



Cisco Nexus 7000 Series NX-OS Fundamentals Command Reference

September 2013

Cisco Systems, Inc.

www.cisco.com

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Text Part Number: OL-25805-3

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Cisco Nexus 7000 Series NX-OS System Management Configuration Guide, Release 6.x
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New and Changed Information

This chapter provides release-specific information for each new and changed feature in the *Cisco Nexus 7000 Series NX-OS Fundamentals Command Reference*. The latest version of this document is available at the following Cisco website:

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-command-reference-list.html>

To check for additional information about this Cisco NX-OS Release, see the Cisco NX-OS Release Notes available at the following Cisco website:

<http://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-release-notes-list.html>

Table 1 summarizes the new and changed features for the Cisco Nexus 7000 Series NX-OS Fundamentals Command Reference, and tells you where they are documented.

Table 1 *New and Changed Information*

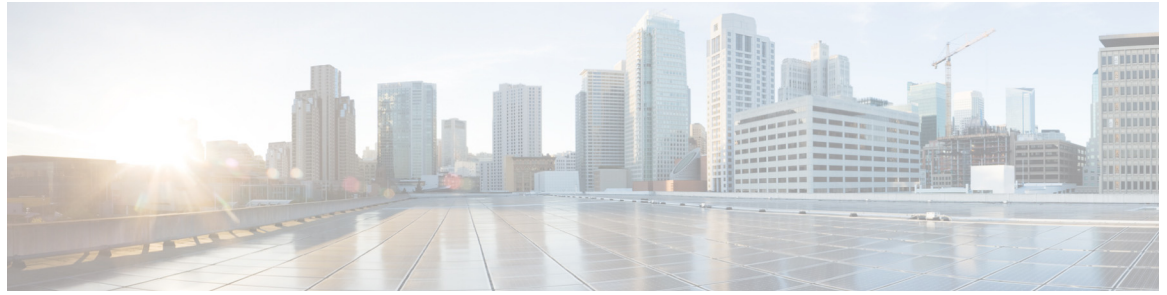
Feature	Change Description	Changed in Release	Where Documented
show time-stamp running-config last-changed	This command was introduced.	8.3(1)	show time-stamp running-config last-changed
Rolling back configuration	You can copy an ASCII version of the configuration to the startup-configuration when reloading the entire NX-OS device.	6.2(2)	reload ascii
Python API	You can invoke the Python Interpreter in interactive mode from the CLI.	6.2(2)	python
source	Changed the command example.	6.2(2)	source
POAP	This command was introduced.	6.1(2)	copy scheduled-config
source	This command was introduced.	6.1(2)	source
pong service	Changed the command output.	6.1(1)	pong
Clear inactive configurations: ACL, QoS	You can delete the inactive ACL and QoS configuration from the Cisco NX-OS device	5.2(1)	clear inactive-config acl clear inactive-config acl qos clear inactive-config qos
Pong service	You can monitor the delay between two switches or two ports in a network with the latency metrics provided by the Pong service.	5.2(1)	feature pong pong
Clock manager	You can set the protocol for the clock on a virtual device context.	5.2(1)	clock protocol

Table 1 **New and Changed Information**

Feature	Change Description	Changed in Release	Where Documented
Licensing	You can view the license information of the packages that are available for the features on a Cisco NX-OS device.	5.2(1)	show license feature package mapping
Concurrent line cards upgrade	You can upgrade up to three line cards concurrently.	5.2(1)	install all parallel
feature-set	Introduced a new high-level functionality, feature set, which performs a specific set of functions.	5.1(1)	allow feature-set feature-set install feature-set show feature-set
Transferring files securely	You can transfer configuration and image files to or from Cisco devices.	5.0(2)	sscp
Installation failure log	You can clear the installation failure log on the standby supervisor module.	4.2(1)	clear install all failed-standby
Command syntax	You can display the syntax of available commands for the command mode.	4.2(1)	show cli syntax
Running configuration	You can exclude the configuration information for features when you display the running configuration.	4.2(1)	show running-config
Startup configuration	You can exclude the configuration information for features when you display the startup configuration.	4.2(1)	show startup-config
I/O module commands	You can send commands to an I/O module from the supervisor module session.	4.2(1)	slot
tar files	You can create and manage tar files.	4.2(1)	tar append tar create tar extract tar list
Command aliases	You can create aliases only for your user account.	4.2(1)	terminal alias
Terminal display colors	You can configure the colors of the information on the terminal session.	4.2(1)	terminal color
Command confirmation prompts	You can enable or disable the display of command confirmation prompts.	4.2(1)	terminal dont-ask
Command edit mode	You can set the command edit mode to emacs or vi.	4.2(1)	terminal edit-mode vi
Command history	You can exclude EXEC commands when you display the command history from a configuration mode.	4.2(1)	terminal history no-exec-in-config
Command logging	You can enable or disable logging of all command in the accounting log.	4.2(1)	terminal log-all
Output redirection format	You can set the format of show command output to either ASCII or zipped.	4.2(1)	terminal redirection-mode

Table 1 ***New and Changed Information***

Feature	Change Description	Changed in Release	Where Documented
Licensing	You can specify the name of the file when you update a Cisco NX-OS software license.	4.2(1)	update license
Modem connections	You can bring up or restart a modem connection.	4.1(2)	modem connect line modem restart line
Command mode context	You can save and restore a command mode context.	4.1(2)	pop push
Displaying version information	You can display build information for the system and kickstart images running on your device.	4.1(2)	show version
Echoing text to command-line prompt	Changed the -e to backslash-interpret in the echo command.	4.0(2)	echo



Preface

This preface describes the audience, organization, and conventions of the *Cisco Nexus 7000 Series NX-OS Fundamentals Command Reference*. It also provides information on how to obtain related documentation.

This chapter includes the following sections:

- [Audience, page 13](#)
- [Organization, page 13](#)
- [Document Conventions, page 14](#)
- [Related Documentation, page 14](#)
- [Documentation Feedback, page 15](#)
- [Obtaining Documentation and Submitting a Service Request, page 16](#)

Audience

This publication is for experienced users who configure and maintain Cisco NX-OS devices.

Organization

This reference is organized as follows:

Chapter and Title	Description
New and Changed Information	Describes the new and changed information for each Cisco NX-OS software release.
Cisco Nexus 7000 Series NX-OS Fundamentals Commands	Describes the Cisco NX-OS fundamentals commands.

Document Conventions

Command descriptions use these conventions:

Convention	Description
boldface font	Commands and keywords are in boldface.
<i>italic font</i>	Arguments for which you supply values are in italics.
[]	Elements in square brackets are optional.
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.

Screen examples use these conventions:

screen font	Terminal sessions and information that the switch displays are in screen font.
boldface screen font	Information you must enter is in boldface screen font.
<i>italic screen font</i>	Arguments for which you supply values are in italic screen font.
< >	Nonprinting characters, such as passwords, are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

This document uses the following conventions:



Note

Means reader *take note*. Notes contain helpful suggestions or references to material not covered in the manual.



Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.



Tip

Means *the following information will help you solve a problem*.

Related Documentation

Cisco NX-OS includes the following documents:

Release Notes

<https://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-release-notes-list.html>

NX-OS Configuration Guides

<https://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-installation-and-configuration-guides-list.html>

NX-OS Command References

<https://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/products-command-reference-list.html>

Other Documents

<https://www.cisco.com/c/en/us/support/switches/nexus-7000-series-switches/tsd-products-support-series-home.html>

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to nexus7k-docfeedback@cisco.com. We appreciate your feedback.

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Cisco Nexus 7000 Series NX-OS Fundamentals Commands

This chapter describes the Cisco Nexus 7000 Series NX-OS fundamentals commands.

attach module

To start a command session on an I/O module, use the **attach module** command.

attach module *slot-number*

Syntax Description	<i>slot-number</i>	Slot numbers in the chassis for the I/O module. The range is from 1 to 10.
---------------------------	--------------------	--

Defaults	None
-----------------	------

Command Modes	Any command mode
----------------------	------------------

Supported User Roles	network-admin
-----------------------------	---------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	<p>To exit the I/O module session, use the exit command. To abort the session, press the \$ character sequence.</p> <p>You can also use the slot command to send commands to an I/O module from the supervisor module session.</p> <p>Use the question mark character (?) to obtain context-sensitive help.</p> <p>This command does not require a license.</p>
-------------------------	---

Examples	This example shows how to start a command session on an I/O module:
-----------------	---

```
switch# attach module 2
Attaching to module 2 ...
To exit type 'exit', to abort type '$.'
module-2#
```

Related Commands	Command	Description
	slot	Sends commands to an I/O module.

allow feature-set

To allow a virtual device context (VDC) to enable a feature set, use the **allow feature-set** command. To disable a feature set on a VDC, use the **no** form of this command.

allow feature-set [*fcoe* | *fex* | *l2mp*]

no allow feature-set [*fcoe* | *fex* | *l2mp*]

Syntax Description	Parameter	Description
	<i>fcoe</i>	(Optional) Specifies Fibre Channel over Ethernet.
	<i>fex</i>	(Optional) Specifies the Fabric Extender (FEX).
	<i>l2mp</i>	(Optional) Specifies FabricPath.

Defaults None

Command Modes config-vdc mode

Supported User Roles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	5.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to enable a feature set on a VDC:

```
switch(config)# vdc 1
switch(config-vdc)# allow feature-set l2mp
switch(config-vdc)#
```

This example shows how to disable a feature set on a VDC:

```
switch(config)# vdc 1
switch(config-vdc)# no allow feature-set l2mp
switch(config-vdc)#
```

allow feature-set**Related Commands**

Command	Description
feature-set	Enables a feature set.
install feature-set	Installs a feature set.

banner exec

To configure the EXEC banner that displays after a user logs in to a switch, use the **banner exec** command. To revert to the default, use the **no** form of this command.

banner exec *delimiting-character message delimiting-character*

no banner exec

Syntax Description	<i>delimiting-character</i>	Delimiting character that you choose. This character indicates the start and end of the message and is not a character that you use in the message. The characters ">", ">>", and " " cannot be used as delimiting characters.
	<i>message</i>	Message text. The text is alphanumeric, case sensitive, and can contain special characters. It does not contain the delimiting character you have chosen. The text has a maximum length of 254 characters per line including the delimiting characters and can have a maximum of 40 lines.

Defaults Blank

Command Modes Global configuration mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	7.3(0)D1(1)	This command was introduced.

Usage Guidelines To create a multiple-line EXEC banner, press **Enter** before typing the delimiting character to start a new line. You can enter up to 40 lines of text and a maximum of 254 characters per line including the delimiting characters.

This command does not require a license.

Examples This example shows how to configure a single-line EXEC banner:

```
switch# configure terminal
switch(config)# banner exec #Unauthorized access to this device is prohibited!#
```

This example shows how to revert to the default EXEC banner:

```
switch# configure terminal
switch(config)# no banner exec
```

Related Commands

Command	Description
show banner exec	Displays the EXEC banner.

banner motd

To configure the message-of-the-day (MOTD) banner that displays when the user logs in to the device, use the **banner motd** command. To revert to the default, use the **no** form of this command.

banner motd *delimiting-character message delimiting-character*

no banner motd

Syntax Description

<i>delimiting-character</i>	Delimiting character that you choose. This character indicates the start and end of the message and is not a character that you use in the message. Do not use " or % as a delimiting character.
<i>message</i>	Message text. The text is alphanumeric, case sensitive, and can contain special characters. It does not contain the delimiting character you have chosen. The text has a maximum length of 80 characters and can have a maximum of 40 lines.

Defaults

User Access Verification

Command Modes

Global configuration mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To create a multiple-line MOTD banner, press **Enter** before typing the delimiting character to start a new line. You can enter up to 40 lines of text.

This command does not require a license.

Examples

This example shows how to configure a single-line MOTD banner:

```
switch# configure terminal
switch(config)# banner motd #Unauthorized access to this device is prohibited!#
```

This example shows how to configure a multiple-line MOTD banner:

```
switch# configure terminal
switch(config)# banner motd #Welcome to authorized users!
> Unauthorized access prohibited.#
```

This example shows how to revert to the default MOTD banner:

■ banner motd

```
switch# configure terminal  
switch(config)# no banner motd
```

Related Commands

Command	Description
show banner motd	Displays the MOTD banner.

boot auto-copy

To enable automatic copying of boot image files to the standby supervisor module, use the **boot auto-copy** command. To disable automatic copying, use the **no** form of this command.

boot auto-copy

no boot auto-copy

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes Global configuration mode

SupportedUserRoles network-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines When automatic copying of image files is enabled, the Cisco NX-OS software copies the image files referred to by the boot variable to the standby supervisor module. These image files must be present in local memory on the active supervisor module. For kickstart and system boot variables, only those image files that are configured for the standby supervisor module are copied. For module images, all modules present in the corresponding locations (bootflash: or slot0:) of the standby supervisor module will be copied.

This command does not require a license.

Examples This example shows how to enable automatic copying of boot image files to the standby supervisor module:

```
switch# configure terminal
switch(config)# boot auto-copy
Auto-copy administratively enabled
```

Related Commands	Command	Description
	boot kickstart	Configures the kickstart boot variable.
	boot system	Configures the system boot variable.
	copy	Copies files.
	show boot	Displays boot variable configuration information.

boot kickstart

To configure the boot variable for the Cisco NX-OS software kickstart image, use the **boot kickstart** command. To clear the kickstart image boot variable, use the **no** form of this command.

```
boot kickstart [filesystem:[//directory] | directory]filename [sup-1] [sup-2]
```

```
no boot kickstart
```

Syntax Description

<i>filesystem:</i>	(Optional) Name of a file system. Valid values are bootflash or slot0 .
<i>//directory</i>	(Optional) Name of a directory. The directory name is case sensitive.
<i>filename</i>	Name of the kickstart image file. The filename is case sensitive.
sup-1	(Optional) Configures the kickstart boot variable for the supervisor module 1 (Sup-1) only.
sup-2	(Optional) Configures the kickstart boot variable for supervisor module (Sup-2) only.

Defaults

Can be configured for both the supervisor modules.

Command Modes

Global configuration mode

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

The Cisco NX-OS software uses the boot variable for loading images when booting up using the **reload** or **install all** command. You must copy the kickstart image to the device before you set the kickstart boot variable. You must also set the system boot variable using the **boot system** command.



Note

We recommend that you use the **install all** command to update the system image on your device.

For information on upgrading and downgrading images on your Cisco NX-OS device, see the *Cisco Nexus 7000 Series NX-OS Software Upgrade and Downgrade Guide, Release 6.x*. This command does not require a license.

Examples

This example shows how to configure the kickstart boot variable for both supervisor modules:

```
switch# configure terminal
switch(config)# boot kickstart bootflash:kickstart-image
```

This example shows how to configure the kickstart boot variable for the sup-1 supervisor module:

```
switch# configure terminal  
switch(config)# boot kickstart bootflash:kickstart-image sup-1
```

This example shows how to clear the kickstart boot variable:

```
switch# configure terminal  
switch(config)# no boot kickstart
```

Related Commands

Command	Description
boot system	Configures the system boot variable.
copy	Copies files.
install all	Installs the software on the physical device.
reload	Reloads the device with new Cisco NX-OS software.
show boot	Displays boot variable configuration information.

boot system

To configure the boot variable for the Cisco NX-OS software system image, use the **boot system** command. To clear the system image boot variable, use the **no** form of this command.

```
boot system [filesystem:[//directory] | directory]filename [sup-1] [sup-2]
```

```
no boot system
```

Syntax Description	
<i>filesystem:</i>	(Optional) Name of a file system. Valid values are bootflash or slot0 .
<i>//directory</i>	(Optional) Name of a directory. The directory name is case sensitive.
<i>filename</i>	Name of the system image file. The filename is case sensitive.
sup-1	(Optional) Configures the system boot variable for supervisor module (Sup-2) only.
sup-2	(Optional) Configures the system boot variable for supervisor module (Sup-2) only.

Defaults Can be configured for both the supervisor modules.

Command Modes Global configuration mode

SupportedUserRoles network-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines The Cisco NX-OS software uses the boot variable for loading images when booting up using the **reload** or **install all** command. You must copy the system image to the device before you set the system boot variable. You must also set the kickstart boot variable using the **boot kickstart** command.



Note We recommend that you use the **install all** command to update the system image on your device.

For information on upgrading and downgrading images on your Cisco NX-OS device, see the *Cisco Nexus 7000 Series NX-OS Software Upgrade and Downgrade Guide, Release 6.x*.

This command does not require a license.

Examples This example shows how to configure the system boot variable for both supervisor modules:

```
switch# configure terminal
switch(config)# boot system bootflash:system-image
```

This example shows how to configure the system boot variable for the sup-1 supervisor module:

```
switch# configure terminal  
switch(config)# boot system bootflash:system-image sup-1
```

This example shows how to clear the system boot variable:

```
switch# configure terminal  
switch(config)# no boot system
```

Related Commands

Command	Description
boot kickstart	Configures the kickstart boot variable.
copy	Copies files.
install all	Installs the software on the physical device.
reload	Reloads the device with new Cisco NX-OS software.
show boot	Displays boot variable configuration information.

cd

To change the current working directory in the device file system, use the **cd** command.

```
cd [filesystem:[//directory] | directory]filename]
```

Syntax Description	
<i>filesystem:</i>	(Optional) Name of the file system. Valid values are bootflash , slot0 , volatile , usb1 , or usb2 .
<i>//directory</i>	(Optional) Name of the directory. The directory name is case sensitive.

Defaults	
	bootflash

Command Modes	
	Any command mode

Supported User Roles	
	network-admin vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	
	Use the pwd command to verify the current working directory. You can change only the directories that reside on the active supervisor module. This command does not require a license.

Examples	
	This example shows how to change the current working directory on the current file system:

```
switch# cd my-scripts
```

This example shows how to change the current working directory to another file system:

```
switch# cd slot0:
```

This example shows how to revert back to the default working directory (bootflash):

```
switch# cd
```

Related Commands	Command	Description
	pwd	Displays the current working directory name.

clear cli history

To clear the command history, use the **clear cli history** command.

clear cli history

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines Use the **show cli history** command to display the history of the commands that you entered at the command-line interface (CLI).

This command does not require a license.

Examples This example shows how to clear the command history:

```
switch# clear cli history
```

Related Commands	Command	Description
	show cli history	Displays the command history.

clear debug-logfile

To clear the contents of the debug logfile, use the **clear debug-logfile** command.

clear debug-logfile *filename*

Syntax Description	<i>filename</i>	Name of the debug logfile to clear.
--------------------	-----------------	-------------------------------------

Defaults	None
----------	------

Command Modes	Any command mode
---------------	------------------

SupportedUserRoles	network-admin vdc-admin
--------------------	----------------------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
------------------	--

Examples	This example shows how to clear the debug logfile:
----------	--

```
switch# clear debug-logfile syslogd_debugs
```

Related Commands	Command	Description
	debug logfile	Configures a debug logging file.
	debug logging	Enables debug logging.
	show debug logfile	Displays the contents of the debug logfile.

clear fault-management logs

To clear the fault-management logs, use the **clear fault-management logs** command.

```
clear fault-management logs [active | standby] {vdc vdc ID} [all]
```

Syntax Description		
active		Deletes logs from the active modules.
standby		Deletes logs from the standby modules.
vdc		Specifies to include the VDC.
<i>vdc ID</i>		Specifies the VDC ID.
all		Deletes logs from the both active and standby modules.

Defaults None.

Command Modes Global configuration mode.

Command History	Release	Modification
	NX-OS 8.0(1)	This command was introduced.

Usage Guidelines None.

Examples The following example shows how to clear all the fault-management logs:

```
switch# configure terminal
switch(config)# clear fault-management logs all
```

Related Commands	Command	Description
	clear fabric database	Clears fabric database.

clear inactive-config acl

To clear inactive access control list (ACL) configurations, use the **clear inactive-config acl** command.

clear inactive-config acl

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.



Note

The automatic **clear inactive-config acl** command that clears an inactive configuration will delete the port channel policies even if one of the ports in a port channel has inactive policies. During a manual removal, when the interface is part of a port channel, remove the policy map or access list from the port channel or remove the interface from the port channel before performing the ISSU or ISSD. For all other interface types, remove the policy map or access list from the interface.

Examples This example shows how to clear inactive ACL configurations:

```
switch# configure terminal
switch(config)# clear inactive-config acl
switch(config)#
```

Related Commands	Command	Description
	clear inactive-config acl qos	Deletes the inactive ACL configurations for QoS.
	clear inactive-config qos	Deletes the inactive QoS configurations.

clear inactive-config acl qos

To clear inactive access control list (ACL) configurations for quality of service (QoS), use the **clear inactive-config acl qos** command.

clear inactive-config acl qos

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to clear inactive ACL configurations for QoS:

```
switch# configure terminal
switch(config)# clear inactive-config acl qos
switch(config)#
```

Related Commands	Command	Description
	clear inactive-config acl	Deletes the inactive ACL configurations.
	clear inactive-config qos	Deletes the inactive QoS configurations.

clear inactive-config qos

To clear inactive quality of service (QoS) configurations, use the **clear inactive-config qos** command.

clear inactive-config acl qos

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to clear inactive QoS configurations:

```
switch# configure terminal
switch(config)# clear inactive-config qos
switch(config)#
```

Related Commands	Command	Description
	clear inactive-config acl	Deletes the inactive ACL configurations.
	clear inactive-config acl qos	Deletes the inactive ACL configuration for QoS.

clear install all failed-standby

To clear the software installation failure log on the standby supervisor module, use the **clear install all failed-standby** command.

clear install all failed-standby

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to clear the software installation failure log on the standby supervisor module:

```
switch# clear install all failed-standby
```

Related Commands	Command	Description
	show install all	Displays status information for the software installation.

clear install failure-reason

To clear the reason for software installation failures, use the **clear install failure-reason** command.

clear install failure-reason

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to clear the reason for software installation failures:

```
switch# clear install failure-reason
```

Related Commands	Command	Description
	show install all	Displays status information for the software installation.

clear license

To uninstall a license, use the **clear license** command.

clear license *filename*

Syntax Description	<i>filename</i>	Name of the license file to be uninstalled.
---------------------------	-----------------	---

Defaults	None
-----------------	------

Command Modes	Any command mode
----------------------	------------------

SupportedUserRoles	network-admin
---------------------------	---------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
-------------------------	--

Examples	This example shows how to clear a specific license:
-----------------	---

```
switch# clear license Enterprise.lic
Clearing license Enterprise.lic:
SERVER this_host ANY
VENDOR cisco

Do you want to continue? (y/n) y
Clearing license ..done
switch#
```

Related Commands	Command	Description
	show license	Displays license information.

cli alias name

To configure a command alias, use the **cli alias name** command. To delete a command alias, use the **no** form of this command.

cli alias name *alias-name alias-text*

no cli alias name *alias-name alias-text*

Syntax Description

<i>alias-name</i>	Name of the command alias. The alias name is an alphanumeric string that is not case sensitive and must begin with an alphabetic character. The maximum length is 30 characters.
<i>alias-text</i>	Alias text string. The command is alphanumeric, not case sensitive, can contain spaces and special characters, and has a maximum of 100 characters.

Defaults

None

Command Modes

Global configuration mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You can use the command to create aliases for commands that you use frequently.

The Cisco NX-OS software has one predefined command alias called alias. You can use it to display the currently configured command aliases.

This command does not require a license.

Examples

This example shows how to configure a command alias:

```
switch# configure terminal
switch(config)# cli alias name crun
```

This example shows how to delete a command alias:

```
switch# configure terminal
switch(config)# no cli alias name crun
```

Related Commands

Command	Description
show cli alias	Displays information about the command alias configuration.

cli var name

To define a command-line interface (CLI) variable for a terminal session, use the **cli var name** command. To remove the CLI variable, use the **no** form of this command.

cli var name *variable-name variable-text*

cli no var name *variable-name*

Syntax Description	variable-name	Name of the variable. The name is alphanumeric, case sensitive, and has a maximum of 31 characters.
	variable-text	Variable text. The text is alphanumeric, can contain spaces, and has a maximum of 200 characters.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You can reference a CLI variable using the following syntax:

\$(variable-name)

Instances where you can use variables include the following:

- Command scripts
- Filenames

You cannot reference a variable in the definition of another variable.

