Show Commands

This chapter describes the Cisco NX-OS Security show commands.

show aaa accounting

To display AAA accounting configuration information, use the show aaa accounting command.

show aaa accounting

Syntax Description

This command has no arguments or keywords.

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 configuration of the accounting log:

show aaa authentication

To display AAA authentication configuration information, use the show aaa authentication command.

show an authentication [login error-enable | login chap | login mschap | login mschap v2 | login ascii-authentication]

Syntax Description

login error-enable	(Optional) Displays the configuration for login error messages.
login chap	(Optional) Displays the configuration for CHAP authentication.
login mschap	(Optional) Displays the configuration for MS-CHAP authentication.
login mschapv2	(Optional) Displays the configuration for MS-CHAP V2 authentication.
login ascii-authentication	(Optional) Displays the configuration for ASCII authentication for passwords on TACACS+ servers.

Defaults

Displays the console and login authentication methods configuration.

Command Modes

Any command mode

Command History

Release	Modification	
5.0(2)	Added the chap keyword	
4.2(1)	Added the mschapv2 keyword.	
4.1(2)	Added the ascii-authentication keyword.	
4.0(1)	This command was introduced.	

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the configured authentication parameters:

switch# show aaa authentication

default: local
console: local
dot1x: not configured
eou: not configured

This example shows how to display the authentication-login error-enable configuration:

This example shows how to display the authentication-login CHAP configuration:

switch# show aaa authentication login chap
disabled

This example shows how to display the authentication-login MSCHAP configuration:

 $\label{eq:switch} \mbox{switch\# show aaa authentication login mschap} \mbox{disabled}$

This example shows how to display the authentication-login MSCHAP V2 configuration:

switch# show aaa authentication login mschapv2
enabled

This example shows how to display the status of the ASCII authentication for passwords feature:

 $\begin{tabular}{ll} switch (config) \# & \textbf{show aaa authentication login ascii-authentication} \\ disabled \end{tabular}$

Command	Description
aaa authentication login ascii-authentication	Enables ASCII authentication for passwords on a TACACS+ server.
aaa authentication login chap enable	Enables CHAP authentication.
aaa authentication login error-enable	Configures the AAA authentication failure message to display on the console.
aaa authentication login mschap enable	Enables MSCHAP authentication.
aaa authentication login mschapv2 enable	Enables MSCHAP V2 authentication.

show aaa authorization

To display AAA authorization configuration information, use the show aaa authorization command.

show aaa authorization [all]

Syntax Description

an (Optional) Displays configured and default values	all	(Optional) Displays configured and default values
--	-----	---

Defaults

Displays the configured information.

Command Modes

Any command mode

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 configured authorization methods:

switch# show aaa authorization

pki-ssh-cert: local
pki-ssh-pubkey: local

AAA command authorization:
default authorization for config-commands: none
cts: group radius

This example shows how to display the configured authorization methods and defaults:

switch# show aaa authorization all

pki-ssh-cert: local
pki-ssh-pubkey: local

AAA command authorization:
default authorization for config-commands: none
default authorization for commands: local
cts: group radius

Command	Description
aaa authorization	Configures the default AAA authorization method.
feature cts	Enables the Cisco TrustSec feature.
feature ldap	Enables the LDAP feature.
feature tacacs+	Enables the TACACS+ feature.

show aaa groups

To display AAA server group configuration, use the show aaa groups command.

show aaa groups

Syntax Description

This command has no arguments or keywords.

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 AAA group information:

switch# show aaa groups
radius

TacServer

show aaa local user blocked

To display the blocked users, use the **show aaa local user blocked** command.

show aaa local user blocked

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)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the blocked users:

switch# show aaa local user blocked

Local-user State

testuser Watched (till 11:34:42 IST Feb 5 2015)

Command	Description
aaa authentication rejected	Configures the login block per user.
clear aaa local user blocked	Clears the blocked users.

show aaa user default-role

To display the AAA user default role configuration, use the show aaa user default-role command.

show aaa user default-role

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(3)	This command was introduced.

Usage Guidelines

User the aaa user default-role command to configure the AAA user default role.

This command does not require a license.

Examples

This example shows how to display the AAA user default role configuration:

 $\verb|switch#| \textbf{show aaa user default-role}|\\$

enabled

Command	Description
aaa user default-role	Enables the AAA user default role.

show access-lists

To display all IPv4, IPv6, and MAC access control lists (ACLs) or a specific ACL, use the **show** access-lists command.

show access-lists [access-list-name] [**expanded** | **summary**]

Syntax Description

access-list-name	(Optional) Name of an ACL, which can be up to 64 alphanumeric, case-sensitive characters.
expanded	(Optional) Specifies that the contents of object groups appear rather than the names of object groups only.
summary	(Optional) Specifies that the command displays information about the ACL. For more information, see the "Usage Guidelines" section.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	Command output is sorted alphabetically by the ACL names.
	Support was added for the fragments command.
4.1(2)	Support for IPv6 ACLs was added.
4.0(1)	This command was introduced.

Usage Guidelines

The device shows all ACLs unless you use the access-list-name argument to specify an ACL.

If you do not specify an ACL name, the device lists ACLs alphabetically by the ACL names.

The **expanded** keyword allows you to display the details of object groups used in an ACL rather than only the name of the object groups. For more information about object groups, see the **object-group ip address**, **object-group ipv6 address**, and **object-group ip port** commands.

The **summary** keyword allows you to display information about the ACL rather than the ACL configuration. The information displayed includes the following:

- Whether per-entry statistics are configured for the ACL.
- Whether the **fragments** command is configured for an IP ACL.
- The number of rules in the ACL configuration. This number does not reflect how many entries that
 the ACL contains when the device applies it to an interface. If a rule in the ACL uses an object group,
 the number of entries in the ACL when it is applied may be much greater than the number of rules.
- The interfaces that the ACL is applied to.
- The interfaces that the ACL is active on.

The **show access-lists** command displays statistics for each entry in an ACL if the following conditions are both true:

- The ACL configuration contains the **statistics per-entry** command.
- The ACL is applied to an interface that is administratively up.

If an IP ACL includes the **fragments** command, it appears before the explicit permit and deny rules, but the device applies the **fragments** command to noninitial fragments only if they do not match all other explicit rules in the ACL.

This command does not require a license.

Examples

This example shows how to use the **show access-lists** command without specifying an ACL name on a device that has one IP ACL and one MAC ACL configured:

This example shows how to use the **show access-lists** command to display an IPv4 ACL named ipv4-RandD-outbound-web, including per-entry statistics for the entries except for the MainLab object group:

```
switch# show access-lists ipv4-RandD-outbound-web
```

```
IP access list ipv4-RandD-outbound-web
statistics per-entry
1000 permit ahp any any [match=732]
1005 permit tcp addrgroup MainLab any eq telnet
1010 permit tcp any any eq www [match=820421]
```

This example shows how to use the **show access-lists** command to display an IPv4 ACL named ipv4-RandD-outbound-web. The **expanded** keyword causes the contents of the object group from the previous example to appear, including the per-entry statistics:

switch# show access-lists ipv4-RandD-outbound-web expanded

```
IP access list ipv4-RandD-outbound-web statistics per-entry 1000 permit ahp any any [match=732] 1005 permit tcp 10.52.34.4/32 any eq telnet [match=5032] 1005 permit tcp 10.52.34.27/32 any eq telnet [match=433] 1010 permit tcp any any eq www [match=820421]
```

This example shows how to use the **show access-lists** command with the **summary** keyword to display information about an IPv4 ACL named ipv4-RandD-outbound-web, such as which interfaces the ACL is applied to and active on:

```
switch# show access-lists ipv4-RandD-outbound-web summary IPV4 ACL ipv4-RandD-outbound-web
```

Command	Description
fragments	Configures how an IP ACL processes noninitial fragments.
ip access-list	Configures an IPv4 ACL.
ipv6 access-list	Configures an IPv6 ACL.
mac access-list	Configures a MAC ACL.
show ip access-lists	Displays all IPv4 ACLs or a specific IPv4 ACL.
show ipv6 access-lists	Displays all IPv6 ACLs or a specific IPv6 ACL.
show mac access-lists	Displays all MAC ACLs or a specific MAC ACL.

show accounting log

To display the accounting log contents, use the **show accounting log** command.

show accounting log [size | last-index | start-seqnum number | start-time year month day HH:MM:SS]

Syntax Description

size	(Optional) Size of the log to display in bytes. The range is from 0 to 250000.
last-index	(Optional) Displays the last index number in the log.
start-seqnum number	(Optional) Specifies a sequence number in the log at which to begin display output. The range is from 1 to 1000000.
start-time year month day HH:MM:SS	(Optional) Specifies a start time in the log at which to begin displaying output. The <i>year</i> argument is in <i>yyyy</i> format. The <i>month</i> is the three-letter English abbreviation. The <i>day</i> argument range is from 1 to 31. The <i>HH:MM:SS</i> argument is in the standard 24-hour format.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	Added the last-index and start-seqnum keyword options.
4.0(1)	This command was introduced.

Usage Guidelines

When you make a change to the configuration, the results are shown in the output for **show accounting log**. There three results for the configuration change:

- Success: indicates the configuration change was successful.
- Failure: indicates the configuration change was unsuccessful.
- **Redirect**: indicates the configuration change was not issued directly from the Command Line Interface (CLI) but was issued as a result of another CLI command. For example, the following output is issued as a result of the **port-profile type** command:

Fri Sep 27 16:15:08 2013:type=update:id=console0:user=admin:cmd=switchto ; configure terminal ; port-profile type port-channel GANETTI-OKEANOS ; switchport trunk allowed vlan add 71 (REDIRECT)

This command does not require a license.

Examples

This example shows how to display the entire accounting log:

switch# show accounting log

Sat Feb 16 10:44:24 2008:update:/dev/pts/1_172.28.254.254:admin:show system uptime

```
Sat Feb 16 10:44:25 2008:update:/dev/pts/1_172.28.254.254:admin:show clock
Sat Feb 16 10:45:20 2008:update:/dev/pts/1_172.28.254.254:admin:show logging log
file start-time 2008 Feb 16 10:44:11
Sat Feb 16 10:45:23 2008:update:/dev/pts/1_172.28.254.254:admin:show accounting
log start-time 2008 Feb 16 10:08:57
Sat Feb 16 10:45:24 2008:update:/dev/pts/1_172.28.254.254:admin:show system uptime
Sat Feb 16 10:45:25 2008:update:/dev/pts/1_172.28.254.254:admin:show clock
Sat Feb 16 10:46:20 2008:update:/dev/pts/1_172.28.254.254:admin:show logging log
file start-time 2008 Feb 16 10:45:11
Sat Feb 16 10:46:22 2008:update:/dev/pts/1_172.28.254.254:admin:show accounting
```

This example shows how to display 400 bytes of the accounting log:

switch# show accounting log 400

```
Sat Feb 16 21:15:24 2008:update:/dev/pts/1_172.28.254.254:admin:show accounting log start-time 2008 Feb 16 18:31:21 Sat Feb 16 21:15:25 2008:update:/dev/pts/1_172.28.254.254:admin:show system uptime Sat Feb 16 21:15:26 2008:update:/dev/pts/1_172.28.254.254:admin:show clock
```

This example shows how to display the accounting log starting at 16:00:00 on February 16, 2008:

switch(config) # show accounting log start-time 2008 Feb 16 16:00:00

```
Sat Feb 16 16:00:18 2008:update:/dev/pts/1_172.28.254.254:admin:show logging log file
start-time 2008 Feb 16 15:59:16
Sat Feb 16 16:00:26 2008:update:/dev/pts/1_172.28.254.254:admin:show accounting log
start-time 2008 Feb 16 12:05:16
Sat Feb 16 16:00:27 2008:update:/dev/pts/1_172.28.254.254:admin:show system uptime
Sat Feb 16 16:00:28 2008:update:/dev/pts/1_172.28.254.254:admin:show clock
Sat Feb 16 16:01:18 2008:update:/dev/pts/1_172.28.254.254:admin:show logging log file
start-time 2008 Feb 16 16:00:16
Sat Feb 16 16:01:26 2008:update:/dev/pts/1_172.28.254.254:admin:show accounting log
start-time 2008 Feb 16 12:05:16
Sat Feb 16 16:01:27 2008:update:/dev/pts/1_172.28.254.254:admin:show system uptime
Sat Feb 16 16:01:29 2008:update:/dev/pts/1_172.28.254.254:admin:show clock
Sat Feb 16 16:02:18 2008:update:/dev/pts/1_172.28.254.254:admin:show logging log file
start-time 2008 Feb 16 16:01:16
Sat Feb 16 16:02:26 2008:update:/dev/pts/1_172.28.254.254:admin:show accounting log
start-time 2008 Feb 16 12:05:16
Sat Feb 16 16:02:28 2008:update:/dev/pts/1_172.28.254.254:admin:show system uptime
```

This example shows how to display the last index number:

```
switch# show accounting log last-index
accounting-log last-index : 1814
```

This example shows how to display the result of configuration changes:

```
switch# show accounting log
Fri Mar 15 10:19:58 2013:type=update:id=console0:user=Ciscoadmin:cmd=configure terminal;
interface Ethernet1/1 (SUCCESS)
Fri Mar 15 10:19:59 2013:type=update:id=console0:user=Ciscoadmin:cmd=configure terminal;
interface Ethernet1/1; shutdown (REDIRECT)
Fri Mar 15 10:19:59 2013:type=update:id=console0:user=Ciscoadmin:cmd=configure terminal;
interface Ethernet1/1; shutdown (SUCCESS)
Fri Mar 15 10:20:03 2013:type=update:id=console0:user=Ciscoadmin:cmd=configure terminal;
interface Ethernet1/1; no shutdown (REDIRECT)
Fri Mar 15 10:20:03 2013:type=update:id=console0:user=Ciscoadmin:cmd=configure terminal;
interface Ethernet1/1; no shutdown (SUCCESS)
```

Command	Description
clear accounting log	Clears the accounting log.

show arp access-lists

To display all ARP access control lists (ACLs) or a specific ARP ACL, use the **show arp access-lists** command.

show arp access-lists [access-list-name]

Syntax Description

access-list-name	(Optional) Name of an ARP ACL, which can be up to 64 alphanumeric,
	case-sensitive characters.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

The device shows all ARP ACLs, unless you use the access-list-name argument to specify an ACL.

This command does not require a license.

Examples

This example shows how to use the **show arp access-lists** command to display all ARP ACLs on a device that has two ARP ACLs:

switch# show arp access-lists

ARP access list arp-permit-all 10 permit ip any mac any ARP access list arp-lab-subnet 10 permit request ip 10.32.143.0 255.255.255.0 mac any

This example shows how to use the **show arp access-lists** command to display an ARP ACL named arp-permit-all:

switch# show arp access-lists arp-permit-all

ARP access list arp-permit-all 10 permit ip any mac any

Command	Description
arp access-list	Configures an ARP ACL.
ip arp inspection filter	Applies an ARP ACL to a VLAN.

show class-map type control-plane

To display control plane class map information, use the show class-map type control-plane command.

show class-map type control-plane [class-map-name]

Syntax Description

class-map-name

(Optional) Name of the control plane class map.

Defaults

None

Command Modes

Any command mode

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 control plane class map information:

switch# show class-map type control-plane

```
class-map type control-plane match-any copp-system-class-critical match access-grp name copp-system-acl-arp match access-grp name copp-system-acl-msdp

class-map type control-plane match-any copp-system-class-important match access-grp name copp-system-acl-gre match access-grp name copp-system-acl-tacas

class-map type control-plane match-any copp-system-class-normal match access-grp name copp-system-acl-icmp match redirect dhcp-snoop match redirect arp-inspect match exception ip option match exception ip icmp redirect match exception ip icmp unreachable
```

show cli syntax roles network-admin

To display the syntax of the commands that the network-admin role can use but the vdc-admin role cannot, use the **show cli syntax roles network-admin** command.

show cli syntax roles network-admin

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the syntax of the commands that the network-admin role can use but the vdc-admin role cannot:

switch# show cli syntax roles network-admin

```
MODE exec
(0) show debug license
(1) show debug bootvar
(2) show debug cmpproxy
(3) show debug exceptionlog
(4) show debug device_test
(5) show debug diagmgr
(6) show debug diagclient
(7) show debug ntp
(8) show debug port_lb
(9) show debug copp
(10) show debug copp bypass
(11) show license usage vdc-all [ { detail | cense-feature> } ]
(12) show system internal license event-history
(13) show system internal license mem-stats [ detail ]
(14) show system internal loader configuration
(15) show system internal bootvar log
(16) show system internal cmpproxy install-logs
(17) show system internal cmpproxy [ event-history ] errors
(18) show system internal cmpproxy [ event-history ] msgs
(19) show system internal cmpproxy mem-stats [ detail ]
(20) show system internal epld logging
(21) c status [ ]
(22) show system internal copp ppf-database { policy { subscriptions | sessions
| instances | all } }
(23) show system internal copp [ event-history ] errors
```

```
(24) show system internal copp [ event-history ] logs
(25) show system internal copp [ event-history ] msgs
(26) show system internal copp mem-stats [ detail ]
(27) show system internal copp info
(28) show system reset-reason
(29) show system reset-reason module <module>
(30) show system reset-reason <s0> <santa-cruz-range>
(31) show system redundancy status
(32) show system redundancy ha status
(33) show logging level { license | licmgr }
(34) show logging level bootvar
(35) show logging level cmpproxy
(36) show logging level diagnostic device_test
(37) show logging level diagnostic diagngr
(38) show logging level diagnostic diagclient
(39) show logging level ntp
(40) show logging level copp
(41) show running-config res_mgr
(42) show running-config vdc [ all ]
(43) show running-config diagnostic [ all ]
(44) show running-config cmp
(45) show running-config ntp [ all ]
(46) show running-config vdc-all [ all ]
(47) show running-config copp [ all ]
(48) show startup-config vdc [ all ]
(49) show startup-config diagnostic [ all ]
(50) show startup-config ntp [ all ]
(51) show startup-config vdc-all
(52) show startup-config copp [ all ]
(53) show tech-support gold
(54) show tech-support cmp
(55) show tech-support dcbx
(56) show tech-support ntp
(57) show tech-support forwarding 12 multicast vdc-all
(58) show tech-support forwarding 13 unicast vdc-all [ module <module> ]
--More--
```

Command	Description
show cli syntax roles	Displays the syntax of the commands that the network-operator role can use
network-operator	but the vdc-operator role cannot.

show copp diff profile

To display the difference between the previous and latest Control Plane Policing (CoPP) best practice policies or between the currently applied default CoPP best practice policy and the latest CoPP best practice policy, use the **show copp diff profile** command.

Syntax Description

lenient	Displays the lenient profile.
moderate	Displays the moderate profile.
strict	Displays the strict profile.
profile	Specifies the profile.
prior-ver	Specifies the previous profile.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.2(1)	This command was introduced.

Usage Guidelines

When you do not include the **prior-ver** option, this command displays the difference between two currently applied default CoPP best practice policies (such as the currently applied strict and currently applied moderate policies).

When you include the **prior-ver** option, this command displays the difference between a currently applied default CoPP best practice policy and a previously applied default CoPP best practice policy (such as the currently applied strict and the previously applied lenient policies).

This command does not require a license.

Examples

This example shows how to display the difference between the currently applied default CoPP best practice policy and the latest CoPP best practice policy:

switch# show copp diff profile moderate applied latest

Command	Description	
show copp profile	Displays the details of the CoPP best practice policy, along with the classes and policer values.	

show copp profile

To display the details of the Control Plane Policing (CoPP) best practice policy, along with the classes and policer values, use the **show copp profile** command.

show copp profile {lenient | moderate | strict}

Syntax Description

lenient	Displays the lenient profile.
moderate	Displays the moderate profile.
strict	Displays the strict profile.

