CHAPTER 7

Cisco Nexus 5000 Series Fibre Channel Commands

This chapter describes the Cisco NX-OS Fibre Channel and virtual Fibre Channel commands available on Cisco Nexus 5000 Series switches.

cfs distribute

To enable or disable Cisco Fabric Services (CFS) distribution on the switch, use the **cfs distribute** command in configuration mode. To disable this feature, use the **no** form of the command.

cfs distribute

no cfs distribute

Syntax Description

This command has no other arguments or keywords.

Command Default

CFS distribution is enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

By default CFS is in the distribute mode. In the distribute mode, fabric-wide distribution is enabled. Applications can distribute configuration data to all CFS-capable switches in the fabric where the application exists. This is the normal mode of operation.

If you disable CFS distribution by entering the **no cfs distribute** command, the following events occur:

- The CFS commands continue to operate. However, CFS and the applications using CFS on the switch are isolated from the rest of the fabric even though there is physical connectivity.
- All CFS operations are restricted to the isolated switch.
- CFS operations (for example, lock, commit, and abort) initiated at other switches do not have any effect at the isolated switch.
- CFS distribution is disabled over both Fibre Channel and IP.

Examples

The following example shows how to disable CFS distribution:

```
switch(config)# no cfs distribute
```

The following example shows how to reenable CFS distribution:

```
switch(config)# cfs distribute
```

Related Commands

Command	Description
show cfs status	Displays whether CFS distribution is enabled or disabled.

cfs ipv4 distribute

To enable Cisco Fabric Services (CFS) distribution over IPv4 for applications that want to use this feature, use the **cfs ipv4** command in configuration mode. To disable this feature, use the **no** form of the command.

cfs ipv4 distribute

no cfs ipv4 distribute

Syntax Description

This command has no arguments or keywords.

Command Default

CFS distribution is enabled.
CFS over IP is disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

All CFS over IP enabled switches with similar multicast addresses form one CFS over IP fabric. CFS protocol-specific distributions, such as the keepalive mechanism for detecting network topology changes, use the IP multicast address to send and receive information.

Observe the following guidelines when using this command:

- If a switch is reachable over both IP and Fibre Channel, application data will be distributed over Fibre Channel.
- You can select either an IPv4 or IPv6 distribution when CFS is enabled over IP.
- Both IPv4 and IPv6 distribution cannot be enabled on the same switch.
- A switch that has IPv4 distribution enabled cannot detect a switch that IPv6 distribution enabled. The switches operate as if they are in two different fabrics even though they are connected to each other.

Examples

The following example shows how to disable CFS IPv4 distribution:

```
switch(config)# no cfs ipv4 distribute
This will prevent CFS from distributing over IPv4 network.
Are you sure? (y/n)  [n]
```

The following example shows how to reenable CFS IPv4 distribution:

```
switch(config)# cfs ipv4 distribute
```

Related Commands

Command	Description
cfs ipv4 mcast-address	Configures an IPv4 multicast address for Cisco Fabric Services (CFS) distribution over IPv4.
show cfs status	Displays whether CFS distribution is enabled or disabled.

cfs ipv4 mcast-address

To configure an IPv4 multicast address for Cisco Fabric Services (CFS) distribution over IPv4, use the **cfs ipv4 mcast-address** command in configuration mode. To disable this feature, use the **no** form of the command.

cfs ipv4 mcast-address *ipv4-address*

no cfs ipv4 mcast-address *ipv4-address*

Syntax Description

ipv4-address	Specifies an IPv4 multicast address for CFS distribution over IPv4. The range of valid IPv4 addresses is 239.255.0.0 through 239.255.255.255, and 239.192.0.0 through 239.251.251.251.

Command Default

Multicast address: 239.255.70.83.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Before using this command, enable CFS distribution over IPv4 using the **cfs ipv4 distribute** command.

All CFS over IP enabled switches with similar multicast addresses form one CFS over IP fabric. CFS protocol-specific distributions, such as the keepalive mechanism for detecting network topology changes, use the IP multicast address to send and receive information., CFS distributions for application data use directed unicast.

You can configure a value for a CFS over IP multicast address. The default IPv4 multicast address is 239.255.70.83.

Examples

The following example shows how to configure an IP multicast address for CFS over IPv4:

```
switch(config)# cfs ipv4 mcast-address 239.255.1.1
Distribution over this IP type will be affected
Change multicast address for CFS-IP ?
Are you sure? (y/n) [n] y
```

The following example shows how to revert to the default IPv4 multicast address for CFS distribution over IPv4:

```
switch(config)# no cfs ipv4 mcast-address 10.1.10.100
```

```
Distribution over this IP type will be affected
Change multicast address for CFS-IP ?
Are you sure? (y/n) [n] y
```

Related Commands

Command	Description
cfs ipv4 distribute	Enables or disables Cisco Fabric Services (CFS) distribution over IPv4.
show cfs status	Displays whether CFS distribution is enabled or disabled.

cfs ipv6 distribute

To enable Cisco Fabric Services (CFS) distribution over IPv6 for applications using CFS, use the **cfs ipv6 distribute** command in configuration mode. To disable this feature, use the **no** form of the command.

cfs ipv6 distribute

no cfs ipv6 distribute

Syntax Description

This command has no arguments or keywords.

Command Default

CFS distribution is enabled.
CFS over IPv4 is disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

All CFS over IP enabled switches with similar multicast addresses form one CFS over IP fabric. CFS protocol-specific distributions, such as the keepalive mechanism for detecting network topology changes, use the IP multicast address to send and receive information.

Observe the following guidelines when using this command:

- If a switch is reachable over both IP and Fibre Channel, application data will be distributed over Fibre Channel.
- You can select either an IPv4 or IPv6 distribution when CFS is enabled over IP.
- Both IPv4 and IPv6 distribution cannot be enabled on the same switch.
- A switch that has IPv4 distribution enabled cannot detect a switch that IPv6 distribution enabled. The switches operate as if they are in two different fabrics even though they are connected to each other.

