CHAPTER 5

D Commands

The commands in this chapter apply to the Cisco MDS 9000 Family of multilayer directors and fabric switches. All commands are shown here in alphabetical order regardless of command mode. See "About the CLI Command Modes" section on page 1-3 to determine the appropriate mode for each command.

data-pattern-file

To configure data pattern file for a SAN tuner extension N port, use the **data-pattern-file** command in interface configuration submode. To remove data pattern file, use the **no** form of the command.

data-pattern-file *filename*

no data-pattern-file

Syntax Description

filename	Specifies the data pattern file name.

Defaults

All zero pattern.

Command Modes

SAN extension N port configuration submode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

By default, an all-zero pattern is used as the pattern for data generated by the virtual N ports. You can optionally specify a file as the data pattern to be generated by selecting a data pattern file from one of three locations: the bootflash: directory, the volatile: directory, or the slot0: directory. This option is especially useful when testing compression over FCIP links. You can also use Canterbury corpus or artificial corpus files for benchmarking purposes.

Examples

The following example configures the data pattern file for an N port:

```
switch# san-ext-tuner
switch(san-ext)# nWWN 10:00:00:00:00:00:00:00
switch(san-ext)# nport pwwn 12:00:00:00:00:00:00:56 vsan 13 interface gigabitethernet
1/2
switch(san-ext-nport)# data-pattern-file bootflash://DataPatternFile
```

Related Commands

Command	Description
nport pwwn	Configures SAN extension tuner N port pWWNs.
san-ext-tuner	Enters SAN extension tuner configuration mode.
show san-ext-tuner	Displays SAN extension tuner information.

deadtime (radius group configuration)

To configure a periodic time interval where a nonreachable (nonresponsive) RADIUS server is monitored for responsiveness, use the **deadtime** command in RADIUS group configuration submode. To disable the monitoring of the nonresponsive server, use the **no** form of the command.

deadtime *time*

no deadtime *time*

Syntax Description

time	Specifies the time interval (in minutes) for monitoring the server. The time range is 1 to 1440 minutes.

Defaults

Zero.

Command Modes

RADIUS group configuration submode.

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines

If the dead time interval for an individual RADIUS server is greater than zero (0), that value takes precedence over the value set for the server group.

When the dead time interval is 0 minutes, RADIUS server monitoring is not performed unless the RADIUS server is part of a server group and the dead time interval for the group is greater than 0 minutes.

Examples

The following example shows the **deadtime** command in RADIUS group configuration submode:

```
switch# config terminal
switch(config)# aaa group server radius testgroup
switch(config-radius)# deadtime 10
```

Related Commands

Command	Description
radius-server deadtime	Sets a time interval for monitoring a nonresponsive RADIUS server.
show radius-server	Displays RADIUS server information.

deadtime (tacacs+ group configuration)

To configure a periodic time interval where a nonreachable (nonresponsive) TACACS+ server is monitored for responsiveness, use the **deadtime** command in TACACS+ group configuration submode. To disable the monitoring of the nonresponsive server, use the **no** form of the command.

deadtime *time*

no deadtime *time*

Syntax Description

time	Specifies the time interval (in minutes) for monitoring the server. The time range is 1 to 1440 minutes.

Defaults

Zero.

Command Modes

TACACS+ group configuration submode.

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines

If the dead time interval for an individual TACACS+ server is greater than zero (0), that value takes precedence over the value set for the server group.

When the dead time interval is 0 minutes, TACACS+ server monitoring is not performed unless the TACACS+ server is part of a server group and the dead time interval for the group is greater than 0 minutes.

Examples

The following example shows the **deadtime** command in TACACS+ group configuration submode:

```
switch# config terminal
switch(config)# aaa group server tacacs mygroup
switch(config-tacacs)# deadtime 5
```

Related Commands

Command	Description
show tacacs-server	Displays TACACS+ server information.
tacacs-server deadtime	Sets a time interval for monitoring a nonresponsive TACACS+ server.

deadtime (server group configuration mode)

To configure deadtime within the context of LDAP server groups, use the **deadtime** command in server group configuration mode. To disable this feature, use the **no** form of the command.

deadtime *minutes*

no deadtime *minutes*

Syntax Description-

This command has no arguments or keywords.

Defaults

None.

Command Modes

Server group configuration mode.

Command History

Release	Modification
NX-OS 5.0(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to configure deadtime within the context of LDAP server groups:

```
switch(config-ldap)# deadtime minutes
switch(config-ldap)#
```

Related Commands

Command	Description
show ldap-server groups	Displays the configured LDAP server groups.

delete

To delete a specified file or directory on a flash memory device, use the **delete** command in EXEC mode.

delete {**bootflash:** *filename* | **debug:** *filename* | **log:** *filename* | **modflash:** *filename* | **slot0:** *filename* | **volatile:** *filename*}

Syntax Description

bootflash:	Flash image that resides on the supervisor module.
filename	The name of the file to be deleted.
debug:	Contains the debug files.
log:	Contains the two default logfiles. The file dmesg contains the kernel log-messages and the file messages contains the system application log-messages.
modflash:	Flash image that resides on a module.
slot0:	Flash image that resides on another module.
volatile:	Flash image that resides on the volatile file system.

Defaults

None.

Command Modes

EXEC mode.

Command History

Release	Modification
1.0(2	This command was introduced.
2.1(1a)	Added **debug**, **log**, and **modflash** keywords.

Usage Guidelines

When you delete a file, the software erases the file.

If you attempt to delete the configuration file or image specified by the CONFIG_FILE or BOOTLDR environment variable, the system prompts you to confirm the deletion. Also, if you attempt to delete the last valid system image specified in the BOOT environment variable, the system prompts you to confirm the deletion.

Caution If you specify a directory, the **delete** command deletes the entire directory and all its contents.

Examples

The following example deletes the file named test from the flash card inserted in slot 0:

```
switch# delete slot0:test
Delete slot0:test? [confirm]
```

The following example deletes a file from a directory:

```
switch# delete dns_config.cfg
```

The following example deletes a file from an external CompactFlash (slot0):

```
switch# delete slot0:dns_config.cfg
```

The following example deletes the entire my-dir directory and all its contents:

```
switch# delete bootflash:my-dir
```

The following example deletes the entire user created dk log file on the active supervisor:

```
switch# delete log://sup-active/
log://sup-active/dk        log://sup-active/dmesg     log://sup-active/messages
switch# delete log://sup-active/dk
switch# dir log:
         31     Feb 04 18:22:03 2005  dmesg
      14223     Feb 04 18:25:30 2005  messages

Usage for log://sup-local
   35393536 bytes used
  174321664 bytes free
  209715200 bytes total
switch#
```

Related Commands

Command	Description
cd	Changes the default directory or file system.
dir	Displays a list of files on a file system.
show boot	Displays the contents of the BOOT environment variable, the name of the configuration file pointed to by the CONFIG_FILE environment variable, the contents of the BOOTLDR environment variable, and the configuration register setting.

delete ca-certificate

To delete certificate authority certificates, use the **delete ca-certificate** command in trust point configuration submode.

delete ca-certificate

Syntax Description

This command has no arguments or keywords.

Defaults

None.

Command Modes

Trust point configuration submode.