The Cisco NX-OS software provides predefined variable `TIMESTAMP`, which you can use to insert the time of day. You cannot change or remove the `TIMESTAMP` CLI variable.

You must remove a CLI variable before you can change its definition.

This command does not require a license.

Examples This example shows how to define a CLI variable:

```
switch# cli var name testinterface interface 2/3
```

This example shows how to reference a CLI variable:

```
switch# cd slot0:
```

This example shows how to reference the `TIMESTAMP` variable:

```
switch# copy running-config > bootflash:run-config-$(TIMESTAMP).cnfg
```

This example shows how to remove a CLI variable:

```
switch# cli no var name testinterface interface 2/3
```

Related Commands

Command	Description
<code>show cli variables</code>	Displays the CLI variables.

clock set

To set the system clock of the Cisco NX-OS Nexus 7000 Series switch to a user-defined value, use the **clock set** command.

clock set *HH:MM:SS day month year*

Syntax	Description
HH	Hour of the day. The range is from 00 to 24.
MM	Minute of the hour. The range is from 0 to 60.
SS	Second of the minute. The range is from 0 to 60.
day	Day of the month. The range is from 1 to 31.
month	Month of the year. The range is from January to December.
year	Calendar year. The range is from 2000 to 2030.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You can use the **clock set** command to set the supervisor clock. Use the **clock protocol none** command before using the **clock set** command.

When you use the **clock set** command, NTP and PTP synchronization of the clock stops.

This command does not require a license.

Examples This example shows how to set the system clock of the Cisco NX-OS Nexus 7000 Series switch to a user defined value:

```
switch# clock set 01:27:00 21 february 2011
Mon Feb 21 01:27:00 UTC 2011
switch#
```

Related Commands	Command	Description
	clock protocol	Sets the system clock on a Cisco NX-OS Nexus 7000 Series switch.

clock protocol

To set the protocol for the clock on a virtual device context (VDC), use the **clock protocol** command. To remove the protocol settings of the clock on the VDC, use the **no** form of this command.

```
clock protocol {ntp | ptp | none} vdc vdc-id
```

```
no clock protocol {ntp | ptp | none} vdc vdc-id
```

Syntax Description

ntp	(Optional) Specifies the Precision Time Protocol (PTP).
ntp	(Optional) Specifies the Network Time Protocol (NTP).
none	(Optional) Specifies the user configured time
vdc	Specifies the VDC.
vdc-id	VDC ID. The range is from 1 to 8.

Defaults

Clock set protocol ntp vdc 1

Command Modes

Global configuration mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to set the PTP for a clock on a VDC:

```
switch# configure terminal  
switch(config)# clock protocol ptp vdc 1
```

This example shows how to remove the PTP from a clock on a VDC:

```
switch(config)# no clock set protocol ptp vdc 1
```

Related Commands

Command	Description
clock set	Sets the system clock to a user-defined value.

clock summer-time

To configure the summer-time (daylight saving time) offset, use the **clock summer-time** command. To revert to the default, use the **no** form of this command.

clock summer-time *zone-name start-week start-day start-month start-time end-week end-day end-month end-time offset-minutes*

no clock summer-time

Syntax Description

<i>zone-name</i>	Zone name. The name is a three-character string that indicates a time zone (for example, PST or EST).
<i>start-week</i>	Week of the month to start the summer-time offset. The range is from 1 to 5.
<i>start-day</i>	Day of the month to start the summer-time offset. Valid values are Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, or Sunday .
<i>start-month</i>	Month to start the summer-time offset. Valid values are January, February, March, April, May, June, July, August, September, October, November, and December .
<i>start-time</i>	Time to start the summer-time offset. The format is <i>hh:mm</i> .
<i>end-week</i>	Week of the month to end the summer-time offset. The range is from 1 to 5.
<i>end-day</i>	Day of the month to end the summer-time offset. Valid values are Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, or Sunday .
<i>end-month</i>	Month to end the summer-time offset. Valid values are January, February, March, April, May, June, July, August, September, October, November, and December .
<i>end-time</i>	Time to end the summer-time offset. The format is <i>hh:mm</i> .
<i>offset-minutes</i>	Number of minutes to offset the clock. The range is from 1 to 1440.

Defaults

None

Command Modes

Global configuration mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the offset for summer-time or daylight saving time:

```
switch# configure terminal  
switch(config)# clock summer-time PDT 1 Sunday March 02:00 1 Sunday November 02:00 60
```

This example shows how to remove the summer-time offset:

```
switch# configure terminal  
switch(config)# no clock summer-time
```

Related Commands

Command	Description
show clock	Displays the clock summer-time offset configuration.

clock timezone

To configure the time zone offset from Coordinated Universal Time (UTC), use the **clock timezone** command. To revert to the default, use the **no** form of this command.

clock timezone *zone-name* *offset-hours* *offset-minutes*

no clock timezone

Syntax Description

<i>zone-name</i>	Zone name is a three-character string that indicates a time zone (for example, PST or EST).
<i>offset-hours</i>	Number of hours offset from UTC. The range is from -23 to 23.
<i>offset-minutes</i>	Number of minutes offset from UTC. The range is from 0 to 59.

Defaults

None

Command Modes

Any command mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

Use this command to offset the device clock from UTC.
This command does not require a license.

Examples

This example shows how to configure the time zone offset from UTC:

```
switch# clock timezone EST 5 0
```

This example shows how to remove the time zone offset:

```
switch# no clock timezone
```

Related Commands

Command	Description
show clock	Displays the clock time.

configure terminal

To enter global configuration mode, use the **configure terminal** command.

configure terminal

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines Use the **configure terminal** command to enter global configuration mode. The commands that you enter in this mode are written to the running configuration file after you press the **Enter** key.

This command does not require a license.

Examples This example shows how to enter global configuration mode:

```
switch# configure terminal
switch(config)#
```

Related Commands	Command	Description
	where	Displays the current configuration mode context.

copy scheduled-config

To configure a file containing cli commands to be applied on the next reboot, use the **copy scheduled-config** command.

copy *filename* **scheduled-config**

Syntax Description	<i>filename</i>	The configuration profile file containing a sequence of commands that accomplishes a specific auto provisioning task.
	Note	The location and the file name should be specified for the filename argument. For example, bootflash:VRF-Tenant-Profile.cfg, where bootflash: is the location and VRF-Tenant-Profile.cfg is the filename.

Defaults	None
-----------------	------

Command Modes	Privileged EXEC (#)
----------------------	---------------------

Command History	Release	Modification
	6.1(2)	This command was introduced.

Usage Guidelines This command should be called explicitly within the poap script to allow the poap boot-up process to continue at the next reboot. When PowerOn Auto Provisioning (POAP) is in progress, any important information or errors are displayed over the serial console aiding the administrator to troubleshoot in case of problems.

This command does not require a license.



Note This is used in POAP script.

Examples This example shows how to specify the file *VRF-Tenant-Profile.cfg*, located in the switch's bootflash: drive, to be applied to the running configuration at the next switch reload:

```
switch# copy bootflash:VRF-Tenant-Profile.cfg scheduled-config
switch(config)#
```

Related Commands	Command	Description
	dir	Displays the directory contents in the switch

copy

To copy one file from another, use the **copy** command.

```
copy source-url destination-url
```

Syntax Description	source-url	Location uniform resource locator (URL) or variable of the source file or directory to be copied. The source can be either local or remote, depending upon whether the file is being downloaded or uploaded. For information about the URL prefix keywords, see the “Usage Guidelines” section.
	destination-url	Destination URL or variable of the copied file or directory. The destination can be either local or remote, depending upon whether the file is being downloaded or uploaded. For information about the URL prefix keywords, see the “Usage Guidelines” section.

Defaults The default name for the destination file is the source filename.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines The **copy** command allows you to copy a file (such as a system image or configuration file) from one location to another location. The source and destination for the file is specified by using a Cisco NX-OS file system URL, which allows you to specify a local or remote file location. The file system being used (such as a local memory source or a remote server) determines the syntax used in the command.

You can enter on the command line all necessary source- and destination-URL information and the username to use, or you can enter the **copy** command and have the CLI prompt you for any missing information.

The entire copying process may take several minutes, depending on the network conditions and the size of the file, and differs from protocol to protocol and from network to network.

The colon character (:) is required after the file system URL prefix keywords (such as **bootflash**).

In the URL syntax for **ftp:**, **scp:**, **sftp:**, and **tftp:**, the server is either an IPv4 address or a hostname.

The format of the source and destination URLs varies according to the file or directory location. You can enter either a command-line interface (CLI) variable for a directory or a filename that follows the Cisco NX-OS file system syntax in this format: *filesystem:[/directory][/filename]*.

The following tables list URL prefix keywords by the file system type. If you do not specify a URL prefix keyword, the switch looks for a file in the current directory.

[Table 1](#) lists URL prefix keywords for local writable storage file systems. [Table 2](#) lists the URL prefix keywords for remote file systems. [Table 3](#) lists the URL prefix keywords for nonwritable file systems.

This command does not require a license.

Copying Files from a Server to Bootflash Memory

Use the **copy *source-url* bootflash:** command (for example, **copy tftp:*source-url* bootflash:**) to copy an image from a server to the local bootflash memory.

Copying a Configuration File from a Server to the Running Configuration

Use the **copy {ftp: | scp: | sftp: | tftp:} *source-url* running-config** command to download a configuration file from a network server to the running configuration of the device. The configuration is added to the running configuration as if the commands were typed in the CLI. The resulting configuration file is a combination of the previous running configuration and the downloaded configuration file. The downloaded configuration file has precedence over the previous running configuration.

You can copy either a host configuration file or a network configuration file. Accept the default value of *host* to copy and load a host configuration file containing commands that apply to one network server in particular. Enter *network* to copy and load a network configuration file that contains commands that apply to all network servers on a network.

Copying a Configuration File from a Server to the Startup Configuration

Use the **copy {ftp: | scp: | sftp: | tftp:} *source-url* startup-config** command to copy a configuration file from a network server to the switch startup configuration. These commands replace the startup configuration file with the copied configuration file.

Copying the Running or Startup Configuration on a Server

Use the **copy running-config {ftp: | scp: | sftp: | tftp:} *destination-url*** command to copy the current configuration file to a network server that uses FTP, SCP, SFTP, or TFTP. Use the **copy startup-config {ftp: | scp: | sftp: | tftp:} *destination-url*** command to copy the startup configuration file to a network server.

You can use the copied configuration file as a backup.

[Table 1](#), [Table 2](#), and [Table 3](#), list the URL prefix keywords.

Table 1 URL Prefix Keywords for Local Writable Storage File Systems

Keyword	Source or Destination
bootflash: [// <i>module</i>]	Source or destination URL for boot flash memory. The <i>module</i> argument value is sup-active , sup-local , sup-remote , or sup-standby .
slot0: [// <i>module</i>]	Source or destination URL of the external PCMCIA Flash memory device. The <i>module</i> argument value is sup-active , sup-local , sup-remote , or sup-standby .
usb0: [// <i>module</i>] usb1: [// <i>module</i>]	Source or destination URL for the external Universal Serial Bus (USB) Flash memory devices. The <i>module</i> argument value is sup-active , sup-local , sup-remote , or sup-standby .

Table 2 URL Prefix Keywords for Remote File Systems

Keyword	Source or Destination
ftp:	Source or destination URL for an FTP network server. The syntax for this alias is as follows: ftp://[server]/[path]/filename
scp:	Source or destination URL for a network server that supports Secure Shell (SSH) and accepts copies of files using the Secure Copy Protocol (SCP). The syntax for this alias is as follows: scp://[username@]server/[path]/filename
sftp:	Source or destination URL for an SSH FTP (SFTP) network server. The syntax for this alias is as follows: sftp://[username@]server/[path]/filename
tftp:	Source or destination URL for a Trivial FTP (TFTP) network server. The syntax for this alias is as follows: tftp://server[:port]/[path]/filename

Table 3 URL Prefix Keywords for Special File Systems

Keyword	Source or Destination
core:	Local memory for core files. You can copy core files from the core: file system.
debug:	Local memory for debug files. You can copy core files from the debug: file system.
log:	Local memory for log files. You can copy log files from the log: file system.
logflash:	External memory for log files. You can copy log files from the logflash: file system.
nvr:	Local NVRAM. You can copy the startup configuration to or from the nvr: file system. The nvr: file system is optional when referencing the startup-config file in a command.
system:	Local system memory. You can copy the running configuration to or from the system: file system. The system: file system is optional when referencing the running-config file in a command.
volatile:	Local volatile memory. You can copy files to or from the volatile: file system. All files in the volatile: memory are lost when the physical device reloads.

Examples

This example shows how to copy a file within the same directory:

```
switch# copy file1 file2
```

This example shows how to copy a file to another directory:

```
switch# copy file1 my_files:file2
```

This example shows how to copy a file to another file system:

```
switch# copy file1 slot0:
```

This example shows how to copy a file to another supervisor module:

```
switch# copy file1 bootflash://sup-remote/file1.bak
```

This example shows how to copy a file from a remote server:

```
switch# copy scp://10.10.1.1/image-file.bin bootflash:image-file.bin
```

Related Commands

Command	Description
cd	Changes the current working directory.
cli var name	Configures CLI variables for the session.
dir	Displays the directory contents.
move	Moves a file.
pwd	Displays the name of the current working directory.

copy running-config startup-config

To copy the running configuration to the startup configuration, use the **copy running-config startup-config** command.

copy running-config startup-config

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines Use the **copy running-config startup-config** command to save your configuration changes in the running configuration to the startup configuration in persistent memory. When a device reload or switchover occurs, the saved configuration is applied.

This command does not require a license.

Examples This example shows how to save the running configuration to the startup configuration:

```
switch# copy running-config startup-config
[#####] 100%
```

Related Commands	Command	Description
	show running-config	Displays the running configuration.
	show running-config diff	Displays the differences between the running configuration and the startup configuration.
	show startup-config	Displays the startup configuration.
	write erase	Erases the startup configuration in the persistent memory.

databits

To configure the number of data bits in a character for the COM1 port or console port, use the **databits** command. To revert to the default, use the **no** form of this command.

databits *bits*

no databits *bits*

Syntax Description	<i>bits</i>	Number of data bits in a character. The range is from 5 to 8.
---------------------------	-------------	---

Defaults	8 bits
-----------------	--------

Command Modes	COM1 port configuration mode Console port configuration mode
----------------------	---

SupportedUserRoles	network-admin vdc-admin
---------------------------	----------------------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	Use the databits command only in the default virtual device context (VDC). You can configure the console and COM1 ports only from a session on the console port. This command does not require a license.
-------------------------	--

Examples	This example shows how to configure the number of data bits for the COM1 port:
-----------------	--

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# databits 7
```

This example shows how to configure the number of data bits for the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# databits 7
```

This example shows how to revert to the default number of data bits for the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# no databits 7
```


This example shows how to revert to the default number of data bits for the console port:

```
switch# configure terminal  
switch(config)# line console  
switch(config-console)# no databits 7
```

Related Commands

Command	Description
show line	Displays information about the COM1 port and console port configuration.

delete

To delete a file, use the **delete** command.

```
delete [filesystem:[//directory/] | directory/]filename
```

Syntax Description		
<i>filesystem:</i>	(Optional) Name of the file system. Valid values are bootflash , slot0 , usb1 , usb2 , or volatile .	
<i>//directory/</i>	(Optional) Name of the directory. The directory name is case sensitive.	
<i>filename</i>	Name of the file. The name is case sensitive.	

Defaults	
None	

Command Modes	
Any command mode	

Supported User Roles	
network-admin vdc-admin	

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	
Use the dir command to locate the file that you want to delete. This command does not require a license.	

Examples	
This example shows how to delete a file: switch# delete bootflash:old_config.cfg	

Related Commands	Command	Description
	dir	Displays the contents of a directory.

diff-clean

To remove the temporary files created automatically when you use diff filtering in **show** commands, use the **diff-clean** command.

diff-clean [**all-sessions** | **all-users**]

Syntax Description		
all-sessions	(Optional)	Removes the temporary files for all sessions, current and past, for the current user.
all-users	(Optional)	Removes the temporary files for all sessions, current and past, for all users.

Defaults Removes the temporary files for the current session of the current user.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to remove the temporary files for the current session of the current user:

```
switch# diff-clean
```

This example shows how to remove the temporary files for the current session and all past sessions of the current user:

```
switch# diff-clean all-sessions
```

This example shows how to remove the temporary files for the current session and all past sessions of all users:

```
switch# diff-clean all-users
```

dir

To display the contents of a directory, use the **dir** command.

```
dir [filesystem:[//directory/] | directory/]
```

Syntax Description	<i>filesystem:</i>	(Optional) Name of the file system. Valid values are bootflash , debug , log , logflash , slot0 , usb1 , usb2 , or volatile .
	<i>//directory/</i>	(Optional) Name of the directory. The directory name is case sensitive.

Defaults Displays the contents of the current working directory.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines Use the **pwd** command to verify the current working directory.
Use the **cd** command to change the current working directory.
This command does not require a license.

Examples This example shows how to display the contents of the root directory in bootflash:

```
switch# dir bootflash:
```

This example shows how to display the contents of the current working directory:

```
switch# dir
```

Related Commands	Command	Description
	cd	Changes the current working directory.
	pwd	Displays the name of the current working directory.

echo

To display a text string on the terminal session, use the **echo** command.

```
echo [backslash-interpret] [text]
```

Syntax Description	backslash-interpret	(Optional) Interprets any character following a backslash character (\) as a formatting option.
	text	(Optional) Text string to display. The text string is alphanumeric, case sensitive, can contain spaces, and has a maximum length of 200 characters. The text string can also contain references to CLI variables.

Defaults Displays a blank line.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(3)	Replaced the -e keyword with the backslash-interpret keyword.
	4.0(1)	This command was introduced.

Usage Guidelines Use the **echo** command in a command script to display information while the script is running. [Table 4](#) lists the formatting keywords that you can insert in the text when you include the **backslash-interpret** keyword.

Table 4 Formatting Options for the echo Command

Formatting Option	Description
\b	Back spaces.
\c	Removes the new line character at the end of the text string.
\f	Inserts a form feed character.
\n	Inserts a new line character.
\r	Returns to the beginning of the text line.
\t	Inserts a horizontal tab character.
\v	Inserts a vertical tab character.

Table 4 *Formatting Options for the echo Command (continued)*

Formatting Option	Description
\\	Displays a backslash character.
\\nnn	Displays the corresponding ASCII octal character.

This command does not require a license.

Examples

This example shows how to display a blank line at the command prompt:

```
switch# echo
```

This example shows how to display a line of text at the command prompt:

```
switch# echo Script run at $(TIMESTAMP).
Script run at 2008-08-12-23.29.24.
```

This example shows how to use a formatting option in the text string:

```
switch# echo backslash-interpret This is line #1. \nThis is line #2.
This is line #1.
This is line #2.
```

Related Commands

Command	Description
run-script	Runs command scripts.

end

To exit a configuration mode and return to EXEC mode, use the **end** command.

end

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to return to EXEC mode from global configuration mode:

```
switch(config)# end
switch#
```

This example shows how to return to EXEC mode from interface configuration mode:

```
switch(config-if)# end
switch#
```

Related Commands	Command	Description
	exit	Returns to the previous command mode.

exec-timeout

To configure the inactive session timeout on the console port or the virtual terminal, use the **exec-timeout** command. To revert to the default, use the **no** form of this command.

exec-timeout *minutes*

no exec-timeout

Syntax Description	<i>minutes</i>	Number of minutes. The range is from 0 to 525600. A setting of 0 minutes disables the timeout.
--------------------	----------------	--

Defaults	30 minutes
----------	------------

Command Modes	Console port configuration mode Line configuration mode
---------------	--

Supported User Roles	network-admin vdc-admin
----------------------	----------------------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	Use the exec-timeout command only in the default virtual device context (VDC). You can configure the console ports only from a session on the console port. This command does not require a license.
------------------	---

Examples	This example shows how to configure the inactive session timeout for the console port:
----------	--

```
switch# configure terminal
switch(config)# line console
switch(config-com1)# exec-timeout 40
```

This example shows how to configure the inactive session timeout for the virtual terminal:

```
switch# configure terminal
switch(config)# line vty
switch(config-line)# exec-timeout 40
```

This example shows how to revert to the default inactive session timeout for the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-com1)# no exec-timeout
```


This example shows how to revert to the default inactive session timeout for the virtual terminal:

```
switch# configure terminal
switch(config)# line vty
switch(config-line)# no exec-timeout
```

Related Commands

Command	Description
show running-config	Displays the running configuration.

exit

To exit a configuration mode and return to the previous configuration mode, use the **exit** command.

exit

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to return to EXEC mode from global configuration mode:

```
switch(config)# exit
switch#
```

This example shows how to return to global configuration mode from interface configuration mode:

```
switch(config-if)# exit
switch(config)#
```

Related Commands	Command	Description
	end	Returns to the EXEC command mode.

fault-management auto-capture

To enable the auto-capture feature, use the **fault-management auto-capture** command. To disable this feature, use the **no** form of this command.

fault-management auto-capture

no fault-management auto-capture

Syntax Description This command has no arguments or keywords.

Defaults Enabled.

Command Modes Global configuration mode.

Command History	Release	Modification
	NX-OS 8.0(1)	This command was introduced.

Usage Guidelines None.

Examples The following example shows how to enable the fault-management auto-capture feature:

```
switch# configure terminal
switch(config)# fault-management auto-capture
```

Related Commands	Command	Description
	fault-management yaml reconfigure	Programs the system YAML file incrementally.

fault-management yaml reconfigure

To program the system YAML file incrementally, use the **fault-management yaml reconfigure** command. To restore the default YAML file, use the **no** form of this command.

fault-management yaml reconfigure

no fault-management yaml reconfigure

Syntax Description This command has no arguments or keywords.

Defaults None.

Command Modes Global configuration mode.

Command History	Release	Modification
	NX-OS 8.0(1)	This command was introduced.

Usage Guidelines You can program a custom YAML file. Use the **fault-management yaml reconfigure** command to program the system YAML file incrementally.

Examples This example shows how to create a flow record and enter flow record configuration mode:

```
switch# configure terminal
switch(config)# fault-management yaml reconfigure
```

Related Commands	Command	Description
	fault-management auto-capture	Enables the fault-management auto-capture option.

feature pong

To enable the Pong feature, use the **feature pong** command. To disable the Pong feature, use the **no** form of this command.

feature pong

no feature pong

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to enable the Pong feature:

```
switch# configure terminal
switch(config)# feature pong
```

This example shows how to disable the Pong feature:

```
switch# configure terminal
switch(config)# no feature pong
```

Related Commands	Command	Description
	feature ptp	Enables the Precision Time Protocol (PTP) feature. This command is documented in the <i>Cisco Nexus 7000 Series NX-OS System Management Command Reference</i> .
	pong	Starts the pong service on the current virtual device context (VDC).

feature-set

To enable a feature set on a virtual device context (VDC), use the **feature-set** command. To disable a feature set on a VDC, use the **no** form of this command.

feature-set [*fcoe* | *fex* | *l2mp*]

no feature-set [*fcoe* | *fex* | *l2mp*]

Syntax Description	Parameter	Description
	fcoe	(Optional) Specifies Fibre Channel over Ethernet.
	<i>fex</i>	(Optional) Specifies the Fabric Extender (FEX).
	l2mp	(Optional) Specifies FabricPath.

Defaults None

Command Modes config-vdc mode

Supported User Roles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	5.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to enable a feature set on a VDC:

```
switch(config)# vdc 1
switch(config-vdc)# install feature-set l2mp
switch(config-vdc)# allow feature-set l2mp
switch(config-vdc)# feature-set l2mp
switch(config-vdc)#
```

This example shows how to disable a feature set on a VDC:

```
switch(config)# vdc 1
switch(config-vdc)# no feature-set l2mp
switch(config-vdc)#
```

Related Commands

Command	Description
allow feature-set	Allows a virtual device context (VDC) to enable a feature set.
install feature-set	Installs a feature set.

find

To find filenames beginning with a character string, use the **find** command.

find *filename-prefix*

Syntax Description	<i>filename-prefix</i>	First part or all of a filename. The filename prefix is a case sensitive, alphanumeric string with a maximum of 64 characters.
---------------------------	------------------------	--

Defaults	None	
-----------------	------	--

Command Modes	Any command mode	
----------------------	------------------	--

Supported User Roles	network-admin vdc-admin	
-----------------------------	----------------------------	--

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines The **find** command searches all subdirectories under the current working directory. Use the **cd** and **pwd** commands to navigate to the starting directory.

