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## C Commands

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This chapter describes the Cisco NX-OS security commands that begin with C.

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## capture session

To enable a capture session for the access control list (ACL), use the **capture session** command.

**capture session** *session*

Syntax Description	<i>session</i>	Session ID. The range is from 1 to 48.
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Defaults	None
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Command Modes	ACL capture configuration mode (config-acl-capture)
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SupportedUserRoles	network-admin vdc-admin
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Command History	Release	Modification
	5.2(1)	This command was introduced.

Usage Guidelines	This command does not require a license.
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Examples	<p>This example shows how to configure an ACL capture session configuration:</p> <pre>switch# <b>configure terminal</b> switch(config)# <b>ip access-list abc1234</b> switch(config-acl)# <b>capture session 7</b> switch(config-acl)#</pre>
----------	--

Related Commands	Command	Description
	<b>ip access-list</b>	Creates an access list.
	<b>monitor session</b> <i>session</i> <b>type acl-capture</b>	Configures an ACL capture session.

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## class (policy map)

To specify a control plane class map for a control plane policy map, use the **class** command. To delete a control plane class map from a control plane policy map, use the **no** form of this command.

```
class { class-map-name [insert-before class-map-name2] | class-default }
```

```
no class class-map-name
```

Syntax Description		
	<i>class-map-name</i>	Name of the class map.
	<b>insert-before</b> <i>class-map-name2</i>	(Optional) Inserts the control plane class map ahead of another control plane class map for the control plane policy map.
	<b>class-default</b>	Specifies the default class.

**Defaults** None

**Command Modes** Policy map configuration

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

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

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

**Examples** This example shows how to configure a class map for a control plane policy map:

```
switch# configure terminal
switch(config)# policy-map type control-plane PolicyMapA
switch(config-pmap)# class ClassMapA
switch(config-pmap-c)
```

This example shows how to delete a class map from a control plane policy map:

```
switch# configure terminal
switch(config)# policy-map type control-plane PolicyMapA
switch(config-pmap)# no class ClassMapA
```

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Related Commands	Command	Description
	<b>policy-map type control-plane</b>	Specifies a control plane policy map and enters policy map configuration mode.
	<b>show policy-map type control-plane</b>	Displays configuration information for control plane policy maps.

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## class-map type control-plane

To create or specify a control plane class map and enter class map configuration mode, use the **class-map type control-plane** command. To delete a control plane class map, use the **no** form of this command.

```
class-map type control-plane [match-all | match-any] class-map-name
```

```
no class-map type control-plane [match-all | match-any] class-map-name
```

Syntax Description		
<b>match-all</b>	(Optional)	Specifies to match all match conditions in the class map.
<b>match-any</b>	(Optional)	Specifies to match any match conditions in the class map.
<i>class-map-name</i>		Name of the class map. The name is alphanumeric and case-sensitive. The maximum length is 64 characters.

**Defaults** match-any

**Command Modes** Global configuration

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

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

**Usage Guidelines**

You cannot use match-all, match-any, or class-default as names for control plane class maps.

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 specify a control plane class map and enter class map configuration mode:

```
switch# configure terminal
switch(config)# class-map type control-plane ClassMapA
switch(config-cmap)#
```

This example shows how to delete a control plane class map:

```
switch# configure terminal
switch(config)# no class-map type control-plane ClassMapA
```

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Related Commands	Command	Description
	show class-map type control-plane	Displays control plane policy map configuration information.

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## clear access-list counters

To clear the counters for all IPv4, IPv6, and MAC access control lists (ACLs) or a single ACL, use the **clear access-list counters** command.

```
clear access-list counters [access-list-name]
```

<b>Syntax Description</b>	<i>access-list-name</i> (Optional) Name of the ACL whose counters the device clears. The name can be up to 64 alphanumeric, case-sensitive characters.
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<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Any command mode
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<b>Supported User Roles</b>	network-admin vdc-admin
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Command History	Release	Modification
	4.1(2)	Added support for clearing IPv6 ACL counters.
4.0(1)	This command was introduced.	

<b>Usage Guidelines</b>	This command does not require a license.
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**Examples** This example shows how to clear counters for all IPv4, IPv6, and MAC ACLs:

```
switch# clear access-list counters
switch#
```

This example shows how to clear counters for an IPv4 ACL named acl-ipv4-01:

```
switch# clear access-list counters acl-ipv4-01
switch#
```

Related Commands	Command	Description
	<b>clear ip access-list counters</b>	Clears counters for IPv4 ACLs.
<b>clear ipv6 access-list counters</b>	Clears counters for IPv6 ACLs.	
<b>clear mac access-list counters</b>	Clears counters for MAC ACLs.	

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<b>Command</b>	<b>Description</b>
<b>clear vlan access-list counters</b>	Clears counters for VACLs.
<b>show access-lists</b>	Displays information about one or all IPv4, IPv6, and MAC ACLs.



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## clear accounting log

To clear the accounting log, use the **clear accounting log** command.

**clear accounting log [logflash]**

<b>Syntax Description</b>	<b>logflash</b> (Optional) Clears the accounting log stored in the logflash for the current VDC.
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<b>Defaults</b>	None
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<b>Command Modes</b>	Any command mode
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<b>SupportedUserRoles</b>	network-admin vdc-admin
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.0(2)	The <b>logflash</b> keyword was added.
4.0(1)	This command was introduced.	

<b>Usage Guidelines</b>	The <b>clear accounting log</b> command operates only in the default virtual device context (VDC 1). This command does not require a license.
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<b>Examples</b>	This example shows how to clear the accounting log: <pre>switch# clear accounting log</pre>
-----------------	--

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show accounting log</b>	Displays the accounting log contents.

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## clear copp statistics

To clear control plane policing (CoPP) statistics, use the **clear copp statistics** command.

**clear copp statistics**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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

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

**Examples** This example shows how to specify a control plane class map and enter class map configuration mode:

```
switch# clear copp statistics
```

Related Commands	Command	Description
	show policy-map interface control-plane	Displays the CoPP statistics for interfaces.

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## clear cts role-based counters

To clear the role-based access control list (RBACL) statistics so that all counters are reset to 0, use the `clear cts role-based counters` command.

`clear cts role-based counters`

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

Command History	Release	Modification
	5.0(2)	This command was introduced.

**Usage Guidelines** This command requires the Advanced Services license.

**Examples** This example shows how to clear the RBACL statistics:

```
switch# clear cts role-based counters
```

Related Commands	Command	Description
	<code>cts role-based counters enable</code>	Enables the RBACL statistics.
	<code>show cts role-based counters</code>	Displays the configuration status of RBACL statistics and lists statistics for all RBACL policies.

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## clear dot1x

To clear 802.1X authenticator instances, use the **clear dot1x** command.

```
clear dot1x {all | interface ethernet slot/port}
```

<b>Syntax Description</b>	<b>all</b> Specifies all 802.1X authenticator instances.						
	<b>interface ethernet slot/port</b> Specifies the 802.1X authenticator instances for a specified interface.						
<b>Defaults</b>	None						
<b>Command Modes</b>	Any command mode						
<b>Supported User Roles</b>	network-admin vdc-admin						
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>4.0(1)</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	4.0(1)	This command was introduced.		
Release	Modification						
4.0(1)	This command was introduced.						
<b>Usage Guidelines</b>	<p>You must use the <b>feature dot1x</b> command before you configure 802.1X.</p> <p>This command does not require a license.</p>						
<b>Examples</b>	<p>This example shows how to clear all 802.1X authenticator instances:</p> <pre>switch# clear dot1x all</pre> <p>This example shows how to clear the 802.1X authenticator instances for an interface:</p> <pre>switch# clear dot1x interface ethernet 1/1</pre>						
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>feature dot1x</b></td> <td>Enables the 802.1X feature.</td> </tr> <tr> <td><b>show dot1x all</b></td> <td>Displays all 802.1X information.</td> </tr> </tbody> </table>	Command	Description	<b>feature dot1x</b>	Enables the 802.1X feature.	<b>show dot1x all</b>	Displays all 802.1X information.
Command	Description						
<b>feature dot1x</b>	Enables the 802.1X feature.						
<b>show dot1x all</b>	Displays all 802.1X information.						

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## clear eou

To clear Extensible Authentication Protocol over User Datagram Protocol (EAPoUDP) sessions, use the **clear eou** command.

```
clear eou { all | authentication { clientless | eap | static } | interface ethernet slot/port | ip-address
ipv4-address | mac-address mac-address | posturetoken type }
```

Syntax Description		
<b>all</b>		Specifies all EAPoUDP sessions.
<b>authentication</b>		Specifies EAPoUDP authentication.
<b>clientless</b>		Specifies sessions authenticated using clientless posture validation.
<b>eap</b>		Specifies sessions authenticated using EAPoUDP.
<b>static</b>		Specifies sessions authenticated using statically configured exception lists.
<b>interface ethernet</b> <i>slot/port</i>		Specifies an interface.
<b>ip-address</b> <i>ipv4-address</i>		Specifies an IPv4 address. in the A.B.C.D format.
<b>mac-address</b> <i>mac-address</i>		Specifies a MAC address.
<b>posturetoken</b> <i>type</i>		Specifies a posture token name.

**Defaults** None

**Command Modes** Any command mode

**SupportedUserRoles** network-admin  
vdc-admin

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

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

**Examples** This example shows how to clear all the EAPoUDP sessions:

```
switch# clear eou all
```

This example shows how to clear the statically authenticated EAPoUDP sessions:

```
switch# clear eou authentication static
```

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This example shows how to clear the EAPoUDP sessions for an interface:

```
switch# clear eou interface ethernet 1/1
```

This example shows how to clear the EAPoUDP sessions for an IP address:

```
switch# clear eou ip-address 10.10.1.1
```

This example shows how to clear the EAPoUDP sessions for a MAC address:

```
switch# clear eou mac-address 0019.076c.dac4
```

This example shows how to clear the EAPoUDP sessions with a posture token type of checkup:

```
switch# clear eou posturetoken healthy
```

---

**Related Commands**

Command	Description
<b>feature eou</b>	Enables EAPoUDP.
<b>show eou</b>	Displays EAPoUDP information.