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines

This command deletes the CA certificate or certificate chain corresponding to the trust point CA. As a result, the trust point CA is no longer trusted. If there is an identity certificate form the CA, you should delete it before attempting to delete the CA certificate. Doing so prevents the accidental deletion of a CA certificate when you have not yet deleted the identity certificate from that CA. This action may be necessary when you do not want to trust the CA any more for a reason such as the CA is compromised or the CA certificate is already expired, with the latter being a very rare event.

Note The trust point configuration, certificates, and key pair configurations are made persistent only after saving to the startup configuration. To be consistent with this configuration behavior, the delete behavior is also the same. That is, the deletions are made persistent only after saving to the startup configuration.

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

Examples

The following example shows how to delete a certificate authority certificate:

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

Related Commands

Command	Description
delete certificate	Deletes the identity certificate.
delete crl	Deletes the crl from the trustpoint.

delete certificate

To delete the identity certificate, use the **delete certificate** command in trust point configuration submode.

delete certificate [**force**]

Syntax Description

force	(Optional) Forces the deletion of the identity certificate.

Defaults

None.

Command Modes

Trust point configuration submode.

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines

Use this command to delete the identity certificate from the trust point CA. This action may be necessary when the identity certificate expires or the corresponding key pair is compromised. Applications will be left without any identity certificate to use after the deletion of the last or the only identity certificate present. Accordingly, an error message is generated if the certificate being deleted is the last or only identity certificate present. If needed, the deletion can still be accomplished by forcing it using the force option.

Note The trust point configuration, certificates, and key pair configurations are made persistent only after saving to the startup configuration. To be consistent with this configuration behavior, the delete behavior is also the same. That is, the deletions are made persistent only after saving to the startup configuration.

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

Examples

The following example shows how to delete the identity certificate:

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

The following example shows how to force the deletion of the identity certificate:

```
switch(config-trustpoint)# delete certificate force
```

Related Commands

Command	Description
delete ca-certificate	Deletes the certificate authority certificate.
delete crl	Deletes the crl from the trustpoint.

delete crl

To delete the crl from the trustpoint, use the **delete crl** command in trust point configuration submode.

delete crl

Syntax Description

This command has no argument or keywords.

Defaults

None.

Command Modes

Trust point configuration submode.

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to delete the crl from the trustpoint:

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

Related Commands

Command	Description
delete ca-certificate	Deletes the certificate authority certificate.
delete certificate	Deletes the identity certificate.

deny (IPv6-ACL configuration)

To configure deny conditions for an IPv6 access control list (ACL), use the **deny** command in IPv6-ACL configuration submode. To remove the conditions, use the **no** form of the command.

deny {*ipv6-protocol-number* | **ipv6**} {*source-ipv6-prefix/prefix-length* | **any** | **host** *source-ipv6-address*} {*dest-ipv6-prefix/prefix-length* | **any** | **host** *dest-ipv6-address*} [**log-deny**]

deny icmp {*source-ipv6-prefix/prefix-length* | **any** | **host** *source-ipv6-address*} {*dest-ipv6-prefix/prefix-length* | **any** | **host** *dest-ipv6-address*} [*icmp-type* [*icmp-code*]] **[log-deny]**

deny tcp {*source-ipv6-prefix/prefix-length* | **any** | **host** *source-ipv6-address*} **[***source-port-operator source-port-number* | **range** *source-port-number source-port-number***]** {*dest-ipv6-prefix/prefix-length* | **any** | **host** *dest-ipv6-address*} **[***dest-port-operator dest-port-number* | **range** *dest-port-number dest-port-number*] [**established**] [**log-deny**]

deny udp {*source-ipv6-prefix/prefix-length* | **any** | **host** *source-ipv6-address*} [*source-port-operator source-port-number* | **range** *source-port-number source-port-number*] {*dest-ipv6-prefix/prefix-length* | **any** | **host** *dest-ipv6-address*} **[***dest-port-operator dest-port-number* | **range** *dest-port-number dest-port-number*] [**log-deny**]

no deny {*ipv6-protocol-number* | **ipv6** | **icmp** | **tcp** | **udp**}

Syntax Description

ipv6-protocol-number	Specifies an IPv6 protocol number. The range is 0 to 255.
ipv6	Applies the ACL to any IPv6 packet.
source-ipv6-prefix/ prefix-length	Specifies a source IPv6 network or class of networks. The format is *X:X:X::X/n*.
any	Applies the ACL to any source or destination prefix.
host *source-ipv6-address*	Applies the ACL to the specified source IPv6 host address. The format is *X:X:X::X*.
dest-ipv6-prefix/prefix-length	Specifies a destination IPv6 network or class of networks. The format is *X:X:X::X/n*.
host *dest-ipv6-address*	Applies the ACL to the specified destination IPv6 host address. The format is *X:X:X::X*.
log-deny	(Optional) For packets that are dropped, creates an informational log message about the packet that matches the entry. The message includes the input interface.
icmp	Applies the ACL to any Internet Control Message Protocol (ICMP) packet.
icmp-type	Specifies an ICMP message type. The range is 0 to 255.
icmp-code	Specifies an ICMP message code. The range is 0 255.
tcp	Applies the ACL to any TCP packet.
source-port-operator	Specifies an operand that compares the source ports of the specified protocol. The operands are **lt** (less than), **gt** (greater than), and **eq** (equals).
source-port-number	Specifies the port number of a TCP or UDP port. The number can be from 0 to 65535. A range requires two port numbers.
udp	Applies the ACL to any UDP packet.

dest-port-operator	Specifies an operand that compares the destination ports of the specified protocol. The operands are **lt** (less than), **gt** (greater than), and **eq** (equals).
dest-port-operator	Specifies the port number of a TCP or UDP port. The number can be from 0 to 65535. A range requires two port numbers.
range	Specifies a range of ports to compare for the specified protocol.
established	(Optional) Indicates an established connection, which is defined as a packet whole SYN flag is not set.

Defaults

None.

Command Modes

IPv6-ACL configuration submode.

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines

The following guidelines can assist you in configuring an IPv6-ACL.

- You can apply IPv6-ACLs to VSAN interfaces, the management interface, Gigabit Ethernet interfaces on IPS modules and MPS-14/2 modules, and Ethernet PortChannel interfaces. However, if IPv6-ACLs are already configured in a Gigabit Ethernet interface, you cannot add this interface to a Ethernet PortChannel group.

Caution Do not apply IPv6-ACLs to just one member of a PortChannel group. Apply IPv6-ACLs to the entire channel group.

- Use only the TCP or ICMP options when configuring IPv6-ACLs on Gigabit Ethernet interfaces.
- Configure the order of conditions accurately. Because the IPv6-ACL filters are applied sequentially to the IP flows, the first match determines the action taken. Subsequent matches are not considered. Be sure to configure the most important condition first. If no conditions match, the software drops the packet.