This command does not require a license.

Examples This example shows how to display filenames beginning with ospf:

```
switch# find ospf
/usr/bin/find: ./lost+found: Permission denied
./ospf-gr.cfg
./ospfgrconfig
./ospf-gr.conf
```

Related Commands	Command	Description
	cd	Changes the current working directory.
pwd	Displays the name of the current working directory.	

flowcontrol hardware

To enable flow control on the COM1 port, use the **flowcontrol hardware** command. To disable flow control, use the **no** form of this command.

flowcontrol hardware

no flowcontrol hardware

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes COM1 port configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines Use the **flowcontrol hardware** command only in the default virtual device context (VDC). You can configure the COM1 ports only from a session on the console port or COM1 port. This command does not require a license.

Examples This example shows how to enable flow control for the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# flowcontrol hardware
```

This example shows how to disable flow control for the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# no flowcontrol hardware
```

Related Commands	Command	Description
	show line	Displays information about the COM1 port and console port configuration.

format

To format an external Flash device to erase the contents and restore it to its factory-shipped state, use the **format** command.

format *filesystem:*

Syntax Description	<i>filesystem:</i>	Name of the file system. The valid values are slot0 , usb1 , or usb2 .
---------------------------	--------------------	---

Defaults	None
-----------------	------

Command Modes	Any command mode
----------------------	------------------

Supported User Roles	network-admin vdc-admin
-----------------------------	----------------------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	You can use this command only in the default virtual device context (VDC).
-------------------------	--



Note

For information about formatting and recovering a corrupted bootflash, see the *Cisco Nexus 7000 Series NX-OS Troubleshooting Guide*.

This command does not require a license.

Examples	This example shows how to format an external Flash device:
-----------------	--

```
switch# format slot0:
```

Related Commands	Command	Description
	cd	Changes the current working directory.
	dir	Displays the directory contents.
	pwd	Displays the name of the current working directory.

gunzip

To uncompress a compressed file, use the **gunzip** command.

gunzip *filename*

Syntax Description	<i>filename</i>	Name of a file. The filename is case sensitive.
---------------------------	-----------------	---

Defaults	None
-----------------	------

Command Modes	Any command mode
----------------------	------------------

SupportedUserRoles	network-admin vdc-admin
---------------------------	----------------------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	The compressed filename must have the .gz extension. You do not have to enter the .gz extension as part of the filename.
-------------------------	--

The Cisco NX-OS software uses Lempel-Ziv 1977 (LZ77) coding for compression.

This command does not require a license.

Examples	This example shows how to uncompress a compressed file:
-----------------	---

```
switch# gunzip run_cfg.cfg
```

Related Commands	Command	Description
	dir	Displays the directory contents.
	gzip	Compresses a file.

gzip

To compress a file, use the **gzip** command.

gzip *filename*

Syntax Description	<i>filename</i>	Name of a file. The filename is case sensitive.
---------------------------	-----------------	---

Defaults	None	
-----------------	------	--

Command Modes	Any command mode	
----------------------	------------------	--

SupportedUserRoles	network-admin vdc-admin	
---------------------------	----------------------------	--

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	<p>After you use this command, the file is replaced with the compressed filename that has the .gz extension. The Cisco NX-OS software uses Lempel-Ziv 1977 (LZ77) coding for compression.</p> <p>This command does not require a license.</p>
-------------------------	---

Examples	<p>This example shows how to compress a file:</p> <pre>switch# gzip run_cfg.cfg</pre>
-----------------	--

Related Commands	Command	Description
	dir	Displays the directory contents.
	gunzip	Uncompresses a compressed file.

hostname

To configure the hostname for the device, use the **hostname** command. To revert to the default, use the **no** form of this command.

hostname *name*

no hostname

Syntax Description	<i>name</i>	Name for the device. The name is alphanumeric, case sensitive, can contain special characters, and can have a maximum of 63 characters.
--------------------	-------------	---

Defaults	switch
----------	--------

Command Modes	Global configuration mode
---------------	---------------------------

SupportedUserRoles	network-admin vdc-admin
--------------------	----------------------------

Command History	Release	Modification
	7.3(0)D1(1)	This command was modified. The character limit of a hostname is increased from 32 to 63 alphanumeric characters.
	4.0(1)	This command was introduced.

Usage Guidelines The Cisco NX-OS software uses the hostname in command-line interface (CLI) prompts and in default configuration filenames.

The **hostname** command performs the same function as the **switchname** command.

This command does not require a license.

Examples This example shows how to configure the device hostname:

```
switch# configure terminal
switch(config)# hostname Engineering2
Engineering2(config)#
```

This example shows how to revert to the default device hostname:

```
Engineering2# configure terminal
Engineering2(config)# no hostname
switch(config)#
```

■ hostname

Related Commands

Command	Description
show hostname	Displays the device hostname.
switchname	Configures the device hostname.

install all

To install the kickstart and system images on your Cisco NX-OS device, use the **install all** command.

install all

```
[kickstart { bootflash: | ftp://server[/path] | scp://[username@]server[/path] |
sftp://[username@]server[/path] | slot0: | tftp://server[:port][[/path] |
volatile: }kickstart-filename]
[system { bootflash: | ftp://server[/path] | scp://[username@]server[/path] |
sftp://[username@]server[/path] | slot0: | tftp://server[:port][[/path] |
volatile: }system-filename]
```

Syntax	Description
kickstart	(Optional) Specifies the kickstart image file.
bootflash:	Specifies the internal Flash memory.
ftp:	Uses FTP to download the file.
<i>//server</i>	(Optional) Server IPv4 address or name. The name is case sensitive.
<i>/path</i>	(Optional) Path to the file. The name is case sensitive.
scp:	Uses Secure Copy Protocol (SCP) to download the file.
<i>username@</i>	(Optional) Username on the server. The name is case sensitive.
sftp:	Uses Secure Shell FTP (SFTP) to download the file.
slot0:	Specifies external Flash memory.
tftp:	Uses Trivial FTP (TFTP) to download the file.
<i>port</i>	(Optional) Port number.
volatile:	Specifies the volatile memory on the device.
<i>kickstart-filename</i>	Name of the kickstart image file. The name is case sensitive.
system	(Optional) Specifies the system image file.
<i>system-filename</i>	Name of the system image file. The name is case sensitive.

Defaults

If you do not enter any parameters, the boot variable values are used.
The path is the default for the user on the remote server.

Command Modes

Any command mode

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

If you do not enter the information about the server or username when downloading and installing the image files from a remote server, you will be prompted for the information.

This command sets the kickstart and system boot variables and copies the image files to the redundant supervisor module.

You can use the **install all** command to downgrade the Cisco NX-OS software on the device. To determine the incompatibility of the downgrade Cisco NX-OS software with the current Cisco NX-OS configuration on the device, use the **show incompatibility system** command.

This command installs Cisco NX-OS software only on devices with dual supervisor modules. To install new Cisco NX-OS software on a device with a single supervisor, you must use the **reload** command to boot the system after you use the **install all** command. For information on upgrading and downgrading images on your Cisco NX-OS device, see the *Cisco Nexus 7000 Series NX-OS Software Upgrade and Downgrade Guide, Release 6.x*.

The **install all** command does not install electronically programmable logical device (EPLD) images.

This command does not require a license.

Examples

This example shows how to install the Cisco NX-OS software from the bootflash: directory:

```
switch# install all kickstart bootflash:nx-os_kick.bin system bootflash:nx-os_sys.bin
```

This example shows how to install the Cisco NX-OS software using the values configured in the kickstart and system boot variables:

```
switch# configure terminal
switch(config)# boot kickstart bootflash:nx-os_kick.bin
switch(config)# boot system bootflash:nx-os_sys.bin
switch(config)# exit
switch# copy running-config startup-config
switch# install all
```

This example shows how to install the Cisco NX-OS software from an SCP server:

```
switch# install all kickstart scp://adminuser@10.10.1.1/nx-os_kick.bin system
bootflash:scp://adminuser@10.10.1.1/nx-os_sys.bin
```

Related Commands

Command	Description
boot kickstart	Configures the boot variable for the kickstart image.
boot system	Configures the boot variable for the system image.
reload	Reloads the device with the new Cisco NX-OS software.
show incompatibility system	Displays configuration incompatibilities between Cisco NX-OS system software images.
show version	Displays information about the software version.

install all epld

To upgrade the electronic programmable logical device (EPLD) image, use the **install all epld** command.

install all epld [**bootflash:** *epld-image-name* | **slot0:** *epld-image-name* | **volatile:** *epld-image-name*]

Syntax Description

bootflash:	(Optional) Specifies the internal flash memory.
<i>epld-image-name</i>	Name of the EPLD image file. The name is case sensitive.
slot0:	(Optional) Specifies the external flash memory.
volatile:	(Optional) Specifies the volatile memory on the device.

Defaults

None

Command Modes

Any command mode

Supported User Roles

network-admin

Command History

Release	Modification
4.2 (1)	This command was introduced.

Usage Guidelines

Follow these guidelines when you upgrade or downgrade the EPLD:

- You can perform an upgrade from the active supervisor module only. All the modules, including the active supervisor module, can be updated individually.
- You can individually update each module whether it is online or offline as follows:
 - If you upgrade EPLD images on an online module, only the EPLD images with version numbers that differ from the new EPLD images are upgraded.
 - If you upgrade EPLD images on an offline module, all of the EPLD images are upgraded.
- On a switch that has two supervisor modules, upgrade the EPLDs for the standby supervisor and then switch the active supervisor to standby mode to upgrade its EPLDs (the supervisor switchover is not disruptive to traffic on Cisco Nexus 7000 switches). On a switch that has only one supervisor module, you can upgrade the active supervisor, but this will disrupt its operations during the upgrade.
- If you interrupt an upgrade, you must upgrade the module that is being upgraded again.
- The upgrade process disrupts traffic on the targeted module.
- Do not insert or remove any modules while an EPLD upgrade is in progress.

This command does not require a license.

Examples

This example shows how to upgrade a Cisco NX-OS EPLD image:

```
switch# install all ep1d bootflash:n7000-s1-ep1d.4.2.1.img
```

Compatibility check:

Module	Type	Upgradable	Impact	Reason
3	LC	Yes	disruptive	Module Upgradable
5	SUP	Yes	disruptive	Module Upgradable
7	LC	Yes	disruptive	Module Upgradable
9	LC	Yes	disruptive	Module Upgradable
1	Xbar	Yes	disruptive	Module Upgradable
2	Xbar	Yes	disruptive	Module Upgradable
3	Xbar	Yes	disruptive	Module Upgradable
1	FAN	Yes	disruptive	Module Upgradable
2	FAN	Yes	disruptive	Module Upgradable
3	FAN	Yes	disruptive	Module Upgradable
4	FAN	Yes	disruptive	Module Upgradable

Retrieving EPLD versions... Please wait.

Images will be upgraded according to following table:

Module	Type	EPLD	Running-Version	New-Version	Upg-Required
3	LC	Power Manager	5.4	5.6	Yes
3	LC	IO	2.11	2.13	Yes
3	LC	Forwarding Engine	1.6	1.6	No
5	SUP	Power Manager	3.7	3.9	Yes
5	SUP	IO	3.26	3.28	Yes
5	SUP	Inband	1.7	1.8	Yes
5	SUP	Local Bus CPLD	3.0	3.0	No
5	SUP	CMP CPLD	6.0	6.0	No
7	LC	Power Manager	4.6	4.8	Yes
7	LC	IO	1.14	1.15	Yes
7	LC	Forwarding Engine	1.6	1.6	No
7	LC	FE Bridge(1)	186.3	186.3	No
7	LC	FE Bridge(2)	186.3	186.3	No
7	LC	Linksec Engine(1)	1.8	2.2	Yes
7	LC	Linksec Engine(2)	1.8	2.2	Yes
7	LC	Linksec Engine(3)	1.8	2.2	Yes
7	LC	Linksec Engine(4)	1.8	2.2	Yes
7	LC	Linksec Engine(5)	1.8	2.2	Yes
7	LC	Linksec Engine(6)	1.8	2.2	Yes
7	LC	Linksec Engine(7)	1.8	2.2	Yes
7	LC	Linksec Engine(8)	1.8	2.2	Yes
9	LC	Power Manager	5.4	5.6	Yes
9	LC	IO	2.11	2.13	Yes
9	LC	Forwarding Engine	1.6	1.6	No
1	Xbar	Power Manager	2.9	2.10	Yes
2	Xbar	Power Manager	2.9	2.10	Yes
3	Xbar	Power Manager	2.9	2.10	Yes
1	FAN	Fan Controller (1)	0.5	0.7	Yes
1	FAN	Fan Controller (2)	0.5	0.7	Yes
2	FAN	Fan Controller (1)	0.5	0.7	Yes
2	FAN	Fan Controller (2)	0.5	0.7	Yes
3	FAN	Fan Controller (1)	0.5	0.7	Yes
3	FAN	Fan Controller (2)	0.5	0.7	Yes
4	FAN	Fan Controller (1)	0.4	0.7	Yes
4	FAN	Fan Controller (2)	0.4	0.7	Yes

The above modules require upgrade.

Do you want to continue (y/n) ? [n]

Related Commands

Command	Description
<code>install all</code>	Installs the kickstart and system images on the Cisco NX-OS device.
<code>reload</code>	Reloads the device with the new Cisco NX-OS software.
<code>show incompatibility system</code>	Displays configuration incompatibilities between Cisco NX-OS system software images.
<code>show version</code>	Displays information about the software version.

install all parallel

To upgrade the line cards in the system concurrently, use the **install all parallel** command.

install all parallel

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin

Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines You can upgrade up to three line cards concurrently by using the **install all parallel** command. The parallel **install all parallel** is supported only when you are upgrading from Cisco NX-OS Release 5.2 to a later release.

This command does not require a license.

Examples This example shows how to upgrade the line cards in the system concurrently:

```
switch(config)# install all parallel
```

Related Commands	Command	Description
	boot kickstart	Configures the boot variable for the kickstart image.
	boot system	Configures the boot variable for the system image.
	reload	Reloads the device with the new Cisco NX-OS software.
	show incompatibility system	Displays configuration incompatibilities between Cisco NX-OS system software images.

install fan-module epld

To install an electronically programmable logical device (EPLD) image on a fan module, use the **install fan-module epld** command.

```
install fan-module slot epld {bootflash: | slot0: | volatile:}filename
```

Syntax Description

<i>slot</i>	Slot number in chassis.
bootflash:	Specifies the internal Flash memory.
slot0:	Specifies the external Flash memory.
<i>volatile:</i>	Specifies the volatile memory.
<i>filename</i>	Name of the EPLD image file.

Defaults

None

Command Modes

Any command mode

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must copy the EPLD image file to local storage before you can install it.

Enter the **install fan-module epld** command from the active supervisor module to update any other module.

Use the **show version fan slot epld** command to display the EPLD version for a fan module.



Caution

Do not insert or remove any modules while an EPLD upgrade or downgrade is in progress.

This command does not require a license.

Examples

This example shows how to install an EPLD image on a module:

```
switch# install fan-module 1 epld bootflash:n7000-s1-epld.4.0.2.bin
```

install fan-module epld**Related Commands**

Command	Description
copy	Copies files.
show version	Displays information about the software version.

install feature-set

To install a feature set on a module, use the **install feature-set** command. To uninstall a feature set from a module, use the **no** form of this command.

install feature-set [*fcoe* | *fex* | *l2mp*]

no install feature-set [*fcoe* | *fex* | *l2mp*]

Syntax Description	Parameter	Description
	fcoe	(Optional) Specifies Fibre Channel over Ethernet.
	<i>fex</i>	(Optional) Specifies the Fabric Extender.
	l2mp	(Optional) Specifies FabricPath.

Defaults None

Command Modes config-vdc mode

Supported User Roles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	5.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to install a feature set:

```
switch(config)# install feature-set l2mp
switch(config)#
```

This example shows how to uninstall a feature set:

```
switch(config)# no install feature-set l2mp
switch(config)#
```

Related Commands	Command	Description
	allow feature-set	Allows a feature set on a virtual device context (VDC).
	feature-set	Enables a feature set.

install license

To install a license, use the **install license** command.

```
install license { bootflash: | slot0: | usb0: | usb1: } src-filename [target-filename]
```

Syntax Description		
bootflash:	Specifies the internal Flash memory source location for the license file.	
slot0:	Specifies the external Flash memory source location for the license file.	
usb0:	Specifies the external USB memory source location for the license file.	
usb1:	Specifies the external USB memory source location for the license file.	
<i>src-filename</i>	Name of the source license file.	
<i>target-filename</i>	(Optional) Name of the target license file.	

Defaults No license is installed.

Command Modes Any command mode

SupportedUserRoles network-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines If a target filename is provided after the source location, the license file is installed with that name. Otherwise, the filename in the source uniform resource locator (URL) is used. This command also verifies the license file before installing it.

For information on installing licenses on your Cisco NX-OS device, see the *Cisco NX-OS Licensing Guide*.

This command does not require a license.

Examples This example shows how to install a file named “license-file” that resides in the bootflash: directory:

```
switch# install license bootflash:license-file
```

Related Commands	Command	Description
	show license	Displays license information.

install module epld

To install an electronically programmable logical device (EPLD) image on an I/O module, use the **install module epld** command.

```
install module slot epld {bootflash: | slot0: | volatile:} filename
```

Syntax Description

<i>slot</i>	Slot number in chassis. The range is from 1 to 18.
bootflash:	Specifies the internal Flash memory.
slot0:	Specifies the external Flash memory.
<i>volatile:</i>	Specifies the volatile memory.
<i>filename</i>	Name of the EPLD image file.

Defaults

None

Command Modes

Any command mode

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must copy the EPLD image file to local storage before you can install it.

Enter the **install module epld** command from the active supervisor module to update any other module.

Use the **show version module *slot* epld** command to display the EPLD version for a fabric module.



Caution

Do not insert or remove any modules while an EPLD upgrade or downgrade is in progress.

This command does not require a license.

Examples

This example shows how to install an EPLD image on a fabric module:

```
switch# install module 2 epld bootflash:n7000-s1-epld.4.0.2.bin
```

install module epld**Related Commands**

Command	Description
copy	Copies files.
show version	Displays information about the software version.

install xbar-module epld

To install an electronically programmable logical device (EPLD) image on a fabric module, use the **install xbar-module epld** command.

```
install xbar-module slot epld { bootflash: | slot0: | volatile: }filename
```

Syntax Description

<i>slot</i>	Slot number in chassis. The range is from 1 to 18.
bootflash:	Specifies the internal Flash memory.
slot0:	Specifies the external Flash memory.
<i>volatile:</i>	Specifies the volatile memory.
<i>filename</i>	Name of the EPLD image file.

Defaults

None

Command Modes

Any command mode

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must copy the EPLD image file to local storage before you can install it.

Enter the **install xbar-module epld** command from the active supervisor module to update any other module.

Use the **show version xbar slot epld** command to display the EPLD version for an I/O module.



Caution

Do not insert or remove any modules while an EPLD upgrade or downgrade is in progress.

This command does not require a license.

Examples

This example shows how to install an EPLD image on an I/O module:

```
switch# install xbar-module 2 epld bootflash:n7000-s1-epld.4.0.2.bin
```

Related Commands

■ install xbar-module epld

Command	Description
copy	Copies files.
show version	Displays information about the software version.

install xbar-module epld

To install an electronically programmable logical device (EPLD) image on a fabric module, use the **install xbar-module epld** command.

```
install xbar-module slot epld { bootflash: | slot0: | volatile: } filename
```

Syntax Description

<i>slot</i>	Slot number in chassis. The range is from 1 to 18.
bootflash:	Specifies the internal Flash memory.
slot0:	Specifies the external Flash memory.
<i>volatile:</i>	Specifies the volatile memory.
<i>filename</i>	Name of the EPLD image file.

Defaults

None

Command Modes

Any command mode

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must copy the EPLD image file to local storage before you can install it.

Enter the **install xbar-module epld** command from the active supervisor module to update any other module.

Use the **show version xbar slot epld** command to display the EPLD version for an I/O module.



Caution

Do not insert or remove any modules while an EPLD upgrade or downgrade is in progress.

This command does not require a license.

Examples

This example shows how to install an EPLD image on an I/O module:

```
switch# install xbar-module 2 epld bootflash:n7000-s1-epld.4.0.2.bin
```

Related Commands

■ install xbar-module epld

Command	Description
copy	Copies files.
show version	Displays information about the software version.

license smart conversion start1

To manually convert a traditional license to a smart license, use the **license smart conversion start** command in Privileged EXEC mode.

license smart conversion start

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Privileged EXEC (#)

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	8.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples The following example shows how to convert a traditional license to smart license using the command line interface:

```
switch# license smart conversion start
```

Smart License Conversion process is in progress. Use the 'show license status' command to check the progress and result.

Related Commands	Command	Description
	show license status	Displays information about the license status.

license smart conversion stop1

To stop a manual conversion of a traditional license to a smart license, use the **license smart conversion stop** command in Privileged EXEC mode.

license smart conversion start

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Privileged EXEC (#)

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	8.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples The following example shows how to stop a manual conversion of a traditional license to a smart license using the command line interface:

```
switch# license smart conversion stop

stop manual conversion failed:
Some Smart Licensing Conversion jobs stopped successfully.
```

Related Commands	Command	Description
	show license status	Displays information about the license status.

line com1

To specify the COM1 port and enter COM1 port configuration mode, use the **line com1** command.

line com1

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You can configure the COM1 line from a console port session or a COM1 port session.
This command does not require a license.

Examples This example shows how to enter COM1 port configuration mode:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)#
```

Related Commands	Command	Description
	show line	Displays information about the COM1 port and console port configuration.

line console

To specify the console port and enter console port configuration mode, use the **line console** command.

line console

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You can use the **line console** command only in the default virtual device context (VDC).
You can configure the console line only from a console port session.
This command does not require a license.

Examples This example shows how to enter console port configuration mode:

```
switch# configure terminal
switch(config)# line console
switch(config-console)#
```

Related Commands	Command	Description
	show line	Displays information about the COM1 port and console port configuration.

line vty

To specify the virtual terminal and enter line configuration mode, use the **line vty** command.

line vty

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Global configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to enter the line configuration mode:

```
switch# configure terminal
switch(config)# line vty
switch(config-line)#
```

Related Commands	Command	Description
	show line	Displays information about the COM1 port and console port configuration.

load

To load either a image file or debug plugin, use the **load** command.

load *device:filename*

Syntax Description	<i>device:filename</i>	Storage device and filename of the image file or debug plugin.
---------------------------	------------------------	--

Defaults	None.
-----------------	-------

Command Modes	Boot EXEC.
----------------------	---------------

Command History	Release	Modification
	5.2(5)	This command was introduced.

Usage Guidelines	Use the load command to load either a image file or debug plugin. You can use the load command in boot-up configuration mode to load the image file. Similarly, you can use the load command to load the debug plugin in the EXEC mode.
-------------------------	--

Examples	The following example shows how to load the debug plugin on the Nexus platform.
-----------------	---

```
switch# load bootflash:n7000-s1-debug-sh.5.2.3a.gbin
```

The following example shows how to load a system image on the Nexus platform.

