



Show Commands

This chapter describes the Cisco NX-OS system management **show** commands.

show callhome

To display information about the Call Home application, use the **show callhome** command.

```
show callhome { destination-profile [profile profile_name] | last action status | last merge status
| merge status | pending | pending-diff | session status | status | transport-email |
user-def-cmds }
```

Syntax	Description
destination-profile	Displays the name of the destination profile.
profile	(Optional) Displays the default profile name.
<i>profile_name</i>	Name of the profile. The name can be the default profile name or the profiles that you created.
last action status	Displays the status of the last Cisco Fabric Services (CFS) commit/abort operation.
last merge status	Displays the status of the last CFS merge operation for Call Home.
merge status	Displays the status of the last CFS merge operation for Call Home.
pending	Displays the Call Home configuration changes in the pending CFS database.
pending-diff	Displays the differences between the pending and running Call Home configuration. These differences would reflect changes made during the current CFS configuration session.
session status	Displays the status of the last CFS commit/abort operation for the Call Home configuration.
status	Displays the CFS distribution state (enabled or disabled) for Call Home.
transport-email	Displays the Call Home e-mail transport configuration.
user-def-cmds	Displays the CLI commands configured for each Call Home alert group.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
network-operator
vdc-admin
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 status of the last CFS operation for the Call Home application:

```
switch# show callhome last action status
Last Action Time Stamp      : None
Last Action                  : None
Last Action Result          : None
Last Action Failure Reason  : none
```

This example shows how to display the Call Home destination profile named Noc101:

```
switch# show callhome destination-profile profile Noc101

Noc101 destination profile information
maximum message size:2500000
message format:XML
message-level:0
email addresses configured:

alert groups configured:
all
```

This example shows how to display the Call Home configuration:

```
switch# show callhome
callhome enabled
Callhome Information:
contact person name(sysContact):who@where
contact person's email:someone@noc.com
contact person's phone number:+1-408-555-9918
street addr:425 E Street, Anytown, CA 95999
site id:8
customer id:987654
contract id:456789
switch priority:7
duplicate message throttling : enabled
periodic inventory : enabled
periodic inventory time-period : 7 days
periodic inventory timeofday : 08:00 (HH:MM)
Distribution : Enabled
```

Related Commands

Command	Description
callhome test	Sends a test message to all configured destinations.
callhome send	Sends the specified Call Home test message to all configured destinations.
callhome	Places you into the CLI call Home configuration mode.
show cfs status	Displays the status of CFS distribution on the device as well as IP distribution information.
show tech-support cfs	Displays information about the CFS configuration required by technical support when resolving a CFS issue.
show logging level cfs	Displays the CFS logging configuration.

show callhome transport

To display the transport-related configuration for Call Home, use the **show callhome transport** command.

show callhome transport

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the transport-related configuration for Call Home:

```
switch(config)# show callhome transport
http vrf:default

from email addr:person@company.com
reply to email addr:person@company.com

smtp server:10.1.1.174
smtp server port:25
smtp server vrf:
smtp server priority:0

smtp server:64.72.101.213
smtp server port:25
smtp server vrf:default
smtp server priority:60

smtp server:172.21.34.193
smtp server port:25
smtp server vrf:default
smtp server priority:50
```

```
smtp server:192.0.2.1
smtp server port:33
smtp server vrf:Neo
smtp server priority:1

smtp server:192.0.2.10
smtp server port:25
smtp server vrf:default
smtp server priority:4

switch(config)#
```

Related Commands

Command	Description
show callhome	Displays the Call Home configuration.

show cdp

To display the interfaces that have the Cisco Discovery Protocol (CDP) enabled, use the **show cdp** command.

```
show cdp {all | entry {all | name name} | global | interface interface-type | traffic interface
interface-type}
```

Syntax Description		
all		Displays all interfaces in the CDP database.
entry		Displays CDP entries in the database.
name <i>name</i>		Displays a specific CDP entry that matches a name.
global		Displays CDP global parameters.
interface <i>interface-type</i>		Displays CDP parameters for an interface.
traffic <i>interface-type</i>		Displays CDP traffic statistics.
	<i>interface-type</i>	Type of interface.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
network-operator
vdc-admin
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 interfaces that have CDP enabled:

```
switch(config)# show cdp all
mgmt0 is up
  CDP enabled on interface
  Refresh time is 60 seconds
  Hold time is 30 seconds
Ethernet7/1 is down
  CDP enabled on interface
  Refresh time is 60 seconds
  Hold time is 30 seconds
```

```
Ethernet7/2 is down
  CDP enabled on interface
  Refresh time is 60 seconds
  Hold time is 30 seconds
Ethernet7/3 is down
  CDP enabled on interface
  Refresh time is 60 seconds
  Hold time is 30 seconds
Ethernet7/4 is down
  CDP enabled on interface
  Refresh time is 60 seconds
  Hold time is 30 seconds
Ethernet7/5 is down
  CDP enabled on interface
  Refresh time is 60 seconds
--More--
```

Related Commands

Command	Description
enable cdp	Enables CDP on an interface.

show cdp neighbors

To display the status of Cisco Discovery Protocol (CDP) neighbors, use the **show cdp neighbors** command.

```
show cdp neighbors [interface interface]
```

Syntax Description	interface (Optional) Displays CDP neighbors on an interface. <i>interface</i>
---------------------------	---

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

Command Modes	Any command mode
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Supported User Roles	network-admin network-operator vdc-admin vdc-operator
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Command History	Release	Modification
	4.0(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
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Examples	<p>This example shows how to display the status of CDP neighbors:</p> <pre>switch(config)# show cdp neighbors Capability Codes: R - Router, T - Trans-Bridge, B - Source-Route-Bridge S - Switch, H - Host, I - IGMP, r - Repeater, V - VoIP-Phone, D - Remotely-Managed-Device, s - Supports-STP-Dispute Device-ID Local Intrfce Hldtme Capability Platform Port ID Switch mgmt0 163 S I WS-C2960-24TC Fas0/21 switch(config)#</pre>
-----------------	---

Related Commands	Command	Description
	cdp holdtime	Configures the time that CDP holds onto neighbor information before refreshing it.

show cfs application

To display information about applications that are currently enabled to use Cisco Fabric Services (CFS) distribution, use the **show cfs application** command.

show cfs application [*name application_name*]

Syntax Description	name (Optional) Displays the name of a specific application. <i>application_name</i>
---------------------------	--

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

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

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

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

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

Examples This example shows how to display CFS information about applications that are currently enabled to use CFS distribution:

```
switch# show cfs application
```

```
-----
Application    Enabled    Scope
-----
ntp            No        Physical-fc-ip
stp            Yes       Physical-eth
vpc            Yes       Physical-eth
igmp           Yes       Physical-eth
l2fm           Yes       Physical-eth
role           No        Physical-fc-ip
radius         No        Physical-fc-ip
callhome       Yes       Physical-fc-ip
```

```
Total number of entries = 8
```

This example shows how to display CFS information about the Call Home application:

■ show cfs application

```
switch# show cfs application name callhome
```

```
Enabled       : Yes
Timeout       : 20s
Merge Capable : Yes
Scope         : Physical-fc-ip
Region        : 4
```

Related Commands

Command	Description
show <i>application_name</i> session status	Displays the CFS configuration session status for the application, including the last action, the result, and the reason if there was a failure.
show cfs internal	Displays information internal to CFS including memory statistics, event history, and so on.
show cfs lock	Displays all active CFS fabric locks.
show cfs merge status name	Displays the merge status for a given CFS application.
show cfs peers	Displays all the CFS peers in the physical fabric.
show cfs regions	Displays all the CFS applications with peers and region information.
show cfs status	Displays the status of CFS distribution on the device as well as IP distribution information.
show tech-support cfs	Displays information about the CFS configuration required by technical support when resolving a CFS issue.
show logging level cfs	Displays the CFS logging configuration.

show cfs lock

To display information about locks that are currently in place for an application that uses Cisco Fabric Services (CFS) for distribution, use the **show cfs lock** command.

```
show cfs lock [name application_name]
```

Syntax Description	name (Optional) Displays the name of a specific application. <i>application_name</i>
---------------------------	--

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

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

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

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

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

Examples This example shows how to display a lock that is currently in place for the Call Home application that uses CFS for distribution:

```
switch(config-callhome)# show cfs lock name callhome
```

```
Scope      : Physical-fc-ip
```

```
-----
Switch WWN          IP Address          User Name    User Type
-----
20:00:00:22:55:79:a4:c1 172.28.230.85      admin       CLI/SNMP v3
switch
```

```
Total number of entries = 10
```

Related Commands	Command	Description
	show <i>application_name</i> session status	Displays the CFS configuration session status for the application, including the last action, the result, and the reason if there was a failure.
	show cfs application	Displays information about applications that are currently enabled to use CFS distribution.
	show cfs internal	Displays information internal to CFS including memory statistics, event history, and so on.
	show cfs merge status name	Displays the merge status for a given CFS application.
	show cfs peers	Displays all the CFS peers in the physical fabric.
	show cfs regions	Displays all the CFS applications with peers and region information.
	show cfs static	Displays all CFS static peers with status.
	show cfs status	Displays the status of CFS distribution on the device as well as IP distribution information.
	show tech-support cfs	Displays information about the CFS configuration required by technical support when resolving a CFS issue.
	show logging level cfs	Displays the CFS logging configuration.

show cfs merge status

To display the merge status for an application that uses Cisco Fabric Services (CFS) for distribution, use the **show cfs merge status** command.

```
show cfs merge status [name application_name]
```

Syntax Description	name (Optional) Displays the name of a specific application. <i>application_name</i>
---------------------------	--

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

Command Modes	Any command mode
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Supported User Roles	network-admin network-operator vdc-admin vdc-operator
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Command History	Release	Modification
	4.1(2)	This command was introduced.

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

Examples This example shows how to display the current merge status for the Call Home application that uses CFS for distribution. In this example, the most recent merge for the Call Home application was successful.

```
switch(config-callhome)# show cfs merge status name callhome

Physical-fc-ip Merge Status: Success [ Wed Dec 17 16:34:26 2008 ]
Local Fabric
-----
Switch WWN                IP Address
-----
20:00:00:22:55:79:a4:c1 172.28.230.85           [Merge Master]
                           switch

Total number of switches = 10
```

Related Commands	Command	Description
	show <i>application_name</i> session status	Displays the CFS configuration session status for the application, including the last action, the result, and the reason if there was a failure.
	show cfs application	Displays information about applications that are currently enabled to use CFS distribution.
	show cfs internal	Displays information internal to CFS including memory statistics, event history, and so on.
	show cfs lock	Displays all active CFS fabric locks.
	show cfs peers	Displays all the CFS peers in the physical fabric.
	show cfs regions	Displays all the CFS applications with peers and region information.
	show cfs static	Displays all CFS static peers with status.
	show cfs status	Displays the status of CFS distribution on the device as well as IP distribution information.
	show tech-support cfs	Displays information about the CFS configuration required by technical support when resolving a CFS issue.
	show logging level cfs	Displays the CFS logging configuration.

show cfs peers

To display all peers in the physical fabric, use the **show cfs peers** command.

```
show cfs peers [name application_name]
```

Syntax Description	name (Optional) Displays the name of a specific application. <i>application_name</i>
---------------------------	--

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

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

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

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

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

Examples This example shows how to display all peers in the physical fabric for the Call Home application:

```
switch(config-callhome)# show cfs peers name callhome
```

```
Scope      : Physical-fc-ip
```

```
-----  
Switch WWN          IP Address  
-----  
20:00:00:22:55:79:a4:c1 172.28.230.85          [Local]  
                        switch
```

```
Total number of entries = 1
```

Related Commands	Command	Description
	show application_name session status	Displays the CFS configuration session status for the application, including the last action, the result, and the reason if there was a failure.
	show cfs application	Displays information about applications that are currently enabled to use CFS distribution.

Command	Description
show cfs internal	Displays information internal to CFS including memory statistics, event history, and so on.
show cfs lock	Displays all active CFS fabric locks.
show cfs merge status name	Displays the merge status for a given CFS application.
show cfs regions	Displays all the CFS applications with peers and region information.
show cfs static	Displays all CFS static peers with status.
show cfs status	Displays the status of CFS distribution on the device as well as IP distribution information.
show tech-support cfs	Displays information about the CFS configuration required by technical support when resolving a CFS issue.
show logging level cfs	Displays the CFS logging configuration.

show cfs regions

To display all Cisco Fabric Services (CFS) applications with peers and region information, use the **show cfs regions** command.

```
show cfs regions { name application_name | region region_id }
```

```
show cfs regions brief { name application_name | region region_id }
```

Syntax Description	name	(Optional) Displays peer and region information for a specified application. <i>application_name</i>
	region <i>region_id</i>	Displays peer and region information for a specified region ID. The range is from 1 to 200.
	brief	Displays configured regions and applications but does not display peers.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines This command does not require a license.

Examples This example shows how to display a brief version of all CFS regions:

```
switch# show cfs regions brief

-----
Region      Application  Enabled
-----
3           radius      yes
4           callhome    yes
```

This example shows how to display a specified CFS region:

```
switch# show cfs regions region 4
```

■ show cfs regions

```

Region-ID : 4
Application: callhome
Scope     : Physical-fc-ip
-----
Switch WWN          IP Address
-----
20:00:00:22:55:79:a4:c1 172.28.230.85          [Local]
                        switch

Total number of entries = 1

```

Related Commands

Command	Description
show <i>application_name</i> session status	Displays the CFS configuration session status for the application, including the last action, the result, and the reason if there was a failure.
show cfs application	Displays information about applications that are currently enabled to use CFS distribution.
show cfs internal	Displays information internal to CFS including memory statistics, event history, and so on.
show cfs lock	Displays all active CFS fabric locks.
show cfs merge status name	Displays the merge status for a given CFS application.
show cfs peers	Displays all the CFS peers in the physical fabric.
show cfs static	Displays all CFS static peers with status.
show cfs status	Displays the status of CFS distribution on the device as well as IP distribution information.
show tech-support cfs	Displays information about the CFS configuration required by technical support when resolving a CFS issue.
show logging level cfs	Displays the CFS logging configuration.

show cfs status

To display the current state of Cisco Fabric Services (CFS), use the **show cfs status** command.

show cfs status

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
	4.1(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the current state of CFS:

```
switch# show cfs status
Distribution : Enabled
Distribution over IP : Enabled - mode IPv4
IPv4 multicast address : 239.255.70.83
IPv6 multicast address : ff15::efff:4653
Distribution over Ethernet : Disabled
Total number of entries = 8
```

Related Commands	Command	Description
	show application_name session status	Displays the CFS configuration session status for the application, including the last action, the result, and the reason if there was a failure.
	show cfs internal	Displays information internal to CFS including memory statistics, event history, and so on.
	show cfs lock	Displays all active CFS fabric locks.
	show cfs merge status name	Displays the merge status for a given CFS application.

Command	Description
show cfs peers	Displays all the CFS peers in the physical fabric.
show cfs regions	Displays all the CFS applications with peers and region information.
show logging level cfs	Displays the CFS logging configuration.
show tech-support cfs	Displays information about the CFS configuration required by technical support when resolving a CFS issue.

show checkpoint

To display the contents of the checkpoint file, use the **show checkpoint** command.

show checkpoint [*name*]

Syntax Description	<i>name</i>	(Optional) Name of the checkpoint file. The name can be any alphanumeric string up to 63 characters.
---------------------------	-------------	--

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

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

SupportedUserRoles	network-admin network-operator vdc-operator 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 contents of the checkpoint file:

```
switch# show checkpoint stable
```

```
-----
Name: stable
version 4.0(2)
power redundancy-mode combined force
license grace-period
feature vrrp
feature tacacs+
feature ospf
feature pim
feature pim6
feature msdp
feature eigrp
feature rip
feature isis
feature pbr
feature private-vlan
feature port-security
feature interface-vlan
```

show checkpoint

```

feature dot1x
feature hsrp
feature lacp
feature glbp

feature dhcp
feature cts
logging level port-security 5
logging level glbp 6
snmp-server context foo
snmp-server community <removed> group vdc-operator
snmp-server community <removed> group network-admin
snmp-server community <removed> group vdc-admin
role feature-group name X
role feature-group name x
role name x
    vlan policy deny
    vrf policy deny
        permit vrf x
        permit vrf X
role name X
username adminbackup password 5 $1$0ip/C5Ci$oOdx7oJS1BCFpNRmQK4na. role vdc-ope
rator
username adminbackup role network-operator
username admin password 5 $1$8GYeC4uW$4WfnImcvtAKI6Uet.ePD.1 role network-admin

```

Related Commands

Command	Description
clear checkpoint database	Clears out all the checkpoint files.

show configuration session

To show information about the configuration sessions, use the **show configuration session** command.

show configuration session [*name*] [*status*] [*summary*]

Syntax Description	
<i>name</i>	(Optional) Name of the configuration session, The name can be any case-sensitive, alphanumeric string up to 63 characters.
<i>status</i>	(Optional) Shows the status of the configuration sessions.
<i>summary</i>	(Optional) Displays the summary of the active configuration sessions.

Defaults Display information for all sessions

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 a configuration session. Each line represents a CLI command that Cisco NX-OS applies to the device when you commit the session.

```
switch# show configuration session myACLs
config session name myACLs
0001 ip access-list test1
0002 permit tcp any any
0003 statistics
```

This example shows how to display the status of a configuration session:

```
switch(config-s)# show configuration session status
Session Name      : myACLs
Last Action       : None
Last Action Status : Success
Last Action Reason : -NA-
Last Action Timestamp : 00:00:00 UTC Jan 01 1970
```

This example shows how to display a summary of the configuration sessions:

■ show configuration session

```

switch(config-s)# show configuration session summary
Name                Session Owner      Creation Time
-----
myACLS              admin              21:34:39 UTC Apr 27 2008
status              admin              00:53:23 UTC Apr 29 2008
a                   admin              01:47:30 UTC Apr 28 2008
myACLS              admin              00:56:46 UTC Apr 29 2008
Number of active configuration sessions = 4
switch(config-s)#

```

Related Commands

Command	Description
show tech-support session-mgr	Shows detailed information about the configuration sessions for troubleshooting purposes.

show configuration session global-info

To display information about the global configuration session, use the **show configuration session global-info** command.

show configuration session global-info

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
	4.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display information about the global configuration session:

```
switch(config)# show configuration session global-info
Maximum number of sessions allowed      : 32
Maximum number of commands (all ssns)  : 102400
Current number of active sessions       : 0
Current number of commands (all ssns)  : 0
switch(config)#
```

Related Commands	Command	Description
	show configuration session	Displays information about the configuration sessions.
	show tech-support session-mgr	Displays detailed information about the configuration sessions for troubleshooting purposes.

show cores

To display the system core files from the virtual device contexts (VDCs), use the **show cores** command.

```
show cores [vdc-all | {vdc [e-vdc2 | vdc-id | switch]}]
```

Syntax Description	
vdc-all	(Optional) Displays core dumps from all VDCs.
vdc	Displays all core dumps for the VDC.
<i>e-vdc2</i>	(Optional) VDC ID number of a nondefault VDC. The range is from 1 to 8.
<i>vdc-id</i>	(Optional) VDC ID number. The range is from 1 to 8.
switch	(Optional) Displays the process core files for VDC number 1.

Defaults None

Command Modes Any command mode

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

Command History	Release	Modification
	6.2(2)	The switch keyword was added.
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the system core files:

```
switch(config)# show cores vdc-all
VDC No Module-num Instance-num Process-name PID Core-create-time
-----
1 10 1 xmlsa 32442 May 8 15:24
1 10 1 xmlsa 25163 May 9 06:04
1 10 1 xmlsa 21581 May 9 13:25
switch(config)#
```

Related Commands

Command	Description
<code>show system core</code>	Displays information about transferring cores.

show diagnostic bootup level

To display information about bootup diagnostics, use the **show diagnostic bootup level** command.

show diagnostic bootup level

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
	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 bootup diagnostic level:

```
switch# show diagnostic bootup level
Current bootup diagnostic level: complete
switch#
```

Related Commands	Command	Description
	diagnostic bootup level	Configures the diagnostic bootup level.

show diagnostic content module

To display information about the diagnostic test content for a module, use the **show diagnostic content module** command.

show diagnostic content module {all | *module_number*}

Syntax Description	<i>module_number</i>	Diagnostic content module number. The range is from 1 to 10.
	all	Displays the diagnostic content for all modules.

Defaults None

Command Modes Any command mode

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

Command History	Release	Modification
		4.0(1)

Usage Guidelines Use the **show diagnostic content module** command to display information about the tests configured on the module and the repeat interval time.

Examples This example shows how to display information about the diagnostic test content for a module:

```
switch# show diagnostic content module 6
Module 6: Supervisor module-1X (Active)
Diagnostics test suite attributes:
B/C/* - Bypass bootup level test / Complete bootup level test / NA
P/*   - Per port test / NA
S/*   - Only applicable to standby unit / NA
D/N/* - Disruptive test / Non-disruptive test / NA
H/*   - Always enabled monitoring test / NA
F/*   - Fixed monitoring interval test / NA
X/*   - Not a health monitoring test / NA
E/*   - Sup to line card test / NA
L/*   - Exclusively run this test / NA
T/*   - Not an ondemand test / NA
A/I/* - Monitoring is active / Monitoring is inactive / NA
```

ID	Name	Attributes	Testing Interval (hh:mm:ss)

show diagnostic content module

```

1) ManagementPortLoopback-----> C**D**X**T* -NA-
2) EOBCPortLoopback-----> C**D**X**T* -NA-
3) ASICRegisterCheck-----> ***N*****A 00:00:20
4) USB-----> C**N**X**T* -NA-
5) CryptoDevice-----> C**N**X**T* -NA-
6) NVRAM-----> ***N*****A 00:00:30
7) RealTimeClock-----> ***N*****A 00:05:00
8) PrimaryBootROM-----> ***N*****A 00:30:00
9) SecondaryBootROM-----> ***N*****A 00:30:00
10) CompactFlash-----> ***N*****A 00:30:00
11) ExternalCompactFlash-----> ***N*****A 00:30:00
12) PwrMgmtBus-----> ***N*****A 00:00:30
13) SpineControlBus-----> ***N*****A 00:00:30
14) SystemMgmtBus-----> ***N*****A 00:00:30
switch

```

Related Commands

Command	Description
diagnostic start	Starts on-demand diagnostics.
diagnostic stop	Stops on-demand diagnostics.
show diagnostic bootup level	Displays information about bootup diagnostics.
show diagnostic description module	Displays the diagnostic description.
show diagnostic events	Displays diagnostic events by error and information event type.
show diagnostic ondemand setting	Displays information about on-demand diagnostics.
show diagnostic results module <i>slot</i>	Displays information about the results of a diagnostic.
show diagnostic simulation module <i>slot</i>	Displays information about a simulated diagnostic.
show diagnostic status module <i>slot</i>	Displays test status for all tests on a module.
show module	Displays module information including online diagnostic test status.

show diagnostic description module

To display information about a diagnostic test for a module, use the **show diagnostic description module** command.

show diagnostic description module *slot test* { *test-ID* | *test-name* | **all** }

Syntax Description		
<i>slot</i>		Diagnostic description slot number. The slot range is from 1 to 10.
test		(Optional) Displays the diagnostic test selection.
<i>test-ID</i>		(Optional) Test ID. The range is from 1 to 14.
<i>test-name</i>		(Optional) Test name. The test name can be any case-sensitive, alphanumeric string up to 32 characters.
all		(Optional) Displays the test description for all tests on all modules.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 diagnostic description for a module:

```
switch# show diagnostic description module 6 test 1
ManagementPortLoopback :
    A bootup test that tests loopback on the management port of
    the module
```

Related Commands	Command	Description
	show diagnostic content	Displays diagnostic test names and test IDs.

show diagnostic eem

To display diagnostic Embedded Event Manager (EEM) action level and the EEM policies, use the **show diagnostic eem** command.

```
show diagnostic eem {action [description] | policy module {module number | all}}
```

Syntax Description

action	Displays the EEM action level.
description	Displays the EEM action description.
policy module	Displays the EEM policies configured for the module.
<i>module number</i>	Displays the module number of a specific module. The range is from 1 to 9.
all	Displays all modules.

show diagnostic events

To display information about diagnostic events, use the **show diagnostic events** command.

show diagnostic events [error | info]

Syntax Description	error	(Optional) Displays diagnostics by error type.
	info	(Optional) Displays diagnostics by information type.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines This command does not require a license.

Examples This example shows how to display diagnostic events:

```
switch# show diagnostic events
1) Event:E_DEBUG, length:114, at 404616 usecs after Wed Jan  7 09:38:46 2009
   [104] Event_INFO: TestName->ASICRegisterCheck TestingType->helth monitoring module->
   9 Result->pass Reason->Success

2) Event:E_DEBUG, length:114, at 414835 usecs after Wed Jan  7 09:38:26 2009
   [104] Event_INFO: TestName->ASICRegisterCheck TestingType->helth monitoring module->
   9 Result->pass Reason->Success

3) Event:E_DEBUG, length:107, at 294482 usecs after Wed Jan  7 09:38:23 2009
   [104] Event_INFO: TestName->PwrMgmtBus TestingType->helth monitoring module->9 Resul
t->pass Reason->Success
```

This example shows how to display diagnostic events by information type:

```
switch# show diagnostic events info
1) Event:E_DEBUG, length:114, at 934712 usecs after Wed Jan  7 11:40:06 2009
```

show diagnostic events

```
[104] Event_INFO: TestName->ASICRegisterCheck TestingType->helth monitoring module->
9 Result->pass Reason->Success
```

2) Event:E_DEBUG, length:110, at 314512 usecs after Wed Jan 7 11:39:53 2009

```
[104] Event_INFO: TestName->SystemMgmtBus TestingType->helth monitoring module->9 Re
sult->pass Reason->Success
```

This example shows how to display diagnostic events by event type:

```
switch# show diagnostic events error
switch#
```

Related Commands

Command	Description
show diagnostic content	Displays diagnostic test names and test IDs.

show diagnostic ondemand setting

To display information about the on-demand diagnostic test for a module, use the **show diagnostic ondemand setting** command.

show diagnostic ondemand setting

Syntax Description	setting Configures the diagnostic on-demand setting.				
Defaults	None				
Command Modes	Any command mode				
SupportedUserRoles	network-admin network-operator vdc-admin vdc-operator				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>4.0(1)</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	4.0(1)	This command was introduced.
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 display diagnostic on-demand information:</p> <pre>switch# show diagnostic ondemand setting Test iterations = 1 Action on test failure = continue until test failure limit reaches 1</pre>				
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>diagnostic ondemand setting</td> <td>Configures the diagnostic on-demand setting.</td> </tr> </tbody> </table>	Command	Description	diagnostic ondemand setting	Configures the diagnostic on-demand setting.
Command	Description				
diagnostic ondemand setting	Configures the diagnostic on-demand setting.				

show diagnostic result

To display diagnostic test results for a module, use the **show diagnostic result** command.

show diagnostic result module { *slot* [**test** [*test-id* | *test-name*]] | **all**} [**detail**]

Syntax Description	
<i>slot</i>	Diagnostic result slot number. The module slot range is from 1 to 10.
test	(Optional) Displays the diagnostic test selection.
<i>test-id</i>	(Optional) Test ID. The range is from 1 to 14.
<i>test-name</i>	(Optional) Test name. The test name can be any case-sensitive, alphanumeric string up to 32 characters.
all	Displays the test result for all tests on all modules.
detail	(Optional) Displays the detailed result.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 diagnostic test result:

```
switch# show diagnostic result module 6 test 6 detail

Current bootup diagnostic level: complete
Module 6: Supervisor module-1X (Active)
Diagnostic level at card bootup: complete
Test results: (. = Pass, F = Fail, I = Incomplete,
              U = Untested, A = Abort, E = Error disabled)

-----
6) NVRAM-----> .
Error code -----> DIAG TEST SUCCESS
                Total run count -----> 1574
                Last test execution time ----> Thu Jun 26 09:28:40 2008
                First test failure time ----> n/a
```

```
switch#  
Last test failure time -----> n/a  
Last test pass time -----> Thu Jun 26 09:28:41 2008  
Total failure count -----> 0  
Consecutive failure count ---> 0  
Last failure reason -----> No failures yet
```

show diagnostic simulation

To display information about a simulated diagnostic for a module, use the **show diagnostic simulation** command.

show diagnostic simulation module *slot*

Syntax Description	<i>slot</i>	Diagnostic simulation slot number. The range is from 1 to 10.
---------------------------	-------------	---

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

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

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

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 display information about simulated diagnostics:</p> <pre>switch# show diagnostic simulation module 6 Card(6): Supervisor module-1X</pre> <hr/> <pre>-NA- switch#</pre>
-----------------	--

Related Commands	Command	Description
	diagnostic test simulation	Sets a simulated test result for a diagnostic test.

show diagnostic status

To display the test status for all tests, use the **show diagnostic status** command.

show diagnostic status module *slot*

Syntax Description	<i>slot</i> Diagnostic status slot number. The range is from 1 to 10.
---------------------------	---

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 test status for all tests on a module:
-----------------	--

```
switch# show diagnostic status module 6
          <BU>-Bootup Diagnostics, <HM>-Health Monitoring Diagnostics
          <OD>-OnDemand Diagnostics, <SCH>-Scheduled Diagnostics
=====
Card:(6) Supervisor module-1X
=====
Current running test           Run by
          -NA-                 -NA-
Currently Enqueued Test       Run by
          -NA-                 -NA-
switch#
```

show diff rollback-patch

To display the differences between the source and destination, use the **show diff rollback-patch** command.

```
show diff rollback-patch { checkpoint name | running-config | startup-config }
```

Syntax Description	Parameter	Description
	checkpoint	Displays the checkpoint name as the source configuration.
	<i>name</i>	Name of the checkpoint file. The name can be any alphanumeric string up to 63 characters.
	running-config	Displays the running configuration as the destination.
	startup-config	Displays the startup configuration as the destination.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
network-operator
vdc-admin
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 differences between the stable checkpoint file and the running configuration:

```
switch# show diff rollback-patch checkpoint stable running-config
switch#
```

Related Commands	Command	Description
	show checkpoint	Displays the contents of the checkpoint file.
	rollback running checkpoint	Implements a rollback for the configured checkpoint file.

show environment

To display information about the hardware environment status, use the **show environment** command.

show environment [clock | fan | power | temperature]

Syntax Description	
clock	(Optional) Displays information about the clock environment.
fan	(Optional) Displays information about the fan environment.
power	(Optional) Displays information about the power environment.
temperature	(Optional) Displays information about the temperature environment.

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 You can use this command to display information about the status of the hardware on your device. This command does not require a license.

Examples This example shows how to display information about the hardware environment:

```
switch# show environment
```

```
Clock:
```

```
-----
Clock          Model          Hw          Status
-----
A              Clock Module   --          NotSupported/None
B              Clock Module   --          NotSupported/None
```

show environment

Fan:

Fan	Model	Hw	Status
Fan1 (sys_fan1)		0.0	Ok
Fan2 (sys_fan2)		0.0	Ok
Fan3 (fab_fan1)		0.0	Ok
Fan4 (fab_fan2)		0.0	Ok
Fan_in_PS1	--	--	Ok
Fan_in_PS2	--	--	Ok
Fan_in_PS3	--	--	Absent
Fan Air Filter : Absent			

Temperature:

Module	Sensor	MajorThresh (Celsius)	MinorThres (Celsius)	CurTemp (Celsius)	Status
2	Crossbar (s5)	105	95	40	Ok
2	CTSdev1 (s6)	115	105	47	Ok
2	CTSdev2 (s7)	115	105	51	Ok
2	CTSdev3 (s8)	115	105	47	Ok
2	CTSdev4 (s9)	115	105	48	Ok
2	CTSdev5 (s10)	115	105	47	Ok
2	CTSdev7 (s12)	115	105	50	Ok
2	CTSdev8 (s13)	115	105	50	Ok
2	CTSdev9 (s14)	115	105	48	Ok
2	CTSdev10 (s15)	115	105	48	Ok
2	CTSdev11 (s16)	115	105	46	Ok
2	CTSdev12 (s17)	115	105	45	Ok
2	QEng1Sn1 (s18)	115	105	43	Ok
2	QEng1Sn2 (s19)	115	105	42	Ok
2	QEng1Sn3 (s20)	115	105	39	Ok
2	QEng1Sn4 (s21)	115	105	40	Ok
2	L2Lookup (s22)	115	105	43	Ok
2	L3Lookup (s23)	120	110	54	Ok

Power Supply:

Voltage: 50 Volts

PS	Model	Power (Watts)	Power (Amp)	Status
1	N7K-AC-6.0KW	0.00	0.00	Ok
2	N7K-AC-6.0KW	6000.00	120.00	Ok
3	-----	0.00	0.00	Absent

Mod	Model	Power Requested (Watts)	Power Requested (Amp)	Power Allocated (Watts)	Power Allocated (Amp)	Status
2	N7K-M148GT-11	247.00	4.94	247.00	4.94	Powered-Up
6	N7K-SUP1	210.00	4.20	210.00	4.20	Powered-Up
Xb1	N7K-C7010-FAB-1	123.50	2.47	123.50	2.47	Powered-Up

```

Power Usage Summary:
-----
Power Supply redundancy mode:           Non-Redundant (combined)
Power Supply redundancy operational mode: Non-Redundant (combined)

Total Power Capacity                    6000.00 W

Power reserved for Supervisor(s)       420.00 W
Power reserved for Fan Module(s)       2184.00 W
Power reserved for Fabric Module(s)    300.00 W
Power currently used by Modules        247.00 W

-----
Total Power Available                   2849.00 W
-----
    
```

This example shows how to display information about the power environment:

```
switch# show environment power
```

```

Power Supply:
Voltage: 50 Volts
-----
PS  Model                Power      Power      Status
   (Watts)      (Amp)
-----
1   FIORANO              0.00      0.00      Ok
2   FIORANO              6000.00   120.00    Ok
3   -----              0.00      0.00      Absent

Mod Model                Power      Power      Power      Power      Status
   Requested Requested  Allocated Allocated
   (Watts)    (Amp)    (Watts)    (Amp)
-----
2   NURBURGRING         247.00    4.94      247.00    4.94      Powered-Up
6   CATALUNYA           210.00    4.20      210.00    4.20      Powered-Up
Xb1 Estoril              123.50    2.47      123.50    2.47      Powered-Up

Power Usage Summary:
-----
Power Supply redundancy mode:           Non-Redundant (combined)
Power Supply redundancy operational mode: Non-Redundant (combined)

Total Power Capacity                    6000.00 W

Power reserved for Supervisor(s)       420.00 W
Power reserved for Fan Module(s)       2184.00 W
Power reserved for Fabric Module(s)    300.00 W
Power currently used by Modules        247.00 W

-----
Total Power Available                   2849.00 W
-----
    
```

Related Commands

Command	Description
power redundancy-mode	Configures the power supply redundancy mode.

show environment power

To display information about the power capacity and power distribution of the system, use the **show environment power** command.

show environment power [**ampere** | **detail**]

Syntax Description	ampere	(Optional) Displays information about the power capacity and power distribution in amperes.
	detail	(Optional) Displays detailed information about the power capacity and power distribution.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines By reading information from the power supply, the system displays the power consumption information. The actual power consumed by the system might be more than what is displayed. This command does not require a license.