Examples

The following example configures an IPv6-ACL called List1, enters IPv6-ACL submode, and adds an entry to deny TCP traffic from any source address to any destination address:

```
switch# config terminal
switch(config)# ipv6 access-list List1
switch(config-ipv6-acl)# deny tcp any any
```

The following example removes a deny condition set for any destination prefix on a specified UDP host:

```
switch# config terminal
switch(config)# ipv6 access-list List1
switch(config-ipv6-acl)# no deny udp host 2001:db8:200d::4000 any
```

The following example removes the IPv6-ACL called List1 and all its entries:

```
switch# config terminal
switch(config)# no ipv6 access-list List1
```

Related Commands

Command	Description
ipv6 access-list	Configures an IPv6 ACL and enters IPv6-ACL configuration submode.
permit	Configures permit conditions for an IPv6 ACL.

description

To configure a description for the Event Manager policy, use the **description** command.

description *policy-description*

Syntax Description

policy-description	Configures a descriptive string for the policy. The string can be any alphanumeric string up to 80 characters. Enclose the string in quotation marks.

Defaults

None.

Command Modes

Embedded Event Manager.

Command History

Release	Modification
NX-OS 4.1(3)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to configure a descriptive string for the policy:

```
switch# configure terminal
switch(config)# event manager applet eem-applet
switch(config-applet)# description "Monitors interface shutdown."
switch(config-applet)#
```

Related Commands

Command	Description
show interface	Displays an interface configuration for a specified interface.
shutdown	Disables and enables an interface.

destination interface

To configure a switched port analyzer (SPAN) destination interface, use the **destination interface** command in SPAN session configuration submode. To disable this feature, use the **no** form of the command.

destination interface {**fc** *slot*/*port* | **fc-tunnel** *tunnel-id*}

no destination interface {**fc** *slot*/*port* | **fc-tunnel** *tunnel-id*}

Syntax Description

fc *slot*/*port*	Specifies the Fibre Channel interface ID at a slot and port.
fc-tunnel *tunnel-id*	Specifies the Fibre Channel tunnel interface ID.

Defaults

Disabled.

Command Modes

SPAN session configuration submode.

Command History

Release	Modification
1.0(2)	This command was introduced.
1.2(1)	Added the **fc-tunnel** parameter.

Usage Guidelines

The SPAN destination interface must be configured as SPAN destination port (SD port) mode using the **switchport** command before the interface can be associated with SPAN session as a destination interface.

Examples

The following example shows how to configure an interface as a SPAN destination port (SD port), create a SPAN session, and then configure the interface fc3/13 as the SPAN destination interface:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# interface fc3/13
switch(config-if)# switchport mode sd
switch(config)# span session 1
switch(config-span)# destination interface fc3/13
switch(config-span)# do show span session 1
switch(config-span)# show span session 1
Session 1 (inactive as destination is down)
   Destination is fc3/13
   No session filters configured
   No ingress (rx) sources
   No egress (tx) sources

switch(config-span)#
```

Related Commands

Command	Description
show span session	Displays specific information about a SPAN session.
source	Configures a SPAN source.
span session	Selects or configures the SPAN session and changes to SPAN configuration submode.
suspend	Suspends a SPAN session.
switchport	Configures the switch port mode on the Fibre Channel interface.

destination-profile

To configure the attributes of the destination such as the e-mail address or the message level with the Call Home function, use the **destination-profile** command in Call Home configuration submode. To disable this feature, use the **no** form of the command.

destination-profile {*profile-name* | **XML-destination** | **full-txt-destination** | **short-txt-destination**} {**alert-group** {**all** | **cisco-Tac** | **environmental** | **inventory** | **license** | **linecard-hardware** | **rmon** | **supervisor-hardware** | **syslog-group-port** | **system** | **test**}} | {**email-addr** *email-address*} | **http** {*https-or-http url*} | {**message-level** *message-level*} | {**message-size** *message-size*} | {**transport-method** {**email** | **http**}}

no destination-profile {*profile-name* | **XML-destination** | **full-txt-destination** | **short-txt-destination**} {**alert-group** {**all** | **cisco-Tac** | **environmental** | **inventory** | **license** | **linecard-hardware** | **rmon** | **supervisor-hardware** | **syslog-group-port** | **system** | **test**}} | {**email-addr** *email-address*} | **http** {*https-or-http url*} | {**message-level** *message-level*} | {**message-size** *message-size*} | {**transport-method** {**email** | **http**}}

Syntax Description

profile-name	Specifies a user-defined user profile with a maximum of 32 alphanumeric characters.
XML-destination	Configures the destination profile for XML messages.
full-txt-destination	Configures the destination profile for plain text messages.
short-txt-destination	Configures the destination for short text messages.
alert-group	Specifies one or more of the alert groups.
all	Specifies an alert group consisting of all Call Home messages.
cisco-Tac	Specifies an alert group consisting of events that are meant only for Cisco TAC.
environmental	Specifies an alert group consisting of power, fan, and temperature-related events.
inventory	Specifies an alert group consisting of inventory status events.
license	Specifies an alert group consisting of license status events.
linecard-hardware	Specifies an alert group consisting of module related events.
rmon	Specifies an alert group consisting of RMON status events.
supervisor-hardware	Specifies an alert group consisting of supervisor-related events.
syslog-port-group	Specifies an alert group consisting of syslog port group status events.
system	Specifies an alert group consisting of software-related events.
test	Specifies an alert group consisting of user-generated test events.
email-addr	E-mail transport method.
email-address	Specifies the E-mail address.
http	HTTP transport method.
https-or-http url	Specifies the HTTP or HTTPs URL.
message-level *message-level*	Specifies Call Home message level (0 is the lowest urgency, 9 is the highest urgency).

message-size *message-size*	Configures the maximum message size (default 2500000).
transport-method	Specifies Call Home message-sending transport method.
email	Specifies the e-mail transport method.
http	Specifies the HTTP transport method.

Defaults

None.

Command Modes

Call Home configuration submode.

Command History

Release	Modification
NX-OS 4.2(1)	Deleted **Avanti** keyword from the syntax description. Added the Usage guideline.
NX-OS 4.1(3)	Added the HTTPs URL and transport method for syntax description.
1.0(2)	This command was introduced.

Usage Guidelines

The transport method as well as the HTTP URL is distributed only to the switches in the fabric running images for 4.2(1) and later. The switches running in the lower version images will simply ignore the HTTP configuration.

The HTTP configuration also will not be distributed to switches that support the HTTP configuration but do not distribute it.

Examples

The following example shows how to configure XML destination profiles for the HTTP URL:

```
switch(config-callhome)# destination-profile XML-destination http http://site.service.com
switch(config-callhome)# no destination-profile XML-destination http
http://site.service.com
```

The following example enables the transport method for destination profile:

```
switch(config-callhome)# destination-profile XML-destination transport-method http
switch(config-callhome)# no destination-profile XML-destination transport-method http
switch(config-callhome)#
switch(config-callhome)# destination-profile XML-destination transport-method email
switch(config-callhome)# no destination-profile XML-destination transport-method email
switch(config-callhome)#
```

The following example shows how to configure full-text destination profiles:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# callhome
switch(config-callhome)# destination-profile full-txt-destination email-addr
person@place.com
switch(config-callhome)# destination-profile full-txt-destination message-size 1000000
```

The following example shows how to configure short-text destination profiles:

```
switch(config-callhome)# destination-profile short-txt-destination email-addr
person@place.com
switch(config-callhome)# destination-profile short-txt-destination message-size 100000
```

Related Commands

Command	Description
call home	Configures the Call Home function.
callhome test	Sends a dummy test message to the configured destinations.
show callhome	Displays configured Call Home information.

device-alias (IVR fcdomain database configuration submode)

To map a device alias to a persistent FC ID for IVR, use the **device-alias** command in IVR fcdomain database configuration submode. To remove the mapping for the device alias, use the **no** form of the command.

device-alias *device-name fc-id*

no device-alias *device-name*

Syntax Description

device-name	Specifies the device name. Maximum length is 64 characters.
fc-id	Specifies the FC ID for the device.