Defaults

None

Command Modes

Any command mode

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 details of the CoPP best practice policy, along with the classes and policer values:

switch# show copp profile moderate

```
ip access-list copp-system-p-acl-bgp
 permit tcp any gt 1024 any eq bgp
 permit tcp any eq bgp any gt 1024
ipv6 access-list copp-system-p-acl-bgp6
 permit tcp any gt 1024 any eq bgp
 permit tcp any eq bgp any gt 1024
ip access-list copp-system-p-acl-cts
 permit tcp any any eq 64999
 permit tcp any eq 64999 any
ip access-list copp-system-p-acl-dhcp
 permit udp any eq bootpc any
 permit udp any neq bootps any eq bootps
ip access-list copp-system-p-acl-dhcp-relay-response
 permit udp any eq bootps any
 permit udp any any eq bootpc
ip access-list copp-system-p-acl-eigrp
 permit eigrp any any
ip access-list copp-system-p-acl-ftp
 permit tcp any any eq ftp-data
 permit tcp any any eq ftp
 permit tcp any eq ftp-data any
 permit tcp any eq ftp any
```

ip access-list copp-system-p-acl-glbp permit udp any eq 3222 224.0.0.0/24 eq 3222 --More--

Command	Description	
copp profile		
copp clone profile		
show copp diff profile	Displays the difference between the currently applied default CoPP best practice policy and the latest or previous CoPP best practice policy.	
show copp status	Displays the CoPP status, including the last configuration operation and its status.	
show running-config copp	Displays the CoPP configuration in the running configuration.	

show cli syntax roles network-operator

To display the syntax of the commands that the network-operator role can use but the vdc-operator role cannot, use the **show cli syntax roles network-operator** command.

show cli syntax roles network-operator

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the syntax of the commands that the network-operator role can use but the vdc-operator role cannot:

switch# show cli syntax roles network-operator

```
MODE exec
(0) show debug license
(1) show debug cmpproxy
(2) show debug exceptionlog
(3) show debug device_test
(4) show debug diagmgr
(5) show debug diagclient
(6) show debug ntp
(7) show debug port_lb
(8) show debug copp
(9) show license usage vdc-all [ { detail | <license-feature> } ]
(10) show system internal license event-history
(11) show system internal license mem-stats [ detail ]
(12) show system internal loader configuration
(13) show system internal bootvar log
(14) show system internal cmpproxy install-logs
(15) show system internal cmpproxy [ event-history ] errors
(16) show system internal cmpproxy [ event-history ] msgs
(17) show system internal cmpproxy mem-stats [ detail ]
(18) show system internal epld logging
(19) show system internal access-list status [ ]
(20) show system internal copp ppf-database { policy { subscriptions | sessions
| instances | all } }
(21) show system internal copp [ event-history ] errors
--More--
```

Command	Description
show cli syntax roles	Displays the syntax of the commands that the network-admin role can use
network-admin	but the vdc-admin role cannot.

show copp status

To display the control plane policing (CoPP) configuration status, use the **show copp status** command.

show copp status

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(2)	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 CoPP configuration status information:

switch# show copp status

Last Config Operation: service-policy input copp-system-policy Last Config Operation Timestamp: 21:57:58 UTC Jun 4 2008 Last Config Operation Status: Success Policy-map attached to the control-plane: new-copp-policy

show crypto ca certificates

To display configured trustpoint certificates, use the **show crypto ca certificates** command.

show crypto ca certificates trustpoint-label

Syntax	

trustpoint-label

Name of the trustpoint. The name is case sensitive.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.1(2)	This command was introduced.

Usage Guidelines

Use this command to display the fields in the identity certificate, if present, followed by the fields in the CA certificate (or each CA certificate if it is a chain, starting from the lowest to the self-signed root certificate), or the trustpoint. If the trustpoint name is not specified, all trustpoint certificate details are displayed.

This command does not require a license.

Examples

This example shows how to display configured trustpoint certificates:

switch# show crypto ca certificates

Trustpoint: admin-ca
certificate:
subject= /CN=switch160
issuer= /C=US/O=cisco/CN=Aparna CA2
serial=6CDB2D9E000100000006
notBefore=Jun 9 10:51:45 2005 GMT
notAfter=May 3 23:10:36 2006 GMT
MD5 Fingerprint=0A:22:DC:A3:07:2A:9F:9A:C2:2C:BA:96:EC:D8:0A:95

MDS FINGErprinc=UA:22:DC:A5:U7:2A:9F:9A:C2:2C:BA:90:EC:D0:UA:95

purposes: sslserver sslclient ike

CA certificate 0:

subject= /C=US/O=cisco/CN=Aparna CA2

issuer= /emailAddress=amandke@cisco.com/C=IN/ST=Maharashtra/L=Pune/O=cisco/OU=ne

tstorage/CN=Aparna CA1

serial=14A3A877000000000005

notBefore=May 5 18:43:36 2005 GMT notAfter=May 3 23:10:36 2006 GMT

MD5 Fingerprint=32:50:26:9B:16:B1:40:A5:D0:09:53:0A:98:6C:14:CC

purposes: sslserver sslclient ike

CA certificate 1:

subject= /emailAddress=amandke@cisco.com/C=IN/ST=Maharashtra/L=Pune/O=cisco/OU=n

etstorage/CN=Aparna CA1

```
issuer= /emailAddress=amandke@cisco.com/C=IN/ST=Karnataka/L=Bangalore/O=Cisco/OU
=netstorage/CN=Aparna CA
serial=611B09A1000000000002
notBefore=May 3 23:00:36 2005 GMT
notAfter=May 3 23:10:36 2006 GMT
MD5 Fingerprint=65:CE:DA:75:0A:AD:B2:ED:69:93:EF:5B:58:D4:E7:AD
purposes: sslserver sslclient ike
CA certificate 2:
subject= /emailAddress=amandke@cisco.com/C=IN/ST=Karnataka/L=Bangalore/O=Cisco/O
U=netstorage/CN=Aparna CA
issuer= /emailAddress=amandke@cisco.com/C=IN/ST=Karnataka/L=Bangalore/O=Cisco/OU
=netstorage/CN=Aparna CA
serial=0560D289ACB419944F4912258CAD197A
notBefore=May 3 22:46:37 2005 GMT
MD5 Fingerprint=65:84:9A:27:D5:71:03:33:9C:12:23:92:38:6F:78:12
purposes: sslserver sslclient ike
```

Command	Description
crypto ca authenticate	Authenticates the certificate of the CA.
show ca trustpoints	Displays trustpoint configurations.

show crypto ca certstore

To display the cert-store configuration, use the **show crypto ca certstore** command.

show crypto ca certstore

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the cert-store configuration:

switch# show crypto ca certstore

Certstore lookup: REMOTE

Command	Description
crypto ca lookup	Specifies the cert-store to be used for certificate authentication.
show crypto ca remote-certstore	Displays the remote cert-store configuration.

show crypto ca crl

To display configured certificate revocation lists (CRLs), use the show crypto ca crl command.

show crypto ca crl trustpoint-label

Syntax Description

trustpoint-label Name of the trustpoint. The label is case sensitive.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.1(2)	This command was introduced.

Usage Guidelines

Use this command to list the serial numbers of the revoked certificates in the CRL of the specified trustpoint.

This command does not require a license.

Examples

This example shows how to display a configured CRL:

```
switch# show crypto ca crl admin-ca
Trustpoint: admin-ca
CRL:
Certificate Revocation List (CRL):
        Version 2 (0x1)
        Signature Algorithm: shalWithRSAEncryption
        Issuer: /emailAddress=rviyyoka@cisco.com/C=IN/ST=Kar/L=Bangalore/O=Cisco
 Systems/OU=1/CN=cisco-blr
        Last Update: Sep 22 07:05:23 2005 GMT
        Next Update: Sep 29 19:25:23 2005 GMT
        CRL extensions:
            X509v3 Authority Key Identifier:
            keyid:CF:72:E1:FE:14:60:14:6E:B0:FA:8D:87:18:6B:E8:5F:70:69:05:3F
            1.3.6.1.4.1.311.21.1:
Revoked Certificates:
    Serial Number: 1E0AE838000000000002
        Revocation Date: Mar 15 09:12:36 2005 GMT
    Serial Number: 1E0AE9AB00000000003
        Revocation Date: Mar 15 09:12:45 2005 GMT
    Serial Number: 1E721E50000000000004
        Revocation Date: Apr 5 11:04:20 2005 GMT
    Serial Number: 3D26E445000000000005
        Revocation Date: Apr 5 11:04:16 2005 GMT
    Serial Number: 3D28F8DF00000000006
        Revocation Date: Apr 5 11:04:12 2005 GMT
```

```
Serial Number: 3D2C6EF300000000007
   Revocation Date: Apr 5 11:04:09 2005 GMT
Serial Number: 3D4D7DDC00000000008
   Revocation Date: Apr 5 11:04:05 2005 GMT
Serial Number: 5BF1FE8700000000009
   Revocation Date: Apr 5 11:04:01 2005 GMT
Serial Number: 5BF22FB30000000000A
   Revocation Date: Apr 5 11:03:45 2005 GMT
Serial Number: 5BFA4A4900000000000B
   Revocation Date: Apr 5 11:03:42 2005 GMT
Serial Number: 5C0BC2250000000000C
   Revocation Date: Apr 5 11:03:39 2005 GMT
Serial Number: 5C0DA95E0000000000D
   Revocation Date: Apr 5 11:03:35 2005 GMT
Serial Number: 5C1377690000000000E
   Revocation Date: Apr 5 11:03:31 2005 GMT
Serial Number: 4864FD5A0000000000F
   Revocation Date: Apr 5 11:03:28 2005 GMT
Serial Number: 48642E2E000000000010
   Revocation Date: Apr 5 11:03:24 2005 GMT
Serial Number: 486D423000000000011
   Revocation Date: Apr 5 11:03:20 2005 GMT
Serial Number: 7FCB75B900000000012
   Revocation Date: Apr 5 10:39:12 2005 GMT
Serial Number: 1A751900000000013
   Revocation Date: Apr 5 10:38:52 2005 GMT
Serial Number: 20F1B000000000014
   Revocation Date: Apr 5 10:38:38 2005 GMT
Serial Number: 436E43A9000000000023
   Revocation Date: Sep 9 09:01:23 2005 GMT
   CRL entry extensions:
       X509v3 CRL Reason Code:
       Cessation Of Operation
Serial Number: 152D3C5E00000000047
   Revocation Date: Sep 22 07:12:41 2005 GMT
Serial Number: 1533AD7F00000000048
   Revocation Date: Sep 22 07:13:11 2005 GMT
Serial Number: 1F9EB8EA00000000000D
   Revocation Date: Jul 19 09:58:45 2005 GMT
   CRL entry extensions:
       X509v3 CRL Reason Code:
       Cessation Of Operation
Serial Number: 1FCA9DC60000000006E
   Revocation Date: Jul 19 10:17:34 2005 GMT
   CRL entry extensions:
       X509v3 CRL Reason Code:
       Cessation Of Operation
Serial Number: 2F1B5E2E00000000072
   Revocation Date: Jul 22 09:41:21 2005 GMT
   CRL entry extensions:
       X509v3 CRL Reason Code:
       Cessation Of Operation
Signature Algorithm: shalWithRSAEncryption
   4e:3b:4e:7a:55:6b:f2:ec:72:29:70:16:2a:fd:d9:9a:9b:12:
   f9:cd:dd:20:cc:e0:89:30:3b:4f:00:4b:88:03:2d:80:4e:22:
   9f:46:a5:41:25:f4:a5:26:b7:b6:db:27:a9:64:67:b9:c0:88:
    30:37:cf:74:57:7a:45:5f:5e:d0
```

Command	Description
crypto ca crl request	Configures a CRL or overwrites the existing one for the trustpoint CA.

show crypto ca remote-certstore

To display the remote cert-store configuration, use the **show crypto ca remote-certstore** command.

show crypto ca remote-certstore

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the remote cert-store configuration:

switch# show crypto ca remote-certstore

Remote Certstore: NONE

Command	Description
crypto ca lookup	Specifies the cert-store to be used for certificate authentication.
show crypto ca certstore	Displays the configured cert-store.

show crypto ca trustpoints

To display trustpoint configurations, use the show crypto ca trustpoints command.

show crypto ca trustpoints

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

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 configured trustpoints:

switch# show crypto ca trustpoints

trustpoint: CAname; key:
revokation methods: crl

Command	Description
crypto ca authenticate	Authenticates the certificate of the CA.
crypto ca trustpoint	Declares the trustpoint certificate authority that the device should trust.
show crypto ca certificates	Displays configured trustpoint certificates.

show crypto certificatemap

To display the certificate mapping filters, use the show crypto certificatemap command.

show crypto certificatemap

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the certificate mapping filters:

switch# show crypto certificatemap

Command	Description
crypto certificatemap mapname	Creates a filter map.
filter	Configures one or more certificate mapping filters within the filter map.

show crypto key mypubkey rsa

To display the RSA public key configurations, use the show crypto key mypubkey rsa command.

show crypto key mypubkey rsa

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

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 RSA public key configurations:

switch# show crypto key mypubkey rsa

key label: myrsa key size: 512 exportable: yes

Command	Description
crypto ca enroll	Requests certificates for the switch's RSA key pair.
crypto key generate rsa	Generate an RSA key pair.
rsakeypair	Configure trustpoint RSA key pair details

show crypto ssh-auth-map

To display the mapping filters configured for SSH authentication, use the **show crypto ssh-auth-map** command.

show crypto ssh-auth-map

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification	
5.0(2)	This command was introduced.	

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the mapping filters configured for SSH authentication:

switch# show crypto ssh-auth-map
Default Map : filtermap1

Command	Description
crypto certificatemap mapname	Creates a filter map.
crypto cert ssh-authorize	Configures a certificate mapping filter for the SSH protocol.
filter	Configures one or more certificate mapping filters within the filter map.

show cts

To display the global Cisco TrustSec configuration, use the show cts command.

show cts

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the **feature cts** command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec global configuration:

```
switch# show cts
```

CTS Global Configuration

CTS support : enabled
CTS device identity : Device1
CTS caching support : disabled

Number of CTS interfaces in DOT1X mode : 0
Manual mode : 0

Command	Description	
feature cts	Enables the Cisco TrustSec feature.	

show cts capability interface

To display the Cisco TrustSec capability of all interfaces or a specific Ethernet interface, use the **show cts capability interface** command.

show cts capability interface {all | ethernet slot/port}

Syntax Description

all	Displays the Cisco TrustSec capability of all interfaces.		
ethernet slot/port	Displays the Cisco TrustSec capability of the specific interface.		

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification	
7.3(0)DX(1)	This command was introduced. The output was modified to display the	
	256-bit and 128-bit encryption and sequence number capabilities.	

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the **feature cts** command.

This command does not require a license.

Examples

This example shows how to display the Cisco TrustSec capability of all interfaces:

switch# show cts capability interface all

CTS capability information for interface(s)

Intf	SGT	L3-Cap	Sec Clr-Pause	Multi	Fips MacSe -SAI -on-	ec 256bit-Encrypt 64bitSeqN -Asic	
Eth1/1	L Yes	No	No No	No	No No	No No	
Eth1/2	2 Yes	No	No No	No	No No	No No	
Eth1/3	Yes	No	No No	No	No No	No No	

Command	Description	
feature cts	Enables the Cisco TrustSec feature.	
show cts	Displays the global Cisco TrustSec configuration.	

show cts credentials

To display the Cisco TrustSec device credentials configuration, use the **show cts credentials** command.

show cts credentials

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the **feature cts** command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec credentials configuration:

switch# show cts credentials

CTS password is defined in keystore, device-id = Device1

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts environment-data

To display the global Cisco TrustSec environment data, use the show cts environment-data command.

show cts environment-data

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the **feature cts** command.

The Cisco NX-OS device downloads the Cisco TrustSec environment data from the ACS after you have configured the Cisco TrustSec credentials for the device and configured authentication, authorization, and accounting (AAA).

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec environment data:

switch# show cts environment-data

CTS Environment Data

Current State : CTS_ENV_DNLD_ST_ENV_DOWNLOAD_DONE

Last Status : CTS_ENV_SUCCESS

Local Device SGT : 0x0002

Transport Type : CTS_ENV_TRANSPORT_DIRECT

Data loaded from cache : FALSE

Env Data Lifetime : 300 seconds after last update Last Update Time : Sat Jan 5 16:29:52 2008

Server List : ACSServerList1

AID:74656d706f72617279 IP:10.64.65.95 Port:1812

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts interface

To display the Cisco TrustSec information for interfaces, use the **show cts interface** command.

show cts interface {all | brief | ethernet slot/port}

Syntax Description

all	Displays Cisco TrustSec information for all interfaces.
brief	Displays a brief summary for all Cisco TrustSec- enabled interfaces.
interface slot/port	Displays Cisco TrustSec information for the specific interface.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
6.2(2)	Added the brief keyword.
6.1(1)	Added the additional configuration example that applies only to M2 Series modules for 40G or 100G links.
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the feature cts command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec configuration for all interfaces:

switch# show cts interface all

```
CTS Information for Interface Ethernet2/13:
   CTS is enabled, mode: CTS_MODE_MANUAL
                           CTS_IFC_ST_CTS_OPEN_STATE
    IFC state:
    Authentication Status: CTS_AUTHC_SKIPPED_CONFIG
     Peer Identity:
     Peer is:
                           Unknown in manual mode
     802.1X role:
                           CTS ROLE UNKNOWN
     Last Re-Authentication:
    Authorization Status: CTS_AUTHZ_SKIPPED_CONFIG
      PEER SGT:
     Peer SGT assignment: Not Trusted
    SAP Status:
                           CTS_SAP_SUCCESS
     Version: 1
     Configured pairwise ciphers: GCM_ENCRYPT_256
     Replay protection: Enabled
     Replay protection mode: Strict
      Selected cipher: GCM_ENCRYPT_256
```

```
Current receive SPI: sci:4300520000 an:0
     Current transmit SPI: sci:4300440000 an:0
   Propagate SGT: Enabled
CTS Information for Interface Ethernet2/27:
   CTS is enabled, mode: CTS_MODE_MANUAL
                          CTS_IFC_ST_CTS_OPEN_STATE
   IFC state:
   Authentication Status: CTS_AUTHC_SKIPPED_CONFIG
     Peer Identity:
     Peer is:
                          Unknown in manual mode
     802.1X role:
                          CTS_ROLE_UNKNOWN
     Last Re-Authentication:
   Authorization Status: CTS_AUTHZ_SKIPPED_CONFIG
     PEER SGT:
     Peer SGT assignment: Not Trusted
   SAP Status: CTS_SAP_SUCCESS
     Version: 1
     Configured pairwise ciphers: GCM_ENCRYPT_256
     Replay protection: Enabled
     Replay protection mode: Strict
     Selected cipher: GCM_ENCRYPT_256
     Current receive SPI: sci:4300440000 an:0
     Current transmit SPI: sci:4300520000 an:0
   Propagate SGT: Enabled
```

This example shows how to display a brief display the Cisco TrustSec configuration:

switch# show cts interface brief

```
CTS Information for Interfaces:
------
Interface CTS Mode IFC State SGT Assignment Propagate SGT
Eth2/13 MANUAL OPEN 0, Not Trusted Enabled
Eth2/27 MANUAL OPEN 0, Not Trusted Enabled
```

This example shows how to display the Cisco TrustSec configuration for a specific interface:

```
switch# show cts interface ethernet 2/24
```

```
CTS Information for Interface Ethernet2/24:
   CTS is enabled, mode: CTS_MODE_DOT1X
   IFC state:
                        CTS_IFC_ST_CTS_OPEN_STATE
   {\tt Authentication\ Status:\ CTS\_AUTHC\_SUCCESS}
     Peer Identity: india1
                   CTS Capable
     Peer is:
     802.1X role:
                          CTS_ROLE_AUTH
     Last Re-Authentication:
   Authorization Status: CTS_AUTHZ_SUCCESS
     PEER SGT:
                          2
     Peer SGT assignment: Trusted
     Global policy fallback access list:
                  CTS_SAP_SUCCESS
    SAP Status:
     Configured pairwise ciphers: GCM_ENCRYPT
     Replay protection: Enabled
     Replay protection mode: Strict
     Selected cipher: GCM_ENCRYPT
     Current receive SPI: sci:1b54c1fbff0000 an:0
     Current transmit SPI: sci:1b54c1fc000000 an:0
CTS Information for Interface Ethernet3/1:
   CTS is enabled, mode: CTS_MODE_MANUAL
   IFC state:
                          CTS_IFC_ST_CTS_OPEN_STATE
   Authentication Status: CTS_AUTHC_SKIPPED_CONFIG
```

```
Peer Identity:
 Peer is:
                        Unknown in manual mode
 802.1X role:
                       CTS_ROLE_UNKNOWN
 Last Re-Authentication:
Authorization Status: CTS_AUTHZ_SKIPPED_CONFIG
 PEER SGT:
                       0
 Peer SGT assignment: Not Trusted
                       CTS_SAP_SUCCESS
SAP Status:
 Configured pairwise ciphers: GCM_ENCRYPT
 Replay protection: Enabled
 Replay protection mode: Strict
 Selected cipher: GCM_ENCRYPT
 Current receive SPI set:
         sci:19076cdee50000 an:0
          sci:19076cdee50001 an:0
         sci:19076cdee50002 an:0
          sci:19076cdee50003 an:0
          sci:19076cdee50004 an:0
          sci:19076cdee50005 an:0
  Current transmit SPI set:
         sci:19076cdee40000 an:0
         sci:19076cdee40001 an:0
         sci:19076cdee40002 an:0
          sci:19076cdee40003 an:0
          sci:19076cdee40004 an:0
         sci:19076cdee40005 an:0
Propagate SGT: Enabled
```

Table 1-1 provides information about the values displayed in the show cts interface command output.