Examples

This example shows how to display information about the power capacity and power distribution of the system:

```
switch(config) show environment power ampere
Power Supply:
Voltage: 50 Volts
Power
Supply      Model                Actual      Total
              Output      Capacity    Status
              (Ampere)    (Ampere)
-----
1           N7K-AC-6.0KW          29.40 A    120.00 A    Ok
2           N7K-AC-6.0KW           0.00 A     0.00 A     Ok
3           -----              0.00 A     0.00 A    Absent
4           -----              0.00 A     0.00 A    Absent

Module      Model                Actual      Power
              Draw      Allocated    Status
              (Ampere)  (Ampere)
-----
6           N7K-M108X2-12L        371.00 A    17.00 A    Powered-Up
7           N7K-M148GS-11         254.00 A     9.00 A    Powered-Up
8           N7K-M148GS-11L        247.00 A     8.00 A    Powered-Up
9           supervisor             N/A         4.20 A    Absent
10          N7K-SUP1               N/A         4.20 A    Powered-Up
Xb1         N7K-C7018-FAB-1       N/A         2.00 A    Powered-Up
Xb2         xbar                   N/A         2.00 A    Absent
Xb3         xbar                   N/A         2.00 A    Absent
Xb4         xbar                   N/A         2.00 A    Absent
Xb5         xbar                   N/A         2.00 A    Absent
fan1        N7K-C7018-FAN         4.34 A     14.72 A    Powered-Up
fan2        N7K-C7018-FAN         3.78 A     10.74 A    Powered-Up

N/A - Per module power not available

Power Usage Summary:
-----
Power Supply redundancy mode (configured)          Non-Redundant (combined)
Power Supply redundancy mode (operational)         Non-Redundant (combined)

Total Power Capacity (based on configured mode)    120.00 A
Total Power of all Inputs (cumulative)             120.00 A
Total Power Output (actual draw)                  29.40 A
Total Power Allocated (budget)                    77.00 A
Total Power Available for additional modules       42.14 A
switch(config)#
```

Related Commands

Command	Description
show environment	Displays information about the hardware environment status.
show hardware capacity	Displays information about the platform hardware resources currently utilized by the system.

show event manager environment

To display the name and value of Embedded Event Manager (EEM) environment variables, use the **show event manager environment** command.

show event manager environment { *varname* | **all** }

Syntax Description		
	<i>varname</i>	(Optional) Displays information about the specified environment variable.
	all	(Optional) Displays information about all environment variables. This is the default.

Defaults If no argument or keyword is specified, information for all environment variables is displayed.

Command Modes Privileged EXEC

SupportedUserRoles network-admin
network-operator
vdc-admin
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 EEM environment variables:

```
switch# show event manager environment all
```

show event manager event-types

To display the Embedded Event Manager (EEM) event types, use the **show event manager event-types** command.

show event manager event-types [**detail** | *event-type-name*] [**module** *module*]

Syntax Description	detail	(Optional) Displays details of all event types.
	<i>event-type-name</i>	(Optional) Name of the event type.
	module <i>module</i>	(Optional) Displays the events defined for a specific module. The range is from 1 to 10.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 details of the EEM event types:

```
switch# show event manager event-types detail
switch#
```

show event manager history events

To display the Embedded Event Manager (EEM) events that have been triggered, use the **show event manager history events** command.

show event manager history events [**detail**] [**maximum number**] [**severity severity**]

Syntax Description	
detail	(Optional) Displays details of all event types.
maximum number	(Optional) Specifies the maximum number of history events to display.
severity severity	(Optional) Displays only those events that were of the specified severity.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 EEM history events that have been triggered that were of severity 7:

```
switch# show event manager history events severity 7
switch#
```


show event manager policy

To display the registered Embedded Event Manager (EEM) policies, use the **show event manager policy** command.

show event manager policy [**detail**] [*policy-name* | **inactive**]

Syntax Description	detail	(Optional) Displays details of all policies.
	<i>policy-name</i>	(Optional) Name of the policy.
	inactive	(Optional) Displays only those policies that are inactive.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 EEM policies:

```
switch# show event manager policy
switch#
```

show event manager policy active

To display the Embedded Event Manager (EEM) policies that are executing, use the **show event manager policy active** command in the privileged EXEC mode.

show event manager policy active [*class class-options* | **[detailed]** [**queue-type** [**applet**]]]

Syntax Description	
class class-options	(Optional) Specifies EEM class policy. Specify either one or all of the following for <i>class-options</i> : <ul style="list-style-type: none"> <i>class-letter</i>: The class letter assigned to EEM policy. Letters range from A to Z. Multiple class letters can be specified. default: Specifies policies registered with default class. range class-letter-range: Specifies the EEM policy class in a range. Multiple instances of range class-letter-range can be specified. The letters must be in upper case.
detailed	(Optional) Displays the detailed content of EEM policy.
queue-type	(Optional) Displays the queue type of the EEM policy.
applet	(Optional) Displays the EEM applet policy.

Defaults None

Command Modes privileged EXEC

Command History	Release	Modification
	7.2(0)D1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples The following is a sample output from the **show event manager policy active** command that includes the priority, scheduler node, and event type fields::

```
switch# show event manager policy active
no. job id  p s  status  time of event  event type  name
1      1      N A  wait    Wed Oct8 21:45:10 2008  syslog     continue.tcl
2      12609  N A  running Mon Oct29 20:49:42 2007  timer watchdog  loop.tcl
```

The table below describes the significant fields shown in the display:

Field	Description
no	Index number automatically assigned to the policy.
job id	Unique internal EEM scheduler job identification number
p	Priority of the policy. There are four priorities: <ul style="list-style-type: none"> • L - Indicates that the policy is of low priority • H - Indicates that the policy is of high priority. • N - Indicates that the policy is of normal priority. • Z - Indicates that the policy is of least priority.
s	Scheduler node of the policy. There are two nodes: <ul style="list-style-type: none"> • A - Indicates that the scheduler node of this policy is active. • S - Indicates that the scheduler node of this policy is standby.
status	Scheduling status for the policy. There are six possible status values: <ul style="list-style-type: none"> • pend - Indicates that the policy is awaiting execution. • running - Indicates that the policy is executing. • exec - Indicates that the policy has completed executing and is awaiting scheduler cleanup tasks. • hold - Indicates that the policy is being held. • wait - Indicates that the policy is waiting for a new event. • continue - Indicates that the policy receives a new event and is ready to run.
time of event	Date and time when the policy was queued for execution in the EEM server.
event type	Type of event.
name	Name of the EEM policy.

Related Commands

Command	Description
show event manager	Shows the event manager details of an EEM policy.

show event manager policy pending

To display the Embedded Event Manager (EEM) policies that are pending for execution, use the **show event manager policy pending** command in the privileged EXEC mode.

```
show event manager policy pending [queue-type applet [detailed] | class class-options |
detailed]
```

Syntax Description	
queue-type	(Optional) Displays the queue type of the EEM policy.
applet	(Optional) Displays the EEM applet policy.
detailed	(Optional) Displays the detailed content of EEM policy.
class class-options	(Optional) Displays EEM class policy. Specify either one or all of the following for <i>class-options</i> : <ul style="list-style-type: none"> <i>class-letter</i>: The class letter assigned to EEM policy. Letters range from A to Z. Multiple class letters can be specified. default: Specifies policies registered with default class. range class-letter-range: Specifies the EEM policy class in a range. Multiple instances of range class-letter-range can be specified. The letters must be in upper case

Defaults None

Command Modes privileged EXEC

Command History	Release	Modification
	7.2(0)D1(1)	This command was introduced.

Usage Guidelines Pending policies are policies that are pending execution in the EEM server execution queue. When an event is triggered, the policy that is registered to handle the event is queued for execution in the EEM server. Use the **show event manager policy pending** command to display the policies in this queue and to view their details.

Examples The following is a sample output from the **show event manager policy pending** command:

```
switch# show event manager policy pending
no. job id  p s  status      time of event      event type      name
1   12851  N A  pend      Mon Oct29  20:51:18 2007  timer watchdog  loop.tcl
2   12868  N A  pend      Mon Oct29  20:51:24 2007  timer watchdog  loop.tcl
3   12873  N A  pend      Mon Oct29  20:51:27 2007  timer watchdog  loop.tcl
4   12907  N A  pend      Mon Oct29  20:51:41 2007  timer watchdog  loop.tcl
5   13100  N A  pend      Mon Oct29  20:52:55 2007  timer watchdog  loop.tcl
```

The table below describes the significant fields shown in the display:

Field	Description
no	Index number automatically assigned to the policy.
job id	Unique internal EEM scheduler job identification number
p	Priority of the policy. There are four priorities: <ul style="list-style-type: none"> • L - Indicates that the policy is of low priority • H - Indicates that the policy is of high priority. • N - Indicates that the policy is of normal priority. • Z - Indicates that the policy is of least priority.
s	Scheduler node of the policy. There are two nodes: <ul style="list-style-type: none"> • A - Indicates that the scheduler node of this policy is active. • S - Indicates that the scheduler node of this policy is standby.
status	Scheduling status for the policy. There are six possible status values: <ul style="list-style-type: none"> • pend - Indicates that the policy is awaiting execution. • running - Indicates that the policy is executing. • exec - Indicates that the policy has completed executing and is awaiting scheduler cleanup tasks. • hold - Indicates that the policy is being held • wait - Indicates that the policy is waiting for a new event. • continue - Indicates that the policy receives a new event and is ready to run.
time of event	Date and time when the policy was queued for execution in the EEM server.
event type	Type of event.
name	Name of the EEM policy.

Related Commands

Command	Description
show event manager	Shows the event manager details of an EEM policy.

show event manager policy internal

To display Embedded Event Manager (EEM) policies that are already registered, use the **show event manager policy internal** command in the privileged EXEC mode.

show event manager policy internal [*word*] [*inactive*]

Syntax Description	
<i>word</i>	(Optional) Displays detailed information about the specified policy.
<i>inactive</i>	(Optional) Lists the policies that are not active in the system.

Defaults If this command is invoked with no optional keywords, it displays all registered EEM system and user policies for all event types. The policies are displayed according to the time at which they were registered.

Command Modes privileged EXEC

Command History	Release	Modification
	7.2(0)D1(1)	This command was introduced.

Examples The following is a sample output from the **show event manager policy internal** command:

```
switch# show event manager policy internal

      Name : POLICY_ORDER_CHECK_1
      Policy Type : applet
      Policy Registration Time : Policy Not Registered

      Name : POLICY_ORDER_CHECK_11
      Policy Type : applet
      Policy Registration Time : Policy Not Registered

      Name : POLICY_ORDER_CHECK_111
      Policy Type : applet
      Policy Registration Time : Policy Not Registered

switch# show event manager policy internal POLICY_ORDER_CHECK_1
      Name : POLICY_ORDER_CHECK_1
      Policy Type : applet
      Policy Registration Time : Policy Not Registered
```

Related Commands	Command	Description
	show event manager	Shows the event manager details of an EEM policy.

show event manager policy-state

To display the state of the named Embedded Event Manager (EEM) policy, use the **show event manager policy-state** command.

```
show event manager policy-state name [module module]
```

Syntax Description

<i>name</i>	Name of a policy to display its state.
module <i>module</i>	(Optional) Displays the policy state defined for a specific module. The range is from 1 to 10.

Defaults

None

Command Modes

Any command mode

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 state of an EEM policy:

```
switch# show event manager policy-state policy42  
switch#
```

show event manager scheduler

To display the schedule of Embedded Event Manager (EEM) policies that are scheduled, use the **show event manager scheduler** command in the privileged EXEC mode.

show event manager scheduler thread detailed

Syntax Description	thread	Displays the thread for the scheduler.
	detailed	Displays the detailed content of EEM policies.

Defaults None

Command Modes privileged EXEC

Command History	Release	Modification
	7.2(0)D1(1)	This command was introduced.

Usage Guidelines Use the **show event manager scheduler** command to show all the EEM execution threads from the scheduler perspective and the details of the running policies.

Examples The following is a sample output from the **show event manager scheduler thread** command:

```
switch# show event manager scheduler thread

1 Script threads service class default total: 1 running: 1 idle: 0
2 Script threads service class range A-D total: 3 running: 0 idle: 3
3 Applet threads service class default total: 32 running: 0 idle: 32
4 Applet threads service class W X total: 5 running: 0 idle: 5

switch# show event manager scheduler thread detailed

1 Script threads service class default total: 1 running: 1 idle: 0
1 job id: 1, pid: 215, name: continue.tcl
2 Script threads service class range A-D total: 3 running: 0 idle: 3
3 Applet threads service class default total: 32 running: 0 idle: 32
4 Applet threads service class W X total: 5 running: 0 idle: 5
```

Related Commands	Command	Description
	show event manager	Shows the event manager details of an EEM policy.

show event manager script

To display the script policy of the Embedded Event Manager (EEM), use the **show event manager script** command.

show event manager script system {*name* | **all**}

Syntax Description	<i>name</i>	Script name to display.
	all	Displays all the system scripts.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
network-operator
vdc-admin
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 the system scripts defined in the EEM:

```
switch# show event manager script system all
switch#
```

show event manager system-policy

To display the system policies of the Embedded Event Manager (EEM), use the **show event manager system-policy** command.

show event manager system-policy [all]

Syntax Description	all	(Optional) Displays all policies (including advanced policies and those policies that cannot be overridden).
---------------------------	------------	--

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 EEM system policies:

```
switch# show event manager system-policy
Name : __BootupPortLoopback
  Description : Do CallHome, log error on affected ports after 1 consecutive f
ailure of GOLD "BootupPortLoopback" test
  Overridable : Yes

      Name : __PortLoopback
  Description : Do CallHome, log error and disable further HM testing on affec
ted ports after 10 consecutive failures of GOLD "PortLoopback" test
  Overridable : Yes

      Name : __RewriteEngineLoopback
  Description : Do CallHome, log error and disable further HM testing on affec
ted ports after 10 consecutive failures of GOLD "RewriteEngineLoopback" test
  Overridable : Yes

      Name : __asic_register_check
  Description : Do CallHome, log error and disable further HM testing for that
ASIC device/instance after 20 consecutive failures of GOLD "AsicRegisterCheck"
test
  Overridable : Yes

      Name : __compact_flash
  Description : Do CallHome, log error and disable further HM testing after 20
consecutive failures of GOLD "CompactFlash" test
  Overridable : Yes

      Name : __crypto_device
  Description : Do CallHome and log error when GOLD "CryptoDevice" test fails
  Overridable : Yes

      Name : __eobc_port_loopback
  Description : Do CallHome and log error when GOLD "EOBCPortLoopback" test fa
ils
  Overridable : Yes

      Name : __ethpm_debug_1
  Description : Action: none
  Overridable : Yes

      Name : __ethpm_debug_2
  Description : Action: none
  Overridable : Yes

      Name : __ethpm_debug_3
  Description : Action: none
  Overridable : Yes

      Name : __ethpm_debug_4
  Description : Action: none
  Overridable : Yes

      Name : __ethpm_link_flap
  Description : More than 30 link flaps in 420 seconds interval. Action: Error
Disable the port
  Overridable : Yes

      Name : __external_compact_flash
  Description : Do CallHome, log error and disable further HM testing after 20
consecutive failures of GOLD "ExternalCompactFlash" test
  Overridable : Yes
switch#
```

show flow exporter

To display the Flexible NetFlow flow exporter status and statistics, use the **show flow exporter** command.

show flow exporter [**name** *exporter-name*]

Syntax Description

name <i>exporter-name</i>	(Optional) Specifies the name of a flow exporter. The name can be any case-sensitive, alphanumeric string up to 64 characters.
----------------------------------	--

Defaults

Information for all flow exporters configured on the router is displayed.

Command Modes

Any command mode

SupportedUserRoles

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

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must have already enabled traffic monitoring with Flexible NetFlow using an exporter before you can use the **show flow exporter** command.

This command does not require a license.

Examples

This example shows how to display the status and statistics for all of the flow exporters configured on the router:

```
switch# show flow exporter
Flow Exporter NFC-DC-PHOENIX:
Export Version 5
Exporter Statistics
  Number of Flow Records Exported 0
  Number of Export Packets Sent 0
  Number of Export Bytes Sent 0
  Number of Destination Unreachable Events 0
  Number of No Buffer Events 0
  Number of Packets Dropped (No Route to Host) 0
  Number of Packets Dropped (other) 0
  Number of Packets Dropped (LC to RP Error) 0
  Number of Packets Dropped (Output Drops) 0
  Time statistics were last cleared: Never
Flow exporter timeout:
```

```

Export Version 5
Exporter Statistics
  Number of Flow Records Exported 0
  Number of Export Packets Sent 0
  Number of Export Bytes Sent 0
  Number of Destination Unreachable Events 0
  Number of No Buffer Events 0
  Number of Packets Dropped (No Route to Host) 0
  Number of Packets Dropped (other) 0
  Number of Packets Dropped (LC to RP Error) 0
  Number of Packets Dropped (Output Drops) 0
  Time statistics were last cleared: Never
Flow exporter test-exporter:
  Description: test server in San Jose CA
  Export Version 5
  Exporter Statistics
    Number of Flow Records Exported 0
    Number of Export Packets Sent 0
    Number of Export Bytes Sent 0
    Number of Destination Unreachable Events 0
    Number of No Buffer Events 0
    Number of Packets Dropped (No Route to Host) 0
    Number of Packets Dropped (other) 0
    Number of Packets Dropped (LC to RP Error) 0
    Number of Packets Dropped (Output Drops) 0
    Time statistics were last cleared: Never

```

Related Commands

Command	Description
clear flow exporter	Clears the statistics for exporters.
destination	Configures an export destination for flow exporters.
dscp	Configures optional differentiated services code point (DSCP) parameters for flow exporters.
export-protocol	Configures the export protocol version for flow exporters.
flow exporter	Creates a flow exporter.
option	Configure options for flow exporters.
show flow exporter	Displays flow exporter status and statistics.
source	Configures the source IP address interface for flow exporters.
template	Configures the template resend timeout for flow exporters.
transport	Configures the transport protocol for flow exporters.
ttl	Configures the time-to-live (TTL) value for flow exporters.

show flow interface

To display the Flexible NetFlow configuration and status for an interface, use the **show flow interface** command.

```
show flow interface [interface-type number]
```

Syntax Description

<i>interface-type number</i>	(Optional) Type of interface that you want to view Flexible NetFlow accounting configuration information on.
------------------------------	--

Defaults

Information for the Flexible NetFlow accounting configuration on the interface is displayed.

Command Modes

Any command mode

Supported User Roles

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

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must have already enabled traffic monitoring with Flexible NetFlow before you can use the **show flow interface** command.

This command does not require a license.

Examples

This example shows how to display the Flexible NetFlow accounting configuration on interface Ethernet 0/0 and 0/1:

```
switch# show flow interface ethernet 1/0
Interface Ethernet1/0
  FNF:  monitor:      NFC-DC-PHOENIX
        direction:   Output
        traffic(ip):  on
```

```
switch# show flow interface ethernet 0/0
Interface Ethernet0/0
  FNF:  monitor:      FLOW-MONITOR-1
        direction:   Input
        traffic(ip):  sampler SAMPLER-2#
```

Table 1 describes the significant fields shown in the display.

Table 1 *show flow interface Field Descriptions*

Field	Description
Interface	The interface that information is applicable to.
monitor	The name of the flow monitor that is configured on the interface.
direction:	The direction of traffic the flow monitor is monitoring. The possible values are as follows: <ul style="list-style-type: none"> • Input—Traffic being received by the interface • Output—Traffic being transmitted by the interface
traffic (ip)	Indicates if the flow monitor is in normal mode or sampler mode. The possible values are as follows: <ul style="list-style-type: none"> • On—The flow monitor is in normal mode. • Sampler— The flow monitor is in sampler mode (the name of the sampler is included in the display).

Related Commands

Command	Description
show flow sw-monitor	Displays flow monitor status and statistics.

show flow monitor

To display the status and statistics for a Flexible NetFlow flow monitor, use the **show flow monitor** command.

show flow monitor [*name monitor-name*] [*cache*]

Syntax Description	
name <i>monitor-name</i>	(Optional) Specifies the name of a flow monitor that you configured by using the flow monitor command.
cache	(Optional) Displays the flow of packets generated by the supervisor. Use this command with the show hardware flow {ip ipv6} command to get all the flows on the system.

Defaults Information for all flow exporters configured on the router is displayed.

Command Modes Any command mode

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

Command History	Release	Modification
	6.2(10)	This command introduced. This command replaced the show flow sw-monitor command.

Usage Guidelines You must have already enabled traffic monitoring with Flexible NetFlow before you can use this command.

This command does not require a license.

Examples This example shows how to display the status and statistics for the flow monitor named mon_IPv4:

```
switch# show flow monitor mon_IPv4 cache
```

SrcAddr	DstAddr	Dir	PktCnt	ByteCnt
10.1.1.1	10.1.1.2	Egr	246	16412
10.1.1.1	10.1.1.2	Egr	1	70
10.1.1.1	10.1.1.2	Egr	1	74
10.1.1.1	10.1.1.2	Egr	1	74
20.1.1.1	20.1.1.2	Egr	1	74

The following table describes the significant fields shown in the display.

Table 2 *show flow monitor Field Descriptions*

Field	Description
SrcAddr	The source address.
DstAddr	The destination address.
PktCnt	The number of packets that have been counted.
ByteCnt	The number of bytes that have been counted.

Related Commands

Command	Description
cache	Configures flow cache parameters for flow monitors.
clear flow monitor	Clears the flow monitor.
exporter	Specifies a flow exporter for flow monitors.
flow monitor	Creates a flow monitor.
protocol-distribution	Configures the collection of protocol distribution statistics for flow monitors.
record	Configures a flow record for the flow monitor.
show hardware flow	Displays information about NetFlow hardware IP flows.
size-distribution	Configures the collection of size distribution statistics for flow monitors.

show flow sw-monitor

To display the status and statistics for a Flexible NetFlow flow monitor, use the **show flow sw-monitor** command.

```
show flow sw-monitor [name exporter-name] [cache [detailed]]
```

Syntax Description	
name <i>exporter-name</i>	(Optional) Specifies the name of a flow exporter. The name can be any case-sensitive, alphanumeric string up to 64 characters.
cache	Displays the flow of packets generated by the supervisor. Use this command with the show hardware flow {ip ipv6} command to get all the flows on the system.
detailed	(Optional) Displays detailed information about the flow of packets.

Defaults Information for all flow exporters configured on the router is displayed.

Command Modes Any command mode

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

Command History	Release	Modification
	6.2(10)	This command has been deprecated. This command was replaced by the show flow monitor command.
	4.0(1)	This command was introduced.

Usage Guidelines You must have already enabled traffic monitoring with Flexible NetFlow using an exporter before you can use the **show flow exporter** command.

This command does not require a license.

Examples This example shows how to display the status and statistics for a flow monitor:

```
switch# show flow sw-monitor NFC-DC-PHOENIX statistics
Cache type:                               Normal
Cache size:                               4096
Current entries:                           4
High Watermark:                            6

Flows added:                               116
Flows aged:                                112
```

```

- Active timeout ( 1800 secs)      0
- Inactive timeout ( 15 secs)     112
- Event aged                       0
- Watermark aged                   0
- Emergency aged                   0

```

Table 3 describes the significant fields shown in the display.

Table 3 *show flow sw-monitor monitor-name Field Descriptions*

Field	Description
Cache Type	The flow monitor cache type. The possible values are as follows: <ul style="list-style-type: none"> • Normal—Flows are expired normally • Permanent—Flows are never expired • Immediate—Flows are expired immediately
Cache Size	The number of entries in the cache.
Current entries	The number of entries in the cache that are in use.
High Watermark	The highest number of cache entries seen.
Flows added	Flows added to the cache since the cache was created.
Flows aged	Flows expired from the cache since the cache was created.
Active Timeout	The current value for the active timeout.
Inactive Timeout	The current value for the inactive timeout.
Event aged	The number of flows that have been aged by an event such as using the force-export option for the clear flow monitor command or the counter value wrapped because the maximum number for the counter was reached.
Watermark aged	The number of flows that have been aged because they exceeded the maximum high watermark value.
Emergency aged	The number of flows that were aged from the cache to allow new flows to be added.

This example shows how to display the status for a flow monitor:

```

switch# show flow sw-monitor NFC-DC-PHOENIX

Flow Monitor NFC-DC-PHOENIX:
  Description:      Used for basic traffic analysis
  Flow Record:     netflow-original
  Flow Exporter:   EXP-DC-TOPEKA
                  EXP-DC-PHOENIX

Cache:
  Type:            normal
  Status:         allocated
  Size:           4096 entries / 311316 bytes
  Inactive Timeout: 15 secs
  Active Timeout:  1800 secs
  Update Timeout:  1800 secs

```

Table 4 describes the significant fields shown in the display.

Table 4 *show flow sw-monitor monitor-name Field Descriptions*

Field	Description
Flow Monitor	The name of the flow monitor that you configured.
Description	The description that you configured for the monitor, or the default description—User defined.
Flow Record	The flow record assigned to the flow monitor.
Flow Exporter	The exporter(s) that are assigned to the flow monitor.
Cache	Information on the cache for the flow monitor.
Type	The flow monitor cache type. The possible values are as follows: <ul style="list-style-type: none"> • Normal—Flows are expired normally • Permanent—Flows are never expired • Immediate—Flows are expired immediately
Status	The status of the flow monitor cache. The possible values are as follows: <ul style="list-style-type: none"> • Allocated—The cache is allocated. • Being deleted—The cache is being deleted. • Not allocated—The cache is not allocated.
Size	The current cache size.
Inactive Timeout	The current value for the inactive timeout.
Active Timeout	The current value for the active timeout.
Update Timeout	The current value for the update timeout.

This example shows how to display the status and statistics for the flow monitor named NFC-DC-PHOENIX:

```
switch# show flow sw-monitor NFC-DC-PHOENIX cache
Cache type:                               Normal
Cache size:                               4096
Current entries:                           8
High Watermark:                           10

Flows added:                              1560
Flows aged:                                1552
- Active timeout ( 1800 secs)              24
- Inactive timeout ( 15 secs)              1528
- Event aged                               0
- Watermark aged                           0
- Emergency aged                           0

IP TOS:                                    0x00
IP PROTOCOL:                               6
IPV4 SOURCE ADDRESS:                       10.10.10.2
IPV4 DESTINATION ADDRESS:                   172.16.10.2
TRNS SOURCE PORT:                           20
```

```

TRNS DESTINATION PORT:    20
INTERFACE INPUT:         Et0/0
FLOW SAMPLER ID:         0
ip source as:            0
ip destination as:       0
ipv4 next hop address:   172.16.7.2
ipv4 source mask:        /0
ipv4 destination mask:   /24
tcp flags:               0x00
interface output:        Et1/0
counter bytes:           198520
counter packets:         4963
timestamp first:         10564356
timestamp last:          12154104

```

Table 5 describes the significant fields shown in the display.

Table 5 *show flow sw-monitor monitor-name Field Descriptions*

Field	Description
Cache type	The flow monitor cache type. The possible values are as follows: <ul style="list-style-type: none"> • Normal—Flows are expired normally • Permanent—Flows are never expired • Immediate—Flows are expired immediately
Cache Size	The number of entries in the cache.
Current entries	The number of entries in the cache that are in use.
High Watermark	The highest number of cache entries seen.
Flows added	Flows added to the cache since the cache was created.
Flows aged	Flows expired from the cache since the cache was created.
Active timeout	The current value for the inactive timeout.
Inactive timeout	The current value for the active timeout.
Event aged	The number of flows that have been aged by an event such as using the force-export option for the clear flow monitor command.
Watermark aged	The number of flows that have been aged because they exceeded the maximum high watermark value.
Emergency aged	The number of flows that were aged from the cache to allow new flows to be added.
IP TOS	The IP type of service (ToS) value.
IP PROTOCOL	The protocol number.
IPV4 SOURCE ADDRESS	The IPv4 source address.
IPV4 DESTINATION ADDRESS	The IPv4 destination address.
TRNS SOURCE PORT	The source port for the transport protocol.
TRNS DESTINATION PORT	The destination port for the transport protocol.
INTERFACE INPUT	The interface that the input is received on.
FLOW SAMPLER ID	The flow sampler ID number.

Table 5 *show flow sw-monitor monitor-name Field Descriptions (continued)*

Field	Description
ip source as	The BGP source AS number.
ip destination as	The BGP destination AS number.
ipv4 next hop address	The IPv4 address of the next hop that the packet is forwarded to.
ipv4 source mask	The IPv4 source address mask.
ipv4 destination mask	The IPv4 destination address mask.
tcp flags	The value of the TCP flags.
interface output	The interface that the input is transmitted on.
counter bytes	The number of bytes that have been counted.
counter packets	The number of packets that have been counted.
timestamp first	The timestamp of the first packet in the flow.
timestamp last	The timestamp of the last packet in the flow.

This example shows how to display the status and statistics for the flow monitor named NFC-DC-PHOENIX in a table format:

```
switch# show flow sw-monitor NFC-DC-PHOENIX cache format table
Cache type:                               Normal
Cache size:                               4096
Current entries:                           4
High Watermark:                            6

Flows added:                               90
Flows aged:                                86
- Active timeout ( 1800 secs)              0
- Inactive timeout ( 15 secs)              86
- Event aged                               0
- Watermark aged                           0
- Emergency aged                           0

IP TOS   IP PROT   IPV4 SRC ADDR   IPV4 DST ADDR   TRNS SRC PORT   TRNS DST PORT
=====  =====  =====
0x00     1    10.251.10.1    172.16.10.2     0                02
0x00     1    10.251.10.1    172.16.10.2     0                20484
0xC0     17   172.16.6.1     224.0(1).0.9    520              5202
0x00     6    10.10.11.1     172.16.10.5     25               252
switch#
```

Related Commands

Command	Description
cache	Configures flow cache parameters for flow monitors.
clear flow monitor	Clears the flow monitor.
exporter	Specifies a flow exporter for flow monitors.
flow monitor	Creates a flow monitor.
protocol-distribution	Configures the collection of protocol distribution statistics for flow monitors.
record	Configures a flow record for the flow monitor.

Command	Description
show flow sw-monitor	Displays flow monitor status and statistics.
size-distribution	Configures the collection of size distribution statistics for flow monitors.

show flow record

To display the status and statistics of a Flexible NetFlow flow record, use the **show flow record** command.

show flow record [**name** *record-name* | **netflow ipv4** *record* | **netflow-original**]

Syntax Description		
name <i>record-name</i>	(Optional) Specifies the name of a flow record that you previously configured.	
netflow ipv4 <i>record</i>	(Optional) Configures the flow monitor to use one of the predefined records. See Table 6 for a listing of the available records and their definitions.	
netflow-original	(Optional) Specifies the Flexible NetFlow implementation of original NetFlow with origin autonomous systems.	

Defaults Information for all flow exporters configured on the router is displayed.

Command Modes Any command mode

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

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

Usage Guidelines You must have already enabled traffic monitoring with Flexible NetFlow using an exporter before you can use the **show flow exporter** command.

[Table 6](#) describes the keywords and descriptions for the *record* argument.

Table 6 Keywords and Descriptions for the record Argument

original-input	Traditional IPv4 input NetFlow.
original-output	Traditional IPv4 output NetFlow.
protocol-port	Protocol ports record.

This command does not require a license.

Examples This example shows how to display the status and statistics of the original input NetFlow record:


```

switch# show flow record netflow ipv4 original-input
Flow record ipv4 original-input:
  Description: Traditional IPv4 input NetFlow
  No. of users: 0
  Template ID: 0
  Fields:
    match ipv4 source address
    match ipv4 destination address
    match ip protocol
    match ip tos
    match transport source-port
    match transport destination-port
    match interface input
    collect routing source as
    collect routing destination as
    collect routing next-hop address ipv4
    collect transport tcp flags
    collect counter bytes
    collect counter packets
    collect timestamp sys-uptime first
    collect timestamp sys-uptime last
    collect interface output
switch#

```

Table 7 describes the significant fields shown in the display.

Table 7 *show flow record netflow-original Field Descriptions*

Field	Description
Description	The description that you configured for the record or the default description—User defined.
No. of users	The number of references to this record in the configuration.
Total field space	The number of bytes required to store these fields for one flow.
Fields	The fields that are included in this record. For more information on the fields, refer to the match and collect commands.

Related Commands

Command	Description
cache	Configures flow cache parameters for flow monitors.
clear flow monitor	Clears the flow monitor.
exporter	Specifies a flow exporter for flow monitors.
flow monitor	Creates a flow monitor.
protocol-distribution	Configures the collection of protocol distribution statistics for flow monitors.
record	Configures a flow record for the flow monitor.
show flow sw-monitor	Displays flow monitor status and statistics.
size-distribution	Configures the collection of size distribution statistics for flow monitors.
protocol-distribution	Configures the collection of protocol distribution statistics for flow monitors.
record	Configures a flow record a for flow monitor.

show flow timeout

To display the Flexible NetFlow flow cache timeout values, use the **show flow timeout** command.

show flow timeout

Syntax Description This command has no arguments or keywords.

Defaults Information for the Flexible NetFlow accounting configuration on the interface is displayed.

Command Modes Any command mode

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

Command History	Release	Modification
	6.1(1)	Changed the command output.
	4.0(1)	This command was introduced.

Usage Guidelines You must have already enabled traffic monitoring with Flexible NetFlow before you can use the **show flow timeout** command.

This command does not require a license.

Examples This example shows how to display the Flexible NetFlow flow cache timeout values for F2 VDC:

```
switch# show flow timeout
Flow timeout values
  Active timeout:           1800 seconds
  Inactive timeout:        15 seconds
  Flush Cache timeout      15 seconds
  Fast timeout:            Disabled
  Session aging timeout:   Disabled
  Aggressive aging timeout: Disabled
switch#
```

Related Commands	Command	Description
	flow timeout	Creates a flow timeout.

show hardware feature-capability

To display information about the registered features that are supported by the system, use the **show hardware feature-capability** command.

show hardware feature-capability [detailed]

Syntax Description	detailed	(Optional) Displays detailed information about registered features.
--------------------	----------	---

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

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

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

Release	Modification
4.2(1)	This command was introduced.

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

Examples	This example shows how to display information about the registered features that are supported by the system:
----------	---

```
switch# show hardware feature-capability detailed
Hardware Dependent Features:
. = supported
X = unsupported
-- Module --
7 12
VPC X X
module 7: Device Min num too small for feature
module 12: Device Min num too small for feature
PVLAN . .
switch#
```

Related Commands	Command	Description
	show hardware capacity	Displays information about the hardware capabilities and current hardware utilization by the system.

show hardware capacity

To display information about the hardware capabilities and current hardware utilization by the system, use the **show hardware capacity** command.

show hardware capacity [eobc | fabric-utilization | forwarding | interface | module | power]

Syntax Description	
eobc	(Optional) Displays the Ethernet Out of Band Channel (EOBC) resources, such as packets per second, total packets, and dropped packets, for both ingress (rx) and egress (tx) direction.
fabric-utilization	(Optional) Displays switch fabric resources, such as the channel speed, the percentage of egress data, the percentage of ingress data, packet drops, peak rates, and time stamps.
forwarding	(Optional) Displays Layer 2 and Layer 3 forwarding resources, such as available resources, the percentage of used resources, and the percentage of free resources.
interface	(Optional) Displays the chassis, slot, or port number, and the ingress (rx) and egress (tx) packet drop counter against it.
module	(Optional) Displays information about the modules, crossbar resources, and the percentage of total, free, and used Flash and NVRAM resources in each module.
power	(Optional) Displays a summary of the power resources of the system.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines You can make network design plans based on the information about hardware capabilities and the current hardware utilization.

This command does not require a license.