Defaults

None.

Command Modes

IVR fcdomain database configuration submode.

Command History

Release	Modification
2.1(2)	This command was introduced.

Usage Guidelines

Only one FC ID can be mapped to a device alias.

Examples

The following example shows how to map the device alias to the persistent FC ID:

```
switch# config t
switch(config)# ivr fcdomain database autonomous-fabric-num 10 vsan 20
switch(config-fcdomain)# native-autonomous-fabric-num 20 native-vsan 30 domain 15
switch(config-fcdomain-fcid)# device-alias SampleName 0x123456
```

The following example shows how to remove the mapping between the device alias and the FC ID:

```
switch# config t
switch(config)# ivr fcdomain database autonomous-fabric-num 10 vsan 20
switch(config-fcdomain)# native-autonomous-fabric-num 20 native-vsan 30 domain 15
switch(config-fcdomain-fcid)# no device-alias SampleName
```

Related Commands

Command	Description
ivr fcdomain database autonomous-fabric-num	Creates IVR persistent FC IDs.
native-autonomous-fabric-num	Creates an IVR persistent FC ID database entry.
show ivr fcdomain database	Displays IVR fcdomain database entry information.

device-alias (SDV virtual device configuration submode)

To add a device alias to a virtual device, use the **device-alias** command in SDV virtual device configuration submode. To remove a device alias, use the **no** form of the command.

device-alias *device-name* [**primary**]

no device-alias *device-name* [**primary**]

Syntax Description

device-name	Specifies the device name. Maximum length is 64 characters.
primary	(Optional) Specifies the device as a primary device.

Defaults

None.

Command Modes

SDV virtual device configuration submode.

Command History

Release	Modification
3.1(2)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to configure a virtual target alias name:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# sdv virtual-device name sqa1 vsan 1
switch(config-sdv-virt-dev)# device-alias group1 primary
```

Related Commands

Command	Description
sdv enable	Enables or disables SAN device virtualization.
show sdv statistics	Displays SAN device virtualization statistics.

device-alias abort

To discard a Distributed Device Alias Services (device alias) Cisco Fabric Services (CFS) distribution session in progress, use the **device-alias abort** command in configuration mode.

device-alias abort

Syntax Description

This command has no other arguments or keywords.

Defaults

None.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to discard a device alias CFS distribution session in progress:

```
switch# config terminal
switch(config)# device-alias abort
```

Related Commands

Command	Description
device-alias database	Configures and activates the device alias database.
device-alias distribute	Enables CFS distribution for device aliases.
show device-alias	Displays device alias information.

device-alias commit

To apply the pending configuration pertaining to the Distributed Device Alias Services (device alias) Cisco Fabric Services (CFS) distribution session in progress in the fabric, use the **device-alias commit** command in configuration mode.

device-alias commit

Syntax Description

This command has no other arguments or keywords.

Defaults

None.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to commit pending changes to the active DPVM database:

```
switch# config terminal
switch(config)# device-alias commit
```

Related Commands

Command	Description
device-alias database	Configures and activates the device alias database.
device-alias distribute	Enables CFS distribution for device aliases.
show device-alias	Displays device alias information.

device-alias database

To initiate a Distributed Device Alias Services (device alias) session and configure device alias database, use the **device-alias database** command. To deactivate the device alias database, use the **no** form of the command.

device-alias database

no device-alias database

Syntax Description

This command has no other arguments or keywords.

Defaults

Deactivated.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

The **device-alias database** command starts a device alias session that locks all the databases on all the switches in this fabrics. When you exit device alias database configuration submode, the device alias session ends and the locks are released.

You can only perform all modifications in the temporary device alias database. To make the changes permanent, use the **device-alias commit** command.

Examples

The following example shows how to activate a device alias session and enter device alias database configuration submode:

```
switch# config terminal
switch(config)# device-alias database
switch(config-device-alias-db)#
```

Related Commands

Command	Description
device-alias commit	Commits changes to the temporary device alias database to the active device alias database.
show device-alias	Displays device alias database information.

device-alias distribute

To enable Cisco Fabric Services (CFS) distribution for Distributed Device Alias Services (device alias), use the **device-alias distribute** command. To disable this feature, use the **no** form of the command.

device-alias distribute

no device-alias distribute

Syntax Description

This command has no other arguments or keywords.

Defaults

Enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

Use the **device-alias commit** command to apply pending changes to the CFS distribution session.

Examples

The following example shows how to enable distribution for device alias information:

```
switch# config terminal
switch(config)# device-alias distribute
```

Related Commands

Command	Description
device-alias commit	Commits changes to the active device alias database.
device-alias database	Configures and activates the device alias database.
show device-alias	Displays device alias information.

device-alias import fcalias

To import device alias database information from another VSAN, use the **device-alias import fcalias** command. To revert to the default configuration or factory defaults, use the **no** form of the command.

device-alias import fcalias vsan *vsan-id*

no device-alias import fcalias vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.

Defaults

None.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

You can import legacy device name configurations using this feature without losing data, if they satisfy the following restrictions:

- Each fcalias has only one member.
- The member type is supported by the device name implementation.

If any name conflict exists, the fcaliases are not imported. The device name database is completely independent from the VSAN dependent fcalias database.

When the import operation is complete, the modified global fcalias table can distributed to all other switches in the physical fabric using the **device-alias distribute** command so that new definitions are available everywhere.

Examples

The following example shows how to import device alias information:

```
switch# config terminal
switch(config)# device-alias import fcalias vsan 10
```

Related Commands

Command	Description
device-alias database	Configures and activates the device alias database.
device-alias distribute	Distributes fcalias database changes to the fabric.
show device-alias	Displays device alias database information.

device-alias mode enhanced

To configure device aliases to operate in enhanced mode, use the **device-alias mode enhanced** command. To disable this feature, use the **no** form of the command.

device-alias mode enhanced

no device-alias mode enhanced

Syntax Description

This command has no arguments or keywords.

Defaults

Basic mode.

Command Modes

Configuration mode.

Command History

Release	Modification
3.1(1)	This command was introduced.

Usage Guidelines

When a device alias is configured in basic mode, which is the default mode, all the applications operate like 3.0 switches. For example, when you attempt to configure the device aliases, immediately the device alias are expanded to a PWWN. This operation continues until the mode is changed to enhanced.

Whena device alias is configured in enhanced mode, all the applications accept a device alias name in its native format, instead of expanding the device alias to a PWWN, the device alias name is stored in the configuration and distributed in its native device alias format.

To use enhanced mode, all switches in the fabric must be running in the Cisco SAN-OS Release 3.1(1) or later, or NX-OS 4.1(1b) later.

Note Enhanced mode, or native device alias based configurations are not accepted in interop mode. VSANs. IVR zoneset activation will fail in interop mode VSANs if the corresponding zones have native device alias-based members

Examples

The following example shows how to configure the device alias in enhanced mode:

```
switch# config terminal
switch(config)# device-alias mode enhanced
switch(config)#
```

Related Commands

Command	Description
device-alias commit	Commits changes to the active device alias database.

Command	Description
device-alias database	Configures and activates the device alias database.
show device-alias	Displays device alias information.

debug ldap

To configure debugging for LDAP, use the **debug ldap** command. To disable this feature, use the **no** form of the command.

debug ldap {**aaa-request** | **aaa-request-lowlevel** | **all** | **config** | **config-lowlevel**}

no debug ldap {**aaa-request** | **aaa-request-lowlevel** | **all** | **config** | **config-lowlevel**}

Syntax Description

aaa-request	Enables LDAP AAA request debug.
aaa-request-lowlevel	Enables LDAP AAA request low level debugging.
config	Enables LDAP configuration debugging.
config-lowlevel	Enables LDAP configuring low level debugging.
all	Enables all the debug flags.

Defaults

None.

Command Modes

EXEC mode.

Command History

Release	Modification
NX-OS 5.0(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to configure LDAP AAA request debug:

```
switch# debug ldap aaa-request
switch#
```

The following example shows how to configure LDAP AAA request low level debugging:

```
switch# debug ldap aaa-request-lowlevel
switch#
```

Related Commands

Command	Description
show debug	Displays all Cisco SME related debug commands configured on the switch.

device-alias name

To configure device names in the device alias database, use the **device-alias name** command. To remove device names from the device alias database, use the **no** form of the command.

device-alias name *device-name* **pwwn** *pwwn-id*

no device-alias name *device-name*

Syntax Description

device-name	Specifies the device name. Maximum length is 64 characters.
pwwn *pwwn-id*	Specifies the pWWN ID. The format is *hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*, where *h* is a hexadecimal number.

Defaults

None.

Command Modes

Device alias database configuration submode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to configure a device name alias entry in the device name database:

```
switch# config terminal
switch(config)# device-alias database
switch(config-device-alias-db)# device-alias name Device1 pwwn 21:00:00:20:37:6f:db:bb
```

Related Commands

Command	Description
device-alias database	Enters device alias database configuration submode.
show device-alias	Displays device alias database information.

dir

To display the contents of the current directory or the specified directory, use the **dir** command in EXEC mode.

dir [**bootflash:***module* | *directory-or-filename* | ***debug:****directory-or-filename* | ***log:****module* | *directory-or-filename* | ***modflash:****module* | *directory-or-filename* | ***slot0:****directory-or-filename* | ***volatile:****module* | *directory-or-filename*]

Syntax Description

bootflash:	(Optional) Flash image that resides on the supervisor module.
debug:	(Optional) Provides information about the debug capture directory.
log:	(Optional) Provides information about the two default log files. The file dmesg contains the kernel log messages and the file messages contains the system application log messages.
modflash:	(Optional) Provides information about the flash image that resides in a module flash file directory.
slot0:	(Optional) Flash image that resides on another module.
module	(Optional) Module name and number.
directory-or-filename	(Optional) Name of the file or directory to display on a specified device. The files can be of any type. You can use wildcards in the filename. A wildcard character (*) matches all patterns. Strings after a wildcard are ignored.
volatile:	(Optional) Flash image on the volatile file system.

Defaults

The default file system is specified by the **cd** command.

Command Modes

EXEC mode.

Command History

Release	Modification
1.2(1)	This command was introduced.
2.1(1a)	Added **debug**, **log**, and **modflash** keywords.

Usage Guidelines

None.

Examples

The following example shows how to list the files on the bootflash directory:

```
switch# dir bootflash:
40295206     Aug 05 15:23:51 1980  ilc1.bin
12456448     Jul 30 23:05:28 1980  kickstart-image1
12288       Jun 23 14:58:44 1980  lost+found/
27602159     Jul 30 23:05:16 1980  system-image1
12447232     Aug 05 15:08:30 1980  kickstart-image2
28364853     Aug 05 15:11:57 1980  system-image2
```

```
Usage for bootflash://sup-local
  135404544 bytes used
   49155072 bytes free
  184559616 bytes total
```

The following example shows how to list the files in the debug directory:

```
switch# dir debug:
Usage for debug://sup-local
          0 bytes used
    2097152 bytes free
    2097152 bytes total
switch#
```

The following example shows how to list the files in the log file directory:

```
switch# dir log:
         31     Feb 05 05:00:57 2005  dmesg
       8445     Feb 06 10:34:35 2005  messages

Usage for log://sup-local
   35196928 bytes used
  174518272 bytes free
  209715200 bytes total
switch#
```

Related Commands

Command	Description
cd	Changes the default directory or file system.
delete	Deletes a file on a flash memory device.

disable

To disable the Call Home function, use the **disable** command in Call Home configuration submode.

disable

Syntax Description

This command has no other arguments or keywords.

Defaults

None.

Command Modes

Call Home configuration submode.

Command History

Release	Modification
1.0(2)	This command was introduced.

Usage Guidelines

To enable the Call Home function, use the **enable** command.

Examples

The following example shows how to disable the Call Home function:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# callhome
switch(config-callhome)# disable
```

Related Commands

Command	Description
callhome	Configures the Call Home function.
callhome test	Sends a dummy test message to the configured destination(s).
show callhome	Displays configured Call Home information.

discover

To initiate the discovery of hosts, use the **discovery** command. To disable this feature, use the **no** form of the command.

discover host *host port* **target** *target port* **vsan** *vsan id* **fabric** *fabric name*

no discover

Syntax Description

host *host port*	Identifies the host port WWN. The format is *hh:hh:hh:hh:hh:hh:hh:hh.*
target *target port*	Identifies the target port WWN. The format is *hh:hh:hh:hh:hh:hh:hh:hh*.
vsan *vsan id*	Selects the VSAN identifier. The range is 1 to 4093.
fabric *fabric name*	Specifies the fabric for discovery.The maximum length is 32 characters.

Defaults

None.

Command Modes

Cisco SME cluster configuration submode.

Command History

Release	Modification
3.2(2)	This command was introduced.

Usage Guidelines

None.

Examples

The following example discovers a host and specifies a target, a VSAN, and a fabric for discovery:

```
switch# config t
switch(config)# sme cluster clustername1
switch(config-sme-cl)# discover host 20:00:00:00:c9:49:28:47 target
21:01:00:e0:8b:29:7e:0c vsan 2345 fabric sw-xyz
```

The following example disables the discovery feature:

```
switch# config t
switch(config)# sme cluster clustername1
switch(config-sme-cl)# no discover
```

Related Commands

Command	Description
show sme cluster	Displays information about the Cisco SME cluster.

discover custom-list

To selectively initiate discovery for specified domain IDs in a VSAN, use the **discover custom-list** command in EXEC mode.

discover custom-list {**add** | **delete**} **vsan** *vsan-id* **fcid** *fc-id*

Syntax Description

add	Add a targets to the customized list.
delete	Deletes a target from the customized list.
vsan *vsan-id*	Discovers SCSI targets for the specified VSAN ID. The range is 1 to 4093.
fcip *fc-id*	Discovers SCSI targets for the specified FCID. The format is *0xhhhhhhh*, where *h* is a hexadecimal digit.