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## clear hardware rate-limiter

To clear rate-limit statistics, use the **clear hardware rate-limiter** command.

```
clear rate-limiter {access-list-log | all | copy | layer-2 {l2pt | mcast-snooping | port-security |
storm-control | vpc-low} | layer-3 {control | glean | mtu | multicast {directly-connected |
local-groups | rpf-leak} | ttl} | receive}
```

Syntax Description		
<b>access-list-log</b>		Clears rate-limit statistics for access-list log packets.
<b>all</b>		Clears all rate-limit statistics.
<b>copy</b>		Clears rate-limit statistics for copy packets.
<b>layer-2</b>		Specifies Layer 2 packet rate limits.
<b>l2pt</b>		Clears rate-limit statistics for Layer 2 Tunnel Protocol (L2TP) packets.
<b>mcast-snooping</b>		Clears rate-limit statistics for Layer 2 multicast-snooping packets.
<b>port-security</b>		Clears rate-limit statistics for Layer 2 port-security packets.
<b>storm-control</b>		Clears rate-limit statistics for Layer 2 storm-control packets.
<b>vpc-low</b>		Clears rate-limit statistics for Layer 2 control packets over the VPC low queue.
<b>layer-3</b>		Specifies Layer 3 packet rate limits.
<b>control</b>		Clears rate-limit statistics for Layer 3 control packets.
<b>glean</b>		Clears rate-limit statistics for Layer 3 glean packets.
<b>mtu</b>		Clears rate-limit statistics for Layer 3 maximum transmission unit (MTU) packets.
<b>multicast</b>		Specifies Layer 3 multicast rate limits.
<b>directly-connected</b>		Clears rate-limit statistics for Layer 3 directly connected multicast packets.
<b>local-groups</b>		Clears rate-limit statistics for Layer 3 local group multicast packets.
<b>rpf-leak</b>		Clears rate-limit statistics for Layer 3 reverse path forwarding (RPF) leak multicast packets.
<b>ttl</b>		Clears rate-limit statistics for Layer 3 time-to-live (TTL) packets.
<b>receive</b>		Clears rate-limit statistics for receive packets.

**Defaults** None

**Command Modes** Any command mode

**SupportedUserRoles** network-admin

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Command History	Release	Modification
	5.0(2)	Added the <b>I2pt</b> keyword.
	4.0(3)	Added the <b>port-security</b> 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 clear all the rate-limit statistics:

```
switch# clear hardware rate-limiter all
```

This example shows how to clear the rate-limit statistics for access-list log packets:

```
switch# clear hardware rate-limiter access-list-log
```

This example shows how to clear the rate-limit statistics for Layer 2 storm-control packets:

```
switch# clear hardware rate-limiter layer-2 storm-control
```

This example shows how to clear the rate-limit statistics for Layer 3 glean packets:

```
switch# clear hardware rate-limiter layer-3 glean
```

This example shows how to clear the rate-limit statistics for Layer 3 directly-connected multicast packets:

```
switch# clear hardware rate-limiter layer-3 multicast directly-connected
```

This example shows how to clear the rate-limit statistics for received packets:

```
switch# clear hardware rate-limiter receive
```

Related Commands	Command	Description
	<b>hardware rate-limiter</b>	Configures rate limits.
	<b>show hardware rate-limiter</b>	Displays rate-limit information.



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## clear ip access-list counters

To clear the counters for all IPv4 access control lists (ACLs) or a single IPv4 ACL, use the **clear ip access-list counters** command.

```
clear ip access-list counters [access-list-name]
```

<b>Syntax Description</b>	<i>access-list-name</i> (Optional) Name of the IPv4 ACL whose counters the device clears. The name can be up to 64 alphanumeric, case-sensitive characters.										
<b>Defaults</b>	None										
<b>Command Modes</b>	Any command mode										
<b>Supported User Roles</b>	network-admin vdc-admin										
<b>Command History</b>	<table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>4.0(1)</td> <td>This command was introduced.</td> </tr> </tbody> </table>	Release	Modification	4.0(1)	This command was introduced.						
Release	Modification										
4.0(1)	This command was introduced.										
<b>Usage Guidelines</b>	This command does not require a license.										
<b>Examples</b>	<p>This example shows how to clear counters for all IPv4 ACLs:</p> <pre>switch# clear ip access-list counters switch#</pre> <p>This example shows how to clear counters for an IP ACL named acl-ipv4-101:</p> <pre>switch# clear ip access-list counters acl-ipv4-101 switch#</pre>										
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>clear access-list counters</b></td> <td>Clears counters for IPv4, IPv6, and MAC ACLs.</td> </tr> <tr> <td><b>clear ipv6 access-list counters</b></td> <td>Clears counters for IPv6 ACLs.</td> </tr> <tr> <td><b>clear mac access-list counters</b></td> <td>Clears counters for MAC ACLs.</td> </tr> <tr> <td><b>clear vlan access-list counters</b></td> <td>Clears counters for VACLs.</td> </tr> </tbody> </table>	Command	Description	<b>clear access-list counters</b>	Clears counters for IPv4, IPv6, and MAC ACLs.	<b>clear ipv6 access-list counters</b>	Clears counters for IPv6 ACLs.	<b>clear mac access-list counters</b>	Clears counters for MAC ACLs.	<b>clear vlan access-list counters</b>	Clears counters for VACLs.
Command	Description										
<b>clear access-list counters</b>	Clears counters for IPv4, IPv6, and MAC ACLs.										
<b>clear ipv6 access-list counters</b>	Clears counters for IPv6 ACLs.										
<b>clear mac access-list counters</b>	Clears counters for MAC ACLs.										
<b>clear vlan access-list counters</b>	Clears counters for VACLs.										

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<b>Command</b>	<b>Description</b>
<b>show access-lists</b>	Displays information about one or all IPv4, IPv6, and MAC ACLs.
<b>show ip access-lists</b>	Displays information about one or all IPv4 ACLs.

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## clear ip arp inspection log

To clear the Dynamic ARP Inspection (DAI) logging buffer, use the **clear ip arp inspection log** command.

**clear ip arp inspection log**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any command mode

**SupportedUserRoles** network-admin  
vdc-admin

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

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

**Examples** This example shows how to clear the DAI logging buffer:

```
switch# clear ip arp inspection log
switch#
```

Related Commands	Command	Description
	<b>ip arp inspection log-buffer</b>	Configures the DAI logging buffer size.
	<b>show ip arp inspection</b>	Displays the DAI configuration status.
	<b>show ip arp inspection log</b>	Displays the DAI log configuration.
	<b>show ip arp inspection statistics</b>	Displays the DAI statistics.

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## clear ip arp inspection statistics vlan

To clear the Dynamic ARP Inspection (DAI) statistics for a specified VLAN, use the **clear ip arp inspection statistics vlan** command.

**clear ip arp inspection statistics vlan** *vlan-list*

<b>Syntax Description</b>	<b>vlan</b> <i>vlan-list</i>	Specifies the VLANs whose DAI statistics this command clears. The <i>vlan-list</i> 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 4094.
<b>Defaults</b>	None	
<b>Command Modes</b>	Any command mode	
<b>Supported User Roles</b>	network-admin vdc-admin	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	4.0(1)	This command was introduced.
<b>Usage Guidelines</b>	This command does not require a license.	
<b>Examples</b>	<p>This example shows how to clear the DAI statistics for VLAN 2:</p> <pre>switch# clear ip arp inspection statistics vlan 2 switch#</pre> <p>This example shows how to clear the DAI statistics for VLANs 5 through 12:</p> <pre>switch# clear ip arp inspection statistics vlan 5-12 switch#</pre> <p>This example shows how to clear the DAI statistics for VLAN 2 and VLANs 5 through 12:</p> <pre>switch# clear ip arp inspection statistics vlan 2,5-12 switch#</pre>	

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<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>clear ip arp inspection log</b>	Clears the DAI logging buffer.
	<b>ip arp inspection log-buffer</b>	Configures the DAI logging buffer size.
	<b>show ip arp inspection</b>	Displays the DAI configuration status.
	<b>show ip arp inspection vlan</b>	Displays DAI status for a specified list of VLANs.

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## clear ip device tracking

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

```
clear ip device tracking {all | interface ethernet slot/port | ip-address ipv4-address | mac-address mac-address}
```

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

**Defaults** None

**Command Modes** Any command mode

**Supported User Roles** network-admin  
vdc-admin  
VDC user

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

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

### Examples

This example shows how to clear all the IP device tracking information:

```
switch# clear ip device tracking all
```

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

```
switch# clear ip device tracking interface ethernet 1/1
```

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

```
switch# clear ip device tracking ip-address 10.10.1.1
```

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

```
switch# clear ip device tracking mac-address 000c.30da.86f4
```

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Related Commands	Command	Description
	ip device tracking	Enables IP device tracking.
	show ip device tracking	Displays IP device tracking information.

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## clear ip dhcp snooping binding

To clear the DHCP snooping binding database, use the **clear ip dhcp snooping binding** command.

**clear ip dhcp snooping binding**

**clear ip dhcp snooping binding** [vlan *vlan-id* mac *mac-address* ip *ip-address* interface ethernet *slot/port* [.subinterface-number]]

**clear ip dhcp snooping binding** [vlan *vlan-id* mac *mac-address* ip *ip-address* interface port-channel *channel-number* [.subchannel-number]]

Syntax Description		
<b>vlan</b> <i>vlan-id</i>	(Optional) Clears the DHCP snooping binding database for an entry identified with the VLAN ID specified by the <i>vlan-id</i> argument and the additional keywords and arguments that follow.	
<b>mac-address</b> <i>mac-address</i>	Specifies the MAC address of the binding database entry to be cleared. Enter the <i>mac-address</i> argument in dotted hexadecimal format.	
<b>ip</b> <i>ip-address</i>	Specifies the IPv4 address of the binding database entry to be cleared. Enter the <i>ip-address</i> argument in dotted decimal format.	
<b>interface ethernet</b> <i>slot/port</i>	(Optional) Specifies the Ethernet interface of the binding database entry to be cleared.	
<i>.subinterface-number</i>	(Optional) Number of the Ethernet-interface subinterface.	<b>Note</b> The dot separator is required between the <i>port</i> and <i>subinterface-number</i> arguments.
<b>interface port-channel</b> <i>channel-number</i>	(Optional) Specifies the Ethernet port-channel of the binding database entry to be cleared.	
<i>.subchannel-number</i>	(Optional) Number of the Ethernet port-channel subchannel.	<b>Note</b> The dot separator is required between the <i>channel-number</i> and <i>subchannel-number</i> arguments.

**Defaults** None

**Command Modes** Any command mode

**Supported User Roles** network-admin  
vdc-admin  
VDC user



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Command History	Release	Modification
	4.0(3)	This command was modified to support clearing a specific binding database entry. The optional <b>vlan</b> keyword and the arguments and keywords that follow it were added.
	4.0(1)	This command was introduced.

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

**Examples** This example shows how to clear the DHCP snooping binding database:

```
switch# clear ip dhcp snooping binding
switch#
```

This example shows how to clear a specific entry from the DHCP snooping binding database:

```
switch# clear ip dhcp snooping binding vlan 23 mac 0060.3aeb.54f0 ip 10.34.54.9 interface
ethernet 2/11
switch#
```

Related Commands	Command	Description
	<b>ip dhcp snooping</b>	Globally enables DHCP snooping on the device.
	<b>show ip dhcp snooping</b>	Displays general information about DHCP snooping.
	<b>show ip dhcp snooping binding</b>	Displays IP-MAC address bindings, including the static IP source entries.
	<b>show ip dhcp snooping statistics</b>	Displays DHCP snooping statistics.
	<b>show running-config dhcp</b>	Displays DHCP snooping configuration, including the IP Source Guard configuration.