Examples

This example shows how to display information about the hardware capabilities and current hardware utilization by the system:

```
switch(config)# show hardware capacity module
Supervisor Redundancy HW Mode(Dual-SUPs): Disabled
Redundancy mode: Active with no standby

Switching Resources:
-----
Module  Model Number      Part Number      Serial Number
-----
  7      N7K-M148GS-11     73-11584-02     JAF1219AGFE
 10      N7K-SUP1          73-10877-11     JAF1307ALAT
 12      NURBURGRING      73-10098-04     JAB104400P0

XBAR Resources:
-----
XbarNum Model Number      Part Number      Serial Number
-----
  1      N7K-C7018-FAB-1  73-11687-01     JAF1225AGHJ

Flash/NVRAM Resources:
-----
Usage: Module  Device      Total (KB)  Free (KB)  %Used
-----
          10    bootflash  1762048    1383980    21
          10    logflash   7997912    6840772    14
          10    slot0     2026608    1985436     2
switch(config)#
```

Related Commands

Command	Description
show hardware fabric-utilization	Displays information about fabric utilizations.
show module	Displays information about a module.

show hardware capacity interface

To display information about the hardware interface resources, use the **show hardware capacity interface** command.

show hardware capacity interface

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
	4.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display information about the hardware interface resources:

```
switch(config)# show hardware capacity interface
Interface Resources

Interface drops:
  Module  Total drops                Highest drop ports
    7     Tx: 0                        -
    7     Rx: 0                        -
   12     Tx: 0                        -
   12     Rx: 0                        -

Interface buffer sizes:
  Module  Bytes: Tx buffer           Rx buffer
    7     6190631                 7743330
   12     6190631                 7743330
switch#
```

Related Commands	Command	Description
	show hardware flow utilization	Displays information about NetFlow hardware flow utilization.
	show hardware fabric-utilization	Displays information about fabric utilization.

show hardware fabric-utilization

To display the fabric utilization values reported from a 10 millisecond measurement interval that is, the ASIC measures link utilization, use the **show hardware fabric-utilization** command.

show hardware fabric-utilization

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the fabric utilization:

```
switch(config)# show hardware fabric-utilization
-----
Slot          Total Fabric      Utilization
              Bandwidth        Ingress % Egress %
-----
1             220 Gbps          0.00    0.00
2             92 Gbps           0.00    0.00
5             23 Gbps           0.00    0.00
6             23 Gbps           0.00    0.00
7             92 Gbps           0.00    0.00
9             46 Gbps           0.00    0.00
--More--
```

Related Commands	Command	Description
	show hardware fabric-utilization	Displays information about fabric utilization.

show hardware fabric-utilization detail timestamp

To display the time and value of peak utilization timestamp, use the **show hardware fabric-utilization detail timestamp** command.

show hardware fabric-utilization detail timestamp

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
	6.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the time and value of peak utilization:

```
switch(config)# show hardware fabric-utilization detail timestamp
swN7K148# show hardware fabric-utilization detail timestamp
-----
Fabric Planes:
A -- Unicast fabric interface
B -- Multicast/Multidestination fabric interface
-----PEAK FABRIC UTILIZATION-----
I/O |-----FABRIC-----|      Ingress      |      Egress      |
Slot |Mod Inst  Plane| Util          | Time           | Util          | Time           |
-----|-----|-----|-----|-----|-----|-----|-----|
2    | 1    1    A    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 1    1    B    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 1    1    A    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 1    1    B    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 2    1    A    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 2    1    B    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 2    1    A    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 2    1    B    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 3    1    A    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 3    1    B    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
2    | 3    1    A    | 0%           | 08-11@19:18:41 | 0%           | 08-11@19:18:41 |
```

show hardware fabric-utilization detail timestamp

```

2      3      1      B      0%      08-11@19:18:41      0%      08-11@19:18:41
5      1      1      A      0%      08-11@19:18:34      0%      08-11@19:18:34
5      1      1      B      0%      08-11@19:18:34      0%      08-11@19:18:34
5      2      1      A      0%      08-11@19:18:34      0%      08-11@19:18:34
--More--

```

Related Commands

Command	Description
show hardware fabric-utilization	Displays information about fabric utilization.

show hardware flow aging

To display information about NetFlow hardware flow aging, use the **show hardware flow aging** command.

```
show hardware flow aging [vdc vdc-name] [module slot-number]
```

Syntax Description		
vdc <i>vdc-name</i>	(Optional) Specifies the virtual context device (VDC) name. The VDC name can be any case-sensitive, alphanumeric string up to 64 characters.	
module <i>slot-number</i>	(Optional) Displays information specific to a module.	

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines You must have already enabled traffic monitoring with Flexible NetFlow before you can use the **show hardware flow aging** command.

This command does not require a license.

Examples This example shows how to display the NetFlow aging values for module 2:

```
switch(config)# show hardware flow aging module 2
VDC(1) Aging Information (time unit is second):

AgingType  Enabled  Timeout  Period  Threshold
-----+-----+-----+-----+-----
Active     Yes      1800     360     N/A
Inactive   Yes      15       3       N/A
Fast       Yes      33       6       22
Aggressive No       90       18      90
Session    No       2        5       N/A
switch(config)#
```

■ show hardware flow aging

Related Commands

Command	Description
flow timeout	Creates a flow timeout.

show hardware flow entry

To display information about a NetFlow table entry, use the **show hardware flow entry** command.

show hardware flow entry address *location* **type** {**ip** | **ipv6**} [**detail**] [**module** *slot-number*]

Syntax Description	Parameter	Description
	address	Specifies the NetFlow table address.
	<i>location</i>	Address location of the NetFlow table entry, in hexadecimal. The location range is from 0x0 to 0x3ffff.
	ip	Displays detailed information about the IP flows.
	ipv6	Displays detailed information about the IPv6 flows.
	detail	(Optional) Displays detailed information about the flows.
	module <i>slot-number</i>	(Optional) Displays information specific to a module.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines You must have already enabled traffic monitoring with Flexible NetFlow before you can use the **show hardware flow entry** command.

This command does not require a license.

Examples This example show how to display the NetFlow table entry for module 2:

```
switch(config)# show hardware flow entry address 0x0 type ip module 2
NT Entry Info (dev_id = 0, nt_entry_addr = 0x00000000):

protocol                = 0 (0=IPv4/IPMAC, 1=IPv6, 2=L2, 3=MPLS)
profile_id              = 0
recir_id                = 0
is_routed               = 0
from_rp                 = 0
lkup_dir                = 0 (0=Ingress, 1=Egress)
ilif(ovld_a)           = 0x0
```

show hardware flow entry

```

elif(ovld_b)           = 0x0
tos(ovld_e)           = 0
l4_protocol           = 0
l4_hdr_vld            = 0
fragment              = 0
mpls                  = 0
l4_info(ovld_d)       = 0x00000000
ipv4_sa(ovld_f)       = 0.0.0.0
ipv4_da(ovld_g)       = 0.0.0.0
ipmac                 = 0
segment               = 0
hash_addr             = 0x0
icam                  = 0
create_ts             = 0
sh_plc_idx/sampler_id = 0x0
rdt_tbl_idx           = 0x0
ignr_aclo             = 0
ignr_qoso             = 0
ignr_acc              = 0
ignr_agg_qos         = 0
tcp_rdt_dst           = 0
copy_policy_idx       = 0x0
nf_acos               = 0
mark_en               = 0
nf_qos_mode           = 0
policer_param_idx    = 0x0
elam_trig             = 0
valid                 = 0
sw_entry              = 0
profile_merged        = 0
fast_ag_en            = 0
sw_bits1              = 0
dgt_mode              = 0
adj_ptr/dgt           = 0x0
ignr_qosi             = 0
ignr_acl_i            = 0

```

NS Entry Info (dev_id = 0, ns_entry_addr = 0x00000000):

```

ack_after_fin         = 0
tcp_flag              = 0x0 (URG=0, ACK=0, PSH=0, RST=0, SYN=0, FIN=0)
mf_ls_ts              = 0
mf_bkt                = 0
nf_pkt_cnt            = 0000000000
nf_byte_cnt           = 00000000000000
nf_byte_cnt_excd     = 00000000000000
ls_used_ts            = 0
sw_prog/sticky_status = 0

```

Related Commands

Command	Description
flow	Creates a flow.

show hardware flow

To display information about NetFlow hardware IP flows, use the **show hardware flow ip** command.

```
show hardware flow {ip | ipv6} [interface type number | monitor monitor-name | profile profile-id
| vdc vdc-name | vlan vlan-name] [detail] [module module]
```

Syntax Description		
ip		Displays information about the IP flows.
ipv6		Displays information about the IPv6 flows.
interface <i>interface-type number</i>	(Optional)	Specifies the type of interface that you want to view Flexible NetFlow accounting configuration information on.
monitor <i>monitor-name</i>	(Optional)	Specifies the name of the flow monitor. The monitor name can be any case-sensitive, alphanumeric string up to 64 characters.
profile <i>profile-id</i>	(Optional)	Specifies the name of the flow profile. The profile ID range is from 0 to 31.
vdc <i>vdc-name</i>	(Optional)	Specifies the virtual device context (VDC) name. The VDC name can be any case-sensitive, alphanumeric string up to 64 characters.
detail	(Optional)	Displays detailed information about the flows.
module <i>slot-number</i>	(Optional)	Displays information specific to a module.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines You must have already enabled traffic monitoring with Flexible NetFlow before you can use the **show hardware flow ip** command.

This command does not require a license.

Examples This example shows how to display the NetFlow aging values for module 8:

```
switch(config)# show hardware flow ip module 8
```

■ show hardware flow

D - Direction; L4 Info - Protocol:Source Port:Destination Port
 IF - Interface: (E)thernet, (S)vi, (V)lan, (P)ortchannel, (T)unnel
 TCP Flags: Ack, Flush, Push, Reset, Syn, Urgent

```

D IF      SrcAddr          DstAddr          L4 Info          PktCnt          TCP Flags
-----+-----+-----+-----+-----+-----+-----
I 8/26    007.002.000.002    007.001.000.002  000:00000:00000 0000421885     . . . . .
I 8/25    007.001.000.002    007.002.000.002  000:00000:00000 0000421900     . . . . .
O 8/25    007.002.000.002    007.001.000.002  000:00000:00000 0000422213     . . . . .
O 8/26    007.001.000.002    007.002.000.002  000:00000:00000 0000422228     . . . . .
switch(config)#

```

Related Commands

Command	Description
flow	Creates a flow.

show hardware flow I2

To display information about NetFlow hardware Layer 2 flows, use the **show hardware flow I2** command.

```
show hardware flow I2 [monitor monitor-name | profile profile-id | vdc vdc-id | vlan vlan-id]
[detail] [instance instance] [module module]
```

Syntax Description	
monitor <i>monitor-name</i>	(Optional) Specifies the name of the flow monitor. The monitor name can be any case-sensitive, alphanumeric string up to 64 characters.
profile <i>profile-id</i>	(Optional) Specifies the name of the flow profile. The profile ID range is from 0 to 7.
vdc	(Optional) Specifies the virtual device context (VDC) name.
<i>vdc-id</i>	(Optional) Virtual device context ID. The range is from 1 to 16 alphanumeric string.
vlan	(Optional) Displays a VLAN.
<i>vlan-id</i>	(Optional) Displays VLAN ID. The range is from 1 to 4094.
detail	(Optional) Displays detailed information about the flows.
instance	(Optional) Displays information about the EARL instance.
<i>instance</i>	(Optional) Displays the instance number. The range is from 1 to 2.
<i>slot number</i>	(Optional) Specifies the slot number. The range is from 1 to 18.

Defaults None

Command Modes EXEC 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 display detailed output information about the NetFlow Layer 2 flows:

```
switch(config)# show hardware flow I2 detail
D IF          SMAC          DMAC          ET  PktCnt      TCP Flags    DSCP
```


show hardware flow sampler

To display information about sampled NetFlow hardware flows, use the **show hardware flow sampler** command.

```
show hardware flow sampler { all | count | index number | name sampler-name | vdc vdc_id }
  [detail] [module module] [instance instance]
```

Syntax Description		
all		Specifies all sampled NetFlow hardware flows.
count		Specifies the sampler table utilization.
index <i>number</i>		Specifies the sampler table index, in hexadecimal. The range is from 0x0 to 0x3ff.
name <i>sampler-name</i>		Specifies the sampler name. The name can be any case-sensitive, alphanumeric string up to 64 characters.
vdc <i>vdc-name</i>		Specifies the virtual device context (VDC) name. The VDC name can be any case-sensitive, alphanumeric string up to 64 characters.
detail		(Optional) Displays detailed information about the flows.
module <i>slot-number</i>		(Optional) Displays information that is specific to a module.
instance <i>instance</i>		(Optional) Displays the instance number.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines You must have already enabled traffic monitoring with Flexible NetFlow before you can use the **show hardware flow sampler** command.

This command does not require a license.

Examples This example shows how to display the NetFlow sampler table utilization for module 2:

```
switch# show hardware flow sampler count module 2
Sampler Table Utilization: about 0.00% (0/64)
```

■ show hardware flow sampler

Related Commands	Command	Description
	flow	Creates a flow.

show hardware flow utilization

To display information about NetFlow hardware flow utilization, use the **show hardware flow utilization** command.

show hardware flow utilization [**module** *module*]

Syntax Description	module <i>slot-number</i> (Optional) Displays information specific to a module.
---------------------------	--

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

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

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

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

Usage Guidelines	You must have already enabled traffic monitoring with Flexible NetFlow before you can use the show hardware flow utilization command. This command does not require a license.
-------------------------	--

Examples	This example shows how to display the NetFlow sampler table utilization for module 2:
-----------------	---

```
switch# show hardware flow utilization module 2
Flow Utilization: 0.00% (0/515090)

Total number of flows                = 0
IPv4 flow creation failure           = 0
IPv6 flow creation failure           = 0
MPLS flow creation failure           = 0
L2 flow creation failure             = 0
IFE flow creation failure            = 0
OFE flow creation failure            = 0
IFE CF FIFO full failure             = 0
OFE CF FIFO full failure             = 0
IFE NT table full failure            = 0
OFE NT table full failure            = 0
NO freelist pointer failure          = 0
Hash Table(NH) page full failure     = 0
IPMAC lookup failure                 = 0
L2 ACL deny                          = 0
```

■ show hardware flow utilization

```
L3 ACL deny           = 0
IFE CF flow control   = 0
OFE CF flow control   = 0
Fast Aging failure    = 0
switch#
```

Related Commands

Command	Description
flow	Creates a flow.

■ show hardware internal rxwait-history

```
RxWait per second (last 60 seconds)
# = RxWait (ms)
```

Related Commands

Command	Description
show hardware internal	Displays information of the physical device hardware.

■ show hardware internal txwait-history

```
Pause TxWait per second (last 60 seconds)
# = TxWait (ms)
```

Related Commands

Command	Description
show hardware internal	Displays information of the physical device hardware.

show icam entries acl

To display the traffic analytics of the access control list (ACL) ternary content addressable memory (TCAM), which includes RACL, VACL, QoS, PBR, WCCP, CoPP, and so on, use the **show icam entries acl** command.

```
show icam entries acl module module inst instance [history num-intervals][sort {[filter
feature-name [exact]}][sort-order sort-order-list][top top-percentage}}
```

Syntax Description		
acl		Specifies TCAM entries.
module <i>module</i>		Specifies the module number. The range is from 1–18 for an 18-slot chassis, and from 1–9 for a 9-slot chassis.
inst <i>instance</i>		Specifies the ASIC or forwarding engine instance number. The range is from 0–11.
history		(Optional) Displays the history of entries.
<i>num-intervals</i>		Number of intervals in the history. The range is from 168–1344.
sort		(Optional) Specifies the sorted display.
sort-order <i>sort-order-list</i>		(Optional) Displays the sorted entries in a specific order; 1 for ascending order and 2 for descending order. The entries are sorted in descending order by default.
filter <i>feature-name</i>		(Optional) Specifies the feature name to be filtered. By default, all the features are displayed. Enclose the feature name in quotation marks if it contains more than one word, for example, QoS COPP.
exact		(Optional) Filters the TCAM entries based on the exact feature name, which has one word. This keyword can be used only when filtering the TCAM entries by feature names.
top <i>top-percentage</i>		(Optional) Displays the top TCAM entries based on the specified percentage. The range is from 1–100. The default is 1.

Command Default The top 1 percent TCAM entries are displayed in descending order.

Command Modes Any command mode

Command History	Release	Modification
	Cisco NX-OS Release 8.2(1)	This command was modified. The following keywords and arguments were added: <ul style="list-style-type: none"> history <i>num-intervals</i> exact
	Cisco NX-OS Release 8.0(1)	This command was introduced.

Usage Guidelines

- To view the history of TCAM entries utilization, enable iCAM monitoring on the required entries using the **icam monitor entries** command.
- To filter the TCAM entries using the **sort** keyword, use at least one option following this keyword.

Examples

This example shows how to view iCAM monitoring of the TCAM entries for a current date:

```
switch# show icam entries acl module 3 inst 5
Retrieving data from linecard. This may take some time ...
=====
TCAM Entries (Mod 3,Inst 5)
-----
Feature Pkt_Type                               Source IP/Mask Dest IP/Mask   Action
ifindex  Stats
-----
          FEX   IPv4                               ip 0.0.0.0/0 0.0.0.0/0
Redirect 0x15090000                                0
          FEX   IPv6 ip 0x00000000000000000000000000000000/0 0x00000000000000000000000000000000
Redirect 0x15090000                                0
          FEX   MAC   0000.0000.0000 0000.0000.0000 0000.0000.0000 0000.0000.0000
Redirect 0x15090000                                0
          FEX   ARP   arp-rarp/all ip 0.0.0.0/0 0.0.0.0/0 0000.0000.0000 0000.0000.00
Redirect 0x15090000                                0
          RACL  IPv4                               tcp 209.165.200.225/27 0.0.0.0/0
Permit 0x1a10a000                                0
          RACL  IPv4                               tcp 209.165.201.1/27 0.0.0.0/0
Permit 0x1a10a000                                0
          RACL  IPv4                               tcp 209.165.202.129/27 0.0.0.0/0
Permit 0x1a10a000                                0
          RACL  IPv4                               tcp 209.165.202.139/27 0.0.0.0/0
Permit 0x1a10a000                                0
          RACL  IPv4                               tcp 209.165.202.140/27 0.0.0.0/0
Permit 0x1a10a000                                0
          QoS  COPP  IPv4                               udp 0.0.0.0/0 209.165.201.3/27
QoS 0x0 0
          QoS  COPP  IPv4                               udp 0.0.0.0/0 209.165.201.3/27
QoS 0x0 0
          QoS  COPP  IPv4                               209.165.201.1/27 0.0.0.0/0
QoS 0x0 0
          QoS  COPP  IPv4                               udp 0.0.0.0/0 209.165.201.1/27
QoS 0x0 0
          QoS  COPP  IPv4                               udp 0.0.0.0/0 209.165.201.1/27
QoS 0x0 0
          QoS  COPP  IPv4                               udp 0.0.0.0/0 209.165.201.7/27
QoS 0x0 0
          QoS  COPP  IPv4                               udp 0.0.0.0/0 209.165.201.7/27
QoS 0x0 0
          QoS  COPP  IPv4                               udp 0.0.0.0/0 209.165.201.11/27
QoS 0x0 0
          QoS  COPP  IPv4                               udp 0.0.0.0/0 209.165.201.11/27
QoS 0x0 0
          QoS  COPP  IPv4                               ip 0.0.0.0/0 209.165.201.14/27
QoS 0x0 0
```

This example shows how to view the top TCAM entries that are monitored by iCAM for a current date filtered by a feature name:

```
switch# show icam entries acl module 3 inst 5 sort filter "qos copp" top 10
Retrieving data from linecard. This may take some time ...
=====
TCAM Entries (Mod 3,Inst 5)
```

```

-----
-----
Feature Pkt_Type Source IP/Mask Dest IP/Mask
Action  ifindex      Stats
-----
-----
QoS COPP  IPv4                               ip 0.0.0.0/0 0.0.0.0/0
QoS      0x0             38408890
QoS COPP  MAC 0000.0000.0000 0000.0000.0000 0180.c200.000e ffff.ffff.ffff 350
QoS      0x0             254
QoS COPP  MAC 0000.0000.0000 0000.0000.0000 0100.0ccc.cccc ffff.ffff.ffff
QoS      0x0             23
QoS COPP  IPv4                               udp 0.0.0.0/0 209.165.201.1/27
QoS      0x0             0
QoS COPP  IPv4                               udp 0.0.0.0/0 209.165.201.1/27
QoS      0x0             0
-----

```

This example shows how to view iCAM monitoring of the TCAM entries for a current date filtered by a feature name using the **exact** keyword:

```

switch# show icam entries acl module 7 inst 0 sort filter QoS exact top 100
Retrieving data from linecard. This may take some time ...
=====
TCAM Entries (Mod 7,Inst 0)
-----
-----
Feature Pkt_Type Source IP/Mask Dest IP/Mask Action
ifindex Stats
-----
-----
QoS IPv4 ip 209.165.201.1/27 209.165.202.129/27 QoS
0x1a316000 0
QoS IPv4 ip 209.165.201.1/27 209.165.202.129/27 QoS
0x1a316000 0
QoS IPv4 ip 209.165.201.2/27 209.165.202.129/27 QoS
0x1a316000 0
QoS IPv4 ip 209.165.201.2/27 209.165.202.129/27 QoS
0x1a316000 0
QoS IPv4 ip 209.165.201.3/27 209.165.202.129/27 QoS
0x1a316000 0
QoS IPv4 ip 209.165.201.3/27 209.165.202.129/27 QoS
0x1a316000 0
QoS IPv4 ip 0.0.0.0/0 0.0.0.0/0 QoS
0x1a316000 0
QoS IPv4 ip 0.0.0.0/0 0.0.0.0/0 QoS
0x1a316000 0
-----

```

This example shows how to view the history of TCAM entries monitored by iCAM:

```

switch# show icam entries acl module 3 inst 5 history 2
=====
TCAM Entries (Mod 3,Inst 5): Cumulative stats for last 2 intervals
-----
-----
Feature Pkt_Type Source IP/Mask Dest IP/Mask
Action  ifindex      Stats      Rate(pps)
-----
-----
-----

```

show icam entries acl

```

      FEX    IPv4
Redirect 0x15090000          0          0          ip 0.0.0.0/0 0.0.0.0/0
      FEX    IPv6 ip 0x00000000000000000000000000000000/0 0x000000000000000000000000
Redirect 0x15090000          0          0
      FEX    MAC    0000.0000.0000 0000.0000.0000 0000.0000.0000 0000.0000.0000
Redirect 0x15090000          0          0
      FEX    ARP    arp-rarp/all ip 0.0.0.0/0 0.0.0.0/0 0000.0000.0000 0000.0000.00
Redirect 0x15090000          0          0
      RACL   IPv4
Permit  0x1a10a000          0          0          tcp 209.165.201.1/27 0.0.0.0/0
      RACL   IPv4
Permit  0x1a10a000          0          0          tcp 209.165.201.2/27 0.0.0.0/0
      RACL   IPv4
Permit  0x1a10a000          0          0          tcp 209.165.201.3/27 0.0.0.0/0
      RACL   IPv4
Permit  0x1a10a000          0          0          tcp 209.165.201.4/27 0.0.0.0/0
      RACL   IPv4
Permit  0x1a10a000          0          0          tcp 209.165.201.5/27 0.0.0.0/0
      RACL   IPv4
Permit  0x1a10a000          0          0
      QoS   COPP   IPv4
QoS     0x0          0          0          udp 0.0.0.0/0 209.165.201.1/27
      QoS   COPP   IPv4
QoS     0x0          0          0          udp 0.0.0.0/0 209.165.201.1/27
      QoS   COPP   IPv4
QoS     0x0          0          0          udp 0.0.0.0/0 209.165.201.1/27
      QoS   COPP   IPv4
QoS     0x0          0          0          udp 0.0.0.0/0 209.165.201.1/27
      QoS   COPP   IPv4
QoS     0x0          0          0          udp 0.0.0.0/0 209.165.201.1/27
      QoS   COPP   IPv4
QoS     0x0          0          0          udp 0.0.0.0/0 209.165.201.7/27
      QoS   COPP   IPv4
QoS     0x0          0          0          udp 0.0.0.0/0 209.165.201.7/27
      QoS   COPP   IPv4
QoS     0x0          0          0          udp 0.0.0.0/0 209.165.201.11/27
      QoS   COPP   IPv4
QoS     0x0          0          0          udp 0.0.0.0/0 209.165.201.11/27
      QoS   COPP   IPv4
QoS     0x0          0          0

```

This example shows how to view the history of the top 1 percent TCAM entries filtered by a feature name:

```

switch# show icam entries acl module 3 inst 5 history 2 sort filter "qos copp" top 1
=====
TCAM Entries (Mod 3,Inst 5): Cumulative stats for last 2 intervals
-----

```

Action	Feature	Pkt_Type	ifindex	Stats	Rate(pps)	Source IP/Mask	Dest IP/Mask
QoS	COPP	MAC	0x0	0000.0000.0000 48	0000.0000.0000 0	0180.c200.000e ffff.ffff.ffff	350
QoS	COPP	MAC	0x0	0000.0000.0000 4	0000.0000.0000 0	0100.0ccc.cccc ffff.ffff.ffff	
QoS	COPP	IPv4	0x0	0	0	tcp 0.0.0.0/0	0.0.0.0/0
QoS	COPP	IPv4	0x0	0	0	tcp 0.0.0.0/0	0.0.0.0/0

This example shows how to view the history of the top 2 percent TCAM entries filtered by a feature name:

```

switch# show icam entries acl module 3 inst 5 history 2 sort filter "qos copp" top 2

```

```

=====
TCAM Entries (Mod 3,Inst 5): Cumulative stats for last 2 intervals
-----

```

Feature Action	Pkt_Type ifindex	Stats	Rate(pps)	Source IP/Mask	Dest IP/Mask
QoS COPP	MAC	0000.0000.0000	0000.0000.0000	0180.c200.000e	ffff.ffff.ffff 350
QoS	0x0	48	0		
QoS COPP	MAC	0000.0000.0000	0000.0000.0000	0100.0ccc.cccc	ffff.ffff.ffff
QoS	0x0	4	0		
QoS COPP	IPv4			tcp 0.0.0.0/0	0.0.0.0/0
QoS	0x0	0	0		
QoS COPP	IPv4			tcp 0.0.0.0/0	0.0.0.0/0
QoS	0x0	0	0		
QoS COPP	IPv4			tcp 0.0.0.0/0	0.0.0.0/0
QoS	0x0	0	0		
QoS COPP	IPv4			tcp 0.0.0.0/0	0.0.0.0/0
QoS	0x0	0	0		
QoS COPP	IPv4			udp 0.0.0.0/0	209.165.201.1/27
QoS	0x0	0	0		

This example shows how to view iCAM monitoring of the TCAM entries for a current date filtered by a feature name:

```

switch# show icam entries acl module 3 inst 5 sort filter "qos copp"
Retrieving data from linecard. This may take some time ...
=====
TCAM Entries (Mod 3,Inst 5)
-----

```

Feature Action	Pkt_Type ifindex	Stats	Source IP/Mask	Dest IP/Mask
QoS COPP	IPv4		ip 0.0.0.0/0	0.0.0.0/0
QoS	0x0	38408890		
QoS COPP	MAC	0000.0000.0000	0000.0000.0000	0180.c200.000e ffff.ffff.ffff 350
QoS	0x0	249		
QoS COPP	MAC	0000.0000.0000	0000.0000.0000	0100.0ccc.cccc ffff.ffff.ffff
QoS	0x0	22		
QoS COPP	IPv4		tcp 0.0.0.0/0	0.0.0.0/0
QoS	0x0	0		

Related Commands

Command	Description
feature icam	Enables the iCAM feature.
icam monitor entries	Enables iCAM monitoring on TCAM entries.
icam monitor interval	Configures the iCAM monitor interval and the number of intervals in an iCAM monitor history.
icam monitor resource	Enables iCAM monitoring on TCAM resources.
show icam entries multicast	Displays traffic analytics of multicast entries.
show icam prediction entries acl	Displays machine-learning predictive analytics of TCAM entries.

Command	Description
show icam prediction entries multicast	Displays machine-learning predictive analytics of multicast entries.
show icam prediction resource	Displays machine-learning predictive analytics of TCAM resource utilization.
show icam resource	Displays TCAM resource utilization.

show icam entries multicast

To display the traffic analytics of multicast entries, use the **show icam entries multicast** command.

```
show icam entries multicast module module [history num-intervals][sort {sort-order
sort-order-list | top top-percentage}]
```

Syntax Description

multicast	Specifies multicast entries.
module <i>module</i>	Specifies the module number. The range is from 1–18 for an 18-slot chassis, and from 1–9 for a 9-slot chassis.
inst <i>instance</i>	Specifies the ASIC or forwarding engine instance number. The range is from 0–11.
history	(Optional) Displays the history of entries.
<i>num-intervals</i>	Number of intervals in history. The range is from 168–1344.
sort	(Optional) Specifies the sorted display.
sort-order <i>sort-order-list</i>	(Optional) Displays the sorted entries in specific order. 1 sorts the entries in ascending order and 2 sorts the entries in descending order. The entries are sorted in descending order by default.
top <i>top-percentage</i>	(Optional) Displays the top multicast entries based on the specified percentage. The range is from 1–100. The default is 1.

Command Default

The top 1 percent multicast entries are displayed in descending order.

Command Modes

Any command mode

Command History

Release	Modification
Cisco NX-OS Release 8.2(1)	This command was modified. The following keywords and arguments were added: <ul style="list-style-type: none"> multicast history <i>num-intervals</i>
Cisco NX-OS Release 8.0(1)	This command was introduced.

Usage Guidelines

To view the history of the utilization of multicast entries, you must enable Intelligent CAM (iCAM) monitoring on the required entries using the **icam monitor entries** command.

Examples

This example shows how to view iCAM monitoring of multicast entries for a current date:

```
switch# show icam entries multicast module 3
Retrieving data from linecard. This may take some time ...
```

show icam entries multicast

```

=====
=====
Multicast Entries (Mod 3)
-----
-----
      VDC_ID      TABLE_ID      Source/Mask      Group/Mask      RPF
Stats
-----
-----
      1          1          0.0.0.0/0      209.165.201.9/27
1
1          1          209.165.201.18/27      209.165.201.10/27      Ethernet3/12
912494
1          1          209.165.201.19/27      209.165.201.10/27      Ethernet3/12
912494
1          1          209.165.201.20/27      209.165.201.10/27      Ethernet3/12
912494
1          1          209.165.201.21/27      209.165.201.10/27      Ethernet3/12
912493
1          1          209.165.201.22/27      209.165.201.10/27      Ethernet3/12
912493
1          1          209.165.201.23/27      209.165.201.10/27      Ethernet3/12
912493
1          1          209.165.201.24/27      209.165.201.10/27      Ethernet3/12
912493
1          1          209.165.201.25/27      209.165.201.10/27      Ethernet3/12
912493
1          1          209.165.201.26/27      209.165.201.10/27      Ethernet3/12
912480
1          1          209.165.201.27/27      209.165.201.10/27      Ethernet3/12
912479
1          1          209.165.201.28/27      209.165.201.10/27      Ethernet3/12
912479
1          1          209.165.201.29/27      209.165.201.10/27      Ethernet3/12
912479
1          1          209.165.201.30/27      209.165.201.10/27      Ethernet3/12
912479
1          1          209.165.202.129/27      209.165.201.10/27      Ethernet3/12
912479
1          1          209.165.202.130/27      209.165.201.10/27      Ethernet3/12
912479
1          1          209.165.202.131/27      209.165.201.10/27      Ethernet3/12
912471
1          1          209.165.202.132/27      209.165.201.10/27      Ethernet3/12
912470
1          1          209.165.202.133/27      209.165.201.10/27      Ethernet3/12
912470
1          1          209.165.202.134/27      209.165.201.10/27      Ethernet3/12
912442
1          1          209.165.202.135/27      209.165.201.10/27      Ethernet3/12
912442
1          1          209.165.202.136/27      209.165.201.10/27      Ethernet3/12
912442
1          1          209.165.202.137/27      209.165.201.10/27      Ethernet3/12
912441
1          1          209.165.202.138/27      209.165.201.10/27      Ethernet3/12
912441
1          1          209.165.202.139/27      209.165.201.10/27      Ethernet3/12
912441
1          1          209.165.202.140/27      209.165.201.10/27      Ethernet3/12
912441
1          1          209.165.202.141/27      209.165.201.10/27      Ethernet3/12
912431

```

```

          1          1 209.165.202.142/27      209.165.201.10/27 Ethernet3/12
912431
          1          1 209.165.202.143/27      209.165.201.10/27 Ethernet3/12
912431
          1          1 209.165.202.144/27      209.165.201.10/27 Ethernet3/12
912431
          1          1 209.165.202.145/27      209.165.201.10/27 Ethernet3/12
912411
          1          1 209.165.202.146/27      209.165.201.10/27 Ethernet3/12
912412
          1          1 209.165.202.147/27      209.165.201.10/27 Ethernet3/12
912411
          1          1 209.165.202.148/27      209.165.201.10/27 Ethernet3/12
912411
          1          1 209.165.202.149/27      209.165.201.10/27 Ethernet3/12
912411
          1          1 209.165.202.150/27      209.165.201.10/27 Ethernet3/12
912345
          1          1 209.165.202.151/27      209.165.201.10/27 Ethernet3/12
912345
          1          1 209.165.202.152/27      209.165.201.10/27 Ethernet3/12
912345
          1          1 209.165.202.153/27      209.165.201.10/27 Ethernet3/12
912345
          1          1 209.165.202.154/27      209.165.201.10/27 Ethernet3/12
912345
          1          1 209.165.202.155/27      209.165.201.10/27 Ethernet3/12
912345
          1          1 209.165.202.156/27      209.165.201.10/27 Ethernet3/12
912344
          1          1 209.165.202.157/27      209.165.201.10/27 Ethernet3/12
912333
          1          1 209.165.202.158/27      209.165.201.10/27 Ethernet3/12
912333
    
```

This example shows how to view the top multicast entries monitored by iCAM for a current date:

```

switch# show icam entries multicast module 3 sort top 1
Retrieving data from linecard. This may take some time ...
=====
Multicast Entries (Mod 3)
-----
-----
      VDC_ID      TABLE_ID      Source/Mask      Group/Mask      RPF
Stats
-----
-----
          1          1 209.165.200.225/27      209.165.201.10/27 Ethernet3/12
933495
          1          1 209.165.200.226/27      209.165.201.10/27 Ethernet3/12
933491
          1          1 209.165.200.227/27      209.165.201.10/27 Ethernet3/12
933488
          1          1 209.165.200.228/27      209.165.201.10/27 Ethernet3/12
933483
          1          1 209.165.200.229/27      209.165.201.10/27 Ethernet3/12
933483
          1          1 209.165.200.230/27      209.165.201.10/27 Ethernet3/12
933480
          1          1 209.165.200.231/27      209.165.201.10/27 Ethernet3/12
933476
    
```

show icam entries multicast

933474	1	1	209.165.200.232/27	209.165.201.10/27	Ethernet3/12
933469	1	1	209.165.200.233/27	209.165.201.10/27	Ethernet3/12
933469	1	1	209.165.200.234/27	209.165.201.10/27	Ethernet3/12
933466	1	1	209.165.200.235/27	209.165.201.10/27	Ethernet3/12
933462	1	1	209.165.200.236/27	209.165.201.10/27	Ethernet3/12
933456	1	1	209.165.200.237/27	209.165.201.10/27	Ethernet3/12
933455	1	1	209.165.200.238/27	209.165.201.10/27	Ethernet3/12
933455	1	1	209.165.201.1/27	209.165.201.10/27	Ethernet3/12
933452	1	1	209.165.201.2/27	209.165.201.10/27	Ethernet3/12
933449	1	1	209.165.201.3/27	209.165.201.10/27	Ethernet3/12
933442	1	1	209.165.201.4/27	209.165.201.10/27	Ethernet3/12
933441	1	1	209.165.201.5/27	209.165.201.10/27	Ethernet3/12
933441	1	1	209.165.201.6/27	209.165.201.10/27	Ethernet3/12
933441	1	1	209.165.201.7/27	209.165.201.10/27	Ethernet3/12
933435	1	1	209.165.201.8/27	209.165.201.10/27	Ethernet3/12
933434	1	1	209.165.201.9/27	209.165.201.10/27	Ethernet3/12
933418	1	1	209.165.201.11/27	209.165.201.10/27	Ethernet3/12
933202	1	1	209.165.201.12/27	209.165.201.10/27	Ethernet3/12
933202	1	1	209.165.201.13/27	209.165.201.10/27	Ethernet3/12
933202	1	1	209.165.201.14/27	209.165.201.10/27	Ethernet3/12
933202	1	1	209.165.201.15/27	209.165.201.10/27	Ethernet3/12
933202	1	1	209.165.201.16/27	209.165.201.10/27	Ethernet3/12
933202	1	1	209.165.201.17/27	209.165.201.10/27	Ethernet3/12
933202	1	1	209.165.201.18/27	209.165.201.10/27	Ethernet3/12
933202	1	1	209.165.201.19/27	209.165.201.10/27	Ethernet3/12
933188	1	1	209.165.201.20/27	209.165.201.10/27	Ethernet3/12
933187	1	1	209.165.201.21/27	209.165.201.10/27	Ethernet3/12
933187	1	1	209.165.201.22/27	209.165.201.10/27	Ethernet3/12
933187	1	1	209.165.201.23/27	209.165.201.10/27	Ethernet3/12
933187	1	1	209.165.201.24/27	209.165.201.10/27	Ethernet3/12
933187	1	1	209.165.201.25/27	209.165.201.10/27	Ethernet3/12
933187	1	1	209.165.201.26/27	209.165.201.10/27	Ethernet3/12

```

          1          1  209.165.201.27/27      209.165.201.10/27  Ethernet3/12
933179
          1          1  209.165.201.28/27      209.165.201.10/27  Ethernet3/12
933178
          1          1  209.165.201.29/27      209.165.201.10/27  Ethernet3/12
933178
          1          1  209.165.201.30/27      209.165.201.10/27  Ethernet3/12
933150
          1          1  209.165.202.129/27     209.165.201.10/27  Ethernet3/12
933150
          1          1  209.165.202.130/27     209.165.201.10/27  Ethernet3/12
933150
          1          1  209.165.202.131/27     209.165.201.10/27  Ethernet3/12
933149
          1          1  209.165.202.132/27     209.165.201.10/27  Ethernet3/12
933149
          1          1  209.165.202.133/27     209.165.201.10/27  Ethernet3/12
933149
          1          1  209.165.202.134/27     209.165.201.10/27  Ethernet3/12
933149
          1          1  209.165.202.135/27     209.165.201.10/27  Ethernet3/12
933139
    
```

This example shows how to view the history of multicast entries monitored by iCAM:

```

switch# show icam entries multicast module 3 history 2
=====
Multicast Entries (Mod 3): Cumulative stats for last 2 intervals
-----
-----
      VDC_ID      TABLE_ID      Source/Mask      Group/Mask      RPF
Stats      Rate(pps)
-----
          1          1          0.0.0.0/0      209.165.201.9/27
0
          1          1      209.165.201.18/27      209.165.201.10/27  Ethernet3/12
165792          690
          1          1      209.165.201.19/27      209.165.201.10/27  Ethernet3/12
165792          690
          1          1      209.165.201.20/27      209.165.201.10/27  Ethernet3/12
165793          690
          1          1      209.165.201.21/27      209.165.201.10/27  Ethernet3/12
165793          690
          1          1      209.165.201.22/27      209.165.201.10/27  Ethernet3/12
165792          690
          1          1      209.165.201.23/27      209.165.201.10/27  Ethernet3/12
165792          690
          1          1      209.165.201.24/27      209.165.201.10/27  Ethernet3/12
165792          690
          1          1      209.165.201.25/27      209.165.201.10/27  Ethernet3/12
165792          690
          1          1      209.165.201.26/27      209.165.201.10/27  Ethernet3/12
165792          690
          1          1      209.165.201.27/27      209.165.201.10/27  Ethernet3/12
165792          690
          1          1      209.165.201.28/27      209.165.201.10/27  Ethernet3/12
165792          690
          1          1      209.165.201.29/27      209.165.201.10/27  Ethernet3/12
165792          690
    
```

show icam entries multicast

```

1          1 209.165.201.30/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.129/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.130/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.131/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.132/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.133/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.134/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.135/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.136/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.137/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.138/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.139/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.140/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.141/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.142/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.143/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.144/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.145/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.146/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.147/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.148/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.149/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.150/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.151/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.152/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.153/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.154/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.155/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.156/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.157/27 209.165.201.10/27 Ethernet3/12
165792    690
1          1 209.165.202.158/27 209.165.201.10/27 Ethernet3/12
165792    690
.
.