Defaults

None.

Command Modes

EXEC mode.

Command History

Release	Modification
1.1(1)	This command was introduced.

Usage Guidelines

None.

Examples

The following example selectively initiates discovery for the specified VSAN and FCID:

```
switch# discover custom-list add vsan 1 fcid 0X123456
```

The following example deletes the specified VSAN and FCID from the customized list:

```
switch# discover custom-list delete vsan 1 fcid 0X123456
```

discover scsi-target

To discover SCSI targets on local storage to the switch or remote storage across the fabric, use the **discover scsi-target** command in EXEC mode.

discover scsi-target {**custom-list** | **local** | **remote** | **vsan** *vsan-id* **fcid** *fc-id*} **os** {**aix** | **all** | **hpux** | **linux** | **solaris** | **windows**} [**lun** | **target**]

Syntax Description

custom-list	Discovers SCSI targets from the customized list.
local	Discovers local SCSI targets.
remote	Discovers remote SCSI targets.
vsan *vsan-id*	Discovers SCSI targets for the specified VSAN ID. The range is 1 to 4093.
fcip *fc-id*	Discovers SCSI targets for the specified FCID. The format is *0xhhhhhhh*, where *h* is a hexadecimal digit.
os	Discovers the specified operating system.
aix	Discovers the AIX operating system.
all	Discovers all operating systems.
hpux	Discovers the HPUX operating system.
linux	Discovers the Linux operating system.
solaris	Discovers the Solaris operating system.
windows	Discovers the Windows operating system.
lun	(Optional) Discovers SCSI targets and LUNs.
target	(Optional) Discovers SCSI targets.

Defaults

None.

Command Modes

EXEC mode.

Command History

Release	Modification
1.3(2a)	This command was introduced.

Usage Guidelines

On-demand discovery only discovers Nx ports present in the name server database that have registered a FC4 Type = SCSI_FCP.

Examples

The following example shows how to discover local targets assigned to all OSs:

```
switch# discover scsi-target local os all
discovery started
```

The following example shows how to discover remote targets assigned to the Windows OS:

```
switch# discover scsi-target remote os windows
discovery started
```

The following example shows how to discover SCSI targets for the specified VSAN (1) and FCID (0x9c03d6):

```
switch# discover scsi-target vsan 1 fcid 0x9c03d6
discover scsi-target vsan 1 fcid 0x9c03d6
VSAN:    1 FCID: 0x9c03d6 PWWN: 00:00:00:00:00:00:00:00
  PRLI RSP: 0x01 SPARM: 0x0012...
```

The following example begins discovering targets from a customized list assigned to the Linux operating system:

```
switch# discover scsi-target custom-list os linux
discovery started
```

distribute

To enable distribution of the Call Home function using CFS, use the **distribute** command in Call Home configuration submode. To disable this feature, use the **no** form of the command.

distribute

no distribute

Syntax Description

This command has no other arguments or keywords.

Defaults

None.

Command Modes

Call Home configuration submode.

Command History

Release	Modification
2.0(1b)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to enable distribution of the Call Home function using CFS:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# callhome
switch(config-callhome)# distribute
```

Related Commands

Command	Description
callhome	Configures the Call Home function.
callhome test	Sends a dummy test message to the configured destination(s).
show callhome	Displays configured Call Home information.

dmm module

To specify default DMM values for migration block size, number of migration blocks and fast migration speed, use the **dmm module** command in configuration mode.

dmm module *mod-id* **rate-of-migration fast** *migration-rate* **medium** *migration-rate* **slow** *migration-rate*

Syntax Description

mod-id	Specifies the module ID.
rate-of-migration	Migration rate can be configured as slow, medium or fast.
fast *migration-rate*	Specifies the rate for fast migration. Units are megabytes per second (MB/s).
medium *migration-rate*	Specifies the rate for medium migration. Units are MB/s.
slow *migration-rate*	Specifies the rate for slow migration. Units are MB/s.

Defaults

None.

Command Modes

Configuration mode.

Command History

Release	Modification
3.2(1)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to set the fast migration rate to 100 MB/s, the medium migration rate to 50 MB/s, and slow migration rate to 10 MB/s:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.

switch(config) dmm module 3 rate_of_migration fast 100 medium 50 slow 10
```

Related Commands

Command	Description
show dmm ip-peer	Displays a DMM port's IP peer.
show dmm job	Displays job information.

dmm module job

To configure a data migration job, use the **dmm module** *mod-id* job command in configuration mode.

dmm module *mod-id* **job** *job-id* {**create | destroy | finish | get-vi vsan** *vsan-id* **| modify rate |** **schedule** {{**hour** *hour* **min** *minute* **day** *day* **month** *month* **year** *year* **| now |reset**}} **| session |** **set-vi** *portwwn nodewwn* **vsan** *vsan-id* **| start | stop | validate | verify**}

Syntax Description

module *mod-id*	Specifies the module ID.
job *job-id*	Specifies the job ID. The range is 0 to18446744073709551615.
create	Creates the job and enters DMM job configuration submode.
destroy	Deletes the DMM job.
finish	Moves the Method 2 data migration job to completed state.
get-vi	Retrieves the virtual initiator (VI) for the DMM job.
vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.
modify	Modifies the DMM job attributes.
rate	Specifies the rate of the job attribute. The range is from 1 to 4. Specify 1 for a default value, 2 for slow, 3 for medium and 4 for fast rates.
schedule	Schedules the DMM job.
hour *hour*	Specifies the hour the DMM job starts. The range is 0 to 23.
min *minute*	Specifies the minute the DMM job starts. The range is 0 to 59.
day *day*	Specifies the day the DMM job starts. The range is 1 to 31.
month *month*	Specifies the month the DMM job starts. The range is 1 to 12.
year *year*	Specifies the year the DMM job starts. The range is 2000 to 2030.
now	Resets the schedule to start the DMM job immediately.
reset	Resets the DMM job to unscheduled.
session	Enables the Session Configuration submode.
set-vi	Sets the VI for the storage based job.
portwwn	Specifies the port WWN. The format is *hh:hh:hh:hh:hh:hh:hh:hh*, where *h* is a hexadecimal number.
nodewwn	Specifies the node WWN. The format is *hh:hh:hh:hh:hh:hh:hh:hh*, where *h* is a hexadecimal number.
vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.
start	Starts the DMM job session.
stop	Stops the DMM job.
validate	Validates the DMM job data.
verify	Verifies the data migration for the specified job.

Defaults

None.

Command Modes

Configuration mode.

Command History

Release	Modification
NX-OS 4.1(1b)	The **set-vi** and **modify rate** keywords were introduced.
3.3(1a)	The **finish** keyword is introduced.

Usage Guidelines

DMM must be enabled before you can create DMM jobs. Use the **ssm enable feature dmm** command to enable DMM.

The data migration job stops executing if it encounters any errors. To restart the migration, enter the **validate** command to validate the job configuration, then enter the **restart** command to restart the job.

Before creating a storage based data migration job, use the **show dmm module vi-list** command to choose the VI for migrating the data and then use the **set-vi** command to specify the VI.