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## clear ipv6 access-list counters

To clear the counters for all IPv6 access control lists (ACLs) or a single IPv6 ACL, use the **clear ipv6 access-list counters** command.

```
clear ipv6 access-list counters [access-list-name]
```

<b>Syntax Description</b>	<i>access-list-name</i> (Optional) Name of the IPv6 ACL whose counters the device clears. The name can be up to 64 alphanumeric, case-sensitive characters.
---------------------------	---

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Any command mode
----------------------	------------------

<b>Supported User Roles</b>	network-admin vdc-admin
-----------------------------	----------------------------

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

<b>Usage Guidelines</b>	This command does not require a license.
-------------------------	--

**Examples** This example shows how to clear counters for all IPv6 ACLs:

```
switch# clear ipv6 access-list counters
switch#
```

This example shows how to clear counters for an IPv6 ACL named acl-ipv6-3A:

```
switch# clear ipv6 access-list counters acl-ipv6-3A
switch#
```

Related Commands	Command	Description
	<b>clear access-list counters</b>	Clears counters for IPv4, IPv6, and MAC ACLs.
	<b>clear ip access-list counters</b>	Clears counters for IPv4 ACLs.
	<b>clear mac access-list counters</b>	Clears counters for MAC ACLs.
	<b>clear vlan access-list counters</b>	Clears counters for VACLs.

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<b>Command</b>	<b>Description</b>
<b>show access-lists</b>	Displays information about one or all IPv4, IPv6, and MAC ACLs.
<b>show ipv6 access-lists</b>	Displays information about one or all IPv6 ACLs.

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## clear ldap-server statistics

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

```
clear ldap-server statistics {ipv4-address | ipv6-address | host-name}
```

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

Defaults	
	None

Command Modes	
	Any command mode

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

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 clear the statistics for an LDAP server:

```
switch# clear ldap-server statistics 10.10.1.1
```

Related Commands	Command	Description
	<b>feature ldap</b>	Enables LDAP.
	<b>ldap-server host</b>	Specifies the IPv4 or IPv6 address or hostname for an LDAP server.
	<b>show ldap-server statistics</b>	Displays the LDAP server statistics.

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## clear mac access-list counters

To clear the counters for all MAC access control lists (ACLs) or a single MAC ACL, use the **clear mac access-list counters** command.

```
clear mac access-list counters [access-list-name]
```

### Syntax Description

<i>access-list-name</i>	(Optional) Name of the MAC ACL whose counters the device clears. The name can be up to 64 alphanumeric, case-sensitive characters.
-------------------------	--

### Defaults

None

### Command Modes

Any command mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
4.0(1)	This command was introduced.

### Usage Guidelines

This command does not require a license.

### Examples

This example shows how to clear counters for all MAC ACLs:

```
switch# clear mac access-list counters
switch#
```

This example shows how to clear counters for a MAC ACL named acl-mac-0060:

```
switch# clear mac access-list counters acl-ipv4-0060
switch#
```

### Related Commands

Command	Description
<b>clear access-list counters</b>	Clears counters for IPv4, IPv6, and MAC ACLs.
<b>clear ip access-list counters</b>	Clears counters for IPv4 ACLs.
<b>clear ipv6 access-list counters</b>	Clears counters for IPv6 ACLs.
<b>clear vlan access-list counters</b>	Clears counters for VACLs.

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<b>Command</b>	<b>Description</b>
<b>show access-lists</b>	Displays information about one or all IPv4, IPv6, and MAC ACLs.
<b>show mac access-lists</b>	Displays information about one or all MAC ACLs.

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## clear port-security

To clear a single, dynamically learned, secure MAC address or to clear all dynamically learned, secure MAC addresses for a specific interface, use the **clear port-security** command.

**clear port-security dynamic interface ethernet** *slot/port* [**vlan** *vlan-id*]

**clear port-security dynamic interface port-channel** *channel-number* [**vlan** *vlan-id*]

**clear port-security dynamic address** *address* [**vlan** *vlan-id*]

Syntax Description	dynamic	Specifies that you want to clear dynamically learned, secure MAC addresses.
	<b>interface</b>	Specifies the interface of the dynamically learned, secure MAC addresses that you want to clear.
	<b>ethernet</b> <i>slot/port</i>	Specifies the Ethernet interface of the dynamically learned, secure MAC addresses that you want to clear.
	<b>vlan</b> <i>vlan-id</i>	(Optional) Specifies the VLAN of the secure MAC addresses to be cleared. Valid VLAN IDs are from 1 to 4096.
	<b>port-channel</b> <i>channel-number</i>	Specifies the port-channel interface of the dynamically learned, secure MAC addresses that you want to clear.
	<b>address</b> <i>address</i>	Specifies a single MAC address to be cleared, where <i>address</i> is the MAC address, in dotted hexadecimal format.

**Defaults** None

**Command Modes** Any command mode

**SupportedUserRoles** network-admin  
vdc-admin

Command History	Release	Modification
	4.2(1)	Support was added for port-security on port-channel interfaces.
	4.0(1)	This command was introduced.

**Usage Guidelines** You must enable port security by using the **feature port-security** command before you can use the **clear port-security** command.

This command does not require a license.

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### Examples

This example shows how to remove dynamically learned, secure MAC addresses from the Ethernet 2/1 interface:

```
switch# configure terminal
switch(config)# clear port-security dynamic interface ethernet 2/1
```

This example shows how to remove the dynamically learned, secure MAC address 0019.D2D0.00AE:

```
switch# configure terminal
switch(config)# clear port-security dynamic address 0019.D2D0.00AE
```

### Related Commands

Command	Description
<b>debug port-security</b>	Provides debugging information for port security.
<b>feature port-security</b>	Enables port security globally.
<b>show port-security</b>	Shows information about port security.
<b>switchport port-security</b>	Enables port security on a Layer 2 interface.



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## clear radius-server statistics

To clear the statistics for a RADIUS server host, use the **clear radius-server statistics** command.

```
clear radius-server statistics {ipv4-address | ipv6-address | server-name}
```

Syntax Description		
<i>ipv4-address</i>		IPv4 address of a RADIUS server host in <i>A.B.C.D</i> format.
<i>ipv6-address</i>		IPv6 address of a RADIUS server host in <i>A:B::C:D</i> format.
<i>server-name</i>		Name of a RADIUS server host. The name is case sensitive.

**Defaults** None

**Command Modes** Any command mode

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

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

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

**Examples** This example shows how to clear statistics for a RADIUS server:

```
switch# clear radius-server statistics 10.10.1.1
```

Related Commands	Command	Description
	<b>show radius-server statistics</b>	Displays RADIUS server host statistics.

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## clear ssh hosts

To clear the Secure Shell (SSH) host sessions and the known host file for a virtual device context (VDC), use the **clear ssh hosts** command.

**clear ssh hosts**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any command mode

**SupportedUserRoles** network-admin  
vdc-admin

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

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

**Examples** This example shows how to clear all SSH host sessions and the known host file:

```
switch# clear ssh hosts
```

Related Commands	Command	Description
	ssh server enable	Enables the SSH server.

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## clear tacacs-server statistics

To clear the statistics for a TACACS+ server host, use the **clear tacacs-server statistics** command.

**clear tacacs-server statistics** {*ipv4-address* | *ipv6-address* | *server-name*}

Syntax Description		
<i>ipv4-address</i>		IPv4 address of a TACACS+ server host in <i>A.B.C.D</i> format.
<i>ipv6-address</i>		IPv6 address of a TACACS+ server host in <i>A:B::C:D</i> format.
<i>server-name</i>		Name of a TACACS+ server host. The name is case sensitive.

**Defaults** None

**Command Modes** Any command mode

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

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

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

**Examples** This example shows how to clear statistics for a TACACS+ server:

```
switch# clear tacacs-server statistics 10.10.1.1
```

Related Commands	Command	Description
	<b>show tacacs-server statistics</b>	Displays TACACS+ server host statistics.

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## clear user

To clear a user session for a virtual device context (VDC), use the **clear user** command.

**clear user** *user-id*

Syntax Description	<i>user-id</i>	User identifier.
--------------------	----------------	------------------

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

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

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

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

Usage Guidelines	Use the <b>show users</b> command to display the current user sessions on the device. This command does not require a license.
------------------	---

Examples	This example shows how to clear all SSH host sessions: <pre>switch# clear user user1</pre>
----------	---

Related Commands	Command	Description
	<b>show users</b>	Displays the user session information.

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## clear vlan access-list counters

To clear the counters for all VLAN access control lists (VACLs) or a single VACL, use the **clear vlan access-list counters** command.

```
clear vlan access-list counters [access-map-name]
```

<b>Syntax Description</b>	<i>access-map-name</i> (Optional) Name of the VLAN access map whose counters the device clears. The name can be up to 64 alphanumeric, case-sensitive characters.
---------------------------	---

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Privileged EXEC
----------------------	-----------------

<b>Supported User Roles</b>	network-admin vdc-admin
-----------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	4.0(1)	This command was introduced.

<b>Usage Guidelines</b>	This command does not require a license.
-------------------------	--

<b>Examples</b>	This example shows how to clear counters for all VACLs:
-----------------	---

```
switch# clear vlan access-list counters  
switch#
```

This example shows how to clear counters for a VACL named vlan-map-101:

```
switch# clear vlan access-list counters vlan-map-101  
switch#
```

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<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>clear access-list counters</b>	Clears counters for IPv4, IPv6, and MAC ACLs.
	<b>clear ip access-list counters</b>	Clears counters for IPv4 ACLs.
	<b>clear ipv6 access-list counters</b>	Clears counters for IPv6 ACLs.
	<b>clear mac access-list counters</b>	Clears counters for MAC ACLs.
	<b>show access-lists</b>	Displays information about one or all IPv4, IPv6, and MAC ACLs.
	<b>show vlan access-map</b>	Displays information about one or all VACLs.

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## copp copy profile

To create a copy of the Control Plane Policing (CoPP) best practice policy, use the **copp clone profile** command.

**copp copy profile** {lenient | moderate | strict} {prefix | suffix} *string*

### Syntax Description

<b>lenient</b>	Specifies the lenient profile.
<b>moderate</b>	Specifies the moderate profile.
<b>strict</b>	Specifies the strict profile.
<b>prefix</b>	Specifies a prefix for the cloned policy.
<b>suffix</b>	Specifies a suffix for the cloned policy.
<i>string</i>	Prefix or suffix string. The suffix or prefix can be any alphanumeric string up to eight characters.

### Defaults

None

### Command Modes

Any command mode

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.2(1)	This command was introduced.

### Usage Guidelines

When you use the **copp copy profile** command, CoPP renames all class maps and policy maps with the specified prefix or suffix.

This command does not require a license.

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---

**Examples**

This example shows how to create a clone of the CoPP best practice policy:

```
switch # copp copy profile moderate abc
```

---

**Related Commands**

Command	Description
<b>copp profile</b>	Applies the default CoPP best practice policy on the Cisco NX-OS device.
<b>show copp status</b>	Displays the CoPP status, including the last configuration operation and its status.
<b>show running-config copp</b>	Displays the CoPP configuration in the running configuration.

---



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## copp profile

To apply the default Control Plane Policing (CoPP) best practice policy on the Cisco NX-OS device without rerunning the setup utility, use the **copp profile** command. To remove the default CoPP policy from the Cisco NX-OS device, use the **no** form of this command.

```
copp profile {lenient | moderate | strict}
```

```
no copp profile {lenient | moderate | strict}
```

Syntax Description	lenient	Specifies the lenient profile.
	moderate	Specifies the moderate profile.
	strict	Specifies the strict profile.