Examples

The following example shows how to disable CFS IPv6 distribution:

```
switch(config)# no cfs ipv6 distribute
This will prevent CFS from distributing over IPv6 network.
Are you sure? (y/n)  [n]
```

The following example shows how to reenable CFS IPv6 distribution:

```
switch(config)# cfs ipv6 distribute
```

Related Commands

Command	Description
cfs ipv6 mcast-address	Configures an IPv6 multicast address for Cisco Fabric Services (CFS) distribution over IPv6.
show cfs status	Displays whether CFS distribution is enabled or disabled.

cfs ipv6 mcast-address

To configure an IPv6 multicast address for Cisco Fabric Services (CFS) distribution over IPv6, use the **cfs ipv6 mcast-address** command in configuration mode. To disable this feature, use the **no** form of the command.

cfs ipv6 mcast-address *ipv6-address*

no cfs ipv6 mcast-address *ipv6-address*

Syntax Description

ipv6-address	Specifies an IPv6 multicast address or CFS distribution over IPv6. The IPv6 Admin scope range is [ff15::/16, ff18::/16].

Command Default

Multicast address: ff15::efff:4653.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Before using this command, enable CFS distribution over IPv6 using the **cfs ipv6 distribute** command.

All CFS over IP enabled switches with similar multicast addresses form one CFS over IP fabric. CFS protocol-specific distributions, such as the keepalive mechanism for detecting network topology changes, use the IP multicast address to send and receive information. , CFS distributions for application data use directed unicast.

You can configure a CFS over IP multicast address value for IPv6. The default IPv6 multicast address is ff15::efff:4653. Examples of the IPv6 Admin scope range are ff15::0000:0000 to ff15::ffff:ffff and ff18::0000:0000 to ff18::ffff:ffff.

Examples

The following example shows how to configure an IP multicast address for CFS over IPv6:

```
switch(config)# cfs ipv6 mcast-address ff13::e244:4754
Distribution over this IP type will be affected
Change multicast address for CFS-IP ?
Are you sure? (y/n) [n] y
```

The following example shows how to revert to the default IPv6 multicast address for CFS distribution over IPv6:

```
switch(config)# no cfs ipv6 ff13::e244:4754
```

```
Distribution over this IP type will be affected
Change multicast address for CFS-IP ?
Are you sure? (y/n) [n] y
```

Related Commands

Command	Description
cfs ipv6 distribute	Enables or disables Cisco Fabric Services (CFS) distribution over IPv6.
show cfs status	Displays whether CFS distribution is enabled or disabled.

cfs region

To create a region that restricts the scope of application distribution to the selected switches, use the **cfs region** command in the configuration mode. To disable this feature, use the **no** form of this command.

cfs region *region-id*

no cfs region *region-id*

Syntax Description

region-id	Specifies the region identifier. The range is from 1 to 255. A total of 200 regions are supported.

Command Default

The default region identifier is 0.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

An application can only be a part of one region on a given switch. By creating the region ID and assigning it to an application, the application distribution is restricted to switches with a similar region ID.

Cisco Fabric Services (CFS) regions provide the ability to create distribution islands within the application scope. Currently, the regions are supported only for physical scope applications. In the absence of any region configuration, the application will be a part of the default region. The default region is region ID 0.

Examples

The following example shows how to create a region ID:

```
switch(config)# cfs region 1
```

The following example shows how to assign an application to a region:

```
switch(config)# cfs region 1
switch(config-cfs-region)# ntp, The applications assigned to a region must be registered
with CFS.
```

The following example shows how to remove an application assigned to a region:

```
switch# cfs region 1
switch(config-cfs-region)# no ntp
```

Related Commands

Command	Description
show cfs regions	Displays all configured applications with peers.

cfs staggered-merge

CFS can merge the data from multiple VSANs. To disable this feature, use the **no** form of this command.

cfs staggered-merge enable

no staggered-merge enable

Syntax Description

enable	Enables the CFS staggered-merge option.

Command Default

Staggered merge is disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to enable CFS staggered merge:

```
switch(config)# cfs staggered-merge enable
```

Related Commands

Command	Description
show cfs status	Displays whether staggered merge is enabled.

clear device-alias

To clear device alias information, use the **clear device-alias** command., clear device-alias {database | session | statistics}

Syntax Description

database	Clears the device alias database.
session	Clears session information.
statistics	Clears device alias statistics.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to clear the device alias session:

```
switch# clear device-alias session
```

Related Commands

Command	Description
show device-alias	Displays device alias database information.

clear fcdomain

To clear the entire list of configured hosts, use the **clear fcdomain** command in EXEC mode., clear fcdomain session **vsan** *vsan-id*

Syntax Description

session	Clears session information.
vsan *vsan-id*	Clears Fibre Channel domains for a specified VSAN ranging from 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command clears only the list of configured hosts. Existing connections are not terminated.

Examples

The following example shows how to clear the entire list of configured hosts for remote capture:

```
switch# clear fcdomain
```

Related Commands

Command	Description
show fcdomain	Displays the list of hosts configured for a remote capture.

clear fcflow stats

To clear Fibre Channel flow statistics, use the **clear fcflow stats** command in EXEC mode., clear fcflow stats [aggregated] index

Syntax Description

aggregated	(Optional) Clears the Fibre Channel flow aggregated statistics.
index	Clears the Fibre Channel flow counters for a specified flow index.
flow-index	Specifies the flow index number.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Examples

The following example shows how to clear aggregated Fibre Channel flow statistics for flow index 1:

```
switch(config)# clear fcflow stats aggregated index 1
```

Related Commands

Command	Description
show fcflow	Displays the fcflow statistics.

clear fcns statistics

To clear the name server statistics, use the **clear fcns statistics** command in EXEC mode., clear fcns statistics vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Clears the FCS statistics for a specified VSAN ranging from 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Examples