Table 1-1 show cts interface Command Output Values Descriptions

Value	Description
Authentication Status Field	1
CTS_AUTHC_INIT	The authentication engine is in initial state.
CTS_AUTHC_SUCCESS	The authentication is successful.
CTS_AUTHC_NO_RESPONSE	The Cisco Access Control Server (ACS) is cannot be reached. No response was received from the Cisco ACS.
CTS_AUTHC_UNAUTHORIZED	The authentication is in progress.
CTS_AUTHC_SKIPPED_CONFIG	The Cisco TrustSec configuration indicates that the device should skip the authentication process.
CTS_AUTHC_REJECT	The Cisco ACS rejected the authentication request.
Authorization Status Field	
CTS_AUTHZ_INIT	The authorization engine is in the initial state.
CTS_AUTHZ_SUCCESS	The authorization was successful.
CTS_AUTHZ_REJECT	The ACS rejected the authorization request.
CTS_AUTHZ_SKIPPED_CONFIG	The Cisco TrustSec configuration indicates that the device should skip the authorization process.
CTS_AUTHZ_POL_ACQ_FAILURE	The authorization policy acquisition failed.
CTS_AUTHZ_HW_FAILURE	The authorization programming failed.

show cts interface Command Output Values Descriptions (continued) Table 1-1

Value	Description
CTS_AUTHZ_RBACL_FAILURE	The security group access control groups (SGACLs) failed to download and install.
CTS_AUTHZ_INCOMPLETE	The authorization is in progress
SAP Status Field	
CTS_SAP_INIT	The Security Association Protocol (SAP) negotiation is in the initial state.
CTS_SAP_SUCCESS	The SAP negotiation succeeded.
CTS_SAP_FAILURE	The SAP negotiation failed.
CTS_SAP_SKIPPED_CONFIG	The Cisco TrustSec configuration indicates that the device should skip the SAP negotiation.
CTS_SAP_REKEY	The SAP rekey is in progress.
CTS_SAP_INCOMPLETE	The SAP negotiation in progress.

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts |3 interface

To display the Layer 3 Cisco TrustSec configuration on the interfaces, use the **show cts 13 interface** command.

show cts 13 interface

/ntax		

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the **feature cts** command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Layer 3 Cisco TrustSec configuration for the interfaces:

switch# show cts 13 interface

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts I3 mapping

To display the Layer 3 Cisco TrustSec mapping configuration for the device, use the **show cts 13** mapping command.

show cts 13 mapping

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the **feature cts** command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Layer 3 Cisco TrustSec mapping for the device:

switch# show cts 13 mapping

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts pacs

To display the Cisco TrustSec protect access credentials (PACs) provisioned by EAP-FAST, use the **show cts pacs** command.

show cts pacs

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the feature cts command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec global configuration:

switch# show cts pacs

PAC Info :

PAC Type : unknown

AID : 74656d706f72617279

I-ID : india1 AID Info : ACS Info

Credential Lifetime : Thu Apr 3 00:36:04 2008

PAC Opaque : 0002008300020004000974656d706f7261727900060070000101001d 6321a2a55fa81e05cd705c714bea116907503aab89490b07fcbb2bd455b8d873f21b5b6b403eb1d8 125897d93b94669745cfe1abb0baf01a00b77aacf0bda9fbaf7dcd54528b782d8206a7751afdde42 1ff4a3db6a349c652fea81809fba4f30b1fffb7bfffaf9a6608

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts role-based access-list

To display the global Cisco TrustSec security group access control list (SGACL) configuration, use the **show cts role-based access-list** command.

show cts role-based access-list [list-name]

Syntax Description

list-name	(Optional) SGACL name
-----------	-----------------------

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification	
4.2(1)	Added list name argument.	
4.0(1)	This command was introduced.	

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the feature cts command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec SGACL configuration:

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts role-based counters

To display the configuration status of role-based access control list (RBACL) statistics and list the statistics for all RBACL policies, use the **show cts role-based counters** command.

show cts role-based counters [sgt {sgt-value | any | unknown}] [dgt {dgt-value | any | unknown}]

Syntax Description

sgt	Specifies the source security group tag (SGT).
sgt-value	Source SGT value. The range is from 0 to 65519.
any	Specifies any SGT or DGT.
unknown	Specifies an unknown SGT or DGT.
dgt	Specifies the destination security group tag (DGT).
dgt-value	Destination SGT value. The range is from 0 to 65519.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the feature cts command.

This command requires the Advanced Services license.

Examples

This example shows how to display the configuration status of RBACL statistics and the total number of packets that match RBACL policies for a specific SGT and DGT:

 $\mathtt{switch} \#$ show cts role-based counters sgt 10 dgt 20

RBACL policy counters enabled sgt: 10 dgt: 20 [180] rbacl test1: deny tcp src eq 1111 dest eq 2222 [75] deny tcp src eq 2222 dest eq 3333 [25] rbacl test2: deny udp src eq 1111 dest eq 2222 [30] deny udp src eq 2222 dest eq 3333 [50]

Command	Description
clear cts role-based counters	Clears the RBACL statistics so that all counters are reset to 0.
cts role-based counters enable	Enables the RBACL statistics.

show cts role-based enable

To display the Cisco TrustSec security group access control list (SGACL) enable status for VLANs and Virtual Routing and Forwarding instances (VRFs), use the **show cts role-based enable** command.

show cts role-based enable

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the feature cts command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec SGACL enforcement status:

switch# show cts role-based enable

vlan:1
vrf:1
vrf:3

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts role-based policy

To display the global Cisco TrustSec security group access control list (SGACL) policies, use the **show cts role-based policy** command.

show cts role-based policy

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the feature cts command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec SGACL policies:

switch# show cts role-based policy

```
sgt:unknown
dgt:unknown
                rbacl:test-2
        permit icmp
        permit igmp
        permit tcp src lt 2000
        permit udp dest gt 4000
sgt:1000
dqt:2000
                rbacl:test-1
        deny ip
        deny icmp
        deny tcp src eq 1000 dest eq 2000
        deny udp src range 1000 2000
sgt:any
dgt:any rbacl:test-3
        deny ip
```

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts role-based sgt vlan

To display the Cisco TrustSec Security Group Tag (SGT) mapping configuration for a specific VLAN, use the **show cts role-based sgt vlan** command.

show cts role-based sgt vlan {all | vlan-id}

Syntax Description

all	Displays the configured SGT for all VLANs.
vlan-id	Configured SGT for the specific VLAN. The range is from 1 to 4094.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the **feature cts** command. This command does not require a license.

Examples

This example shows how to display the Cisco TrustSec SGT mapping configuration for all VLANs: switch# show cts role-based sgt vlan all

Command	Description
feature cts	Enables the Cisco TrustSec feature.
show cts role-based sgt-map	Displays the global Cisco TrustSec SGT mapping configuration.
cts role-based sgt	Configures mapping of Cisco TrustSec SGTs to an SGACL.

show cts role-based sgt-map

To display the global Cisco TrustSec Security Group Tag (SGT) mapping configuration, use the **show cts role-based sgt-map** command.

show cts role-based sgt-map [summary | sxp peer peer-ipv4-addr | vlan vlan-id | vrf vrf-name]

Syntax Description

summary	(Optional) Displays a summary of the SGT mappings.
sxp peer peer-ipv4-addr	(Optional) Displays the SGT map configuration for a specific SGT Exchange Protocol (SXP) peer.
vlan vlan-id	(Optional) Displays the SGT map configuration for a specific VLAN.
vrf vrf-name	(Optional) Displays the SGT map configuration for a specific virtual routing and forwarding (VRF).

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
6.2(2)	The summary , sxp peer <i>peer-ipv4-addr</i> , vlan <i>vlan-id</i> , and vrf <i>vrf-name</i> keywords and arguments were added.
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the feature cts command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec SGT mapping configuration:

switch# show cts	role-based sgt-map		
IP ADDRESS	SGT	VRF/VLAN	SGT CONFIGURATION
5.5.5.5	5	vlan:10	CLI Configured
5.5.5.6	6	vlan:10	CLI Configured
5.5.5.7	7	vlan:10	CLI Configured
5.5.5.8	8	vlan:10	CLI Configured
10.10.10.10	10	vrf:3	CLI Configured
10.10.10.20	20	vrf:3	CLI Configured
10.10.10.30	30	vrf:3	CLI Configured

Command	Description
feature cts	Enables the Cisco TrustSec feature.
cts role-based sgt-map	Manually configures the Cisco TrustSec SGT mapping to IP addresses.

show cts sap pmk

To display the Cisco TrustSec Security Association Protocol (SAP) pairwise master key (PMK) configuration, use the **show cts sap pmk** command.

show cts sap pmk {all | interface ethernet slot/port}

•	_	
Syntax	Descr	ıntıon

all	Displays the hexadecimal value of the configured PMK for all interfaces.
<pre>interface ethernet slot/port</pre>	Displays the hexadecimal value of the configured PMK for the specific Ethernet interface.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the **feature cts** command.

This command does not require a license.

Examples

This example shows how to display the Cisco TrustSec SAP PMK configuration:

switch# show cts sap pmk interface ethernet 2/2

Command	Description
feature cts	Enables the Cisco TrustSec feature.
sap pmk	Configures the Cisco TrustSec SAP PMK.

show cts sxp

To display information about the Cisco TrustSec Security Group Tag (SGT) Exchange Protocol (SXP) configuration and default route for SGT, use the **show cts sxp** command.

show cts sxp

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
7.3(0)D1(1)	This output was modified to include details about the SXPv3 version and network map expansion limit.
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the **feature cts** command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec SXP configuration:

switch# show cts sxp
CTS SXP Configuration:
SXP enabled
SXP retry timeout:60
SXP reconcile timeout:120
Highest supported SXP version:3
Network Map expansion limit:0
Default Route SGT Propagation: Disabled
Unsupported SXP version(s):2

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show cts sxp connection

To display the Cisco TrustSec Security Group Tag (SGT) Exchange Protocol (SXP) connections information, use the **show cts sxp connection** command.

show cts sxp connection

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the feature cts command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec Security Group Tag (SGT) Exchange Protocol (SXP) connections information:

switch# show cts sxp connection

PEER_IP_ADDR VRF PEER_SXP_MODE SELF_SXP_MODE CONNECTION STATE VERSION 30.1.1.3 default listener speaker connected 3

Command	Description
feature cts	Enables the Cisco TrustSec feature.

show dot1x

To display the 802.1X feature status, use the **show dot1x** command.

show dot1x

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must enable the 802.1X feature by using the **feature dot1x** command before using this command.

This command does not require a license.

Examples

This example shows how to display the 802.1X feature status:

switch# show dot1x

Sysauthcontrol Enabled Dot1x Protocol Version 2

Command	Description
feature dot1x	Enables the 802.1X feature.

show dot1x all

To display all 802.1X feature status and configuration information, use the show dot1x all command.

show dot1x all [details | statistics | summary]

Syntax Description

details	(Optional) Displays detailed information about the 802.1X configuration.	
statistics	(Optional) Displays 802.1X statistics.	
summary	(Optional) Displays a summary of 802.1X information.	

Defaults

Displays global and interface 802.1X configuration

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must enable the 802.1X feature by using the **feature dot1x** command before using this command. This command does not require a license.

Examples

This example shows how to display all 802.1X feature status and configuration information:

```
switch# show dot1x all
```

Sysauthcontrol Enabled Dot1x Protocol Version 2

 ${\tt Dot1x\ Info\ for\ Ethernet2/1}$

PAE = AUTHENTICATOR
PortControl = FORCE_AUTH
HostMode = SINGLE HOST
ReAuthentication = Disabled
QuietPeriod = 60

ServerTimeout = 30 SuppTimeout = 30 PeAuthPeriod = 360

ReAuthPeriod = 3600 (Locally configured)

ReAuthMax = 2
MaxReq = 2
TxPeriod = 30
RateLimitPeriod = 0

Command	Description
feature dot1x	Enables the 802.1X feature.

show dot1x interface ethernet

To display the 802.1X feature status and configuration information for an Ethernet interface, use the **show dot1x interface ethernet** command.

show dot1x interface ethernet slot/port [details | statistics | summary]

Syntax Description

slot/port	Slot and port identifiers for the interface.
details	(Optional) Displays detailed 802.1X information for the interface.
statistics	(Optional) Displays 802.1X statistics for the interface.
summary	(Optional) Displays a summary of the 802.1X information for the interface.

Defaults

Displays the interface 802.1X configuration

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must enable the 802.1X feature by using the feature dot1x command before using this command.

This command does not require a license.

Examples

This example shows how to display the 802.1X feature status and configuration information for an Ethernet interface:

switch# show dot1x interface ethernet 2/1

TxPeriod = 30

RateLimitPeriod = 0

Dot1x Info for Ethernet2/1

PAE = AUTHENTICATOR
PORTCONTROL = FORCE_AUTH
HOSTMODE = SINGLE HOST

ReAuthentication = Disabled
QuietPeriod = 60
ServerTimeout = 30
SuppTimeout = 30
ReAuthPeriod = 3600 (Locally configured)
ReAuthMax = 2
MaxReq = 2

Command	Description
feature dot1x	Enables the 802.1X feature.

show encryption service stat

To display the status of the encryption service, use the show encryption service stat command.

show encryption service stat

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

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 status of the encryption service:

switch# show encryption service stat Encryption service is enabled Master Encryption Key is configured. Type-6 encryption is being used switch#

Command	Description
show key chain	Displays the configuration for a specific keychain.

show eou

To display Extensible Authentication Protocol over User Datagram Protocol (EAPoUDP) status and configuration information, use the **show eou** command.

show eou [all | authentication {clientless | eap | static} | interface ethernet slot/port | ip-address | ipv4-address | mac-address | posturetoken [name]]

Syntax Description

all	(Optional) Displays all EAPoUDP sessions.
authentication	(Optional) Displays EAPoUDP sessions for specific authentication types.
clientless	Specifies sessions authenticated using clientless posture validation.
eap	Specifies sessions authenticated using EAPoUDP.
static	Specifies sessions statically authenticated using statically configured exception lists.
interface ethernet slot/port	(Optional) Displays the EAPoUDP sessions for a specific interface.
ip-address ipv4-address	(Optional) Displays the EAPoUDP sessions for a specific IPv4 address.
mac-address mac-address	(Optional) Displays the EAPoUDP sessions for a specific MAC address.
posturetoken name	(Optional) Displays the EAPoUDP sessions for posture tokens.
name	(Optional) Token name.

Defaults

Displays the global EAPoUDP configuration

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must enable the 802.1X feature by using the feature eou command before using this command.

This command does not require a license.

Examples

This example shows how to display all 802.1X feature status and configuration information:

switch# show eou all

This example shows how to display 802.1X clientless authentication information:

switch# show eou authentication clientless

This example shows how to display 802.1X EAP authentication information:

switch# show eou authentication eap

This example shows how to display 802.1X static authentication information:

switch# show eou interface ethernet 2/1

This example shows how to display 802.1X information for an Ethernet interface:

switch# show eou ip-address 10.10.10.1

This example shows how to display 802.1X information for a MAC address:

switch# show eou mac-address 0019.076c.dac4

This example shows how to display 802.1X information for a MAC address:

switch# show eou posturetoken healthy

Command	Description
feature eou	Enables the 802.1X feature.

show fips status

To display the status of Federal Information Processing Standards (FIPS) mode, use the **show fips status** command.

show fips status

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any

Command History

Release	Modification
5.1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the status of FIPS mode:

switch# show fips status
FIPS mode is disabled

Command	Description
fips mode enable	Enables FIPS mode.

show

To display information about which I/O modules are configured with the command, use the **show** command.

show

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

If no I/O modules are configured with the command, the show command has no output.

Examples

This example shows how to display the I/O modules that are configured with the command:

switch# **show**Module 1 enabled
Module 3 enabled

switch#

show access-list status module

To display the access control list (ACL) capture configuration, use the **show access-list status module** command.

show access-list status module slot

ntax		

slot	Slot ID. Th	e range is	from	1 to	18.
------	-------------	------------	------	------	-----

Defaults

None

Command Modes

Any command mode

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 access control list (ACL) capture configuration:

switch(config)# show access-list status module 5

Non-Atomic ACL updates Disabled.

TCAM Default Result is Deny.

Resource-pooling: Disabled

switch(config)#

Command	Description
access-list capture	Enables access control list (ACL) capture on all virtual device contexts
	(VDCs).

show hardware access-list feature-combo

To display the bank mapping matrix, use the show hardware access-list feature- combo command.

show hardware access-list {input | output} {interface | vlan} feature-combo features

Syntax Description

input	Displays input/ingress policies.
output	Displays output/egress policies
interface	Specifies interface.
vlan	Specifies VLAN.
feature-combo	Specifies the feature combination.
features	Specifies the features.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
6.2(10)	This command was introduced.

Usage Guidelines

This command does not require a license.

The following are the features you can enter:

- arp—Address Resolution Protocol
- bfd—Bidirectional Forwarding Detection
- cbts—Class-Based Tunnel Selection
- cts_impl_tunnel—CTS Implicit Tunnel
- dhcp—Dynamic Host Configuration Protocol
- erspan_dst—Encapsulated Remote Switched Port Analyzer (destination)
- erspan_src—Encapsulated Remote Switched Port Analyzer (source)
- lisp—Locator/ID Separation Protocol
- lisp_inst—LISP Multitenant Policy
- netflow—NetFlow
- netflow_svi—NetFlow on SVI
- netflow_sampler—NetFlow Sampler
- netflow_sampler_svi—NetFlow Sampler on SVI
- otv—Overlay Transport Virtualization

- pacl—Port ACL
- pbr—Policy-Based Routing without statistics
- pbr_stats—Policy-Based Routing with statistics
- qos—Quality of Service
- racl—Router ACL without statistics
- racl_stats—Router ACL with statistics
- rbacl—Role-based ACL
- tunnel-decap—Tunnel Decap
- vacl—VLAN ACL without statistics
- vacl_stats—VLAN ACL with statistics
- wccp—Web Cache Communication Protocol

If the feature is not supported, the switch returns the following message:

This feature combination is not supported !

Examples

This example shows how to display a feature combination check on the ingress policy on a Layer 3 interface with the following features—racl with no stats, pbr with stats, wccp, qos and netflow:

 ${\tt switch \# \ show \ hardware \ access-list \ input \ interface \ feature-combo \ racl \ pbr_stats \ wccp \ qosnetflow}$

Feature	Rslt Type	т0в0	T0B1	T1B0	T1B1
RACL Interface	Acl	X			
Netflow	Acl	X			
QoS Interface	Qos			X	
WCCP Interface	Acl	X			
PBR Interface Stats	Acl		X		

This example shows how to display a feature combination check on the ingress policy on a VLAN/SVI with the following features—vacl with stats, racl on svi, pbr on svi, dhcp snoop on vlan and wccp:

switch# show hardware access-list input vlan feature-combo vacl_stat racl pbr dhcp wccp

Feature	Rslt Type	T0B0	T0B1	T1B0	T1B1
RACL	Acl				X
PBR	Acl				X
DHCP	Acl			X	
SPM WCCP	Acl				X
VACL Stats	Acl			X	

This example shows how to display a f eature combination check on the ingress policy on a Layer 2 interface with the following features —pacl and 12 qos:

switch# show hardware access-list input vlan feature-combo pacl

Feature	Rslt Type	T0B0	T0B1	T1B0	T1B1
PACL	Acl	x			
QoS	Qos		x		

Related Commands	Command	Description
	hardware access-list	Configures the device to allow ACL TCAM bank mappings.
	resource feature	
	bank-mapping	

show hardware rate-limiter

To display the hardware rate limit configuration and statistics, use the **show hardware rate-limiter** command.

show hardware rate-limiter {access-list-log [module module] | copy [module module] | f1 {rl-1 [module module] | rl-2 [module module] | rl-3 [module module] | rl-4 [module module] | rl-5 [module module] | layer-2 {12pt [module module] | mcast-snooping [module module] | port-security [module module] | storm-control [module module] | vpc-low [module module] | layer-3 {control [module module] | glean [module module] | glean-fast [module module] | multicast {directly-connect [module module] | local-groups [module module] | rpf-leak [module module]} | ttl [module module]} | module module | receive [module module]

Syntax Description

access-list-log	Specifies rate-limit statistics for access-list log packets.
module module	Specifies a module number. The range is from 1 to 18.
сору	Specifies rate-limit statistics for copy packets.
f1	Specifies the control packets from the F1 modules to the supervisor.
rl-1	Specifies the F1 rate-limiter 1.
rl-2	Specifies the F1 rate-limiter 2.
rl-3	Specifies the F1 rate-limiter 3.
rl-4	Specifies the F1 rate-limiter 4.
rl-5	Specifies the F1 rate-limiter 5.
layer-2	(Optional) Displays Layer 2 packet rate limits.
l2pt	Specifies rate-limit statistics for Layer 2 Tunnel Protocol (L2TP) packets.
mcast-snooping	Specifies rate-limit statistics for Layer 2 multicast-snooping packets.
port-security	Specifies rate-limit statistics for Layer 2 port-security packets.
storm-control	Specifies rate-limit statistics for Layer 2 storm-control packets.
vpc-low	Specifies rate-limit statistics for Layer 2 control packets over the virtual port channel (vPC) low queue.
layer-3	(Optional) Displays Layer 3 packet rate limits.
control	Specifies rate-limit statistics for Layer 3 control packets.
glean	Specifies rate-limit statistics for Layer 3 glean packets.
glean-fast	Specifies rate-limit statistics for Layer 3 glean fast-path packets.
mtu	Specifies rate-limit statistics for Layer 3 maximum transmission unit (MTU) packets.
multicast	Specifies Layer 3 multicast rate limits.
directly-connected	Specifies rate-limit statistics for Layer 3 directly connected multicast packets.
local-groups	Specifies rate-limit statistics for Layer 3 local group multicast packets.
rpf-leak	Specifies rate-limit statistics for Layer 3 reverse path forwarding (RPF) leak multicast packets.
ttl	Specifies rate-limit statistics for Layer 3 time-to-live (TTL) packets.
receive	(Optional) Displays rate-limit statistics for receive packets.
_	

Defaults

Displays all rate-limit statistics.

