

Before Contacting Technical Support

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Steps to Perform Before Calling TAC

At some point, you might need to contact your technical support representative or Cisco TAC for some additional assistance. This section outlines the steps that you should perform before you contact your next level of support in order to reduce the amount of time spent resolving the issue.

To prepare for contacting your customer support representative, follow these steps:

1. Collect the system information and configuration. You should collect this information before and after the issue has been resolved. Use one of the following three methods to gather this information:
   - Configure your Telnet or Secure Shell (SSH) application to log the screen output to a text file. Use the **terminal length 0** command and then use the **show tech-support details** command.

Note If certain **show tech** commands generate a large amount of data and occupy more disk space, they can be stored in a compressed format. See the following example:

```
bash-4.2# time vsh -c " show tech-support platform-sdk" | gzip >
/bootflash/pltfm-tech.gz
```

Note SSH timeout period must be longer than the time of the tac-pac generation time. Otherwise, the VSH log might show %VSHD-2-VSHD_SYSLOG_EOL_ERR error. Ideally, set to 0 (infinity) before collecting tac-pac or showtech.

   - Beginning with Cisco NX-OS Release 9.3(1), you can use the **show tech-support details** [**space-optimized** | **time-optimized**] command. The multi-threaded virtual shell can run up to 16 threads in parallel and monitor them at the same time. The space-optimized parameter removes duplicate input commands and zips the output to optimize memory utilization.

Note This command is not supported on devices with less than 4GB of RAM.

- Use the **tac-pac** *filename* command to redirect the output of the **show tech-support details** command to a file, and then gzip the file.

```
switch# tac-pac bootflash://showtech.switch1
```

- If you do not specify a filename, Cisco NX-OS creates the file as volatile:show_tech_out.gz. Copy the file from the device using the procedure in Copying Files to or from Cisco NX-OS, on page 3.

2. If an error occurs in DCNM, take a screen shot of the error. In Windows, press **Alt+PrintScreen** to capture the active window, or press **PrintScreen** to capture the entire desktop. Paste the screenshot into a new Microsoft Paint (or similar program) session and save the file.
3. Capture the exact error codes that you see in the message logs from either DCNM or the CLI.
   - Choose **Event Browser** in DCNM to see the recent list of messages generated.
   - Copy the error from the message log, which you can display by using either the **show logging logfile** or the **show logging last** *number* command to view the last lines of the log.
4. Answer the following questions before you contact your technical support representative:
   - On which device or port is the problem occurring?
   - Which Cisco NX-OS software, driver versions, operating systems versions, and storage device firmware are in your network?
   - What is the network topology? (In DCNM, choose **Topology** > **Save layout**.)
   - Were any changes made to the environment (VLANs, upgrades, or adding modules) prior to or at the time of this event?
   - Are there other similarly configured devices that could have this problem but do not?
   - Where was this problematic device connected (which device and interface)?
   - When did this problem first occur?
   - When did this problem last occur?
   - How often does this problem occur?
   - How many devices have this problem?
   - Were any traces or debug output captured during the problem time? What troubleshooting steps have you attempted? Which, if any, of the following tools were used?
     - Ethanalyzer, local or remote SPAN
     - CLI debug commands
     - traceroute, ping
     - DCNM tools

5. Answer the following questions if your problem is related to a software upgrade attempt:
   - What was the original Cisco NX-OS version?
   - What is the new Cisco NX-OS version?
   - Collect the output from the following commands and forward them to your customer support representative:
     - **show install all status**
     - **show log nvram**

Copying Files to or from Cisco NX-OS

You might need to move files to or from the device. These files may include the log, configuration, or firmware files.

Cisco NX-OS offers protocols to use for copying to or from the device. The device always acts as a client, so that an FTP, SCP, or TFTP session always originates from Cisco NX-OS and either pushes files to an external system or pulls files from an external system.

```
File Server: 172.22.36.10
File to be copied to the switch: /etc/hosts
```

The **copy** command supports the FTP, SCP, SFTP, and TFTP transfer protocols and many different sources for copying files.

```
switch# copy ?
 bootflash:      Select source filesystem
 core:           Select source filesystem
 debug:          Select source filesystem
 ftp:            Select source filesystem
 http:           Select source filesystem

 licenses        Backup license files
 log:            Select source filesystem
 logflash:       Select source filesystem
 nvram:          Select source filesystem
 running-config  Copy running configuration to destination
 scp:            Select source filesystem
 sftp:           Select source filesystem
 startup-config  Copy startup configuration to destination
 system:         Select source filesystem
 tftp:           Select source filesystem
 usb1:           Select source filesystem
 usb2:           Select source filesystem
 volatile:       Select source filesystem
```

You can use secure copy (SCP) as the transfer mechanism, as follows:

```
scp:[//[username@]server][/path]
```

This example copies /etc/hosts from 172.22.36.10 to hosts.txt, for user user1:

```
switch# copy scp://user1@172.22.36.10/etc/hosts bootflash:hosts.txt
user1@172.22.36.10's password:
```

```
hosts 100% |****************************| 2035 00:00
```

This example backs up the startup configuration to an SFTP server:

```
switch# copy startup-config sftp://user1@172.22.36.10/test/startup configuration.bak1
Connecting to 172.22.36.10...
User1@172.22.36.10's password:
switch#
```

Note You should back up the startup configuration to a server on a daily basis and prior to any changes. You could write a short script to run on Cisco NX-OS to perform a save and then a backup of the configuration. The script needs to contain two commands: **copy running-configuration startup-configuration** and **copy startup-configuration tftp:***//server/name*. To execute the script, use the **run-script** *filename* command.

Using Core Dumps

Core dumps contain detailed information about the system and software status prior to a crash. Use core dumps in situations where unknown problems exist. You can send core dumps to a TFTP server or to a Flash card in slot0: of the local system. You should set up your system to generate core dumps under the instruction of your technical support representative. Core dumps are decoded by technical support engineers.

Set up core dumps to go to a TFTP server so that you can e-mail these core dumps directly to your technical support representative.

Use the **system cores** command to set up core dumps on your system as follows:

```
switch# system cores tftp://10.91.51.200/jsmith_cores
switch# show system cores
Cores are transferred to tftp://10.91.51.200/jsmith_cores
```

Note The filename (indicated by jsmith_cores) must exist in the TFTP server directory.