Examples

The following example shows how to create a job with a schedule. The job is scheduled to start on Sunday, January 6, 2008 at 11:00 P.M.

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# dmm module 3 job 1 schedule hour 23 min 0 day 6 month 1 year 2008
```

Command	Description
show dmm ip-peer	Displays the IP peers that the DMM port is connected to.
show dmm job	Displays DMM job information.
show dmm module vi-list	Displays the list of VIs.

do

Use the **do** command to execute an EXEC-level command from any configuration mode or submode.

do *command*

Syntax Description

command	Specifies the EXEC command to be executed.

Defaults

None.

Command Modes

All configuration modes.

Command History

Release	Modification
1.1(1)	This command was introduced.
NX-OS 4.1(1b)	Added the command output for extended bbcredit interface.
NX-OS 4.1(1b)	Added a note.

Usage Guidelines

Use this command to execute EXEC commands while configuring your switch. After the EXEC command is executed, the system returns to the mode from which you issued the **do** command.

Note The receive bbcredit value reflects the extended bbcredit configuration. Extended bbcredit range for Vegas and ISOLA cards is 256-3500.

Examples

The following example shows how to execute the EXEC commands:

```
switch(config)# port-monitor name cisco
switch(config-port-monitor)# do
switch(config-port-monitor)#
```

The following example disables the **terminal session-timeout** command using the **do** command in configuration mode:

```
switch(config)# do terminal session-timeout 0
switch(config)#
```

The following example creates and enables the interface from configuration mode:

```
switch(config)# int fc 3/1
switch(config-if)# no shut
```

The following example shows how to receive the extended bbcredit interface:

```
switch(config-if)# do show interface fc3/2
fc3/2 is trunking
Hardware is Fiber Channel, SFP is short wave laser w/o OFC (SN)
Port WWN is 20:82:00:05:30:00:2a:1e
```

```
Peer port WWN is 20:42:00:0b:46:79:f1:80
Admin port mode is auto, trunk mode is on
Port mode is TE
Port vsan is 1
Speed is 2 Gbps
Transmit B2B Credit is 255
Receive B2B Credit is 1500
Receive data field Size is 2112
Beacon is turned off
    Trunk vsans (admin allowed and active) (1-10)
    Trunk vsans (up)                       (1-10)
    Trunk vsans (isolated)                 ()
    Trunk vsans (initializing)             ()
    5 minutes input rate 504 bits/sec, 63 bytes/sec, 0 frames/sec
    5 minutes output rate 344 bits/sec, 43 bytes/sec, 0 frames/sec
      69390 frames input, 4458680 bytes
        0 discards, 0 errors
        0 CRC,  0 unknown class
        0 too long, 0 too short
      69458 frames output, 3086812 bytes
        0 discards, 0 errors
      2 input OLS, 1 LRR, 0 NOS, 2 loop inits
      1 output OLS, 1 LRR, 1 NOS, 1 loop inits
```

dpvm abort

To discard a dynamic port VSAN membership (DPVM) Cisco Fabric Services (CFS) distribution session in progress, use the **dpvm abort** command in configuration mode.

dpvm abort

Syntax Description

This command has no other arguments or keywords.

Defaults

None.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

To use this command, DPVM must be enabled using the **dpvm enable** command.

Examples

The following example shows how to discard a DPVM CFS distribution session in progress:

```
switch# config terminal
switch(config)# dpvm abort
```

Related Commands

Command	Description
dpvm database	Configures the DPVM database.
dpvm distribute	Enables CFS distribution for DPVM.
dpvm enable	Enables DPVM.
show dpvm	Displays DPVM information.

dpvm activate

To activate the dynamic port VSAN membership (DPVM) configuration database, use the **dpvm activate** command. To deactivate the DPVM configuration database, use the **no** form of the command.

dpvm activate [**force**]

no dpvm activate [**force**]

Syntax Description

force	(Optional) Forces the activation or deactivation if conflicts exist between the configured DPVM database and the active DPVM database.

Defaults

Deactivated.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

To use this command, DPVM must be enabled using the **dpvm enable** command.

Activation might fail if conflicting entries are found between the configured DPVM database and the currently activated DPVM database. You can ignore the conflicts using the **force** option.

Examples

The following example shows how to activate the DPVM database:

```
switch# config terminal
switch(config)# dpvm activate
```

The following example shows how to deactivate the DPVM database:

```
switch# config terminal
switch(config)# no dpvm activate
```

Related Commands

Command	Description
dpvm database	Configures the DPVM database.
dpvm enable	Enables DPVM.
show dpvm	Displays DPVM database information.

dpvm auto-learn

To enable the automatic learning feature (autolearn) for the active dynamic port VSAN membership (DPVM) database, use the **dpvm auto-learn** command. To disable this feature, use the **no** form of the command.

dpvm auto-learn

no dpvm auto-learn

Syntax Description

This command has no other arguments or keywords.

Defaults

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

To use this command, DPVM must be enabled using the **dpvm enable** command.

When autolearn is enabled, the system automatically creates the DPVM database by learning about devices currently logged or newly logged devices with a VSAN. This is a quick way to create the DPVM which can later be edited. Autolearn features include the following:

- An autolearned entry is created by adding the device PWWN and VSAN to the active DPVM database.
- The active DPVM database must be present when autolearning is enabled.
- Autolearned entries can be deleted from the active DPVM database by the user until autolearning is disabled. Autolearned entries are not permanent in the active DPVM database until autolearning is disabled.
- If a device logs out when autolearning is enabled, the device entry is deleted from the active DPVM database.
- If a particular device logs into the switch multiple times through different ports, then only the VSAN corresponding to last login is associated with the device.
- Autolearn entries do not override previously configured activate entries.

Examples

The following example shows how to enable autolearning for the DPVM database:

```
switch# config terminal
switch(config)# dpvm auto-learn
```

The following example shows how to disable autolearning for the DPVM database:

```
switch# config terminal
switch(config)# no dpvm auto-learn
```

Related Commands

Command	Description
dpvm enable	Enables DPVM.
show dpvm	Displays DPVM database information.

dpvm commit

To apply the pending configuration pertaining to the dynamic port VSAN membership (DPVM) Cisco Fabric Services (CFS) distribution session in progress in the fabric, use the **dpvm commit** command.

dpvm commit

Syntax Description

This command has no other arguments or keywords.

Defaults

None.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

To use this command, DPVM must be enabled using the **dpvm enable** command.

Examples

The following example shows how to commit changes to the DPVM database:

```
switch# config terminal
switch(config)# dpvm commit
```

Related Commands

Command	Description
dpvm distribute	Enables CFS distribution for DPVM.
dpvm enable	Enables DPVM.
show dpvm	Displays DPVM information.

dpvm database

To activate and configure the dynamic port VSAN membership (DPVM) database, use the **dpvm database** command. To deactivate the database, use the **no** form of the command.

dpvm database

no dpvm database

Syntax Description

This command has no other arguments or keywords.

Defaults

Deactivated.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

To use this command, DPVM must be enabled using the **dpvm enable** command.

The DPVM database consists of a series of device mapping entries. Each entry consists of device pWWN or nWWN along with the dynamic VSAN to be assigned. Use the **nwwn** command or **pwwn** command to add the entries to the DPVM database. This database is global to the whole switch (and fabric) and is not maintained for each VSAN.

Examples

The following example shows how to activate the DPVM database and enter DPVM database configuration submode:

```
switch# config terminal
switch(config)# dpvm database
switch#(config-dpvm-db)#
```

The following example shows how to activate the DPVM database and enter nWWN device:

```
switch#(config-dpvm-db)# nwwn 14:21:30:12:63:39:72:81 vsan 101
Successful. Commit should follow for command to take effect.
excal-178(config-dpvm-db)#
```

The following example shows how to activate the DPVM database and enter pWWN device:

```
switch#(config-dpvm-db)# pwwn 14:21:30:12:63:39:72:81 vsan 101
Successful. Commit should follow for command to take effect.
switch#(config-dpvm-db)#
```

Related Commands

Command	Description
dpvm enable	Enables DPVM.
nwwn (DPVM database configuration submode)	Adds entries to the DPVM database using the nWWN.
pwwn (DPVM database configuration submode)	Adds entries to the DPVM database using the pWWN.
show dpvm	Displays DPVM database information.

dpvm database copy active

To copy the active dynamic port VSAN membership (DPVM) database to the config DPVM database, use the **dpvm database copy active** command.

dpvm database copy active

Syntax Description

This command has no other arguments or keywords.

Defaults

Disabled.

Command Modes

EXEC mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

To use this command, DPVM must be enabled using the **dpvm enable** command.

The following circumstances may require the active database to be copied to the config database:

- When the autolearned entries are only added to the active database.
- When the config database or entries in the config database are accidently deleted.

Note If you want to copy the DPVM database and fabric distribution is enabled, you must first commit the changes.

Examples

The following example shows how to copy the active DPVM database to the config DPVM database:

```
switch# dpvm database copy active
```

Related Commands

Command	Description
dpvm enable	Enables DPVM.
show dpvm	Displays DPVM database information.

dpvm database diff

To display the active dynamic port VSAN membership (DPVM) database, use the **dpvm database diff** command.

dpvm database diff {**active** | **config**}

Syntax Description

active	Displays differences in the DPVM active database compared to the DPVM config database.
config	Displays differences in the DPVM config database compared to the DPVM active database.

Defaults

Deactivated.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

To use this command, DPVM must be enabled using the **dpvm enable** command.

Examples

The following example displays the differences in the DPVM active database when compared with the DPVM config database:

```
switch# dpvm database diff active
Legend: "+" New Entry, "-" Missing Entry, "*" Possible Conflict Entry
------------------------------------------------------------------------
- pwwn 44:22:33:44:55:66:77:88 vsan 44
* pwwn 11:22:33:44:55:66:77:88 vsan 11
```

The following example displays the differences in the DPVM config database when compared with the DPVM active database:

```
switch# dpvm database diff config
Legend: "+" New Entry, "-" Missing Entry, "*" Possible Conflict Entry
------------------------------------------------------------------------
- pwwn 44:22:33:44:55:66:77:88 vsan 44
* pwwn 11:22:33:44:55:66:77:88 vsan 11
```

Related Commands

Command	Description
dpvm enable	Enables DPVM.
show dpvm	Displays DPVM database information.

dpvm distribute

To enable Cisco Fabric Services (CFS) distribution for dynamic port VSAN membership (DPVM), use the **dpvm distribute** command. To disable this feature, use the **no** form of the command.

dpvm distribute

no dpvm distribute

Syntax Description

This command has no other arguments or keywords.

Defaults

Enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

To use this command, DPVM must be enabled using the **dpvm enable** command.

Temporary changes to the DPVM database must be committed to the active DPVM database using the **dpvm commit** command before being distributed to the fabric.

Examples

The following example shows how to disable distribution for the DPVM database:

```
switch# config terminal
switch(config)# no dpvm distribute
```

The following example shows how to enable distribution for the DPVM database:

```
switch# config terminal
switch(config)# dpvm distribute
```

Related Commands

Command	Description
dpvm enable	Enables DPVM.
show dpvm	Displays DPVM information.

dpvm enable

To enable dynamic port VSAN membership (DPVM), use to **dpvm enable** command. To disable DPVM, use the **no** form of the command.

dpvm enable

no dpvm enable

Syntax Description

This command has no other arguments or keywords.

Defaults

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.
NX-OS 4.1(1b)	This command was deprecated.

Usage Guidelines

The configuration and verification commands for DPVM are only available when DPVM is enabled on the switch. When you disable this feature, all related configurations are automatically discarded.

Examples

The following example shows how to enable DPVM:

```
switch# config terminal
switch(config)# dpvm enable
```

Related Commands

Command	Description
dpvm activate	Activates the DPVM database.
dpvm database	Configures the DPVM database.
show dpvm	Displays DPVM database information.

dpvm overwrite-duplicate-pwwn

To overwrite the first login information with the duplicate PWWN login, use the **dpvm overwrite-duplicate-pwwn** command.

dpvm overwrite-duplicate-pwwn

Syntax Description

This command has no arguments or keywords.

Defaults

None.

Command Modes

Configuration mode.

Command History

Release	Modification
NX-OS 4.1(1b)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to overwrite the DPVM duplicate PWWN login:

```
switch#(config)# dpvm overwrite-duplicate-pwwn
switch#(config)#
```

dscp

To configure a differentiated services code point (DSCP) in a QoS policy map class, use the **dscp** command in EXEC mode. To disable this feature, use the **no** form of the command.

dscp *value*

no dscp *value*

Syntax Description

value	Configures the DSCP value. The range is 0 to 63. DSCP value 46 is reserved.

Defaults

The default DSCP value is 0.

Command Modes

QoS policy map class configuration submode.

Command History

Release	Modification
1.3(1)	This command was introduced.

Usage Guidelines

Before you can configure a QoS policy map class you must complete the following:

- Enable the QoS data traffic feature using the **qos Enable** command.
- Configure a QoS class map using the **qos Class-map** command.
- Configure a QoS policy map using the **qos Policy-map** command.
- Configure a QoS policy map class using the **class** command.

Examples

The following example configures a DSCP value of 56 in QoS policy classMap1:

```
switch(config-pmap)# class classMap1
switch(config-pmap-c)# dscp 56
switch(config-pmap-c)#
```

Related Commands

Command	Description
class	Configure a QoS policy map class.
qos class-map	Configures a QoS class map.
qos enable	Enables the QoS data traffic feature on the switch.
qos policy-map	Configure a QoS policy map.
show qos	Displays the current QoS settings.

duplicate-message throttle

To enable throttling of duplicate Call Home alert messages, use the **duplicate-message throttle** command in Call Home configuration submode. To disable this feature, use the **no** form of the command.

duplicate-message throttle

no duplicate-message throttle

Syntax Description

This command has no other arguments or keywords.

Defaults

Enabled.

Command Modes

Call Home configuration submode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

The rate of throttling is a maximum of thirty messages in 2 hours.

Examples

The following example shows how to enable throttling of duplicate Call Home alert messages:

```
switch# config terminal
switch(config)# callhome
switch(config-callhome)# duplicate-message throttle
```

Related Commands

Command	Description
callhome	Configures the Call Home function.
callhome test	Sends a dummy test message to the configured destination(s).
show callhome	Displays configured Call Home information.