Command Modes

Any command mode

Command History

Release	Modification	
6.2(2)	Added the glean-fast keyword.	
5.1(1)	Added the f1, rl-1, rl-2, rl-3, rl-4, rl-5, and module keywords.	
5.0(2)	Added the l2pt keyword.	
4.0(3)	Added the port-security keyword.	
4.0(1)	This command was introduced.	

Usage Guidelines

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

This command does not require a license.

Examples

This example shows how to display all the hardware rate-limit configuration and statistics:

 $\verb|switch#| \textbf{show hardware rate-limiter}|\\$

Units for Config: packets per second Allowed, Dropped & Total: aggregated since last clear counters

Rate Limiter Class	Parameters	;
layer-3 mtu	Config Allowed Dropped Total	: 0 : 0
layer-3 tt1	Config Allowed Dropped Total	: 0 : 0
layer-3 control	Config Allowed Dropped Total	: 0 : 0
layer-3 glean	Config Allowed Dropped Total	: 0 : 0
layer-3 multicast directly-connected	Config Allowed Dropped Total	: 0 : 0
layer-3 multicast local-groups	Config Allowed Dropped	: 0

	Total	:	0
layer-3 multicast rpf-leak	Config Allowed Dropped Total	:	0
layer-2 storm-control	Config	:	Disabled
access-list-log	Config Allowed Dropped Total	:	0
сору	Config Allowed Dropped Total	:	0
receive	Config Allowed Dropped Total	:	0
layer-2 port-security	Config	:	Disabled
layer-2 mcast-snooping	Config Allowed Dropped Total	:	0
layer-2 vpc-low	Config Allowed Dropped Total	:	0
layer-2 l2pt	Config Allowed Dropped Total	:	0

This example shows how to display the rate-limit configuration and statistics for access-list log packets: switch# show hardware rate-limiter access-list-log

Units for Config: packets per second Allowed, Dropped & Total: aggregated since last clear counters

Rate Limiter Class	Parameters		
access-list-log	Config Allowed		
	Dropped Total	:	

Command	Description
clear hardware rate-limiter	Clears rate-limit statistics.
hardware rate-limiter	Configures rate limits.

show identity policy

To display the identity policies, use the **show identity policy** command.

show identity policy [policy-name]

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•	VIILUA.	D C 3 C	, , , , ,	UUI

policy-name	(Optional) Name	of a policy. The	name is case sensitive.

Defaults

Displays information for all identity policies.

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 information for all of the identity policies:

switch# show identity policy

This example shows how to display information for a specific identity policy:

switch# show identity policy AdminPolicy

Command	Description	
identity policy	Configures identity policies.	

show identity profile

To display the identity profiles, use the **show identity profile** command.

show identity profile [eapoudp]

•	_	_	
	mtav	Hacc	 ntınn
3	yntax	DCOL	 vuvii

eapoudp	(Optional) Displays the Extensible Authentication Protocol over User Datagram
	Protocol (EAPoUDP) identity profile.

Defaults

Displays information for all identity profiles.

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 identity profiles:

switch# show identity profile

This example shows how to display the EAPoUDP identity profile configuration:

switch# show identity profile eapoudp

Command	Description
identity profile eapoudp	Configures EAPoUDP identity profiles.

show ip access-lists

To display all IPv4 access control lists (ACLs) or a specific IPv4 ACL, use the **show ip access-lists** command.

show ip access-lists [access-list-name] [expanded | summary]

Syntax Description

access-list-name	(Optional) Name of an IPv4 ACL, which can be up to 64 alphanumeric, case-sensitive characters.
expanded	(Optional) Specifies that the contents of IPv4 address groups or port groups show rather than the names of object groups only.
summary	(Optional) Specifies that the command displays information about the ACL rather than the ACL configuration. For more information, see the "Usage Guidelines" section.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification	
4.2(1)	Command output is sorted alphabetically by the ACL names.	
	Support was added for the fragments command.	
4.0(1)	This command was introduced.	

Usage Guidelines

The device shows all IPv4 ACLs, unless you use the access-list-name argument to specify an ACL.

If you do not specify an ACL name, the device lists ACLs alphabetically by the ACL names.

IPv4 address object groups and IP port object groups show only by name, unless you use the **expanded** keyword.

The **expanded** keyword allows you to display the details of object groups used in an ACL rather than only the name of the object groups. For more information about object groups, see the **object-group ip address** and **object-group ip port** commands.

The **summary** keyword allows you to display information about the ACL rather than the ACL configuration. The information displayed includes the following:

- Whether per-entry statistics are configured for the ACL.
- Whether the **fragments** command is configured for the ACL.
- The number of rules in the ACL configuration. This number does not reflect how many entries that the ACL contains when the device applies it to an interface. If a rule in the ACL uses an object group, the number of entries in the ACL when it is applied may be much greater than the number of rules.
- The interfaces that the ACL is applied to.

• The interfaces that the ACL is active on.

The **show ip access-lists** command displays statistics for each entry in an ACL if the following conditions are both true:

- The ACL configuration contains the **statistics per-entry** command.
- The ACL is applied to an interface that is administratively up.

If an IP ACL includes the **fragments** command, it appears before the explicit permit and deny rules, but the device applies the **fragments** command to noninitial fragments only if they do not match all other explicit rules in the ACL.

This command does not require a license.

Examples

This example shows how to use the **show ip access-lists** command to display all IPv4 ACLs on a device that has a single IPv4 ACL:

```
switch# show ip access-lists

IP access list ipv4-open-filter

10 permit ip any any
```

This example shows how to use the **show ip access-lists** command to display an IPv4 ACL named ipv4-RandD-outbound-web, including per-entry statistics for the entries except for the MainLab object group:

switch# show ip access-lists ipv4-RandD-outbound-web

```
IP access list ipv4-RandD-outbound-web
statistics per-entry
fragments deny-all
1000 permit ahp any any [match=732]
1005 permit tcp addrgroup MainLab any eq telnet
1010 permit tcp any any eq www [match=820421]
```

This example shows how to use the **show ip access-lists** command to display an IPv4 ACL named ipv4-RandD-outbound-web. The **expanded** keyword causes the contents of the object group from the previous example to appear, including the per-entry statistics:

switch# show ip access-lists ipv4-RandD-outbound-web expanded

```
IP access list ipv4-RandD-outbound-web statistics per-entry 1000 permit ahp any any [match=732] 1005 permit tcp 10.52.34.4/32 any eq telnet [match=5032] 1005 permit tcp 10.52.34.27/32 any eq telnet [match=433] 1010 permit tcp any any eq www [match=820421]
```

This example shows how to use the **show ip access-lists** command with the **summary** keyword to display information about an IPv4 ACL named ipv4-RandD-outbound-web, such as which interfaces the ACL is applied to and active on:

```
switch# show ip access-lists ipv4-RandD-outbound-web summary
IPV4 ACL ipv4-RandD-outbound-web
```

Command	Description	
fragments	Configures how an IP ACL processes noninitial fragments.	
ip access-list	Configures an IPv4 ACL.	
show access-lists	Displays all ACLs or a specific ACL.	
show ipv6 access-lists	Displays all IPv6 ACLs or a specific IPv6 ACL.	
show mac access-lists	Displays all MAC ACLs or a specific MAC ACL.	
statistics per-entry Starts recording statistics for packets permitted or denied by ea an ACL.		

show ip access-lists capture session

To display the ACL capture session configuration, use the **show ip access-lists capture session** command.

show ip access-lists capture session session

Syntax Description	session Session	n ID. The range is from 0 to 4294967295.
Defaults	None	
Command Modes	Any command mode	
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 ACL capture session configuration:
<pre>switch# show ip access-lists capture session 5 switch#</pre>		-lists capture session 5
Related Commands	Command	Description
	monitor session session type acl-capture	Configures an ACL capture session.
	destination interface	Configures a destination for ACL capture packets.

show ip arp inspection

To display the Dynamic ARP Inspection (DAI) configuration status, use the **show ip arp inspection** command.

show ip arp inspection

Syntax Description

This command has no arguments or keywords.

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 status of the DAI configuration:

switch# show ip arp inspection

```
Source Mac Validation : Enabled Destination Mac Validation : Enabled IP Address Validation : Enabled
```

Vlan : 1

Configuration : Enabled Operation State : Active

ARP Req Forwarded = 0
ARP Res Forwarded = 0
ARP Req Dropped = 0
ARP Res Dropped = 0
DHCP Drops = 0
DHCP Permits = 0
SMAC Fails-ARP Req = 0
SMAC Fails-ARP Res = 0
DMAC Fails-ARP Res = 0
IP Fails-ARP Req = 0
IP Fails-ARP Res = 0

Command	Description
ip arp inspection vlan	Enables DAI for a specified list of VLANs.
show ip arp inspection interface	Displays the trust state and the ARP packet rate for a specified interface.
show ip arp inspection log	Displays the DAI log configuration.
show ip arp inspection statistics	Displays the DAI statistics.
show ip arp inspection vlan	Displays DAI status for a specified list of VLANs.
show running-config dhcp	Displays DHCP snooping configuration, including DAI configuration.

show ip arp inspection interface

To display the trust state and the ARP packet rate for the specified interface, use the **show ip arp inspection interface** command.

show ip arp inspection interface {**ethernet** *slot/port* | **port-channel** *channel-number*}

Syntax Description

ethernet slot/port	(Optional) Specifies that the output is for an Ethernet interface.
port-channel channel-number	(Optional) Specifies that the output is for a port-channel interface. Valid port-channel numbers are from 1 to 4096.

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 trust state and the ARP packet rate for a trusted interface:

switch# show ip arp inspection interface ethernet 2/1

Interface	Trust State	Rate (pps)	Burst Interval
Ethernet2/46	Trusted	15	5
switch#			

Command	Description
ip arp inspection vlan	Enables Dynamic ARP Inspection (DAI) for a specified list of VLANs.
show ip arp inspection	Displays the DAI configuration status.
show ip arp inspection log	Displays the DAI log configuration.
show ip arp inspection statistics	Displays the DAI statistics.
show ip arp inspection vlan	Displays DAI status for a specified list of VLANs.
show running-config dhcp	Displays DHCP snooping configuration, including DAI configuration.

show ip arp inspection log

To display the Dynamic ARP Inspection (DAI) log configuration, use the **show ip arp inspection log** command.

show ip arp inspection log

Syntax Description

This command has no arguments or keywords.

Defaults

None

switch#

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 DAI log configuration:

switch# show ip arp inspection log

Syslog Buffer Size : 32
Syslog Rate : 5 entries per 1 seconds

Command	Description	
clear ip arp inspection log	Clears the DAI logging buffer.	
ip arp inspection log-buffer	Configures the DAI logging buffer size.	
show ip arp inspection	Displays the DAI configuration status.	
show ip arp inspection interface	Displays the trust state and the ARP packet rate for a specified interface.	
show running-config dhcp	Displays DHCP snooping configuration, including DAI configuration.	

show ip arp inspection statistics

Use the **show ip arp inspection statistics** command to display the Dynamic ARP Inspection (DAI) statistics. You can specify a VLAN or range of VLANs.

show ip arp inspection statistics [vlan vlan-list]

Syntax Description

vlan vlan-list	(Optional) Specifies the list of VLANs for which to display DAI statistics. Valid
	VLAN IDs are from 1 to 4096.

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 DAI statistics for VLAN 1:

switch# show ip arp inspection statistics vlan 1

Command	Description
clear ip arp inspection statistics vlan	Clears the DAI statistics for a specified VLAN.
show ip arp inspection	Displays the DAI configuration status.
show ip arp inspection interface	Displays the trust state and the ARP packet rate for a specified interface.

Command	Description
show ip arp inspection log	Displays the DAI log configuration.
show running-config dhcp	Displays DHCP snooping configuration, including DAI configuration.

show ip arp inspection vlan

Use the **show ip arp inspection vlan** command to display Dynamic ARP Inspection (DAI) status for the specified list of VLANs.

show ip arp inspection vlan vlan-list

Syntax Description

vlan-list	VLANs with DAI status that this command shows. The vlan-list argument allows
	you to specify a single VLAN ID, a range of VLAN IDs, or comma-separated IDs
	and ranges (see the "Examples" section). Valid VLAN IDs are from 1 to 4096.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Examples

This example shows how to display DAI status for VLANs 1 and 13:

switch# show ip arp inspection vlan 1,13

Source Mac Validation : Enabled Destination Mac Validation : Enabled IP Address Validation : Enabled

Vlan : 1

Configuration : Enabled Operation State : Active

Vlan : 13

Configuration : Enabled Operation State : Inactive

switch#

Command	Description
clear ip arp inspection statistics vlan	Clears the DAI statistics for a specified VLAN.
ip arp inspection vlan	Enables DAI for a specified list of VLANs.
show ip arp inspection	Displays the DAI configuration status.

Command	Description
show ip arp inspection interface	Displays the trust state and the ARP packet rate for a specified interface.
show running-config dhcp	Displays DHCP snooping configuration, including DAI configuration.

show ip device tracking

To display IP device tracking information, use the **show ip device tracking** command.

show ip device tracking {all | interface ethernet *slot/port* | **ip-address** *ipv4-address* | **mac-address** | *mac-address* |

Syntax Description

all	Displays all IP device tracking information.
interface ethernet slot/port	Displays IP tracking device information for an interface.
ip-address ipv4-address	Displays IP tracking device information for an IPv4 address in the A.B.C.D format.
mac-address mac-address	Displays IP tracking information for a MAC address in the XXXX.XXXX format.

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 all IP device tracking information:

switch# show ip device tracking all

This example shows how to display the IP device tracking information for an interface:

switch# show ip device tracking ethernet 1/2

This example shows how to display the IP device tracking information for an IP address:

switch# show ip device tracking ip-address 10.10.1.1

This example shows how to display the IP device tracking information for a MAC address:

switch# show ip device tracking mac-address 0018.bad8.3fbd

Command	Description
ip device tracking	Configures IP device tracking.

show ip dhcp relay

To display DHCP snooping relay status, including DHCP server address configuration details, use the **show ip dhcp relay** command.

show ip dhcp relay

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(2)	This command was introduced.
7.2(0)D1(1)	This command was modified. An example for a helper address configuration on a bridge domain interface (BDI) was added.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the DHCP relay status and configured DHCP server addresses:

switch# show ip dhcp relay

DHCP relay service is enabled
Insertion of option 82 is enabled
Insertion of VPN suboptions is enabled
Helper addresses are configured on the following interfaces:
Interface Relay Address VRF Name
-----Ethernet1/4 10.10.10.1 red

This example shows how to display the DHCP relay status and configured DHCP server addresses. In this example, the helper address is configured on a bridge domain interface.

switch# show ip dhcp relay

Helper addresses are configured on the following interfaces:

Interface Re	elay Address	VRF Name
Bdi14 192.0.2.120	management	

Command	Description
feature dhcp	Enables the DHCP snooping feature on the device.
ip dhcp relay	Enables the DHCP relay agent.
show ip dhcp relay address	Shows DHCP server addresses configured on the device.

show ip dhcp relay address

To display DHCP server addresses configured on the device, use the **show ip dhcp relay address** command.

show ip dhcp relay address [interface {ethernet list | port-channel list}]

show ip dhcp relay address [interface interface-list]

Syntax Description

interface	(Optional) Restricts the output to a DHCP addresses configured on range or set of Ethernet or port-channel interfaces and subinterfaces.
ethernet	(Optional) Restricts the output to a DHCP addresses configured on range or set of Ethernet interfaces and subinterfaces.
list	Single interface, range of interfaces, or comma-separated interfaces and ranges (see the "Examples" section).
port-channel	(Optional) Restricts the output to a DHCP addresses configured on range or set of port-channel interfaces and subinterfaces.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(2)	Support was added for the interface keyword and for VRF awareness.
4.2(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display all the DHCP relay addresses configured on a device:

switch#	show	ip	dhcp	relay	address
---------	------	----	------	-------	---------

Interface	Relay Address	VRF Name
Ethernet1/2	10.1.1.1	
Ethernet1/3	10.1.1.1	red
Ethernet1/4	10.1.1.1	red
Ethernet1/5	10.1.1.1	red
Ethernet1/6	10.1.1.1	red
Ethernet1/7	10.1.1.1	red
Ethernet1/8	10.1.1.1	red

switch#

This example shows how to display the DHCP relay addresses configured Ethernet interfaces 1/2 through 1/4 and Ethernet 1/8:

switch(config-if) # show ip dhcp relay address interface ethernet 1/2-4,ethernet 1/8

Interface	Relay Address	VRF Name
Ethernet1/2	10.1.1.1	
Ethernet1/3	10.1.1.1	red
Ethernet1/4	10.1.1.1	red
Ethernet1/8	10.1.1.1	red

Command	Description
feature dhcp	Enables the DHCP snooping feature on the device.
ip dhcp relay	Enables the DHCP relay agent.
show ip dhcp relay	Shows DHCP relay status and server addresses configured on the device.

show ip dhcp relay statistics

To display the DHCP relay statistics, use the show ip dhcp relay statistics command.

show ip dhcp relay statistics [interface interface]

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interface interface	Displays the DHCP relay address of the interface. The supported interface
	types are ethernet, port-channel, and VLAN.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
6.2(2)	This command was introduced.
7.2(0)D1(1)	This command was modified. An example for DHCP relay statistics information for a Bridge Domain Interface (BDI) was added.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display DHCP relay statistics for an interface:

 ${\tt switch\#} \ \ \textbf{show ip dhcp relay statistics interface bdi 14}$

Message Type	Rx	Tx	Drops	
Discover	7	 7	0	
Offer	0	0	0	
Request(*)	0	0	0	
Ack	0	0	0	
Release(*)	0	0	0	
Decline	0	0	0	
<pre>Inform(*)</pre>	0	0	0	
Nack	0	0	0	
Total	7	7	0	

DHCP server stats:

Server	Vrf	Requ	est	Response
10.64.66.242	management		 7 	0
DHCP L3 FWD: Total Packets Total Packets Total Packets	Forwarded	: 0 : 0 :	0	

Non DHCP:

0 Total Packets Received Total Packets Forwarded

Command	Description
ip dhcp relay	Enables the DHCP relay agent.
show ip dhcp relay	Displays the DHCP configuration.

show ip dhcp snooping

To display general status information for DHCP snooping, use the **show ip dhcp snooping** command.

show ip dhcp snooping

Syntax Description

This command has no arguments or keywords.

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 general status information about DHCP snooping:

switch# show ip dhcp snooping
DHCP snooping service is enabled
Switch DHCP snooping is enabled
DHCP snooping is configured on the following VLANs:
1,13

DHCP snooping is operational on the following VLANs:

1

Insertion of Option 82 is disabled Verification of MAC address is enabled

DHCP snooping trust/rate is configured on the following interfaces:

switch#

Command	Description
feature dhcp	Enables the DHCP snooping feature on the device.
ip dhcp snooping	Globally enables DHCP snooping on the device.
show ip dhcp snooping binding	Displays IP-MAC address bindings, including the static IP source entries.