```

This example shows how to view the history of top 1 percent multicast entries monitored by iCAM:

```
switch# show icam entries multicast module 3 history 2 sort top 1
=====
Multicast Entries (Mod 3): Cumulative stats for last 2 intervals
-----
-----
VDC_ID      TABLE_ID      Source/Mask      Group/Mask      RPF
Stats      Rate(pps)
-----
-----
1          1      209.165.200.225/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.226/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.227/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.228/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.229/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.230/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.231/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.232/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.233/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.234/27      209.165.201.10/27      Ethernet3/12
165725      690
1          1      209.165.200.235/27      209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.200.236/27      209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.200.237/27      209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.200.238/27      209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.1/27        209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.2/27        209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.3/27        209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.4/27        209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.5/27        209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.6/27        209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.7/27        209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.8/27        209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.9/27        209.165.201.10/27      Ethernet3/12
165724      690
1          1      209.165.201.11/27       209.165.201.10/27      Ethernet3/12
165724      690
```

show icam entries multicast

```

1          1  209.165.201.12/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.13/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.14/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.15/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.16/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.17/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.18/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.19/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.20/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.21/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.22/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.23/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.24/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.25/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.26/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.27/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.28/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.29/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.201.30/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.202.129/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.202.130/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.202.131/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.202.132/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.202.133/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.202.134/27  209.165.201.10/27  Ethernet3/12
165724    690
1          1  209.165.202.135/27  209.165.201.10/27  Ethernet3/12
165724    690

```

Related Commands

Command	Description
feature icam	Enables the iCAM feature.
icam monitor entries	Enables iCAM monitoring on TCAM entries.
icam monitor interval	Configures the iCAM monitor interval and the number of intervals in an iCAM monitor history.
icam monitor resource	Enables iCAM monitoring on TCAM resources.

Command	Description
show icam entries acl	Displays traffic analytics of the ACL TCAM, which includes RACL, VACL, QoS, PBR, WCCP, CoPP, and so on.
show icam prediction entries acl	Displays machine-learning predictive analytics of TCAM entries.
show icam prediction entries multicast	Displays machine-learning predictive analytics of multicast entries.
show icam prediction resource	Displays machine-learning predictive analytics of TCAM resource utilization.
show icam resource	Displays the TCAM resource utilization.

show icam prediction entries acl

To display machine-learning predictive analytics of TCAM entries, use the **show icam prediction entries acl** command.

```
show icam prediction entries acl module module inst instance year month day time [top
top-percentage]
```

Syntax Description	Parameter	Description
	acl	Specifies TCAM entries.
	module <i>module</i>	Specifies the module number. The range is from 1–18 for an 18-slot chassis, and from 1–9 for a 9-slot chassis.
	inst <i>instance</i>	Specifies the ASIC or forwarding engine instance number. The range is from 0–11.
	<i>year</i>	Year in YYYY format. The values range from 1970–2030.
	<i>month</i>	Month in MMM format, for example, Jan, Feb, and so on. The values are case sensitive.
	<i>day</i>	Day of the month in DD format. The range is from 1–31.
	<i>time</i>	Time in HH:MM:SS format.
	top <i>top-percentage</i>	(Optional) Displays the predictive analytics of top TCAM entries based on the specified percentage. The range is from 1–10. The default is 1.

Command Default The predictive analytics of the top 1 percent TCAM entries are displayed.

Command Modes Any command mode

Command History	Release	Modification
	Cisco NX-OS Release 8.2(1)	This command was introduced.

Usage Guidelines To view predictive analytics of TCAM entries, you must enable Intelligent CAM (iCAM) monitoring on the corresponding entries using the **icam monitor entries** command.

Examples This example shows how to view the predictive analytics of TCAM entries:

```
switch# show icam prediction entries acl module 3 inst 5 2018 Jan 27 11:35:30
Generating predictions, this may take some time ...
```

```
TCAM Entries Prediction (Mod 3,Inst 5)
```

```
-----
Feature  Pkt_Type                               Source IP/Mask Dest IP/Mask
Action   ifindex                               Stats           Prediction
```

```

-----
QoS COPP IPv4 ip 0.0.0.0/0 0.0.0.0/0
QoS 0x0 38408890 38408890
QoS COPP MAC 0000.0000.0000 0000.0000.0000 0180.c200.000e ffff.ffff.ffff 350
QoS 0x0 485 501
QoS COPP MAC 0000.0000.0000 0000.0000.0000 0100.0ccc.cccc ffff.ffff.ffff
QoS 0x0 42 43
FEX IPv4 ip 0.0.0.0/0 0.0.0.0/0
Redirect 0x15090000 0 0

```

This example shows how to display the predictive analytics of the top 2 percent TCAM entries:

```

switch# show icam prediction entries acl module 3 inst 5 2018 Jan 27 11:35:30 top 2
Generating predictions, this may take some time ...

```

```

=====
TCAM Entries Prediction (Mod 3,Inst 5)
-----

```

Feature	Pkt_Type	Stats	Prediction
Action	ifindex		Source IP/Mask Dest IP/Mask
QoS COPP	IPv4		ip 0.0.0.0/0 0.0.0.0/0
QoS	0x0	38408890 38408890	
QoS COPP	MAC	0000.0000.0000 0000.0000.0000	0180.c200.000e ffff.ffff.ffff 350
QoS	0x0	485 501	
QoS COPP	MAC	0000.0000.0000 0000.0000.0000	0100.0ccc.cccc ffff.ffff.ffff
QoS	0x0	42 43	
FEX	IPv6	ip 0x00000000000000000000000000000000/0	0x00000000000000000000
Redirect	0x15090000	0	0
FEX	IPv4		ip 0.0.0.0/0 0.0.0.0/0
Redirect	0x15090000	0	0
FEX	ARP	arp-rarp/all ip 0.0.0.0/0 0.0.0.0/0	0000.0000.0000 0000.0000.00
Redirect	0x15090000	0	0
FEX	MAC	0000.0000.0000 0000.0000.0000	0000.0000.0000 0000.0000.0000
Redirect	0x15090000	0	0

Related Commands

Command	Description
feature icam	Enables the iCAM feature.
icam monitor entries	Enables iCAM monitoring on TCAM entries.
icam monitor interval	Configures the iCAM monitor interval and the number of intervals in an iCAM monitor history.
icam monitor resource	Enables iCAM monitoring on TCAM resources.
show icam entries acl	Displays traffic analytics of the ACL TCAM, which includes RAACL, VAACL, QoS, PBR, WCCP, CoPP, and so on.
show icam entries multicast	Displays traffic analytics of multicast entries.
show icam prediction entries multicast	Displays machine-learning predictive analytics of multicast entries.

Command	Description
show icam prediction resource	Displays machine-learning predictive analytics of TCAM resource utilization.
show icam resource	Displays TCAM resource utilization.

show icam prediction entries multicast

To display machine-learning predictive analytics of multicast entries with results and statistics, use the **show icam prediction entries** command.

show icam prediction entries multicast module *module year month day time* [**top** *top-percentage*]

Syntax Description	Parameter	Description
	multicast	Specifies multicast entries.
	module <i>module</i>	Specifies the module number. The range is from 1 to 18 for an 18-slot chassis, and the range is from 1 to 9 for a 9-slot chassis.
	inst <i>instance</i>	Specifies the ASIC or forwarding engine instance number. The range is from 0 to 11.
	<i>year</i>	Year in YYYY format. The values range from 1970 to 2030.
	<i>month</i>	Month in MMM format, for example, Jan, Feb, and so on. The values are case sensitive.
	<i>day</i>	Day of the month in DD format. The range is from 1 to 31.
	<i>time</i>	Time in HH:MM:SS format.
	top <i>top-percentage</i>	(Optional) Displays predictive analytics of top multicast entries based on the specified percentage. The range is from 1 to 10. The default is 1.

Command Default Displays predictive analytics of the top 1 percent multicast entries.

Command Modes Any command mode

Command History	Release	Modification
	Cisco NX-OS Release 8.2(1)	This command was introduced.

Usage Guidelines To view predictive analytics of multicast entries, you must enable Intelligent CAM (iCAM) monitoring on the corresponding entries using the **icam monitor entries** command.

Examples This example displays predictive analytics of multicast entries:

```
switch# show icam prediction entries multicast module 3 2020 Jul 19 08:10:29
Generating predictions, this may take some time ...
```

```
=====
Multicast Entries Prediction (Mod 3)
-----
-----
VDC_ID      TABLE_ID      Source/Mask      Group/Mask      RPF
Stats      Prediction
```

show icam prediction entries multicast

```

-----
-----
1          1    209.165.202.129/27    209.165.200.225/27  Ethernet3/12
1679387    1679387
1          1    209.165.201.23/27    209.165.200.225/27  Ethernet3/12
1679419    1679419
1          1    209.165.201.24/27    209.165.200.225/27  Ethernet3/12
1679411    1679411
1          1    209.165.201.25/27    209.165.200.225/27  Ethernet3/12
1679411    1679411
1          1    209.165.201.26/27    209.165.200.225/27  Ethernet3/12
1679411    1679411
1          1    209.165.201.27/27    209.165.200.225/27  Ethernet3/12
1679411    1679411
1          1    209.165.201.28/27    209.165.200.225/27  Ethernet3/12
1679404    1679404
1          1    209.165.201.29/27    209.165.200.225/27  Ethernet3/12
1679403    1679403
1          1    209.165.201.30/27    209.165.200.225/27  Ethernet3/12
1679403    1679403
1          1    209.165.201.8/27     209.165.200.225/27  Ethernet3/12
1679113    1679113
1          1    209.165.201.7/27     209.165.200.225/27  Ethernet3/12
1679113    1679113
1          1    209.165.201.4/27     209.165.200.225/27  Ethernet3/12
1679141    1679141
1          1    209.165.201.3/27     209.165.200.225/27  Ethernet3/12
1679142    1679142
1          1    209.165.201.6/27     209.165.200.225/27  Ethernet3/12
1679113    1679113
1          1    209.165.201.5/27     209.165.200.225/27  Ethernet3/12
1679141    1679141
1          1    209.165.200.238/27    209.165.200.225/27  Ethernet3/12
1679150    1679150
1          1    209.165.200.237/27    209.165.200.225/27  Ethernet3/12
1679150    1679150
1          1    209.165.201.2/27     209.165.200.225/27  Ethernet3/12
1679150    1679150
1          1    209.165.201.1/27     209.165.200.225/27  Ethernet3/12
1679150    1679150
1          1    209.165.200.226/27    209.165.200.225/27  Ethernet3/12
1679166    1679166
1          1    209.165.201.22/27    209.165.200.225/27  Ethernet3/12
1679422    1679422
1          1    209.165.201.21/27    209.165.200.225/27  Ethernet3/12
1679424    1679424
1          1    209.165.201.20/27    209.165.200.225/27  Ethernet3/12
1679424    1679424
1          1    209.165.201.19/27    209.165.200.225/27  Ethernet3/12
1679425    1679425
1          1    209.165.201.18/27    209.165.200.225/27  Ethernet3/12
1679431    1679431
1          1    209.165.201.17/27    209.165.200.225/27  Ethernet3/12
1679435    1679435
1          1    209.165.201.16/27    209.165.200.225/27  Ethernet3/12
1679438    1679438
1          1    209.165.201.15/27    209.165.200.225/27  Ethernet3/12
1679438    1679438
1          1    209.165.201.14/27    209.165.200.225/27  Ethernet3/12
1679443    1679443
1          1    209.165.201.13/27    209.165.200.225/27  Ethernet3/12
1679445    1679445
1          1    209.165.200.235/27    209.165.200.225/27  Ethernet3/12
1679150    1679150

```

```

1          1 209.165.200.236/27 209.165.200.225/27 Ethernet3/12
1679150    1679150
1          1 209.165.200.233/27 209.165.200.225/27 Ethernet3/12
1679165    1679165
1          1 209.165.200.234/27 209.165.200.225/27 Ethernet3/12
1679151    1679151
1          1 209.165.200.231/27 209.165.200.225/27 Ethernet3/12
1679165    1679165
1          1 209.165.200.232/27 209.165.200.225/27 Ethernet3/12
1679165    1679165
1          1 209.165.200.229/27 209.165.200.225/27 Ethernet3/12
1679165    1679165
1          1 209.165.200.230/27 209.165.200.225/27 Ethernet3/12
1679165    1679165
1          1 209.165.200.227/27 209.165.200.225/27 Ethernet3/12
1679166    1679166
1          1 209.165.200.228/27 209.165.200.225/27 Ethernet3/12
1679166    1679166
1          1 209.165.201.12/27 209.165.200.225/27 Ethernet3/12
1679103    1679103
1          1 209.165.201.9/27 209.165.200.225/27 Ethernet3/12
1679112    1679112
1          1 209.165.201.10/27 209.165.200.225/27 Ethernet3/12
1679113    1679113
1          1 209.165.201.11/27 209.165.200.225/27 Ethernet3/12
1679113    1679113
.
.
.

```

This example displays predictive analytics of the top 1 percent multicast entries:

```

switch# show icam prediction entries multicast module 3 2020 Jul 19 08:10:29 top 1
Generating predictions, this may take some time ...

```

```

=====
Multicast Entries Prediction (Mod 3)
-----

```

VDC_ID	TABLE_ID	Source/Mask	Group/Mask	RPF
Stats	Prediction			
1	1	209.165.202.129/27	209.165.200.225/27	Ethernet3/12
1679387	1679387			
1	1	209.165.201.23/27	209.165.200.225/27	Ethernet3/12
1679419	1679419			
1	1	209.165.201.24/27	209.165.200.225/27	Ethernet3/12
1679411	1679411			
1	1	209.165.201.25/27	209.165.200.225/27	Ethernet3/12
1679411	1679411			
1	1	209.165.201.26/27	209.165.200.225/27	Ethernet3/12
1679411	1679411			
1	1	209.165.201.27/27	209.165.200.225/27	Ethernet3/12
1679411	1679411			
1	1	209.165.201.28/27	209.165.200.225/27	Ethernet3/12
1679404	1679404			
1	1	209.165.201.29/27	209.165.200.225/27	Ethernet3/12
1679403	1679403			
1	1	209.165.201.30/27	209.165.200.225/27	Ethernet3/12
1679403	1679403			

show icam prediction entries multicast

```

1          1      209.165.201.8/27      209.165.200.225/27  Ethernet3/12
1679113   1679113
1          1      209.165.201.7/27      209.165.200.225/27  Ethernet3/12
1679113   1679113
1          1      209.165.201.4/27      209.165.200.225/27  Ethernet3/12
1679141   1679141
1          1      209.165.201.3/27      209.165.200.225/27  Ethernet3/12
1679142   1679142
1          1      209.165.201.6/27      209.165.200.225/27  Ethernet3/12
1679113   1679113
1          1      209.165.201.5/27      209.165.200.225/27  Ethernet3/12
1679141   1679141
1          1      209.165.200.238/27    209.165.200.225/27  Ethernet3/12
1679150   1679150
1          1      209.165.200.237/27    209.165.200.225/27  Ethernet3/12
1679150   1679150
1          1      209.165.201.2/27      209.165.200.225/27  Ethernet3/12
1679150   1679150
1          1      209.165.201.1/27      209.165.200.225/27  Ethernet3/12
1679150   1679150
1          1      209.165.200.226/27    209.165.200.225/27  Ethernet3/12
1679166   1679166
1          1      209.165.201.22/27     209.165.200.225/27  Ethernet3/12
1679422   1679422
1          1      209.165.201.21/27     209.165.200.225/27  Ethernet3/12
1679424   1679424
1          1      209.165.201.20/27     209.165.200.225/27  Ethernet3/12
1679424   1679424
1          1      209.165.201.19/27     209.165.200.225/27  Ethernet3/12
1679425   1679425
1          1      209.165.201.18/27     209.165.200.225/27  Ethernet3/12
1679431   1679431
1          1      209.165.201.17/27     209.165.200.225/27  Ethernet3/12
1679435   1679435
1          1      209.165.201.16/27     209.165.200.225/27  Ethernet3/12
1679438   1679438
1          1      209.165.201.15/27     209.165.200.225/27  Ethernet3/12
1679438   1679438
1          1      209.165.201.14/27     209.165.200.225/27  Ethernet3/12
1679443   1679443
1          1      209.165.201.13/27     209.165.200.225/27  Ethernet3/12
1679445   1679445
1          1      209.165.200.235/27    209.165.200.225/27  Ethernet3/12
1679150   1679150
1          1      209.165.200.236/27    209.165.200.225/27  Ethernet3/12
1679150   1679150
1          1      209.165.200.233/27    209.165.200.225/27  Ethernet3/12
1679165   1679165
1          1      209.165.200.234/27    209.165.200.225/27  Ethernet3/12
1679151   1679151
1          1      209.165.200.231/27    209.165.200.225/27  Ethernet3/12
1679165   1679165
1          1      209.165.200.232/27    209.165.200.225/27  Ethernet3/12
1679165   1679165
1          1      209.165.200.229/27    209.165.200.225/27  Ethernet3/12
1679165   1679165
1          1      209.165.200.230/27    209.165.200.225/27  Ethernet3/12
1679165   1679165
1          1      209.165.200.227/27    209.165.200.225/27  Ethernet3/12
1679166   1679166
1          1      209.165.200.228/27    209.165.200.225/27  Ethernet3/12
1679166   1679166
1          1      209.165.201.12/27     209.165.200.225/27  Ethernet3/12
1679103   1679103

```



```

1          1      209.165.201.9/27      209.165.200.225/27  Ethernet3/12
1679112   1679112
1          1      209.165.201.10/27     209.165.200.225/27  Ethernet3/12
1679113   1679113
1          1      209.165.201.11/27    209.165.200.225/27  Ethernet3/12
1679113   1679113
.
.
.

```

Related Commands

Command	Description
feature icam	Enables the iCAM feature.
icam monitor entries	Enables iCAM monitoring on TCAM entries.
icam monitor interval	Configures the iCAM monitor interval and the number of intervals in an iCAM monitor history.
icam monitor resource	Enables iCAM monitoring on TCAM resources.
show icam entries acl	Displays traffic analytics of the ACL TCAM, which includes RACL, VACL, QoS, PBR, WCCP, CoPP, and so on.
show icam entries multicast	Displays traffic analytics of multicast entries.
show icam prediction entries acl	Displays machine-learning predictive analytics of TCAM entries.
show icam prediction resource	Displays machine-learning predictive analytics of TCAM resource utilization.
show icam resource	Displays TCAM resource utilization.

show icam prediction resource

To display machine-learning predictive analytics of ternary content addressable memory (TCAM) resource utilization, use the **show icam prediction resource** command.

```
show icam prediction resource {acl_tcam | fib_tcam} module module inst instance year month
day time
```

Syntax Description	Parameter	Description
	acl_tcam	Specifies access control list (ACL) TCAM resources.
	module <i>module</i>	Specifies the module number. The range is from 1–18 for an 18-slot chassis, and from 1–9 for a 9-slot chassis.
	inst <i>instance</i>	Specifies the ASIC or forwarding engine instance number. The range is from 0–11.
	fib_tcam	Specifies forwarding information base (FIB) TCAM resources.
	<i>year</i>	Year in YYYY format. The values range from 1970–2030.
	<i>month</i>	Month in MMM format, for example, Jan, Feb, and so on. The values are case sensitive.
	<i>day</i>	Day of the month in DD format. The range is from 1–31.
	<i>time</i>	Time in HH:MM:SS format.

Command Default None

Command Modes Any command mode

Command History	Release	Modification
	Cisco NX-OS Release 8.2(1)	This command was introduced.

Usage Guidelines To view predictive analytics of TCAM resource utilization, you must enable iCAM monitoring on the required resources using the **icam monitor resource** command.

Examples This example shows how to view predictive analytics of ACL TCAM resource utilization:

```
switch# show icam prediction resource acl_tcam module 3 inst 4 2018 Jan 27 11:35:30
Generating predictions, this may take some time ...
-----
---
Feature Hardware Resource Prediction (Mod 3,Inst 4)
-----
---
-----
---
          Feature   Direction   TCAM#   BANK#   Feature_Entries   Free_Entries
Percent_Util
```

```

-----
---
          PACL      ingress      0      0      4      4072
0.00
          FEX Control ingress      1      0      5      4071
0.00
          CoPP      ingress      1      1      420     3656
10.00

=====
===
ACL TCAM Resource Prediction (Mod 3,Inst 4)
-----
---
          Used      Free      Percent_Util
-----
---
Tcam 1 Bank 1      440     3656          10.74
Tcam 1 Bank 0       25     4071           0.61
Tcam 0 Bank 1       20     4076           0.48
Tcam 0 Bank 0       24     4072           0.58

```

This example shows how to view predictive analytics of FIB TCAM resource utilization:

```
switch# show icam prediction resource fib_tcam module 3 inst 5 2025 Dec 20 10:20:37
```

Generating predictions, this may take some time ...

```

=====
FIB TCAM Resource Prediction (Mod 3, Inst 5)
-----
-----
          Type      logical      physical      Percent_Util
-----
          FC MPLS      0           0           0.00
          IPV4 unicast 16          16          0.00
          DIAG_80      1           1           0.00
          EOM Peer     0           0           0.00
          MPLS         0           0           0.00
          IPV6 multicast 5           20          0.00
          IPV6 LinkLocal 1           2           0.00
          FCOE         0           0           0.00
          MPLS VPN     0           0           0.00
          IPV4 multicast 5005        5005        7.00
          IPV6 unicast  4           8           0.00

```

Related Commands

Command	Description
feature icam	Enables the iCAM feature.
icam monitor entries	Enables iCAM monitoring on TCAM entries.
icam monitor interval	Configures the iCAM monitor interval and the number of intervals in an iCAM monitor history.
icam monitor resource	Enables iCAM monitoring on TCAM resources.
show icam entries acl	Displays traffic analytics of the ACL TCAM, which includes RACL, VACL, QoS, PBR, WCCP, CoPP, and so on.
show icam entries multicast	Displays traffic analytics of multicast entries.

Command	Description
show icam prediction entries acl	Displays machine-learning predictive analytics of TCAM entries.
show icam prediction entries multicast	Displays machine-learning predictive analytics of multicast entries.
show icam resource	Displays TCAM resource utilization.

show icam resource

To display ternary content addressable memory (TCAM) resource utilization, use the **show icam resource** command.

```
show icam resource {acl_tcam | fib_tcam} module module inst instance [history num-intervals]
```

Syntax	Description
acl_tcam	Specifies access control list (ACL) TCAM resources.
module <i>module</i>	Specifies the module number. The range is from 1–18 for an 18-slot chassis, and from 1–9 for a 9-slot chassis.
inst <i>instance</i>	Specifies the ASIC or forwarding engine instance number. The range is from 0–11.
fib_tcam	Specifies forwarding information base (FIB) TCAM resources.
history	(Optional) Shows resource history.
<i>num-intervals</i>	Number of intervals in history. The range is from 168–1344.

Command Default None

Command Modes Any command mode

Command History	Release	Modification
	Cisco NX-OS Release 8.2(1)	This command was modified. The following keywords and arguments were added: <ul style="list-style-type: none"> • acl_tcam • fib_tcam • history num-intervals
	Cisco NX-OS Release 8.0(1)	This command was introduced.

Usage Guidelines To view the history of TCAM resource utilization, you must enable Intelligent CAM (iCAM) monitoring on the corresponding resources using the **icam monitor resource** command.

Examples This example shows how to view ACL TCAM resource utilization:

```
switch# show icam resource acl_tcam module 3 inst 5
-----
---
Feature Hardware Resource Utilization (Mod 3,Inst 5)
-----
---

Ingress Resources
```

show icam resource

```

-----
---
      Feature TCAM# BANK# Feature_Entries  Free_Entries  Percent_Util  Timestamp
(UTC)
-----
---
      RACL      1      0           6           4065           0.14 2017-09-05
22:05:52
      CoPP      1      1          420           3656           10.25 2017-09-05
22:05:52
      FEX Control  1      0           5           4065           0.12 2017-09-05
22:05:52

Egress Resources
-----
---
      Feature TCAM# BANK# Feature_Entries  Free_Entries  Percent_Util  Timestamp
(UTC)
-----
---

=====
===
ACL TCAM Resource Utilization (Mod 3,Inst 5)
-----
---
              Used    Free    Percent_Util          Timestamp (UTC)
-----
---
Tcam 0 Bank 0      20    4076           0.48    2017-09-05 22:05:52
Tcam 0 Bank 1      20    4076           0.48    2017-09-05 22:05:52
Tcam 1 Bank 0      31    4065           0.75    2017-09-05 22:05:52
Tcam 1 Bank 1     440    3656           10.74    2017-09-05 22:05:52

```

This example shows how to view the history of ACL TCAM resource utilization:

```
switch# show icam resource acl_tcam module 3 inst 5 history 2
```

```

-----
---
Feature Hardware Resource Utilization (Mod 3,Inst 5)
-----
---

Ingress Resources
-----
---
      Feature TCAM# BANK# Feature_Entries  Free_Entries  Percent_Util  Timestamp
(UTC)
-----
---
      RACL      1      0           6           4065           0.14 2017-09-05
22:13:13
              6           4065           0.14 2017-09-05
23:13:13
      CoPP      1      1          420           3656           10.25 2017-09-05
22:13:13
              420           3656           10.25 2017-09-05
23:13:13
      FEX Control  1      0           5           4065           0.12 2017-09-05
22:13:13

```

```

23:13:13                    5          4065          0.12 2017-09-05

Egress Resources
-----
---
      Feature TCAM# BANK# Feature_Entries   Free_Entries   Percent_Util   Timestamp
(UTC)
-----
---
=====
===
ACL TCAM Resource Utilization (Mod 3,Inst 5)
-----
---
              Used      Free      Percent_Util          Timestamp (UTC)
-----
---
Tcam 0 Bank 0      20     4076          0.48      2017-09-05 22:13:13
                  20     4076          0.48      2017-09-05 23:13:13
Tcam 0 Bank 1      20     4076          0.48      2017-09-05 22:13:13
                  20     4076          0.48      2017-09-05 23:13:13
Tcam 1 Bank 0      31     4065          0.75      2017-09-05 22:13:13
                  31     4065          0.75      2017-09-05 23:13:13
Tcam 1 Bank 1     440    3656         10.74      2017-09-05 22:13:13
                  440    3656         10.74      2017-09-05 23:13:13

```

This example shows how to view FIB TCAM resource utilization:

```

switch# show icam resource fib_tcam module 3 inst 5

=====
FIB TCAM Resource Utilization (Mod 3, Inst 5)
-----
      Type          logical      physical   Percent_Util   Timestamp (UTC)
-----
      IPV4 unicast      16           16           0.02      2017-09-05 22:09:19
      DIAG_80           1            1            0.00      2017-09-05 22:09:19
      IPV4 multicast    5005         5005         7.82      2017-09-05 22:09:19
      MPLS              0            0            0.00      2017-09-05 22:09:19
      EOM Peer          0            0            0.00      2017-09-05 22:09:19
      MPLS VPN          0            0            0.00      2017-09-05 22:09:19
      FCMPLS           0            0            0.00      2017-09-05 22:09:19
      FCOE              0            0            0.00      2017-09-05 22:09:19
      IPV6 LinkLocal    1            2            0.00      2017-09-05 22:09:19
      IPV6 unicast      4            8            0.01      2017-09-05 22:09:19
      IPV6 multicast    5            20           0.03      2017-09-05 22:09:19

```

This example shows how to view the history of FIB TCAM resource utilization:

```

switch# show icam resource fib_tcam module 3 inst 5 history 2

=====
FIB TCAM Resource Utilization (Mod 3, Inst 5)
-----
      Type          logical      physical   Percent_Util   Timestamp (UTC)
-----
      IPV4 unicast      16           16           0.02      2017-09-05 22:17:14
                  16           16           0.02      2017-09-05 23:17:14
      DIAG_80           1            1            0.00      2017-09-05 22:17:14

```

show icam resource

	1	1	0.00	2017-09-05 23:17:14
IPV4 multicast	5005	5005	7.82	2017-09-05 22:17:14
	5005	5005	7.82	2017-09-05 23:17:14
MPLS	0	0	0.00	2017-09-05 22:17:14
	0	0	0.00	2017-09-05 23:17:14
EOM Peer	0	0	0.00	2017-09-05 22:17:14
	0	0	0.00	2017-09-05 23:17:14
MPLS VPN	0	0	0.00	2017-09-05 22:17:14
	0	0	0.00	2017-09-05 23:17:14
FCMPLS	0	0	0.00	2017-09-05 22:17:14
	0	0	0.00	2017-09-05 23:17:14
FCOE	0	0	0.00	2017-09-05 22:17:14
	0	0	0.00	2017-09-05 23:17:14
IPV6 LinkLocal	1	2	0.00	2017-09-05 22:17:14
	1	2	0.00	2017-09-05 23:17:14
IPV6 unicast	4	8	0.01	2017-09-05 22:17:14
	4	8	0.01	2017-09-05 23:17:14
IPV6 multicast	5	20	0.03	2017-09-05 22:17:14
	5	20	0.03	2017-09-05 23:17:14

Related Commands

Command	Description
feature icam	Enables the iCAM feature.
icam monitor entries	Enables iCAM monitoring on TCAM entries.
icam monitor interval	Configures the iCAM monitor interval and the number of intervals in an iCAM monitor history.
icam monitor resource	Enables iCAM monitoring on TCAM resources.
show icam entries acl	Displays traffic analytics of the ACL TCAM, which includes RACL, VACL, QoS, PBR, WCCP, CoPP, and so on.
show icam entries multicast	Displays the traffic analytics of multicast entries.
show icam prediction entries acl	Displays machine-learning predictive analytics of TCAM entries.
show icam prediction entries multicast	Displays machine-learning predictive analytics of multicast entries.
show icam prediction resource	Displays the machine-learning predictive analytics of TCAM resource utilization.

show interface ethernet capabilities

To show if an interface is Energy Efficient Ethernet (EEE) capable, use the **show interface ethernet capabilities** command.

show interface ethernet *slot/chassis* capabilities

Syntax Description	<i>slot/chassis</i>	Slot or chassis number. The range is from 1 to 253.
	capabilities	(Optional) Displays clock module information.

Defaults None

Command Modes Any command mode

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

Command History	Release	Modification
		6.1(2)

Usage Guidelines This command does not require a license.

Examples

This example shows how to display if an interface is EEE capable:

```
switch(config-if)# show interface ethernet 16/1 capabilities
Ethernet16/1
  Model: N7K-F248XT-25
  Type (Non SFP): 10g
  Speed: 1000,10000
  Duplex: full
  Trunk encap. type: 802.1Q
  FabricPath capable: yes
  Channel: yes
  Broadcast suppression: percentage(0-100)
  Flowcontrol: rx-(off/on/desired),tx-(off/on/desired)
  Rate mode: dedicated
  Port mode: Routed,Switched
  QOS scheduling: rx-(8q4t),tx-(3p5q1t)
  CoS rewrite: yes
  ToS rewrite: yes
  SPAN: yes
  UDLD: yes
  MDIX: yes
  TDR capable: yes
  Link Debounce: yes
  Link Debounce Time: yes
  FEX Fabric: yes
  dot1Q-tunnel mode: yes
  Pvlan Trunk capable: yes
  Port Group Members: 1-4
  EEE (efficient-eth): yes
  PFC capable: yes
switch(config-if)#
```

show interface ethernet

To display the Energy Efficient Ethernet (EEE) status on an interface, Use the **show interface** command.

show interface ethernet *slot/chassis*

Syntax Description	<i>slot/chassis</i>	Slot or chassis number. The range is from 1 to 253.
---------------------------	---------------------	---

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

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

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

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

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

Examples	This example shows how to display the EEE status on an interface:
-----------------	---

```
switch# show interface ethernet2/6
Ethernet2/6 is down (Link not connected)
admin state is up, Dedicated Interface
  Hardware: 10000 Ethernet, address: 0022.5579.de41 (bia 001b.54c1.af5d)
  MTU 1500 bytes, BW 10000000 Kbit, DLY 10 usec
  reliability 255/255, txload 1/255, rxload 1/255
  Encapsulation ARPA, medium is broadcast
  auto-duplex, auto-speed, media type is 10G
  Beacon is turned off
  Auto-Negotiation is turned off
  Input flow-control is off, output flow-control is off
  Auto-mdix is turned off
  Rate mode is shared
  Switchport monitor is off
  EtherType is 0x8100
  EEE (efficient-ethernet) : n/a
  Last link flapped never
  Last clearing of "show interface" counters never
  0 interface resets
  30 seconds input rate 0 bits/sec, 0 packets/sec
  30 seconds output rate 0 bits/sec, 0 packets/sec
  Load-Interval #2: 5 minute (300 seconds)
```

■ show interface ethernet

```
input rate 0 bps, 0 pps; output rate 0 bps, 0 pps
L3 in Switched:
  ucast: 0 pkts, 0 bytes - mcast: 0 pkts, 0 bytes
--More--
```

Related Commands

Command	Description
show lldp tlv-select	Displays the LLDP TLV configuration.
lldp tlv-select	Specifies the TLVs to send and receive in LLDP packets.

show interface ethernet counter detailed

To display the only nonzero counters, use the **show interface ethernet counter detailed** command.

show interface ethernet *slot/chassis* counter detailed

Syntax Description	<i>slot/chassis</i>	Slot or chassis number. The range is from 1 to 253.
---------------------------	---------------------	---

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

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

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

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

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

Examples	This example shows how to display the only nonzero counters:
-----------------	--

```
switch# show interface ethernet 10/25 counters detailed
Ethernet10/25
Rx Packets:                               3635
  Rx Unicast Packets:                      9788
  Rx Multicast Packets:                    3631
Rx Bytes:                                  1062103
  Rx Packets from 128 to 255 bytes:         1211
  Rx Packets from 256 to 511 bytes:         2420
  Rx Packets from 1024 to 1518 bytes:        4
Tx Packets:                                 39883
  Tx Unicast Packets:                      9788
  Tx Multicast Packets:                    39879
Tx Bytes:                                   3731578
  Tx Packets from 65 to 127 bytes:          36247
  Tx Packets from 128 to 255 bytes:         1211
  Tx Packets from 256 to 511 bytes:         2421
  Tx Packets from 1024 to 1518 bytes:        4
Non Fcoe in packets:                       13419
Non Fcoe in octets:                         2392727
Non Fcoe out packets:                       39883
Non Fcoe out octets:                        3731578
Tx LPI uses:                                74304694529
```

■ show interface ethernet counter detailed

```
Rx LPI usecs                74329358769
Tx LPI requests             39865
Rx LPI indications         3628
switch(config)#
```

Related Commands

Command	Description
show lldp tlv-select	Displays the LLDP TLV configuration.
lldp tlv-select	Specifies the TLVs to send and receive in LLDP packets.

show inventory

To display inventory information for the device hardware, use the **show inventory** command.

show inventory [**chassis** | **clock** | **fans** | **module** | **power_supply**]

Syntax Description	
chassis	(Optional) Displays chassis information.
clock	(Optional) Displays clock module information.
fans	(Optional) Displays fan information.
module	(Optional) Displays module information.
power_supply	(Optional) Displays power supply information.