**Defaults** strict

**Command Modes** Global configuration (config)

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

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

**Usage Guidelines** In Cisco NX-OS releases prior to 5.2(1), you must use the setup utility to change or reapply the default CoPP policy. You can access the setup utility using the **setup** command.

Beginning with Cisco NX-OS Release 5.2, the CoPP best practice policy is read-only. If you want to modify its configuration, you must clone it using the **copp clone profile** command. Cloned policies are treated as user configurations.

When you use in-service software downgrade (ISSU) to upgrade to Cisco NX-OS Release 5.2, the policy attached to the control plane is treated as a user-configured policy. Check the CoPP profile using the **show copp profile** command and make any required changes.

If you use ISSU to downgrade from Cisco NX-OS Release 5.2, CoPP reports the incompatible configuration and instructs you to clone the CoPP profile. In the lower version, all configurations are restored in user-configuration mode.

This command does not require a license.

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### Examples

This example shows how to apply the default CoPP best practice policy on the Cisco NX-OS device:

```
switch# configure terminal
switch(config)# copp profile moderate
switch(config)#
```

This example shows how remove the default CoPP best practice policy from the Cisco NX-OS device:

```
switch(config)# no copp profile moderate
switch(config)#
```

### Related Commands

Command	Description
<b>copp copy profile</b>	Creates a copy of the CoPP best practice policy.
<b>show copp profile</b>	Displays the details of the CoPP best practice policy.
<b>show copp status</b>	Displays the CoPP status, including the last configuration operation and its status.
<b>show running-config copp</b>	Displays the CoPP configuration in the running configuration.

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## CRLLookup

To configure the attribute name, search filter, and base-DN for the certificate revocation list (CRL) search operation in order to send a search query to the Lightweight Directory Access Protocol (LDAP) server, use the **CRLLookup** command. To disable this configuration, use the **no** form of this command.

**CRLLookup** *attribute-name* *attribute-name* *search-filter* *filter* **base-DN** *base-DN-name*

**no CRLLookup**

### Syntax Description

<b>attribute-name</b> <i>attribute-name</i>	Specifies the attribute name of the LDAP search map. The name is alphanumeric, case sensitive, and has a maximum of 128 characters.
<b>search-filter</b> <i>filter</i>	Specifies the filter for the LDAP search map. The name is alphanumeric, case sensitive, and has a maximum of 128 characters.
<b>base-DN</b> <i>base-DN-name</i>	Specifies the base-designated name for the LDAP search map. The name is alphanumeric, case sensitive, and has a maximum of 128 characters.

### Defaults

None

### Command Modes

Lightweight Directory Access Protocol (LDAP) search map configuration

### Supported User Roles

network-admin  
vdc-admin

### Command History

Release	Modification
5.0(2)	This command was introduced.

### Usage Guidelines

To use this command, you must enable LDAP.

This command does not require a license.

### Examples

This example shows how to configure the attribute name, search filter, and base-DN for the CRL search operation in order to send a search query to the LDAP server:

```
switch# conf t
switch(config)# ldap search-map s0
switch(config-ldap-search-map)# CRLLookup attribute-name certificateRevocationList
search-filter (&(objectClass=cRLDistributionPoint)) base-DN CN=CDP,CN=Public Key
Services,CN=Services,CN=Configuration,DC=mdslaptestlab,DC=com
switch(config-ldap-search-map)#
```

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Related Commands	Command	Description
	<b>feature ldap</b>	Enables LDAP.
	<b>ldap search-map</b>	Configures an LDAP search map.
	<b>show ldap-search-map</b>	Displays the configured LDAP search maps.

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## crypto ca authenticate

To associate and authenticate a certificate of the certificate authority (CA) and configure its CA certificate (or certificate chain), use the **crypto ca authenticate** command. To remove the association and authentication, use the **no** form of this command.

**crypto ca authenticate** *trustpoint-label*

**no crypto ca authenticate** *trustpoint-label*

<b>Syntax Description</b>	<i>trustpoint-label</i>	Name of the trustpoint. The name is alphanumeric, case sensitive, and has a maximum length of 64 characters.
---------------------------	-------------------------	--

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Global configuration
----------------------	----------------------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	4.1(2)	This command was introduced.

**Usage Guidelines**

You can use this command to authenticate the CA to the Cisco NX-OS device by obtaining the self-signed certificate of the CA that contains the public key of the CA. Because the CA signs its own certificate, you should manually authenticate the public key of the CA by contacting the CA administrator when you execute this command. The CA certificate or certificate chain must be available in Privacy Enhanced Mail (PEM) (base-64) encoded format.

Use this command when you initially configure certificate authority support for the device. First create the trustpoint using the **crypto ca trustpoint** command using the CA certificate fingerprint published by the CA. You must compare the certificate fingerprint displayed during authentication with the one published by the CA and accept the CA certificate only if it matches.

If the CA to authenticate is a subordinate CA (it is not self-signed), then another CA certifies it, which in turn may be certified by yet another CA, and so on, until there is a self-signed CA. In this case, the subordinate CA has a CA certificate chain. You must enter the entire chain during CA authentication. The maximum length that the CA certificate chain supports is ten.

The trustpoint CA is the certificate authority that you configure on the device as the trusted CA. The device accepts any peer certificate if it is signed by a locally trusted CA or its subordinates.

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#### Note

The trustpoint configuration that you create with the **crypto ca trustpoint** command persists across device reboots only if you save it explicitly using the **copy running-config startup-config** command. The certificates and CRL associated to a trustpoint are automatically persistent when you save the trustpoint configuration in the startup configuration. Otherwise, if you do not save the trustpoint in the startup configuration, the associated certificates and CRL are not automatically persistent because they cannot exist without the corresponding trustpoint after the device reboots.

To ensure that the configured certificates, CRLs, and key pairs are persistent, always save the running configuration in the startup configuration.

This command does not require a license.

#### Examples

This example shows how to authenticate a CA certificate called admin-ca:

```
switch# configure terminal
switch(config)# crypto ca authenticate myCA
input (cut & paste) CA certificate (chain) in PEM format;
end the input with a line containing only END OF INPUT :
-----BEGIN CERTIFICATE-----
MIIC4jCCAoygAwIBAgIQBWD5iay0GZRPSRI1jK0ZejANBgkqhkiG9w0BAQUFADCB
kDEGMB4GCSqGSIb3DQEJARYRYW1hbmRrZUBjaXNjby5jb20xZCZAJBgNVBAYTAk10
MRIwEAYDVQQIEw1LYXJlYXRha2ExEjAQBGNVBAcTCUJhbmdbG9yZTEOMAwGA1UE
ChMFQ2l2Y28xZzARBGNVBAStcm5ldHN0b3JhZ2UxEjAQBGNVBAMTCUFwYXJlYXND
QTAeFw0wNTA1MDMyMjQ2MzdaFw0wNzA1MDMyMjU1MTdaMIGQMSAwHgYJKoZIhvcN
AQkBFhFhbWVZGt1QGNpc2NvLmNvbTELMakGA1UEBHMCSU4xEjAQBGNVBAGTCUth
cm5hdGFrYTESMBAGA1UEBxMJQmFuZ2Fsb3JlMQ4wDAYDVQQKEwVDaXNjbzETMBEG
A1UECxMKbmV0c3RvcnFnZTESMBAGA1UEAxMjQXhcm5hIENBMFwwDQYJKoZIhvcN
AQEBBQADSwAwSAJBAMW/7b3+DXJPANBsIHHzluNccNM87ypyzwuoSNZXOMpeRXXI
OzyBAGixT2ASFuUOwQ1iDM8rO/41jf8RxyKvysCAwEAaA0BvzCBvDALBgNVHQ8E
BAMCAcYwDwYDVR0TAQH/BAUwAwEB/zAdBgNVHQ4EFgQUJyJyRoMbrCNMRU2OyRhQ
GgsWbHEwawYDVR0fBGQwYjAuOCyGKoYoHR0cDovL3NzZS0wOC9DZXJ0RW5yb2xs
L0FwYXJlYXNlcnRfbnJvbnRlcnRfbnJvbnRlcnRfbnJvbnRlcnRfbnJvbnRlcnRf
bGxcQXBhcm5hJTlWQ0EuY3JsbGAgCSsGAQQBgjcVAQDDAgEAMA0GCsQGSIB3DQEB
BQUAA0EAHv6UQ+8nE399Tww+KaGr0g0NIJaNgLh0AfcT0rEyuyt/WYGPzksF9Ea
NBG7E0oN66zex0EOEFG1Vs6mXp1//w==
-----END CERTIFICATE-----
END OF INPUT
Fingerprint(s): MD5 Fingerprint=65:84:9A:27:D5:71:03:33:9C:12:23:92:38:6F:78:12
Do you accept this certificate? [yes/no]: y
```

#### Related Commands

Command	Description
<b>crypto ca trustpoint</b>	Configures the trustpoint.
<b>show crypto ca certificates</b>	Displays configured trustpoint certificates.
<b>show crypto ca trustpoints</b>	Displays trustpoint configurations.

***Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).***

## crypto ca crl request

To configure a new certificate revocation list (CRL) downloaded from the certificate authority (CA), use the **crypto ca crl request** command.

```
crypto ca crl request trustpoint-label source-file
```

Syntax Description		
	<i>trustpoint-label</i>	Name of the trustpoint. The maximum size is 64 characters.
	<i>source-file</i>	Location of the CRL in the form <b>bootflash:filename</b> . The maximum size is 512.

**Defaults** None

**Command Modes** Global configuration

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** The **crypto ca crl request** command allows you to pre-download CRLs for the trustpoints and cache the CRLs in the certificate (cert) store. The CRL file specified should contain the latest CRL in either the Privacy Enhanced Mail (PEM) format or Distinguished Encoding Rules (DER) format.



### Note

The trustpoint configuration that you create with the **crypto ca trustpoint** command persists across device reboots only if you save it explicitly using the **copy running-config startup-config** command. The certificates and CRL associated to a trustpoint are automatically persistent when you save the trustpoint configuration in the startup configuration. Otherwise, if you do not save the trustpoint in the startup configuration, the associated certificates and CRL are not automatically persistent because they cannot exist without the corresponding trustpoint after the device reboots.

To ensure that the configured certificates, CRLs and key pairs are persistent, always save the running configuration in the startup configuration.

This command does not require a license.

**Examples** This example shows how to configure a CRL for the trustpoint or replaces the current CRL:

```
switch# configure terminal
switch(config)# crypto ca crl request admin-ca bootflash:admin-ca.crl
```

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**Related Commands**

<b>Command</b>	<b>Description</b>
<b>revocation-check</b>	Configures trustpoint revocation check methods.
<b>show crypto ca crl</b>	Displays configured certificate revocation lists (CRL).



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## crypto ca enroll

To request a certificate for the device RSA key pair created for this trustpoint CA, use the **crypto ca enroll** command.