Command	Description
show ip dhcp snooping statistics	Displays DHCP snooping statistics.
show running-config dhcp	Displays DHCP snooping configuration.

show ip dhcp snooping binding

To display IP-to-MAC address bindings for all interfaces or a specific interface, use the **show ip dhcp snooping binding** command. It includes static IP source entries. Static entries appear with the term "static" in the Type column.

show ip dhcp snooping binding [IP-address] [MAC-address] [**interface ethernet** slot/port] [**vlan** vlan-id]

show ip dhcp snooping binding [dynamic]

show ip dhcp snooping binding [static]

Syntax Description

IP-address	(Optional) IPv4 address that the bindings shown must include. Valid entries are in dotted-decimal format.
MAC-address	(Optional) MAC address that the bindings shown must include. Valid entries are in dotted-hexadecimal format.
interface ethernet slot/port	(Optional) Specifies the Ethernet interface that the bindings shown must be associated with.
vlan vlan-id	(Optional) Specifies a VLAN ID that the bindings shown must be associated with. Valid VLAN IDs are from 1 to 4096.
dynamic	(Optional) Limits the output to all dynamic IP-MAC address bindings.
static	(Optional) Limits the output to all static IP-MAC address bindings.

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 all bindings:

switch#	show	iр	\mathtt{dhcp}	snooping	binding
---------	------	----	-----------------	----------	---------

MacAddress	IpAddress	LeaseSec	Type	VLAN	Interface
Of:00:60:b3:23:33	10.3.2.2	infinite	static	13	Ethernet2/46
Of:00:60:b3:23:35	10.2.2.2	infinite	static	100	Ethernet2/10
cwitch#					

Command	Description
clear ip dhcp snooping binding	Clears the DHCP snooping binding database.
feature dhcp	Enables the DHCP snooping feature on the device.
ip dhcp relay	Enables or disables the DHCP relay agent.
ip dhcp snooping	Globally enables DHCP snooping on the device.
show ip dhcp snooping	Displays general information about DHCP snooping.
show ip dhcp snooping statistics	Displays DHCP snooping statistics.
show running-config dhcp	Displays DHCP snooping configuration, including IP Source Guard configuration.

show ip dhcp snooping statistics

To display DHCP snooping statistics, use the show ip dhcp snooping statistics command.

show ip dhcp snooping statistics

Syntax Description

This command has no arguments or keywords.

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.

Displayed Statistics

- **Packets processed**—The number of packets containing DHCP messages.
- Packets forwarded—The number of packets containing DHCP messages forwarded by the relay agent.
- Total packets dropped—The total number of packets containing DHCP messages that were dropped. The reasons for dropping the packets are as follows:
 - Received from untrusted ports—The number of packets containing DHCP messages, particularly DHCPOFFER packets, received from untrusted ports.
 - MAC address check failure-
 - Option 82 insertion failure—
 - O/P Intf unknown—
 - Unknown reason—

Examples

This example shows how to display DHCP snooping statistics:

```
switch# show ip dhcp snooping statistics
Packets processed 0
Packets received through cfsoe 0
Packets forwarded 0
Packets forwarded on cfsoe 0
Total packets dropped 0
Packets dropped from untrusted ports 0
Packets dropped due to MAC address check failure 0
Packets dropped due to Option 82 insertion failure 0
Packets dropped due to o/p intf unknown 0
```

Packets dropped which were unknown 0 Packets dropped due to dhcp relay not enabled ${\tt 0}$ Packets dropped due to no binding entry ${\tt 0}$ Packets dropped due to interface error/no interface 0 Packets dropped due to max hops exceeded 0 switch#

Command	Description
feature dhcp	Enables the DHCP snooping feature on the device.
ip dhcp snooping	Globally enables DHCP snooping on the device.
service dhcp	Enables or disables the DHCP relay agent.
show ip dhcp snooping	Displays general information about DHCP snooping.
show ip dhcp snooping binding	Displays IP-MAC address bindings, including the static IP source entries.
show running-config dhcp	Displays DHCP snooping configuration.

show ip verify source

To display the IP-to-MAC address bindings, use the **show ip verify source** command.

 $\textbf{show ip verify source [interface } \{\textbf{ethernet } \textit{slot/port} \mid \textbf{port-channel } \textit{channel-number}\}]$

Syntax Description

interface	(Optional) Specifies that the output is limited to IP-to-MAC address bindings for a particular interface.
ethernet slot/port	(Optional) Specifies that the output is limited to bindings for the Ethernet interface given.
port-channel channel-number	(Optional) Specifies that the output is limited to bindings for the port-channel interface given. Valid port-channel numbers are from 1 to 4096.

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 IP-to-MAC address bindings:

switch# show ip verify source
switch#

Command	Description
ip source binding	Creates a static IP source entry for the specified Ethernet interface.
ip verify source dhcp-snooping-vlan	Enables IP Source Guard on an interface.
show running-config dhcp	Displays DHCP snooping configuration, including IP Source Guard configuration.

show ipv6 access-lists

To display all IPv6 access-control lists (ACLs) or a specific IPv6 ACL, use the **show ipv6 access-lists** command.

show ipv6 access-lists [access-list-name] [expanded | summary]

Syntax Description

access-list-name	(Optional) Name of an IPv6 ACL, which can be up to 64 alphanumeric, case-sensitive characters.
expanded	(Optional) Specifies that the contents of IPv6 address groups or port groups show rather than the names of object groups only.
summary	(Optional) Specifies that the command displays information about the ACL rather than the ACL configuration. For more information, see the "Usage Guidelines" section.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification	
4.2(1)	Command output is sorted alphabetically by the ACL names.	
	Support was added for the fragments command.	
4.1(2)	This command was introduced.	

Usage Guidelines

The device shows all IPv6 ACLs, unless you use the access-list-name argument to specify an ACL.

If you do not specify an ACL name, the device lists ACLs alphabetically by the ACL names.

IPv6 address object groups and IP port object groups show only by name, unless you use the **expanded** keyword.

The **expanded** keyword allows you to display the details of object groups used in an ACL rather than only the name of the object groups. For more information about object groups, see the **object-group ipv6 address** and **object-group ip port** commands.

The **summary** keyword allows you to display information about the ACL rather than the ACL configuration. The information displayed includes the following:

- Whether per-entry statistics are configured for the ACL.
- Whether the **fragments** command is configured for the ACL.
- The number of rules in the ACL configuration. This number does not reflect how many entries that the ACL contains when the device applies it to an interface. If a rule in the ACL uses an object group, the number of entries in the ACL when it is applied may be much greater than the number of rules.
- The interfaces that the ACL is applied to.

• The interfaces that the ACL is active on.

The **show ipv6 access-lists** command displays statistics for each entry in an ACL if the following conditions are both true:

- The ACL configuration contains the **statistics per-entry** command.
- The ACL is applied to an interface that is administratively up.

If an IP ACL includes the **fragments** command, it appears before the explicit permit and deny rules, but the device applies the **fragments** command to noninitial fragments only if they do not match all other explicit rules in the ACL.

This command does not require a license.

Examples

This example shows how to use the **show ipv6 access-lists** command to display all IPv6 ACLs on a device that has a single IPv6 ACL:

```
switch# show ipv6 access-lists

IPv6 access list ipv6-main-filter

10 permit ipv6 any any
```

This example shows how to use the **show ipv6 access-lists** command to display an IPv6 ACL named ipv6-RandD-outbound-web, including per-entry statistics for the entries except for the LowerLab object group:

switch# show ipv6 access-lists ipv6-RandD-outbound-web

```
IPv6 access list ipv6-RandD-outbound-web statistics per-entry fragments deny-all 1000 permit ahp any any [match=732] 1005 permit tcp addrgroup LowerLab any eq telnet 1010 permit tcp any any eq www [match=820421]
```

This example shows how to use the **show ipv6 access-lists** command to display an IPv6 ACL named ipv6-RandD-outbound-web. The **expanded** keyword causes the contents of the object group from the previous example to appear, including the per-entry statistics:

switch# show ipv6 access-lists ipv6-RandD-outbound-web expanded

```
IPv6 access list ipv6-RandD-outbound-web
    statistics per-entry
    1000 permit ahp any any [match=732]
    1005 permit tcp 2001:db8:0:3ab0::1/128 any eq telnet [match=5032]
    1005 permit tcp 2001:db8:0:3ab0::32/128 any eq telnet [match=433]
    1010 permit tcp any any eq www [match=820421]
```

This example shows how to use the **show ipv6 access-lists** command with the **summary** keyword to display information about an IPv6 ACL named ipv6-RandD-outbound-web, such as which interfaces the ACL is applied to and active on:

```
switch# show ipv6 access-lists ipv6-RandD-outbound-web summary

IPV6 ACL ipv6-RandD-outbound-web

Statistics enabled

West laces Configured: 4
```

Command	Description	
fragments	Configures how an IP ACL processes noninitial fragments.	
ipv6 access-list	Configures an IPv6 ACL.	
show access-lists	Displays all ACLs or a specific ACL.	
show ip access-lists	Displays all IPv4 ACLs or a specific IPv4 ACL.	
show mac access-lists	Displays all MAC ACLs or a specific MAC ACL.	
statistics per-entry	Starts recording statistics for packets permitted or denied by each entry in an ACL.	

show ipv6 dhcp-ldra

To display configuration details and statistics for the Lightweight DHCPv6 Relay Agent (LDRA), use the **show ipv6 dhcp-ldra** command.

show ipv6 dhcp-ldra [statistics]

Syntax Description	statistics	(Optional) Displays LDRA-related statistics.
Defaults	None	
Command Modes	Any command mode	
Command History	Release	Modification
	7.3(0)D1(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the LDRA feature by using the **ipv6 dhcp-ldra** command.

Examples

This example shows how to enable the LDRA feature on the specified interface:

```
switch(config)# ipv6 dhcp-ldra
switch(config) # show ipv6 dhcp-ldra statistics
    DHCPv6 LDRA client facing statistics.
Messages received
                                2
Messages sent
                                2
Messages discarded
                                0
Messages Received
SOLICIT
                                1
REQUEST
                                1
Messages Sent
RELAY-FORWARD
   DHCPv6 LDRA server facing statistics.
Messages received
Messages sent
                                2
Messages discarded
                                0
Messages Received
RELAY-REPLY
                                2
Messages Sent
ADVERTISE
                                1
REPLY
                                1
```

Command	Description
ipv6 dhcp-ldra	Enables the LDRA feature.

show ipv6 dhcp relay

To display the DHCPv6 relay global or interface-level configuration, including DHCPv6 server addresses configured on interfaces, use the **show ipv6 dhcp relay** command.

show ipv6 dhcp relay [interface interface]

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interface interface	(Optional) Displays the DHCPv6 relay address of the interface. The
	supported interface types are ethernet, port-channel, and VLAN.

Defaults

None

Command Modes

Any command mode

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 globally configured DHCPv6 relay status and DHCPv6 server addresses:

switch# show ipv6 dhcp relay
DHCPv6 relay service : Enabled
Insertion of VPN options : Disabled

Insertion of VPN options : Disabled Insertion of CISCO options : Disabled

 ${\tt DHCPv6}$ Relay is configured on the following interfaces:

Interface Relay Address VRF Name
----Ethernet1/4 red

Command	Description
ipv6 dhcp relay	Enables the DHCPv6 relay agent.
show ipv6 dhcp relay statistics	Displays statistics relating to DHCPv6.

show ipv6 dhcp relay statistics

To display the DHCPv6 relay statistics, use the **show ipv6 dhcp relay statistics** command.

show ipv6 dhcp relay statistics [interface interface]

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interface interface	(Optional) Displays the DHCPv6 relay address of the interface. The
	supported interface types are ethernet, port-channel, and VLAN.

Defaults

None

Command Modes

Any command mode

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 globally configured DHCPv6 relay statistics:

switch# show ipv6 dhcp relay statistics

Command	Description
ipv6 dhcp relay	Enables the DHCPv6 relay agent.
show ipv6 dhcp relay	Displays the DHCPv6 configuration.

show ip udp relay

To display the configuration details of the UDP relay feature, use the show ip udp relay command.

show ip udp relay [interface [ethernet *slot/port-number* | **port-channel** *port-channel-number*] | **object-group** *object-group-name*]

Syntax Description

slot/port-number	Specifies the slot and port number.
port-channel-number	Specifies the port channel number.
object-grp-name	Specifies the name of the object group.

Defaults

None

Command Modes

Any command mode

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 details of the UDP relay feature:

switch# show ip udp relay
UDP relay service is enabled
UDP relay on default UDP ports:
Default UDP Ports Status

Time service (port 37) enabled IEN-116 Name Service (port 42) enabled TACACS service (port 49) enabled Domain Naming System (port 53) enabled Trivial File Transfer Protocol (port 69) enabled NetBIOS Name Server (port 137) enabled NetBIOS Datagram Server (port 138) enabled

UDP relay is enabled on the following non-default UDP ports:

Object-group and Subnet-broadcast configurations:

Interface Subnet-broadcast Object-group

771---700 d'arth de l'arret

Vlan700 disabled iSmart Vlan800 enabled iHello

Rel	ated	Comn	ande

Command	Description
ip forward-protocol	Enables the UDP relay feature.
udp	
object-group udp relay	Configures the object group.
ip address	

show key chain

To display the configuration for a specific keychain, use the **show key chain** command.

show key chain keychain-name [mode decrypt]

Syntax Description

keychain-name	Name of the keychain to configure, up to 63 alphanumerical characters.
mode decrypt	(Optional) Shows the key text configuration in cleartext. This option is available only when access the device with a user account that is assigned a network-admin or vdc-admin user role.

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 keychain configuration for the keychain glbp-key, which contains one key (key 13) which has specific accept and send lifetimes:

switch# show key chain

Key-Chain glbp-keys

Key 13 -- text 7 071a33595c1d0c1702170203163e3e21213c20361a021f11
accept lifetime UTC (00:00:00 Jun 13 2008) - (23:59:59 Sep 12 2008)
send lifetime UTC (00:00:00 Jun 13 2008) - (23:59:59 Aug 12 2008)

Command	Description
accept-lifetime	Configures an accept lifetime for a key.
key	Configures a key.
key chain	Configures a keychain.
key-string	Configures a key string.
send-lifetime	Configures a send lifetime for a key.

show Idap-search-map

To display information about the configured Lightweight Directory Access Protocol (LDAP) attribute maps, use the **show ldap-search-map** command.

show ldap-search-map

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

You must use the **feature ldap** command before you can display LDAP information.

This command does not require a license.

Examples

This example shows how to display information about the configured LDAP attribute maps:

Command	Description	
attribute-name	Configures the attribute name, search filter, and base-DN for the user profile, trusted certificate, CRL, certificate DN match, public key match, or user-switchgroup lookup search operation.	
feature ldap	Enables LDAP.	
ldap search-map	Configures an LDAP search map.	
ldap-server host	Specifies the IPv4 or IPv6 address or hostname for an LDAP server.	

show Idap-server

To display the Lightweight Directory Access Protocol (LDAP) server configuration, use the **show ldap-server** command.

show ldap-server

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

You must use the **feature ldap** command before you can display LDAP information.

This command does not require a license.

Examples

This example shows how to display the LDAP server configuration:

```
switch# show ldap-server
timeout : 5
port : 389
deadtime : 0
```

total number of servers : 0

Command	Description
feature ldap	Enables LDAP.
ldap-server host	Specifies the IPv4 or IPv6 address or hostname for an LDAP server.

show Idap-server groups

To display the Lightweight Directory Access Protocol (LDAP) server group configuration, use the **show ldap-server groups** command.

show ldap-server groups

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

You must use the **feature ldap** command before you can display LDAP information.

This command does not require a license.

switch# show ldap-server groups

Search map:

Examples

This example shows how to display the LDAP server group configuration:

```
total number of groups: 1

following LDAP server groups are configured:
    group LDAPgroup1:
        Use-vrf: default
        Mode: UnSecure
        Authentication: Search and Bind
        Bind and Search: append with basedn (cn=$userid)
        Authentication: Do bind instead of compare
        Bind and Search: compare passwd attribute userPassword
        Authentication Mech: Default(PLAIN)
```

Command	Description
aaa group server ldap	Creates an LDAP server group and enters the LDAP server group configuration mode for that group.
feature ldap	Enables LDAP.

show Idap-server statistics

To display the Lightweight Directory Access Protocol (LDAP) server statistics, use the **show ldap-server statistics** command.

show ldap-server statistics { *ipv4-address* | *ipv6-address* | *host-name* }

Syntax Description

ipv4-address	Server IPv4 address in the A.B.C.D format.
ipv6-address	Server IPv6 address in the <i>X:X:X:X</i> format.
host-name	Server name. The name is alphanumeric, case sensitive, and has a maximum of 256 characters.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

You must use the feature ldap command before you can display LDAP information.

This command does not require a license.

Examples

This example shows how to display the statistics for an LDAP server:

switch# show ldap-server statistics 10.10.1.1

Server is not monitored

Authentication Statistics
failed transactions: 0
sucessfull transactions: 0
requests sent: 0
requests timed out: 0
responses with no matching requests: 0
responses not processed: 0
responses containing errors: 0

Command	Description
feature ldap	Enables LDAP.
ldap-server host	Specifies the IPv4 or IPv6 address or hostname for an LDAP server.

show mac access-lists

To display all MAC access control lists (ACLs) or a specific MAC ACL, use the **show mac access-lists** command.

show mac access-lists [access-list-name] [expanded | summary]

Syntax Description

access-list-name	(Optional) Name of a MAC ACL, which can be up to 64 alphanumeric, case-sensitive characters.
expanded	(Optional) Specifies that the contents of object groups show rather than the names of object groups only.
summary	(Optional) Specifies that the command displays information about the ACL rather than the ACL configuration. For more information, see the "Usage Guidelines" section.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	Command output is sorted alphabetically by the ACL names.
4.0(1)	This command was introduced.

Usage Guidelines

The device shows all MAC ACLs, unless you use the access-list-name argument to specify an ACL.

If you do not specify an ACL name, the device lists ACLs alphabetically by the ACL names.

The **expanded** keyword allows you to display the details of object groups used in an ACL rather than only the name of the object groups. For more information about object groups, see the **object-group ip address**, **object-group ipv6 address**, and **object-group ip port** commands.

The **summary** keyword allows you to display information about the ACL rather than the ACL configuration. The information displayed includes the following:

- Whether per-entry statistics are configured for the ACL.
- The number of rules in the ACL configuration. This number does not reflect how many entries that
 the ACL contains when the device applies it to an interface. If a rule in the ACL uses an object group,
 the number of entries in the ACL when it is applied may be much greater than the number of rules.
- The interfaces that the ACL is applied to.
- The interfaces that the ACL is active on.

The **show mac access-lists** command displays statistics for each entry in an ACL if the following conditions are both true:

• The ACL configuration contains the **statistics per-entry** command.

• The ACL is applied to an interface that is administratively up.

This command does not require a license.

Examples

This example shows how to use the **show mac access-lists** command to show all MAC ACLs on a device with a single MAC ACL:

```
switch# show mac access-lists

MAC access list mac-filter

10 permit any any ip
```

This example shows how to use the **show mac access-lists** command to display a MAC ACL named mac-lab-filter, including per-entry statistics:

```
switch# show mac access-lists mac-lab-filter
```

```
MAC access list mac-lab-filter

statistics per-entry

10 permit 0600.ea5f.22ff 0000.0000.0000 any [match=820421]

20 permit 0600.050b.3ee3 0000.0000.0000 any [match=732]
```

This example shows how to use the **show mac access-lists** command with the **summary** keyword to display information about a MAC ACL named mac-lab-filter, such as which interfaces the ACL is applied to and active on:

```
switch# show mac access-lists mac-lab-filter summary
```

```
MAC ACL mac-lab-filter

Statistics enabled
Total ACEs Configured: 2
Configured on interfaces:
Ethernet2/3 - ingress (Port ACL)
Active on interfaces:
Ethernet2/3 - ingress (Port ACL)
```

Command	Description
mac access-list	Configures a MAC ACL.
show access-lists	Displays all ACLs or a specific ACL.
show ip access-lists	Displays all IPv4 ACLs or a specific IPv4 ACL.
show ipv6 access-lists	Displays all IPv6 ACLs or a specific IPv6 ACL.

show password secure-mode

To display the secure mode for changing password, use the **show password secure-mode** command.

show password secure-mode

Syntax Description

This command has no arguments or keywords.

Defaults

Enabled

Command Modes

Any command mode

Command History

Release	Modification
6.1.4	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the secure mode for changing password:

switch# show password secure-mode Password secure mode is enabled

Command	Description
password strength-check	Enables password-strength checking.

show password strength-check

To display password-strength checking status, use the **show password strength-check** command.

show password strength-check

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(3)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display password-strength checking status:

switch# show password strength-check
Password strength check enabled

Command	Description
password strength-check	Enables password-strength checking.
show running-config security	Displays security feature configuration in the running configuration.

show policy-map interface control-plane

To display packet-level statistics for all classes that are part of the applied control plane policing (CoPP) policy, use the **show policy-map interface control-plane** command.

show policy-map interface control-plane [class class-name] [module module-number]

Syntax Description

class class-name	Displays the packet-level statistics for the specific class.
module module-number	Displays the packet-level statistics for the specific module. The range is from 1 to 18.