```
switch(boot)# load bootflash:system-image1
```

modem connect line

To notify the Cisco NX-OS device that you connected a modem, use the **modem connect line** command.

modem connect line {com1 | console}

Syntax Description	com1	Specifies that you have connected the modem to the COM1 port.
	console	Specifies that you have connected the modem to the console port.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.1(2)	This command was introduced.

Usage Guidelines You can use the **modem connect line** command only in the default virtual device context (VDC). This command does not require a license.

Examples This example shows how to notify the device that you have connected a modem to the COM1 port:

```
switch# modem connect line com1
```

This example shows how to notify the device that you have connected a modem to the console port:

```
switch# modem connect line console
```

Related Commands	Command	Description
	modem in	Enables the modem connection on the COM1 port or console port.
	show line	Displays information about the COM1 and console port configuration.

modem in

To enable the modem connection on the COM1 or console port, use the **modem in** command. To disable the modem connection, use the **no** form of this command.

modem in

no modem in

Syntax Description This command has no arguments or keywords.

Defaults Disabled

Command Modes COM1 port configuration mode
Console port configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You can use the **modem in** command only in the default virtual device context (VDC).
You can configure the console and COM1 ports only from a session on the console port.
This command does not require a license.

Examples This example shows how to enable a modem connection on the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# modem in
```

This example shows how to enable a modem connection on the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# modem in
```

This example shows how to disable a modem connection on the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# no modem in
```

Related Commands	Command	Description
	line com1	Enters COM1 port configuration mode.
	line console	Enters console port configuration mode.
	show line	Displays information about the COM1 and console port configuration.

modem init-string

To download the initialization string to a modem connected to the COM1 or console port, use the **modem init-string** command. To revert to the default, use the **no** form of this command.

modem init-string { **default** | **user-input** }

no modem init-string

Syntax Description

default	Downloads the default initialization string.
user-input	Downloads the user-input initialization string.

Defaults

The default initialization string is ATE0Q1&D2&C1S0=1\015.

Command Modes

COM1 port configuration mode
Console port configuration mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You can use the **modem init-string** command only in the default virtual device context (VDC).

You can configure the console and COM1 ports only from a session on the console port.

The default initialization string ATE0Q1&D2&C1S0=1\015 is defined as follows:

- AT—Attention
- E0 (required)—No echo
- Q1—Result code on
- &D2—Normal data terminal ready (DTR) option
- &C1—Enable tracking the state of the data carrier
- S0=1—Pick up after one ring
- \015 (required)—Carriage return in octal

Use the **modem set-string** command to configure the user-input initialization string.

This command does not require a license.

Examples

This example shows how to download the default initialization string to the modem connected to the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# modem init-string default
```

This example shows how to download the default initialization string to the modem connected to the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# modem init-string default
```

This example shows how to download the user-input initialization string to the modem connected to the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# modem init-string user-input
```

This example shows how to download the user-input initialization string to the modem connected to the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# modem init-string user-input
```

This example shows how to revert to the default initialization string for the modem connected to the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# no modem init-string
```

This example shows how to revert to the default initialization string for the modem connected to the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# no modem init-string
```

Related Commands

Command	Description
line com1	Enters COM1 port configuration mode.
line console	Enters console port configuration mode.
modem set-string user-input	Configures the user-input initialization string for a modem.
show line	Displays information about the COM1 and console port configuration.

modem restart line

To restart a modem connection on the COM1 port or console port, use the **modem restart line** command.

modem restart line { **com1** | **console** }

Syntax Description	com1	Restarts the modem on the COM1 port.
	console	Restarts the modem on the console port.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.1(2)	This command was introduced.

Usage Guidelines You can use the **modem restart line** command only in the default virtual device context (VDC). This command does not require a license.

Examples This example shows how to restart a modem connected to the COM1 port:

```
switch# modem restart line com1
```

This example shows how to restart a modem connected to the console port:

```
switch# modem restart line console
```

Related Commands	Command	Description
	modem in	Enables the modem connection on the COM1 port or console port.
	show line	Displays information about the COM1 and console port configuration.

modem set-string user-input

To configure the user-input initialization string to download to a modem connected to the COM1 or console port, use the **modem set-string user-input** command. To revert to the default, use the **no** form of this command.

modem set-string user-input *string*

no modem set-string

Syntax Description	<i>string</i>	User-input string. This string is alphanumeric and case sensitive, can contain special characters, and has a maximum of 100 characters.
---------------------------	---------------	---

Defaults	None
-----------------	------

Command Modes	COM1 port configuration mode Console port configuration mode
----------------------	---

SupportedUserRoles	network-admin vdc-admin
---------------------------	----------------------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	<p>You can use the modem set-string user-input command only in the default virtual device context (VDC).</p> <p>You can configure the console and COM1 ports only from a session on the console port.</p> <p>This command does not require a license.</p>
-------------------------	--

Examples	<p>This example shows how to configure the user-input initialization string for the modem connected to the COM1 port:</p>
-----------------	---

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# modem set-string user-input ATE0Q1&D2&C1S0=3\015
```

This example shows how to configure the user-input initialization string for the modem connected to the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# modem set-string user-input ATE0Q1&D2&C1S0=3\015
```

This example shows how to revert to the default user-input initialization string for the modem connected to the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# no modem set-string
```

This example shows how to revert to the default user-input initialization string for the modem connected to the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# no modem set-string
```

Related Commands

Command	Description
line com1	Enters COM1 port configuration mode.
line console	Enters console port configuration mode.
modem init-string	Downloads the user-input initialization string to a modem.
show line	Displays information about the COM1 and console port configuration.

move

To move a file from one directory to another, use the **move** command.

```
move [filesystem:[//module/][directory/] | directory/]source-filename
      { [filesystem:[//module/][directory/] | directory/]destination-filename } | target-filename }
```

Syntax Description		
<i>filesystem:</i>	(Optional) Name of a file system. The name is case sensitive.	
<i>//module/</i>	(Optional) Identifier for a supervisor module. Valid values are sup-active , sup-local , sup-remote , or sup-standby . The identifiers are case sensitive.	
<i>directory/</i>	(Optional) Name of a directory. The name is case sensitive.	
<i>source-filename</i>	Name of the file to move. The name is case sensitive.	
<i>destination-filename</i>	(Optional) Name of the destination file. The name is alphanumeric, case sensitive, and has a maximum of 64 characters.	
<i>target-filename</i>	(Optional) Name of the target file. The target-filename argument is alphanumeric, case sensitive, and has a maximum of 64 characters.	

Defaults

The default name for the destination file is the same as the source filename.

Command Modes

Any command mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You can make a copy of a file by using the **copy** command.



Tip

You can rename a file by moving it within the same directory.

This command does not require a license.

Examples

This example shows how to move a file to another directory:

```
switch# move file1 my_files:file2
```

This example shows how to move a file to another file system:

```
switch# move file1 slot0:
```

This example shows how to move a file to another supervisor module:

```
switch# move file1 bootflash://sup-remote/file1.bak
```

Related Commands

Command	Description
cd	Changes the current working directory.
copy	Makes a copy of a file.
dir	Displays the directory contents.
pwd	Displays the name of the current working directory.

parity

To configure the parity for the COM1 port or console port, use the **parity** command. To revert to the default, use the **no** form of this command.

```
parity {even | none | odd}
```

```
no parity {even | none | odd}
```

Syntax Description

even	Specifies even parity.
none	Specifies no parity.
odd	Specifies odd parity.

Defaults

The **none** keyword is the default.

Command Modes

COM1 port configuration mode
Console port configuration mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You can use the **parity** command only in the default virtual device context (VDC).
You can configure the console and COM1 ports only from a session on the console port.
This command does not require a license.

Examples

This example shows how to configure the parity for the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# parity even
```

This example shows how to configure the parity for the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# parity even
```

This example shows how to revert to the default parity for the COM1 port:

```
switch# configure terminal
switch(config)# line com1
```

```
switch(config-com1)# no parity even
```

This example shows how to revert to the default parity for the console port:

```
switch# configure terminal  
switch(config)# line console  
switch(config-console)# no parity even
```

Related Commands

Command	Description
show line	Displays information about the COM1 port and console port configuration.

ping

To determine the network connectivity to another device using IPv4 addressing, use the **ping** command.

```
ping {dest-ipv4-address | hostname} [count {number | unlimited}] [df-bit] [interval seconds]
[packet-size bytes] [source src-ipv4-address] [timeout seconds] [vrf vrf-name]
```

Syntax Description

<i>dest-ipv4-address</i>	IPv4 address of the destination device. The format is: <i>A.B.C.D</i> .
<i>hostname</i>	Hostname of the destination device. The hostname is case sensitive.
count	(Optional) Specifies the number of transmissions to send.
<i>number</i>	Number of pings. The range is from 1 to 655350. The default is 5.
unlimited	Allows an unlimited number of pings.
df-bit	(Optional) Enables the do-not-fragment bit in the IPv4 header. By default, it is disabled.
interval <i>seconds</i>	(Optional) Specifies the interval in seconds between transmissions. The range is from 0 to 60. The default is 0 second.
packet-size <i>bytes</i>	(Optional) Specifies the packet size in bytes to transmit. The range is from 1 to 65468. The default is 56 bytes.
source <i>scr-ipv4-address</i>	(Optional) Specifies the source IPv4 address to use. The format is <i>A.B.C.D</i> . The default is the IPv4 address for the management interface of the device.
timeout <i>seconds</i>	(Optional) Specifies the nonresponse timeout interval in seconds. The range is from 1 to 60. The default is 2 seconds.
vrf <i>vrf-name</i>	(Optional) Specifies the virtual routing and forwarding (VRF) name. The default is the default VRF.

Defaults

For the default values, see the “Syntax Description” section for this command.

Command Modes

Any command mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To determine the network connectivity to another device using IPv6 addressing, use the **ping6** command. This command does not require a license.

Examples

This example shows how to determine connectivity to another device using IPv4 addressing:

```
switch# ping 172.28.231.246 vrf management
PING 172.28.231.246 (172.28.231.246): 56 data bytes
Request 0 timed out
64 bytes from 172.28.231.246: icmp_seq=1 ttl=63 time=0.799 ms
64 bytes from 172.28.231.246: icmp_seq=2 ttl=63 time=0.597 ms
64 bytes from 172.28.231.246: icmp_seq=3 ttl=63 time=0.711 ms
64 bytes from 172.28.231.246: icmp_seq=4 ttl=63 time=0.67 ms

--- 172.28.231.246 ping statistics ---
5 packets transmitted, 4 packets received, 20.00% packet loss
round-trip min/avg/max = 0.597/0.694/0.799 ms
```

Related Commands

Command	Description
ping6	Determines connectivity to another device using IPv6 addressing.

ping6

To determine the network connectivity to another device using IPv6 addressing, use the **ping6** command.

```
ping6 {dest-ipv6-address | hostname} [count {number | unlimited}] [interface intf-id] [interval
seconds] [packet-size bytes] [source ipv6-address] [timeout seconds] [vrf vrf-name]
```

Syntax Description

<i>dest-ipv6-address</i>	IPv6 address of the destination device. The format is: <i>A.B.C.D</i> .
<i>hostname</i>	Hostname of the destination device. The hostname is case sensitive.
count	(Optional) Specifies the number of transmissions to send.
<i>number</i>	Number of pings. The range is from 1 to 655350. The default is 5.
unlimited	Allows an unlimited number of pings.
interface <i>intf-id</i>	(Optional) Specifies the interface to send the IPv6 packet. The valid interface types are Ethernet, loopback, port channel, and VLAN.
interval <i>seconds</i>	(Optional) Specifies the interval in seconds between transmissions. The range is from 0 to 60. The default is 1 second.
packet-size <i>bytes</i>	(Optional) Specifies the packet size in bytes to transmit. The range is from 1 to 65468.
source <i>ipv6-address</i>	(Optional) Specifies the source IPv6 address to use. The format is <i>A:B::C:D</i> . The default is the IPv6 address for the management interface of the device.
timeout <i>seconds</i>	(Optional) Specifies the nonresponse timeout interval in seconds. The range is from 1 to 60. The default is 2 seconds.
vrf <i>vrf-name</i>	(Optional) Specifies the virtual routing and forwarding (VRF) name. The default is the default VRF.

Defaults

For the default values, see the “Syntax Description” section for this command.

Command Modes

Any command mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To determine the network connectivity to another device using IPv4 addressing, use the **ping** command. This command does not require a license.

Examples

This example shows how to determine connectivity to another device using IPv6 addressing:

```
switch# ping6 2001:0DB8::200C:417A vrf management
```

Related Commands

Command	Description
ping	Determines connectivity to another device using IPv4 addressing.

pong

To start the pong service on the current virtual device context (VDC), use the **pong** command.

pong {source *mac* destination *mac*} vlan *vlan-id* count *numbers* cos | details | inject | interface *interface-id* | interval *seconds* | timeout *seconds*]

Syntax Description

source	Specifies the source ID.
mac	MAC address. The format can be: E.E.E, EE-EE-EE-EE-EE-EE, EE:EE:EE:EE:EE:EE, or EEEE.EEEE.EEEE.
destination	Specifies the destination ID.
vlan	Specifies the VLAN over which the packets go through.
vlan-id	VLAN ID. The range is from 1 to 4094.
count <i>numbers</i>	Specifies the number number of packets to send. The range is from 0 to 2147483647.
cos	802.1Q class of service value. The range is from 0 to 7.
details	(Optional) Specifies details of all timestamps.
inject	(Optional) Specifies the injection of packets through an interface.
interface <i>interface-id</i>	(Optional) Specifies the interface to send Pong messages. The valid interface types are Ethernet.
interval <i>seconds</i>	(Optional) Specifies the interval for sending the Pong messages. The range is from 1 to 5.
timeout <i>seconds</i>	(Optional) Specifies the timeout for receiving Pong replies. The range is from 2 to 10.

Defaults

None

Command Modes

Global configuration mode

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
6.1(1)	Changed the command outputs.
5.2(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows the Pong service between FabricPath switch-ids:

```
switch# configure terminal
switch(config)# pong destination-swid 2811 destination-mac 18ef.63e9.ee43 vlan 2
```

Packet No. 1

Legend:

```
(*) - software delay(not hardware latency)
(#) - reverse path
(NA) - not available
```

```
-----
Hop  System-mac  (switch-id)  Switching time
              (sec,    nsec)
-----
1    18-ef-63-e9-ee-42 ( 456)    0      4928
2    18-ef-63-e9-ee-43 (2811)    0      530568408*
#3   18-ef-63-e9-ee-42 ( 456)    0      4872
Round trip time: 0sec 15624 nsec
```

Packet No. 2

Legend:

```
(*) - software delay(not hardware latency)
(#) - reverse path
(NA) - not available
```

```
-----
Hop  System-mac  (switch-id)  Switching time
              (sec,    nsec)
-----
1    18-ef-63-e9-ee-42 ( 456)    0      4896
2    18-ef-63-e9-ee-43 (2811)    0      536461272*
#3   18-ef-63-e9-ee-42 ( 456)    0      4808
Round trip time: 0sec 15544 nsec
```

Packet No. 3

Legend:

```
(*) - software delay(not hardware latency)
(#) - reverse path
(NA) - not available
```

```
-----
Hop  System-mac  (switch-id)  Switching time
              (sec,    nsec)
-----
1    18-ef-63-e9-ee-42 ( 456)    0      4848
2    18-ef-63-e9-ee-43 (2811)    0      534087176*
#3   18-ef-63-e9-ee-42 ( 456)    0      4888
Round trip time: 0sec 15544 nsec
```

Packet No. 4

Legend:

```
(*) - software delay(not hardware latency)
(#) - reverse path
(NA) - not available
```

```
-----
Hop  System-mac  (switch-id)  Switching time
              (sec,    nsec)
-----
1    18-ef-63-e9-ee-42 ( 456)    0      4880
2    18-ef-63-e9-ee-43 (2811)    0      541281528*
#3   18-ef-63-e9-ee-42 ( 456)    0      4824
Round trip time: 0sec 15544 nsec
```

Packet No. 5

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id)  Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-42 ( 456)    0      4880
2     18-ef-63-e9-ee-43 (2811)    0      543347528*
#3    18-ef-63-e9-ee-42 ( 456)    0      4856
Round trip time: 0sec 15576 nsec
```

Summary:

Packets sent on vlan : 2
 Total packets sent : 5
 Total packets received: 5
 Maximum round trip time in ns: 15624
 Minimum round trip time in ns: 15544
 Average round trip time in ns: 15566

This example shows the Pong service using static MAC for injection:

```
switch(config)# configure terminal
switch(config)# pong source 1.2.3 destination 18ef.63e9.ee43 interface ethernet 1/10
inject
```

Packet No. 1

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id)  Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-41  (NA)    0      4304
2     18-ef-63-e9-ee-42  (NA)    0      4288
3     18-ef-63-e9-ee-43  (NA)    0      540653528*
#4    18-ef-63-e9-ee-42  (NA)    0      4760
#5    18-ef-63-e9-ee-41  (NA)    0      4816
Round trip time: 0sec 23984 nsec
```

Packet No. 2

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id)  Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-41  (NA)    0      4328
2     18-ef-63-e9-ee-42  (NA)    0      4800
3     18-ef-63-e9-ee-43  (NA)    0      543289656*
#4    18-ef-63-e9-ee-42  (NA)    0      4776
#5    18-ef-63-e9-ee-41  (NA)    0      4816
Round trip time: 0sec 24552 nsec
```

Packet No. 3

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id) Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-41  (NA)  0      4304
2     18-ef-63-e9-ee-42  (NA)  0      4816
3     18-ef-63-e9-ee-43  (NA)  0      532286984*
#4    18-ef-63-e9-ee-42  (NA)  0      4760
#5    18-ef-63-e9-ee-41  (NA)  0      4816
Round trip time: 0sec 24512 nsec
```

Packet No. 4

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id) Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-41  (NA)  0      4240
2     18-ef-63-e9-ee-42  (NA)  0      4816
3     18-ef-63-e9-ee-43  (NA)  0      532730344*
#4    18-ef-63-e9-ee-42  (NA)  0      4792
#5    18-ef-63-e9-ee-41  (NA)  0      4832
Round trip time: 0sec 24480 nsec
```

Packet No. 5

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id) Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-41  (NA)  0      4360
2     18-ef-63-e9-ee-42  (NA)  0      4832
3     18-ef-63-e9-ee-43  (NA)  0      542201864*
#4    18-ef-63-e9-ee-42  (NA)  0      4760
#5    18-ef-63-e9-ee-41  (NA)  0      4784
Round trip time: 0sec 24568 nsec
```

Summary:

```
Packets sent on vlan : 1
Total packets sent   : 5
Total packets received: 5
Maximum round trip time in ns: 24568
Minimum round trip time in ns: 23984
Average round trip time in ns: 24419
```

This example shows the CE Pong with source MAC specified:

```
switch(config-if)# pong source 18ef.63e9.ee41 destination 18ef.63e9.ee43
```

Packet No. 1

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id)  Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-42 ( 456)    0      4256
2     18-ef-63-e9-ee-43  (NA)    0      539622256*
#3    18-ef-63-e9-ee-42 ( 456)    0      4264
Round trip time: 0sec 14360 nsec
```

Packet No. 2

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id)  Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-42 ( 456)    0      4832
2     18-ef-63-e9-ee-43  (NA)    0      533784720*
#3    18-ef-63-e9-ee-42 ( 456)    0      4808
Round trip time: 0sec 15448 nsec
```

Packet No. 3

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id)  Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-42 ( 456)    0      4768
2     18-ef-63-e9-ee-43  (NA)    0      538628976*
#3    18-ef-63-e9-ee-42 ( 456)    0      4808
Round trip time: 0sec 15384 nsec
```

Packet No. 4

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path
 (NA) - not available

```
-----
Hop   System-mac  (switch-id)  Switching time
              (sec,      nsec)
-----
1     18-ef-63-e9-ee-42 ( 456)    0      4800
2     18-ef-63-e9-ee-43  (NA)    0      533690096*
#3    18-ef-63-e9-ee-42 ( 456)    0      4792
Round trip time: 0sec 15416 nsec
```

Packet No. 5

Legend:

(*) - software delay(not hardware latency)
 (#) - reverse path

```

                (NA) - not available
-----
Hop   System-mac  (switch-id)  Switching time
                (sec,      nsec)
-----
1     18-ef-63-e9-ee-42 ( 456)    0      4832
2     18-ef-63-e9-ee-43 (NA)      0      544597072*
#3    18-ef-63-e9-ee-42 ( 456)    0      4792
Round trip time: 0sec 15448 nsec

```

Summary:

```

Packets sent on vlan : 1
Total packets sent   : 5
Total packets received: 5
Maximum round trip time in ns: 15448
Minimum round trip time in ns: 14360
Average round trip time in ns: 15211

```

Related Commands

Command	Description
feature pong	Enables the Pong feature.
feature ptp	Enables the Precision Time Protocol (PTP) feature. This command is documented in the <i>Cisco Nexus 7000 Series NX-OS System Management Command Reference</i> .

pop

To restore a saved command mode context, use the **pop** command.

pop [*name*]

Syntax Description	<i>name</i>	(Optional) Name for the command mode context.
--------------------	-------------	---

Defaults	The recent saved mode context
----------	-------------------------------

Command Modes	Any command mode
---------------	------------------

Supported User Roles	network-admin vdc-admin
----------------------	----------------------------

Command History	Release	Modification
	4.1(2)	This command was introduced.

Usage Guidelines	You can save a command mode context using the push command. This command does not require a license.
------------------	--

Examples	This example shows how to restore an unnamed command mode context:
----------	--

```
switch# configure terminal
switch(config)# role name test
switch(config-role)# push
switch(config-role)# end
switch# pop
switch(config-role)#
```

This example shows how to restore a named command mode context:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# push com1
switch(config-com1)# end
switch# pop com1
switch(config-com1)#
```

Related Commands	Command	Description
	push	Saves a command mode context.

power redundancy-mode

To configure the power supply redundancy mode, use the **power redundancy-mode** command. To revert to the default, use the **no** form of this command.

power redundancy-mode { **combined** | **insrc-redundant** | **ps-redundant** | **redundant** }

no power redundancy-mode { **combined** | **insrc-redundant** | **ps-redundant** | **redundant** }

Syntax Description

combined	Specifies the combined power supply mode.
insrc-redundant	Specifies the input source redundancy mode.
ps-redundant	Specifies the power supply redundancy mode.
redundant	Specifies the full redundancy mode.

Defaults

ps-redundant

Command Modes

Global configuration mode

Supported User Roles

network-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You can use the **power redundancy-mode** command only in the default virtual device context (VDC).

You can configure the power supplies with the following modes:

- **Combined mode**—This is the simplest power mode, but it does not provide power redundancy. The available power for this mode is the total power capacity of all power supplies.
- **Power supply redundancy mode**—This mode provides an extra power supply in case an active power supply goes down. With this mode, the power supply that can supply the most power operates in the standby mode. The other one or two power supplies are active. The available power is the amount of power provided by the active power supply units.
- **Input source redundancy mode**—This mode uses two electrical grids, each one powering a half module within each power supply. If one power grid goes down, each power supply continues to draw power through its other half module. The available power is the amount of power by the lesser of the two grids through the power supplies.
- **Full redundancy mode**—This mode combines power supply redundancy and input source redundancy, which means that the chassis has an extra power supply and each half of each power supply is connected to one electrical grid while the other half of each power supply is connected to the other electrical grid. The available power is the lesser of the available power for the power supply mode and input source mode.

This command does not require a license.

Examples

This example shows how to configure the full power supply redundancy mode:

```
switch# configure terminal  
switch(config)# power redundancy-mode redundant
```

This example shows how to disable the full power supply redundancy mode:

```
switch# configure terminal  
switch(config)# no power redundancy-mode redundant
```

Related Commands

Command	Description
show environment	Displays information about the device hardware environment.

purge module running-config

To remove the configuration for a missing module from the running configuration, use the **purge module running-config** command.

purge module *slot* **running-config**

Syntax Description	<i>slot</i>	Slot in the chassis. The range is from 1 to 18.
---------------------------	-------------	---

Defaults	None
-----------------	------

Command Modes	Any command mode
----------------------	------------------

SupportedUserRoles	network-admin
---------------------------	---------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	You can use the purge module running-config command only in the default virtual device context (VDC).
-------------------------	--

Use the **show hardware** command to verify which modules are missing.

This command does not require a license.