**crypto ca enroll** *trustpoint-label*

<b>Syntax Description</b>	<i>trustpoint-label</i>	Name of the trustpoint. The maximum size is 64 characters.
---------------------------	-------------------------	--

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Global configuration
----------------------	----------------------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	4.1(2)	This command was introduced.

**Usage Guidelines**

A Cisco NX-OS device enrolls with the trustpoint CA to obtain an identity certificate. You can enroll your device with multiple trustpoints and obtain a separate identity certificate from each trustpoint.

When enrolling with a trustpoint, you must specify an RSA key pair to certify. You must generate the key pair and associate it to the trustpoint before generating the enrollment request.

Use the **crypto ca enroll** command to generate a request to obtain an identity certificate from each of your trustpoints that correspond to authenticated CAs. The certificate signing request (CSR) generated is per the Public-Key Cryptography Standards (PKCS) #10 standard and is displayed in the PEM format. You then cut and paste the certificate and submit it to the corresponding CA through an e-mail or on the CA website. The CA administrator issues the certificate and makes it available to you either through the website or by sending it in an e-mail. You need to import the obtained identity certificate that corresponds to the trustpoint using the **crypto ca import** *trustpoint-label* **certificate** command.



**Note** The device does not save the challenge password with the configuration. Record this password so that you can provide it if you need to revoke your certificate.

This command does not require a license.

**Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).****Examples**

This example shows how to generate a certificate request for an authenticated CA:

```
switch# configure terminal
switch(config)# crypto ca enroll myCA
Create the certificate request ..
Create a challenge password. You will need to verbally provide this
password to the CA Administrator in order to revoke your certificate.
For security reasons your password will not be saved in the configuration.
Please make a note of it.
Password:nbv123
The subject name in the certificate will be: Vegas-1.cisco.com
Include the switch serial number in the subject name? [yes/no]:no
Include an IP address in the subject name [yes/no]:yes
ip address:209.165.200.226
The certificate request will be displayed...
-----BEGIN CERTIFICATE REQUEST-----
MIIBQzCCARQCAQAwHDEaMBGGA1UEAxMRVnVnYXNjby5jaXNjby5jb20wgZ8wDQYJ
KoZIhvcNAQEBBQADgY0AMIGJAoGBAL8Y1UAJ2NC7jUJ1DVaSMqNIgJ2kt8r141KY
0JC6ManNy4qxk8VeMXZSiLJ4JgTzKWdxbLDkTTysnjuCXGvjb+wj0hEhv/y51T9y
P2NJJ8ornqShrvFZgC7ysN/PyMwKcgzhhVpj+rargZvhtGJ91XTq4WoVksCzXv8S
VqyH0vEvAgMBAAGgTzAVBgkqhkiG9w0BCQcxCBMGbmJ2MTIzMDYGCScGSIB3DQEJ
DjEpmCcwJQYDVDR0RAQH/BBswGYIRVnVnYXNjby5jaXNjby5jb22HBKwWH6IwDQYJ
KoZIhvcNAQEBBQADgYEAKT60KER6Qo8nj0sDXZVHSfJZh6K6JtDz3Gkd99G1FWgt
PftrNcWUE/pw6HayfQ12T3ecgNwe12d15133YBF2bktExiI6U188nTOjg1XMjja8
8a23bNDpNsM8rklwA6hWkrVL8NUZEFJxqbjfngPNTZacJCUS6ZqKCMetbKytUx0=
-----END CERTIFICATE REQUEST-----
```

**Related Commands**

Command	Description
<b>crypto ca import trustpoint-label certificate</b>	Imports the identity certificate obtained from the CA to the trustpoint.
<b>crypto key generate rsa</b>	Generates an RSA key pair.
<b>rsaakeypair</b>	Configures and associates the RSA key pair details to a trustpoint.
<b>show crypto key mypubkey rsa</b>	Displays all RSA public key configurations.

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## crypto ca export

To export the RSA key pair and the associated certificates (identity and CA) of a trustpoint within a Public-Key Cryptography Standards (PKCS) #12 format file to a specified location, use the **crypto ca export** command.

**crypto ca export** *trustpoint-label* **pkcs12** *destination-file-url* *pkcs12-password*

Syntax Description		
<i>trustpoint-label</i>		Name of the trustpoint. The maximum size is 64 characters.
<b>pkcs12</b> <i>destination-file-url</i>		Specifies a destination file in <b>bootflash:filename</b> format. The filename is alphanumeric, case sensitive, and has maximum of 512 characters.
<i>pkcs12-password</i>		Password to be used to protect the RSA private key in the exported file. The passwords is alphanumeric, case sensitive, and has maximum of 64 characters.

**Defaults** None

**Command Modes** Global configuration

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** You can export the identity certificate with the associated RSA key pair and CA certificate (or certificate chain) to a PKCS #12 format file for backup purposes. You can later import the certificate and RSA key pair to recover from a system crash on your device.

This command does not require a license.

**Examples** This example shows how to export a certificate and key pair in the PKCS #12 format:

```
switch# configure terminal
switch(config)# crypto ca export admin-ca pkcs12 bootflash:adminid.p12 nbv123
```

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<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>crypto ca import trustpoint-label certificate</b>	Imports the identity certificate obtained from the CA to the trustpoint.
	<b>crypto ca import trustpoint-label pkcs12</b>	Imports the identity certificate and associated RSA key pair and CA certificate (chain) to a trustpoint.
	<b>crypto key generate rsa</b>	Generates an RSA key pair.
	<b>rsa keypair</b>	Configures and associates the RSA key pair details to a trustpoint.
	<b>show crypto key mypubkey rsa</b>	Displays any RSA public key configurations.

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## crypto ca import

To import the identity certificate in the Privacy Enhanced Mail (PEM) format or the identity certificate and associated RSA key pair and CA certificate (or certificate chain) in the Public-Key Cryptography Standards (PKCS) #12 format, use the **crypto ca import** command.

```
crypto ca import trustpoint-label {certificate | pkcs12 source-file-url pkcs12-password}
```

Syntax Description		
<i>trustpoint-label</i>		Name of the trustpoint. The maximum size is 64 characters.
<b>certificate</b>		Specifies that you will paste the trustpoint certificate at the command-line interface (CLI) prompt.
<b>pkcs12</b> <i>source-file-url</i>		Specifies a source file containing the trustpoint certificate in <b>bootflash:filename</b> format. The filename is case sensitive.
<i>pkcs12-password</i>		Password that was used to protect the RSA private key in the imported PKCS#12 file. The password is case sensitive.

**Defaults** None

**Command Modes** Global configuration

**SupportedUserRoles** network-admin  
vdc-admin

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

**Usage Guidelines** Use the **certificate** keyword to import (by cut and paste means) the identity certificate obtained from the CA, corresponding to the enrollment request generated earlier in the trustpoint and submitted to the CA. Use the **pkcs12 source-file-url pkcs12-password** keyword and argument to import the complete identity information, which includes the identity certificate and associated RSA key pair and CA certificate or certificate chain, into an empty trustpoint. This method allows you to restore the configuration after a system crash.

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**Note**

The trustpoint configuration that you create with the **crypto ca trustpoint** command persists across device reboots only if you save it explicitly using the **copy running-config startup-config** command. The certificates and CRL associated to a trustpoint are automatically persistent when you save the trustpoint configuration in the startup configuration. Otherwise, if you do not save the trustpoint in the startup configuration, the associated certificates and CRL are not automatically persistent because they cannot exist without the corresponding trustpoint after the device reboots.

To ensure that the configured certificates, CRLs and key pairs are persistent, always save the running configuration in the startup configuration.

This command does not require a license.

**Examples**

This example shows how to install an identity certificate obtained from a CA corresponding to an enrollment request made and submitted earlier:

```
switch# configure terminal
switch(config)# crypto ca import myCA certificate
input (cut & paste) certificate in PEM format:
-----BEGIN CERTIFICATE-----
MIIEADCCA6qgAwIBAgIKCj0OoQAAAAAADANBgkqhkiG9w0BAQUFADCBkDEgMB4G
CSqGSIB3DQEJARYRYW1hbmRrZUBjaXNjby5jb20xCzAJBgNVBAYTAklOMRIwEAYD
VQQIEw1LYXJlYXRha2ExEjAQBGNVBAcTCUJhbmdhbG9yZTEOMAwGA1UEChMFQ21z
Y28xZzARBgNVBA5TCm5ldHN0b3JhZ2UxExEjAQBGNVBAAMTCUwYXJlYXNDQTAeFw0w
NTEeMTIwMzAyNDBaFw0wNjExMTIwMzEyNDBaMBwxGjAYBgNVBAMTEVZlZ2FzLTFEu
Y21zY28uY29tMIGfMA0GCSqGSIB3DQEBQUAA4GNADCBiQKBgQC/GNVACdjQu41C
dQ1WkjKjSICdplfK5eJSmNCQujGpzcKsZPFxf2UoiyeCYE8yLncWyw5E08rJ47
glxr42/sI9IRIb/8udU/cj9jSSfKK56koa7xWYAu8rDfz8jMcNIM4W1aY/q2q4Gb
x7RiFdv06uFqFZEgs17/Elash9LxLwIDAQABo4ICEzCCAg8wJQYDVR0RAQH/BBsw
GYIRVnVnYXMTMS5jaXNjby5jb22HBKwWH6IwHQYDVR0OBByEFKCLi+2sspWEfgrR
bhWmlVyo9jngMIHMBGNVHSMEEgcQwgcGAFCCo8kaDG6wjTEVNjskYUBoLfmxxoYGW
pIGTMIGQMSAwHgyJKoZIhvcNAQkBFhPhbWFuZGt1QGNgp2NvLmNvbTELMakGA1UE
BhMCSU4xEjAQBGNVBAGTCUthcm5hdGFrYTESMBAGA1UEBxMJQmFuZ2Fsb3JlMQ4w
DAYDVQQKEwVdXNjZjE0bWV0c3RvcnRfZTESMBAGA1UEAxMjQXBBhcm5hIENBghAFYnk
JrLQZlE9JEiWMrRl6MGsGA1UdHwRkMG1wLqAsOCqGKGh0dHA6
Ly9zc2UtMDgvc2VydEVucm9sbC9BcGFybmE1MjBDQS5jcmwwMKAuoCyGKmZpbGU6
Ly9cXHNzZS0wOFxDZlJ0Rw5yb2xsXEFwYXJlYXUyMENBLmNybdCBiGyIKwYBBQUH
AQEefjB8MDsGCCsGAQUFBzAChi9odHRwOi8vc3NlLTA4L0NlcnRFbnJvbGwvc3Nl
LTA4X0FwYXJlYXUyMENBLmNybdA9BggrBgEFBQcwAoYxZmlsZTovL1xccc3NlLTA4
XENlcnRFbnJvbGwvc3NlLTA4X0FwYXJlYXUyMENBLmNybdANBgkqhkiG9w0BAQUF
AANBADBGBGsbE7GNLh9xeOTWbNm24U69ZSuDDcOcUZUUTgrpnTqVpPyejtsyflw
E36cIZu4WsExREqxbTk8ycx7V5o=
-----END CERTIFICATE-----
```

This example shows how to import a certificate and key pair in a Public-Key Cryptography Standards (PKCS) #12 format file:

```
switch# configure terminal
switch(config)# crypto ca import admin-ca pkcs12 bootflash:adminid.p12 nbv123
```

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<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>crypto ca export trustpoint-label pkcs12</b>	Exports the RSA key pair and associated certificates of a trustpoint.
	<b>crypto ca enroll</b>	Generates a certificate signing request for a trustpoint.
	<b>crypto key generate rsa</b>	Generates the RSA key pair.
	<b>rsa keypair</b>	Configures trustpoint RSA key pair details.
	<b>show crypto ca certificates</b>	Displays the identity and CA certificate details.
	<b>show crypto key mypubkey rsa</b>	Displays any RSA public key configurations.