Command Modes

Any command mode

Command History

Release	Modification
6.2(2)	This command was introduced.

Usage Guidelines

Use this command to display the policy values with associated class maps and drops per policy or class map. It also displays the scale factor values when a CoPP policy is applied. When the scale factor value is the default (1.00), it is not displayed.



The scale factor changes the CIR, BC, PIR, and BE values internally on each module, but the display shows the configured CIR, BC, PIR, and BE values only. The actual applied value on a module is the scale factor multiplied by the configured value.

This command does not require a license.

Examples

This example shows how to monitor CoPP:

```
switch# show policy-map interface control-plane
Control Plane

service-policy input: copp-system-policy-default

class-map copp-system-class-igmp (match-any)
match protocol igmp
police cir 1024 kbps , bc 65535 bytes
conformed 0 bytes; action: transmit
violated 0 bytes;
class-map copp-system-class-pim-hello (match-any)
match protocol pim
police cir 1024 kbps , bc 4800000 bytes
conformed 0 bytes; action: transmit
violated 0 bytes;
```

This example shows the 5-minute moving averages and peaks of the conformed and violated byte counts in the output of the **show policy-map interface control-plane** command. In this example, the 5-minute offered rate is the 5-minute moving average of the conformed bytes, the 5-minute violate rate is the 5-minute moving average of the violated bytes, and the peak rate is the highest value since bootup or counter reset, with the peak occurring at the time stamp shown.

```
module 9:
  conformed 0 bytes,
    5-min offered rate 10 bytes/sec
    peak rate 12 bytes/sec at 12:29:38.654 UTC Sun Jun 30 2013
violated 0 bytes,
5-min violate rate 20 bytes/sec
  peak rate 22 bytes/sec at 12:26:22.652 UTC Sun Jun 30 2013
```

Command	Description
show copp status	Displays the CoPP status, including the last configuration operation and
	its status.

show policy-map type control-plane

To display control plane policy map information, use the show policy-map type control-plane command.

show policy-map type control-plane [expand] [name policy-map-name]

Syntax Description

expand	(Optional) Displays expanded control plane policy map information.
name policy-map-name	(Optional) Specifies the name of the control plane policy map. The name is case sensitive.

Defaults

None

Command Modes

Any command mode

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 control plane policy map information:

switch# show policy-map type control-plane

```
policy-map type control-plane copp-system-policy
 class copp-system-class-critical
   police cir 2000 kbps bc 1500 bytes pir 3000 kbps be 1500 bytes conform transmit
     exceed transmit violate drop
  class copp-system-class-important
   police cir 1000 kbps bc 1500 bytes pir 1500 kbps be 1500 bytes conform transmit
     exceed transmit violate drop
  class copp-system-class-normal
   police cir 400 kbps bc 1500 bytes pir 600 kbps be 1500 bytes conform transmit
     exceed transmit violate drop
  class class-default
   police cir 200 kbps bc 1500 bytes pir 300 kbps be 1500 bytes conform transmit
      exceed transmit violate drop
```

show port-security

To show the state of port security on the device, use the **show port-security** command.

show port-security [state]

Syntax	

state	(Optional) Shows that port security is enabled.
-------	---

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	Support for Layer 2 port-channel interfaces was added.
4.0(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to use the **show port-security** command to view the status of the port security feature on a device:

switch# show port-security

Total Secured Mac Addresses in System (excluding one mac per port) : 0
Max Addresses limit in System (excluding one mac per port) : 8192

Secure Port MaxSecureAddr CurrentAddr SecurityViolation Security Action (Count) (Count)

Ethernet1/4 5 1 0 Shutdown

switch#

Command	Description
feature port-security	Enables the port security feature.
show port-security address	Shows MAC addresses secured by the port security feature.
show port-security interface	Shows the port security status for a specific interface.
switchport port-security	Configures port security on a Layer 2 interface.

show port-security address

To show information about MAC addresses secured by the port security feature, use the **show port-security address** command.

show port-security address [interface {port-channel channel-number | ethernet slot/port}]

Syntax Description

interface	(Optional) Limits the port-security MAC address information to a specific interface.
port-channel channel-number	Specifies a Layer 2 port-channel interface. The <i>channel-number</i> argument can be a whole number from 1 to 4096.
ethernet slot/port	Specifies an Ethernet interface.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	Support for Layer 2 port-channel interfaces was added.
4.0(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to use the **show port-security address** command to view information about all MAC addresses secured by port security:

switch# show port-security address

Total Secured Mac Addresses in System (excluding one mac per port) : 0
Max Addresses limit in System (excluding one mac per port) : 8192

Secure Mac Address Table

Vlan Mac Address Type Ports Remaining Age (mins) ____ _____ ---------STATIC 0054.AAB3.770F 0 1 port-channel1 00EE.378A.ABCE STATIC 0 Ethernet1/4

switch#

This example shows how to use the **show port-security address** command to view the MAC addresses secured by the port security feature on the Ethernet 1/4 interface:

switch# show port-security address interface ethernet 1/4

	Secure	Mac	Address	Table
--	--------	-----	---------	-------

Vlan	Mac Address	Type	Ports	Remaining Age (mins)
1	00EE.378A.ABCE	STATIC	Ethernet1/4	0
switch#	 ‡			

Command	Description
feature port-security	Enables the port security feature.
show port-security	Shows the status of the port security feature.
show port-security interface	Shows the port security status for a specific interface.
switchport port-security	Configures port security on a Layer 2 interface.

show port-security interface

To show the state of port security on a specific interface, use the **show port-security interface** command.

show port-security interface {port-channel channel-number | ethernet slot/port}

Syntax Description

port-channel	Specifies a Layer 2 port-channel interface. The <i>channel-number</i> argument can be
channel-number	a whole number from 1 to 4096.
ethernet slot/port	Specifies an Ethernet interface.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification	
4.2(1)	Support for Layer 2 port-channel interfaces was added.	
4.0(1)	This command was introduced.	

Usage Guidelines

This command does not require a license.

Examples

This example shows how to use the **show port-security interface** command to view the status of the port security feature on the Ethernet 1/4 interface:

switch# show port-security interface ethernet 1/4

Port Security : Enabled Port Status : Secure Down Violation Mode : Shutdown Aging Time : 0 mins : Absolute Aging Type Maximum MAC Addresses Total MAC Addresses Configured MAC Addresses : 1 Sticky MAC Addresses : 0 Security violation count : 0 switch#

Command	Description
feature port-security	Enables the port security feature.
show port-security	Shows the status of the port security feature.

Command	Description
show port-security address	Shows MAC addresses secured by the port security feature.
switchport port-security	Configures port security on a Layer 2 interface.

show privilege

To show the current privilege level, username, and status of cumulative privilege support, use the **show privilege** command.

show privilege

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to use the **show privilege** command to view the current privilege level, username, and status of cumulative privilege support:

switch# show privilege

User name: admin

Current privilege level: -1 Feature privilege: Enabled

switch#

Command	Description
enable level	Enables a user to move to a higher privilege level.
enable secret priv-lvl	Enables a secret password for a specific privilege level.
feature privilege	Enables the cumulative privilege of roles for command authorization on TACACS+ servers.
username username priv-lvl	Enables a user to use privilege levels for authorization.

show radius

To display the RADIUS Cisco Fabric Services (CFS) distribution status and other details, use the **show** radius command.

show radius {distribution status | merge status | pending [cmds] | pending-diff | session status | status}

Syntax Description

distribution status	Displays the status of the RADIUS CFS distribution.
merge status	Displays the status of a RADIUS merge.
pending	Displays the pending configuration that is not yet applied to the running configuration.
cmds	(Optional) Displays the commands for the pending configuration.
pending-diff	Displays the difference between the active configuration and the pending configuration.
session status	Displays the status of the RADIUS CFS session.
status	Displays the status of the RADIUS CFS.

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 RADIUS CFS distribution status:

 $\verb|switch#| \textbf{show radius distribution status}|\\$

distribution : enabled session ongoing: no session db: does not exist merge protocol status: not yet initiated after enable last operation: enable

This example shows how to display the RADIUS merge status:

switch# show radius merge status
Result: Waiting

last operation status: success

This example shows how to display the RADIUS CFS session status:

switch# show radius session status

Last Action Time Stamp : None
Last Action : Distribution Enable
Last Action Result : Success
Last Action Failure Reason : none

This example shows how to display the RADIUS CFS status:

```
switch# show radius status
distribution : enabled
session ongoing: no
session db: does not exist
merge protocol status: not yet initiated after enable
last operation: enable
last operation status: success
```

This example shows how to display the pending RADIUS configuration:

```
switch# show radius pending radius-server host 10.10.1.1 key 7 qxz123aaa group server radius aaa-private-sg
```

This example shows how to display the pending RADIUS configuration commands:

```
switch# show radius pending cmds
radius-server host 10.10.1.1 key 7 qxz12345 auth_port 1812 acct_port 1813 authentication
accounting
```

This example shows how to display the differences between the pending RADIUS configuration and the current RADIUS configuration:

show radius-server

To display RADIUS server information, use the **show radius-server** command.

show radius-server [hostname | ipv4-address | ipv6-address] [directed-request | groups | sorted | statistics]

Syntax Description

hostname	(Optional) RADIUS server Domain Name Server (DNS) name. The name is case sensitive.
ipv4-address	(Optional) RADIUS server IPv4 address in the A.B.C.D format.
ipv6-address	(Optional) RADIUS server IPv6 address in the X:X:X:X format.
directed-request	(Optional) Displays the directed request configuration.
groups	(Optional) Displays information about the configured RADIUS server groups.
sorted	(Optional) Displays sorted-by-name information about the RADIUS servers.
statistics	(Optional) Displays RADIUS statistics for the RADIUS servers.

Defaults

Displays the global RADIUS server configuration

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

RADIUS preshared keys are not visible in the **show radius-server** command output. Use the **show running-config radius** command to display the RADIUS preshared keys.

This command does not require a license.

switch# show radius-server

Examples

This example shows how to display information for all RADIUS servers:

```
available for accounting on port:1813
```

This example shows how to display information for a specified RADIUS server:

This example shows how to display the RADIUS directed request configuration:

```
switch# show radius-server directed-request
enabled
```

This example shows how to display information for RADIUS server groups:

This example shows how to display information for a specified RADIUS server group:

This example shows how to display sorted information for all RADIUS servers:

This example shows how to display statistics for a specified RADIUS server:

```
switch# show radius-server statistics 10.10.1.1
Server is not monitored

Authentication Statistics
    failed transactions: 0
    sucessfull transactions: 0
    requests sent: 0
    requests timed out: 0
    responses with no matching requests: 0
    responses not processed: 0
    responses containing errors: 0
```

```
Accounting Statistics
failed transactions: 0
sucessfull transactions: 0
requests sent: 0
requests timed out: 0
responses with no matching requests: 0
responses not processed: 0
responses containing errors: 0
```

Command	Description
show running-config radius	Displays the RADIUS information in the running configuration file.

show role

To display the user role configuration, use the **show role** command.

show role [name role-name]

Syntax Description

name role-name	(Optional) Displays information for a specific user role name. The
	role name is case sensitive.

Defaults

Displays information for all user roles.

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 information for a specific user role:

switch(config)# show role name MyRole

```
role: MyRole
description: new role
vlan policy: deny
permitted vlan
1-10
interface policy: deny
permitted interface
Ethernet2/1-8
vrf policy: permit (default)
```

This example shows how to display information for all user roles in the default virtual device context (VDC):

```
switch(config) # show role
```

```
role: network-admin

description: Predefined network admin role has access to all commands on the switch

Rule Perm Type Scope Entity

permit read-write

role: network-operator

description: Predefined network operator role has access to all read commands on the switch
```

```
Perm Type
 Rule
                       Scope
                                         Entity
       permit read
role: vdc-admin
 description: Predefined vdc admin role has access to all commands within
 a VDC instance
 Rule Perm Type
                   Scope
 ______
       permit read-write
role: vdc-operator
 description: Predefined vdc operator role has access to all read commands
 within a VDC instance
      Perm Type
                        Scope
 Rule
                                         Entity
       permit read
role: MyRole
 description: new role
 vlan policy: deny
 permitted vlan
 1-10
 interface policy: deny
 permitted interface
 Ethernet2/1-8
 vrf policy: permit (default)
```

This example shows how to display information for all user roles in a nondefault virtual device context (VDC):

```
switch-MyVDC# show role
role: vdc-admin
 description: Predefined vdc admin role has access to all commands within
 a VDC instance
 Rule Perm Type
                      Scope
                                      Entity
 ______
      permit read-write
role: vdc-operator
 description: Predefined vdc operator role has access to all read commands
 within a VDC instance
      Perm Type
                      Scope
                                      Entity
 Rule
 1 permit read
```

Command	Description
role name	Configures user roles.

show role feature

To display the user role features, use the **show role feature** command.

show role feature [detail | name feature-name]

Syntax Description

detail	(Optional) Displays detailed information for all features.
name feature-name	(Optional) Displays detailed information for a specific feature. The feature name is case sensitive.

Defaults

Displays a list of user role feature names.

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 user role features:

```
switch(config) # show role feature
feature: aaa
feature: access-list
feature: arp
feature: callhome
feature: cdp
feature: crypto
feature: gold
feature: install
feature: 13vm
feature: license
feature: ping
feature: platform
feature: qosmgr
feature: radius
feature: scheduler
feature: snmp
feature: syslog
<content deleted>
```

This example shows how to display detailed information for all the user role features:

```
switch(config)# show role feature detail
feature: aaa
  show aaa *
  config t ; aaa *
  aaa *
```

```
clear aaa *
 debug aaa *
 show accounting *
 config t ; accounting *
 accounting *
 clear accounting *
 debug accounting *
feature: access-list
 show ip access-list *
 show ipv6 access-list *
 show mac access-list *
 show arp access-list *
 show vlan access-map *
 config t ; ip access-list *
 config t ; ipv6 access-list *
 config t ; mac access-list *
 config t ; arp access-list ^{\star}
 config t ; vlan access-map *
 clear ip access-list *
 clear ipv6 access-list *
 clear mac access-list *
 clear arp access-list *
 clear vlan access-map *
 debug aclmgr *
feature: arp
 show arp *
 show ip arp \star
 config t; ip arp *
 clear ip arp *
 debug ip arp *
 debug-filter ip arp *
<content deleted>
```

This example shows how to display detailed information for a specific user role feature:

```
switch(config)# show role feature name dot1x
feature: dot1x
   show dot1x *
   config t ; dot1x *
   dot1x *
   clear dot1x *
   debug dot1x *
```

Command	Description
role feature-group	Configures feature groups for user roles.
rule	Configures rules for user roles.

show role feature-group

To display the user role feature groups, use the show role feature-group command.

show role feature-group [detail | name group-name]

Syntax Description

detail	(Optional) Displays detailed information for all feature groups.
name group-name	(Optional) Displays detailed information for a specific feature group. The group name is case sensitive.
	group. The group name is ease sensitive.

Defaults

Displays a list of user role feature groups.

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 user role feature groups:

switch(config)# show role feature-group

```
feature group: L3
feature: router-bgp
feature: router-eigrp
feature: router-isis
feature: router-ospf
feature: router-rip

feature group: SecGroup
feature: aaa
feature: radius
feature: tacacs
```

This example shows how to display detailed information about all the user role feature groups:

switch(config)# show role feature-group detail

```
feature group: L3
feature: router-bgp
  show bgp *
  config t ; bgp *
  bgp *
  clear bgp *
  debug bgp *
  show ip bgp *
  show ip mbgp *
```

```
show ipv6 bgp *
 show ipv6 mbgp *
 clear ip bgp *
 clear ip mbgp *
 debug-filter ip *
 debug-filter ip bgp *
 config t ; router bgp *
feature: router-eigrp
 show eigrp *
 config t ; eigrp *
 eigrp *
 clear eigrp *
 debug eigrp *
 show ip eigrp *
 clear ip eigrp *
 debug ip eigrp *
 config t ; router eigrp ^{\star}
feature: router-isis
 show isis *
 config t ; isis *
 isis *
 clear isis *
 debug isis *
 debug-filter isis *
 config t ; router isis *
feature: router-ospf
 show ospf *
 config t ; ospf *
 ospf *
 clear ospf *
 debug ospf *
 show ip ospf *
 show ospfv3 *
 show ipv6 ospfv3 *
 debug-filter ip ospf *
 debug-filter ospfv3 *
 debug ip ospf *
 debug ospfv3 *
 clear ip ospf *
 clear ip ospfv3 *
 config t ; router ospf *
 config t ; router ospfv3 *
feature: router-rip
 show rip *
 config t ; rip *
 rip *
 clear rip *
 debug rip
 show ip rip *
 show ipv6 rip *
 overload rip *
 debug-filter rip *
 clear ip rip *
 clear ipv6 rip *
 config t ; router rip *
```

This example shows how to display information for a specific user role feature group:

switch(config) # show role feature-group name SecGroup

```
feature group: SecGroup
feature: aaa
feature: radius
feature: tacacs
```

Command	Description
role feature-group	Configures feature groups for user roles.
rule	Configures rules for user roles.

show role pending

To display the pending user role configuration differences for the Cisco Fabric Services distribution session, use the **show role pending** command.

show role pending

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example displays the user role configuration differences for the Cisco Fabric Services session:

switch# show role pending

Role: test-user
Description: new role

Vlan policy: permit (default)
Interface policy: permit (default)

Vrf policy: permit (default)

Rule Perm Type Scope Entity

1 permit read-write feature aaa

Command	Description
role distribute	Enables Cisco Fabric Services distribution for the user role configuration.

show role pending-diff

To display the differences between the pending user role configuration for the Cisco Fabric Services distribution session and the running configuration, use the **show role pending-diff** command.

show role pending-diff

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example displays the user role configuration differences for the Cisco Fabric Services session:

switch# show role pending

+Role: test-user

- + Description: new role
 - + Vlan policy: permit (default)
 - + Interface policy: permit (default)
 - + Vrf policy: permit (default)
 - + ------
 - + Rule Perm Type Scope Entity
 - + ------
 - + 1 permit read-write feature aa

Command	Description
role distribute	Enables Cisco Fabric Services distribution for the user role configuration.

show role session

To display the status information for a user role Cisco Fabric Services session, use the **show role session** command.

show role session status

	Descri	

status	(Opt	tional)	Dis	plays	the	role	session	status.
--------	------	---------	-----	-------	-----	------	---------	---------

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example displays the user role configuration differences for the Cisco Fabric Services session:

switch# show role session status

Last Action Time Stamp : Thu Nov 20 12:43:26 2008
Last Action : Distribution Enable

Last Action Result : Success Last Action Failure Reason : none

Command	Description
role distribute	Enables Cisco Fabric Services distribution for the user role configuration.

show role status

To display the status for the Cisco Fabric Services distribution for the user role feature, use the **show role status** command.

show role status

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.1(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example displays the user role configuration differences for the Cisco Fabric Services session:

switch# show role status Distribution: Enabled Session State: Locked

Command	Description
role distribute	Enables Cisco Fabric Services distribution for the user role configuration.

show running-config aaa

version 4.0(1)

To display authentication, authorization, and accounting (AAA) configuration information in the running configuration, use the **show running-config aaa** command.

show running-config aaa [all]

Syntax Description	all	(Optional) Displays configured and default information.
Defaults	None	
Command Modes	Any command m	ode
Command History	Release	Modification
	4.0(1)	This command was introduced.
Usage Guidelines	This command de	oes not require a license.
Examples	-	ows how to display the configured AAA information in the running configuration:

show running-config acImgr

To display the user-configured access control lists (ACLs) in the running configuration, use the **show running-config aclmgr** command.

show running-config aclmgr [all | inactive-if-config]

Syntax Description

all	Displays both the default (CoPP-configured) and user-configured ACLs the running configuration.		
inactive-if-config	Displays the inactive policies in the running configuration.		