Defaults Displays all hardware inventory information.

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 configuration incompatibilities:

```
switch# show inventory
NAME: "Chassis", DESCR: "Nexus7000 C7010 (10 Slot) Chassis "
PID: N7K-C7010          , VID:          , SN: TBM11256507

NAME: "Slot 2", DESCR: "10/100/1000 Mbps Ethernet Module"
PID: N7K-M148GT-11     , VID:          , SN: JAB104400P0

NAME: "Slot 6", DESCR: "Supervisor module-1X"
PID: N7K-SUP1          , VID: TBD , SN: JAB10380101

NAME: "Slot 11", DESCR: "Fabric card module"
PID: N7K-C7010-FAB-1   , VID:          , SN: JAB104300HM

NAME: "Slot 33", DESCR: "Nexus7000 C7010 (10 Slot) Chassis Power Supply"
PID: FIORANO           , VID:          , SN: DTH1117T005

NAME: "Slot 34", DESCR: "Nexus7000 C7010 (10 Slot) Chassis Power Supply"
PID: N7K-AC-6.0KW      , VID:          , SN: DTH1117T009

NAME: "Slot 36", DESCR: "Nexus7000 C7010 (10 Slot) Chassis Fan Module"
PID:                   , VID: V00, SN:

NAME: "Slot 37", DESCR: "Nexus7000 C7010 (10 Slot) Chassis Fan Module"
PID:                   , VID: V00, SN:

NAME: "Slot 38", DESCR: "Nexus7000 C7010 (10 Slot) Chassis Fan Module"
PID:                   , VID: V00, SN:

NAME: "Slot 39", DESCR: "Nexus7000 C7010 (10 Slot) Chassis Fan Module"
PID:                   , VID: V00, SN:

switch#
```


show lldp dcbx interface ethernet

To display the local Data Center Bridging Capability Exchange (DCBX) control status of an interface, use the **show lldp dcbx interface ethernet** command.

show lldp dcbx interface ethernet *slot/port-number*

Syntax Description	<i>slot/port-number</i> Slot number and port number is in this format: <i>slot/port-number</i> . The range is from 1 to 253.
---------------------------	--

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

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

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

Command History	Release	Modification
	5.0(1)	This command was introduced.

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

Examples This example shows how to display the local DCBX control status:

```
switch(config)# show lldp dcbx interface ethernet 1/5
Local DCBXP Control information:
Operation version: 00 Max version: 00 Seq no: 1 Ack no: 1 Type/
Subtype Version En/Will/Adv Config
003/000 000 Y/N/Y 0008
002/000 000 Y/N/Y 1111100032 32000000 00000002

Peer's DCBXP Control information:
Operation version: 00 Max version: 00 Seq no: 1 Ack no: 1
Type/ Max/Oper
Subtype Version En/Will/Err Config
003/000 000/000 Y/N/N 0008
002/000 000/000 Y/N/N 1111100032 32000000 00000002

switch(config)#
```

Related Commands	Command	Description
	show lldp tlv-select	Displays the LLDP TLV configuration.
	lldp tlv-select	Specifies the TLVs to send and receive in LLDP packets.

show lldp interface ethernet

To display the Link Layer Discovery Protocol (LLDP) configuration on the interface, use the **show lldp interface ethernet** command.

show lldp interface ethernet *slot/port-number*

Syntax Description	<i>slot/port-number</i> Slot number and port number in this format: <i>slot/port-number</i> . The range is from 1 to 253.										
Defaults	None										
Command Modes	Any command mode										
Supported User Roles	network-admin network-operator vdc-admin vdc-operator										
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>5.0(1)</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	5.0(1)	This command was introduced.						
Release	Modification										
5.0(1)	This command was introduced.										
Usage Guidelines	This command does not require a license.										
Examples	<p>This example shows how to display the LLDP configuration on the interface:</p> <pre>switch(config)# show lldp interface ethernet 6/3 Interface Information: Enable (tx/rx/dcbx): Y/Y/Y Port Mac address: 00:24:f7:19:84:72 switch(config)#</pre>										
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>show lldp traffic interface ethernet</td> <td>Displays the number of LLDP packets sent and received on the interface.</td> </tr> <tr> <td>show running-config lldp</td> <td>Displays the global LLDP configuration.</td> </tr> <tr> <td>lldp transmit</td> <td>Enables the transmission of LLDP packets on an interface.</td> </tr> <tr> <td>lldp receive</td> <td>Enables the reception of LLDP packets on an interface.</td> </tr> </tbody> </table>	Command	Description	show lldp traffic interface ethernet	Displays the number of LLDP packets sent and received on the interface.	show running-config lldp	Displays the global LLDP configuration.	lldp transmit	Enables the transmission of LLDP packets on an interface.	lldp receive	Enables the reception of LLDP packets on an interface.
Command	Description										
show lldp traffic interface ethernet	Displays the number of LLDP packets sent and received on the interface.										
show running-config lldp	Displays the global LLDP configuration.										
lldp transmit	Enables the transmission of LLDP packets on an interface.										
lldp receive	Enables the reception of LLDP packets on an interface.										

show lldp neighbors

To display the status of the Link Layer Discovery Protocol (LLDP) neighbor device, use the **show lldp neighbors** command.

```
show lldp neighbors {detail | interface ethernet slot/port-number}
```

Syntax Description	Parameter	Description
	detail	Displays LLDP neighbor detail information.
	interface ethernet	Specifies the interface for which you are displaying LLDP information.
	<i>slot/port-number</i>	Slot number and port number in this format: <i>slot/port-number</i> . The range is from 1 to 253.

Defaults None

Command Modes Any command mode

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

Command History	Release	Modification
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the LLDP neighbor device status:

```
switch(config)# show lldp neighbors detail
Capability codes:
  (R) Router, (B) Bridge, (T) Telephone, (C) DOCSIS Cable Device
  (W) WLAN Access Point, (P) Repeater, (S) Station, (O) Other
Local Intf Chassis ID Port ID Hold-time Capability
Eth8/24 0018.bad8.5e45 Eth8/23 120 R
Eth8/23 0018.bad8.5e45 Eth8/24 120 R
switch(config)#
```

Related Commands	Command	Description
	show lldp traffic	Displays the LLDP counters, including the number of LLDP packets sent and received by the device, the number of discarded packets, and the number of unrecognized TLVs.
	show lldp traffic interface ethernet	Displays the number of LLDP packets sent and received on the interface.

show lldp timers

To display the Link Layer Discovery Protocol (LLDP) hold time, delay time, and update frequency configuration, use the **show lldp timers** command.

show lldp timers

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the LLDP hold time, delay time, and update frequency configuration:

```
switch(config)# show lldp timers
LLDP Timers:

    Holdtime in seconds: 180
    Reinit-time in seconds: 6
    Transmit interval in seconds: 45
switch(config)#
```

Related Commands	Command	Description
	show lldp holdtime	Specifies the amount of time in seconds that a receiving device should hold the information sent by your device before discarding it.
	lldp reinit	Specifies the delay time in seconds for LLDP to initialize on any interface.
	lldp timer	Specifies the transmission frequency of LLDP updates in seconds.

show lldp tlv-select

To display the type, length, and value (TLV) configuration for the Link Layer Discovery Protocol (LLDP), use the **show lldp tlv-select** command.

show lldp tlv-select

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the TLV configuration for LLDP:

```
switch(config)# show lldp tlv-select
  access-management
  dcbx
  port-description
  port-vlan
  system-capabilities
  system-description
  system-name

switch(config)#
```

Related Commands	Command	Description
	show lldp dcbx interface ethernet	Displays the local DCBX control status.
	lldp tlv-select	Specifies the TLVs to send and receive in LLDP packets.

show lldp traffic

To display the Link Layer Discovery Protocol (LLDP) counters, including the number of LLDP packets sent and received by the device, the number of discarded packets, and the number of unrecognized TLVs, use the **show lldp traffic** command.

show lldp traffic

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the LLDP counters:

```
switch(config)# show lldp traffic
LLDP traffic statistics:

    Total frames transmitted: 323
    Total entries aged: 0
    Total frames received: 0
    Total frames received in error: 0
    Total frames discarded: 0
    Total unrecognized TLVs: 0
switch(config)#
```

Related Commands	Command	Description
	show lldp traffic interface ethernet	Displays the number of LLDP packets sent and received on the interface.
	show running-config lldp	Displays the global LLDP configuration.

show lldp traffic interface ethernet

To display the number of Link Layer Discovery Protocol (LLDP) packets sent and received on the interface, use the **show lldp traffic interface ethernet** command.

show lldp traffic interface ethernet *slot/port-number*

Syntax Description	<i>slot/port-number</i> Slot number and port number in this format: <i>slot/port-number</i> . The range is from 1 to 253.
---------------------------	---

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

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

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

Command History	Release	Modification
	5.0(1)	This command was introduced.

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

Examples	This example shows how to display the number of LLDP packets sent and received on the interface:
-----------------	--

```
switch(config)# show lldp traffic interface ethernet 7/1
LLDP interface traffic statistics:

    Total frames transmitted: 0
    Total entries aged: 0
    Total frames received: 0
    Total frames received in error: 0
    Total frames discarded: 0
    Total unrecognized TLVs: 0
switch(config)#
```

Related Commands	Command	Description
	show lldp traffic	Displays the LLDP counters, including the number of LLDP packets sent and received by the device, the number of discarded packets, and the number of unrecognized TLVs.
	show running-config lldp	Displays the global LLDP configuration.

show locator-led status

To show the status of locator LEDs on the system, use the **show locator-led status** command.

show locator-led status

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
	4.1(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows the locator LED status for the system:

```
switch# show locator-led status
Xbar 1 : Locator LED off
Module 7 : Locator LED off
Module 9 : Locator LED off
Module 12 is not powered up.
Chassis Locator LED off
PowerSupply 1 : Locator LED off
PowerSupply 2 : Locator LED off
Fan 1 : Locator LED off
Fan 2 : Locator LED off
switch(config)#
```

Related Commands	Command	Description
	locator-led	Blinks an LED on the system.

show logging console

To display the console logging configuration, use the **show logging console** command.

show logging console

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the console logging configuration:

```
switch# show logging console
Logging console:          enabled (Severity: critical)
switch#
```

Related Commands	Command	Description
	logging console	Configures logging to the console.

show logging info

To display the logging configuration, use the **show logging info** command.

show logging info

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples

This example shows how to display the logging configuration:

```
switch# show logging info
Logging console:          enabled (Severity: critical)
Logging monitor:         enabled (Severity: notifications)
Logging linecard:        enabled (Severity: notifications)
Logging timestamp:       Seconds
Logging loopback :       disabled
Logging server:          enabled
{172.28.254.254}
    server severity:      notifications
    server facility:     local7
    server VRF:          default
Logging logflash:        enabled (Severity: information)
Logging logfile:         enabled
Name - messages: Severity - information Size - 10485760
```

Facility	Default Severity	Current Session Severity
-----	-----	-----
aaa	3	5
aclog	2	2
aclmgr	3	3
auth	0	0
authpriv	3	3
bfd	2	2
--More--		

show logging ip access-list cache

To display information about the logging IP access list cache, use the **show logging ip access-list cache** command.

show logging ip access-list cache

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
	6.2(6)	This command was modified. The output was modified to include additional parameters if detailed IP access list logging is enabled.
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

When detailed logging is enabled, the following additional parameters will be displayed in ACL-LOG cache entry with the currently collected ACL-LOG fields:

- ACL Name
- ACE Number
- ACE Action (Permit /Deny)
- ACL Direction (Ingress/Egress)
- ACL Filter Type (RACL_IPV4/PACL_MAC/ PACL_IPV4/PBR/VACL)
- ACL Applied Interface

Examples This example shows how to display information about the logging IP access list cache:

```
switch# show logging ip access-list cache  
switch#
```

■ show logging ip access-list cache

Related Commands	Command	Description
	logging ip access-list cache	Configures Optimized ACL Logging (OAL) parameters.
	logging ip access-list detailed	Enables detailed logging for access lists.

show logging last

To display the last *number* lines of the logfile, use the **show logging last** command.

show logging last *number*

Syntax Description	<i>number</i>	Number of lines. The range is from 1 to 9999.
---------------------------	---------------	---

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 last 42 lines of the logfile:
-----------------	---

```
switch# show logging last 42
switch#
```

show logging level

To display a logging configuration, use the **show logging level** command.

```
show logging level [level]
```

Syntax Description	<i>level</i>	(Optional) Logging configuration to display. The keyword options are listed in the “System Message Logging Facilities” section on page 1 .
---------------------------	--------------	--

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

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

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

Command History	Release	Modification
	4.0(1)	This command was introduced.
	4.0(2)	Added the interface-vlan , netstack , private-vlan , and ipv6 keywords.
	4.1(2)	Added the cfs keyword.

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

Examples This example shows how to display the current Cisco Fabric Services (CFS) logging configuration:

```
switch# show logging level cfs
Facility          Default Severity      Current Session Severity
-----          -
cfs                3                      3

0 (emergencies)   1 (alerts)            2 (critical)
3 (errors)         4 (warnings)          5 (notifications)
6 (information)    7 (debugging)
```

Related Commands	Command	Description
	logging level	Configures the facility logging level.

show logging logfile

To display the messages in the log file that were timestamped within the span entered, use the **show logging logfile** command.

```
show logging logfile [start-time yyyy mmm dd hh:mm:ss] [end-time yyyy mmm dd hh:mm:ss]
```

Syntax Description	
start-time	(Optional) Specifies to enter a start time in the format <i>yyyy mmm dd hh:mm:ss</i> . Use three characters for the month (<i>mmm</i>) field, digits for the year (<i>yyyy</i>) and day (<i>dd</i>) fields, and digits separated by colons for the time (<i>hh:mm:ss</i>) field.
end-time	(Optional) Specifies to enter an end time in the format <i>yyyy mmm dd hh:mm:ss</i> . Use three characters for the month (<i>mmm</i>) field, digits for the year (<i>yyyy</i>) and day (<i>dd</i>) fields, and digits separated by colons for the time (<i>hh:mm:ss</i>) field.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines If you do not enter an end time, the current time is used.
This command does not require a license.

Examples This example shows how to display the messages in the log file that were timestamped within the span shown:

```
switch# show logging logfile start-time 2008 mar 11 12:10:00
switch#
```

Related Commands	Command	Description
	logging logfile	Configures logging to a log file.

show logging loopback

To display the logging loopback configuration, use the **show logging loopback** command.

show logging loopback

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the logging loopback configuration:

```
switch# show logging loopback
switch#
```

show logging module

To display the module logging configuration, use the **show logging module** command.

show logging module

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the module logging configuration:

```
switch# show logging module
switch#
```

Related Commands	Command	Description
	logging module	Configures module logging.

show logging monitor

To display the monitor logging configuration, use the **show logging monitor** command.

show logging monitor

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the monitor logging configuration:

```
switch# show logging monitor
switch#
```

Related Commands	Command	Description
	logging monitor	Configures logging on the monitor.

show logging nvram

To display the messages in the NVRAM log, use the **show logging nvram** command.

show logging nvram [**last** *number-lines*]

Syntax Description	last <i>number-lines</i> (Optional) Specifies a number of lines to display. The last <i>number-lines</i> is displayed. The range is from 1 to 100 lines.
---------------------------	---

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 last 20 messages in the NVRAM log:
-----------------	--

```
switch# show logging nvram last 20
switch#
```

show logging onboard

To display the onboard logging information based on the error type, use the **show logging onboard** command.

```
show logging onboard { boot-uptime | card-boot-history | card-first-power-on | cpuhog |
  credit-loss | counter-stats | device-version | endtime | environmental-history | error-stats |
  exception-log | flow-control | internal | interrupt-stats | kernel-trace | mem-leak |
  memory-errors | memory-info | module num | obfl-history | obfl-logs | register-log | rxwait
  | stack-trace | starttime | status | txwait }
```

Syntax Description

boot-uptime	Displays the OBFL boot and uptime information.
card-boot-history	Displays the OBFL card boot history.
card-first-power-on	Displays the OBFL card first power on information.
cpuhog	Displays the OBFL information for CPU hog events.
credit-loss	Displays the OBFL credit loss logs.
counter-stats	(Optional) Displays the OBFL counter statistics.
device-version	Displays the OBFL device version information.
endtime	Displays the OBFL logs until the specified end time.
environmental-history	Displays the OBFL environmental history.
error-stats	Displays the OBFL error statistics.
exception-log	Displays the OBFL exception log.
flow-control	Displays the OBFL flow control logs.
internal	Displays the logging onboard internal information.
interrupt-stats	Displays the OBFL interrupt statistics.
kernel-trace	Displays the OBFL kernel trace information.
mem-leak	Displays the OBFL memory leak information.
memory-errors	Displays the memory error log for corrected single bit
memory-info	Displays memory information.
module <i>num</i>	Displays the OBFL information for a specific module.
obfl-history	Displays the OBFL history information.
obfl-logs	Displays the OBFL tech support log information.
register-log	Displays the OBFL register log information.
rxwait	Displays the OBFL RxWait log information.
stack-trace	Displays the OBFL kernel stack trace information.
starttime	Displays the OBFL logs from the specified start time.
status	Displays the OBFL status enable/disable.
txwait	Displays the OBFL TxWait log information.

Defaults

None

Command Modes Any command mode

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

Command History	Release	Modification
	8.2(1)	Added the rxwait and txwait keywords.
	4.0(2)	Added the counter-stats keyword.
	4.0(1)	This command was introduced.

Usage Guidelines The date and time arguments for the **starttime** and **endtime** keywords are entered as the date month/day/year (*mm/dd/yy*), followed by a hyphen, and the time in 24-hour format in hours:minutes:seconds (HH:MM:SS). For example:

- **starttime** 03/17/08-15:01:57
- **endtime** 03/18/08-15:04:57

The valid values for *file* are as follows:

- **bootflash:**
- **ftp:**
- **scp:**
- **sftp:**
- **slot0:**
- **tftp:**
- **volatile:**

The valid values for *type* are as follows:

- **begin [-i] [-x] [word]**—Begins with the line that matches the text.
 - **-i**—Ignores the case difference when comparing the strings.
 - **-x**—Prints only the lines where the match is a whole line.
 - *word*—Specifies for the expression.
- **count [> file || type]**—Counts number of lines.
- **egrep | grep print-match**—Egrep or Grep. Egrep searches for lines of text that match more sophisticated regular expression syntax than grep. Grep searches for lines of text that match one or many regular expressions, and outputs only the matching lines.
 - **-A num**—Prints the specifies number of lines of context after every matching line. The range is from 1 to 999.
 - **-B num**—Prints the specifies number of lines of context before every matching line. The range is from 1 to 999.
 - **-c**—Prints a total count of matching lines only.

- **-i**—Ignores the case difference when comparing the strings.
- **-n**—Prints each match preceded by its line number.
- **-v**—Prints only the lines that contain no matches for the *word* argument.
- **-w**—Prints only lines where the match is a complete word
- **-x**—Prints only the lines where the match is a whole line.
- *word*—Specifies for the expression.
- **exclude [-i] [-x] [word]**—Excludes the lines that match.
 - **-i**—Ignores the case difference when comparing the strings.
 - **-x**—Prints only the lines where the match is a whole line.
 - *word*—Specifies for the expression.
- **head [-n num]**—Stream Editor. The optional **-n num** keyword and argument allow you to specify the number of lines to print. The range is from 0 to 2147483647.
- **include [-i] [-x] [word]**—Includes the lines that match.
 - **-i**—Ignores the case difference when comparing the strings.
 - **-x**—Prints only the lines where the match is a whole line.
 - *word*—Specifies for the expression.
- **last [num]**—Displays the last lines to print. The optional *num* specifies the number of lines to print. The range is from 0 to 9999.
- **less [-E | -d]**—Quits at the end of the file.
 - **-E**—(Optional) Quits at the end of the file.
 - **-d**—(Optional) Specifies a dumb terminal.
- **no-more**—Turns off pagination for command output.
- **sed command**—Stream Editor
- **wc**—Counts words, lines, and characters.
 - **-c**—(Optional) Specifies the output character count.
 - **-l**—(Optional) Specifies the output line count.
 - **-w**—(Optional) Specifies the output word count.
 - **>**—Redirects it to a file
 - **|**—Pipe command output to filter

Use this command to view OBFL data from the system hardware. The OBFL feature is enabled by default and records operating temperatures, hardware uptime, interrupts, and other important events and messages that can assist with diagnosing problems with hardware modules installed in a Cisco router or switch. Data is logged to files that are stored in nonvolatile memory. When the onboard hardware is started up, a first record is made for each area monitored and becomes a base value for subsequent records.

The OBFL feature provides a circular updating scheme for collecting continuous records and archiving older (historical) records, ensuring accurate data about the system. Data is recorded in one of two formats: continuous information that displays a snapshot of measurements and samples in a continuous file, and summary information that provides details about the data being collected. The message “No historical data to display” is seen when historical data is not available.

This command does not require a license.

Examples

This example shows how to display the OBFL boot and uptime information:

```
switch# show logging onboard module 2 boot-uptime
Sat Feb 29 18:11:38 2008: Boot Record
-----
Boot Time.....: Sat Feb 29 18:11:38 2008
Slot Number.....: 2
Serial Number.....: JAB0912026U
Bios Version.....: v0.0.8(08/18/07)
Alt Bios Version...: v0.0.8(08/18/07)
Firmware Version...: 3.0(1) [build 3.0(0.291)]
switch#
```

Table 8 describes the significant fields shown in the display.

Table 8 *show logging onboard boot-uptime Command Output*

Field	Description
Boot Time	Time boot occurred.
Slot Number	Slot number
Serial Number	Serial number of the module.
Bios Version	Primary binary input and output system (BIOS) version.
Alt Bios Version	Alternate BIOS version.
Firmware Version	Firmware version.

This example shows how to display the OBFL logging device information:

```
switch# show logging onboard module 2 device-version
Device Version Records:
-----
Timestamp                Device Name           Instance  Hardware  Software
                          Num                Version    Version
-----
Sat Feb 29 18:11:38 2008 Stratosphere         0          1          1
Sat Feb 29 18:11:38 2008 Stratosphere         1          1          1
Sat Feb 29 18:11:38 2008 Skyline-asic          0          1          1
Sat Feb 29 18:11:38 2008 Tuscany-asic          0          1          0
Sat Feb 29 18:11:38 2008 X-Bus IO              0          6          0
Sat Feb 29 18:11:38 2008 Power Mngmnt Ep1    0          6          0
Sat Feb 29 18:42:01 2008 Stratosphere         0          1          1
Sat Feb 29 18:42:01 2008 Stratosphere         1          1          1
Sat Feb 29 18:42:01 2008 Skyline-asic          0          1          1
Sat Feb 29 18:42:01 2008 Tuscany-asic          0          1          0
Sat Feb 29 18:42:01 2008 X-Bus IO              0          6          0
Sat Feb 29 18:42:01 2008 Power Mngmnt Ep1    0          6          0
switch#
```

Table 9 describes the significant fields shown in the display.

Table 9 *show logging onboard device-version Command Output*

Field	Description
Timestamp	Day, date, and time.
Device Name	Device name.

Table 9 *show logging onboard device-version Command Output*

Field	Description
Instance Num	Number of instances.
Hardware Version	Hardware device version.
Software Version	Software device version.

This example shows how to display the OBFL exception log information:

```
switch# show logging onboard module 2 exception-log
Sun Feb 24 00:12:35 2008 : Exception Log Record
Device Id : 60
Device Name : DEV_SKYLINE_NI
Device Error Code : f(H)
Device Error Name : SKY_NI_ERR_BM_B1_3_BIST_FAILED
Sys Error : Skyline ni module experienced an error
Errtype : NON-CATASTROPHIC
PhyPortLayer : Fibre Channel
Port(s) Affected : 13-18
Error Description : Skyline BM B1_3 BIST for interface 2 timed out during init
DSAP : 0
UUID : 0
Time : Sun Feb 24 00:11:25 2008
switch#
```

Table 10 describes the significant fields shown in the display.

Table 10 *show logging onboard exception-log Command Output*

Field	Description
Sun Feb 24 00:12:35 2008:	Date and time the exception was recorded.
Device Id:	Device identification number.
Device Name:	Device name.
Device Error Code	Device specific error code.
Device Error Name:	Name of the device error.
Sys Error:	System error message.
Errtype:	Error type.
PhyPortLayer:	Physical layer type.
Port(s) Affected:	Number of the ports affected.
Error Description:	Description of the error.
DSAP:	Destination session announcement protocol (DSAP) identification.
UUID:	Universal unique identifier (UUID).

This example shows how to display the OBFL history information:

```
switch# show logging onboard module 2 obfl-history
OBFL history records:
-----
Sat Feb 29 30 18:09:57 2008 : OBFL all logs cleared
Sat Feb 29 18:47:53 2008 : OBFL miscellaneous-error logs cleared
```

```
Sat Feb 29 20:07:45 2008 : OBFL miscellaneous-error logs cleared
switch#
```

The **show logging onboard obfl-history** command displays the following information:

- Timestamp when OBFL is manually disabled.
- Timestamp when OBFL is manually enabled.
- Timestamp when OBFL data is manually cleared.

This example shows how to display the OBFL kernel stack trace information:

```
switch# show logging onboard module 2 stack-trace
===== STACK TRACE =====
Logging time: Sat Feb 29 19:47:38 2008
watchdog timeout: process swapper (0), jiffies 0x169bb
Stack: c0006e98 c001721c d195f5b4 c0005424 c0005500 c0003e90 c0005a2c c0005a40
c0001a88 c01bf610 c0000394
Call Trace:
print_stack2_buf + 0x50
kernel_thread + 0xb94
klm_cctrl + 0x4554
ppc_irq_dispatch_handler + 0x190
do_IRQ + 0x3c
ret_from_intercept + 0x0
probe_irq_mask + 0x494
probe_irq_mask + 0x4a8
transfer_to_handler + 0x15c
softnet_data + 0x2b0
Registers:
NIP: C0005A20 XER: 00000000 LR: C0005A2C SP: C01AA120 REGS: c01aa070 TRAP: 0500
Tainted: PF
MSR: 00009000 EE: 1 PR: 0 FP: 0 ME: 1 IR/DR: 00
DEAR: C0029B40, ESR: C01F0000
MCSRR0: 00000000, MCSRR1: 00000000, MCAR: 00000000
MCSR: 00000000 MCAR: 00000000 MCPSUMR: 00000000
TASK = c01a8190[0] 'swapper' Last syscall: 120
last math 00000000 last altivec 00000000 last spe 00000000
GPR00: 00000000 C01AA120 C01A8190 00000000 00000032 C8F1DE28 D1010A9F 00000000
GPR08: 0000180F C01FA39C D1010AA3 C01B8D18 24044244 1003A44C 0FFF6700 10049000
GPR16: 0FFAE1B0 0FFFAC90 00000000 00000000 00000000 00000000 00000000 00000001
GPR24: 00000000 00000000 00001160 007FFEAB 007FFE00 C01F0000 C01F0000 00000000
```

The **show logging onboard stack-trace** command displays the following information:

- Time in seconds.
- Time in microseconds.
- Error description string.
- Current process name and identification.
- Kernel jiffies.
- Stack trace.

This example shows how to display the OBFL error statistics:

```
switch# show logging onboard module 2 error-stats
-----
OBFL Data for
  Module: 2
-----
```

show logging onboard

```
ERROR STATISTICS INFORMATION FOR DEVICE ID 80 DEVICE Eureka
```

```
-----
Error Stat Counter Name      |      Count      |      Time Stamp      |In|Port
                           |                 |MM/DD/YY HH:MM:SS    |st|Rang
                           |                 |                       |Id|e
-----
PB2_TX FlwCtrl from conn. ASIC > pe|0x1              |02/04/08 17:07:28|00|
riod Intr                    |                 |                   |||
PB2_TX FlwCtrl from conn. ASIC > pe|0x1              |02/06/08 10:54:44|00|
riod Intr                    |                 |                   |||
-----
```

```
ERROR STATISTICS INFORMATION FOR DEVICE ID 81 DEVICE Lamira
```

```
-----
Error Stat Counter Name      |      Count      |      Time Stamp      |In|Port
                           |                 |MM/DD/YY HH:MM:SS    |st|Rang
                           |                 |                       |Id|e
-----
NF2 Interrupt - NH HIT error  |0x1              |02/06/08 10:54:44|00|
-----
```

```
switch#
```

Table 11 describes the significant fields shown in the display.

Table 11 show logging onboard error-stats Command Output

Field	Description
Error Stat Counter Name	Name of the error statistics counter.
Count	Total interrupt count.
Time Stamp MM/DD/YY HH:MM:SS	Time and date of the error.
Inst Id	Instance number.
Port The range is from	Range of ports affected.

The following example shows how to display the OBFL RxWait information:

```
switch# show logging onboard rxwait
```

```
-----
Module: 2 rxwait count
-----

Show Clock
-----
2017-10-05 11:42:22
Notes:
  - Sampling period is 20 seconds
  - Only rxwait delta >= 100 ms are logged

-----
| Interface      | Delta RxWait Time | Congestion | Timestamp |
|               | 2.5us ticks | seconds |           |
-----
| Eth2/11(VL3)  | 2880818          | 7          | Thu Sep 21 18:31:58 2017 |
| Eth2/30(VL3)  | 42200            | 0          | Thu Sep 14 15:05:15 2017 |
| Eth2/31(VL3)  | 40261           | 0          | Thu Sep 14 15:01:14 2017 |
| Eth2/29(VL3)  | 41155           | 0          | Thu Sep 14 14:47:54 2017 |
| Eth2/30(VL3)  | 40499           | 0          | Thu Sep 14 14:47:54 2017 |
-----
```

The following example shows how to display the OBFL Txwait information:

```
switch# show logging onboard txwait
```

```
-----
Module: 10 txwait count
-----

-----
Show Clock
-----
2017-08-28 17:01:30
```

```
Notes:
- Sampling period is 20 seconds
- Only txwait delta >= 100 ms are logged
```

```
-----
| Interface          | Delta TxWait Time      | Congestion | Timestamp
| 2.5us ticks | seconds |          |
-----
| Eth10/20 VL3)    | 882527 | 2 | 11% | Mon Aug 28 16:15:45 2017|
| Eth10/20 VL3)    | 5457256 | 13 | 68% | Mon Aug 28 16:15:24 2017|
-----
```

Related Commands

clear logging onboard	Clears the OBFL entries in the persistent log.
hw-module logging onboard	Enables or disabled OBFL entries based on the error type.

show logging server

To display the syslog server configuration, use the **show logging server** command.

show logging server

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the syslog server configuration:

```
switch# show logging server
switch#
```

Related Commands	Command	Description
	logging server	Configures a remote syslog server.

show logging session status

To display the logging session status, use the **show logging session status** command.

show logging session status

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the logging session status:

```
switch# show logging session status
switch#
```

show logging status

To display the logging status, use the **show logging status** command.

show logging status

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the logging status:

```
switch# show logging status
switch#
```

show logging timestamp

To display the logging timestamp configuration, use the **show logging timestamp** command.

show logging timestamp

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the logging time stamp configuration:

```
switch# show logging timestamp
switch#
```

Related Commands	Command	Description
	logging timestamp	Configures the logging time stamp granularity.

show maintenance snapshot-delay

To display the after_maintenance snapshot-delay timer value, use the **show maintenance snapshot-delay** command.

show maintenance snapshot-delay

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Privileged EXEC

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

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

Usage Guidelines This command does not require a license.

Examples This example shows how to display the after_maintenance snapshot-delay timer value:

```
switch# show maintenance snapshot-delay
after_maintenance snapshot delay value: 5000
```

Related Commands	Command	Description
	system mode maintenance snapshot-delay delay-in-seconds	Changes the snapshot-delay timer value. The default snapshot-delay timer value is 120 seconds.

show module

To display module information, use the **show module** command.

```
show module [slot {bandwidth-fairness} | fabric [fabric-slot] | internal | uptime | xbar
            [xbar-slot]]
```

Syntax Description	
<i>slot</i>	(Optional) Number of the slot for an I/O module or a supervisor module.
bandwidth-fairness	Displays the status of the bandwidth fairness for the module.
fabric	(Optional) Displays the fabric information.
<i>fabric-slot</i>	(Optional) Number of slots for the fabric module.
internal	(Optional) Displays the line card manager related information.
uptime	(Optional) Displays the amount of time since the modules were reloaded.
xbar	(Optional) Displays information about a fabric module.
<i>xbar-slot</i>	(Optional) Number of the slot for the xbar module.

Defaults Displays module information for all I/O modules and supervisor modules in the chassis.

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.
	4.1(2)	Output modified to show diagnostic events.
	6.2(2)	Removed the recovery-steps keyword.

Usage Guidelines This command does not require a license.