The following example shows how to clear the name server statistics:

```
switch# clear fcns statistics vsan 1
```

Related Commands

Command	Description
show fcns statistics	Displays the name server statistics.

clear fcsm log

To clear the FCSM log, use the **clear fcsm log** command in EXEC mode., clear fcsm log

Syntax Description

None.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Examples

The following example shows how to clear the FSCM log:

```
switch# clear fcsm log
```

Related Commands

Command	Description
show fcs	Displays the fabric configuration server information.

clear fcs statistics

To clear the fabric configuration server statistics, use the **clear fcs statistics** command in EXEC mode., clear fcs statistics vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Clears the FCS statistics for a specified VSAN ranging from 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Examples

The following example shows how to clear the fabric configuration server statistics for VSAN 10:

```
switch# clear fcs statistics vsan 10
```

Related Commands

Command	Description
show fcs statistics	Displays the fabric configuration server statistics information.

clear fctimer session

To clear fctimer Cisco Fabric Services (CFS) session configuration and locks, use the **clear fctimer session** command., clear fctimer session

Syntax Description

This command has no other arguments or keywords.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to clear an fctimer session:

```
switch# clear fctimer session
```

Related Commands

Command	Description
show fctimer	Displays fctimer information.

clear fspf counters

To clear the Fabric Shortest Path First (FSPF) statistics, use the **clear fspf counters** command in EXEC mode., clear fspf counters vsan *vsan-id* [interface *type*]

Syntax Description

vsan	Indicates that the counters are to be cleared for a VSAN.
vsan-id	The ID of the VSAN is from 1 to 4093.
interface *type*	(Optional). The counters are to be cleared for an interface. The interface types are fc (Fibre Channel) and san-port-channel (SAN port channel).

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

If the interface is not specified, then all of the counters of a VSAN are cleared. If the interface is specified, then the counters of the specific interface are cleared.

Examples

The following example clears the FSPF statistics on VSAN 1:

```
switch# clear fspf counters vsan 1
```

The following example clears FSPF statistics in VSAN 1 for the specified Fibre Channel interface:

```
switch#  clear fspf counters vsan 1 interface fc 3/2
```

Related Commands

Command	Description
show fspf	Displays global FSPF information for a specific VSAN.

clear port-security

To clear the port security information on the switch, use the **clear port-security** command in EXEC mode., clear port-security {database auto-learn {interface fc *slot*/*port* | san-port-channel *port*} | session | statistics} vsan *vsan-id*

Syntax Description

database	Clears the port security active configuration database.
session	Clears the port security CFS configuration session and locks.
statistics	Clears the port security counters.
auto-learn	Clears the automatically learned entries for a specified interface or VSAN.
interface fc *slot*/*port*	Clears entries for the specified Fibre Channel interface.
san-port-channel *port*	Clears entries for a specified SAN port channel. The range is 1 to 128.
vsan *vsan-id*	Clears entries for a specified VSAN ID. The range is 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

The active database is read-only and the **clear port-security database** command can be used when resolving conflicts.

Examples

The following example clears all existing statistics from the port security database for a specified VSAN:

```
switch# clear port-security statistics vsan 1
```

The following example clears learned entries in the active database for a specified interface within a VSAN:

```
switch# clear port-security database auto-learn interface fc2/1 vsan 1
```

The following example clears learned entries in the active database up to for the entire VSAN:

```
switch# clear port-security database auto-learn vsan 1
```

Related Commands

Command	Description
show port-security	Displays the configured port security information.

clear rlir

To clear Registered Link Incident Report (RLIR) information, use the **clear rlir** command in EXEC mode., clear rlir {history | recent {interface fc *slot/port* | port number *port*} | statistics vsan *vsan-id* }

Syntax Description

history	Clears RLIR incident link history.
recent	Clears recent link incidents
interface fc *slot/port*	Clears entries for the specified interface
port number *port*	Displays the port number for the link incidents
statistics	Clears the RLIR statistics.
vsan *vsan-id*	Clears the RLIR statistics for a VSAN. The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to clear RLIR statistics for VSAN 1:

```
switch# clear rlir statistics vsan 1
```

Related Commands

Command	Description
show rlir	Displays RLIR information.

clear rscn session

To clear a Registered State Change Notification (RSCN) session for a specified VSAN, use the **clear rscn session** command., clear rscn session vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Specifies a VSAN where the RSCN session should be cleared. The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example clears an RSCN session on VSAN 1:

```
switch# clear rscn session vsan 1
```

Related Commands

Command	Description
rscn	Configures an RSCN.
show rscn	Displays RSCN information.

clear rscn statistics

To clear the registered state change notification statistics for a specified VSAN, use the **clear rscn statistics** command in EXEC mode., clear rscn statistics vsan *vsan-id*

Syntax Description

vsan	Clears the RSCN statistics for a VSAN.
vsan-id	The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to clear RSCN statistics for VSAN 1:

```
switch# clear rscn statistics vsan 1
```

Related Commands

Command	Description
show rscn	Displays RSCN information.

clear zone

To clear all configured information in the zone server for a specified VSAN, use the **clear zone** command in EXEC mode., clear zone {database | lock | statistics } vsan *vsan-id*

Syntax Description

database	Clears zone server database information.
lock	Clears a zone server database lock.
statistics	Clears zone server statistics.
vsan	Clears zone information for a VSAN.
vsan-id	The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

After entering a **clear zone database** command, you need to explicitly enter the **copy running-config startup-config** to ensure that the running configuration is used when you next start the switch.

When you enter the **clear zone lock** command from a remote switch, only the lock on that remote switch is cleared. When you enter the **clear zone lock** command from the switch where the lock originated, all locks in the VSAN are cleared. , The recommended method to clear a session lock on a switch where the lock originated is by entering the **no zone commit vsan** command.

Examples

The following example shows how to clear all configured information in the zone server for VSAN 1:

```
switch# clear zone database vsan 1
```

Related Commands

Command	Description
show zone	Displays zone information for any configured interface.