Defaults

None

Command Modes

Any

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 user-configured ACLs in the running configuration:

```
switch# show running-config aclmgr all
!Command: show running-config aclmgr all
!Time: Wed May 25 08:03:46 2011

version 5.2(1)
ip access-list acl1
ip access-list cisco123-copp-acl-bgp
```

20 permit tcp any eq bgp any gt 1024 ipv6 access-list cisco123-copp-acl-bgp6 10 permit tcp any gt 1024 any eq bgp 20 permit tcp any eq bgp any gt 1024

10 permit tcp any gt 1024 any eq bgp

ip access-list cisco123-copp-acl-cts

10 permit tcp any any eq 64999 20 permit tcp any eq 64999 any

ip access-list cisco123-copp-acl-dhcp

10 permit udp any eq bootpc any

20 permit udp any neq bootps any eq bootps

ip access-list cisco123-copp-acl-dhcp-relay-response

10 permit udp any eq bootps any

20 permit udp any any eq bootpc

ip access-list cisco123-copp-acl-eigrp

10 permit eigrp any any

ip access-list cisco123-copp-acl-ftp

10 permit tcp any any eq ftp-data

```
20 permit tcp any any eq ftp
  30 permit tcp any eq ftp-data any
  40 permit tcp any eq ftp any
ip access-list cisco123-copp-acl-glbp
  10 permit udp any eq 3222 224.0.0.0/24 eq 3222
ip access-list cisco123-copp-acl-hsrp
  10 permit udp any 224.0.0.0/24 eq 1985
ipv6 access-list cisco123-copp-acl-hsrp6
  10 permit udp any ff02::66/128 eg 2029
ip access-list cisco123-copp-acl-icmp
  10 permit icmp any any echo
  20 permit icmp any any echo-reply
ipv6 access-list cisco123-copp-acl-icmp6
  10 permit icmp any any echo-request
  20 permit icmp any any echo-reply
ipv6 access-list cisco123-copp-acl-icmp6-msgs
  10 permit icmp any any router-advertisement
  20 permit icmp any any router-solicitation
  30 permit icmp any any nd-na
  40 permit icmp any any nd-ns
  50 permit icmp any any mld-query
  60 permit icmp any any mld-report
  70 permit icmp any any mld-reduction
ip access-list cisco123-copp-acl-igmp
  10 permit igmp any 224.0.0.0/3
mac access-list cisco123-copp-acl-mac-cdp-udld-vtp
  10 permit any 0100.0ccc.cccc 0000.0000.0000
mac access-list cisco123-copp-acl-mac-cfsoe
  10 permit any 0180.c200.000e 0000.0000.0000 0x8843
mac access-list cisco123-copp-acl-mac-dot1x
  10 permit any 0180.c200.0003 0000.0000.0000 0x888e
mac access-list cisco123-copp-acl-mac-fabricpath-isis
  10 permit any 0180.c200.0015 0000.0000.0000
  20 permit any 0180.c200.0014 0000.0000.0000
mac access-list cisco123-copp-acl-mac-flow-control
  10 permit any 0180.c200.0001 0000.0000.0000 0x8808
mac access-list cisco123-copp-acl-mac-gold
  10 permit any any 0x3737
mac access-list cisco123-copp-acl-mac-l2pt
  10 permit any 0100.0ccd.cdd0 0000.0000.0000
mac access-list cisco123-copp-acl-mac-lacp
 10 permit any 0180.c200.0002 0000.0000.0000 0x8809
mac access-list cisco123-copp-acl-mac-lldp
  10 permit any 0180.c200.000c 0000.0000.0000 0x88cc
mac access-list cisco123-copp-acl-mac-otv-isis
  10 permit any 0100.0cdf.dfdf 0000.0000.0000
mac access-list cisco123-copp-acl-mac-sdp-srp
  10 permit any 0180.c200.000e 0000.0000.0000 0x3401
mac access-list cisco123-copp-acl-mac-stp
  10 permit any 0100.0ccc.cccd 0000.0000.0000
  20 permit any 0180.c200.0000 0000.0000.0000
mac access-list cisco123-copp-acl-mac-undesirable
 10 permit any any
--More--
```

Command	Description
show running-config	Displays the CoPP configuration in the running configuration.
copp	

Command	Description
show startup-config aclmgr	Displays the user-configured ACLs in the startup configuration.
show startup-config copp	Displays the CoPP configuration in the startup configuration.

show running-config copp

To display control plane policing configuration information in the running configuration, use the **show running-config copp** command.

show running-config copp [all]

•	_	_			
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J	yntax	DESU		μu	UII

all	(O	ptional)	Dis	plays	configure	d and	default	information.
-----	----	----------	-----	-------	-----------	-------	---------	--------------

Defaults

None

Command Modes

Any command mode

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 configured control plane policing information in the running configuration:

```
switch# show running-config copp
```

version 4.0(1)

class-map type control-plane match-any copp-system-class-critical

 $\verb|match| access-group| \verb|name| copp-system-acl-arp|$

match access-group name copp-system-acl-msdp

 $\verb|class-map| type control-plane match-any copp-system-class-important|$

match access-group name copp-system-acl-gre

match access-group name copp-system-acl-tacas

class-map type control-plane match-any copp-system-class-normal

match access-group name copp-system-acl-icmp

match redirect dhcp-snoop

match redirect arp-inspect

match exception ip option

match exception ip icmp redirect

match exception ip icmp unreachable
policy-map type control-plane copp-system-policy

class copp-system-class-critical

police cir 2000 kbps bc 1500 bytes pir 3000 kbps be 1500 bytes conform transmit exceed transmit violate drop

class copp-system-class-important

police cir 1000 kbps bc 1500 bytes pir 1500 kbps be 1500 bytes conform transmit exceed transmit violate drop

class copp-system-class-normal

police cir $400~\mathrm{kbps}$ bc $1500~\mathrm{bytes}$ pir $600~\mathrm{kbps}$ be $1500~\mathrm{bytes}$ conform transmit exceed transmit violate drop

```
class class-default police cir 200 kbps bc 1500 bytes pir 300 kbps be 1500 bytes conform transmit exceed transmit violate drop
```

This example shows how to display the configured and default control plane policing information in the running configuration:

```
switch# show running-config copp all
version 4.0(1)
class-map type control-plane match-any copp-system-class-critical
 match access-group name copp-system-acl-arp
 match access-group name copp-system-acl-msdp
class-map type control-plane match-any copp-system-class-important
 match access-group name copp-system-acl-gre
 match access-group name copp-system-acl-tacas
class-map type control-plane match-any copp-system-class-normal
 match access-group name copp-system-acl-icmp
 match redirect dhcp-snoop
 match redirect arp-inspect
 match exception ip option
 match exception ip icmp redirect
 match exception ip icmp unreachable
policy-map type control-plane copp-system-policy
  class copp-system-class-critical
   police cir 2000 kbps bc 1500 bytes pir 3000 kbps be 1500 bytes conform transmit exceed
transmit violate drop
  class copp-system-class-important
   police cir 1000 kbps bc 1500 bytes pir 1500 kbps be 1500 bytes conform transmit exceed
transmit violate drop
  class copp-system-class-normal
   police cir 400 kbps bc 1500 bytes pir 600 kbps be 1500 bytes conform transmit exceed
transmit violate drop
  class class-default
   police cir 200 kbps bc 1500 bytes pir 300 kbps be 1500 bytes conform transmit exceed
transmit violate drop
```

show running-config cts

To display the Cisco TrustSec configuration in the running configuration, use the **show running-config cts** command.

show running-config cts

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any configuration mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the Cisco TrustSec feature using the feature cts command.

This command requires the Advanced Services license.

Examples

This example shows how to display the Cisco TrustSec configuration in the running configuration:

switch# show running-config cts

Command	Description	
feature cts	Enables the Cisco TrustSec feature.	

show running-config dhcp

To display the Dynamic Host Configuration Protocol (DHCP) snooping configuration in the running configuration and verify other DHCP configurations on a device, use the **show running-config dhcp** command.

show running-config dhcp [all]

ıtax		

all	Optional) Displays configured and default information.
an	Optional) Displays configured and default information.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification		
4.0(1)	This command was introduced.		
7.2(0)D1(1)	This command was modified. A sample output for DHCP relay configuration on a Bridge Domain Interface (BDI) was added.		

Usage Guidelines

To use this command, you must enable the DHCP snooping feature using the **feature dhcp** command. This command does not require a license.

Examples

This example shows how to display the DHCP snooping configuration:

```
switch# show running-config dhcp
version 4.0(1)
feature dhcp

interface Ethernet2/46
  ip verify source dhcp-snooping-vlan
  ip arp inspection trust
ip dhcp snooping
ip arp inspection validate src-mac dst-mac ip
ip source binding 10.3.2.2 0f00.60b3.2333 vlan 13 interface Ethernet2/46
ip source binding 10.2.2.2 0060.3454.4555 vlan 100 interface Ethernet2/10
ip dhcp snooping vlan 1
ip arp inspection vlan 1
ip dhcp snooping vlan 13
ip arp inspection vlan 13
```

This example shows how to verify DHCP configurations on the device. DHCP relay configuration information is also displayed in the example.

switch# show running-config dhcp

```
version 7.1(0)D1(1)
feature dhcp
service dhcp
ip dhcp relay
ip dhcp relay information option
ip dhcp relay information option vpn
ipv6 dhcp relay
interface Bdi14
ip dhcp relay address 10.64.66.242 use-vrf management
```

Command	Description
feature dhcp	Enables the DHCP snooping feature on the device.
ip dhcp snooping	Globally enables DHCP snooping on the device.
service dhcp	Enables or disables the DHCP relay agent.
show ip dhcp snooping	Displays general information about DHCP snooping.
show ip dhcp snooping binding	Displays IP-MAC address bindings, including the static IP source entries.

show running-config dot1x

To display 802.1X configuration information in the running configuration, use the **show running-config dot1x** command.

show running-config dotx1 [all]

Syntax	Description	all

all	(O	ptional)	Dis	plays	s configured	and	default	information.
-----	----	----------	-----	-------	--------------	-----	---------	--------------

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must enable the 802.1X feature by using the **feature dot1x** command before using this command.

This command does not require a license.

Examples

This example shows how to display the configured 802.1X information in the running configuration:

switch# show running-config dot1x
version 4.0(1)

show running-config eou

version 4.0(1)

To display the Extensible Authentication Protocol over User Datagram Protocol (EAPoUDP) configuration information in the running configuration, use the **show running-config eou** command.

show running-config eou [all]

Syntax Description	all	(Optional) Displays configured and default information.
Defaults	None	
Command Modes	Any command m	ode
Command History	Release	Modification
	4.0(1)	This command was introduced.
Usage Guidelines		the EAPoUDP feature by using the feature eou command before using this command. oes not require a license.
Examples	_	ows how to display the configured EAPoUDP information in the running configuration:

show running-config Idap

To display Lightweight Directory Access Protocol (LDAP) server information in the running configuration, use the **show running-config ldap** command.

show running-config ldap [all]

	show ldap-server	Displays LDAP information.
Related Commands	Command	Description
	switch# show running-	config Idap
Examples		
Examples	This avample shows how	v to display LDAP information in the running configuration:
	This command does not	require a license.
Usage Guidelines	You must use the featur	e ldap command before you can display LDAP information.
•	5.0(2)	This command was introduced.
Command History	Release	Modification
Command Modes	Any command mode	
Defaults	None	
Syntax Description	all	(Optional) Displays default LDAP configuration information.
<u> </u>		

show running-config port-security

To display port-security information in the running configuration, use the **show running-config port-security** command.

show running-config port-security [all]

•		-	
SI	/ntax	Descri	ntıon

all (O	ptional [*]) Di	spla	ys	default 1	port-se	ecurity	configu	ation	inf	orma	tion.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(3)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display information for port-security in the running configuration:

switch# show running-port-security
version 4.0(3)
feature port-security
logging level port-security 5

interface Ethernet2/3
 switchport port-security

Command	Description				
show startup-config	Displays port-security information in the startup configuration.				
port-security					

show running-config radius

To display RADIUS server information in the running configuration, use the **show running-config radius** command.

show running-config radius [all]

Syntax Description	all	(Optional) Displays default RADIUS configuration information.
Defaults	None	
ommand Modes	Any command m	ode
Command History	Release	Modification
	4.0(1)	This command was introduced.
sage Guidelines	This command do	pes not require a license.
xamples	This example sho	ows how to display information for RADIUS in the running configuration:
camples	_	ows how to display information for RADIUS in the running configuration: nning-config radius

Displays RADIUS information.

show radius-server

show running-config security

To display a user account, Secure Shell (SSH) server, and Telnet server information in the running configuration, use the **show running-config security** command.

show running-config security [all]

•		_	-	
.51	/ntax	Desc	rın	ition

all	(Optional) Displays the default user account, SSH server, and Telnet server
	configuration information.

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 user account, SSH server, and Telnet server information in the running configuration:

switch# show running-config security

version 5.1(1)

username admin password 5 \$1\$7Jwq/LDM\$XF0M/UWeT43DmtjZy8VP91 role network-admin username adminbackup password 5 \$1\$0ip/C5Ci\$00dx7oJS1BCFpNRmQK4na. role network-operator username user1 password 5 \$1\$qEclQ5Rx\$CAX9fXiAoFPYSvbVzpazj/ role network-operator telnet server enable ssh key rsa 1024 force

show running-config tacacs+

To display TACACS+ server information in the running configuration, use the **show running-config tacacs+** command.

show running-config tacacs+ [all]

ntax		

all (Optional) Displays default TACACS+ configuration	n information.
---	----------------

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must use the **feature tacacs+** command before you can display TACACS+ information.

This command does not require a license.

Examples

This example shows how to display TACACS+ information in the running configuration:

switch# show running-config tacacs+

Command	Description
show tacacs-server	Displays TACACS+ information.

show ssh key

To display the Secure Shell (SSH) server key for a virtual device context (VDC), use the **show ssh key** command.

show ssh key

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

This command is available only when SSH is enabled using the **feature ssh** command.

This command does not require a license.

Examples

This example shows how to display the SSH server key:

rsa Keys generated:Wed Aug 11 11:45:14 2010

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAAAgQDypfN6FSHZDbFPWEoz7sgWCamhfoqjqYNoZMvySSb4 056LhWZ75D90KPo+G+XTo7QAyQMpLJSkwKcRkidgD41wJaDd/Ic/S15SJ3i0jyM61Bwvi+8+J3JoIdftAvgH47GT5BdDD6hM7aUHq+efSQSq8pGyDAR4Cw6UdY9HNAWoTw==

bitcount:1024
fingerprint:

cd:8d:e3:0c:2a:df:58:d3:6e:9c:bd:72:75:3f:2e:45

could not retrieve dsa key information

Command	Description
ssh server key	Configures the SSH server key.

show ssh server

To display the Secure Shell (SSH) server status for a virtual device context (VDC), use the **show ssh server** command.

show ssh server

Syntax Description

This command has no arguments or keywords.

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 SSH server status:

switch# show ssh server
ssh is enabled
version 2 enabled

Command	Description
feature ssh	Enables the SSH server.

show startup-config aaa

To display authentication, authorization, and accounting (AAA) configuration information in the startup configuration, use the **show startup-config aaa** command.

show startup-config aaa

Syntax Description

This command has no arguments or keywords.

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 AAA information in the startup configuration:

switch# show startup-config aaa
version 4.0(1)

show startup-config acImgr

To display the user-configured access control lists (ACLs) in the startup configuration, use the **show startup-config aclmgr** command.

show startup-config aclmgr [all]

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all	Displays both the default (CoPP-configured) and user-configured ACLs in
	the startup configuration.

Defaults

None

Command Modes

Any

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 user-configured ACLs in the startup configuration:

```
switch(config)# show startup-config aclmgr all
!Command: show startup-config aclmgr all
!Time: Wed May 25 08:04:36 2011
!Startup config saved at: Mon May 23 05:44:16 2011
version 5.2(1)
ip access-list acl1
ip access-list copp-system-p-acl-bgp
  10 permit tcp any gt 1024 any eq bgp
  20 permit tcp any eq bgp any gt 1024
ipv6 access-list copp-system-p-acl-bgp6
  10 permit tcp any gt 1024 any eq bgp
  20 permit tcp any eq bgp any gt 1024
ip access-list copp-system-p-acl-cts
  10 permit tcp any any eq 64999
  20 permit tcp any eq 64999 any
ip access-list copp-system-p-acl-dhcp
  10 permit udp any eq bootpc any
  20 permit udp any neq bootps any eq bootps
ip access-list copp-system-p-acl-dhcp-relay-response
  10 permit udp any eq bootps any
  20 permit udp any any eq bootpc
ip access-list copp-system-p-acl-eigrp
  10 permit eigrp any any
ip access-list copp-system-p-acl-ftp
  10 permit tcp any any eq ftp-data
  20 permit tcp any any eq ftp
```

```
30 permit tcp any eq ftp-data any
  40 permit tcp any eq ftp any
ip access-list copp-system-p-acl-glbp
  10 permit udp any eq 3222 224.0.0.0/24 eq 3222
ip access-list copp-system-p-acl-hsrp
  10 permit udp any 224.0.0.0/24 eq 1985
ipv6 access-list copp-system-p-acl-hsrp6
  10 permit udp any ff02::66/128 eq 2029
ip access-list copp-system-p-acl-icmp
  10 permit icmp any any echo
  20 permit icmp any any echo-reply
ipv6 access-list copp-system-p-acl-icmp6
  10 permit icmp any any echo-request
  20 permit icmp any any echo-reply
ipv6 access-list copp-system-p-acl-icmp6-msgs
  10 permit icmp any any router-advertisement
  20 permit icmp any any router-solicitation
  30 permit icmp any any nd-na
  40 permit icmp any any nd-ns
  50 permit icmp any any mld-query
  60 permit icmp any any mld-report
  70 permit icmp any any mld-reduction
ip access-list copp-system-p-acl-igmp
  10 permit igmp any 224.0.0.0/3
mac access-list copp-system-p-acl-mac-cdp-udld-vtp
  10 permit any 0100.0ccc.ccc 0000.0000.0000
mac access-list copp-system-p-acl-mac-cfsoe
  10 permit any 0180.c200.000e 0000.0000.0000 0x8843
mac access-list copp-system-p-acl-mac-dot1x
  10 permit any 0180.c200.0003 0000.0000.0000 0x888e
mac access-list copp-system-p-acl-mac-fabricpath-isis
 10 permit any 0180.c200.0015 0000.0000.0000
  20 permit any 0180.c200.0014 0000.0000.0000
mac access-list copp-system-p-acl-mac-flow-control
--More--
```

Command	Description
show running-config aclmgr	Displays the user-configured ACLs in the running configuration.
show running-config copp	Displays the CoPP configuration in the running configuration.
show startup-config copp	Displays the CoPP configuration in the startup configuration.

show startup-config copp

To display the Control Plane Policing (CoPP) configuration information in the startup configuration, use the **show startup-config copp** command.

show startup-config copp

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

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 control plane policing information in the startup configuration:

```
switch# show startup-config copp
version 4.0(1)
class-map type control-plane match-any MyClassMap
  match redirect dhcp-snoop
class-map type control-plane match-any copp-system-class-critical
 match access-group name copp-system-acl-arp
  match access-group name copp-system-acl-msdp
class-map type control-plane match-any copp-system-class-important
 match access-group name copp-system-acl-gre
 match access-group name copp-system-acl-tacas
class-map type control-plane match-any copp-system-class-normal
 match access-group name copp-system-acl-icmp
 match redirect dhcp-snoop
 match redirect arp-inspect
 match exception ip option
 match exception ip icmp redirect
 match exception ip icmp unreachable
policy-map type control-plane MyPolicyMap
  class MyClassMap
   police cir 0 bps bc 0 bytes conform drop violate drop
policy-map type control-plane copp-system-policy
  class copp-system-class-critical
   police cir 2000 kbps bc 1500 bytes pir 3000 kbps be 1500 bytes conform transmit exceed
transmit violate drop
  class copp-system-class-important
   police cir 1000 kbps bc 1500 bytes pir 1500 kbps be 1500 bytes conform transmit exceed
```

transmit violate drop

class copp-system-class-normal
 police cir 400 kbps bc 1500 bytes pir 600 kbps be 1500 bytes conform transmit exceed
transmit violate drop
 class class-default
 police cir 200 kbps bc 1500 bytes pir 300 kbps be 1500 bytes conform transmit exceed
transmit violate drop
policy-map type control-plane x
 class class-default
 police cir 0 bps bc 0 bytes conform drop violate drop

show startup-config dhcp

To display the Dynamic Host Configuration Protocol (DHCP) snooping configuration in the startup configuration, use the **show startup-config dhcp** command.

show startup-config dhcp [all]

Syntax Description

all (Optional) Displays configured ar	nd default information.
--	-------------------------

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

To use this command, you must enable the DHCP snooping feature using the **feature dhcp** command.

This command does not require a license.

Examples

This example shows how to display the DHCP snooping configuration in the startup configuration:

```
switch# show startup-config dhcp
version 4.0(1)
feature dhcp
```

interface Ethernet2/46

ip verify source dhcp-snooping-vlan

ip arp inspection trust

ip dhcp snooping

ip arp inspection validate $\operatorname{src-mac}$ dst-mac ip

ip source binding 10.3.2.2 0f00.60b3.2333 vlan 13 interface Ethernet2/46

ip source binding 10.2.2.2 0060.3454.4555 vlan 100 interface Ethernet2/10

ip dhcp snooping vlan 1

ip arp inspection vlan 1

ip dhcp snooping vlan 13

ip arp inspection vlan 13

switch#

Command	Description
feature dhcp	Enables the DHCP snooping feature on the device.
show running-config dhcp	Shows DHCP snooping configuration in the running configuration.

show startup-config dot1x

To display 802.1X configuration information in the startup configuration, use the show startup-config dot1x command.

show startup-config dot1x

•	_	
Syntax	Descr	ıntıon

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must enable the 802.1X feature by using the **feature dot1x** command before using this command. This command does not require a license.