Examples

This example shows how to display information for all modules in the chassis:

```
switch# show module
Mod  Ports  Module-Type                Model                Status
---  ---
7    48     1000 Mbps Optical Ethernet Modul N7K-M148GS-11      ok
9    0      Supervisor module-1X         N7K-SUP1           active *
12   0      10/100/1000 Mbps Ethernet Module powered-dn

Mod  Power-Status  Reason
---  ---
12   powered-dn   Configured Power down

Mod  Sw          Hw
---  ---
7    4.1(3)     0.202
9    4.1(3)     0.805

Mod  MAC-Address(es)                Serial-Num
---  ---
7    00-1b-54-c2-ed-d0 to 00-1b-54-c2-ee-04 JAF1219AGFE
9    00-1b-54-c0-ff-10 to 00-1b-54-c0-ff-18 JAB114000BV

Mod  Online Diag Status
---  ---
7    Pass
9    Pass

Xbar Ports  Module-Type                Model                Status
---  ---
1    0          Fabric Module 1         N7K-C7018-FAB-1    ok

Xbar Sw          Hw
---  ---
1    NA          0.101

Xbar MAC-Address(es)                Serial-Num
---  ---
1    NA          JAF1225AGHJ

* this terminal session
switch#
```

This example shows how to display information for a specific module:

```
switch# show module 7
Mod  Ports  Module-Type                Model                Status
---  ---  ---
7    48    1000 Mbps Optical Ethernet Modul N7K-M148GS-11      ok

Mod  Sw                Hw
---  ---
7    4.1(3)            0.202

Mod  MAC-Address(es)                Serial-Num
---  ---
7    00-1b-54-c2-ed-d0 to 00-1b-54-c2-ee-04 JAF1219AGFE

Mod  Online Diag Status
---  ---
7    Pass

Chassis Ejector Support: Enabled
Ejector Status:
Left ejector CLOSE, Right ejector CLOSE, Module HW does not support ejector based shutdown.
switch#
```

This example shows how to display information for the fabric modules:

```
switch# show module xbar
Xbar Ports  Module-Type                Model                Status
---  ---  ---
1    0    Fabric Module 1            N7K-C7018-FAB-1    ok

Xbar Sw                Hw
---  ---
1    NA                0.101

Xbar MAC-Address(es)                Serial-Num
---  ---
1    NA                JAF1225AGHJ

* this terminal session
switch#
```

Related Commands

Command	Description
show hardware	Displays information about the hardware.
show inventory	Displays hardware inventory information.
show diagnostic events	Displays diagnostic events by error and information event type.

show monitor

To display information about the Ethernet Switched Port Analyzer (SPAN), use the **show monitor** command.

show monitor

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
	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 a SPAN:

```
switch(config)# show monitor
Session State Reason Description
-----
1 down Session admin shut
6 down Session admin shut
8 down Session admin shut
9 down Session admin shut
switch(config)#
```

Related Commands	Command	Description
	show running-config monitor	Displays the running configuration to the startup configuration.
	show startup-config monitor	Displays information about the startup SPAN configuration.

show monitor session

To display information about an Ethernet Switched Port Analyzer (SPAN) or a Encapsulated Remote Switched Port Analyzer (ERSPAN) session for analyzing traffic between ports, use the **show monitor session** command.

show monitor session { **all** | *session_number* | **range** *session_range* } [**brief**]

Syntax Description	all	Displays information about all SPAN or ERSPAN sessions.
	<i>session_number</i>	Specified SPAN or ERSPAN session number.
	range <i>session_range</i>	Displays information about the specified range of SPAN or ERSPAN sessions.
	brief	(Optional) Displays a brief summary of the information for the specified SPAN or ERSPAN session.

Defaults Displays a brief summary of information for all configured SPAN or ERSPAN sessions.

Command Modes Any command mode

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

Command History	Release	Modification
	6.1(1)	Changed the command output for ERSPAN-source sessions.
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display information for all configured ERSPAN sessions:

```
switch(config)# show monitor session 2
  session 2
  -----
type           : erspan-source
state          : up
erspan-id      : 100
vrf-name       : default
acl-name       : acl-name not specified
ip-ttl         : 255
ip-dscp        : 0
destination-ip : 10.1.1.2
```

show monitor session

```

origin-ip      : 3.3.3.3 (global)
source intf   :
    rx         : Eth7/15
    tx         : Eth7/15
    both       : Eth7/15
source VLANs  :
    rx         :
    tx         :
    both       :
filter VLANs  : filter not specified

```

Feature	Enabled	Value	Modules Supported	Modules Not-Supported
Rate-limiter	No			
MTU-Trunc	No			
Sampling	No			
MCBE	No			
L3-TX	-	-	2 4 5 7	3 10
ERSPAN-ACL	-	-	4 7	2 3 5 10

Legend:

MCBE = multicast best effort
L3-TX = L3 Multicast Egress SPAN

```

switch(config-erspan-src)# show monitor session 2
    session 2

```

```

-----
type           : erspan-source
version        : 3
state          : up
erspan-id      : 100
granularity    : 100 microseconds
vrf-name       : default
acl-name       : acl-name not specified
ip-ttl         : 255
ip-dscp        : 0
destination-ip : 10.1.1.2
origin-ip      : 3.3.3.3 (global)
source intf    :
    rx         : Eth7/15
    tx         : Eth7/15
    both       : Eth7/15
source VLANs  :
    rx         :
    tx         :
    both       :
filter VLANs  : filter not specified

```

Feature	Enabled	Value	Modules Supported	Modules Not-Supported
Rate-limiter	No			
MTU-Trunc	No			
Sampling	No			
MCBE	No			
L3-TX	-	-	2 4 5 7	3 10
ERSPAN-ACL	-	-	4 7	2 3 5 10
ERSPAN-V3	Yes	-	2 3 4 10	5 7

Legend:

MCBE = multicast best effort

L3-TX = L3 Multicast Egress SPAN

Related Commands

Command	Description
monitor session	Places you into monitor configuration mode for configuring a SPAN or ERSPAN session.

show ntp access-groups

To display the Network Time Protocol (NTP) access group configuration, use the **show ntp access-groups** command.

show ntp access-groups

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the NTP access group configuration:

```
switch(config)# show ntp access-groups
-----
Access List                               Type
-----
Admin_Group_123                           Peer
switch(config)#
```

Related Commands	Command	Description
	ntp access-group peer	Configures an NTP access group.

show ntp authentication-keys

To display the Network Time Protocol (NTP) authentication keys, use the **show ntp authentication-keys** command.

show ntp authentication-keys

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the NTP authentication keys:

```
switch(config)# show ntp authentication-keys
-----
Auth key          MD5 String
-----
3                 cisco
42                Nice_Key
34567             nexus7k
switch(config)#
```

Related Commands	Command	Description
	show ntp authentication-status	Displays the status of all NTP authentication.
	ntp authentication-key	Configures one or more keys that a time source must provide in its NTP packets in order for the device to synchronize to it.

show ntp authentication-status

To display the status of the Network Time Protocol (NTP) authentication, use the **show ntp authentication-status** command.

show ntp authentication-status

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the NTP authentication status:

```
switch(config)# show ntp authentication-status
Authentication enabled.
switch(config)#
```

Related Commands	Command	Description
	ntp authenticate	Enables NTP authentication.
	show ntp authentication-keys	Displays the configured NTP authentication keys.

show ntp internal

To display the Network Time Protocol (NTP) internal information, use the **show ntp internal** command.

```
show ntp internal { event-history [config | fsm | msgs | rts | tstamp] | mem-stats [detail] |
module-info }
```

Syntax Description		
event-history		Specifies the event history.
config	(Optional)	Specifies the configuration history.
fsm	(Optional)	Specifies the finite state machine (FSM) state transition.
msgs	(Optional)	Specifies the message and transaction service (MTS) message history.
rts	(Optional)	Specifies the request-to-send (RTS) history.
tstamp	(Optional)	Specifies the timestamp update history.
mem-stats		Specifies memory allocation statistics of NTP.
detail	(Optional)	Specifies the memory allocation statistics of NTP in detail.
module-info		Specifies all line card-related information.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 NTP internal information:

```
switch(config)# show ntp internal module-info
Number of Linecards present = 4
Timestamp check (configured) = enabled
Timestamp check status = disabled
Enable/Disable status
-----
User : not disabled
SUP : not disabled
Fabric : not disabled
switch(config)#
```

Related Commands

Command	Description
show running-config ntp	Displays the NTP information.
show ntp statistics	Displays the NTP statistics.

show ntp logging-status

To display the Network Time Protocol (NTP) logging status, use the **show ntp logging-status** command.

show ntp logging-status

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the NTP logging status:

```
switch(config)# show ntp logging-status
NTP logging enabled.
switch(config)#
```

Related Commands	Command	Description
	ntp logging	Enables NTP logging.
	show ntp authentication-status	Displays the status of NTP authentication.
	show ntp session status	Displays the NTP CFS distribution session information.

show ntp peers

To display the configured Network Time Protocol (NTP) servers and peers, use the **show ntp peers** command.

show ntp peers

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
	5.0(1)	This command was introduced.

Usage Guidelines A domain name is resolved only when you have a domain name server (DNS) server configured. This command does not require a license.

Examples This example shows how to display all the configured NTP servers and peers:

```
switch(config)# show ntp peers
-----
Peer IP Address          Serv/Peer
-----
2001:db8::4101          Peer (configured)
192.0.2.10              Server (configured)
switch(config)#
```

Related Commands	Command	Description
	ntp server	Configures an NTP server.
	ntp peer	Configures an NTP peer.
	show ntp peer-status	Displays the status of all the server and peers.

show ntp peer-status

To do display the status of the Network Time Protocol (NTP) peers, use the **show ntp peer-status** command.

show ntp peer-status

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the peer status for NTP:
`switch(config)# show ntp peer-status`

Related Commands	Command	Description
	<code>show ntp peers</code>	Displays information about NTP peers.

show ntp pending-diff

To display the differences between the pending Network Time Protocol (NTP) configuration and the active NTP configuration, use the **show ntp pending-diff** command.

show ntp pending-diff

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
	4.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the differences between the pending NTP configuration and the active NTP configuration:

```
switch# show ntp pending-diff
switch#
```

Related Commands	Command	Description
	show ntp source	Displays information about the NTP source.
	show ntp peers	Displays information about NTP peers.

show ntp pending peers

To display pending Network Time Protocol (NTP) configuration changes on all peers, use the **show ntp pending peers** command.

show ntp pending peers

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
	4.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the pending NTP configuration changes on all peers:

```
switch# show ntp pending peers
switch#
```

Related Commands	Command	Description
	show ntp source	Displays information about the NTP source.
	show ntp peers	Displays information about NTP peers.

show ntp session status

To display the Network Time Protocol (NTP) session status, use the **show ntp session status** command.

show ntp session status

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
	4.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the NTP session status:

```
switch# show ntp session status
Last Action Time Stamp      : Thu Aug 1 16:22:00 20
Last Action                  : Distribution Enable
Last Action Result          : Success
Last Action Failure Reason  : none
switch#
```

Related Commands	Command	Description
	show ntp source	Displays information about the NTP source.
	show ntp peers	Displays information about NTP peers.

show ntp status

To display the Network Time Protocol (NTP) distribution status, use the **show ntp status** command.

show ntp status

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
	4.1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the NTP distribution status:

```
switch(config)# show ntp status
Distribution : Disabled
Last operational state: No session
switch(config)#
```

Related Commands	Command	Description
	show ntp source	Displays information about the NTP source.
	show ntp peers	Displays information about NTP peers.

show ntp rts-update

To display if the request to send (RTS) update is enabled, use the **show ntp rts-update** command.

show ntp rts-update

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
	4.1(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to view RTS-update information:

```
switch(config)# show ntp rts-update
RTS update is enabled
switch(config)#
```

Related Commands	Command	Description
	show ntp source-interface	Displays information about the NTP source.

show ntp source

To display information about the Network Time Protocol (NTP) source, use the **show ntp source** command.

show ntp source

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the NTP source information:
`switch(config)# show ntp source`

Related Commands	Command	Description
	<code>ntp source</code>	Configures the NTP source.

show ntp source-interface

To display the Network Time Protocol (NTP) source interface, use the **show ntp source-interface** command.

show ntp source-interface

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
	4.1(3)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the NTP source interface:

```
switch(config)# show ntp source-interface
Source interface loopback1
switch(config)#
```

Related Commands	Command	Description
	show startup-config ntp	Displays information about the startup NTP configuration of the switch.
	show running-config ntp	Displays information about the NTP configuration that is currently running on the switch.

show ntp statistics

To display Network Time Protocol (NTP) statistics, use the **show ntp statistics** command.

```
show ntp statistics {io | local | memory | peer} {ipaddr address | name name1 [..namen]}
```

Syntax Description		
io		Displays the input-output statistics.
local		Displays the counters maintained by the local NTP.
memory		Displays the statistics counters related to the memory code.
peer		Displays the per-peer statistics counter of a peer.
ipaddr address		Displays statistics for the peer with the configured IPv4 or IPv6 address. The IPv4 address format is dotted decimal, x.x.x.x. The IPv6 address format is hex A:B::C:D.
name name		Displays statistics for one or more named peers.

Defaults None

Command Modes Any command mode

Supported User Roles network-admin
network-operator
vdc-admin
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 displays statistics for NTP:

```
switch(config)# show ntp statistics local
```

Related Commands	Command	Description
	clear ntp statistics	Clears NTP statistics.

show ntp status

To display the Network Time Protocol (NTP) distribution status, use the **show ntp status** command.

```
show ntp status [ > | >> | | ]
```

Syntax Description	
>	(Optional) Redirects the command output to a file.
>>	(Optional) Redirects the command output to a file in append mode.
	(Optional) Pipes the command output to a filter.

Defaults Disabled

Command Modes Any command mode

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

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

Usage Guidelines This command shows whether Cisco Fabric Services (CFS) is enabled or disabled for the NTP application and whether a fabric lock is in place because a configuration is in progress.

This command does not require a license.

Examples This example shows how to display the CFS distribution status for NTP. In this example, CFS distribution is enabled and the fabric is locked. When a configuration is in progress on a CFS-enabled device, the fabric is locked until the change is committed and the configuration is distributed throughout the fabric. The lock prevents multiple configurations occurring at the same time.

```
switch(config)# show ntp status
Distribution : Enabled
Last operational state: Fabric Locked
```

Related Commands

Command	Description
show cfs status	Displays the global CFS distribution status (enabled/disabled) for the device.
clear ntp session	Clears the application configuration session, discards pending changes, and releases the lock on the fabric.
ntp distribute	Enables the device to receive NTP configuration updates distributed through CFS.
cfs distribute	Globally enables CFS distribution for all applications on the device, including CFS over IP.
ntp enable	Enables NTP on a device. NTP is enabled by default.

show ntp trusted-keys

To display the configured Network Time Protocol (NTP) trusted keys, use the **show ntp trusted-keys** command.

show ntp trusted-keys

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display all the configured NTP trusted keys:

```
switch(config)# show ntp trusted-keys
Trusted Keys:
42
switch(config)#
```

Related Commands	Command	Description
	ntp trusted-keys	Displays the configured NTP authentication keys.

show platform hardware capacity interface resources

To display a summary of current platform hardware resource utilization, use the **show platform hardware capacity interface resources** command.

show platform hardware capacity interface resources

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
	4.1(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display a summary of current platform hardware resource utilization:

```
switch# show platform hardware capacity interface resources
Interface Resources

Interface drops:
  Module   Total drops:  Tx                               Rx  Highest drop port: Tx Rx
           7                               0                               0   - -

Interface buffer sizes:
  Module   Bytes:  Tx buffer           Rx buffer
           7           6452775           7743330
```

Related Commands	Command	Description
	show hardware fabric-utilization	Display information about fabric utilization.

show port-monitor

To display information about the Simple Network Management Protocol (SNMP) port-monitor configuration, use the **show port-monitor** command.

show port-monitor [*policy-name*]

Syntax Description	<i>policy-name</i> (Optional) Policy name. The maximum number of alphanumeric characters is 32.
---------------------------	---

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

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

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

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

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

Examples	This example shows how to display the SNMP port-monitor information:
-----------------	--

```
switch(config)# show port-monitor name pm2
switch(config-port-monitor)# show port-monitor pm2
```

```
Policy Name : pm2
Admin status : Not Active
Oper status : Not Active
Port type : All Ports
```

```
-----
Counter      Threshold  Interval  Rising  Threshold  event  Falling  Threshold  event  In
Use
-----  -----  -----  -----  -----  -----  -----  -----  -----  -
-----
Link Loss    Delta      60        5        4          1          4
  Yes
Sync Loss    Delta      60        5        4          1          4
  Yes
Protocol Error  Delta      60        1        4          0          4
  Yes
Signal Loss    Delta      60        5        4          1          4
```



```

      Yes
Invalid Words   Delta    60    1    4    0    4
      Yes
Invalid CRC's   Delta    60    5    4    1    4
      Yes
RX Performance  Delta    60    2147483648    4    524288000    4
      Yes
TX Performance  Delta    60    2147483648    4    524288000    4
      Yes
-----
switch(config-port-monitor)#
    
```

Related Commands

Command	Description
show port-monitor status	Displays the port-monitor status.
show port-monitor active	Displays active port-monitor policies.

show port-monitor active

To display information about the active Simple Network Management Protocol (SNMP) port-monitor policies, use the **show port-monitor active** command.

show port-monitor active

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
	4.1(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display information about the active SNMP port-monitor policies:

```
switch(config)# show port-monitor active
```

```
Policy Name : test
Admin status : Active
Oper status : Active
Port type : All Ports
```

```
-----
Counter      Threshold  Interval  Rising  Threshold  event  Falling  Threshold  e
vent In Use
-----  -----  -----  -----  -----  -----  -----  -----
-----
Link Loss    Delta      60        5        4          1        4
  Yes
Sync Loss    Delta      60        5        4          1        4
  Yes
Protocol Error  Delta      60        1        4          0        4
  Yes
Signal Loss    Delta      60        5        4          1        4
  Yes
Invalid Words  Delta      60        1        4          0        4
```

```

      Yes
Invalid CRC's   Absolute   30      10000000      100   1           4
      Yes
RX Performance  Delta      60      2147483648    4     524288000   4
      Yes
TX Performance  Delta      60      2147483648    4     524288000   4
      Yes
-----
-----
switch(config)#
    
```

Related Commands

Command	Description
show port-monitor status	Displays the port-monitor status.
show port-monitor active	Displays active port-monitor policies.

show port-monitor status

To display information about the Simple Network Management Protocol (SNMP) port-monitor status, use the **show port-monitor status** command.

show port-monitor status

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
	4.1(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the SNMP port-monitor status:

```
switch(config)# show port-monitor status
Port Monitor      : Enabled
Active Policies   : None

Last 10 logs :

switch(config-port-monitor)#
```

Related Commands	Command	Description
	show port-monitor active	Displays active port-monitor policies.
	show port-monitor	Displays information about the port-monitor configuration.

show processes

To display the process information for a device, use the **show processes** command.

```
show processes [vdc vdc-number]
```

Syntax Description	vdc vdc-number (Optional) Displays process information for a specific virtual device context (VDC).
---------------------------	--

Defaults Displays information for all processes in the local device.

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 specify another VDC only from the default VDC.
This command does not require a license.

Examples This example shows how to display the process information for a device:

```
switch# show processes
```

PID	State	PC	Start_cnt	TTY	Type	Process
1	S	b7f9e468	1	-	O	init
2	S	0	1	-	O	migration/0
3	S	0	1	-	O	ksoftirqd/0
4	S	0	1	-	O	desched/0
5	S	0	1	-	O	migration/1
6	S	0	1	-	O	ksoftirqd/1
7	S	0	1	-	O	desched/1
8	S	0	1	-	O	events/0
9	S	0	1	-	O	events/1
10	S	0	1	-	O	khelper
15	S	0	1	-	O	kthread
...						

This example shows how to display the process information for another VDC:

```
switch# show processes vdc 2
```

PID	State	PC	Start_cnt	TTY	Type	Process
1	S	b7f9e468	1	-	O	init
2	S	0	1	-	O	migration/0
3	S	0	1	-	O	ksoftirqd/0
4	S	0	1	-	O	desched/0
5	S	0	1	-	O	migration/1
6	S	0	1	-	O	ksoftirqd/1
7	S	0	1	-	O	desched/1
8	S	0	1	-	O	events/0
9	S	0	1	-	O	events/1
10	S	0	1	-	O	khelper
15	S	0	1	-	O	kthread
...						

show processes cpu

To display the CPU utilization information for processes on the device, use the **show processes cpu** command.

show processes cpu

Syntax Description This command has no arguments or keywords.

Defaults Displays information for all processes in the local device.

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 CPU utilization information for the processes:

```
switch# show processes cpu
```

PID	Runtime (ms)	Invoked	uSecs	1Sec	Process
1	286	315748	0	0	init
2	302	636268	0	0	migration/0
3	1586	72636726	0	0	ksoftirqd/0
4	502	1345165	0	0	desched/0
5	1956	559740	3	0	migration/1
6	2218	457761883	0	0	ksoftirqd/1
7	2325	1469647	1	0	desched/1
8	1158	794795	1	0	events/0
9	1258	721210	1	0	events/1
10	62	2779	22	0	khelper
15	0	30	25	0	kthread
24	0	2	5	0	kacpid
102	201	286	704	0	kblockd/0
103	276	516	535	0	kblockd/1
116	0	5	17	0	khubd
...					

show processes cpu history

To display information about the CPU utilization by the system processes in the last 60 seconds, 60 minutes, and 72 hours in a graphical format, use the **show processes cpu history** command.

show processes cpu history

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
	4.2.(1)	This command was introduced.

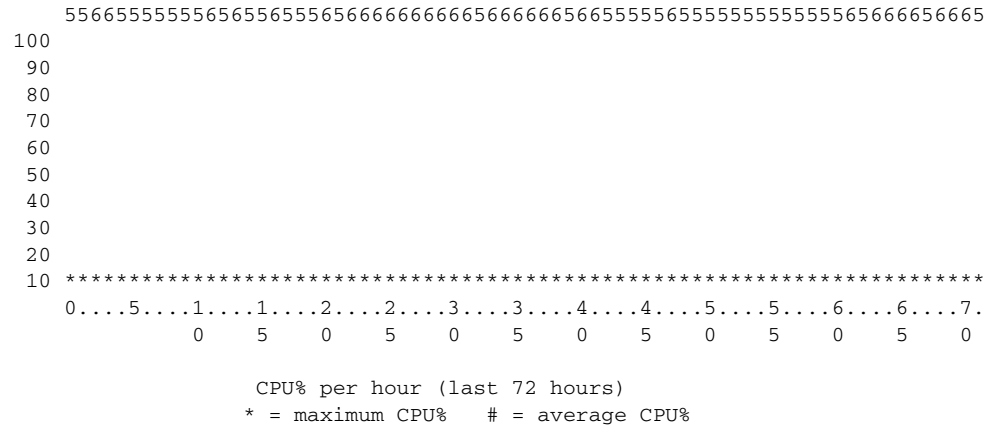
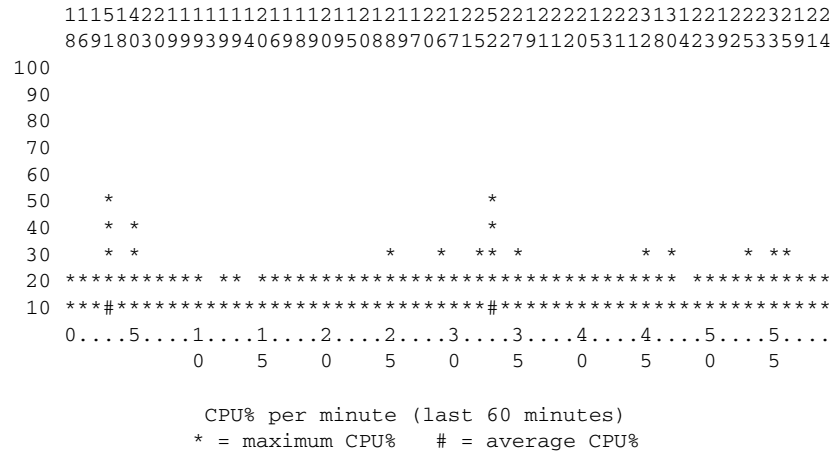
Usage Guidelines This command does not require a license.

Examples This example shows how to display information about the CPU utilization by the system processes for last 60 seconds, 60 minutes, and 72 hours in a graphical format:

```
switch(config)# show processes cpu history

92      5  4   73   474      64   65 575   47
      206324551543534226644368135103343343133313901236334538431915
100
90 #
80 #           #
70 #           #           #           #           #
60 #           #           #           #           #           #
50 #           # #           #           #           #           #
40 #           # #           #           #           #           #
30 #           # #           #           #           #           #
20 ##          # #           #           #           #           #
10 ###         # # #         #           #           #           # # # # #
      0...5...1...1...2...2...3...3...4...4...5...5...
      0      5      0      5      0      5      0      5      0      5

      CPU% per second (last 60 seconds)
      # = average CPU%
```

Related Commands

Command	Description
show processes cpu	Displays the CPU utilization information for processes on the device.
show system resources	Displays the system resources.

show process cpu sort

To display information about CPU processes sorted by CPU utilization, use the **show process cpu sort** command.

show process cpu sort [5sec | 1min | 5min]

Syntax Description	5sec	(Optional) Displays the sorted output based on the processes that use the memory for five seconds.
	1min	(Optional) Displays the sorted output based on the processes that use the memory for one minute.
	5min	(Optional) Displays the sorted output based on the processes that use the memory for five minutes.

Defaults None

Command Modes Any command mode

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

Command History	Release	Modification
	6.2(2)	Added the 5sec , 1min , and 5min keywords.
	4.1(1)	This command was introduced.

Usage Guidelines

The modules perform the polling and send messages to the supervisor module for Simple Network Management Protocol (SNMP) caching. When attached to a module under no load, the CPU spikes approximately every 10 seconds for a short period of time. The name of the process is statsclient.

The CPU spike can go up to 100 percent for a few milliseconds. The process is preemptive and it does not block other high priority processes.

This command does not require a license.

Examples This example shows how to display information about CPU processes sorted by CPU utilization:

```
switch(config)# show process cpu sort
```

```

PID      Runtime(ms)   Invoked    uSecs   1Sec   Process
-----
3622      2335          6843      341     50.0%  pfstat

```

```

 1      2550      4169      611      0.0%  init
 2         13       2676         4      0.0%  migration/0
 3      2091     883525         2      0.0%  ksoftirqd/0
 4         48       6300         7      0.0%  desched/0
 5         10       2816         3      0.0%  migration/1
 6         21     4450597         0      0.0%  ksoftirqd/1
 7         42       6416         6      0.0%  desched/1
 8      1785      8581      208      0.0%  events/0
 9      1560      7426      210      0.0%  events/1
10         58      2731         21      0.0%  khelper
15         0         30         25      0.0%  kthread
24         0         2          5      0.0%  kacpid
104        12         201         62      0.0%  kblockd/0
105         4         138         33      0.0%  kblockd/1
118         0         5          17      0.0%  khubd
185         0         4           3      0.0%  pdflush
186        139      3010         46      0.0%  pdflush
187         0         1           5      0.0%  kswapd0
--More--

```

**Note**

Because the values in the 1Sec column represent a dual-core CPU, the CPU processes may add up to 200 percent. In this example, the pfstat process is consuming 50 percent of one core.

Related Commands

Command	Description
show processes cpu	Displays the CPU utilization information for processes on the device.
show processes cpu history	Displays information about the CPU utilization by the system processes in the last 60 seconds, 60 minutes, and 72 hours in a graphical format.

show processes log

To display the contents of the process log, use the **show processes log** command.

show processes log [**details** | **pid** *process-id* | **vdc-all**]

Syntax Description	details	(Optional) Displays detailed information from the process log.
	pid <i>process-id</i>	(Optional) Displays detailed information from the process log for a specific process. The range is from 1 to 2147483647.
	vdc-all	(Optional) Displays process log information for all virtual device contexts (VDCs).

Defaults Displays summary information for all processes on the device.

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 summary information from the process log:

```
switch# show processes log
VDC Process          PID      Normal-exit  Stack  Core  Log-create-time
-----
 1 aclmgr             3632      N           Y      N     Thu Mar 13 21:37:07 2008
 1 aclmgr             4182      N           Y      N     Wed Mar 12 13:45:38 2008
 1 aclmgr             4205      N           Y      N     Wed Mar 12 13:45:38 2008
 1 adjmgr             4333      N           N      N     Sat Nov 24 06:25:20 2007
 1 arbiter            4332      N           Y      N     Mon Nov 19 10:14:42 2007
 1 arp                3870      N           Y      N     Sat Dec 22 12:02:46 2007
 1 clis               10005     N           Y      N     Sat Nov 24 03:46:13 2007
 1 clis               10268     N           N      N     Fri Dec 14 09:13:53 2007
 1 clis               1040      N           Y      N     Fri Nov 16 13:34:30 2007
...
```

This example shows how to display detailed information from the process log:

```
switch# show processes log details
=====
Service: aclmgr
Description: ACL Mgr

Started at Thu Mar 13 20:34:35 2008 (507163 us)
Stopped at Thu Mar 13 20:37:07 2008 (664205 us)
Uptime: 2 minutes 32 seconds

Start type: SRV_OPTION_RESTART_STATELESS (23)
Death reason: SYSMGR_DEATH_REASON_FAILURE_SIGNAL (2)
System image name: n7000-s1-dk9.4.0.1.gbin
System image version: 4.0(1) S7

PID: 3632
Exit code: signal 11 (core dumped)

CWD: /var/sysmgr/work

Virtual Memory:

CODE      08048000 - 0811CCF4
DATA      0811DCF4 - 0811EBE8
BRK       08121000 - 08259000
STACK     BFFFE270
TOTAL     47244 KB

Register Set:

EBX B7D64CD0      ECX 00000001      EDX 00000001
ESI 41170040      EDI 00000000      EBP BFFFD1C8
EAX 00000401      XDS C010007B      XES 0000007B
EAX FFFFFFFF (orig) EIP B7D5BEF2      XCS 00000073
EFL 00010292      ESP BFFFD1C0      XSS 0000007B

Stack: 4272 bytes. ESP BFFFD1C0, TOP BFFFE270

0xBFFFD1C0: B7D5BEE0 B7D64CD0 BFFFD1D8 B7D5C381 .....L.....
0xBFFFD1D0: B7D2614C FF000226 BFFFD218 B7D232BA La..&.....2..
0xBFFFD1E0: B5542014 B7D25DE0 000007DE B5542014 . T..]..... T.
0xBFFFD1F0: B7D08918 B7D2614C FF000226 08241A54 ...La..&...T.$
0xBFFFD200: B5542014 41170034 08241A54 B7D2614C . T.4..AT$.La..
0xBFFFD210: FF000226 BFFFD2D0 BFFFD278 B7D138CE &.....x....8..
0xBFFFD220: 08246A04 08230074 BFFFD2D0 B7D5A24D .j$.t.#.....M...
0xBFFFD230: B7D6369A 00002000 00000004 00000000 .6... ..
0xBFFFD240: 0000C005 00002000 BFFFD278 B7D3CF90 ..... ..x.....
...
```

This example shows how to display detailed information from the process log for a specific process:

```
switch# show processes pid 3632
=====
Service: arp
Description: Address Resolution Protocol (ARP)

Started at Sat Dec 22 12:02:19 2007 (216828 us)
Stopped at Sat Dec 22 12:02:44 2007 (496964 us)
Uptime: 25 seconds

Start type: SRV_OPTION_RESTART_STATELESS (23)
Death reason: SYSMGR_DEATH_REASON_FAILURE_SIGNAL (2)
System image version: 4.0(0.788) S16

PID: 3912
Exit code: signal 11 (core dumped)

Threads: 3906 3905 4066 3917 3884 3870

CWD: /var/sysmgr/work

Virtual Memory:

      CODE      08048000 - 08071474
      DATA     08072474 - 08074794
      BRK       08075000 - 080DE000
      STACK     BFFFEB80
      TOTAL     107908 KB

Register Set:

      EBX B7EF4264      ECX B53F45CA      EDX B8009B1E
      ESI B601C003      EDI B53F45C8      EBP B53F4578
      EAX B8009B1E      XDS 0000007B      XES 0000007B
      EAX FFFFFFFF (orig) EIP B7EDF9AB      XCS 00000073
      EFL 00010286      ESP B53F4560      XSS 0000007B

Stack: 2688 bytes. ESP B53F4560, TOP BFFFEB80

0xB53F4560: B601C003 00000001 F1EC838D B7EF4264 .....dB..
0xB53F4570: 00000000 00000000 B53F45D8 B7EE0C0D .....E?.....
0xB53F4580: B601C003 B53F45CA B53F45C8 B53F45C0 .....E?..E?..E?.
0xB53F4590: 00000001 B53F45C4 00000000 00000001 .....E?.....
...
```

This example shows how to display process log information for all VDCs on the physical device:

```
switch# show processes log vdc-all
VDC Process          PID      Normal-exit  Stack  Core  Log-create-time
-----
1 aclmgr             3632      N           Y      N     Thu Mar 13 21:37:07 2008
1 aclmgr             4182      N           Y      N     Wed Mar 12 13:45:38 2008
1 aclmgr             4205      N           Y      N     Wed Mar 12 13:45:38 2008
1 adjmgr             4333      N           N      N     Sat Nov 24 06:25:20 2007
1 arbiter            4332      N           Y      N     Mon Nov 19 10:14:42 2007
1 arp                3870      N           Y      N     Sat Dec 22 12:02:46 2007
1 clis               10005     N           Y      N     Sat Nov 24 03:46:13 2007
1 clis               10268     N           N      N     Fri Dec 14 09:13:53 2007
1 clis               1040      N           Y      N     Fri Nov 16 13:34:30 2007
1 clis               10486     N           Y      N     Fri Nov 16 14:58:59 2007
1 clis               10646     N           Y      N     Fri Nov 16 14:59:45 2007
...
```

show processes memory

To display the memory allocation information for processes, use the **show processes memory** command.

show processes memory [shared | sort]

Syntax Description	shared	(Optional) Displays the shared memory allocation.
	sort	(Optional) Displays the sorted list that is based on the memory usage.

Defaults Displays memory allocated to the processes.

Command Modes Any command mode

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

Command History	Release	Modification
	6.2(2)	Added the sort keyword.
	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 memory allocation for processes:

```
switch# show processes memory
```

```

PID      MemAlloc  StackBase/Ptr  Process
-----
 1      147456  bffffda0/bffff890  init
 2           0           0/0  migration/0
 3           0           0/0  ksoftirqd/0
 4           0           0/0  desched/0
 5           0           0/0  migration/1
 6           0           0/0  ksoftirqd/1
 7           0           0/0  desched/1
 8           0           0/0  events/0
 9           0           0/0  events/1
10           0           0/0  khelper
15           0           0/0  kthread
24           0           0/0  kacpid
...

```

This example shows how to display information about shared memory allocation for processes:

```
switch# show processes memory shared
Component          Shared Memory      Size      Used  Available  Reference
                   Address      (kbytes)  (kbytes)  (kbytes)  Count
smm                0X60000000      1024         3       1021       115
cli                0X60110000     24576*      13991    10585       84
am                 0X61920000     14336*       14     14322        7
urib               0X62730000     32768*       648    32120       25
u6rib-ufdm        0X64740000       320*        188     132         2
urib-redis        0X647A0000     4096*         0     4096       25
icmpv6            0X64BB0000     2048         0       2048        2
ip                 0X64DC0000     8192         65     8127       23
urib-ufdm         0X655D0000     2048*         0     2048         2
u6rib             0X657E0000    16384*       507    15877       12
ipv6              0X667F0000     8192         2     8190         9
u6rib-notify      0X67000000     2048*         681    1367       12
rpm               0X67210000     2048         6     2042       11
mrrib             0X67420000    40960         2    40958         3
mrrib-mfdm        0X69C30000     5120         0     5120         2
m6rib            0X6A140000    10240         2    10238         3
m6rib-mfdm        0X6AB50000     2048         10     2038         2
igmp              0X6AD60000     8192         0     8192         2
bgp               0X6B570000     8192         182    8010         1
Shared memory totals - Size: 189 MB, Used: 16 MB, Available: 173 MB
Free Physical Memory: 0 MB kernel, 0 MB user
```

Related Commands

Command	Description
show processes	Displays process information.
show startup-config	Displays the startup configuration.

show ptp brief

To display a brief status of the Precision Time Protocol (PTP) interfaces, use the **show ptp brief** command.

show ptp brief

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 a brief status of the PTP interfaces:

```
switch# show ptp brief
PTP port status
-----
Port          State
-----
Eth7/10      Passive
Eth7/1       Slave
```

This example shows how to display a brief display of the status of the PTP interfaces. The output below indicates that multiple ports that can be in master, passive, disabled, or uncalibrated states but only one port can be in slave state:

```
switch# show ptp brief
PTP port status
-----
Port State
-----
Eth1/1 Master
Eth1/15 Slave
Eth1/31 Master
Eth1/32 Master
```

Related Commands	Command	Description
	show ptp clock	Displays the properties of the local clock.
	show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
	show ptp counters	Displays PTP specific packet counters for all Ethernet interfaces or for a specified interface.
	show ptp corrections	Displays the last few PTP corrections.
	show ptp delay	Displays the link delay and residence delay status of the PTP interface.
	show ptp parent	Displays the properties of the PTP parent.
	show ptp port	Displays the status of the PTP port.
	show ptp time-property	Displays the properties of the PTP clock.

show ptp clock

To display the Precision Time Protocol (PTP) clock information, use the **show ptp clock** command.

show ptp clock

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.
	7.3(0)D1(1)	This command was modified. The field <i>PTP Device Type</i> has been removed from the output. The fields <i>PTP Device Mode</i> , <i>PTP Device Encapsulation</i> , <i>PTP SwitchLatency Estimated</i> have been added to the output.
	7.3(0)DX(1)	This command was modified. The fields <i>PTP Source IP Address</i> , <i>Two-Step Clock Mode</i> , and <i>Slave-Only Clock Mode</i> have been added to the output.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the PTP clock information. The below output indicate that the PTP device is running in gPTP mode. The field description is self-explanatory.

```
switch# show ptp clock

PTP Device Mode : boundary-clock
PTP Device Encapsulation : layer-3
PTP Source IP Address : 1.1.1.1
PTP SwitchLatency Estimated : 5000(ns)
Clock Identity : 84:78:ac:ff:fe:56:bc:c1
Clock Domain : 0
Two-Step Clock Mode : Enabled
Slave-Only Clock Mode : Disabled
Number of PTP ports : 1
Priority1 : 255
Priority2 : 255
Clock Quality :
```

■ show ptp clock

```

Class : 248
Accuracy : 254
Offset (log variance) : 65535
Offset From Master : 0
Mean Path Delay : 0
Steps removed : 0
Local clock time : Tue Mar 15 02:23:45 2016

```

Related Commands

Command	Description
show ptp brief	Displays the PTP status.
show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
show ptp counters	Displays PTP specific packet counters for all Ethernet interfaces or for a specified interface.
show ptp corrections	Displays the last few PTP corrections.
show ptp delay	Displays the link delay and residence delay status of the PTP interface.
show ptp parent	Displays the properties of the PTP parent.
show ptp port	Displays the status of the PTP port.
show ptp time-property	Displays the properties of the PTP clock.

show ptp clock foreign-masters-record

To display information about the state of foreign masters known to the Precision Time Protocol (PTP) process, use the **show ptp clocks foreign-masters-record** command.

```
show ptp clock foreign-masters-record {interface [ethernet slot/port]}
```

Syntax Description

interface	Specifies an interface.
ethernet slot/port	(Optional) Specifies an Ethernet interface.