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.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	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)# 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.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	This command was introduced.

Usage Guidelines

None.

Examples

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

```
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 the 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.

Command Default

Deactivated.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	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)# 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.

Command Default

Enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	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)# 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.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	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)# 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

To configure device alias enhanced mode, use the **device-alias mode** command. To remove device alias enhanced mode, use the **no** form of the command.

device-alias mode enhanced

no device-alias mode enhanced

Syntax Description

mode enhanced	Specifies enhanced mode.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to device alias enhanced mode:

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

Related Commands

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

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.

Command Default

None.

Command Modes

Device alias database configuration submode.

Command History

Release	Modification
Release 4.0	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)# 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.

device-alias rename

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

device-alias rename *device-name1 device-name2*

no device-alias rename *device-name*

Syntax Description

device-name1	Specifies the current device name.
device-name2	Specifies the new device name. Maximum length is 64 characters.

Command Default

None.

Command Modes

Device alias database configuration submode.

Command History

Release	Modification
Release 4.0	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)# device-alias database
switch(config-device-alias-db)# device-alias rename Device1 Device2
```

Related Commands

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

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* **domain** *domain-id*

Syntax Description

add	Adds 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.
domain *domain-id*	Discovers SCSI targets for the specified domain ID. The range is 1 to 239.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

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

```
switch# discover custom-list add vsan 1 domain 2
```

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

```
switch# discover custom-list delete vsan 1 domain 2
```

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.
fcid *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.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

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 os aix
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
```

fabric profile

To utilize a preset QoS setting, use the **fabric profile** command in configuration mode. To restore the default, use the **no** form of the command.

fabric profile {**reliable-multicast** | **unicast-optimized**}

no fabric profile

Syntax Description

reliable-multicast	Optimizes the QoS parameters in the fabric to ensure reliable delivery of multicast traffic.
unicast-optimized	Optimizes the QoS parameters in the fabric for unicast traffic.

Command Default

Unicast-optimized.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example sets the fabric to ensure reliable delivery of multicast traffic:

```
switch(config)# fabric profile reliable-multicast
```

The following example sets the fabric profile to the default value:

```
switch(config)# no fabric profile
```

Related Commands

Command	Description
show fabric profile	Displays the current setting of the fabric.

fabric-binding activate

To activate fabric binding in a VSAN, use the **fabric-binding activate** command in configuration mode. To disable this feature, use the **no** form of the command.

fabric-binding activate vsan *vsan-id* [**force**]

no fabric-binding activate vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Specifies the VSAN. The ID of the VSAN is from 1 to 4093.
force	(Optional) Forces fabric binding activation.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example activates the fabric binding database for the specified VSAN:

```
switch(config)# fabric-binding activate vsan 1
```

The following example deactivates the fabric binding database for the specified VSAN:

```
switch(config)# no fabric-binding activate vsan 10
```

The following example forcefully activates the fabric binding database for the specified VSAN

```
switch(config)# fabric-binding activate vsan 3 force
```

The following example reverts to the previously configured state or to the factory default (if no state is configured):

```
switch(config)# no fabric-binding activate vsan 1 force
```

Related Commands

Command	Description
fabric-binding database	Configures a fabric-binding database.
fabric-binding enable	Enables fabric-binding.

fabric-binding database copy

To copy from the active fabric binding database to the configuration fabric binding database, use the **fabric-binding database copy** command in EXEC mode. **, fabric-binding** database copy vsan *vsan-id*

Syntax Description

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

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Fabric binding is configured on a per-VSAN basis and can be implemented in both FICON VSANs and Fibre Channel VSANs.

If the configured database is empty, this command is not accepted.

Examples

The following example copies from the active database to the configuration database in VSAN 1:

```
switch# fabric-binding database copy vsan 1
```

Related Commands

Command	Description
fabric-binding diff	Provides the differences between the fabric-binding databases.

fabric-binding database diff

To view the differences between the active database and the configuration database in a VSAN, use the **fabric-binding database diff** command in EXEC mode.**, fabric-binding database** diff { active | **config** } vsan *vsan-id*

Syntax Description

active	Provides information about the differences in the active database relating to the configuration database.
config	Provides information about information on the differences in the configuration database relating to the active database.
vsan *vsan-id*	Specifies the VSAN. The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Fabric binding is configured on a per-VSAN basis and can be implemented in both FICON VSANs and Fibre Channel VSANs.

Examples

The following example displays the differences between the active database and the configuration database in VSAN 1:

```
switch# fabric-binding database diff active vsan 1
```

The following example displays information about the differences between the configuration database and the active database:

```
switch# fabric-binding database diff config vsan 1
```

Related Commands

Command	Description
fabric-binding copy	Copies from the active to the configuration fabric binding database.

fabric-binding database vsan

To configure a user-specified fabric binding list in a VSAN, use the **fabric-binding database vsan** command in configuration mode. To disable the fabric binding, use the **no** form of the command.

fabric-binding database vsan *vsan-id*
  swwn *switch-wwn* **domain** *domain-id*

fabric-binding database vsan *vsan-id*
  no swwn *switch-wwn* **domain** *domain-id*

no fabric-binding database vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Specifies the VSAN. The ID of the VSAN is from 1 to 4093.
swwn *switch-wwn*	Configures the switch WWN in dotted hex format.
domain *domain-id*	Specifies the specified domain ID. The domain ID is a number from 1 to 239.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Fabric binding is configured on a per-VSAN basis. In a Fibre Channel VSAN, only the switch world wide name (sWWN_ is required; the domain ID is optional.

A user-specified fabric binding list contains a list of switch WWNs (sWWNs) within a fabric. If an sWWN attempts to join the fabric and that sWWN is not on the list, or the sWWN is using a domain ID that differs from the one specified in the allowed list, the ISL between the switch and the fabric is automatically isolated in that VSAN and the switch is denied entry into the fabric.

Examples

The following example enters the fabric binding database submode and adds the sWWN and domain ID of a switch to the configured database list:

```
switch(config)# fabric-binding database vsan 5
switch(config-fabric-binding)# swwn 21:00:05:30:23:11:11:11 domain 102
```

The following example deletes a fabric binding database for the specified VSAN:

```
switch(config)# no fabric-binding database vsan 10
```

The following example deletes the sWWN and domain ID of a switch from the configured database list:

```
switch(config)# fabric-binding database vsan 5
switch(config-fabric-binding)# no swwn 21:00:15:30:23:1a:11:03 domain 101
```

Related Commands

Command	Description
fabric-binding activate	Activates fabric-binding.
fabric-binding enable	Enables fabric-binding.

fabric-binding enable

To enable fabric binding in a VSAN, use the **fabric-binding enable** command. To disable fabric binding, use the **no** form of the command.

fabric-binding enable

no fabric-binding enable

Syntax Description

This command has no other arguments or keywords.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Fabric binding is configured on a per-VSAN basis.

The fabric binding feature must be enabled in each switch in the fabric that participate in the fabric binding.

Examples

The following example enables fabric binding on that switch:

```
switch(config)# fabric-binding enable
```

The following example disables fabric binding on that switch:

```
switch(config)# no fabric-binding enable
```

Related Commands

Command	Description
fabric-binding activate	Activates fabric-binding.
fabric-binding database	Configures a fabric-binding database.

fcalias clone

To clone a Fibre Channel alias, use the **fcalias clone** command.**, fcalias clone** *origFcalias-Name cloneFcalias-Name* **vsan** *vsan-id*

Syntax Description

origFcalias-Name *cloneFcalias-Name*	Clones a Fibre Channel alias from the current name to a new name. Maximum length of names is 64 characters.
vsan	The clone Fibre Channel alias is for a VSAN.
vsan-id	The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

To disable a Fibre Channel alias, use the **no** form of the **fcalias name** command.

Examples

The following example shows how to clone a fcalias named origAlias to cloneAlias on VSAN 45:

```
switch(config)# fcalias clone origAlias cloneAlias vsan 45
```

Related Commands

Command	Description
show fcalias	Displays the member name information in a Fibre Channel alias (fcalias).

fcalias name

To configure a Fibre Channel alias, use the **fcalias name** command. To disable a Fibre Channel alias, use the **no** form of the command.

fcalias name *alias name* **vsan** *vsan-id*

no fcalias name *alias name* **vsan** *vsan-id*

Syntax Description

alias-name	The name of the fcalias. Maximum length is 64 characters.
vsan	The fcalias is for a VSAN.
vsan-id	The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

To include multiple members in any alias, use the FCID, fWWN, or pWWN values.

Examples

The following example shows how to configure an fcalias called AliasSample on VSAN 3:

```
switch(config)# fcalias name AliasSample vsan 3
switch(config-fcalias)#
```

Related Commands

Command	Description
member (fcalias configuration mode)	Configures alias members for a specified zone.

fcalias rename

To rename a Fibre Channel alias (fcalias), use the **fcalias rename** command.

fcalias rename *current-name new-name* **vsan** *vsan-id*

no fcalias rename *current-name new-name* **vsan** *vsan-id*

Syntax Description

current-name	Specifies the current fcalias name. The maximum length is 64.
new-name	Specifies the new fcalias name. The maximum length is 64.
vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to rename an fcalias:

```
switch(config)# fcalias rename oldalias newalias vsan 10
```

Related Commands

Command	Description
fcalias name	Configures fcalias names.
show fcalias	Displays fcalias information.

fcdomain

To configure the Fibre Channel domain feature, use the **fcdomain** command. To disable the Fibre Channel domain, use the **no** form of the command.

fcdomain {**allowed** *domain* **vsan** *vsan-id* | **auto-reconfigure vsan** *vsan-id* | **contiguous-allocation vsan** *vsan-id* | **domain** *id* {**preferred | static**} **vsan** *vsan-id* | **fabric-name** *name* **vsan** *vsan-id* | **fcid** {**database | persistent vsan** *vsan-id*} | **optimize fast-restart vsan** *vsan-id* | **priority** *value* **vsan** *vsan-id* | **restart** [**disruptive**] **vsan** *vsan-id* | **vsan** *vsan-id*}

no fcdomain {**allowed** *domain* **vsan** *vsan-id* | **auto-reconfigure vsan** *vsan-id* | **contiguous-allocation vsan** *vsan-id* | **domain** *id* {**preferred | static**} **vsan** *vsan-id* | **fabric-name** *name* **vsan** *vsan-id* | **fcid** {**database | persistent vsan** *vsan-id*} | **optimize fast-restart vsan** *vsan-id* | **priority** *value* **vsan** *vsan-id* | **restart** [**disruptive**] **vsan** *vsan-id* | **vsan** *vsan-id*}

Syntax Description

allowed *domain*	Configures the allowed domain ID list ranging from 1 to 239.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.
auto-reconfigure	Configures autoreconfigure.
contiguous-allocation	Configures contiguous allocation.
domain *id*	Configures the domain ID and its type. The range is 0 to 239.
preferred	Configures the domain ID as preferred. By default, the local switch accepts the domain ID assigned by the principal switch and the assigned domain ID becomes the runtime domain ID.
static	Configures the domain ID as static. The assigned domain ID is discarded, all local interfaces are isolated, and the local switch assigns itself the configured domain ID, which becomes the runtime domain ID.
fabric-name *name*	Specifies the fabric name. The name format is *hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*.
fcid	Configures Fibre Channel domain persistent FC IDs.
database	Enters persistent FC IDs submode.
persistent	Enables or disables Fibre Channel domain persistent FC IDs.
optimize fast-restart	Enables a domain manager fast restart on a specified VSAN.
priority *value*	Specifies the Fibre Channel domain priority. The range is 1 to 254.
restart	Starts a disruptive or nondisruptive reconfiguration.
disruptive	(Optional) Forces the disruptive fabric reconfiguration.

Command Default

Enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

You can use this command to select the principal switch, configure domain ID distribution, reconfigure the fabric, and allocate FC IDs.

We recommend using the **optimize fast-restart** option on most fabrics, especially those with a large number of logical ports (3200 or more), where a logical port is an instance of a physical port in a VSAN.

Examples

The following example shows how to configure a preferred domain ID for VSAN 87:

```
switch(config)# fcdomain domain 3 preferred vsan 87
```

The following example shows how to specify disruptive fabric reconfiguration for VSAN 1:

```
switch(config)# fcdomain restart disruptive vsan 1
```

The following example shows how to enable domain manager fast restart for VSANs 7 through 10:

```
switch(config)# fcdomain optimize fast-restart vsan 7 - 10
```

The following example shows how configure the fabric world wide name (fWWN) for VSAN3:

```
switch(config)# fcdomain fabric-name 20:1:ac:16:5e:0:21:01 vsan 3
```

Related Commands

Command	Description
show fcdomain	Displays global information about the Fibre Channel domain configurations.

fcdomain abort vsan

To flush cached data without committing and release the lock, use the **fcdomain abort vsan** command. To disable the flushing of cached data, use the **no** form of the command.

fcdomain abort vsan *vsan-id*

no fcdomain abort vsan *vsan-id*

Syntax Description

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

Command Default

Enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to flush cached data:

```
switch(config)# fcdomain abort vsan 10
```

Related Commands

Command	Description
fcdomain	Configures Fibre Channel domain features.
fcdomain commit vsan	Commits cached data and releases the lock.
show fcdomain	Displays global information about the Fibre Channel domain configurations.

fcdomain commit vsan

To commit cached data and release the lock, use the **fcdomain commit vsan** command. To release the lock without committing the cached data, use the **no** form of the command.

fcdomain commit vsan *vsan-id*

no fcdomain commit vsan *vsan-id*

Syntax Description

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

Command Default

Enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to commit cached data:

```
switch(config)# fcdomain commit vsan 10
```

Related Commands

Command	Description
fcdomain	Configures Fibre Channel domain features.
fcdomain abort vsan	Flushes cached data without committing and releases the lock.
show fcdomain	Displays global information about the Fibre Channel domain configurations.

fcdomain distribute

To enable fabric distribution using Cisco Fabric Services (CFS), use the **fcdomain distribute** command. To disable fabric distribution using CFS, us the **no** form of the command.

fcdomain distribute

no fcdomain distribute

Syntax Description

This command has no arguments or keywords.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example enables fabric distribution using CFS:

```
switch(config)# fcdomain distribute
```

The following example disables fabric distribution using CFS:

```
switch(config)# no fcdomain distribute
```

Related Commands

Command	Description
fcdomain	Configures Fibre Channel domain features.
show fcdomain	Displays global information about the Fibre Channel domain configurations.

fcdomain rcf-reject

To enable the RCF reject flag for a Fibre Channel interface, use the **fcdomain** option. To disable this feature, use the **no** form of the command.

fcdomain rcf-reject vsan *vsan-id*

no fcdomain rcf-reject vsan *vsan-id*

Syntax Description

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

Command Default

Enabled.

Command Modes

Interface configuration submode

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Use this option to configure the RCF reject option for the selected Fibre Channel or virtual Fibre Channel interface.

Examples

The following example shows how to configure the FCIP RCF reject fcdomain feature on a virtual Fibre Channel interface:

```
switch(config)# interface vfc 3/1
switch(config-if)# fcdomain rcf-reject vsan 1
```

Related Commands

Command	Description
show fcdomain	Displays global information about the Fibre Channel domain configurations.
show interface fc	Displays an interface configuration for a specified Fibre Channel interface.

fcdroplatency

To configure the network and switch Fibre Channel drop latency time, use the **fcdroplatency** command in configuration mode. To disable the Fibre Channel latency time, use the **no** form of the command.

fcdroplatency {**network** *milliseconds* [**vsan** *vsan-id*] | **switch** *milliseconds*}

no fcdroplatency {**network** *milliseconds* [**vsan** *vsan-id*] | **switch** *milliseconds*}

Syntax Description

network *milliseconds*	Specifies network latency. The range is 500 to 60000.
vsan *vsan-id*	(Optional) Specifies a VSAN ID. The range is 1 to 4093.
switch *milliseconds*	Specifies switch latency. The range is 0 to 60000 milliseconds.

Command Default

2000 millisecond network latency.

500 millisecond switch latency.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to configure the network latency to 5000 milliseconds:

```
switch(config)# fcdroplatency network 5000
```

The following example shows how to revert to the default switch latency:

```
switch(config)# no fcdroplatency switch 4000
```

Related Commands

Command	Description
show fcdroplatency	Displays the configured Fibre Channel drop latency parameters.

fcflow stats

To configure fcflow statistics, use the **fcflow stats** command in configuration mode. To disable the counter, use the **no** form of the command.

fcflow stats {**aggregated index** *flow-number* **vsan** *vsan-id* | **index** *flow-number destination-fcid source-fcid netmask* **vsan** *vsan-id*}

no fcflow stats {**aggregated index** *flow-number* | **index** *flow-number*}

Syntax Description

aggregated	Configures aggregated fcflow statistics.
index *flow-number*	Specifies a flow index. The range is 1 to 2147483647.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.
destination-fcid	Enters the destination FCID in hexadecimal format.
source-fcid	Enters the source FCID in hexadecimal format.
netmask	Enters the mask for the source and destination FCID (restricted to 6 hexadecimal characters ranging from 0xff0000 to 0xffffff).

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

If you enable flow counters, you can enable a maximum of 1024 entries for aggregate flow and flow statistics. Be sure to assign an unused flow index or each new flow. The number space for flow index is shared between the aggregate flow statistics and the flow statistics.

Examples

The following example enables the aggregated flow counter:

```
switch(config)# fcflow stats aggregated index 1005 vsan 1
```

The following example disables the aggregated flow counter:

```
switch(config)# no fcflow stats aggregated index 1005
```

The following example enables the flow counter for a specific flow:

```
switch(config)# fcflow stats index 1 0x145601 0x5601 0xffffff vsan 1
```

The following example disables the flow counter for index 1001:

```
switch(config)# no fcflow stats index 1001
```

Related Commands

Command	Description
show fcflow stats	Displays the configured Fibre Channel drop latency parameters.

fcid-allocation

Use the **fcid-allocation** command to manually add a FCID to the default area company ID list. Use the **no** form of the command to remove a FCID from the default area company ID list.

fcid-allocation area company-id *company-id*

no fcid-allocation area company-id *company-id*

Syntax Description

area	Modifies the auto area list of company IDs.
company-id *company-id*	Configures the company IDs.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Fibre Channel standards require a unique FCID to be allocated to an N port attached to a Fx port in any switch. To conserve the number of FCIDs used, Cisco Nexus 5000 Series switches use a special allocation scheme.

Some HBAs do not discover targets that have FC IDs with the same domain and area. The switch software maintains a list of tested company IDs that do not exhibit this behavior. These HBAs were allocated with single FC IDs, and for others a full area was allocated.

To allow further scalability for switches with numerous ports, the switch software maintains a list of HBAs exhibiting this behavior. Each HBA is identified by its company ID (also known as Organizational Unique Identifier, or OUI) used in the pWWN during a fabric log in. A full area is allocated to the N ports with company IDs that are listed and for the others, a single FC ID is allocated. Regardless of the type (whole area or single) of FC ID allocated, the FC ID entries remain persistent.

Examples

The following example adds a new company ID to the default area company ID list:

```
switch(config)# fc-id allocation area company-id 0x003223
```

fcinterop fcid-allocation

To allocate FCIDs on the switch, use the **fcinterop fcid-allocation** command in configuration mode. To disable FCIDs on the switch, use the **no** form of the command.

fcinterop fcid-allocation {**auto** | **flat** | **none**}

no fcinterop fcid-allocation {**auto** | **flat** | **none**}

Syntax Description

auto	Assigns single FCID to compatible HBAs.
flat	Assign single FCID.
none	Assigns FCID range.

Command Default

The default is automatic allocation of FCIDs.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command defines how the switch assigns FCIDs.

Examples

The following example sets the FCID allocation to flat:

```
switch(config)# fcinterop fcid-allocation flat
```

Related Commands

Command	Description
show flogi database	Displays the fabric login (FLOGI) table.

fcns no-auto-poll

To enable or disable automatic polling in the name server database, use the **fcns no-auto-poll** command in configuration mode.

fcns no-auto-poll [**vsan** *vsan-id*] | [**wwn** *wwn-id*]

no fcns no-auto-poll [**vsan** *vsan-id*] | [**wwn** *wwn-id*]

Syntax Description

vsan *vsan-id*	(Optional) Specifies a VSAN ID. The range is 1 to 4093.
wwn *wwn-id*	(Optional) Specifies the port WWN, with the format *hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to disable automatic polling for VSAN 2:

```
switch(config)# fcns no-auto-poll vsan 2
```

Related Commands

Command	Description
show fcns	Displays the name server database and statistical information for a specified VSAN or for all VSANs.

fcns proxy-port

To register a name server proxy, use the **fcns proxy-port** command in configuration mode.

fcns proxy-port *wwn-id* **vsan** *vsan-id*

no fcns proxy-port *wwn-id* **vsan** *vsan-id*

Syntax Description

wwn-id	Specifies the port WWN, with the format *hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

One name server can be configured to proxy another name server and name server information can be displayed using the CLI. The name server can be viewed using the CLI or the Cisco Fabric Manager.

All name server registration requests come from the same port whose parameter is registered or changed. If it does not, then the request is rejected.

Examples

The following example shows configuring a proxy port for VSAN 2:

```
switch(config)# fcns proxy-port 21:00:00:e0:8b:00:26:d vsan 2
```

Related Commands

Command	Description
show fcns	Displays the name server database and statistical information for a specified VSAN or for all VSANs.

fcns reject-duplicate-pwwn vsan

To reject duplicate Fibre Channel name server (FCNS) proxies on a VSAN, use the **fcns reject-duplicate-pwwn vsan** command in configuration mode.

fcns reject-duplicate-pwwn vsan *vsan-id*

no fcns reject-duplicate-pwwn vsan *vsan-id*

Syntax Description

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

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	This command was introduced.

Usage Guidelines

None.

Examples

The following example rejects duplicate FCNS pWWNs for VSAN 2:

```
switch(config)# fcns reject-duplicate-pwwn vsan 2
```

Related Commands

Command	Description
show fcns	Displays the name server database and statistical information for a specified VSAN or for all VSANs.

fcping

To ping an N port, use the **fcping** command in EXEC mode.**, fcping** {device-alias *aliasname* | **fcid** {*fc-port* | *domain-controller-id*} | **pwwn** *pwwn-id*} **vsan** *vsan-id* [**count** *number* [**timeout** *value* [**usr-priority** *priority*]]]

Syntax Description

device-alias *aliasname*	Specifies the device alias name. Maximum length is 64 characters.
fcid	The FCID of the destination N port.
fc-port	The port FCID, with the format *0xhhhhhh*.
domain-controller-id	Verifies connection to the destination switch.
pwwn *pwwn-id*	Specifies the port WWN of the destination N port, with the format *hh:hh:hh:hh:hh:hh:hh:hh*.
vsan *vsan-id*	Specifies the VSAN ID of the destination N port. The range is 1 to 4093.
count *number*	(Optional) Specifies the number of frames to send. A value of 0 sends forever. The range is 0 to 2147483647.
timeout *value*	(Optional) Specifies the timeout value in seconds. The range is 1 to 10.
usr-priority *priority*	(Optional) Specifies the priority the frame receives in the switch fabric. The range is 0 to 1.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

To obtain the domain controller ID, concatenate the domain ID with FFFC. For example, if the domain ID is 0xda(218), the concatenated ID is 0xfffcda.

Examples

The following example shows a fcping operation for the FCID of the destination. By default, five frames are sent.