Examples

This example shows how to display the 802.1X information in the startup configuration:

switch# show startup-config dot1x

version 4.0(1)

show startup-config eou

To display the Extensible Authentication Protocol over User Datagram Protocol (EAPoUDP) configuration information in the startup configuration, use the **show startup-config eou** command.

show startup-config eou

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

You must enable the EAPoUDP feature by using the **feature eou** command before using this command. This command does not require a license.

Examples

This example shows how to display the EAPoUDP information in the startup configuration:

switch# show startup-config eou
version 4.0(1)

show startup-config Idap

To display Lightweight Directory Access Protocol (LDAP) configuration information in the startup configuration, use the **show startup-config ldap** command.

show startup-config ldap

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

You must use the **feature ldap** command before you can display LDAP information.

This command does not require a license.

Examples

This example shows how to display the LDAP information in the startup configuration:

switch# show startup-config ldap
!Command: show startup-config ldap
!Time: Wed Feb 17 13:02:31 2010
!Startup config saved at: Wed Feb 17 10:32:23 2010

version 5.0(2)
feature ldap
aaa group server ldap LDAPgroup1
 no ldap-search-map
aaa group server ldap LdapServer1
 no ldap-search-map

Command	Description
show ldap-server	Displays LDAP information.

show startup-config port-security

To display port-security information in the startup configuration, use the **show startup-config port-security** command.

show startup-config port-security [all]

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all	(Opti	onal) Di	splay	s default	port-security	y configura	ation information	n.
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Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(3)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display information for port-security in the startup configuration:

switch# show startup-port-security
version 4.0(3)

feature port-security

logging level port-security 5

interface Ethernet2/3
 switchport port-security

Command	Description
show running-config	Displays port-security information in the running configuration.
port-security	

show startup-config radius

To display RADIUS configuration information in the startup configuration, use the **show startup-config radius** command.

show startup-config radius

•	_	_			
.51	/ntax	Des	crin	ition	

This command has no arguments or keywords.

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 RADIUS information in the startup configuration:

switch# show startup-config radius
version 4.0(1)

show startup-config security

To display user account, Secure Shell (SSH) server, and Telnet server configuration information in the startup configuration, use the **show startup-config security** command.

show startup-config security

Syntax Description

This command has no arguments or keywords.

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 user account, SSH server, and Telnet server information in the startup configuration:

switch# show startup-config security

version 5.1(1)

username admin password 5 \$1\$7Jwq/LDM\$XF0M/UWeT43DmtjZy8VP91 role network-admin username adminbackup password 5 \$1\$0ip/C5Ci\$00dx7oJS1BCFpNRmQK4na. role network-operator username user1 password 5 \$1\$qEclQ5Rx\$CAX9fXiAoFPYSvbVzpazj/ role network-operator telnet server enable ssh key rsa 1024 force

show startup-config tacacs+

To display TACACS+ configuration information in the startup configuration, use the **show startup-config tacacs+** command.

show startup-config tacacs+

Syntax Description

This command has no arguments or keywords.

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 TACACS+ information in the startup configuration:

switch# show startup-config tacacs+
version 4.0(1)

show system internal access-list feature bank-class map

To display the access control list (ACL) ternary content addressable memory (TCAM) bank mapping feature group and class combination tables, use the **show system internal access-list feature bank-class map** command.

show system internal access-list feature bank-class map {ingress | egress} [module module]

Syntax Description

ingress	Displays feature class information for ingress modules.	
egress	Displays feature class information for egress modules.	
module module	(Optional) Displays the module. The range is from 1 to 18.	

Defaults

None

Command Modes

Any command mode

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 feature group and class combination tables for ingress module 4:

switch(config) # show system internal access-list feature bank-class map ingress module 4

```
Feature Class Definition:
0. CLASS_QOS :
QoS,
1. CLASS_INBAND :
Tunnel Decap, SPM LISP, SPM ERSPAN (termination),
2. CLASS_PACL :
PACL, Netflow,
3. CLASS_DHCP :
DHCP, Netflow, ARP, VACL,
4. CLASS_RACL :
RACL, RACL_STAT, Netflow (SVI), ARP,
5. CLASS_VACL :
VACL, VACL_STAT, ARP, FEX, Netflow,
6. CLASS_RV_ACL :
RACL, PBR, BFD, ARP, SPM WCCP, VACL, SPM OTV, FEX, CTS
implicit Tunnel
```

Related Commands	Command	Description
	hardware access-list resource feature bank-mapping	Enables ACL TCAM bank mapping for feature groups and classes.

show system internal access-list feature bank-chain map

To display the access control list (ACL) ternary content addressable memory (TCAM) bank mapping feature group and combination tables, use the **show system internal access-list feature bank-chain map** command.

show system internal access-list feature bank-chain map {port-vlan | vlan-vlan} {ingress | egress} [module | module]

Syntax Description

port-vlan	Specifies the PORT-VLAN mode.	
vlan-vlan	Vlan-vlan Specifies the VLAN-VLAN mode.	
ingress	Displays feature class information for ingress modules.	
egress	Displays feature class information for egress modules.	
module module	(Optional) Displays the module.	

Defaults

None

Command Modes

Any command mode

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 feature group and class combination tables for ingress module 2: switch# show system internal access-list feature bank-chain map vlan-vlan ingress module 2

Feature	Rslt Type	T0B0	T0B1	T1B0	T1B1
QoS	Qos	X	X		
RACL	Acl			X	X
PBR	Acl			X	X
VACL	Acl			X	X
DHCP	Acl			X	X
ARP	Acl			X	X
Netflow	Acl			X	X
Netflow (SVI)	Acl			X	X
Netflow Sampler	Acc	X	X		
Netflow Sampler (SVI)	Acc	X	X		
SPM WCCP	Acl			X	X
BFD	Acl			X	X
SPM OTV	Acl			X	X
ACLMGR ERSPAN (source)	Acl			X	X
SPM_VINCI_PROXY	Acl			X	X
SPM_VINCI_ANYCAST	Acl			X	X

SPM_VINCI_FABRIC_VLAN	Acl	X	Χ
SPM ITD	Acl	X	X
SPM EVPN ARP	Acl	X	Х

Related Commands	Command Description	
	hardware access-list resource feature bank-mapping	Enables ACL TCAM bank mapping for feature groups and classes.

show system internal access-list globals

To display the access control list (ACL) ternary content addressable memory (TCAM) common information along with the bank chaining mode, use the **show system internal access-list globals** command.

show system internal access-list globals

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)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the bank chaining mode:

```
switch# show system internal access-list globals
slot 2
======
       Atomic Update : ENABLED
  Default ACL : DENY
  Bank Chaining: VLAN-VLAN
  Seq Feat Model: NO_DENY_ACE_SUPPORT
  This pltfm supports seq feat model
  Bank Class Model : DISABLED
  This pltfm supports bank class model
  Fabric path DNL : DISABLED
  Seq Feat Model : NO_DENY_ACE_SUPPORT
  This pltfm supports seq feat model
  L4 proto CAM extend : DISABLED
  This pltfm supports L4 proto CAM extend
  MPLS Topmost As Pipe Mode : DISABLED
  This pltfm supports mpls topmost as pipe mode
  LOU Threshold Value : 5
slot 3
======
  Atomic Update : ENABLED
  Default ACL : DENY
  Bank Chaining: PORT-VLAN
```

Seq Feat Model : NO_DENY_ACE_SUPPORT
This pltfm supports seq feat model
Bank Class Model : DISABLED
This pltfm supports bank class model
Fabric path DNL : DISABLED
Seq Feat Model : NO_DENY_ACE_SUPPORT
This pltfm supports seq feat model

L4 proto CAM extend : DISABLED
This pltfm supports L4 proto CAM extend
MPLS Topmost As Pipe Mode : DISABLED
This pltfm supports mpls topmost as pipe mode
LOU Threshold Value : 5

Command	Description
hardware access-list resource feature bank-mapping	Enables ACL TCAM bank mapping for feature groups and classes.

show system internal pktmgr internal control sw-rate-limit

To display the inband and outband global rate limit configuration for packets that reach the supervisor module, use the **show system internal pktmgr internal control sw-rate-limit** command.

show system internal pktmgr internal control sw-rate-limit

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any

Command History

Release	Modification	
5.1(1)	This command was introduced.	

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the inband and outband global rate limit configuration for packets that reach the supervisor module:

switch# show system internal pktmgr internal control sw-rate-limit
inband pps global threshold 12500 outband pps global threshold 15500
switch#

Command	Description	
rate-limit cpu	Configures rate limits globally on the device for packets that reach the	
direction pps action	supervisor module.	
log		

show system internal udp-relay database

To display the configuration details of the UDP relay feature, use the **show system internal udp-relay database** command.

show system internal udp-relay database

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)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the details of the UDP relay feature:

switch# show system internal udp-relay database

UDP Relay enabled : Yes

Relay enabled on the following UDP Ports:

Sr No.	UDP-Port	Default Port?
1.	37	Yes
2.	42	Yes
3.	49	Yes
4.	53	Yes
5.	69	Yes
6.	137	Yes
7.	138	Yes

Object Groups information:

Object-Group Name : iHello No. of Relay Addresses : 3

1 . IP-Addr : 2.6.8.12 Netmask : 255.255.255.255
2 . IP-Addr : 9.8.7.6 Netmask : 255.255.255.255
3 . IP-Addr : 2.4.6.8 Netmask : 255.255.0.0

Associated Interfaces: Vlan800 Subnet-broadcast enabled ______ Object-Group Name : iSmart No. of Relay Addresses : 1 1 . IP-Addr : 4.5.6.7 Netmask : 255.255.0.0 Associated Interfaces: _____ Vlan700 Subnet-broadcast disabled

D۵	latad	Commands	•

Command	Description
ip forward-protocol udp	Enables the UDP relay feature.
object-group udp relay ip address	Configures the object group.

show tacacs+

To display the TACACS+ Cisco Fabric Services (CFS) distribution status and other details, use the **show tacacs+** command.

show tacacs+ {distribution status | pending [cmds] | pending-diff}

Syntax Description

distribution status	Displays the status of the TACACS+ CFS distribution.	
pending	Displays the pending configuration that is not yet applied to the running configuration.	
cmds	(Optional) Displays the commands for the pending configuration.	
pending-diff	Displays the difference between the active configuration and the pending configuration.	

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 TACACS+ CFS status:

switch# show tacacs+ distribution status

distribution : enabled
session ongoing: no

session db: does not exist

merge protocol status: not yet initiated after enable

last operation: enable

last operation status: success

This example shows how to display the TACACS+ merge status:

switch# show tacacs+ merge status

Result: Waiting

This example shows how to display the pending TACACS+ configuration:

switch# show tacacs+ pending

tacacs-server host 10.10.2.2 key 7 qxz12345

This example shows how to display the pending TACACS+ configuration commands:

```
switch# show tacacs+ pending cmds
tacacs-server host 10.10.2.2 key 7 qxz12345 port 49
```

This example shows how to display the differences between the pending TACACS+ configuration and the current TACACS+configuration:

switch# show tacacs+ pending-diff
+tacacs-server host 10.10.2.2

show tacacs-server

To display TACACS+ server information, use the **show tacacs-server** command.

show tacacs-server [hostname | ip4-address | ipv6-address] [directed-request | groups | sorted | statistics]

Syntax Description

hostname	(Optional) TACACS+ server Domain Name Server (DNS) name. The maximum character size is 256.
ipv4-address	(Optional) TACACS+ server IPv4 address in the A.B.C.D format.
ipv6-address	(Optional) TACACS+ server IPv6 address in the X:X:X::X format.
directed-request	(Optional) Displays the directed request configuration.
groups	(Optional) Displays information about the configured TACACS+ server groups.
sorted	(Optional) Displays sorted-by-name information about the TACACS+ servers.
statistics	(Optional) Displays TACACS+ statistics for the TACACS+ servers.

Defaults

Displays the global TACACS+ server configuration

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

TACACS+ preshared keys are not visible in the **show tacacs-server** command output. Use the **show running-config tacacs+** command to display the TACACS+ preshared keys.

You must use the **feature tacacs+** command before you can display TACACS+ information.

This command does not require a license.

Examples

This example shows how to display information for all TACACS+ servers:

This example shows how to display information for a specified TACACS+ server:

This example shows how to display the TACACS+ directed request configuration:

```
switch# show tacacs-server directed-request
enabled
```

This example shows how to display information for TACACS+ server groups:

This example shows how to display information for a specified TACACS+ server group:

This example shows how to display sorted information for all TACACS+ servers:

This example shows how to display statistics for a specified TACACS+ servers:

```
switch# show tacacs-server statistics 10.10.2.2
Server is not monitored

Authentication Statistics
    failed transactions: 0
    sucessfull transactions: 0
    requests sent: 0
    requests timed out: 0
    responses with no matching requests: 0
    responses not processed: 0
    responses containing errors: 0

Authorization Statistics
    failed transactions: 0
```

```
sucessfull transactions: 0
requests sent: 0
requests timed out: 0
responses with no matching requests: 0
responses not processed: 0
responses containing errors: 0

Accounting Statistics
failed transactions: 0
sucessfull transactions: 0
requests sent: 0
requests timed out: 0
responses with no matching requests: 0
responses not processed: 0
responses containing errors: 0
```

Command	Description
show running-config tacacs+	Displays the TACACS+ information in the running configuration file.

show telnet server

To display the Telnet server status for a virtual device context (VDC), use the **show telnet server** command.

show telnet server

Syntax Description

This command has no arguments or keywords.

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 Telnet server status:

switch# show telnet server
telnet service enabled

Command	Description
telnet server enable	Enables the Telnet server.

show time-range

To display all time ranges or a specific time range, use the **show time-range** command.

show time-range [time-range-name]

Syntax Description

time-range-name	(Optional) Name of a time range, which can be up to 64 alphanumeric,
	case-sensitive characters.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.0(1)	This command was introduced.

Usage Guidelines

The device shows all time ranges unless you use the time-range-name argument to specify a time range.

If you do not specify a time-range name, the device lists time ranges alphabetically by the time-range names.

The output of the **show time-range** command indicates whether a time range is active, which means that the current system time on the device falls within the configured time range.

This command does not require a license.

Examples

This example shows how to use the **show time-range** command without specifying a time-range name on a device that has two time ranges configured, where one of the time ranges is inactive and the other is active:

switch(config-time-range)# show time-range

```
time-range entry: december (inactive)

10 absolute start 0:00:00 1 December 2009 end 11:59:59 31 December 2009
time-range entry: november (active)

10 absolute start 0:00:00 1 November 2009 end 23:59:59 30 November 2009
```

Command	Description
time-range	Configures a time range.
permit (IPv4)	Configures a permit rule for an IPv4 ACL.
ipv6 access-list	Configures an IPv6 ACL.
permit (IPv6)	Configures a permit rule for an IPv6 ACL.

Command	Description
permit (MAC)	Configures a permit rule for a MAC ACL.
show ipv6 access-lists	Displays all IPv6 ACLs or a specific IPv6 ACL.
show access-lists	Displays all ACLs or a specific ACL.

show user-account

To display information for the user accounts in a virtual device context (VDC), use the **show** user-account command.

show user-account

Syntax Description

This command has no arguments or keywords.

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 information for user accounts in the default virtual device context (VDC):

switch# show user-account

user:admin

this user account has no expiry date

roles:network-admin

user:adminbackup

this user account has no expiry date

roles:network-operator

This example shows how to display information for user accounts in a nondefault VDC:

switch-MyVDC# show user-account

user:admin

this user account has no expiry date

roles:vdc-admin

Command	Description
telnet server enable	Enables the Telnet server.

show username

To display the public key for the specified user, use the **show username** command.

show username username keypair

Syntax Description

username	Name of the user. You can enter up to 28 alphanumeric characters.
keypair	Displays the Secure Shell (SSH) user keys.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
5.0(2)	This command was introduced.

Usage Guidelines

This command does not require a license.

For security reasons, this command does not show the private key.

Examples

This example shows how to display the public key for the specified user:

switch# show username admin keypair

rsa Keys generated:Mon Feb 15 08:10:45 2010

ssh-rsa AAAAB3NzaC1yc2EAAAABIwAAAIEA0+rIeMgXwv004lt/hwOoyqIKbFGl1tmkFNm/tozuazfL4dH/asAXZoJePDdiO1ILBGfrQgzyS5u3prXuXfgnWkTu0/4WlD0DF/EPdsd3NNzNbpPFzNDVylPDyDfRX5SfVICioEirjX9Y59DZP+Nng6rJD7Z/YHVXs/jRNLPBOIs=

switch#

Command	Description
username username keypair	Generates the SSH public and private keys and stores them in the
generate	home directory of the Cisco NX-OS device for the specified user.

show users

To display the user session information for a virtual device context (VDC), use the **show users** command.

show users

Syntax Description

This command has no arguments or keywords.

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 user session information in the default virtual device context (VDC):

switch#	show users				
NAME	LINE	TIME	IDLE	PID	COMMENT
admin	pts/1	Mar 17 15:18	•	5477	(172.28.254.254)
admin	pts/9	Mar 19 11:19	•	23101	(10.82.234.56)*

This example shows how to display information for user accounts in a nondefault VDC:

Command	Description
username	Configures user accounts.

show vlan access-list

To display the contents of the IPv4 access control list (ACL), IPv6 ACL, or MAC ACL associated with a specific VLAN access map, use the **show vlan access-list** command.

show vlan access-list access-list-name

Syntax Description

access-list-name	Name of the VLAN access map, which can be up to 64 alphanumeric,
	case-sensitive characters.

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 use the **show vlan access-list** command to display the contents of the ACL that the VLAN access map named vacl-01 is configured to use:

switch# show vlan access-list vac1-01

IP access list ipv4acl
5 deny ip 10.1.1.1/32 any
10 permit ip any any

Command	Description
vlan access-map	Configures an VLAN access map.
show access-lists	Displays all ACLs or a specific ACL.
show ip access-lists	Displays all IPv4 ACLs or a specific IPv4 ACL.
show ipv6 access-lists	Displays all IPv6 ACLs or a specific IPv6 ACL.
show mac access-lists	Displays all MAC ACLs or a specific MAC ACL.
show vlan access-map	Displays all VLAN access maps or a specific VLAN access map.

show vlan access-map

To display all VLAN access maps or a VLAN access map, use the **show vlan access-map** command.

show vlan access-map map-name

Syntax Description

тар-пате	VLAN access map, which can be up to 64 alphanumeric, case-sensitive	
	characters.	

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
4.2(1)	Command output is sorted alphabetically by the ACL names.
4.0(1)	This command was introduced.

Usage Guidelines

The device shows all VLAN access maps, unless you use the *map-name* argument to specify an access map.

If you do not specify an access-map name, the device lists VLAN access maps alphabetically by access-map name.

For each VLAN access map displayed, the device shows the access-map name, the ACL specified by the **match** command, and the action specified by the **action** command.

Use the **show vlan filter** command to see which VLANs have a VLAN access map applied to them.

This command does not require a license.

Examples

This example shows how to remove dynamically learned, secure MAC addresses from the Ethernet 2/1 interface:

switch# show vlan access-map

Vlan access-map austin-vlan-map

match ip: austin-corp-acl
action: forward

Command	Description
action	Specifies an action for traffic filtering in a VLAN access map.
match	Specifies an ACL for traffic filtering in a VLAN access map.

Command	Description
show vlan filter	Displays information about how a VLAN access map is applied.
vlan access-map	Configures a VLAN access map.
vlan filter	Applies a VLAN access map to one or more VLANs.

show vlan filter

To display information about instances of the **vlan filter** command, including the VLAN access-map and the VLAN IDs affected by the command, use the **show vlan filter** command.

show vlan filter [access-map map-name | vlan vlan-ID]

Syntax Description

access-map	(Optional) Limits the output to VLANs that the specified access map is applied to.
map-name	
vlan vlan-ID	(Optional) Limits the output to access maps that are applied to the specified VLAN only. Valid VLAN IDs are from 1 to 4096.

Defaults

The device shows all instances of VLAN access maps applied to a VLAN, unless you use the **access-map** keyword and specify an access map, or you use the **vlan** keyword and specify a VLAN ID.

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 all VLAN access map information on a device that has only one VLAN access map applied (austin-vlan-map) to VLANs 20 through 35 and 42 through 80:

switch# show vlan filter

vlan map austin-vlan-map:

Configured on VLANs: 20-35,42-80

Command	Description
action	Specifies an action for traffic filtering in a VLAN access map.
match	Specifies an ACL for traffic filtering in a VLAN access map.
show vlan access-map	Displays all VLAN access maps or a VLAN access map.
vlan access-map	Configures a VLAN access map.
vlan filter	Applies a VLAN access map to one or more VLANs.