Examples	This example shows how to remove the configuration for a missing module from the running configuration:
-----------------	---

```
switch# purge module 1 running-config
```

Related Commands	Command	Description
	show running-config	Displays the running configuration.

push

To save a command mode context, use the **push** command.

```
push [name]
```

Syntax Description	<i>name</i> (Optional) Name for the command mode context.				
Defaults	None				
Command Modes	Any command mode				
Supported User Roles	network-admin vdc-admin				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>4.1(2)</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	4.1(2)	This command was introduced.
Release	Modification				
4.1(2)	This command was introduced.				
Usage Guidelines	<p>You can save only one command mode context. Use the pop command to restore a saved command mode context.</p> <p>This command does not require a license.</p>				
Examples	<p>This example shows how to save an unnamed command mode context:</p> <pre>switch# configure terminal switch(config)# role name test switch(config-role)# push</pre> <p>This example shows how to save a named command mode context:</p> <pre>switch# configure terminal switch(config)# line com1 switch(config-com1)# push com1</pre>				
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>pop</td> <td>Restores a command mode context.</td> </tr> </tbody> </table>	Command	Description	pop	Restores a command mode context.
Command	Description				
pop	Restores a command mode context.				

python

To invoke the Python Interpreter in interactive mode from the CLI, use the **python** command.

python

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	6.2(2)	This command was introduced.

Usage Guidelines To run CLI commands in Python, you must import the **cisco** module. The **cisco** module contains the code that integrates with the command-line interface (CLI).

The functions contained in the **cisco** module that enable the CLI commands are imported automatically when you use the **python** command to invoke the Python interactive mode (or when you use the **source** command when invoking the Python noninteractive mode).

The Python programming language has three APIs that can execute CLI commands. See the *Cisco Nexus 7000 Series NX-OS Fundamentals Configuration Guide, Release 6.x* for a list of CLI commands.

Examples This example shows how to invoke Python from the CLI:



Note

The Python interpreter is designated with the ">>>" or "... " prompt.

```
switch# show clock
23:54:55.872 UTC Wed May 16 2012
switch # python                                !-- Enter Python interpreter
switch >>> cli ("conf term ; interface loopback 1")
switch(config-if)# >>> cli("ip address 1.1.1.1/24")
switch(config-if)# >>> cli("exit")            !-- Exit the CLI interface mode
switch(config)# >>> cli("exit")
switch# >>> i=0
switch# >>> while i<8:
switch# >>> i=i+1                               !-- Composite command; prompt indicates more input
switch# ...cmd = "show module %i" % i
switch# ...r=clid(cmd)
```



```

switch# ...if "TABLE_modinfo/model" in r.keys():
switch# ...    if r ["TABLE_modinfo/model"] == "Nurburgring":
switch# ...        print "got a racer in slot %d" % i
switch# ...                                !-- Empty input indicates end of loop
got a racer in slot 3
switch# >>> exit                                !-- Exit Python interpreter

```

Python is forked from the CLI shell, which means the following::

- No state is preserved between invocations of the Python interpreter.
- The CLI mode is lost when exiting the Python interpreter.

This example shows the nonpersistence of the Python interpreter:

```

switch# python                                !-- Invoke Python interpreter
switch# >>> i = 2
switch# >>> print "var i = %d" % i
var i = 2
switch# >>> cli("configure terminal")
switch(config)# >>> blabla
switch(config)# >>> exit                        !-- Exit Python interpreter
switch#                                         !-- CLI still in exec mode (conf t is lost)
switch# python                                  !-- Invoke new Python interpreter
switch# >>> print "var i = %d" % i !-- Previous Python interpreter and variables are lost
Error: variable 'i' undefined.
switch# >>> exit
switch# conf t ; inter lo 1
switch(config-if)# python                      !-- Invoke new Python interpreter
switch(config-if)# >>>                        !-- Inherits the CLI mode (forked from CLI)

```

Related Commands

Command	Description
source	Runs a tcl/python script in noninteractive mode

reload

To reload the entire Cisco NX-OS device, use the **reload** command.

reload [**soft**]

Syntax Description	soft	(Optional) Specifies to not reload the Connectivity Management Processor (CMP) on the active supervisor module.
--------------------	------	---

Defaults Reloads the entire device.

Command Modes Any command mode

Supported User Roles network-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines

You can use the **reload** command only in the default virtual device context (VDC).

The **reload** command uses the kickstart and system images referenced in the boot variables to reboot the device. Use the **show boot** command to verify the contents of the kickstart and system boot variables. To set the boot variables to reference the correct images, use the **boot kickstart** and **boot system** commands.

If the boot variables do not reference images on the device, the device comes up at the loader> prompt after you enter the **reload** command. For information about recovering from the loader> prompt, see the *Cisco Nexus 7000 Series NX-OS Troubleshooting Guide*.



Caution

The **reload** command disrupts traffic on the device.



Note

The **reload** command does not save the running configuration. Use the **copy running-config startup-config** command to save the current configuration on the device.

For information on upgrading and downgrading images on your Cisco NX-OS device, see the *Cisco Nexus 7000 Series NX-OS Software Upgrade and Downgrade Guide, Release 6.x*.

This command does not require a license.

Examples

This example shows how to reload the Cisco NX-OS device:

```

switch# copy running-config startup-config
[#####] 100%
switch# reload
This command will reboot the system. (y/n)? [n] y

```

Related Commands

Command	Description
boot kickstart	Configures the kickstart boot variable.
boot system	Configures the system boot variable.
copy running-config startup-config	Copies the current running configuration to the startup configuration.
install all	Installs the software on the physical device.
reload ascii	Copies an ASCII version of the configuration to the startup configuration when reloading the entire CISCO NX-OS device.
reload cmp module	Reloads the Connectivity Management Processor (CMP).
reload module	Reloads a module in the device.
reload vdc	Reloads the virtual device context (VDC).
show boot	Displays boot variable configuration information.
show version	Displays information about the software version.

reload ascii

To copy an ASCII version of the configuration to the startup configuration when reloading the entire Cisco NX-OS device, use the **reload ascii** command.

reload ascii

Syntax Description

This command has no arguments or keywords.

Defaults

Reloads the entire device, including any unsaved configurations and binary configuration in the VDC.

Command Modes

Any command mode

Supported User Roles

network-admin

Command History

Release	Modification
6.2.(2)	This command was introduced.

Usage Guidelines

The **reload ascii** command erases the binary configuration in the VDC and reboots the system with an ASCII configuration.



Caution

The **reload ascii** command disrupts traffic on the device.



Note

The **reload ascii** command does not save the running configuration. Use the **copy running-config startup-config** command to save the current configuration on the device.

This command does not require a license.

Examples

This example shows how to copy an ASCII version of the configuration to the startup configuration when reloading the entire Cisco NX-OS device :

```
switch# copy running-config startup-config
[#####] 100%
Copy complete.
switch# reload ascii
!!!WARNING! there is unsaved configuration in VDC!!!
!!!WARNING! This command will erase binary configuration
in this VDC and reboot the system with ascii configuration.
Do you wish to proceed anyway? (y/n) [n]
```

Related Commands

Command	Description
copy running-config startup-config	Copies the current running configuration to the startup configuration.
reload	Reloads the entire Cisco NX-OS device.
reload cmp module	Reloads the Connectivity Management Processor (CMP).
reload module	Reloads a module in the device.
reload vdc	Reloads the current virtual device context (VDC).

reload cmp module

To reload the Connectivity Management Processor (CMP), use the **reload cmp module** command.

reload cmp module *slot*

Syntax Description	<i>slot</i>	Chassis slot number. The range is from 9 to 10.
---------------------------	-------------	---

Defaults	None	
-----------------	------	--

Command Modes	Any command mode	
----------------------	------------------	--

SupportedUserRoles	network-admin	
---------------------------	---------------	--

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	<p>You can use the reload cmp module command only in the default virtual device context (VDC). Use the show hardware command to determine the location of the CMPs on your device. This command does not require a license.</p>	
-------------------------	---	--

Examples	<p>This example shows how to reload the CMP on the supervisor module on a slot:</p> <pre>switch# reload cmp module 5</pre>	
-----------------	--	--

Related Commands	Command	Description
	show version	Displays information about the software version.
	reload	Reloads the entire Cisco NX-OS device.
	reload ascii	Copies an ASCII version of the configuration to the startup configuration when reloading the entire Cisco NX-OS device.
	reload module	Reloads a module in the device.
	reload vdc	Reloads a nondefault virtual device context (VDC).

reload module

To reload a module in the device, use the **reload module** command.

```
reload module slot [force-dnld]
```

Syntax Description	slot	Chassis slot number. The range is from 1 to 18.
	force-dnld	(Optional) Forces the download of software to the module.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You can use the **reload module** command only in the default virtual device context (VDC). Use the **show hardware** command to display information about the hardware on your device. This command does not require a license.

Examples This example shows how to reload a module:

```
switch# reload module 2
```

Related Commands	Command	Description
	show version	Displays information about the software version.
	reload	Reloads the entire Cisco NX-OS device.
	reload ascii	Copies an ASCII version of the configuration to the startup configuration when reloading the entire Cisco NX-OS device.
	reload cmp module	Reloads the Connectivity Management Processor (CMP).
	reload vdc	Reloads a a nondefault virtual device context (VDC).

reload vdc

To reload a nondefault virtual device context (VDC), use the **reload vdc** command.

reload vdc *number*

Syntax Description	<i>number</i>	VDC number.
--------------------	---------------	-------------

Defaults	None
----------	------

Command Modes	Any command mode in a nondefault VDC
---------------	--------------------------------------

Supported User Roles	network-admin vdc-admin
----------------------	----------------------------

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines You can use the **reload vdc** command only in the default virtual device context (VDC). Use the **reload vdc ?** command to view all VDCs.



Caution

Reloading a VDC disrupts all traffic on the VDC.



Note

Use the **reload** command to reload the default VDC, which also reloads all nondefault VDCs.

This command requires the Advanced Services license.

Examples This example shows how to restart a VDC:

```
switch# reload vdc
```

Related Commands	Command	Description
	reload	Reloads the Cisco NX-OS device.
	reload ascii	Copies an ASCII version of the configuration to the startup configuration when reloading the entire Cisco NX-OS device.

reload cmp module	Reloads the Connectivity Management Processor (CMP).
reload module	Reloads a module in the Cisco NX-OS device .

rmdir

To remove a directory, use the **rmdir** command.

```
rmdir [filesystem:[//module/]]directory
```

Syntax Description		
<i>filesystem:</i>	(Optional) Name of a file system. The name is case sensitive.	
<i>//module/</i>	(Optional) Identifier for a supervisor module. Valid values are sup-active , sup-local , sup-remote , or sup-standby . The identifiers are case sensitive.	
<i>directory</i>	Name of a directory. The name is case sensitive.	

Defaults Removes the directory from the current working directory.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to remove a directory:

```
switch# rmdir my_files
```

Related Commands	Command	Description
	cd	Changes the current working directory.
	dir	Displays the directory contents.
	pwd	Displays the name of the current working directory.

run-script

To run a command script file at the command-line interface (CLI), use the **run-script** command.

```
run-script [filesystem:[//module/]][directory/]filename
```

Syntax Description	
<i>filesystem:</i>	(Optional) Name of a file system. The name is case sensitive.
<i>//module/</i>	(Optional) Identifier for a supervisor module. Valid values are sup-active , sup-local , sup-remote , or sup-standby . The identifiers are case sensitive.
<i>directory/</i>	(Optional) Name of a directory. The name is case sensitive.
<i>filename</i>	Name of the command file. The name is case sensitive.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You must create the command file on a remote device and download it to the Cisco NX-OS device by using the **copy** command.

This command does not require a license.

Examples This example shows how to run a command script file:

```
switch# run-script script-file
```

Related Commands	Command	Description
	cd	Changes the current working directory.
	copy	Copies files.
	dir	Displays the directory contents.
	pwd	Displays the name of the current working directory.

send

To send a message to the active user sessions, use the **send** command.

```
send [session line] text
```

Syntax Description	session line	(Optional) Specifies a user session.
	text	Text string. The text string can be up to 80 alphanumeric characters and is case sensitive.

Defaults Sends a message to all active user sessions.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You can use the **show users** command to display information about the active user sessions. The **send** command does not require a license.

Examples This example shows how to send a message to all active user sessions on the device:

```
switch# send The system will reload in 15 minutes!
The system will reload in 15 minutes!
```

This example shows how to send a message to a specific user session:

```
switch# send session pts/39 You must log off the device.
```

Related Commands	Command	Description
	show users	Displays the active user session on the device.

setup

To enter the basic device setup dialog, use the **setup** command.

setup

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines When you use the **setup** command to change your device configuration, the setup utility uses the factory-default values, not the values that you have configured, when you accept the default values in the dialog.

You can exit the setup utility dialog at any time by pressing **Ctrl+C**.

The **setup** command does not require a license.

Examples This example shows how to enter the basic device setup script:

```
switch# setup
```

```
---- Basic System Configuration Dialog VDC: 1 ----
```

```
This setup utility will guide you through the basic configuration of
the system. Setup configures only enough connectivity for management
of the system.
```

```
*Note: setup is mainly used for configuring the system initially,
when no configuration is present. So setup always assumes system
defaults and not the current system configuration values.
```

```
Press Enter at anytime to skip a dialog. Use ctrl-c at anytime
to skip the remaining dialogs.
```

```
Would you like to enter the basic configuration dialog (yes/no):
```

■ setup

Related Commands	Command	Description
	show running-config	Displays the running configuration.

session-limit

To configure the maximum number of the concurrent virtual terminal sessions on a device, use the **session-limit** command. To revert to the default, use the **no** form of this command.

session-limit *sessions*

no session-limit *sessions*

Syntax Description	<i>sessions</i>	Maximum number of sessions. The range is from 1 to 64.
Defaults	32 sessions	
Command Modes	Line configuration mode	
SupportedUserRoles	network-admin vdc-admin	
Command History	Release	Modification
	4.0(1)	This command was introduced.
Usage Guidelines	This command does not require a license.	
Examples	<p>This example shows how to configure the maximum number of concurrent virtual terminal sessions:</p> <pre>switch# configure terminal switch(config)# line vty switch(config-line)# session-limit 48</pre> <p>This example shows how to revert to the default maximum number of concurrent virtual terminal sessions:</p> <pre>switch# configure terminal switch(config)# line vty switch(config-line)# no session-limit 48</pre>	
Related Commands	Command	Description
	show running-config	Displays the running configuration.

show banner exec

To display the EXEC banner, use the **show banner exec** command.

show banner exec

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	7.3(0)D1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the EXEC banner:

```
switch# show banner exec
Unauthorized access to this device is prohibited!
```

Related Commands	Command	Description
	banner exec	Configures the EXEC banner.

show banner motd

To display the message-of-the-day (MOTD) banner, use the **show banner motd** command.

show banner motd

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the MOTD banner:

```
switch# show banner motd
Unauthorize access prohibited!
```

Related Commands	Command	Description
	banner motd	Configures the MOTD banner.

show boot

To display the boot variable configuration, use the **show boot** command.

```
show boot [auto-copy | module [slot] | sup-1 | sup-2 | variables]
```

Syntax	Description
auto-copy	(Optional) Displays the boot auto-copy status.
module	(Optional) Displays the boot variable configured for an I/O module.
<i>slot</i>	(Optional) Slot number in the chassis. The range is from 1 to 18.
sup-1	(Optional) Displays the boot variables configured for supervisor module 1 (sup-1).
sup-2	(Optional) Displays the boot variables configured for supervisor module 2 (sup-2).
variables	(Optional) Displays a list of boot variables.

Defaults Displays all configured boot variables.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines Sup-1 refers to the top supervisor module in a chassis with two supervisor modules, and sup-2 refers to the bottom supervisor module. For example, in the Cisco NX-OS 7010 device, sup-1 is in slot 5, and sup-2 is in slot 6.

This command does not require a license.

Examples This example shows how to display all configured boot variables:

```
switch# show boot
sup-1
kickstart variable = bootflash:/n7000-s1-kickstart.4.0.2.bin
system variable = bootflash:/n7000-s1-dk9.4.0.2.bin
sup-2
kickstart variable = bootflash:/n7000-s1-kickstart.4.0.2.bin
system variable = bootflash:/n7000-s1-dk9.4.0.2.bin
```

No module boot variable set

This example shows how to display the boot variables for supervisor module 1:

```
switch# show boot sup-1
sup-1
kickstart variable = bootflash:/n7000-s1-kickstart.4.0.2.bin
system variable = bootflash:/n7000-s1-dk9.4.0.2.bin
```

This example shows how to display the list of boot variable names (see [Table 5](#) for field descriptions):

```
switch# show boot variables
ssi
system
asm-sfn
kickstart
```

Table 5 *show boot variables Field Descriptions*

Field	Description
ssi	Not supported.
system	Name of the variable for the system image filename.
asm-sfn	Not supported.
kickstart	Name of the variable for the kickstart image filename.

Related Commands

Command	Description
boot auto-copy	Enables automatic copy of boot images to the standby supervisor module.
boot kickstart	Configures the boot variable for the kickstart image.
boot system	Configures the boot variable for the system image.

show cli alias

To display the command alias configuration, use the **show cli alias** command.

```
show cli alias [name alias-name]
```

Syntax Description	name <i>alias-name</i>	(Optional) Specifies the name of a command alias. The alias name is not case sensitive and it can be up to 30 characters.
--------------------	------------------------	---

Defaults Displays all configured command alias variables.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display all configured command aliases:

```
switch# show cli alias
CLI alias commands
=====
ethint      :interface ethernet
shintbr     :show interface br
shintupbr   :shintbr | include up | include ethernet
alias       :show cli alias
crun        :copy running-config startup-config
```

This example shows how to display a specific command alias:

```
switch# show cli alias name ethint
ethint :interface ethernet
```

Related Commands	Command	Description
	cli alias name	Configures command aliases.

show cli history

To display the command history, use the **show cli history** command.

show cli history [*lines*] [**unformatted**]

Syntax Description	
<i>lines</i>	(Optional) Number of lines at the end of the command history to display.
unformatted	(Optional) Displays the commands without line numbers or time stamps.

Defaults Displays the entire formatted history.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display all of the command history:

```
switch# show cli history
0 22:59:13 show boot
1 23:00:05 show boot sup-1
2 23:01:23 show boot variables
3 23:20:28 config t
4 23:22:16 end
5 23:22:25 show cli alias
6 00:00:10 show cli alias name ethint
...
```

This example shows how to display the last 10 lines of the command history:

```
switch# show cli history 10
42 00:42:54 ip route 0.0.0.0/0 172.28.230.1
43 00:42:54 interface mgmt0
44 00:42:54 ip address 172.28.231.193/23
45 00:42:54 no shutdown
46 00:42:54 aaa group server radius aaa-private-sg
47 00:42:54 use-vrf management
48 00:42:54 telnet server enable
```

```
49 00:42:54 logging server 172.28.254.254
50 00:42:54 power redundancy-mode combined
51 00:43:28 show cli history 10
```

This example shows how to display unformatted command history:

```
switch# show cli history unformatted
config t
vrf context management
ip route 0.0.0.0/0 172.28.230.1
interface mgmt0
ip address 172.28.231.193/23
no shutdown
aaa group server radius aaa-private-sg
use-vrf management
telnet server enable
logging server 172.28.254.254
power redundancy-mode combined
show cli history unformatted
```

show cli list

To list the Cisco NX-OS commands available in a command mode, use the **show cli list** command.

show cli list [*combinations*] [*component-name*] [**recurse**]

Syntax Description		
<i>combinations</i>	(Optional) Number of combinations to show per command. The range is from 0 to 2147483647 combinations. The default is 100.	
<i>component-name</i>	(Optional) Name of the component. Currently components are restricted to routing commands.	
recurse	(Optional) Displays the children commands within a command mode.	

Defaults Displays the commands for the command mode in a single-line format.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(2)	This command was introduced.

Usage Guidelines To exit a long listing generated by this command, press **Ctrl-C**.
This command does not require a license.

Examples This example shows how to display all commands available in EXEC mode:

```
switch# show cli list
MODE exec
show system internal modlock-info
show system internal usd errors
show system internal usd isr
show system internal usd mts
show system internal usd timeslice
show system internal usd wd
show system internal aaa event-history errors
show system internal aaa event-history msgs
...
^C
```

This example shows how to display all commands related to the Address Resolution Protocol (ARP) available in configuration command mode:

```
switch(config)# show cli list arp
MODE configure
no ip arp timeout
no logging level arp <uint:0-7>
no ip arp event-history packet size <small|medium|large|disabled>
no ip arp event-history event size <small|medium|large|disabled>
no ip arp event-history ha size <small|medium|large|disabled>
no ip arp event-history errors size <small|medium|large|disabled>
no ip arp event-history lcache size <small|medium|large|disabled>
no ip arp event-history lcache-errors size <small|medium|large|disabled>
no ip arp event-history client-event size <small|medium|large|disabled>
no ip arp event-history client-errors size <small|medium|large|disabled>
no ip arp event-history snmp size <small|medium|large|disabled>
no ip arp event-history cli size <small|medium|large|disabled>
logging level arp <uint:0-7>
ip arp event-history packet size <small|medium|large|disabled>
ip arp event-history event size <small|medium|large|disabled>
ip arp event-history ha size <small|medium|large|disabled>
ip arp event-history errors size <small|medium|large|disabled>
ip arp event-history lcache size <small|medium|large|disabled>
ip arp event-history lcache-errors size <small|medium|large|disabled>
ip arp event-history client-event size <small|medium|large|disabled>
ip arp event-history client-errors size <small|medium|large|disabled>
ip arp event-history snmp size <small|medium|large|disabled>
ip arp event-history cli size <small|medium|large|disabled>
ip arp timeout <int:60-28800>
```

This example shows how to display commands related to Open Shortest Path First (OSPF) available in the loopback interface command mode:

```
switch(config)# interface loopback 0
switch(config-if)# show cli list ospf
MODE if-loopback
no ip ospf network point-to-point
no ip ospf network
```

Related Commands

Command	Description
show cli syntax	Displays the Cisco NX-OS command syntax available in a command mode.

show cli syntax

To display the Cisco NX-OS command syntax available in a command mode, use the **show cli syntax** command.

```
show cli syntax [component-name] [long] [mode mode-name] [recurse]
```

Syntax Description	
<i>component-name</i>	(Optional) Name of the component.
long	(Optional) Displays the syntax in a tree format with more than one line per command.
mode <i>mode-name</i>	(Optional) Displays the command syntax for only the specified command mode.
recurse	(Optional) Displays the syntax of the commands within a command mode for the children of the current mode.