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## crypto ca lookup

To specify the cert-store to be used for certificate authentication, use the **crypto ca lookup** command.

```
crypto ca lookup {local | remote | both}
```

Syntax Description	local	remote	both
	Specifies the local cert-store for certificate authentication.	Specifies the remote cert-store for certificate authentication.	Specifies the local cert-store for certificate authentication, but if the authentication fails or the CA certificate is not found, the remote cert-store is used.

**Defaults** Local

**Command Modes** Global configuration

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

Command History	Release	Modification
	5.0(2)	This command was introduced.

**Usage Guidelines** If you plan to configure a remote cert-store, you must set up an LDAP server in a remote device and make sure that the CA certificates that are used for authentication are loaded to the Active Directory.

This command does not require a license.

**Examples** This example shows how to specify the remote cert-store for certificate authentication:

```
switch(config)# crypto ca lookup remote
```

Related Commands	Command	Description
	<b>crypto ca remote ldap crl-refresh-time</b>	Configures the refresh time to update the certificate revocation list from the remote cert-store.
	<b>crypto ca remote ldap server-group</b>	Configures the LDAP server group to be used while communicating with LDAP.



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<b>Command</b>	<b>Description</b>
<b>show crypto ca certstore</b>	Displays the configured cert-store.
<b>show crypto ca remote-certstore</b>	Displays the remote cert-store configuration.

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## crypto ca remote ldap crl-refresh-time

To configure the refresh time to update the certificate revocation list (CRL) from the remote cert-store, use the **crypto ca remote ldap crl-refresh-time** command.

**crypto ca remote ldap crl-refresh-time** *hours*

<b>Syntax Description</b>	<i>hours</i>	Refresh time value in hours. The range is from 0 to 744 hours. If you enter 0, the refresh routine runs once.
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<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Global configuration
----------------------	----------------------

<b>SupportedUserRoles</b>	network-admin vdc-admin
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<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	5.0(2)	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must configure a remote cert-store and the LDAP server group. This command does not require a license.
-------------------------	--

<b>Examples</b>	This example shows how to configure the refresh time to update the CRL from the remote cert-store: <pre>switch(config)# <b>crypto ca remote ldap crl-refresh-time 10</b></pre>
-----------------	---

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>crypto ca lookup</b>	Specifies the cert-store to be used for certificate authentication.
	<b>crypto ca remote ldap server-group</b>	Configures the LDAP server group to be used while communicating with LDAP.

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## crypto ca remote ldap server-group

To configure the Lightweight Directory Access Protocol (LDAP) server group to be used while communicating with LDAP, use the **crypto ca remote ldap server-group** command.

**crypto ca remote ldap server-group** *group-name*

<b>Syntax Description</b>	<i>group-name</i>	Server group name. You can enter up to 64 alphanumeric characters.
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<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Global configuration
----------------------	----------------------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

Command History	Release	Modification
	5.0(2)	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must configure a remote cert-store. This command does not require a license.
-------------------------	--

<b>Examples</b>	This example shows how to configure the LDAP server group to be used while communicating with LDAP:
-----------------	---

```
switch(config)# crypto ca remote ldap server-group group1
```

Related Commands	Command	Description
	<b>crypto ca lookup</b>	Specifies the cert-store to be used for certificate authentication.
<b>crypto ca remote ldap crl-refresh-time</b>	Configures the refresh time to update the certificate revocation list from the remote cert-store.	

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## crypto ca test verify

To verify a certificate file, use the **crypto ca test verify** command.

**crypto ca test verify** *certificate-file*

<b>Syntax Description</b>	<i>certificate-file</i>	Certificate filename in the form <b>bootflash:filename</b> . The filename is case sensitive.
---------------------------	-------------------------	--

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Global configuration
----------------------	----------------------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	4.1(2)	This command was introduced.

**Usage Guidelines**

Use this command to verify the specified certificate in the PEM format by using the trusted CAs configured and by consulting the certificate revocation list (CRL), if needed, as indicated by the revocation checking configuration.

This command does not require a license.

**Examples**

This example shows how to verify a certificate file:

```
switch(config)# crypto ca test verify bootflash:id1.pem
verify status oode:0
verify error msg:
```



**Note**

The verify status code value of 0 indicates that the verification is successful.

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show crypto ca certificates</b>	Displays configured trustpoint certificates.

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## crypto ca trustpoint

To create a trustpoint certificate authority (CA) that the device should trust and enter trustpoint configuration mode, use the **crypto ca trustpoint** command. To remove the trustpoint, use the **no** form of this command.

**crypto ca trustpoint** *trustpoint-label*

**no crypto ca trustpoint** *trustpoint-label*

<b>Syntax Description</b>	<i>trustpoint-label</i>	Name of the trustpoint. The name is alphanumeric, case sensitive, and has a maximum of 64 characters.
---------------------------	-------------------------	---

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Global configuration
----------------------	----------------------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	4.1(2)	This command was introduced.

<b>Usage Guidelines</b>	<p>Trustpoints have the following characteristics:</p> <ul style="list-style-type: none"> <li>• A trustpoint corresponds to a single CA, which a Cisco NX-OS device trusts for peer certificate verification for any application.</li> <li>• A CA must be explicitly associated to a trustpoint using the <b>crypto ca authenticate</b> command.</li> <li>• A Cisco NX-OS device can have many trustpoints and all applications on the device can trust a peer certificate issued by any of the trustpoint CAs.</li> <li>• A trustpoint is not restricted to a specific application.</li> <li>• The Cisco NX-OS device can optionally enroll with a trustpoint CA to get an indemnity certificate for itself.</li> </ul>
-------------------------	--

You do not need to designate one or more trustpoints to an application. Any application should be able to use any certificate issued by any trustpoint as long as the certificate satisfies the application requirement.

You do not need more than one identity certificate from a trustpoint or more than one key pair associated to a trustpoint. A CA certifies a given identity (name) only once and does not issue multiple certificates with the same subject name. If you need more than one identity certificate for a CA, define another trustpoint for the same CA, associate another key pair to it, and have it certified if the CA allows multiple certificates with the same subject name.

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**Note**

Before using the **no crypto ca trustpoint** command to remove the trustpoint, you must first delete the identity certificate and CA certificate (or certificate chain) and then disassociate the RSA key pair from the trustpoint. The device enforces this sequence of actions to prevent the accidental removal of the trustpoint with the certificates.

This command does not require a license.

**Examples**

This example shows how to declare a trustpoint CA that the device should trust and enter trustpoint configuration mode:

```
switch# configure terminal
switch(config)# crypto ca trustpoint admin-ca
switch(config-trustpoint)#
```

This example shows how to remove the trustpoint CA:

```
switch# configure terminal
switch(config)# no crypto ca trustpoint admin-ca
```

**Related Commands**

Command	Description
<b>crypto ca authenticate</b>	Authenticates the certificate of the certificate authority.
<b>crypto ca enroll</b>	Generates a certificate signing request for a trustpoint.
<b>show crypto ca certificates</b>	Displays the identity and CA certificate details.
<b>show crypto ca trustpoints</b>	Displays trustpoint configurations.

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## crypto certificatemap mapname

To create a filter map, use the **crypto certificatemap mapname** command.

**crypto certificatemap mapname** *map-name*

<b>Syntax Description</b>	<i>map-name</i>	Name of the filter map. You can enter up to 64 alphanumeric characters.
---------------------------	-----------------	---

<b>Defaults</b>	None
-----------------	------

<b>Command Modes</b>	Global configuration
----------------------	----------------------

<b>SupportedUserRoles</b>	network-admin vdc-admin
---------------------------	----------------------------

Command History	Release	Modification
	5.0(2)	This command was introduced.

<b>Usage Guidelines</b>	To use this command, you must configure a cert-store for certificate authentication. This command does not require a license.
-------------------------	--

<b>Examples</b>	This example shows how to create a new filter map: <pre>switch(config)# <b>crypto certificatemap mapname</b> filtermap1</pre>
-----------------	--

Related Commands	Command	Description
	<b>filter</b>	Configures one or more certificate mapping filters within the filter map.
	<b>show crypto certificatemap</b>	Displays the certificate mapping filters.

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## crypto cert ssh-authorize

To configure a certificate mapping filter for the SSH protocol, use the **crypto cert ssh-authorize** command.

```
crypto cert ssh-authorize [default | issuer-CAname] [map map-name1 [map-name2]]
```

Syntax Description	Parameter	Description
	<b>default</b>	Specifies the default filter map for SSH authorization.
	<i>issuer-CAname</i>	Issuer of the CA certificate. You can enter up to 64 alphanumeric characters. You can enter up to 64 alphanumeric characters.
	<b>map</b>	Specifies the mapping filter to be applied.
	<i>map-name1</i> , <i>map-name2</i>	Name of the default mapping filter, which is already configured. You can enter up to 64 alphanumeric characters.  If you do not use the default map, you can specify one or two filter maps for authorization.

**Defaults** None

**Command Modes** Global configuration

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

Command History	Release	Modification
	5.0(2)	This command was introduced.

**Usage Guidelines** To use this command, you must create a filter map.  
This command does not require a license.

**Examples** This example shows how to configure a certificate mapping filter for the SSH protocol:  
switch(config)# **crypto cert ssh-authorize default map filtermap1**

Related Commands	Command	Description
	<b>crypto certificatemap</b> <b>mapname</b>	Creates a filter map.



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Command	Description
<b>filter</b>	Configures one or more certificate mapping filters within the filter map.
<b>show crypto ssh-auth-map</b>	Displays the mapping filters configured for SSH authentication.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

## delete ca-certificate

To delete certificate authority certificates, use the **delete ca-certificate** command.

**delete ca-certificate**

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Trustpoint configuration

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

**Usage Guidelines** This command deletes the CA certificate or certificate chain corresponding to the trustpoint CA. As a result, the trustpoint CA is no longer trusted. If there is an identity certificate from the CA, you must delete it before you can delete the CA certificate. This prevents the accidental deletion of a CA certificate when you have not yet deleted the identity certificate obtained from that CA. Deleting the CA certificate may be necessary when you no longer want to trust the CA because the CA is compromised or the CA certificate has expired.



**Note** The trustpoint configuration, certificates, and key pair configurations are persistent only after saving to the startup configuration. Deletions become persistent only after you save the running configuration to the startup configuration.

