



## APPENDIX **A**

# Before Contacting Technical Support

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This appendix describes the steps to perform before calling for technical support for Cisco NX-OS. This appendix includes the following sections:

- [Steps to Perform Before Calling TAC, page A-1](#)
- [Using Core Dumps, page A-4](#)



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**Note** If you purchased Cisco support through a Cisco reseller, contact the reseller directly. If you purchased support directly from Cisco, contact Cisco Technical Support at this URL: <http://www.cisco.com/warp/public/687/Directory/DirTAC.shtm>

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## Steps to Perform Before Calling TAC

At some point, you may 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.



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**Note** Do not reload the module or the system until you have completed [Step 1](#). Some logs and counters are kept in volatile storage and will not survive a reload.

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

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- Step 1** Collect system information and configuration. This should be done before and after the issue has been resolved. Use one of the following three methods to gather this information:
- Configure your Telnet or SSH application to log the screen output to a text file. Use the **terminal length 0** CLI command and then use the **show tech-support details** CLI command.
  - Use the **tac-pac filename** CLI command to redirect the output of the **show tech-support details** CLI command to a file, and then gzip the file.  

```
switch# tac-pac bootflash://showtech.switch1
```
  - If no filename is specified, the file is created as `volatile:show_tech_out.gz`. Copy the file then from the device using the procedure in the [“Copying Files to or from Cisco NX-OS”](#) section on [page A-3](#).

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- Step 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 only **PrintScreen** to capture the entire desktop. Paste the screenshot into a new Microsoft Paint (or similar program) session and save the file.
- Step 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 can be displayed using either the **show logging log** CLI command or the **show logging last number** to view the last lines of the log.
- Step 4** Answer the following questions before you contact your technical support representative:
- On which switch or port is the problem occurring?
  - Which Cisco NX-OS software, driver versions, operating systems versions and storage device firmware are in your fabric?
  - What is the network topology? (In DCNM, choose **Topology > Save layout.**)
  - Were any changes made to the environment (VLANs, adding modules, upgrades) 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 switch 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?
    - Ethalyzer, local or remote SPAN
    - CLI debug commands
    - traceroute, ping
    - DCNM tools

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**Step 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?
- Please collect the output from the following commands and forward them to your customer support representative:
  - **show install all status**
  - **show system internal log install**
  - **show system internal log install details**
  - **show log nvram**

## Copying Files to or from Cisco NX-OS

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

Cisco NX-OS offers a broad range of protocols to use for copying to or from the switch. The device always acts as a client, so that an ftp, scp, or tftp session always originates from Cisco NX-OS and either push files to an external system or pull files from an external system.

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

The **copy** CLI command supports the ftp, scp, sftp, and tftp transfer protocols as well as 12 different sources for copying files.

```
switch# copy ?
bootflash: Select source filesystem
core: Select source filesystem
debug: Select source filesystem
ftp: Select source filesystem
licenses Backup license files
log: Select source filesystem
modflash: Select source filesystem
nvram: Select source filesystem
running-config Copy running configuration to destination
scp: Select source filesystem
sftp: Select source filesystem
slot0: Select source filesystem
startup-config Copy startup configuration to destination
system: Select source filesystem
tftp: 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 a sftp server:

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```
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#
```



### Tip

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.

## Setting Up Core Dumps Using the CLI

Use the **system cores** CLI 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.