Defaults Displays the command syntax for the command mode in a single-line format.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.2(1)	Added the mode keyword.
	4.0(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the command syntax for commands available in the role configuration command mode in the default format:

```
switch(config-role)# show cli syntax
MODE role
(0) description <line> | no description
(1) description <line> | no description
(2) rule <number> { <action> } { { <permission> [ <featuretype> <name> ] } | { c
ommand <cmd_line> } } | no rule <number>
(3) rule <number> { <action> } { { <permission> [ <featuretype> <name> ] } | { c
ommand <cmd_line> } } | no rule <number>
(4) [ no ] vlan policy deny
(5) [ no ] interface policy deny
```

```
(6) [ no ] vrf policy deny
```

This example shows how to display the command syntax for commands available in the role configuration command mode in long format:

```
switch(config-role)# show cli syntax long
MODE role
*** (0) description <line>
      | no description
*** (1) description <line>
      | no description
*** (2) rule <number> { <action> }
          { { <permission> [ <featuretype> <name> ] }
            | { command <cmd_line> } }
      | no rule <number>
*** (3) rule <number> { <action> }
          { { <permission> [ <featuretype> <name> ] }
            | { command <cmd_line> } }
      | no rule <number>
*** (4) [no] vlan policy deny
*** (5) [no] interface policy deny
*** (6) [no] vrf policy deny
```

This example shows how to display the command syntax for commands and subcommands available in the role configuration command mode in the default format:

```
switch(config-role)# show cli syntax long recurse
MODE role
*** (0) description <line>
      | no description
*** (1) description <line>
      | no description
*** (2) rule <number> { <action> }
          { { <permission> [ <featuretype> <name> ] }
            | { command <cmd_line> } }
      | no rule <number>
*** (3) rule <number> { <action> }
          { { <permission> [ <featuretype> <name> ] }
            | { command <cmd_line> } }
      | no rule <number>
*** (4) [no] vlan policy deny
*** (5) [no] interface policy deny
*** (6) [no] vrf policy deny
MODE vlan
*** (7) [no] permit vlan <vlan-mrange>
MODE interface
*** (8) [no] permit interface <if0>
MODE vrf
*** (9) [no] permit vrf <vrf-name>
```

show cli variables

To display the configuration of the CLI variables, use the **show cli variables** command.

show cli variables

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the CLI variables:

```
switch# show cli variables
VSH Variable List
-----
TIMESTAMP="2008-06-13-01.14.09"
testinterface="ethernet 2/3"
```

Related Commands	Command	Description
	cli var name	Configures CLI variables.

show clock

To display the clock configuration, use the **show clock** command.

show clock [detail]

Syntax Description	detail	(Optional) Displays the summer-time (daylight saving time) offset configuration.
--------------------	--------	--

Defaults	Displays all configured command alias variables.
----------	--

Command Modes	Any command mode
---------------	------------------

SupportedUserRoles	network-admin vdc-admin network-operator vdc-operator
--------------------	--

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
------------------	--

Examples	This example shows how to display the clock setting:
----------	--

```
switch# show clock
Fri Jun 13 02:19:20 PDT 2008
```

This example shows how to display the clock setting and the summer-time (daylight saving time) configuration:

```
switch# show clock detail
Fri Jun 13 02:19:02 PDT 2008
summer-time configuration:
-----
timezone name: PDT
starts       : 1 Sunday March at 02:00 hours
Ends        : 1 Sunday November at 02:00 hours
Minute offset: 60
```

Related Commands

Command	Description
clock set	Sets the clock time.
clock summer-time	Configures the summer-time (daylight saving time) offset.

show copyright

To display the Cisco NX-OS software copyright information, use the **show copyright** command.

show copyright

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the Cisco NX-OS copyright information:

```
switch# show copyright
Cisco Nexus Operating System (NX-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2008, Cisco Systems, Inc. All rights reserved.
The copyrights to certain works contained in this software are
owned by other third parties and used and distributed under
license. Certain components of this software are licensed under
the GNU General Public License (GPL) version 2.0 or the GNU
Lesser General Public License (LGPL) Version 2.1. A copy of each
such license is available at
http://www.opensource.org/licenses/gpl-2.0.php and
http://www.opensource.org/licenses/lgpl-2.1.php
```

show feature-set

To display the status of a feature set, use the **show feature-set** command.

show feature-set

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	5.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the status of a feature set:

```
switch# show feature-set
Feature Set Name      ID      State
-----
fcoe                  1      disabled
l2mp                  2      enabled
fex                   3      disabled
switch#
```

Related Commands	Command	Description
	show install all	Displays information related to the operation of the install all command.

show file

To display the contents of a file on the local memory, use the **show file** command.

show file [*filesystem:*][*//directory*]/*filename*

Syntax Description	
<i>filesystem:</i>	(Optional) Name of a file system. Valid values are bootflash , debug , logflash , slot0 , usb1 , usb2 , or volatile .
<i>//directory</i>	(Optional) Name of a directory. The directory name is case sensitive.
<i>filename</i>	Name of the file. The filename is case sensitive.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the contents of a file:

```
switch# show file scriptfile
configure terminal
interface $(testinterface)
no shutdown
end
show interface $(testinterface)
```

Related Commands	Command	Description
	cd	Changes the current working directory.
	dir	Displays the directory contents.
	pwd	Displays the name of the current working directory.

show hostname

To display the hostname for the device, use the **show hostname** command.

show hostname

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines The **show switchname** command also displays the device hostname.
This command does not require a license.

Examples This example shows how to display the hostname for the device:

```
switch# show hostname
```

Related Commands	Command	Description
	hostname	Configures the hostname for the device.
	show switchname	Displays the hostname.

show incompatibility system

To display the configuration incompatibilities between the running system image and an earlier system image prior to downgrading the Cisco NX-OS software, use the **show incompatibility system** command.

```
show incompatibility system { bootflash: | slot0: | volatile: }filename
```

Syntax Description	
bootflash:	Specifies the internal Flash memory.
slot0:	Specifies the external Flash memory.
volatile:	Specifies the volatile memory on the device.
<i>filename</i>	System image filename to compare with the loaded software image.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You can use the **show incompatibility system** command only in the default virtual device context (VDC).

This command does not require a license.

Examples This example shows how to display the configuration incompatibilities:

```
switch# show incompatibility system bootflash:old_image.bin
The following configurations on active are incompatible with the system image
1) Service : eth_port_channel , Capability : CAP_FEATURE_AUTO_CREATED_PORT_CHANNEL
Description : active mode port channels, auto create enabled ports or auto created
port-channels are present
Capability requirement : STRICT
Disable command : 1.Convert Active mode port channels to On mode port channels (no channel
mode active).
2.Disable autcreate on interfaces (no channel-group auto).
3.Convert autcreated port channels to be persistent (port-channel 1 persistent).
```

show install all

To display information related to the operation of the **install all** command, use the **show install all** command.

```
show install all { failed-standby | failure-reason | impact [kickstart | system] | status }
```

Syntax Description		
failed-standby		Displays the software installation failure log on the standby supervisor module.
failure-reason		Displays the software installation failure reason.
impact		Displays the impact of installing the images referred to in the boot variables.
kickstart		(Optional) Displays the impact of installing the kickstart image referred to in the kickstart boot variable.
system		(Optional) Displays the impact of installing the system image referred to in the kickstart boot variable.
status		Displays the status of the software installation process.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin

Command History	Release	Modification
	4.2(1)	Added the failed-standby keyword.
	4.0(1)	This command was introduced.

Usage Guidelines You can use the **show install all** command only in the default virtual device context (VDC). This command does not require a license.

Examples This example shows how to display the installation failure reason:

```
switch# show install all failure-reason
No install all failure-reason
```

This example shows how to display the impact of installing new images:

```
switch# show install all impact

Verifying image bootflash:/n7000-s1-kickstart.4.0.2.bin for boot variable "
kickstart".
[#####] 100% -- SUCCESS
```

```

Verifying image bootflash:/n7000-s1-dk9.4.0.2.bin for boot variable "system
".
[#####] 100% -- SUCCESS

Verifying image type.
[#####] 100% -- SUCCESS

Extracting "lc1n7k" version from image bootflash:/n7000-s1-dk9.4.0.2.bin.
[#####] 100% -- SUCCESS

Extracting "bios" version from image bootflash:/n7000-s1-dk9.4.0.2.bin.
[#####] 100% -- SUCCESS

Extracting "system" version from image bootflash:/n7000-s1-dk9.4.0.2.bin.
[#####] 100% -- SUCCESS

Extracting "kickstart" version from image bootflash:/n7000-s1-kickstart.4.0.2.gb
in.S22.
[#####] 100% -- SUCCESS

```

Compatibility check is done:

Module	bootable	Impact	Install-type	Reason
2	yes	non-disruptive	none	
6	yes	non-disruptive	none	

Images will be upgraded according to following table:

Module	Image	Running-Version(pri:alt)	New-Versi
on Upg-Required			
2)	lc1n7k	4.0(2)	4.0(
8)	bios	v1.10.5(02/27/08):	v1.10.5(02/27/0
2)	system	4.0(2)	4.0(
2)	kickstart	4.0(2)	4.0(
8)	bios	v3.17.0(03/23/08):	v3.17.0(03/23/0

This example shows how to display the status of a software installation:

```
switch# show install all status
```

There is an on-going installation...

Enter Ctrl-C to go back to the prompt.

```
Verifying image bootflash:/n7000-s1-kickstart.4.0.2.bin
```

```
-- SUCCESS
```

```
Verifying image bootflash:/n7000-s1-dk9.4.0.2.bin
```

```
-- SUCCESS
```

```
Extracting "system" version from image bootflash:/n7000-s1-dk9.4.0.2.bin.
```

```
-- SUCCESS  
Extracting "kickstart" version from image bootflash:/n7000-s1-kickstart.4.0.2.bin.  
-- SUCCESS  
Extracting "loader" version from image bootflash:/n7000-s1-kickstart.4.0.2.bin.  
-- SUCCESS
```

Related Commands

Command	Description
clear install all failed-standby	Clears the software installation failure log for the standby supervisor module.
install all	Installs the software on the physical device.
show boot	Displays the boot variable configuration.

show license

To display license information, use the **show license** command.

show license [**brief** | **file** *filename*]

Syntax Description	Parameter	Description
	brief	(Optional) Displays a list of license files installed on a device.
	file <i>filename</i>	(Optional) Displays information for a specific license file.

Defaults Displays information about the installed licenses.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display a specific license installed on a device:

```
switch# show license file Enterprise.lic
Enterprise.lic:
SERVER this_host ANY
VENDOR cisco
INCREMENT LAN_ENTERPRISE_SERVICES_PKG cisco 1.0 permanent uncounted \
  VENDOR_STRING=<LIC_SOURCE>MDS_SWIFT</LIC_SOURCE><SKU>N7K-LAN1K9=</SKU> \
  HOSTID=VDH=TBC10412106 \
  NOTICE="<LicFileID>20071025133322456</LicFileID><LicLineID>1</LicLineID>
\
  <PAK></PAK>" SIGN=0CC6E2245FBE
```

This example shows how to display a list of license files installed on a device:

```
switch# show license brief
Enterprise.lic:
```

This example shows how to display all licenses installed on a device:

```
switch# show license
Enterprise.lic:
SERVER this_host ANY
```

```
VENDOR cisco
INCREMENT LAN_ENTERPRISE_SERVICES_PKG cisco 1.0 permanent uncounted \
  VENDOR_STRING=<LIC_SOURCE>MDS_SWIFT</LIC_SOURCE><SKU>N7K-LAN1K9=</SKU> \
  HOSTID=VDH=TBC10412106 \
  NOTICE="<LicFileID>20071025133322456</LicFileID><LicLineID>1</LicLineID>
\
  <PAK></PAK>" SIGN=0CC6E2245FBE
```

show license feature package mapping

To display license information of the packages that are available for the features on a Cisco NX-OS device, use the **show license feature package mapping** command.

show license feature package mapping

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
vdc-operator

Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display license information about the packages that are available for the features:

```
switch# show license feature package mapping

-----
Feature-Name: fcoe
-----

Linecard-Type       :AIDA
Package All or Any  :any
Package-Name (ver)  :FCOE-N7K-F132XP(1.0)

-----
Feature-Name: lisp
-----

Linecard-Type       :SUP
Package All or Any  :any
Package-Name (ver)  :TRANSPORT_SERVICES_PKG(1.0)

-----
```



```

Feature-Name: mpls_te
-----

Linecard-Type      :SUP
Package All or Any :any
Package-Name(ver)  :MPLS_PKG(1.0)

-----

Feature-Name: l3vpn
-----

Linecard-Type      :SUP
Package All or Any :any
Package-Name(ver)  :MPLS_PKG(1.0)

-----

Feature-Name: ldp
-----

Linecard-Type      :SUP
Package All or Any :any
Package-Name(ver)  :MPLS_PKG(1.0)

switch(config)# show license feature
% Incomplete command at '^' marker.
switch(config)# show license feature package
% Incomplete command at '^' marker.
switch(config)# show license feature package mapping

-----

Feature-Name: fcoe
-----

Linecard-Type      :AIDA
Package All or Any :any
Package-Name(ver)  :FCOE-N7K-F132XP(1.0)

-----

Feature-Name: lisp
-----

Linecard-Type      :SUP
Package All or Any :any
Package-Name(ver)  :TRANSPORT_SERVICES_PKG(1.0)

-----

Feature-Name: mpls_te
-----

Linecard-Type      :SUP
Package All or Any :any
Package-Name(ver)  :MPLS_PKG(1.0)

-----

Feature-Name: l3vpn
-----

Linecard-Type      :SUP
Package All or Any :any
Package-Name(ver)  :MPLS_PKG(1.0)

-----

```

■ show license feature package mapping

```
Feature-Name: ldp
-----
Linecard-Type      :SUP
Package All or Any :any
Package-Name (ver) :MPLS_PKG (1.0)

switch#
```

Related Commands

Command	Description
show license	Displays license information.
show license usage	Displays license usage information.

show license host-id

To display the serial number for the chassis to use for licensing, use the **show license host-id** command.

show license host-id

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines The serial number is the entire string that appears after the colon (:).
This command does not require a license.

Examples This example shows how to display the host ID, which is required to request node-locked licenses:

```
switch# show license host-id
License hostid:VDH=4C0AF664
```

show license usage

To display license usage information, use the **show license usage** command.

```
show license usage [vdc-all] [LAN_ADVANCED_SERVICES_PKG |
LAN_ENTERPRISE_SERVICES_PKG]
```

Syntax	Description
vdc-all	(Optional) Displays license information for all VDCs.
LAN_ADVANCED_SERVICES_PKG	(Optional) Displays a list of licensed features in use for the Advanced Services license package.
LAN_ENTERPRISE_SERVICES_PKG	(Optional) Displays a list of licensed features in use for the Enterprise Services license package.

Defaults Displays license usage information for the local VDC.

Command Modes Any command mode

Supported User Roles

- network-admin
- vdc-admin
- network-operator
- vdc-operator

Command History	Release	Modification
	8.2(4)	Added support for Honor mode licensing.
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display information about the current license usage for the local VDC:

```
switch# show license usage
Feature                               Ins  Lic  Status Expiry Date Comments
                                Count
-----
LAN_ADVANCED_SERVICES_PKG            No   -   In use          Grace 116D 20H
LAN_ENTERPRISE_SERVICES_PKG          No   -   In use          Grace 116D 20H
-----
```



Note

Starting from Cisco NX-OS Release 8.2(4), the grace period feature is not supported on Cisco Nexus 7000 Series switches.

Table 6 describes the significant fields shown in the display.

Table 6 *show license usage Field Description*

Field	Description
Feature	Name of the license package.
Ins	License installation status. “No” indicates that the license is not installed, and “Yes” indicates that the license is installed.
Lic Count	License count. “-” indicates that the count is not used for this license package. A number in this field indicates the number of current usages of the license by features. This field is not supported.
Status	License status. “Unused” indicates that no features that require the license are enabled. “In use” indicates that one or more features are using the license.
Expiry Date	License expiry date. The field is blank if the license is not installed. If the license is installed, the field displays “Never” to indicate that the license has no time limit or displays the date of expiry for the license.
Comments	Additional information. “Grace” with a time period remaining in days (“D”) and hours (“H”) indicates that the grace license is in use, and “license missing” indicates that an error has occurred.

This example shows how to display a list of features in use for a specific license:

```
switch# show license usage LAN_ENTERPRISE_SERVICES_PKG
Application
-----
bgp
ospf
-----
```

This example shows how to display a list of features in use for a specific license for all VDCs:

```
switch# show license usage vdc-all LAN_ENTERPRISE_SERVICES_PKG
Application
-----
bgp
ospf
bgp@2
ospf@2
-----
```



Note

The “@2” characters after the feature name in the command output indicate that the feature is enabled in VDC 2. Use the **show vdc** command to display the VDC name and identifier information.

Starting from Cisco NX-OS Release 8.2(4), Honor mode licensing is supported. This example displays how to show the time elapsed since honor-mode licensing is enabled for a package:

```
switch# show license usage
```

Feature	Ins	Lic Count	Status	Expiry Date	Comments
FCOE_NPV_PKG	No	-	Unused		-
SECURITY_PKG	No	0	In use		Honor Start 21M 17S

show line

To display COM1 and console port configuration information, use the **show line** command.

show line [com1 | console]

Syntax Description	com1	(Optional) Displays only information about the COM1 port configuration.
	console	(Optional) Displays only information about the console port configuration.

Defaults Displays information about the COM1 port and the console port configuration.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display information about the console port and COM1 port configuration:

```
switch# show line
line Console:
  Speed:          115200 baud
  Databits:       8 bits per byte
  Stopbits:       1 bit(s)
  Parity:         none
  Modem In:       Disable
  Modem Init-String -
                  default : ATE0Q1&D2&C1S0=1\015
Statistics: tx:26197 rx:805 Register Bits:RTS|CTS|DTR|DSR|CD|RI
line Aux:
  Speed:          9600 baud
  Databits:       8 bits per byte
  Stopbits:       1 bit(s)
  Parity:         none
  Modem In:       Enable
  Modem Init-String -
                  default : ATE0Q1&D2&C1S0=1\015
  Hardware Flowcontrol: ON
Statistics: +ò Çê+ Register Bits:RTS|CTS|DTR|DSR|CD|RI
```

This example shows how to display only information about the console port configuration:

```
switch# show line console
line Console:
  Speed:          115200 baud
  Databits:       8 bits per byte
  Stopbits:       1 bit(s)
  Parity:         none
  Modem In:       Disable
  Modem Init-String -
                  default : ATE0Q1&D2&C1S0=1\015
Statistics: tx:26197 rx:805   Register Bits:RTS|CTS|DTR|DSR|CD|RI
```

Related Commands

Command	Description
line com1	Enters the COM1 port configuration mode.
line console	Enters the console port configuration mode.

show running-config

To display the running configuration, use the **show running-config** command.

show running-config [**all** | **exclude** *component-list*]

Syntax Description	
all	(Optional) Displays all the default and configured information.
exclude <i>component-list</i>	(Optional) Removes the components from the command output. The <i>component-list</i> argument is a space-separated list and can contain a maximum of four component names.

Defaults Displays only the configured information.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.2(1)	Added the exclude option.
	4.0(1)	This command was introduced.

Usage Guidelines You can use the context-sensitive command-line interface (CLI) help to display the list of valid component names.

This command does not require a license.

Examples This example shows how to display the changes that you have made to the running configuration:

```
switch# show running-config
```

This example shows how to display the entire running configuration, including the default values:

```
switch# show running-config all
```

This example shows how to exclude the ACL manager and Control Plane Policing (CoPP) components from the command output:

```
switch# show running-config exclude aclmgr copp
```


Related Commands

Command	Description
copy running-config startup-config	Copies the running configuration to the startup configuration.
show running-config diff	Displays the differences between the running configuration and the startup configuration.
show startup-config	Displays the startup configuration.

show running-config diff

To display the differences between the running configuration and the startup configuration, use the **show running-config diff** command.

show running-config diff

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines [Table 7](#) describes the notations used in the command output.

Table 7 *show running-config diff* Notations

Notation	Description
***** --- line1, line2 --- *** line1, line2 ****	Indicates ranges of lines where differences occur. The range of lines indicated with asterisks (*) is for the running configuration, and the range indicated with dashes (-) is for the startup configuration.
+ text	Indicates that the line is not in the running configuration but is in the startup configuration.
- text	Indicates that the line is in not the running configuration but it is in the startup configuration.
! text	Indicates that the line exists in both configurations but in a different order.

This command does not require a license.

Examples This example shows how to display the difference between the running configuration and the startup configuration:

```

switch# show running-config diff
*** Startup-config
--- Running-config
*****
*** 48,76 ****
--- 48,83 ----
    username foo role network-admin
    username x password 5 ! role network-operator
    username user-op password 5 $1$ykZCz5Y2$npXjKVQhpa4U7EtwMauQG1 role network-o
perator
    telnet server enable
    ssh key rsa 768 force
+ ssh key dsa force
    ip domain-lookup
    ip host 172.28.231.193 172.28.231.193
    kernel core target 0.0.0.0
...

```

Related Commands

Command	Description
copy running-config startup-config	Copies the running configuration to the startup configuration.
show running-config	Displays the running configuration.
show startup-config	Displays the startup configuration.

show startup-config

To display the startup configuration, use the **show startup-config** command.

show startup-config [**exclude** *component-list*]

Syntax Description	exclude <i>component-list</i> (Optional) Removes the components from the command output. The <i>component-list</i> argument is a space-separated list and can contain a maximum of four component names.
---------------------------	---

Defaults	None
-----------------	------

Command Modes	Any command mode
----------------------	------------------

SupportedUserRoles	network-admin vdc-admin network-operator vdc-operator
---------------------------	--

Command History	Release	Modification
	4.2(1)	Added the exclude option.
	4.0(1)	This command was introduced.

Usage Guidelines	You can use the context-sensitive command-line interface (CLI) help to display the list of valid component names. This command does not require a license.
-------------------------	---

Examples	This example shows how to display the startup configuration: switch# show startup-config This example shows how to exclude the ACL manager and Control Plane Policing (CoPP) components from the command output: switch# show startup-config exclude aclmgr copp
-----------------	---

Related Commands	Command	Description
	copy running-config startup-config	Copies the running configuration to the startup configuration.

Command	Description
show running-config	Displays the running configuration.
show running-config diff	Displays the differences between the running configuration and the startup configuration.

show switchname

To display the hostname for the device, use the **show switchname** command.

show switchname

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines The **show hostname** command also displays the device hostname.
This command does not require a license.

Examples This example shows how to display the hostname for the device:

```
switch# show switchname
```

Related Commands	Command	Description
	show hostname	Displays the hostname.
	switchname	Configures the hostname for the device.

show system internal dir

To display the temporary (tmp) directory files in the file system, use the **show system internal dir** command.

show system internal dir *dir-path*

Syntax Description	dir-path	Files in the tmp directory.
--------------------	----------	-----------------------------

Defaults	None
----------	------

Command Modes	Any command mode
---------------	------------------

Supported User Roles	network-admin vdc-admin network-operator vdc-operator
----------------------	--

Command History	Release	Modification
	4.2(3)	This command was introduced.

Usage Guidelines	Use the show system internal dir /var/tmp command to check which files are in the tmp directory. This command does not require a license.
------------------	--

Examples	This example shows how to display the files in the tmp directory: switch# show system internal dir /var/tmp
----------	---

Related Commands	Command	Description
	show hostname	Displays the hostname.

show system statistics mts

To display the MTS statistics, use the **show system statistics mts** command.

```
show system statistics mts sap {sap-number | all} {brief | module | receive | transmit} {us | ms |
detail} [sort {ascending | descending} by {last-time | max-time | avg-time | count}]
```

Syntax Description

sap	Specifies to scan the MTS tracker for Sap subscriber.
<i>sap-number</i>	Specifies the component ID for the Sap.
all	Specifies to add all the modules to be included for MTS statistics.
brief	Displays the MTS statistics in brief.
module	Specifies the module to be included for MTS statistics.
receive	Specifies MTS receive statistics.
transmit	Specifies MTS transmit statistics.
us	Specifies statistics in micro second time format.
ms	Specifies statistics in millisecond time format.
detail	Displays MTS statistics in detail.
sort	Specifies the sorting order.
ascending	Specifies the sorting to be in ascending order.
descending	Specifies the sorting to be in descending order.
last-time	Specifies the sorting order to be by the last time.
max-time	Specifies the sorting order to be by the maximum time.
avg-time	Specifies the sorting order to be by the average time.
count	Specifies the sorting order to be by count.

Defaults

None.

Command Modes

Global configuration mode.