Defaults

None

Command Modes

Any command mode

Supported User Roles

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 information about the state of foreign masters known to the PTP process. The below output indicates that the Ethernet 1/15 is receiving Announce messages correctly.

```
switch# show ptp clocks foreign-masters-record interface Ethernet 1/1
```

```
P1=Priority1, P2=Priority2, C=Class, A=Accuracy,
```

```
OSLV=Offset-Scaled-Log-Variance, SR=Steps-Removed
```

```
GM=Is grandmaster
```

```
-----  
Interface Clock-ID P1 P2 C A OSLV SR
```

```
-----  
Eth1/15 22:22:22:ff:fe:22:22:22 128 248 6 35 0 0 GM
```

Related Commands	Command	Description
	show ptp brief	Displays the PTP status.
	show ptp clock	Displays the properties of the local clock.
	show ptp counters	Displays PTP specific packet counters for all Ethernet interfaces or for a specified interface.
	show ptp corrections	Displays the last few PTP corrections.
	show ptp parent	Displays the properties of the PTP parent.
	show ptp port	Displays the status of the PTP port.
	show ptp time-property	Displays the properties of the PTP clock.

show ptp corrections

To display the history of the Precision Time Protocol (PTP) clock corrections on the Ethernet interfaces, use the **show ptp corrections** command.

show ptp corrections

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 the history of the PTP clock corrections on the Ethernet interfaces:

```
switch# show ptp corrections
PTP corrections
-----
Slave Port      Sup time          Corrections(s,ns)
-----
Eth7/10         2010 Mar 11 03:14:55  -1 1210900
Eth7/10         2010 Mar 11 03:14:55  -340978
```

Related Commands	Command	Description
	show ptp brief	Displays the PTP status.
	show ptp clock	Displays the properties of the local clock.
	show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
	show ptp counters	Displays PTP specific packet counters for all Ethernet interfaces or for a specified interface.

Command	Description
show ptp parent	Displays the properties of the PTP parent.
show ptp port	Displays the status of the PTP port.
show ptp time-property	Displays the properties of the PTP clock.

show ptp counters

To display the Precision Time Protocol (PTP) packet counters for all Ethernet interfaces or for a specified interface, use the **show ptp counters** command.

show ptp counters [**all** | **interface** *interface-name slot/port*]

Syntax Description	<i>interface-name</i> <i>slot/port</i>	Specifies an interface name and slot/port number.
---------------------------	---	---

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

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

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

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

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

Examples This example shows how to display the PTP counters of the Ethernet interface:

```
switch# show ptp counters interface ethernet 4/47
PTP Packet Counters of Interface Eth4/47:
-----
Packet Type                TX                RX
-----
Announce                    2                 294
Sync                        1                 147
FollowUp                     1                 147
Delay Request               113                0
Delay Response              0                 113
PDelay Request              0                  0
PDelay Response             0                  0
PDelay Followup             0                  0
Management                  0                  0
-----
```

Related Commands	Command	Description
	clear ptp counters	Clears PTP specific packet counters for all Ethernet interfaces or for a specified interface.
	show ptp brief	Displays the PTP status.
	show ptp clock	Displays the properties of the local clock.
	show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
	show ptp delay	Displays the link delay and residence delay status of the PTP interface.
	show ptp parent	Displays the properties of the PTP parent.
	show ptp port	Displays the status of the PTP port.
	show ptp time-property	Displays the properties of the PTP clock.

show ptp delay

To display the link delay and residence delay status of the Precision Time Protocol (PTP) interfaces, use the **show ptp delay** command.

show ptp delay summary

Syntax	Description
interface	Specifies an interface.
ethernet <i>slot/port</i>	(Optional) Specifies an Ethernet interface.

Defaults None

Command Modes Any command mode

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

Command History	Release	Modification
	5.2(1)	This command was introduced.
	7.3(0)D1(1)	This command was modified. The field <i>RD</i> , indicating Residence Delay, has been added to the output.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the link delay and residence delay status of the PTP interfaces. The output indicates the measured link delay and the configured residence delay, nanoseconds. The field descriptions are self-explanatory.

```
switch# show ptp delay summary
```

Legend:

PM(Port mode): BC-Boundary Clock, TC-Transparent Clock, GP-Generalized PTP

PS(Port state): M-Master, S-Slave, P-Passive, D-Disabled, C-Uncalibrated

LD: Link Delay

RD: Residence Delay

```
-----  
Interface PM PS LD(ns) RD(ns)  
-----
```

```
Eth1/1 GP M 220 5000
```

```
Eth1/15 GP S 204 5000
```

```
Eth1/31 GP M 360 5000
```

```
Eth1/32 GP M 516 5000
```

Related Commands	Command	Description
	show ptp clock	Displays the properties of the local clock.
	show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
	show ptp counters	Displays PTP specific packet counters for all Ethernet interfaces or for a specified interface.
	show ptp corrections	Displays the last few PTP corrections.
	show ptp parent	Displays the properties of the PTP parent.
	show ptp port	Displays the status of the PTP port.
	show ptp time-property	Displays the properties of the PTP clock.

show ptp parent

To display information about the parent and grand master of the Precision Time Protocol (PTP) clock, use the **show ptp parent** command.

show ptp parent

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 information about the parent and grand master of the PTP clock:

```
switch# show ptp parent
Parent Clock:
Parent Clock Identity: 0:18:ba:ff:ff:d8: e:16
Parent Port Number: 1546
Observed Parent Offset (log variance): N/A
Observed Parent Clock Phase Change Rate: N/A

Grandmaster Clock:
Grandmaster Clock Identity: 0:18:ba:ff:ff:d8: e:16
Grandmaster Clock Quality:
  Class: 248
  Accuracy: 254
  Offset (log variance): 65535
  Priority1: 255
  Priority2: 255
```

Related Commands	Command	Description
	show ptp brief	Displays the PTP status.
	show ptp clock	Displays the properties of the local clock.
	show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
	show ptp counters	Displays PTP specific packet counters for all Ethernet interfaces or for a specified interface.
	show ptp corrections	Displays the last few PTP corrections.
	show ptp port	Displays the status of the PTP port.
	show ptp time-property	Displays the properties of the PTP clock.

show ptp port

To display information about the Precision Time Protocol (PTP) port, use the **show ptp port** command.

```
show ptp port {interface [ethernet]}
```

Syntax Description	Parameter	Description
	interface	Specifies the interface.
	ethernet	(Optional) Specifies an Ethernet interface.

Defaults None

Command Modes Any command mode

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

Command History	Release	Modification
	5.2(1)	This command was introduced.
	7.3(0)DX(1)	This command was modified. The fields <i>Port mode</i> , <i>Port encapsulation</i> , and <i>PTP vlan</i> have been added to the output.

Usage Guidelines This command does not require a license.

Examples This example shows how to display information about the PTP port:

```
switch# show ptp port interface ethernet 5/1
PTP Port Dataset: Eth5/1
Port identity: clock identity: 8c:60:4f:ff:fe:88:ae:42
Port identity: port number: 1024
PTP version: 2
Port state: Slave
Port mode: generalized-PTP
Port encapsulation: layer-2
PTP vlan: 1
Delay request interval(log mean): 2
Announce receipt time out: 3
Peer mean path delay: 0
Announce interval(log mean): 1
Sync interval(log mean): 2
Delay Mechanism: End to End
Peer delay request interval(log mean): 0
```

Related Commands	Command	Description
	show ptp brief	Displays the PTP status.
	show ptp clock	Displays the properties of the local clock.
	show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
	show ptp counters	Displays PTP specific packet counters for all Ethernet interfaces or for a specified interface.
	show ptp corrections	Displays the last few PTP corrections.
	show ptp parent	Displays the properties of the PTP parent.
	show ptp time-property	Displays the properties of the PTP clock.

show ptp time-property

To display the Precision Time Protocol (PTP) clock properties, use the **show ptp time-property** command.

show ptp time-property

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 the PTP clock properties:

```
switch# show ptp time-property
PTP CLOCK TIME PROPERTY:
  Current UTC Offset valid: 0
  Current UTC Offset: 33
  Leap59: 0
  Leap61: 0
  Time Traceable: 0
  Frequency Traceable: 0
  PTP Timescale: 0
  Time Source: 0xA0(internal Oscillator)
```

Related Commands	Command	Description
	show ptp brief	Displays the PTP status.
	show ptp clock	Displays the properties of the local clock.
	show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.

Command	Description
show ptp counters	Displays PTP specific packet counters for all Ethernet interfaces or for a specified interface.
show ptp corrections	Displays the last few PTP corrections.
show ptp parent	Displays the properties of the PTP parent.
show ptp port	Displays the status of the PTP port.

show redundancy status

To show detailed information about redundancy, use the **show redundancy status** command.

show redundancy status

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to displays redundancy information:

```
switch# show redundancy status
Redundancy mode
-----
      administrative:  HA
      operational:    None

This supervisor (sup-6)
-----
      Redundancy state:  Active
      Supervisor state:  Active
      Internal state:    Active with no standby

Other supervisor (sup-5)
-----
      Redundancy state:  Not present

      Supervisor state:  N/A
      Internal state:    N/A

System start time:          Fri Aug 15 15:55:19 2008

System uptime:              3 days, 23 hours, 57 minutes, 22 seconds
```

■ show redundancy status

```
Kernel uptime:          4 days, 0 hours, 1 minutes, 39 seconds
Active supervisor uptime: 3 days, 23 hours, 57 minutes, 22 secondss
```

show resource monitor-session

To display the resources that are available for a traditional Ethernet Switched Port Analyzer (SPAN) session, use the **show resource monitor-session** command.

show resource monitor-session

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
	6.2(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the resources that are available for traditional SPAN sessions:

```
switch# show resource monitor-session
Resource           Min      Max      Used      Unused      Avail
-----
monitor-session    0        2        0         0           2
```

Related Commands	Command	Description
	show resource monitor-session-extended	Displays the resources that are available for an extended SPAN and ERSPAN session.

show resource monitor-session-extended

To display the resources that are available for the extended Ethernet Switched Port Analyzer (SPAN) or Encapsulated Remote Switched Port Analyzer (ERSPAN) sessions, use the **show resource monitor-session-extended** command.

show resource monitor-session-extended

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
	6.2(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the resources that are available for extended SPAN or ERSPAN sessions:

```
switch# show resource monitor-session-extended
```

Resource	Min	Max	Used	Unused	Avail
-----	---	---	----	-----	-----
monitor-session-extended	0	12	0	0	12

Related Commands	Command	Description
	show resource monitor-session	Displays the resources that are available for a traditional SPAN session.

show rmon

To display the configuration or onboard logs, use the **show rmon** command.

```
show rmon {alarms | events | hcalarms | logs | status}
```

Syntax Description		
alarms		Displays the configured 32-bit RMON alarms.
events		Displays the configured RMON events.
hcalarms		Displays the configured 64-bit HC (High Capacity) RMON alarms.
logs		Displays the RMON event log.
status		Displays the RMON information.

Defaults None

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 configured RMON alarms:

```
switch# show rmon alarms
Alarm 20 is active, owned by test
Monitors 1.3.6.1.2.1.2.2.1.16.30 every 30 second(s)
Taking delta samples, last value was 17
Rising threshold is 15, assigned to event 1
Falling threshold is 0, assigned to event 0
On startup enable rising or falling alarm
```

This example shows how to display the configured RMON events:

```
switch# show rmon events
Event 4 is active, owned by administrator@london_op_center
Description is WARNING(4)
Event firing causes log and trap to community public, last fired 03:32:43
```

This example shows how to display the configured high-capacity RMON alarms:

```
switch# show rmon hcalarms
High Capacity Alarm 1 is active, owned by cseSysCPUUtilization.0@test
Monitors 1.3.6.1.4.1.9.9.305.1.1.1.0 every 10 second(s)
Taking absolute samples, last value was 0
Rising threshold is 60, assigned to event 4
Falling threshold is 59, assigned to event 4
On startup enable rising alarm
```

This example shows how to display RMON configuration and logged information:

```
switch# show rmon status
Maximum allowed 32 bit or 64 bit alarms : 512
Number of 32 bit alarms configured : 0
Number of 64 bit hcalarms configured : 0
switch#
```

Related Commands

Command	Description
rmon alarm	Configures the 32-bit RMON alarm.
rmon event	Configures an RMON event.
rmon hcalarm	Configures the 64-bit RMON alarm.

show run mmode

To display the currently running maintenance profile configuration on a switch, use the **show run mmode** command.

show run mmode [all]

Syntax Description	all	Displays the currently running maintenance profile configuration along with the defaults.
---------------------------	------------	---

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

Command Modes	Privileged EXEC
----------------------	-----------------

SupportedUserRoles	network-admin network-operator vdc-admin 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 currently running maintenance profile configuration on a switch:
-----------------	--

```
switch(config)# show run mmode

!Command: show running-config mmode
!Time: Wed May 13 22:37:02 1970

version 7.3(0)D1(1)
configure maintenance profile normal-mode
  router isis 100
    no isolate
  router ospf 100
    no isolate
  router bgp 100
    no isolate
configure maintenance profile maintenance-mode
  router bgp 100
    isolate
  router ospf 100
    isolate
  router isis 100
```

```

    isolate
configure terminal

```

Related Commands	Command	Description
	configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
	show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
	system mode maintenance always-use-custom-profile	Applies the existing custom maintenance mode profile and prevents creation of auto-generated maintenance mode profile.
	system mode maintenance on-reload reset-reason	Boots the switch into maintenance mode automatically in the event of a specified system crash.
	system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the shutdown command and not the default isolate command).
	system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

show running-config cdp

To display the Cisco Discovery Protocol (CDP) running configuration, use the **show running-config cdp** command.

show running-config cdp [all]

Syntax Description	all (Optional) Displays the running configuration with defaults.
---------------------------	---

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

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

Supported User Roles	network-admin network-operator vdc-admin 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 CDP running configuration with defaults:

```
switch(config)# show running-config cdp all
!Command: show running-config cdp all
!Time: Fri Jan 15 22:19:20 2010
```

```
version 5.0(2)
logging level cdp 6
cdp advertise v2
cdp enable
cdp holdtime 180
cdp timer 60
cdp format device-id system-name
```

```
interface Ethernet6/1
  cdp enable
```

```
interface Ethernet6/2
  cdp enable
```

```
interface Ethernet6/3
```

```

    cdp enable

interface Ethernet6/4
  cdp enable

interface Ethernet6/5
  cdp enable

interface Ethernet6/6
  cdp enable

interface Ethernet6/7
  cdp enable

interface Ethernet6/8
  cdp enable

interface Ethernet7/1
  cdp enable

interface Ethernet7/2
  cdp enable

interface Ethernet7/3
  cdp enable

interface Ethernet7/4
  cdp enable

interface Ethernet7/5
  cdp enable

interface Ethernet7/6
  cdp enable

interface Ethernet7/7
  cdp enable

interface Ethernet7/8
  cdp enable
--More--
switch(config)#

```

Related Commands

Command	Description
enable cdp	Enables CDP on an interface.

show running-config diagnostic

To display the running-configuration diagnostics, use the **show running-config diagnostic** command.

show running-config diagnostic [all]

Syntax Description	all (Optional) Displays the running-configuration diagnostics with defaults.
---------------------------	---

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 running-configuration diagnostics:
-----------------	--

```
switch(config)# show running-config diagnostic all
```

```
!Command: show running-config diagnostic all
!Time: Fri Jan 15 22:22:01 2010
```

```
version 5.0(2)
diagnostic bootup level complete
```

```
switch(config)#
```

Related Commands	Command	Description
	show startup-config diagnostic	Displays the startup-configuration diagnostics.

show running-config eem

To display the Embedded Event Manager (EEM) running configuration, use the **show running-config eem** command.

show running-config eem

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows the Embedded Event Manager (EEM) running configuration:

```
switch# show running-config eem
switch(config)# show running-config eem

!Command: show running-config eem
!Time: Fri Jan 15 22:23:28 2010

version 5.0(2)

switch(config)#
```

show running-config lldp

To display the global Link Layer Discovery Protocol (LLDP) configuration, use the **show running-config lldp** command.

show running-config lldp

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
	5.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the global LLDP configuration:

```
switch(config)# show running-config lldp

!Command: show running-config lldp
!Time: Mon Jan 11 02:19:29 2010

version 5.0(2)
feature lldp

logging level lldp 5

switch(config)#
```

Related Commands	Command	Description
	feature lldp	Enables the LLDP feature globally.

show running-config monitor

To display information about the running Ethernet Switched Port Analyzer (SPAN) configuration on the system, use the **show running-config monitor** command.

show running-config monitor [all]

Syntax Description	all (Optional) Displays the running SPAN configuration with defaults.
---------------------------	--

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 running SPAN configuration on the system:

```
switch(config)# show running-config monitor
!Command: show running-config monitor
!Time: Fri Jan 15 22:24:43 2010

version 5.0(2)
logging level monitor 6
switch(config)#
```

Related Commands	Command	Description
	show monitor	Displays information about the SPAN configuration.
	show startup-config monitor	Displays information about the startup SPAN configuration.

show running-config netflow

To display the NetFlow configuration that is currently on your switch, use the **show running-config netflow** command.

show running-config netflow [all]

Syntax Description	all (Optional) Displays the NetFlow configuration with defaults.				
Defaults	None				
Command Modes	Any command mode				
SupportedUserRoles	network-admin network-operator vdc-admin vdc-operator				
Command History	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>4.0(1)</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	4.0(1)	This command was introduced.
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 NetFlow configuration that is running on the switch:

```
switch(config)# show running-config netflow all
!Command: show running-config netflow all
!Time: Fri Jan 15 22:26:04 2010

version 5.0(2)
feature netflow

flow timeout active 1800
flow timeout inactive 15
flow exporter new_flow_1
  transport udp 9995
  dscp 0
  version 5
flow exporter new_flow_2
  transport udp 9995
  dscp 0
  version 9
  template data timeout 1800
flow exporter test
  transport udp 9995
  dscp 0
  version 9
  template data timeout 1800
flow exporter Custom-Flow-Exporter-1
  transport udp 9995
  dscp 0
  version 9
  template data timeout 1800
  option exporter-stats timeout 1200
switch(config)#
```

Related Commands

Command	Description
show startup-config netflow	Displays the startup NetFlow configurations.

show running-config ntp

To display the Network Time Protocol (NTP) configuration that is currently running on the system, use the **show running-config ntp** command.

show running-config ntp [all]

Syntax Description	all (Optional) Displays all of the NTP running configuration.
---------------------------	--

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 NTP configuration that is currently running:

```
switch(config)# show running-config ntp

!Command: show running-config ntp
!Time: Fri Jan 15 22:28:34 2010

version 5.0(2)
ntp server 190.0.2.10
ntp server 192.0.2.10 prefer use-vrf RED key 786
ntp peer 2001:db8::4101
ntp authentication-key 3 md5 fewhg 7
ntp authentication-key 34567 md5 qabzk7f 7
ntp logging
ntp access-group peer abcd*123

switch(config)#
```

■ show running-config ntp

Related Commands	Command	Description
	show ntp source-interface	Displays information about the NTP source interface.
	show startup-config ntp	Displays information about the startup NTP configuration of the switch.

show running-config snmp

To display the running Simple Network Management Protocol (SNMP) configuration of a system, use the **show running-config snmp** command.

show running-config snmp [all]

Syntax Description	all (Optional) Displays the running SNMP configuration with defaults.
---------------------------	--

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 running SNMP configuration of a system:

```
switch(config)# show running-config snmp
!Command: show running-config snmp
!Time: Fri Jan 15 22:30:27 2010

version 5.0(2)
snmp-server user admin network-admin auth md5 0x1dc65f45a9d8e41dbccd76380946d6c3
priv 0x1dc65f45a9d8e41dbccd76380946d6c3 localizedkey

switch(config)#
```

Related Commands!	Command	Description
	show startup-config snmp	Displays the startup SNMP configuration.
	show port-monitor active	Displays active port-monitor policies.

show sampler

To display a NetFlow sampler, use the **show sampler** command.

```
show sampler [name] [sampler-name]
```

Syntax Description	name	(Optional) Specifies a sampler.
	<i>sampler-name</i>	(Optional) Sampler name. The maximum number of characters is 32.

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

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

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

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

Usage Guidelines	You can create a sampler to define the NetFlow sampling rate for a flow. This command does not require a license.
------------------	--

Examples	This example shows how to display a NetFlow sampler: <pre>switch(config)# show sampler Sampler Netflow-Sampler-1: mode 1 out-of 1000 switch(config)#</pre>
----------	--

Related Commands	Command	Description
	sampler	Configures a sampler to collect data for a user selected packet ratio to preserve hardware resources.

show scheduler

To display information about scheduled maintenance jobs, use the **show scheduler** command.

```
show scheduler { config | internal [mem-stats] | job [name jobname] | logfile | schedule [name
  schedulename]}
```

Syntax Description		
config		Displays scheduler configuration information.
internal		Provides the internal scheduler information as specified.
mem-stats		(Optional) Provides the scheduler internal memory information as specified.
job		Displays job information as specified.
name jobname		(Optional) Displays information for the specified scheduler job name.
logfile		Displays the scheduler log file as specified.
schedule		Displays the scheduler timetable as specified.
name schedulename		(Optional) Displays the scheduler timetable for the specified schedule name.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines

To use this command, the scheduler must already be enabled.

To enable the scheduler, use the **feature scheduler** command.

This command does not require a license.

Examples This example shows how to display the scheduler configuration:

```
switch# show scheduler config
config terminal
  feature scheduler
  scheduler logfile size 16
```

```

end

config terminal
  scheduler job name test-1
end

config terminal
  scheduler job name test
end

config terminal
  scheduler job name test1
end

config terminal
  scheduler job name test2
end

switch#

```

This example shows how to display the specified scheduler timetable:

```

switch# show scheduler schedule name test
Schedule Name : test
-----
User Name : admin
Schedule Type : Run once on Tue Aug 10 09:48:00 2008
Last Execution Time: Tue Aug 10 09:48:00 2008
-----
Job Name      Status
-----
addMem       Success (0)

```

Related Commands

Command	Description
scheduler	Configures maintenance jobs.
feature scheduler	Enables the scheduler feature for scheduling maintenance jobs.

show snapshots

To display the snapshots present on the switch, use the **show snapshots** command.

show snapshots

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Privileged EXEC

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

Command History	Release	Modification
	7.2(0)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the snapshots present on the switch:

```
switch# show snapshots
Snapshot Name          Time                Description
-----
before_maintenance    Wed May 13 13:21:16 1970  system-internal-snapshot
new                   Mon May 11 15:51:27 1970  after if down
```



Note

In the above output example, “before_Maintenance” is the system-generated snapshot and “new” is the user-generated snapshot.

Related Commands	Command	Description
	snapshot create <i>name</i> <i>description</i>	Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.
	snapshot delete	Deletes a snapshot.
	show snapshots compare	Displays the comparison between two snapshots.

Command	Description
show snapshots dump	Displays content of the various sections in a generated snapshot.
snapshot section	Adds or deletes a snapshot section.

show snapshots compare

To display the comparison between the two snapshots on a switch, use the **show snapshots compare** command.

```
show snapshots snapshot-1 snapshot-2 [ipv4routes | ipv6routes | summary]
```

Syntax Description		
	<i>snapshot-1</i> <i>snapshot-2</i>	Displays the comparison between the two snapshots.
	ipv4routes	Displays a comparison of the IPv4 routes between the two snapshots.
	ipv6routes	Displays a comparison of the IPv6 routes between the two snapshots.
	summary	Displays a summary of the comparison between the two snapshots.

Defaults None

Command Modes Privileged EXEC

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

Command History	Release	Modification
	7.2(0)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples

This example shows how to display a comparison between two snapshots:

```
switch# show snapshots compare before_maint during_maint

=====
Feature          Tag          before_maint    during_maint
=====
[bgp]
-----

[eigrp]
-----

[eigrpv6]
-----

[interface]
-----

... <snip> ...

[v4route]
-----

      [ipprefix:0.0.0.0/32]
            uptime          PT24M32S          **PT58M37S**

      [ipprefix:127.0.0.0/8]
            uptime          PT24M32S          **PT58M37S**
```

This example shows how to display a summary of the comparison between two snapshots:

```
switch# show snapshots compare before_maintenance after_maintenance summary

=====
Feature          before_maintenance after_maintenance
changed
=====
basic summary
# of interfaces          50          50
# of vlans                0           0
# of ipv4 routes vrf default    13         13
# of ipv4 paths vrf default     13         13
# of ipv4 routes vrf management  14         14
# of ipv4 paths vrf management  14         14
# of ipv6 routes vrf default     3           3
# of ipv6 paths vrf default      3           3

interfaces
# of eth interfaces      48          48
# of eth interfaces up   1           1
# of eth interfaces down 47          47
# of eth interfaces other 0           0

# of vlan interfaces     0           0
# of vlan interfaces up  0           0
# of vlan interfaces down 0           0
# of vlan interfaces other 0           0
```

This example shows how to display a comparison of the IPv4 routes between the two snapshots:

```
switch# show snapshots compare snapshot1 snapshot2 ipv4routes
```

Related Commands

Command	Description
show snapshots	Displays snapshots on a switch.
show snapshots dump	Display content of the various sections in a generated snapshot.
show snapshots sections	Displays content of the various sections in a generated snapshot.
snapshot create <i>name</i> <i>description</i>	Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.
snapshot delete	Deletes a snapshot.
show snapshots dump	Displays content of the various sections in a generated snapshot.
snapshot section	Adds or deletes a snapshot section.

show snapshots dump

To display content of the various sections in a generated snapshot, use the **show snapshots dump** command.

show snapshots dump *snapshot-name*

Syntax Description	<i>snapshot-name</i> Name of the snapshot.
---------------------------	--

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

Command Modes	Privileged EXEC
----------------------	-----------------

SupportedUserRoles	network-admin network-operator vdc-admin 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	The following example shows how to display content of the various sections in a generated snapshot:
-----------------	---

```
switch# show snapshots dump new

File: interface.xml      Snapshot: new
=====
<?xml version="1.0" encoding="ISO-8859-1"?>
<nf:rpc-reply xmlns:nf="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns="http://www.cisco.com/nxos:7.3.0.D1.1.:if_manager">
  <nf:data>
    <show>
      <interface>
        <__readonly__>
          <TABLE_interface>
            <ROW_interface>
              <interface>mgmt0</interface>
              <state>up</state>
              <admin_state>up</admin_state>
              <eth_hw_desc>GigabitEthernet</eth_hw_desc>
              <eth_hw_addr>5cfc.666d.3b34</eth_hw_addr>
              <eth_bia_addr>5cfc.666d.3b34</eth_bia_addr>
              <eth_ip_addr>5.24.100.101</eth_ip_addr>
            </ROW_interface>
          </TABLE_interface>
        </__readonly__>
      </interface>
    </show>
  </nf:data>
</nf:rpc-reply>
```

```

<eth_ip_mask>16</eth_ip_mask>
<eth_ip_prefix>5.24.0.0</eth_ip_prefix>
<eth_mtu>1500</eth_mtu>

```

Related Commands

Command	Description
show snapshots	Displays snapshots on a switch.
show snapshots sections	Displays content of the various sections in a generated snapshot.
snapshot create <i>name</i> <i>description</i>	Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.
snapshot delete	Deletes a snapshot.
show snapshots dump	Displays content of the various sections in a generated snapshot.
snapshot section	Adds or deletes a snapshot section.

show snapshots sections

To display the user-specified sections in a snapshot, use the **show snapshots sections** command.

show snapshots sections

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Privileged EXEC

SupportedUserRoles network-admin
network-operator
vdc-admin
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 user-specified sections in a snapshot:

```
switch# show snapshots sections
user-specified snapshot sections
-----
[v4route]
show command: show ip route detail vrf all
row id: ROW_prefix
key1: ipprefix
key2: -
```

Related Commands	Command	Description
	show snapshots compare	Displays the comparison between two snapshots.
	show snapshots dump	Displays content of the various sections in a generated snapshot.
	snapshot create <i>name</i> <i>description</i>	Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.

Command	Description
snapshot delete	Deletes a snapshot.
snapshot section	Adds or deletes a snapshot section.

show snmp

To display Simple Network Management Protocol (SNMP) information, use the **show snmp** command.

show snmp

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples

This example shows how to display the SNMP information:

```

switch(config)# show snmp
sys contact:
sys location: anyplace, Anywhere

0 SNMP packets input
  0 Bad SNMP versions
  0 Unknown community name
  0 Illegal operation for community name supplied
  0 Encoding errors
  0 Number of requested variables
  0 Number of altered variables
  0 Get-request PDUs
  0 Get-next PDUs
  0 Set-request PDUs
0 SNMP packets output
  0 Too big errors
  0 No such name errors
  0 Bad values errors
  0 General errors

Community                               Group / Access
-----
Comm2                                    network-admin
testCommunity                            vdc-operator
com3                                       vdc-admin

-----
SNMP USERS
-----

User          Auth  Priv(enforce)  Groups
-----
foo           md5   aes-128(no)   network-operator
              vdc-admin
              network-admin
User3         md5   no            network-operator
admin        md5   des(no)       network-admin
user1       md5   des(no)       vdc-admin

NOTIFICATION TARGET USERS (configured for sending V3 Inform)
-----

User          Auth  Priv
-----
foo           md5   no
(EngineID 11:22:33:44:55)

foo           sha   no
(EngineID 33:0:33:22:33)

SNMP Tcp Authentication Flag : Enabled.
    
```

■ show snmp

Related Commands

Command	Description
snmp-server community	Configures SNMP community strings.

show snmp community

To display the Simple Network Management Protocol (SNMP) community strings, use the **show snmp community** command.

show snmp community

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
	4.0(1)	This command was introduced.

Usage Guidelines Use the **show snmp community** command to display a list of SNMP communities configured on a device.

In Cisco NX-OS Release 4.0(2) and later releases, the **show snmp-community** command displays any SNMP contexts that are mapped to SNMPv2c communities.

This command does not require a license.

Examples This example shows how to display the SNMP community strings and any associated SNMP contexts:

```
switch# show snmp community
Community                Group / Access  context
-----                -
testCommunity            vdc-operator   contextB
Comm2                     network-admin
com3                      vdc-admin
```

■ show snmp community

Related Commands	Command	Description
	snmp-server community	Configures SNMP community strings.
	snmp-server mib community-map	Maps SNMP community strings to SNMP contexts.

show snmp context

To display the Simple Network Management Protocol (SNMP) context mapping, use the **show snmp context** command.

show snmp context

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
	4.0(2)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the SNMP context mapping:

```
switch# show snmp context
-----
Context                [Protocol instance, VRF, Topology]
-----
contextB                instancel,
                        vrfl,
                        topl
-----
```

Related Commands	Command	Description
	snmp-server context	Configures SNMP context mapping.

show snmp engineID

To display the Simple Network Management Protocol (SNMP) engine ID, use the **show snmp engineID** command.

show snmp engineID

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the SNMP engine ID:

```
switch(config)# show snmp engineID
Local SNMP engineID: [Hex] 80000009030005300A0B0C
                    [Dec] 128:000:000:009:003:000:005:048:010:011:012
```

Related Commands	Command	Description
	snmp-server user	Configures SNMP target notification users.

show snmp group

To display the Simple Network Management Protocol (SNMP) groups, use the **show snmp group** command.

show snmp group

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples

This example shows how to display the SNMP groups:

```
switch(config)# show snmp group

role: network-admin
description: Predefined network admin role has access to all commands
on the switch
-----
Rule    Perm    Type      Scope      Entity
-----
1       permit  read-write

role: network-operator
description: Predefined network operator role has access to all read
commands on the switch
-----
Rule    Perm    Type      Scope      Entity
-----
1       permit  read

role: vdc-admin
description: Predefined vdc admin role has access to all commands within
a VDC instance
-----
Rule    Perm    Type      Scope      Entity
-----
1       permit  read-write

role: vdc-operator
description: Predefined vdc operator role has access to all read commands
within a VDC instance
-----
Rule    Perm    Type      Scope      Entity
-----
1       permit  read
```

Related Commands

Command	Description
role name	Configures security roles used as SNMP groups.

show snmp host

To display the Simple Network Management Protocol (SNMP) host notification receivers, use the **show snmp host** command.

show snmp host

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the SNMP hosts:

```
switch(config)# show snmp host
-----
Host                               Port Version  Level  Type  SecName
-----
192.0.2.1                           33   v1       noauth trap  Comm2
-----
192.0.2.2                           162  v3       auth   trap  comm3
-----
Use VRF: Blue
-----
192.0.2.10                           162  v3       auth   trap  testCommunity
-----
Filter VRF: Red
-----
```

■ show snmp host

Related Commands

Command	Description
snmp-server host	Configures SNMP hosts.

show snmp sessions

To display the current Simple Network Management Protocol (SNMP) sessions, use the **show snmp sessions** command.

show snmp sessions

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the SNMP sessions:

```
switch(config)# show snmp sessions
```

Related Commands	Command	Description
	snmp-server user	Configures SNMP users.

show snmp source-interface

To display the Simple Network Management Protocol (SNMP) source interface through which notifications are sent, use the **show snmp source-interface** command.

show snmp source-interface

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
	4.2(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the SNMP source interface through which notifications are sent:

```
switch(config)# show snmp source-interface
-----
Notification                source-interface
-----
trap                        lookback1
inform                      Ethernet1/1
-----
switch(config)#
```

Related Commands	Command	Description
	snmp-server sourceinterface	Configures an SNMP source interface through which notifications are sent.

show snmp trap

To display the Simple Network Management Protocol (SNMP) notification enable status, use the **show snmp trap** command.

show snmp trap

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the SNMP notification enable status:

```
switch(config)# show snmp trap
Trap type           Enabled
-----
aaa server state-change      No
callhome                   No
entity fru                  Yes
license                     Yes
snmp authentication         No
vrrp                        No
link                        No
bridge topologychange       No
bridge newroot              No
stp inconsistency           No
stp loop-inconsistency      No
stp root-inconsistency      No
```

■ show snmp trap

Related Commands	Command	Description
	snmp-server trap enable	Enables SNMP notifications.

show snmp user

To display the Simple Network Management Protocol (SNMP) users, use the **show snmp user** command.

```
show snmp user [username [engineID id]]
```

Syntax Description		
<i>username</i>	(Optional) Name of the user. The name can be any case-sensitive, alphanumeric string up to 32 characters.	
engineID <i>id</i>	(Optional) Configures the SNMP Engine ID for a notification target user. The ID is 11 decimal values separated by colons.	