Enter the **copy running-config startup-config** command to make the certificate and key pair deletions persistent.

This command does not require a license.

**Examples** This example shows how to delete a certificate authority certificate:

```
switch# configure terminal
switch(config)# crypto ca trustpoint admin-ca
switch(config-trustpoint)# delete ca-certificate
```

Related Commands	Command	Description
	<b>delete certificate</b>	Deletes the identity certificate.
	<b>delete crl</b>	Deletes the CRL from the trustpoint.

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## cts device-id

To configure a Cisco TrustSec device identifier, use the **cts device-id** command.

```
cts device-id device-id password [7] password
```

Syntax Description		
	<i>device-id</i>	Cisco TrustSec device identifier name. The name is alphanumeric and case-sensitive. The maximum length is 32 characters.
	7	(Optional) Encrypts the password.
	password <i>password</i>	Specifies the password to use during EAP-FAST processing. The name is alphanumeric and case-sensitive. The maximum length is 32 characters.

Defaults	
	No Cisco TrustSec device identifier Clear text password

Command Modes	
	Global configuration

Supported User Roles	
	network-admin vdc-admin

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 <b>feature cts</b> command. The Cisco TrustSec device identifier name must be unique in your Cisco TrustSec network cloud. This command requires the Advanced Services license.

Examples	
	This example shows how to configure a Cisco TrustSec device identifier:

```
switch# configure terminal  
switch(config)# cts device-id DeviceA password Cisco321
```

Related Commands	Command	Description
	<b>feature cts</b>	Enables the Cisco TrustSec feature.
	<b>show cts credentials</b>	Displays the Cisco TrustSec credentials information.

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## cts dot1x

To enable Cisco TrustSec authentication on an interface and enter Cisco TrustSec 802.1X configuration mode, use the **cts dot1x** command. To revert to the default, use the **no** form of this command.

**cts dot1x**

**no cts dot1x**

---

**Syntax Description** This command has no arguments or keywords.

---

**Defaults** Disabled

---

**Command Modes** Interface configuration

---

**SupportedUserRoles** network-admin  
vdc-admin

---

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

---



---

**Usage Guidelines**

This command is not supported for F1 Series modules.

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

After using this command, you must enable and disable the interface using the **shutdown/no shutdown** command sequence for the configuration to take effect.

This command requires the Advanced Services license.

---

**Examples** This example shows how to enable Cisco TrustSec authentication on an interface:

```
switch# configure terminal
switch(config)# interface ethernet 2/3
switch(config-if)# cts dot1x
switch(config-if-cts-dot1x)# exit
switch(config-if)# shutdown
switch(config-if)# no shutdown
```

This example shows how to disable Cisco TrustSec authentication on an interface:

```
switch# configure terminal
switch(config)# interface ethernet 2/3
switch(config-if)# no cts dot1x
switch(config-if)# shutdown
switch(config-if)# no shutdown
```

***Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).***

Related Commands	Command	Description
	feature cts	Enables the Cisco TrustSec feature.
	show cts interface	Displays Cisco TrustSec configuration information for interfaces.

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## cts manual

To enter Cisco TrustSec manual configuration for an interface, use the **cts manual** command. To remove the manual configuration, use the **no** form of this command.

**cts manual**

**no cts manual**

**Syntax Description** This command has no arguments or keywords.

**Defaults** Disabled

**Command Modes** Global configuration

**SupportedUserRoles** network-admin  
vdc-admin

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.

After using this command, you must enable and disable the interface using the **shutdown/no shutdown** command sequence for the configuration to take effect.

This command requires the Advanced Services license.

**Examples** This example shows how to enter Cisco TrustSec manual configuration mode for an interface:

```
switch# configure terminal
switch(config)# interface ethernet 2/4
switch(config-if)# cts manual
switch(config-if-cts-manual)#
```

This example shows how to remove the Cisco TrustSec manual configuration from an interface:

```
switch# configure terminal
switch(config)# interface ethernet 2/4
switch(config-if)# no cts manual
switch(config-if)# shutdown
switch(config-if)# no shutdown
```

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Related Commands	Command	Description
	feature cts	Enables the Cisco TrustSec feature.
	show cts interface	Displays Cisco TrustSec configuration information for interfaces.

[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)

## cts refresh role-based-policy

To refresh the Cisco TrustSec security group access control list (SGACL) policies downloaded from the Cisco Secure ACS, use the **cts refresh role-based-policy** command.

### cts refresh role-based-policy

**Syntax Description** This command has no arguments or keywords.

**Defaults** None

**Command Modes** Any configuration mode

**SupportedUserRoles** network-admin  
vdc-admin

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 enter Cisco TrustSec manual configuration mode for an interface:

```
switch# cts refresh role-based-policy
```

Related Commands	Command	Description
	<b>feature cts</b>	Enables the Cisco TrustSec feature.
	<b>show cts role-based policy</b>	Displays Cisco TrustSec SGACL policy configuration.



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## cts rekey

To rekey an interface for Cisco TrustSec policies, use the **cts rekey** command.

**cts rekey ethernet *slot/port***

Syntax Description	ethernet <i>slot/port</i>	Specifies an Ethernet interface.
--------------------	---------------------------	----------------------------------

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

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

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

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

Usage Guidelines	To use this command, you must enable the Cisco TrustSec feature using the <b>feature cts</b> command. This command requires the Advanced Services license.
------------------	--

Examples	This example shows how to rekey an interface for Cisco TrustSec: switch# <b>cts rekey ethernet 2/3</b>
----------	---

Related Commands	Command	Description
	<b>feature cts</b>	Enables the Cisco TrustSec feature.
	<b>show cts interface</b>	Displays Cisco TrustSec configuration information for interfaces.

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## cts role-based access-list

To create or specify a Cisco TrustSec security group access control list (SGACL) and enter role-based access control list configuration mode, use the **cts role-based access-list** command. To remove an SGACL, use the **no** form of this command.

**cts role-based access-list** *list-name*

**no cts role-based access-list** *list-name*

### Syntax Description

<i>list-name</i>	Name for the SGACL. The name is alphanumeric and case-sensitive. The maximum length is 32 characters.
------------------	---

### Defaults

None

### Command Modes

Global configuration

### Supported User Roles

network-admin  
vdc-admin

### 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 create a Cisco TrustSec SGACL and enter role-based access list configuration mode:

```
switch# configure terminal
switch(config)# cts role-based access-list MySGACL
switch(config-rbacl)#
```

This example shows how to remove a Cisco TrustSec SGACL:

```
switch# configure terminal
switch(config)# no cts role-based access-list MySGACL
```

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Related Commands	Command	Description
	feature cts	Enables the Cisco TrustSec feature.
	show cts role-based access-list	Displays the Cisco TrustSec SGACL configuration.

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## cts role-based counters enable

To enable role-based access control list (RBACL) statistics, use the **cts role-based counters enable** command. To disabled RBACL statistics, use the **no** form of this command.

**cts role-based counters enable**

**no cts role-based counters enable**

---

**Syntax Description** This command has no arguments or keywords.

---

**Defaults** Disabled

---

**Command Modes** Global configuration

---

**SupportedUserRoles** network-admin  
vdc-admin

---

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.

To use this command, you must enable RBACL policy enforcement on the VLAN and VRF.

When you enable RBACL statistics, each policy requires one entry in the hardware. If you do not have enough space remaining in the hardware, an error message appears, and you cannot enable the statistics.

When you modify an RBACL policy, statistics for the previously assigned access control entry (ACE) are displayed, and the newly assigned ACE statistics are initialized to 0.

RBACL statistics are lost only when the Cisco NX-OS device reloads or you deliberately clear the statistics.

This command requires the Advanced Services license.

---

**Examples** This example shows how to enable RBACL statistics:

```
switch# configure terminal
switch(config)# cts role-based counters enable
```

This example shows how to disable RBACL statistics:

```
switch# configure terminal
switch(config)# no cts role-based counters enable
```

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Related Commands	Command	Description
	<b>clear cts role-based counters</b>	Clears the RBACL statistics so that all counters are reset to 0.
	<b>show cts role-based counters</b>	Displays the configuration status of RBACL statistics and lists statistics for all RBACL policies.

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## cts role-based enforcement

To enable Cisco TrustSec security group access control list (SGACL) enforcement in a VLAN or Virtual Routing and Forwarding instance (VRF), use the **cts role-based enforcement** command. To revert to the default, use the **no** form of this command.

**cts role-based enforcement**

**no cts role-based enforcement**

---

**Syntax Description** This command has no arguments or keywords.

---

**Defaults** Disabled

---

**Command Modes** Global configuration  
VLAN configuration  
VRF configuration

---

**SupportedUserRoles** network-admin  
vdc-admin

---

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 enable Cisco TrustSec SGACL enforcement in the default VRF:

```
switch# configure terminal
switch(config)# cts role-based enforcement
```

This example shows how to enable Cisco TrustSec SGACL enforcement in a VLAN:

```
switch# configure terminal
switch(config)# vlan 1
switch(config-vlan)# cts role-based enforcement
```

This example shows how to enable Cisco TrustSec SGACL enforcement in a nondefault VRF:

```
switch# configure terminal
switch(config)# vrf context MyVRF
switch(config-vrf)# cts role-based enforcement
```

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This example shows how to disable Cisco TrustSec SGACL enforcement:

```
switch# configure terminal  
switch(config)# no cts role-based enforcement
```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>feature cts</b>	Enables the Cisco TrustSec feature.
<b>show cts role-based enable</b>	Displays the Cisco TrustSec SGACL policy enforcement configuration.

**[Send document comments to nexus7k-docfeedback@cisco.com.](mailto:nexus7k-docfeedback@cisco.com)**

## cts role-based sgt

To manually configure mapping of Cisco TrustSec security group tags (SGTs) to a security group access control list (SGACL), use the **cts role-based sgt** command. To remove the SGT mapping to an SGACL, use the **no** form of this command.

```
cts role-based sgt { sgt-value | any | unknown } dgt { dgt-value | unknown }
access-list list-name
```

```
no cts role-based sgt { sgt-value | any | unknown } dgt { dgt-value | unknown }
```

Syntax Description		
	<i>sgt-value</i>	Source SGT value. The range is 0 to 65533.
	<b>any</b>	Specifies any SGT.
	<b>unknown</b>	Specifies an unknown SGT.
	<b>dgt</b>	Specifies the destination SGT.
	<i>dgt-value</i>	Destination SGT value. The range is 0 to 65533.
	<b>access-list</b> <i>list-name</i>	Specifies the name for the SGACL.

Defaults	
	None

Command Modes	
	Global configuration

SupportedUserRoles	
	network-admin vdc-admin

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 <b>feature cts</b> command. You must configure the SGACL before you can configure SGT mapping. This command requires the Advanced Services license.

Examples	
	This example shows how to configure SGT mapping for an SGACL: <pre>switch# <b>configure terminal</b> switch(config)# <b>cts role-based sgt 3 dgt 10 access-list MySGACL</b></pre>
	This example shows how to remove SGT mapping for an SGACL: <pre>switch# <b>configure terminal</b> switch(config)# <b>no cts role-based sgt 3 sgt 10</b></pre>



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Related Commands	Command	Description
	feature cts	Enables the Cisco TrustSec feature.
	show cts role-based policy	Displays the Cisco TrustSec SGT mapping for an SGACL.