Command History

Release	Modification
NX-OS 8.0(1)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to display the MTS statistics:

```
switch# show system statistics mts sap 167 brief
=====
+-----: MTS SAP COUNTERS BRIEF :-----+
=====
```



```
SAP Name: MTS_SAP_VLAN_MGR
Rx Total: 22 Rx Unique: 14
Tx Total: 18 Tx Unique: 12
```

```
switch# show system statistics mts sap 167 receive us sort descending by count
```

```
=====
-----: MTS RX DETAILS :-----
=====
-----+-----+-----+
| Opcode Processed
| Source SAP
| Count | Last(us) | Avg(us) | Max(us) |
-----+-----+-----+
|-----+-----+-----+
| MTS_OPC_VSH_CMD_TLV
| MTS_SAP_SNMP_AGENT_RESP |210 |89 |90 |540 |
| MTS_OPC_VLAN_MGR_GET_PORT_TRUNKING_MEMBERSHIP | MTS_SAP_SNMP_AGENT_RESP |96 |653 |474
|1012 |
| MTS_OPC_PCM_GET_PORT_MEMBERSHIP
| MTS_SAP_ETH_PORT_CHANNEL_|16|3 |2 |3 |
|
| MTS_OPC_FM_CMI_GET_FEATURE_STATUS | MTS_SAP_FEATURE_MGR |4
|4 |3 |4 |
| MTS_OPC_PSSHELPER_RESPONSE_TO_PBLR | MTS_SAP_PSS_HELPER |3
|141 |75 |141 |
| MTS_OPC_VSH_CMD_TLV_SYNC
| MTS_SAP_LAST_DYNAMIC |3 |75131 |25399 |75131 |
| MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE | MTS_SAP_PVLAN |2
|488 |1334 |2181 |
| MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE | MTS_SAP_IGMP
|1 |159 |159 |159 |
| MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE | MTS_SAP_ACLMGR |1
|184 |184 |184 |
| MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE | MTS_SAP_DHCP_SNOOP |1
|238 |238 |238 |
| MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE | MTS_SAP_IPQOS_MGR |1
|182 |182 |182 |
| MTS_RES_MGR_OPC_FREE_RESOURCE_WITH_VALUE_FOR_VDC | MTS_SAP_RES_MGR |1 |9422 |9422
|9422 |
| MTS_OPC_VLAN_MGR_PORT_AFFECTED2 | MTS_SAP_VLAN_MGR
|1 |515 |515 |515 |
| MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE | MTS_SAP_TEST_ETHPM |1
|491 |491 |491 |
| MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE | MTS_SAP_ELTM
|1 |411 |411 |411 |
| MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE | MTS_SAP_L2FM
|1 |487 |487 |487 |
| MTS_OPC_VLAN_MGR_PORT_BD_MEMBERSHIP_CHANGE | MTS_SAP_PLSM |1
|208 |208 |208 |
```

```
switch# show system statistics mts sap 167 transmit us sort descending by count
```

```
=====
-----: MTS TX DETAILS
-----+-----+-----+
| Opcode Processed
| Source SAP
| Count | Last(us) | Avg(us) | Max(us) |
-----+-----+-----+
|-----+-----+-----+
```

show system statistics mts

```

|MTS_OPC_PCM_GET_PORT_MEMBERSHIP
|MTS_SAP_ETH_PORT_CHANNEL_|16|97|90|128|
|MTS_OPC_FM_CMI_GET_FEATURE_STATUS|MTS_SAP_FEATURE_MGR|4
|118|252|304|
|MTS_OPC_PSSHHELPER_PUB_WRITE
|MTS_SAP_PSS_HELPER|3|0|0
|0|
|MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE|MTS_SAP_PVLAN|2
|339|363|387|
|MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE|MTS_SAP_IGMP
|1|3113|3113|3113|
|MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE|MTS_SAP_ACLMGR|1
|184|184|184|
|MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE|MTS_SAP_DHCP_SNOOP|1
|8890|8890|8890|
|MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE|MTS_SAP_IPQOS_MGR|1
|194|194|194|
|MTS_RES_MGR_OPC_FREE_RESOURCE_WITH_VALUE_FOR_VDC|MTS_SAP_RES_MGR|1|209|209
|209|
|MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE|MTS_SAP_TEST_ETHPM|1
|350|350|350|
|MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE|MTS_SAP_ELTM
|1|1973|1973|1973|
|MTS_OPC_VLAN_MGR_REQ_RESP_VLAN_DELETE|MTS_SAP_L2FM
|1|3670|3670|3670|
|MTS_OPC_VLAN_MGR_PORT_BD_MEMBERSHIP_CHANGE|MTS_SAP_PLSM|1
|31489|31489|31489|

```

Related Commands

Command	Description
system statistics mts	Enables the MTS statistics feature.

show tech-support

To display information about Cisco technical support, use the **show tech-support** command.

show tech-support [**brief** | **commands** | **details** | *feature*]

Syntax Description		
brief	(Optional)	Displays information only about the status of the device.
commands	(Optional)	Displays the complete list of commands that are executed by the show tech-support command.
details	(Optional)	Displays detailed information for troubleshooting.
<i>feature</i>	(Optional)	Specific feature name. Use the command-line interface (CLI) context-sensitive help (for example, show tech-support ?) for the list of features.

Defaults Displays information for all features.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines The output from the **show tech-support** command is very long. To better manage this output, you can redirect the output to a file (for example, **show tech-support > bootflash:filename**).

If you need to contact your customer support representative or Cisco TAC to resolve an issue, use the **show tech-support details** command to collect system information and configuration details. Redirect the output of the **show tech-support details** command to a file using the **tac-pac** command.

This command does not require a license.

Examples This example shows how to display technical support information and redirect it to a file:

```
switch# show tech-support > bootflash:tsupport_file
```

This example shows how to display the brief technical support information for the device:

```
switch# show tech-support brief
```

This example shows how to display the technical support information for a feature:

■ show tech-support

```
switch# show tech-support aaa
```

This example shows how to display the commands to generate the technical support information:

```
switch# show tech-support commands
```

Related Commands

Command	Description
tac-pac	Saves system information in a compressed .gz file.

show terminal

To display information about the terminal configuration for a session, use the **show terminal** command.

show terminal

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display information about the terminal configuration for a session:

```
switch# show terminal
TTY: /dev/pts/41 Type: "ansi"
Length: 31 lines, Width: 80 columns
Session Timeout: None
```

Related Commands	Command	Description
	terminal length	Configures the terminal display length for the session.
	terminal session-timeout	Configures the terminal inactive session timeout for a session.
	terminal type	Configures the terminal type for a session.
	terminal width	Configures the terminal display width for a session.

show time-stamp running-config last-changed

To display the time stamp on when the running configuration was last changed, use the **show time-stamp running-config last-changed** command.

show time-stamp running-config last-changed

Syntax Description This command has no arguments or keywords.

Defaults Displays only the configured information.

Command Modes Any command mode.

Command History

Release	Modification
8.3(1)	This command was introduced.

Examples

This example shows the display after a normal reload when there is no change in running configuration:

```
switch# show time-stamp running-config last-changed
No configuration change since last restart
switch#
```

This example shows the display of time stamp after making some changes in running configuration:

```
switch# show time-stamp running-config last-changed
Running configuration last done at: Thu Feb 22 04:06:35 2018
```

This example shows the display of **show running-configuration** command that shows information about the last changed configuration.

```
switch(config)# show running-configuration

!Command: show running-config
!Running configuration last done at: Thu Feb 22 04:16:19 2018
!Time: Thu Feb 22 04:17:29 2018

version 8.3(0)SK(1)
vdc switch id 1
```

This example shows the display of time stamp after a configuration:

```
switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
```

```

switch(config)# interface loopback 1
switch(config-if)# ip address 10.1.1.2/24
switch(config-if)# exit
switch(config)# exit
switch# show interface loopback 1
loopback1 is up
admin state is up
  Hardware: Loopback
  Description: loopack-for-routing
  Internet Address is 10.1.1.2/24
  MTU 1500 bytes, BW 8000000 Kbit, DLY 5000 usec
  reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation LOOPBACK, medium is broadcast
  Port mode is routed
  Auto-mdix is turned off
    0 packets input 0 bytes
    0 multicast frames 0 compressed
    0 input errors 0 frame 0 overrun 0 fifo
    0 packets output 0 bytes 0 underruns
    0 output errors 0 collisions 0 fifo
    0 out_carrier_errors
    0 packets input 0 bytes
    0 multicast frames 0 compressed
    0 input errors 0 frame 0 overrun 0 fifo
    0 packets output 0 bytes 0 underruns
    0 output errors 0 collisions 0 fifo
    0 out_carrier_errors

switch# show time-stamp running-config last-changed
Running configuration last done at: Thu May 31 04:06:35 2018

```

Related Commands

Command	Description
show running-config	Displays the running configuration.
show running-config diff	Displays the differences between the running configuration and the startup configuration.
show startup-config	Displays the startup configuration.

show version

To display information about the software version, use the **show version** command.

```
show version [build-info [all] | epld filename | fan fan-number epld | image filename | module slot
[epld] | xbar xbar-number epld]
```

Syntax Description		
build-info	(Optional)	Displays the build information for the currently running system image.
all	(Optional)	Displays the build information for the currently running system image and the corresponding kickstart image.
epld <i>filename</i>	(Optional)	Displays the version information for an electrically programmable logic device (EPLD) image file.
fan <i>fan-number</i> epld	(Optional)	Displays the EPLD version information for a fan.
image <i>filename</i>	(Optional)	Displays the version information for a system or kickstart image file.
module <i>slot</i>	(Optional)	Displays the version information for an I/O module image and BIOS.
epld	(Optional)	Displays the version information for EPLD images on an I/O module.
xbar <i>xbar-number</i> epld	(Optional)	Displays the EPLD version information for a fabric module.

Defaults Displays software version information for the running kickstart and system images.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin
network-operator
vdc-operator

Command History	Release	Modification
	4.1(2)'	Added the build-info keyword.
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the version information for the kickstart and system images running on the device:


```

switch# show version
Cisco Nexus Operating System (NX-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2008, Cisco Systems, Inc. All rights reserved.
The copyrights to certain works contained in this software are
owned by other third parties and used and distributed under
license. Certain components of this software are licensed under
the GNU General Public License (GPL) version 2.0 or the GNU
Lesser General Public License (LGPL) Version 2.1. A copy of each
such license is available at
http://www.opensource.org/licenses/gpl-2.0.php and
http://www.opensource.org/licenses/lgpl-2.1.php

Software
  BIOS:          version 3.17.0
  loader:        version N/A
  kickstart:     version 4.0(1a) [gdb]
  system:        version 4.0(1a) [gdb]
  BIOS compile time:    03/23/08
  kickstart image file is: bootflash:/n7000-s1-kickstart.4.0.1a.bin
  kickstart compile time: 5/8/2008 13:00:00 [05/20/2008 07:52:26]
  system image file is:   bootflash:/n7000-s1-dk9.4.0.1a.bin
  system compile time:    5/8/2008 13:00:00 [05/20/2008 08:35:00]

Hardware
  cisco Nexus7000 C7010 (10 Slot) Chassis ("Supervisor module-1X")
  Intel(R) Xeon(R) CPU          with 2063436 kB of memory.
  Processor Board ID JAB10380101

  Device name: switch
  bootflash:   1023120 kB
  slot0:       0 kB (expansion flash)

Kernel uptime is 1 day(s), 3 hour(s), 48 minute(s), 20 second(s)

Last reset at 761445 usecs after Wed May 21 11:46:23 2008

Reason: Reset Requested by CLI command reload
System version: 4.0(1.51)
Service:

plugin
  Core Plugin, Ethernet Plugin

CMP (Module 6) no response

CMP (Module 5) no response

```

This example shows how to display the version information for an image file:

```

switch# show version image bootflash:old_image
  image name: old_image
  bios:       v3.15.0(03/04/08)
  system:     version 4.0(1a)
  compiled:   4/3/2008 8:00:00 [04/18/2008 08:26:29]

```

This example shows how to display the version information for an I/O module:

```

switch# show version module 2
ModNo  Image Type  SW Version  SW Interim Version  BIOS Version
2      SLC          4.0(1a)     4.0(1a)              1.10.5

```

This example shows how to display the version information for the EPLD images on an I/O module:

```

switch# show version module 2 epld

```

```
EPLD Device                Version
-----
Power Manager              2.9
IO                         1.17
Forwarding Engine         1.4
```

This example shows how to display the version information for the EPLD images on a fabric module:

```
switch# show version xbar 1 epld
```

```
EPLD Device                Version
-----
Power Manager              2.4
```

sleep

To cause the command-line interface (CLI) to pause before displaying the prompt, use the **sleep** command.

sleep *seconds*

Syntax Description	<i>seconds</i>	Number of seconds. The range is from 0 to 2147483647.
---------------------------	----------------	---

Defaults	None
-----------------	------

Command Modes	Any command mode
----------------------	------------------

SupportedUserRoles	network-admin vdc-admin
---------------------------	----------------------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	You can use the sleep command scripts to delay the execution of the script. This command does not require a license.
-------------------------	--

Examples	This example shows how to cause the CLI to pause before displaying the prompt: switch# sleep 5
-----------------	--

slot

To issue commands to an I/O module from the supervisor module session, use the **slot** command.

```
slot slot-number {command-string | quoted "command-string"}
```

Syntax Description		
<i>slot-number</i>		Chassis slot number for the I/O module. The range is from 1 to 18.
<i>command-string</i>		Commands to send to the I/O module. If you want to send more than one command to the I/O module, separate the commands with a space, a semicolon (;), and a space.
quoted		Indicates that the command string is enclosed in double quotation marks.

Defaults	
	None

Command Modes	
	Any command mode

Supported User Roles	
	network-admin vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines

You can use the **slot** command instead of starting a session on the I/O module with the **attach** command. By default, the keyword and arguments in the *command-string* argument are separated by a space. To send more than one command to a module, separate the commands with a space character, a semicolon character (;), and a space character.

The **quoted** keyword indicates that the command string begins and ends with double quotation marks (“ ”). Use this keyword when you want to redirect the module command output to a filtering utility, such as diff, that is supported only on the supervisor module session.

This command does not require a license.

Examples

This example shows how to send commands to an I/O module from the supervisor module session:

```
switch# slot 1 show system uptime ; show version
System start time:      Tue Aug  4 15:09:49 2009
System uptime:         6 days, 17 hours, 50 minutes, 55 seconds
Kernel uptime:        6 days, 17 hours, 53 minutes, 7 seconds
RAM 516692 kB
lc1
Software
  BIOS:                version 1.10.6
  system:              version 4.2(1) [build 4.2(1)]
```

```

BIOS compile time:      11/04/08
system compile time:    7/3/2009 2:00:00 [08/02/2009 07:15:39]

```

Hardware

```

bootflash: 0 blocks (block size 512b)

uptime is 6 days 17 hours 53 minute(s) 7 second(s)

```

This example shows how to send a quoted command to an I/O module from the supervisor module session:

```

switch# slot 1 quoted "show system uptime" | diff
switch# slot 1 quoted "show system uptime" | diff -c
*** /volatile/vsh_diff_1_admin_4849_slot_quoted_show_system_uptime.old Tue Aug 11
09:16:14 2009
--- - Tue Aug 11 09:16:14 2009
*****
*** 1,3 ****
    System start time:      Tue Aug  4 15:09:49 2009
! System uptime:          6 days, 18 hours, 6 minutes, 13 seconds
! Kernel uptime:         6 days, 18 hours, 8 minutes, 25 seconds
--- 1,3 ----
    System start time:      Tue Aug  4 15:09:49 2009
! System uptime:          6 days, 18 hours, 6 minutes, 36 seconds
! Kernel uptime:         6 days, 18 hours, 8 minutes, 48 seconds

```

Related Commands

Command	Description
attach module	Starts a command session on an I/O module.

source

To run a tcl/python script, use the **source** command.

```
source filename [argument ...]
```

Syntax Description	<p>filename The file in bootflash:scripts directory. Depending on the language of the script, the first line of the file has to start with one of the following:</p> <pre>#!/bin/env tclsh</pre> <pre>#!/bin/env python</pre> <p>The TCL or Python script can run CLI commands with the new TCL/Python command cli.</p>
	<p>argument (Optional) arguments. Refer to <i>Cisco Nexus 7000 Series NX-OS Fundamentals Configuration Guide, Release 6.x</i> for information on arguments and accessing online help for arguments.</p>

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	6.1(2)	This command was introduced.

Usage Guidelines Python is operated in noninteractive mode when using the **source** command. To invoke interactive mode, use the **python** command.

This command does not require a license.

Examples This example shows how to invoke a Python script:

```
switch# show file bootflash:scripts/test.py !--bootflash:scripts directory
                                     != is the default script directory
#!/bin/env python                    !-- Invoke Python to run testl.py script
)
i=0
while i<3
    r=clip('show version')
    uptime_name='/@/show/version/_readonly_/kern_uptm_secs'
    print uptime_name, r[uptime_name]
    clid('sleep')
```

```
i=i+1

switch# source test.py      !-- Default directory is /bootflash/script
/@/show/version/_readonly_/kern_uptm_secs 36
/@/show/version/_readonly_/kern_uptm_secs 38
/@/show/version/_readonly_/kern_uptm_secs 40
```

This example shows how a script accepts an argument:

```
root@switch# source ntimes 2 "show clock" !--Pass arguments '2' and 'show clock' to script

>>>> iteration 1 for 'show clock'
21:27:21.716 UTC Tue Oct 09 2012
>>>> iteration 2 for 'show clock'
21:27:21.730 UTC Tue Oct 09 2012
root@switch#
```

Related Commands

Command	Description
python	Invokes python interpreter in interactive mode.

sscp

To copy command output to or from Cisco devices securely, use the **sscp** command.

command | **sscp** *mybox /users/user-name/host-name*

Syntax Description	command	Specifies a command that produces command-line interface (CLI) output.
	mybox	Name of the Secure Shell (SSH) connection.
	<i>/users/user-name/host-name</i>	Path and name of the file on the remote host.

Defaults	None
----------	------

Command Modes	Any command mode
---------------	------------------

Supported User Roles	network-admin vdc-admin
----------------------	----------------------------

Command History	Release	Modification
	5.0(2)	This command was introduced.

Usage Guidelines

You must create a Secure Shell (SSH) connection before using the **sscp** command. You can *create an SSH connection by using the ssh name command*. Password is specified only once at the time of creation of the ssh-master-connection. So, you do not have to enter the password again.

If the SSH server is running on a Windows system, you must copy the cat.exe file from the binutils of GNU into the Windows path.

The **sscp** command is used at the end of the pipe (|).

This command does not require a license.

Examples

This example shows how to use the Streaming Secure Copy Protocol (SSCP) as the transfer mechanism:

```
switch# ssh name mybox admin 172.22.36.10
                               WARNING!!!
                               READ THIS BEFORE ATTEMPTING TO LOGON
```

```

This System is for the use of authorized users only.  Individuals
using this computer without authority, or in excess of their
...

```

```
admin@172.23.152.34's password:
switch# show version | sscp mybox /users/admin/tada
```


switch#

stopbits

To configure the stop bits for the COM1 port or console port, use the **stopbits** command. To revert to the default, use the **no** form of this command.

stopbits {1 | 2}

no stopbits {1 | 2}

Syntax Description	1	Specifies one stop bit.
	2	Specifies two stop bits.

Defaults 1 stop bit

Command Modes COM1 port configuration mode
Console port configuration mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines You can use the **stopbits** command only in the default virtual device context (VDC).
You can configure the console and COM1 ports only from a session on the console port.
This command does not require a license.

Examples This example shows how to configure the number of stop bits for the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# stopbits 2
```

This example shows how to configure the number of stop bits for the console port:

```
switch# configure terminal
switch(config)# line console
switch(config-console)# stopbits 2
```

This example shows how to revert to the default number of stop bits for the COM1 port:

```
switch# configure terminal
switch(config)# line com1
switch(config-com1)# no stopbits 2
```

This example shows how to revert to the default number of stop bits for the console port:

```
switch# configure terminal  
switch(config)# line console  
switch(config-console)# no stopbits 2
```

Related Commands

Command	Description
show line	Displays information about the COM1 port and console port configuration.

switchname

To configure the hostname for the device, use the **switchname** command. To revert to the default, use the **no** form of this command.

switchname *name*

no switchname

Syntax Description	<i>name</i>	Name for the device. The name is alphanumeric, case sensitive, can contain special characters, and can have a maximum of 63 characters.
---------------------------	-------------	---

Defaults	switch
-----------------	--------

Command Modes	Global configuration mode
----------------------	---------------------------

SupportedUserRoles	network-admin vdc-admin
---------------------------	----------------------------

Command History	Release	Modification
	7.3(0)D1(1)	This command was modified. The character limit of a switch name is increased from 32 to 63 alphanumeric characters.
	4.0(1)	This command was introduced.

Usage Guidelines The Cisco NX-OS software uses the hostname in command-line interface (CLI) prompts and in default configuration filenames.

The **switchname** command performs the same function as the **hostname** command.

This command does not require a license.

Examples This example shows how to configure the device hostname:

```
switch# configure terminal
switch(config)# switchname Engineering2
Engineering2(config)#
```

This example shows how to revert to the default device hostname:

```
Engineering2# configure terminal
Engineering2(config)# no switchname
switch(config)#
```

Related Commands

Command	Description
hostname	Configures the device hostname.
show switchname	Displays the device hostname.

system statistics mts

To enable the MTS statistics feature, use the **system statistics mts** command. To disable the MTS statistics feature, use the **no** form of this command.

```
system statistics mts sap sap-number | all [module module-number]
```

```
no system statistics mts sap sap-number | all [module module-number]
```

Syntax Description

sap	Specifies to scan the MTS tracker for Sap subscriber.
<i>sap-number</i>	Specifies the component ID for the Sap.
all	Specifies to add all the modules to be included for MTS statistics.
module	Specifies the module to be included for MTS statistics.
<i>module-number</i>	Specifies the component ID for the module.

Defaults

Enabled for all saps.

Command Modes

Global configuration mode.

Command History

Release	Modification
NX-OS 8.0(1)	This command was introduced.

Usage Guidelines

None.

Examples

This example shows how to configure the device hostname:

```
switch# configure terminal
switch(config)# system statistics mts sap all
```

Related Commands

Command	Description
show system statistics mts	Displays the MTS statistics.

tac-pac

To save system information in a compressed .gz file at a specific location, use the **tac-pac** command.

tac-pac [**bootflash:** | **ftp:** | **scp:** | **sftp:** | **slot0:** | **tftp:** | **volatile:**]

Syntax Description	
bootflash:	(Optional) Specifies the internal Flash memory.
ftp:	(Optional) Uses FTP to download the file.
scp:	(Optional) Uses Secure Copy Protocol (SCP) to download the file.
sftp:	(Optional) Uses Secure Shell FTP (SFTP) to download the file.
slot0:	(Optional) Specifies the external Flash memory.
tftp:	(Optional) Uses Trivial FTP (TFTP) to download the file.
volatile:	(Optional) Specifies the volatile memory on the device.

Command Default None

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

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

If you do not specify a filename, Cisco NX-OS creates the file as volatile:show_tech_out.gz.

This command does not require a license.

Examples This example shows how to save the output of the **show tech-support details** command to the bootflash:

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

Related Commands	Command	Description
	show tech-support	Displays information about Cisco technical support.

tail

To display the last lines of a file, use the **tail** command.

```
tail [filesystem:[//module/]][directory/]filename lines
```

Syntax Description		
<i>filesystem:</i>	(Optional) Name of a file system. The name is case sensitive.	
<i>//module/</i>	(Optional) Identifier for a supervisor module. Valid values are sup-active , sup-local , sup-remote , or sup-standby . The identifiers are case sensitive.	
<i>directory/</i>	(Optional) Name of a directory. The name is case sensitive.	
<i>filename</i>	Name of the command file. The name is case sensitive.	
<i>lines</i>	(Optional) Number of lines to display. The range is from 0 to 80.	

Defaults	
10 lines	

Command Modes	
Any command mode	

Supported User Roles	
network-admin vdc-admin	

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	
This command does not require a license.	

Examples	
This example shows how to display the last 10 lines of a file:	

```
switch# tail bootflash:startup.cfg
ip arp inspection filter marp vlan 9
ip dhcp snooping vlan 13
ip arp inspection vlan 13
ip dhcp snooping
ip arp inspection validate src-mac dst-mac ip
ip source binding 10.3.2.2 0f00.60b3.2333 vlan 13 interface Ethernet2/46
ip source binding 10.2.2.2 0060.3454.4555 vlan 100 interface Ethernet2/10
logging level dhcp_snoop 6
logging level eth_port_channel 6
```

This example shows how to display the last 20 lines of a file:

```
switch# tail bootflash:startup.cfg 20
area 99 virtual-link 1.2.3.4
router rip Enterprise
router rip foo
```



```
    address-family ipv4 unicast
router bgp 33.33
event manager applet sctest
monitor session 1
monitor session 2
ip dhcp snooping vlan 1
ip arp inspection vlan 1
ip arp inspection filter marp vlan 9
ip dhcp snooping vlan 13
ip arp inspection vlan 13
ip dhcp snooping
ip arp inspection validate src-mac dst-mac ip
ip source binding 10.3.2.2 0f00.60b3.2333 vlan 13 interface Ethernet2/46
ip source binding 10.2.2.2 0060.3454.4555 vlan 100 interface Ethernet2/10
logging level dhcp_snoop 6
logging level eth_port_channel 6
```

Related Commands

Command	Description
cd	Changes the current working directory.
copy	Copies files.
dir	Displays the directory contents.
pwd	Displays the name of the current working directory.

tar append

To append files to a tar archive file, use the **tar append** command.