Defaults Displays all users

Command Modes Any command mode

SupportedUserRoles network-admin
network-operator
vdc-admin
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 SNMP users:

```
switch(config)# show snmp user
```

```

-----
                        SNMP USERS
-----
User                      Auth  Priv(enforce)  Groups
-----
foo                        md5    aes-128(no)    network-operator
                        vdc-admin
                        network-admin
User3
admin                      md5    no              network-operator
user1                      md5    des(no)        network-admin
                        vdc-admin
-----
NOTIFICATION TARGET USERS (configured for sending V3 Inform)
-----
User                      Auth  Priv
-----
foo                        md5    no
(EngineID 11:22:33:44:55)

```

Related Commands

Command	Description
snmp-server user	Configures SNMP users.

show sprom

To display the contents of the serial PROM (SPROM) on the device, use the **show sprom** command.

```
show sprom {all | backplane bp-number | clock clock-number | cmp | fan fan-number | module slot
| powersupply ps-number | stby-sup | sup | xbar xbar-number}
```

Syntax Description		
all		Displays the SPROM contents for all components on the physical device.
backplane <i>bp-number</i>		Displays the SPROM contents for a backplane.
clock <i>clock-number</i>		Displays the SPROM contents for a clock module.
cmp		Displays the SPROM contents for a Connectivity Management Processor (CMP).
fan <i>fan-number</i>		Displays the SPROM contents for a fan.
module <i>slot</i>		Displays the SPROM contents for a I/O module.
powersupply <i>ps-number</i>		Displays the SPROM contents for a power supply.
stby-sup		Displays the SPROM contents for the standby supervisor module.
sup		Displays the SPROM contents for the active supervisor module.
xbar <i>xbar-number</i>		Displays the SPROM contents for a fabric module.

Defaults Displays summary information for all processes on the device.

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 SPROM on the physical device components contain detailed information about the hardware, including the serial number, part number, and revision numbered.

This command does not require a license.

Examples

This example shows how to display SPROM information for all components on the physical device:

```
switch# show sprom all
DISPLAY active supervisor sprom contents:
Common block:
  Block Signature : 0xabab
  Block Version  : 3
  Block Length   : 160
  Block Checksum : 0x158a
  EEPROM Size    : 65535
  Block Count    : 3
  FRU Major Type : 0x6004
  FRU Minor Type : 0x5
  OEM String     : Cisco Systems, Inc
  Product Number : N7K-SUP1
  Serial Number  : JAB10380101
  Part Number    : 73-10877-03
  Part Revision  : 09
  Mfg Deviation  : 0
  H/W Version    : 0.311
  Mfg Bits       : 0
  Engineer Use   : 0
  snmpOID        : 0.0.0.0.0.0.0.0
  Power Consump  : -247
  RMA Code       : 0-0-0-0
  CLEI Code      : TBD
  VID            : TBD
...
```

This example shows how to display SPROM information for a backplane:

```
switch# show sprom backplane 1
DISPLAY backplane sprom contents:
Common block:
  Block Signature : 0xabab
  Block Version  : 3
  Block Length   : 160
  Block Checksum : 0x147e
  EEPROM Size    : 65535
  Block Count    : 5
  FRU Major Type : 0x6001
  FRU Minor Type : 0x0
  OEM String     : Cisco Systems, Inc.
  Product Number : N7K-C7010
  Serial Number  : TBM11256507
  Part Number    : 73-10900-04
  Part Revision  : 03
  Mfg Deviation  :
  H/W Version    : 0.403
  Mfg Bits       : 0
  Engineer Use   : 0
  snmpOID        : 0.0.0.0.0.0.0.0
  Power Consump  : -247
  RMA Code       : 0-0-0-0
  CLEI Code      :
  VID            :
Chassis specific block:
  Block Signature : 0x6001
  Block Version  : 3
  Block Length   : 39
  Block Checksum : 0x3bf
  Feature Bits   : 0x0
  HW Changes Bits : 0x0
```

```

Stackmib OID      : 0
MAC Addresses     : 00-18-ba-d8-3f-bc
Number of MACs    : 128
OEM Enterprise    : 9
OEM MIB Offset    : 5
MAX Connector Power: 1
WWN software-module specific block:
Block Signature   : 0x6005
Block Version     : 1
Block Length      : 0
Block Checksum    : 0x66
wwn usage bits:
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
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00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00
00 00
License software-module specific block:
Block Signature   : 0x6006
Block Version     : 1
Block Length      : 16
Block Checksum    : 0x77
lic usage bits:
00 00 00 00 00 00 00 00
Second Serial number specific block:
Block Signature   : 0x6007
Block Version     : 1
Block Length      : 28
Block Checksum    : 0x302
Serial Number     : TBM11256507

```

show startup-config cdp

To display the Cisco Discovery Protocol (CDP) startup configuration, use the **show startup-config cdp** command.

show startup-config cdp [all]

Syntax Description	all (Optional) Displays the startup configuration with defaults.
---------------------------	---

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

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

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

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

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

Examples	This example shows how to display the CDP startup configuration with defaults:
-----------------	--

```
switch(config)# show startup-config cdp all
!Command: show startup-config cdp
!Time: Tue Feb  2 22:36:26 2010

version 5.0(2)
logging level cdp 6

switch(config)#
```

Related Commands

Command	Description
<code>show running-config cdp</code>	Displays the running CDP configuration.

show startup-config diagnostic

To display startup-configuration diagnostics, use the **show startup-config diagnostic** command.

show startup-config diagnostic [all]

Syntax Description	all (Optional) Displays the startup configuration with defaults.
---------------------------	---

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

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

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

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 display the startup-configuration diagnostics:</p> <pre>switch(config)# show startup-config diagnostic all !Command: show startup-config diagnostic all !Time: Tue Jan 26 22:38:22 2010 !Startup config saved at: Thu Jan 21 08:39:42 2010 version 5.0(2) diagnostic bootup level complete switch(config)#</pre>
-----------------	--

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

show startup-config cfs

To display information about the Cisco Fabric Services (CFS) startup configuration, use the **show startup-config cfs** command.

show startup-config cfs [all]

Syntax Description	all (Optional) Displays all of the CFS startup configuration.						
Defaults	None						
Command Modes	Any command mode						
Supported User Roles	network-admin network-operator vdc-admin vdc-operator						
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	This command does not require a license.						
Examples	<p>This example shows how to display the CFS startup configuration:</p> <pre>switch(config)# show startup-config cfs !Command: show startup-config cfs !Time: Tue Feb 2 22:40:47 2010 !Startup config saved at: Thu Jan 21 08:39:42 2010 version 5.0(2) switch(config)#</pre>						
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>cfs distribute</td> <td>Enables CFS distribution for the device globally.</td> </tr> <tr> <td>show cfs status</td> <td>Displays the CFS distribution status.</td> </tr> </tbody> </table>	Command	Description	cfs distribute	Enables CFS distribution for the device globally.	show cfs status	Displays the CFS distribution status.
Command	Description						
cfs distribute	Enables CFS distribution for the device globally.						
show cfs status	Displays the CFS distribution status.						

show startup-config eem

To display the Embedded Event Manager (EEM) startup configuration, use the **show startup-config eem** command.

show startup-config eem

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the Embedded Event Manager (EEM) startup configuration:

```
switch# show startup-config eem
!Command: show startup-config eem
!Time: Tue Feb  2 22:41:25 2010
!Startup config saved at: Thu Jan 21 08:39:42 2010

version 5.0(2)
switch#
```

show startup-config monitor

To display information about the startup Ethernet Switched Port Analyzer (SPAN) configuration, use the **show startup-config monitor** command.

show startup-config monitor

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
	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 startup Ethernet SPAN configuration:

```
switch(config)# show startup-config monitor
!Command: show startup-config monitor
!Time: Tue Feb  2 22:42:07 2010
!Startup config saved at: Thu Jan 21 08:39:42 2010

version 5.0(2)
logging level monitor 6
switch(config)#
```

Related Commands	Command	Description
	show monitor	Displays information about an Ethernet Switched Port Analyzer (SPAN).
	show running-config monitor	Displays the running configuration to the startup configuration.

show startup-config netflow

To display the startup NetFlow configuration, use the **show startup-config netflow** command.

show startup-config netflow [all]

Syntax Description	all (Optional) Displays the startup NetFlow configuration with defaults.
---------------------------	---

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 startup NetFlow configuration:
-----------------	--

```
switch# show startup-config netflow

!Command: show startup-config monitor
!Time: Tue Feb  2 22:42:07 2010
!Startup config saved at: Thu Jan 21 08:39:42 2010

version 5.0(2)
logging level monitor 6

switch(config)# show startup-config netflow

!Command: show startup-config netflow
!Time: Tue Feb  2 22:43:13 2010
!Startup config saved at: Thu Jan 21 08:39:42 2010

version 5.0(2)
feature netflow

flow exporter new_flow_1
  version 5
flow exporter new_flow_2
  version 9
```

```
flow exporter test
  version 9
flow exporter Custom-Flow-Exporter-1
  version 9
  option exporter-stats timeout 1200

switch#
```

Related Commands

Command	Description
show running-config netflow	Displays information about the NetFlow configuration that is currently running on the switch.

show startup-config ntp

To display the Network Time Protocol (NTP) startup configuration, use the **show startup-config ntp** command.

show startup-config ntp [all]

Syntax Description	all (Optional) Displays all NTP startup configurations.
---------------------------	--

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 NTP startup configuration:
-----------------	--

```
switch(config)# show startup-config ntp

!Command: show startup-config ntp
!Time: Tue Feb  2 22:45:37 2010
!Startup config saved at: Thu Jan 21 08:39:42 2010

version 5.0(2)
ntp server 192.0.2.10 use-vrf Red
ntp peer 2001:db8::4101
ntp authenticate
ntp authentication-key 42 md5 dJmhwKzd 7
ntp trusted-key 42
ntp logging
ntp access-group peer NT_GLOBAL

switch(config)#
```

Related Commands	Command	Description
	show ntp source-interface	Displays information about the NTP source interface.
	show running-config ntp	Displays information about the NTP configuration that is currently running on the switch.

show startup-config snmp

To display the startup Simple Network Management Protocol (SNMP) configuration of a system, use the **show startup-config snmp** command.

show startup-config snmp [all]

Syntax Description	all (Optional) Displays the startup SNMP configuration with defaults.				
Defaults	None				
Command Modes	Any command mode				
SupportedUserRoles	network-admin network-operator vdc-admin vdc-operator				
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	This command does not require a license.				

Examples

This example shows how to display the startup SNMP configuration of the system:

```
switch(config)# show startup-config snmp

!Command: show startup-config snmp all
!Time: Tue Feb  2 22:46:33 2010
!Startup config saved at: Thu Jan 21 08:39:42 2010

version 5.0(2)
snmp-server aaa-user cache-timeout 3600
snmp-server protocol enable
no snmp-server globalEnforcePriv
snmp-server tcp-session auth
snmp-server user admin network-admin auth md5 0x1dc65f45a9d8e41dbccd76380946d6c3
  priv 0x1dc65f45a9d8e41dbccd76380946d6c3 localizedkey
snmp-server enable traps ospf rate-limit 10 7
snmp-server enable traps ospf foo rate-limit 10 7
no snmp-server enable traps bridge topologychange
no snmp-server enable traps bridge newroot
no snmp-server enable traps stpx inconsistency
no snmp-server enable traps stpx loop-inconsistency
no snmp-server enable traps stpx root-inconsistency

switch(config-port-monitor)#
```

Related Commands

Command	Description
show running-config snmp	Displays the running SNMP configuration.
show port-monitor active	Displays active port-monitor policies.

show system cores

To display the core filename, use the **show system cores** command.

show system cores

Syntax Description This command has no arguments or keywords.

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 Use the **system cores** command to configure the system core filename.
This command does not require a license.

Examples This example shows how to display destination information for the system core files:

```
switch# show system cores
Cores are transferred to slot0:
```

Related Commands	Command	Description
	system cores	Configures the system core filename.

show system error-id

To display the destination information for core files, use the **show system error-id** command.

```
show system error-id {error-number | list}
```

Syntax Description	<i>error-id</i>	Error number. The range is from 0x0 to 0xffffffff.
	list	Displays brief information for all the system error messages.

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 detailed information for an error message:

```
switch# show system error-id 0x1
```

```
Error Facility: (null)
Error Description: not enough memory
```

This example shows how to display brief information for all the error messages:

```
switch# show system error-id list
```

```
Common errors:
 0x00000000 (SYSERR_SUCCESS): "success".
 0x00000001 (SYSERR_NOMEM): "not enough memory".
 0x00000002 (SYSERR_PSS_ERROR): "error while accessing PSS".
 0x00000003 (SYSERR_CMI_NO_RESPONSE_PAYLOAD): "no cmi response payload".
 0x00000004 (SYSERR_CMI_NULL_RECEIVE_BUF): "null cmi receive buffer".
 0x00000005 (SYSERR_MGMT_ERROR): "unknown error".
 0x00000006 (SYSERR_MGMT_NO_ENTRY): "entry not present".
 0x00000007 (SYSERR_MGMT_NO_OBJECT): "object not present".
...
```

show system internal dir

To list all the files in a specific directory path along with the file sizes, use the **show system internal dir** command.

show system internal dir *directory-path*

Syntax Description	<i>directory-path</i>	The complete directory path.
---------------------------	-----------------------	------------------------------

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

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

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

Command History	Release	Modification
	4.2(4)	This command was introduced.

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

Examples	This example shows how to display all the files in a specific directory path along with the file sizes:
-----------------	---

```
switch# show system internal dir /etc
./ 2660
../ 1020
dcos-xinetd.pid 10
shadow 1394
passwd 1817
```

Related Commands	Command	Description
	show system internal file	Lists the contents of a specific file.

show system internal file

To list the contents of a file, use the **show system internal file** command.

show system internal file *file-name*

Syntax Description	<i>file-name</i>	The complete file path.
---------------------------	------------------	-------------------------

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

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

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

Command History	Release	Modification
	4.2(4)	This command was introduced.

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

Examples This example shows how to display all the files in a specific directory path along with the file sizes:

```
switch# show system internal file /bootflash/poap_debugs_7191.txt
<Wed Apr 1 01:23:02 2015> ../feature/poap/server/poap_main.c:main: getrlimit re
turns, soft:4294967295, hard: 4294967295.
poap_initialize(315): timer library initialization successful
poap_initialize(334): poap_db_initialize done
poap_mts_queue_initialize(147): mts bind for poap_q_mts(10) successful
poap_mts_queue_initialize(182): registered MTS_OPC_SDWRAP_DEBUG_DUMP(1530) with
poap_q_mts
poap_mts_queue_initialize(182): registered MTS_OPC_SYSLOG_FACILITY_OPR(185) with
poap_q_mts
```

Related Commands	Command	Description
	show system internal dir	List all the files in a specific directory path along with the file sizes.

show system internal scale-parameters

To display scale parameters, use the show system internal scale-parameters command.

show system internal scale-parameters [**configured** | **supported** | **violated** [**summary** | **vdc**]]

Syntax Description	configured	Displays the configured scale limits.
	supported	Displays the scale limits supported in the current software version.
	violated	Displays the currently violated scale limits.
	summary	Displays the summary of scale limits for the switch.
	vdc	Displays scale limits for a specific VDC.

Defaults None.

Command Modes Any command mode

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

Command History	Release	Modification
	7.2(1)D1(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example show how to display scale limits for a switch:



Note

If the configured scale limit exceeds the maximum permissible limit, then it displays a "Y" in the violated column for the specific scale parameter.

```
switch# show system internal scale-parameters
Scale Parameters for entire switch:
Parameter                               Supported   Configured  Violated(Y/N)
-----
FEX server interfaces                   3072       0           N
F1 HW entries                           256000     0           N
vPCs                                    744        0           N
Fabric Extenders(FEXs)                  64         0           N
Edge-ports                              384        1           N
port-channels                           744        0           N
```

IS-IS adjacencies	256	0	N
BFD-sessions	2000	0	N
L2-mroutes	32000	5001	N
M2 HW entries	128000	0	N
Core-ports	256	0	N
M1 HW entries	128000	0	N
FabricPath Switch-ids	256	0	N
VLANs	4000	5001	Y
FabricPath Topologies	8	0	N
F2/F2e HW entries	192000	0	N

Scale Parameters for VDC: switch

Parameter	Supported	Configured	Violated(Y/N)
-----	-----	-----	-----
FEX server interfaces	3072	0	N
F1 HW entries(module 3)	256000	0	N
vPCs	744	0	N
Fabric Extenders(FEXs)	64	0	N
Edge-ports	384	1	N
port-channels	744	0	N
MSTP	64	0	N
IS-IS adjacencies	256	0	N
BFD-sessions	2000	0	N
L2-mroutes	32000	3000	N
M2 HW entries(module 4)	128000	3000	N
Core-ports	256	0	N
M1 HW entries	128000	0	N
FabricPath Switch-ids	256	0	N
VLANs	4000	3000	N
FabricPath Topologies	8	0	N
F2/F2e HW entries	192000	0	N

Scale Parameters for VDC: v2

Parameter	Supported	Configured	Violated(Y/N)
-----	-----	-----	-----
FEX server interfaces	3072	0	N
F1 HW entries(module 3)	256000	0	N
vPCs	744	0	N
Fabric Extenders(FEXs)	64	0	N
Edge-ports	384	0	N
port-channels	744	0	N
MSTP	64	0	N
IS-IS adjacencies	256	0	N
BFD-sessions	2000	0	N
L2-mroutes	32000	1	N
M2 HW entries(module 4)	128000	0	N
Core-ports	256	0	N
M1 HW entries	128000	0	N
FabricPath Switch-ids	256	0	N
VLANs	4000	1	N
FabricPath Topologies	8	0	N
F2/F2e HW entries	192000	0	N

This example shows how to display a summary of the currently violated scale limits on a switch:

```
switch# show system internal scale-parameters violated summary
```

Scale Parameters for entire switch:

Parameter	Supported	Configured	Violated(Y/N)
-----	-----	-----	-----
VLANs	4000	5001	Y

■ show system internal scale-parameters

Related Commands

Command	Description
system scale-limit monitor	Enables scale limit monitoring on a switch.

show system memory-status

To display the memory status information, use the **show system memory-status** command.

show system memory-status

Syntax Description This command has no arguments or keywords.

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 This command does not require a license.

Examples This example shows how to display the memory status information:

```
switch# show system memory-status  
MemStatus: OK
```

show system mode

To display the current system mode, use the **show system mode** command. Starting with Cisco NX-OS Release 7.3(0)D1(1), you can use the **show system mode** command to also display the current state of the maintenance mode timer when the switch is in maintenance mode

```
show system mode
```

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Any command mode

Command History	Release	Modification
	7.3(0)D1(1)	Supports display of current state of the maintenance mode timer when the switch is in maintenance mode.
	7.2.0	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the current system mode:

```
switch# show system mode
System Mode : Normal
```

This example shows how to display the current system mode and the state of the maintenance mode timer when the switch is in maintenance mode:

```
switch# show system mode
System Mode: Maintenance
Maintenance Mode Timer: 24 minutes 55 seconds remaining
```

This example shows that the switch is in maintenance mode and that the maintenance mode timer is not running:

```
switch# show system mode
System Mode: Maintenance
Maintenance Mode Timer: not running
```

Related Commands

Command	Description
show run mmode	Displays the currently running maintenance profile configuration on a switch.
system mode maintenance always-use-custom-profile	Applies the existing custom maintenance-mode profile and prevents creation of auto-generated maintenance-mode profile.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance-mode automatically in the event of a specified system crash.
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the shutdown command and not the default isolate command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

show system pss shrink status

To display the last Persistent Storage Service (PSS) shrink status, use the **show system pss shrink status** command.

show system pss shrink status

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
	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 PSS shrink status:

```
switch(config)# show system pss shrink status
Last pss shrink started on: Tue May 12 08:08:30 2009
switch(config)#
```

Related Commands	Command	Description
	show system pss shrink status details	Displays the last PSS shrink status details.

show system pss shrink status details

To display details of the last Persistent Storage Service (PSS) shrink status details, use the **show system pss shrink status details** command.

show system pss shrink status details

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display details of the last PSS shrink status:

```
switch(config)# show system pss shrink status details
Last pss shrink started on: Tue May 12 08:08:30 2009

VDC 1:
Service "aaa" in vdc 1: pss shrink completed successfully
Service "cert_enroll" in vdc 1: pss shrink completed successfully
Service "ExceptionLog" in vdc 1: pss shrink completed successfully
Service "psshelper_gsvc" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "platform" in vdc 1: pss shrink completed successfully
Service "R2D2_usd" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "radius" in vdc 1: pss shrink completed successfully
Service "securityd" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "tacacs" in vdc 1: pss shrink completed successfully
Service "eigrp" in vdc 1: pss shrink request not sent
Service "isis" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "isis_dce" in vdc 1: pss shrink request not sent
Service "isis_otv" in vdc 1: pss shrink request not sent
Service "ospf" in vdc 1: pss shrink request not sent
Service "ospfv3" in vdc 1: pss shrink request not sent
Service "rip" in vdc 1: pss shrink request not sent
Service "eigrp" in vdc 1: pss shrink request not sent
```

show system pss shrink status details

```

Service "isis" in vdc 1: pss shrink request not sent
Service "isis_dce" in vdc 1: pss shrink request not sent
Service "ospf" in vdc 1: pss shrink request not sent
Service "ospfv3" in vdc 1: pss shrink request not sent
Service "rip" in vdc 1: pss shrink request not sent
Service "eigrp" in vdc 1: pss shrink request not sent
Service "isis" in vdc 1: pss shrink request not sent
Service "isis_dce" in vdc 1: pss shrink request not sent
Service "ospf" in vdc 1: pss shrink request not sent
Service "ospfv3" in vdc 1: pss shrink request not sent
Service "rip" in vdc 1: pss shrink request not sent
Service "eigrp" in vdc 1: pss shrink request not sent
Service "isis" in vdc 1: pss shrink request not sent
Service "isis_dce" in vdc 1: pss shrink request not sent
Service "ospf" in vdc 1: pss shrink request not sent
Service "ospfv3" in vdc 1: pss shrink request not sent
Service "rip" in vdc 1: pss shrink request not sent
Service "acllog" in vdc 1: pss shrink completed successfully
Service "aclmgr" in vdc 1: pss shrink completed successfully
Service "adjmgr" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "amt" in vdc 1: pss shrink request not sent
Service "arbiter" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "arp" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "ascii-cfg" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "babycaesar" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "bgp" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "bios_daemon" in vdc 1: pss shrink request not sent
Service "bootup_test" in vdc 1: pss shrink request not sent
Service "bootvar" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "callhome" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "capability" in vdc 1: pss shrink completed successfully
Service "cardclient" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "cdp" in vdc 1: pss shrink completed successfully
Service "cfs" in vdc 1: pss shrink completed successfully
Service "clis" in vdc 1: pss shrink not needed (defaultcb invoked)
Service "cmpproxy" in vdc 1: pss shrink completed successfully
Service "confcheck" in vdc 1: pss shrink completed successfully
--More--

```

Related Commands

Command	Description
show system pss shrink status	Displays the last PSS shrink status.

show system reset-reason

To display the reset-reason history for the modules on the device, use the **show system reset-reason** command.

show system reset-reason [**module** *slot* | **xbar** *xbar-number*]

Syntax Description	module <i>slot</i>	(Optional) Displays the restart reason for an I/O module or supervisor module.
	xbar <i>xbar-number</i>	(Optional) Displays the restart reason for the fabric module.

Defaults Displays the reset reasons for the supervisor modules.

Command Modes Any command mode

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

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).
This command does not require a license.

Examples This example shows how to display the reset-reason history for the supervisor modules:

```
switch# show system reset-reason
----- reset reason for Supervisor-module 6 (from Supervisor in slot 6) ---
1) At 11151 usecs after Fri May 30 14:40:50 2008
   Reason: Reset Requested by CLI command reload
   Service:
   Version: 4.0(2)
2) At 171083 usecs after Wed May 28 11:40:49 2008
   Reason: Reset Requested by CLI command reload
   Service:
   Version: 4.0(2)
----- reset reason for Supervisor-module 5 (from Supervisor in slot 6) ---
1) No time
   Reason: Unknown
   Service:
   Version:
2) No time
```

■ show system reset-reason

```
Reason: Unknown  
Service:  
Version:
```

Related Commands

Command	Description
clear system reset-reason	Clears the reset reason history for the device.

show system redundancy

To display the system redundancy status, use the **show system redundancy** command.

show system redundancy [ha] status

Syntax Description	ha (Optional) Displays the virtual device context (VDC) redundancy status.
---------------------------	---

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

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

SupportedUserRoles	network-admin network-operator vdc-admin 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 system redundancy status:
-----------------	---

```
switch# show system redundancy status
Redundancy mode
-----
      administrative:  HA
      operational:    None

This supervisor (sup-1)
-----
      Redundancy state:  Active
      Supervisor state:  Active
      Internal state:    Active with no standby

Other supervisor (sup-2)
-----
      Redundancy state:  Not present
switch#
```

This example shows how to display the virtual device context (VDC) redundancy status:

```
switch# show system redundancy ha status
VDC No      This supervisor                Other supervisor
-----      -
```

■ show system redundancy

```
vdc 1    Active with no standby    N/A
vdc 2    Active with no standby    N/A
vdc 3    Active with no standby    N/A
vdc 4    N/A                      N/A
switch#
```

Related Commands

Command	Description
system switchover	Switches over to the standby supervisor.

show system resources

To display the system resources, use the **show system resources** command.

show system resources

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the system resources:

```
switch(config)# show system resources
Load average:  1 minute: 0.00   5 minutes: 0.00   15 minutes: 0.0
Processes   :  520 total, 1 running
CPU states  :  0.0% user,   0.5% kernel,  99.5% idle
Memory usage: 4135616K total,  1642556K used,  2493060K free
              1188K buffers,  731988K cache
switch(config)#
```

Related Commands	Command	Description
	show processes cpu	Displays the CPU utilization information for processes on the device.

show system standby manual-boot

To display the status of the system standby manual boot option, use the **show system standby manual-boot** command.

show system standby manual-boot

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to display the status of the system standby manual boot option:

```
switch(config)# show system standby manual-boot
system standby manual-boot option is enabled
switch(config)#
```

Related Commands	Command	Description
	system hap-reset	Enables the Supervisor Reset HA policy.

show system uptime

To display the amount of time since the last system upload, use the **show system uptime** command.

show system uptime

Syntax Description This command has no arguments or keywords.

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 This command does not require a license.

Examples This example shows how to display the amount of time since the last system reload:

```
switch# show system uptime
System start time:      Fri May 30 14:46:25 2008
System uptime:         16 days, 23 hours, 9 minutes, 22 seconds
Kernel uptime:        16 days, 23 hours, 13 minutes, 29 seconds
Active supervisor uptime: 16 days, 23 hours, 9 minutes, 22 seconds
```

show tech-support all binary

To collect logs from across the entire device in binary format, including virtual device contexts (VDCs) and linecards, use the **show tech-support all binary** command.

```
show tech-support all binary { bootflash: | logflash: | slot0: }
```

Syntax Description	Parameter	Description
	bootflash:	Specifies bootflash as the destination file system used to save the binary output.
	logflash:	Specifies logflash as the destination file system used to save the binary output.
	slot0:	Specifies slot0 as the destination file system used to save the binary output.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines Binary tech support is a log-collecting framework that collects logs internally from all Cisco NX-OS processes that are running on the device. The **show tech-support all binary** command collects logs from across the entire device, including VDCs, and line cards. The logs are saved under one tarball that can be easily transferred for later analysis.

Binary tech support can either be parsed within the device or moved to an external log server where it can be parsed offline. The tool that is used to parse the logs is called DeBlogger. If a line card fails during the log collection, binary tech support continues to collect logs from all remaining line cards and VDCs.



Note

The output filename is automatically generated and cannot be chosen.

This command does not require a license.

Examples This example shows how to collect logs from across the entire device:

```
switch(config)# show tech-support all binary bootflash:
```

```

Temporary Storage Space Available: 1345 MB
Destination Storage Space Available: 229 MB
Waiting for all Modules to dump 'Binary Tech Support'...
Response from module: 7 is: 0x0(SUCCESS/Success)
Response from module: 4 is: 0x0(SUCCESS/Success)
Response from module: 9 is: 0x0(SUCCESS/Success)
Response from module: 5 is: 0x0(SUCCESS/Success)
Response from module: 6 is: 0x0(SUCCESS/Success)
-----
Please find the output here:
bootflash:binary_show_tech_all_06_12_2013_14_26_05HRS.tar
-----
    
```

Related Commands

Command	Description
bloggerd parse log-buffer	Parses logs from binary to ASCII format.

show tech-support ascii-cfg

To display detailed information about the checkpoint feature, use the **show tech-support ascii-cfg** command.

show tech-support ascii-cfg

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
	4.0(1)	This command was introduced.

Usage Guidelines This command does not require a license.

Examples This example shows how to show the detailed information about the checkpoint feature:

```
switch# show tech-support ascii-cfg
`show checkpoint summary`
-----
Name                UserName                Created at
-----
stable              admin                   Tue May 27 13:19:24 2008
`show checkpoint`
-----
Name: stable
version 4.0(2)
power redundancy-mode combined force
license grace-period
feature vrp
feature tacacs+
feature ospf
feature pim
feature pim6
feature msdp
feature eigrp
feature rip
feature isis
```



```
feature pbr
```

Related Commands

Command	Description
show checkpoint	Displays the contents of the checkpoint file.

show tech-support cfs

To display information about the Cisco Fabric Services (CFS) configuration required by technical support, use the **show tech-support cfs** command.

```
show tech-support cfs {commands} | [name application_name {commands}]
```

Syntax Description	commands	Displays all related CFS commands for use when working with technical support on a CFS issue.
	name application_name	(Optional) Displays information about the CFS configuration required by technical support for a specific application.

Defaults None

Command Modes Any command mode

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

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

Usage Guidelines This command does not require a license.

Examples This example shows how to display information about the CFS configuration required by technical support:

```
switch# show tech-support cfs
`show cfs application`
```

```
-----
Application    Enabled    Scope
-----
ntp            No        Physical-fc-ip
stp            Yes       Physical-eth
vpc            Yes       Physical-eth
igmp           Yes       Physical-eth
l2fm           Yes       Physical-eth
role           No        Physical-fc-ip
radius         No        Physical-fc-ip
callhome       Yes       Physical-fc-ip
```

```

Total number of entries = 8

`show cfs lock`
`show cfs peers`

Physical Fabric
-----
Switch WWN                IP Address
-----
20:00:00:22:55:79:a4:c1 172.28.230.85           [Local]
                        switch

Total number of entries = 1

`show cfs status`
Distribution : Enabled
Distribution over IP : Enabled - mode IPv4
IPv4 multicast address : 239.255.70.83
IPv6 multicast address : ff15::efff:4653
Distribution over Ethernet : Disabled`show cfs internal event-history errors`
Mon Dec 22 12:24:42 2008 :
Sending over network failed, retval ffffffff, errno 113 [No route to host]
Msg ID: [6e:00:00:00:c0:e0:ff:bf:0:1]
vsan: 4097, IP addr: 0.0.0.0

Total number of entries = 8

```

Related Commands

Command	Description
show <i>application_name</i> session status	Displays the CFS configuration session status for the application, including the last action, the result, and the reason if there was a failure.
show cfs internal	Displays information internal to CFS including memory statistics, event history, and so on.
show cfs lock	Displays all active CFS fabric locks.
show cfs merge status <i>name</i>	Displays the merge status for a given CFS application.
show cfs peers	Displays all the CFS peers in the physical fabric.
show cfs regions	Displays all the CFS applications with peers and region information.
show cfs static	Displays all CFS static peers with their status.
show cfs status	Displays the status of CFS distribution on the device as well as IP distribution information.

show tech-support mmode

To display information for maintenance profile troubleshooting, use the **show tech-support mmode** command.

show tech-support mmode

Syntax Description This command has no arguments or keywords.

Defaults None

Command Modes Privileged EXEC

SupportedUserRoles network-admin
network-operator
vdc-admin
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 information for maintenance profile troubleshooting:

```
switch# show tech-support mmode
`show system mode`
System Mode: Normal
`show maintenance profile`
[Normal Mode]
router bgp 100
  no isolate

[Maintenance Mode]
router bgp 100
  isolate

`show maintenance on-reload reset-reasons`
Reset reasons for on-reload maintenance mode:
-----
(not configured)

bitmap = 0x0
`show maintenance timeout`
Maintenance mode timeout value: 0 minutes
`show system internal mmode mem-stats`
```

Num blocks	User size	Total size	Library
16	560	800	mmode
265	51818	55824	ld-2.8.so
1	20	32	libdl-2.8.so
1	38	56	libpthread-2.8.so
12	2860	3056	libsvifdb.so.0.0.0

Related Commands

Command	Description
system mode maintenance always-use-custom-profile	Applies the existing custom maintenance-mode profile and prevents creation of auto-generated maintenance-mode profile.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance-mode automatically in the event of a specified system crash.
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the shutdown command and not the default isolate command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

show tech-support session-mgr

To display detailed information about the session manager, which controls configuration sessions, use the **show tech-support session-mgr** command.

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
	4.0(1)	This command was introduced.

Usage Guidelines Use the **show tech-support session-mgr** command to gather information about the session manager for troubleshooting purposes. This command displays detailed information about the session manager. The output should be saved to a file and included in any support requests for the session manager.

This command does not require a license.

Examples This example shows how to save the output of the **show tech-support session-mgr** command to a file:

```
switch# show tech-support session-mgr > bootflash:output
```

Related Commands	Command	Description
	show configuration session	Displays information about the configuration sessions.

show tech-support snmp

To display detailed technical support information for Simple Network Management Protocol (SNMP), use the **show tech-support snmp** command.

show tech-support snmp

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
	4.0(1)	This command was introduced.

Usage Guidelines Use the **show tech-support snmp** command to gather information about SNMP for troubleshooting purposes. This command displays detailed information about SNMP. The output should be saved to a file and included in any support requests for SNMP.

This command does not require a license.

Examples This example shows how to save the output of the **show tech-support snmp** command to a file:

```
switch# show tech-support snmp > bootflash:output
```

Related Commands	Command	Description
	snmp-server community	Configures SNMP community strings.

show tech-support slowdrain

To display detailed technical support information for the slow drain feature, use the **show tech-support slowdrain** command.

show tech-support slowdrain

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
	4.0(1)	This command was introduced.

Usage Guidelines Use the **show tech-support slowdrain** command to gather information about the slow drain feature for troubleshooting purposes. This command displays detailed information about slow drain. The output should be saved to a file and included in any support requests for slow drain.

This command does not require a license.

Examples This example shows how to save the output of the **show tech-support slowdrain** command to a file:

```
switch# show tech-support slowdrain > bootflash:output
```

Related Commands	Command	Description
	system default interface congestion timeout <i>milliseconds</i> mode {core edge}	Configures slow drain congestion timeout value for Cisco NX-OS Release 8.1(1) and earlier releases.
	system default interface pause timeout <i>milliseconds</i> mode {core edge}	Configures slow drain pause timeout value for Cisco NX-OS Release 8.1(1) and earlier releases.

Command	Description
system timeout fcoe congestion-drop { <i>milliseconds</i> default } mode { core edge }	Configures slow drain congestion timeout value for Cisco NX-OS Release 8.2(1) and earlier releases.
system timeout fcoe pause-drop { <i>milliseconds</i> default } mode { core edge }	Configures slow drain pause timeout value for Cisco NX-OS Release 8.2(1) and earlier releases.

show xml server status

To display information about the status of the XML server, use the **show xml server status** command.

show xml server status

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
	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 status of the XML server:

```
switch(config)# show xml server status
operational status is enabled
maximum session configured is 8
switch(config)#
```