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## cts role-based sgt-map

To manually configure the Cisco TrustSec security group tag (SGT) mapping to IP addresses, use the **cts role-based sgt-map** command. To remove an SGT, use the **no** form of this command.

```
cts role-based sgt-map ipv4-address sgt-value
```

```
no cts role-based sgt-map ipv4-address
```

Syntax Description	<i>ipv4-address</i>	IPv4 address. The format is <i>A.B.C.D</i>
	<i>sgt-value</i>	SGT value. The range is 0 to 65533.

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

Command Modes	Global configuration VLAN configuration VRF configuration
---------------	---

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

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 <b>feature cts</b> command. You can use only IPv4 addressing with Cisco TrustSec. This command requires the Advanced Services license.
------------------	--

**Examples** This example shows how to configure mapping for a Cisco TrustSec SGT:

```
switch# configure terminal
switch(config)# cts role-based sgt-map 10.10.1.1 3
switch(config-rbacl)#
```

This example shows how to remove a Cisco TrustSec SGT mapping:

```
switch# configure terminal
switch(config)# no cts role-based sgt-map 10.10.1.1
```

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Related Commands	Command	Description
	feature cts	Enables the Cisco TrustSec feature.
	show cts role-based sgt-map	Displays the Cisco TrustSec SGT mapping.

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## cts sgt

To configure the security group tag (SGT) for Cisco TrustSec, use the **cts sgt** command.

**cts sgt tag**

Syntax Description	tag	Local SGT for the device that is a hexadecimal value with the format <b>0xhhhh</b> . The range is from 0x0 to 0xffff.
--------------------	-----	---

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

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

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

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 <b>feature cts</b> command. This command requires the Advanced Services license.
------------------	--

Examples	This example shows how to configure the Cisco TrustSec SGT for the device:
----------	--

```
switch# configure terminal
switch(config)# cts sgt 0x3
```

Related Commands	Command	Description
	<b>feature cts</b>	Enables the Cisco TrustSec feature.
	<b>show cts environment-data</b>	Displays the Cisco TrustSec environment data.

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## cts sxp connection peer

To configure a Security Group Tag (SGT) Exchange Protocol (SXP) peer connection for Cisco TrustSec, use the **cts sxp connection peer** command. To remove the SXP connection, use the **no** form of this command.

```
cts sxp connection peer peer-ipv4-addr [source src-ipv4-addr] password {default | none |
required {password | 7 encrypted-password}} mode {speaker | listener} [vrf vrf-name]

no cts sxp connection peer peer-ipv4-addr [vrf vrf-name]
```

### Syntax Description

<i>peer-ipv4-addr</i>	IPv4 address of the peer device.
<b>source</b> <i>src-ipv4-addr</i>	(Optional) Specifies the IPv4 address of the source device.
<b>password</b>	Specifies the password option to use for the SXP authentication.
<b>default</b>	Specifies that SXP should use the default SXP password for the peer connection.
<b>none</b>	Specifies that SXP should not use a password.
<b>required</b>	Specifies the password that SXP should use for this peer connection.
<i>password</i>	Clear text password. The password is alphanumeric and case-sensitive. The maximum length is 32 characters.
<i>7 encrypted password</i>	Specifies an encrypted password. The maximum length is 32 characters.
<b>mode</b>	Specifies the mode of the peer device.
<b>speaker</b>	Specifies that the peer is the speaker.
<b>listener</b>	Specifies that the peer is the listener.
<b>vrf</b> <i>vrf-name</i>	(Optional) Specifies the VRF for the peer.

### Defaults

Configured default SXP password for the device  
 Configured default SXP source IPv4 address for the device  
 Default VRF

### Command Modes

Global configuration

### Supported User Roles

network-admin  
 vdc-admin

### Command History

Release	Modification
4.1(3)	Added the <b>7</b> option to allow encrypted passwords.
4.0(1)	This command was introduced.

## ***Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).***

### **Usage Guidelines**

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

You can use only IPv4 addressing with Cisco TrustSec.

If you do not specify a source IPv4 address, you must configure a default SXP source IPv4 address using the **cts sxp default source-ip** command.

If you specify default as the password mode, you must configure a default SXP password using the **cts sxp default password** command.

This command requires the Advanced Services license.

### **Examples**

This example shows how to configure an SXP peer connection:

```
switch# configure terminal
switch(config)# cts sxp connection peer 10.10.1.1 source 10.10.2.2 password default mode listener
```

This example shows how to remove an SXP peer connection:

```
switch# configure terminal
switch(config)# no cts sxp connection peer 10.10.1.1
```

### **Related Commands**

<b>Command</b>	<b>Description</b>
<b>cts sxp default password</b>	Configures the default SXP password for the device.
<b>cts sxp default source-ip</b>	Configures the default SXP source IPv4 address for the device.
<b>feature cts</b>	Enables the Cisco TrustSec feature.
<b>show cts sxp connection</b>	Displays the Cisco TrustSec SXP peer connection information.

***Send document comments to [nexus7k-docfeedback@cisco.com](mailto:nexus7k-docfeedback@cisco.com).***

## cts sxp default password

To configure the default Security Group Tag (SGT) Exchange Protocol (SXP) password for the device, use the **cts sxp default password** command. To remove the default, use the **no** form of this command.

```
cts sxp default password {password | 7 encrypted-password}
```

```
no cts sxp default password
```

Syntax Description		
	<i>password</i>	Clear text password. The password is alphanumeric and case-sensitive. The maximum length is 32 characters.
	<i>7 encrypted password</i>	Specifies an encrypted password. The maximum length is 32 characters.

**Defaults** None

**Command Modes** Global configuration

**SupportedUserRoles** network-admin  
vdc-admin

Command History	Release	Modification
	4.1(3)	Added the 7 option to allow encrypted passwords.
	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 configure the default SXP password for the device:

```
switch# configure terminal
switch(config)# cts sxp default password Cisco654
```

This example shows how to remove the default SXP password:

```
switch# configure terminal
switch(config)# no cts sxp default password
```

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Related Commands	Command	Description
	<b>feature cts</b>	Enables the Cisco TrustSec feature.
	<b>show cts sxp</b>	Displays the Cisco TrustSec SXP configuration information.



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## cts sxp default source-ip

To configure the default Security Group Tag (SGT) Exchange Protocol (SXP) source IPv4 address for the device, use the **cts sxp default source-ip** command. To revert to the default, use the **no** form of this command.

```
cts sxp default source-ip ipv4-address
```

```
no cts sxp default source-ip ipv4-address
```

Syntax Description	<i>ipv4-address</i>	Default SXP IPv4 address for the device.
--------------------	---------------------	--

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

Command Modes	Global configuration
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SupportedUserRoles	network-admin vdc-admin
--------------------	----------------------------

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 <b>feature cts</b> command. You can use only IPv4 addressing with Cisco TrustSec. This command requires the Advanced Services license.
------------------	--

Examples	This example shows how to configure the default SXP source IP address for the device:
----------	---

```
switch# configure terminal
switch(config)# cts sxp default source-ip 10.10.3.3
```

This example shows how to remove the default SXP source IP address:

```
switch# configure terminal
switch(config)# no cts sxp default source-ip
```

Related Commands	Command	Description
	<b>feature cts</b>	Enables the Cisco TrustSec feature.
	<b>show cts sxp</b>	Displays the Cisco TrustSec SXP configuration information.

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## cts sxp enable

To enable the Security Group Tag (SGT) Exchange Protocol (SXP) peer on a device, use the **cts sxp enable** command. To revert to the default, use the **no** form of this command.

**cts sxp enable**

**no cts sxp enable**

---

**Syntax Description** This command has no arguments or keywords.

---

**Defaults** Disabled

---

**Command Modes** Global configuration

---

**SupportedUserRoles** network-admin  
vdc-admin

---

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 enable SXP:

```
switch# configure terminal
switch(config)# cts sxp enable
```

This example shows how to disable SXP:

```
switch# configure terminal
switch(config)# no cts sxp enable
```

---

Related Commands	Command	Description
	<b>feature cts</b>	Enables the Cisco TrustSec feature.
	<b>show cts sxp</b>	Displays the Cisco TrustSec SXP configuration information.

---

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## cts sxp reconcile-period

To configure a Security Group Tag (SGT) Exchange Protocol (SXP) reconcile period timer, use the **cts sxp reconcile-period** command. To revert to the default, use the **no** form of this command.

**cts sxp reconcile-period** *seconds*

**no cts sxp reconcile-period**

Syntax Description	<i>seconds</i>	Number of seconds. The range is from 0 to 64000.
--------------------	----------------	--

Defaults	60 seconds (1 minute)
----------	-----------------------

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

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

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.

After a peer terminates an SXP connection, an internal hold down timer starts. If the peer reconnects before the internal hold down timer expires, the SXP reconcile period timer starts. While the SXP reconcile period timer is active, the Cisco NX-OS software retains the SGT mapping entries learned from the previous connection and removes invalid entries.



**Note**

Setting the SXP reconcile period to 0 seconds disables the timer and causes all entries from the previous connection to be removed.

This command requires the Advanced Services license.

**Examples**

This example shows how to configure the SXP reconcile period:

```
switch# configure terminal
switch(config)# cts sxp reconcile-period 120
```

This example shows how to revert to the default SXP reconcile period value:

```
switch# configure terminal
switch(config)# no cts sxp reconcile-period
```

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Related Commands	Command	Description
	<b>feature cts</b>	Enables the Cisco TrustSec feature.
	<b>show cts sxp connection</b>	Displays the Cisco TrustSec SXP configuration information.

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## cts sxp retry-period

To configure a Security Group Tag (SGT) Exchange Protocol (SXP) retry period timer, use the **cts sxp retry-period** command. To revert to the default, use the **no** form of this command.

**cts sxp retry-period** *seconds*

**no cts sxp retry-period**

Syntax Description	<i>seconds</i>	Number of seconds. The range is from 0 to 64000.
--------------------	----------------	--

Defaults	120 seconds (2 minutes)
----------	-------------------------

Command Modes	Global configuration
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SupportedUserRoles	network-admin vdc-admin
--------------------	----------------------------

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 SXP retry period determines how often the Cisco NX-OS software retries an SXP connection. When an SXP connection is not successfully set up, the Cisco NX-OS software makes a new attempt to set up the connection after the SXP retry period timer expires.



**Note**

Setting the SXP retry period to 0 seconds disables the timer and retries are not attempted.

This command requires the Advanced Services license.

**Examples**

This example shows how to configure the SXP retry period:

```
switch# configure terminal
switch(config)# cts sxp retry-period 120
```

This example shows how to revert to the default SXP retry period value:

```
switch# configure terminal
switch(config)# no cts sxp retry-period
```

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Related Commands	Command	Description
	<b>feature cts</b>	Enables the Cisco TrustSec feature.
	<b>show cts sxp connection</b>	Displays the Cisco TrustSec SXP peer connection information.