```
tar append {bootflash: | volatile:}archive-filename [absolute] [remove] [verbose] filename-list
```

Syntax Description		
bootflash		Specifies the internal CompactFlash memory located on the active supervisor module used for storing image files, configuration files, and other miscellaneous files. The initial default directory is bootflash.
volatile		Specifies the volatile random-access memory that is located on a supervisor module used for temporary or pending changes.
<i>archive-filename</i>		Name of an existing tar archive file.
absolute		(Optional) Uses the filenames without stripping leading backslashes (/).
remove		(Optional) Removes the files after adding them to the archive file.
verbose		(Optional) Displays the filenames when the Cisco NX-OS software appends them to the archive file.
<i>filename-list</i>		Space-separated list of filenames. The files must be only on bootflash: or volatile:.

Defaults Adds the tar.gz extension to the archive filename if you do not enter an extension.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines You must create an archive file using the **tar create** command before you can append files to it. This command does not require a license.

Examples This example shows how to append two files to the end of an archive file:

```
switch# tar append bootflash:testarchive.tar.gz newfile1 newfile2
```

This example shows how to append two files to the end of an archive file and display the filenames as they are appended:

```
switch# tar append bootflash:testarchive.tar.gz verbose newfile1 newfile2  
/bootflash/newfile1
```

```
/bootflash/newfile2
```

This example shows how to append two files to the end of an archive file and remove those files from the device:

```
switch# tar append bootflash:testarchive.tar.gz remove newfile1 newfile2
```

Related Commands

Command	Description
tar create	Creates an archive file.
tar extract	Extracts the files from an archive file.
tar list	Displays the contents of an archive file.

tar create

To create a tar archive file, use the **tar create** command.

```
tar create { bootflash: | volatile: } archive-filename [absolute] [bz2-compress] [gz-compress]
[remove] [uncompressed] [verbose] filename-list
```

Syntax Description

bootflash	Specifies the internal CompactFlash memory located on the active supervisor module used for storing image files, configuration files, and other miscellaneous files. The initial default directory is bootflash.
volatile	Specifies the volatile random-access memory that is located on a supervisor module used for temporary or pending changes.
<i>archive-filename</i>	Name of an existing tar archive file.
absolute	(Optional) Uses the filenames without removing the leading backslashes (/).
bz2-compress	(Optional) Compresses the files when they are added to the archive file by using the bzip 2 utility. With this option, the archive file extension is .tar.bz2.
gz-compress	(Optional) Compresses the files when they are added to the archive file by using the gzip utility. With this option, the archive file extension is .tar.gz.
remove	(Optional) Removes the files after adding them to the archive file.
uncompressed	(Optional) Adds the files to the archive file without compression. With this option, the archive file extension is .tar.
verbose	(Optional) Displays the filenames when the Cisco NX-OS software appends them to the archive file.
<i>filename-list</i>	Space-separated list of filenames. The files must be only on bootflash: or volatile:.

Defaults

gz-compress

Command Modes

Any command mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.2(1)	Added the absolute , bz2-compress , and uncompressed optional keywords. Changed the compress keyword to gz-compress .
4.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to create a tar archive file and add two files:

```
switch# tar create bootflash:testarchive.tar.gz newfile1 newfile2
```

This example shows how to create a tar archive file, add two files, and display the filenames as they are appended:

```
switch# tar create bootflash:testarchive.tar.gz verbose newfile1 newfile2
/bootflash/newfile1
/bootflash/newfile2
```

This example shows how to create a tar archive file, add two files, and remove those files from the device:

```
switch# tar create bootflash:testarchive.tar.gz remove newfile1 newfile2
```

Related Commands

Command	Description
tar append	Appends files to the end of an archive file.
tar extract	Extracts the files from an archive file.
tar list	Displays the contents of an archive file.

tar extract

To extract files from a tar archive file, use the **tar extract** command.

```
tar extract { bootflash: | volatile: } archive-filename [keep-old] [screen] [to { bootflash: | volatile: } filename] [verbose]
```

Syntax Description

bootflash	Specifies the internal CompactFlash memory located on the active supervisor module used for storing image files, configuration files, and other miscellaneous files. The initial default directory is bootflash.
volatile	Specifies the volatile random-access memory that is located on a supervisor module used for temporary or pending changes.
<i>archive-filename</i>	Name of an existing tar archive file.
keep-old	(Optional) Specifies to not overwrite existing files.
screen	(Optional) Extracts only to the terminal session screen.
to	(Optional) Extracts to another tar archive file. The target archive file must exist on the device before you can extract files to it.
<i>filename</i>	Name of the file that you want to create.
verbose	(Optional) Displays the filenames when the Cisco NX-OS software appends them to the archive file.

Defaults

Adds the tar.gz extension to the archive filename if you do not enter an extension.

Command Modes

Any command mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.2(1)	Added the keep-old and to optional keywords.
4.1(2)	This command was introduced.

Usage Guidelines

You must create an archive file using the **tar create** command before you can extract files from it. This command does not require a license.

Examples

This example shows how to extract files from an archive file:

```
switch# tar extract bootflash:testarchive.tar.gz
```

This example shows how to extract files from an archive file and display the filenames as they are extracted:

```
switch# tar extract bootflash:testarchive.tar.gz verbose newfile1 newfile2
/bootflash/newfile1
/bootflash/newfile2
```

Related Commands

Command	Description
tar append	Appends files to the end of an archive file.
tar create	Creates an archive file.
tar list	Displays the contents of an archive file.

tar list

To list the files in a tar archive file, use the **tar list** command.

tar list { **bootflash:** | **volatile:** } *archive-filename*

Syntax Description		
	bootflash	Specifies the internal CompactFlash memory located on the active supervisor module used for storing image files, configuration files, and other miscellaneous files. The initial default directory is bootflash.
	volatile	Specifies the volatile random-access memory that is located on a supervisor module used for temporary or pending changes.
	<i>archive-filename</i>	Name of an existing tar archive file.

Defaults Adds the tar.gz extension to the archive filename if you do not enter an extension.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.1(2)	This command was introduced.

Usage Guidelines You must create an archive file using the **tar create** command before you can list files. This command does not require a license.

Examples This example shows how to list files in an archive file:

```
switch# tar list bootflash:testfile.tar.gz
bootflash/newfile2
bootflash/newfile1
```

Related Commands	Command	Description
	tar append	Appends files to the end of an archive file.
	tar create	Creates an archive file.
	tar extract	Extracts the files from an archive file.

terminal alias

To display and define command aliases for the user session, use the **terminal alias** command. To remove the alias definition, use the **no** form of this command.

terminal alias [**persist**] [*alias-name alias-definition*]

no terminal alias [**persist**] [*alias-name alias-definition*]

Syntax Description	
persist	(Optional) Makes the setting persistent for the current and future sessions for the current user.
<i>alias-name</i>	(Optional) Name of the alias.
<i>alias-definition</i>	Alias definition.

Defaults Displays the command aliases available to the user session.

Command Modes Any command mode

Supported User Roles network-admin
vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines Aliases that you define with the **terminal alias** command are available only to the current user. Other users cannot use these command aliases. To create aliases that other users can access, use the **cli alias name** command.

This command does not require a license.

Examples This example shows how to define a command alias only for the current user session:

```
switch# terminal alias shint show interface brief
```

This example shows how to define a command alias to persist across sessions for the current user:

```
switch# terminal alias persist shver show version
```

This example shows how to display the command aliases available to the current user session:

```
switch# terminal alias
CLI alias commands
=====
shint :show interface brief
-----
```

■ terminal alias

```
alias :show cli alias
```

This example shows how to remove a temporary command alias for the user session:

```
switch# no terminal alias shint
```

Related Commands

Command	Description
cli alias name	Configures command aliases for all user sessions.

terminal color

To change the colors used when displaying the commands and output on the command-line interface (CLI) for the user session, use the **terminal color** command. To revert to the default, use the **no** form of this command.

terminal color [persist]

no terminal color [persist]

Syntax Description

persist	(Optional) Makes the setting persistent for the current and future sessions for the current user.
----------------	---

Defaults

All CLI prompts, commands, and command outputs display in colors that are defined by the terminal emulator.

Command Modes

Any command mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.2(1)	This command was introduced.

Usage Guidelines

The **terminal color** command changes the CLI colors as follows:

- Displays the command prompt in green if the previous command was successful.
- Displays the command prompt in red if an error occurred in the previous command.
- Displays the command in blue.
- Displays the output in the default color defined by the terminal emulator.

The terminal colors setting applies only to the current user session. Use the **persist** keyword to change the setting for the current and future sessions for the current user.

This command does not require a license.

Examples

This example shows how to change the terminal display colors for the current user session:

```
switch# terminal color
```

This example shows how to change the terminal display colors for the current and future sessions for the current user:

```
switch# terminal color persist
```

This example shows how to revert to the default for the current user session:

```
switch# no terminal color
```

This example shows how to revert to the default for the current and future sessions for the current user:

```
switch# no terminal color persist
```

terminal dont-ask

To disable confirmation prompts on the command-line interface (CLI), use the **terminal dont-ask** command. To revert to the default, use the **no** form of this command.

terminal dont-ask [persist]

no terminal dont-ask [persist]

Syntax Description	
persist	(Optional) Makes the setting persistent for the current and future sessions for the current user.

Defaults Confirmation prompts are enabled.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines The terminal confirmation prompt setting applies only to the current user session. Use the **persist** keyword to change the setting for the current and future sessions for the current user.

This command does not require a license.

Examples This example shows how to disable the CLI confirmation prompts for the current user session:

```
switch# terminal dont-ask
```

This example shows how to disable the CLI confirmation prompts for the current and future sessions for the current user:

```
switch# terminal dont-ask persist
```

This example shows how to enable the CLI confirmation prompts for the current user session:

```
switch# no terminal dont-ask
```

This example shows how to enable the CLI confirmation prompts for the current and future sessions for the current user:

```
switch# no terminal dont-ask persist
```

terminal edit-mode vi

To enable vi editing of recalled commands, use the **terminal edit-mode vi** command. To revert to the default, use the **no** form of this command.

terminal edit-mode vi [persist]

no terminal edit-mode vi [persist]

Syntax Description	persist	(Optional) Makes the setting persistent for the current and future sessions for the current user.
---------------------------	----------------	---

Defaults	emacs
-----------------	--------------

Command Modes	Any command mode
----------------------	------------------

SupportedUserRoles	network-admin vdc-admin
---------------------------	----------------------------

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines	The edit mode setting applies only to the current user session. Use the persist keyword to change the setting for the current and future sessions for the current user.
-------------------------	--

This command does not require a license.

Examples	This example shows how to change the edit mode for recalled commands to vi for the current user session:
-----------------	--

```
switch# terminal edit-mode vi
```

This example shows how to change the edit mode for recalled commands to vi for the current and future sessions for the current user:

```
switch# terminal edit-mode vi persist
```

This example shows how to revert the edit mode for recalled commands to emacs for the current user session:

```
switch# no terminal edit-mode vi
```

This example shows how to revert the edit mode for recalled commands to emacs for the current and future sessions for the current user:

```
switch# no terminal edit-mode vi persist
```

Related Commands

Command	Description
show terminal	Displays the terminal session configuration.

terminal history no-exec-in-config

To remove the EXEC commands from the **show history** command output, use the **terminal history no-exec-in-config** command. To revert to the default, use the **no** form of this command.

terminal history no-exec-in-config

no terminal history no-exec-in-config

Syntax Description This command has no arguments or keywords.

Defaults The **show history** command always displays EXEC commands.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines The terminal history setting applies only to the current session.
This command does not require a license.

Examples This example shows how to remove the EXEC commands when recalling the command history from a configuration command mode:

```
switch# terminal history no-exec-in-config
```

This example shows how to revert to the default:

```
switch# no terminal history no-exec-in-config
```


terminal length

To set the number of lines of output to display on the terminal screen for the current session before pausing, use the **terminal length** command. To revert to the default, use the **no** form of this command.

terminal length *lines*

terminal no length

Syntax Description	<i>lines</i>	Number of lines to display. The range is from 0 to 511. Use 0 to not pause while displaying output.
--------------------	--------------	---

Defaults	<p>The initial default for the console is 0.</p> <p>The initial default for virtual terminal sessions is 31.</p> <p>The default for the no form is 24 lines.</p>
----------	---

Command Modes	Any command mode
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SupportedUserRoles	<p>network-admin</p> <p>vdc-admin</p>
--------------------	---------------------------------------

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	<p>The session pauses after displaying the number of lines set in the terminal length. Press the space bar to display another screen of lines or press the Enter key to display another line. To return to the command prompt, press Ctrl-C.</p>
------------------	--

The terminal length setting applies only to the current session.

This command does not require a license.

Examples	<p>This example shows how to set the number of lines of command output to display on the terminal before pausing:</p>
----------	---

```
switch# terminal length 28
```

This example shows how to revert to the default number of lines:

```
switch# terminal no length
```

terminal length**Related Commands**

Command	Description
show terminal	Displays the terminal session configuration.

terminal log-all

To enable logging of all commands, including the **show** commands, to the accounting log, use the **terminal log-all** command. To revert to the default, use the **no** form of this command.

terminal log-all

terminal no log-all

Syntax Description This command has no arguments or keywords.

Defaults Does not log the **show** commands.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines The terminal log setting applies only to the current session.
This command does not require a license.

Examples This example shows how to enable logging of all commands in the accounting log:

```
switch# terminal log-all
```

This example shows how to disable logging of all commands in the accounting log:

```
switch# terminal no log-all
```

Related Commands	Command	Description
	show terminal	Displays the terminal session configuration.

terminal redirection-mode

To configure the format of the output from **show** commands, use the **terminal redirection-mode** command.

terminal redirection-mode {ascii | zipped}

Syntax Description	ascii	Specifies the standard character format when redirecting show command output.
	zipped	Specifies the zipped format when redirecting show command output.

Defaults **ascii**

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.2(1)	This command was introduced.

Usage Guidelines Some of the **show** commands have lengthy outputs, especially the debugging **show** commands such as the **show tech-support** command. You can use the **terminal redirection-mode** command to reduce the size of the file when you redirect the output from the command.

The terminal redirection mode setting applies only to the current session.

This command does not require a license.

Examples This example shows how to configure the zipped format for the terminal redirection mode:

```
switch# terminal redirection-mode zipped
```

This example shows how to configure the ASCII format for the terminal redirection mode:

```
switch# terminal redirection-mode ascii
```

Related Commands	Command	Description
	show terminal	Displays the terminal session configuration.

terminal session-timeout

To set the terminal inactivity timeout for the current session, use the **terminal session-timeout** command. To revert to the default, use the **no** form of this command.

terminal session-timeout *minutes*

terminal no session-timeout

Syntax	Description
<i>minutes</i>	Number of minutes. The range is from 0 to 525600 minutes (8760 hours).

Defaults	Description
0 minutes	

Command Modes	Description
Any command mode	

Supported User Roles	Description
network-admin vdc-admin	

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	Description
A value of 0 minutes disables the session timeout.	
The terminal session inactivity timeout setting applies only to the current session.	
This command does not require a license.	

Examples	Description
This example shows how to set the terminal inactivity timeout for the session: switch# terminal session-timeout 10	
This example shows how to revert to the default terminal inactivity timeout for the session: switch# terminal no session-timeout	

Related Commands	Command	Description
	show terminal	Displays the terminal session configuration.

terminal type

To set the terminal type for the current session, use the **terminal type** command. To revert to the default, use the **no** form of this command.

terminal type *type*

terminal no type

Syntax Description	<i>type</i>	Type of terminal. The type string is case sensitive, must be a valid type (for example, vt100 or xterm), and has a maximum of 80 characters.
Defaults	ansi	
Command Modes	Any command mode	
Supported User Roles	network-admin vdc-admin	
Command History	Release	Modification
	4.0(1)	This command was introduced.
Usage Guidelines	The terminal type setting applies only to the current session. This command does not require a license.	
Examples	This example shows how to set the terminal type: switch# terminal type xterm	
	This example shows how to revert to the default terminal type: switch# terminal no type	
Related Commands	Command	Description
	show terminal	Displays the terminal session configuration.

terminal width

To set the number of character columns on the terminal screen for the current line for a session, use the **terminal width** command. To revert to the default, use the **no** form of this command.

terminal width *columns*

terminal no width

Syntax	Description
<i>columns</i>	Number of columns. The range is from 24 to 511.

Defaults	80 columns
----------	------------

Command Modes	Any command mode
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Supported User Roles	network-admin vdc-admin
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Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	The terminal width setting applies only to the current session. This command does not require a license.
------------------	---

Examples	This example shows how to set the number of columns to display on the terminal:
----------	---

```
switch# terminal width 70
```

This example shows how to revert to the default number of columns:

```
switch# terminal no width
```

Related Commands	Command	Description
	show terminal	Displays the terminal session configuration.

traceroute

To discover the routes that packets take when traveling to an IPv4 address, use the **traceroute** command.

```
traceroute {dest-ipv4-addr | hostname} [vrf vrf-name] [show-mpls-hops] [source src-ipv4-addr]
```

Syntax Description		
<i>dest-ipv4-addr</i>		IPv4 address of the destination device. The format is <i>A.B.C.D</i> .
<i>hostname</i>		Name of the destination device. The name is case sensitive.
vrf <i>vrf-name</i>		(Optional) Specifies the virtual routing and forwarding (VRF) to use. The name is case sensitive.
show-mpls-hops		(Optional) Displays the Multiprotocol Label Switching (MPLS) hops.
source <i>src-ipv4-addr</i>		(Optional) Specifies a source IPv4 address. The format is <i>A.B.C.D</i> .

Defaults

Uses the default VRF.
Does not show the MPLS hops.
Uses the management IPv4 address for the source address.

Command Modes

Any command mode

Supported User Roles

network-admin
vdc-admin

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use IPv6 addressing for discovering the route to a device, use the **traceroute6** command.
This command does not require a license.

Examples

This example shows how to discover a route to a device:

```
switch# traceroute 172.28.255.18 vrf management
traceroute to 172.28.255.18 (172.28.255.18), 30 hops max, 40 byte packets
 1 172.28.230.1 (172.28.230.1) 0.746 ms 0.595 ms 0.479 ms
 2 172.24.114.213 (172.24.114.213) 0.592 ms 0.51 ms 0.486 ms
 3 172.20.147.50 (172.20.147.50) 0.701 ms 0.58 ms 0.486 ms
 4 172.28.255.18 (172.28.255.18) 0.495 ms 0.43 ms 0.482 ms
```

Related Commands

Command	Description
traceroute6	Discovers the route to a device using IPv6 addressing.

traceroute6

To discover the routes that packets take when traveling to an IPv6 address, use the **traceroute6** command.

```
traceroute6 { dest-ipv6-addr | hostname } [vrf vrf-name] [source src-ipv6-addr]
```

Syntax Description		
<i>dest-ipv6-addr</i>		IPv6 address of the destination device. The format is <i>A:B::C:D</i> .
<i>hostname</i>		Name of the destination device. The name is case sensitive.
vrf <i>vrf-name</i>	(Optional)	Specifies the virtual routing and forwarding (VRF) to use. The name is case sensitive.
source <i>src-ipv4-addr</i>	(Optional)	Specifies a source IPv4 address. The format is <i>A:B::C:D</i> .

Defaults

- Uses the default VRF.
- Uses the management IPv6 address for the source address.

Command Modes Any command mode

Supported User Roles

- network-admin
- vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines

- To use IPv4 addressing for discovering the route to a device, use the **traceroute** command.
- This command does not require a license.

Examples

This example shows how to discover a route to a device:

```
switch# traceroute6 2001:0DB8::200C:417A vrf management
```

Related Commands	Command	Description
	traceroute	Discovers the route to a device using IPv4 addressing.

update license

To update an existing license, use the **update license** command.

update license { **bootflash:** | **slot0:** | **usb0:** | **usb1:** } *filename license-filename*

Syntax Description	Parameter	Description
	bootflash:	Specifies the license file location in the internal bootflash memory.
	slot0:	Specifies the license file in the CompactFlash memory or PCMCIA card.
	usb0:	Specifies the license file in the external USB memory.
	usb1:	Specifies the license file in the external USB memory.
	<i>filename</i>	Name of the license file that needs to be installed.
	<i>license-filename</i>	Name of the existing license file that needs to be updated.

Command Modes Any command mode

Supported User Roles network-admin

Command History	Release	Modification
	4.2(1)	Added the <i>license filename</i> argument.
	4.0(1)	This command was introduced.

Usage Guidelines To view the existing license file name, use the **show license** command.



Note

After installing the license, the system copies it to a hidden location. You can delete the license file from bootflash after installing it on the system.

You can use the **update license** command only in the default virtual device context (VDC).

This command does not require a license.

Examples This example shows how to update a specific license:

```
switch# update license bootflash:Advanced2.lic Advanced1.lic
Updating Advanced1.lic:
SERVER this_host ANY
VENDOR cisco
Advanced1.lic:
FEATURE LAN_ADVANCED_SERVICES cisco 1.000 permanent 30 HOSTID=VDH=4C0AF664 \
SIGN=24B2B68AA676

with bootflash:/Advance2.lic:
SERVER this_host ANY
VENDOR cisco
```

```
Advanced2.lic:
FEATURE LAN_ADVANCED_SERVICES cisco 1.000 permanent uncounted HOSTID=VDH=4C0AF664 \
SIGN=CB7872B23700

Do you want to continue? (y/n) y
Updating license ..done
```

Related Commands

Command	Description
show license	Displays the license information.

where

To display your current context in the command-line interface (CLI), use the **where** command.

where [**detail**]

Syntax Description	detail	(Optional) Displays detailed context information.
--------------------	--------	---

Defaults	Displays summary context information.
----------	---------------------------------------

Command Modes	Any command mode
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Supported User Roles	network-admin vdc-admin
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Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	The where command helps you to keep track of where you are in the CLI and how you got to that place. This command does not require a license.
------------------	--

Examples	This example shows how to display summary context information:
----------	--

```
switch(config-if)# where
?conf; interface Ethernet2/3      admin@switch%default
```

This example shows how to display detailed context information:

```
switch(config-if)# where detail
?conf; interface Ethernet2/3      admin@switch%default
mode:                               conf
                                     interface Ethernet2/3
username:                            admin
vdc:                                   switch
routing-context vrf: default
```

write erase

To erase configurations in persistent memory areas, use the **write erase** command.

write erase [boot | debug]

Syntax Description	boot	(Optional) Erases only the boot variable and mgmt0 interface configuration.
	debug	(Optional) Erases only the debug configuration.

Defaults Erases all configuration in persistent memory except for the boot variable, mgmt0 interface, and debug configuration.

Command Modes Any command mode

SupportedUserRoles network-admin
vdc-admin

Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines Use the **write erase** command to erase the startup configuration in the persistent memory when information is corrupted or otherwise unusable. Erasing the startup configuration returns the device to its initial state, except for the boot variable, mgmt0 interface, and debug configurations. You have to explicitly erase those configurations with the **boot** and **debug** options.

This command does not require a license.

Examples This example shows how to erase the startup configuration:

```
switch(config-if)# write erase
Warning: This command will erase the startup-configuration.
Do you wish to proceed anyway? (y/n) [n] y
```

This example shows how to erase the boot variable and mgmt0 interface configuration in the persistent memory:

```
switch(config-if)# write erase boot
```

This example shows how to erase the debug configuration in the persistent memory:

```
switch(config-if)# write erase debug
```

Related Commands	Command	Description
	copy running-config startup-config	Copies the running configuration to the startup configuration.
	show running-config	Displays the startup configuration.