```
switch# fcping fcid 0xd70000 vsan 1
```

The following example shows the setting of the number of frames to be sent using the count option. The range is from 0 through 2147483647. A value of 0 will ping forever.

```
switch# fcping fcid 0xd70000 vsan 1 count 10
```

The following example shows the setting of the timeout value. The default period to wait is 5 seconds. The range is from 1 through 10 seconds.

```
switch# fcping fcid 0xd500b4 vsan 1 timeout 10
```

The following example displays fcping operation using the device alias of the specified destination:

```
switch# fcping device-alias x vsan 1
```

fcroute

To configure Fibre Channel routes and to activate policy routing, use the **fcroute** command. To remove a configuration or revert to factory defaults, use the **no** form of the command.

fcroute {*fcid* [*network-mask*] **interface** {**fc** *slot*/*port* | **san-port-channel** *port* | **vfc** *vig-num*/*vint-id*} **domain** *domain-id* {**metric** *number* | **remote** | **vsan** *vsan-id*}}

no fcroute {*fcid network-mask* **interface** {**fc** *slot*/*port* | **san-port-channel** *port* | **vfc** *vig-num*/*vint-id*} **domain** *domain-id* {**metric** *number* | **remote** | **vsan** *vsan-id*}}

Syntax Description

fcid	Specifies the FC ID. The format is 0xhhhhhh.
network-mask	Specifies the network mask of the FC ID. The format is 0x0 to 0xffffff.
interface	Specifies an interface.
fc *slot*/*port*	Specifies a Fibre Channel interface.
san-port-channel *port*	Specifies a SAN port channel interface.
vfc *vig-num*/*vint-id*	Specifies a virtual Fibre Channel interface.
domain *domain-id*	Specifies the route for the domain of the next hop switch. The range is 1 to 239.
metric *number*	Specifies the cost of the route. The range is 1 to 65535. Default cost is 10.
remote	Configures the static route for a destination switch remotely connected.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Use this command to assign forwarding information to the switch and to activate a preferred path route map.

Examples

The following example specifies the Fibre Channel interface and the route for the domain of the next hop switch for VSAN 2:

```
switch(config)# fcroute 0x111211 interface fc3/1 domain 3 vsan 2
```

The following example specifies the SAN port channel interface and the route for the domain of the next hop switch for VSAN 4:

```
switch(config)# fcroute 0x111211 interface san-port-channel 1 domain 3 vsan 4
```

The following example specifies the Fibre Channel interface, the route for the domain of the next hop switch, and the cost of the route for VSAN 1:

```
switch(config)# fcroute 0x031211 interface fc1/1 domain 3 metric 1 vsan 1
```

The following example specifies the Fibre Channel interface, the route for the domain of the next hop switch, the cost of the route, and configures the static route for a destination switch remotely connected for VSAN 3:

```
switch(config)# fcroute 0x111112 interface fc3/1 domain 3 metric 3 remote vsan 3
```

Related Commands

Command	Description
show fcroute	Displays Fibre Channel routes.
fcroute-map	Specifies a preferred path Fibre Channel route map.
show fcroute-map	Displays the preferred path route map configuration and status.
fcroute policy fcroute-map	Activates the preferred path Fibre Channel route map.

fcs plat-check-global

To enable FCS platform and node-name checking fabric wide, use the **fcs plat-check-global** command in configuration mode. To disable this feature, use the **no** form of the command.

fcs plat-check-global vsan *vsan-id*

no fcs plat-check-global vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Specifies the VSAN ID for platform checking, which is from 1 to 4096.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

```
switch(config)# fcs plat-check-global vsan 2
```

Related Commands

Command	Description
show fcs	Displays fabric configuration server information.

fcs register

To register FCS attributes, use the **fcs register** command in configuration mode. To disable this feature, use the **no** form of the command.

fcs register

no fcs register

Syntax Description

This command has no arguments or keywords.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to register FCS attributes:

```
switch(config)# fcs register
```

Related Commands

Command	Description
show fcs	Displays fabric configuration server information.

fcs virtual-device-add

To include a virtual device in a query about zone information from an FCS, use the **fcs virtual-device-add** command in configuration mode. To remove a virtual device, use the **no** form of the command.

fcs virtual-device-add [**vsan-ranges** *vsan-ids*]

no fcs virtual-device-add [**vsan-ranges** *vsan-ids*]

Syntax Description

vsan-ranges *vsan-ids*	(Optional) Specifies one or multiple ranges of VSANs. The range is 1 to 4093.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

VSAN ranges are entered as *vsan-ids*-*vsan-ids*. When you specify more than one range, separate each range with a comma. If no range is specified, the command applies to all VSANs.

Examples

The following example shows how to add to one range of VSANs:

```
switch(config)# fcs virtual-device-add vsan-ranges 2-4
```

The following example shows how to add to more than one range of VSANs:

```
switch(config)# fcs virtual-device-add vsan-ranges 2-4,5-8
```

Related Commands

Command	Description
show fcs	Displays fabric configuration server information.

fcsp

To configure an Fibre Channel Security Protocol (FC-SP) authentication mode for a specific interface in a FC-SP-enabled switch, use the **fcsp** command. To disable an FC-SP on the interface, use the **no** form of the command.

fcsp {**auto-active** | **auto-passive** | **on** | **off**} [*timeout-period*]

no fcsp

Syntax Description

auto-active	Configures the auto-active mode to authenticate the specified interface.
auto-passive	Configures the auto-passive mode to authenticate the specified interface.
on	Configures the on mode to authenticate the specified interface.
off	Configures the off mode to authenticate the specified interface.
timeout-period	(Optional) Specifies the time out period to reauthenticate the interface. The time ranges from 0 (default—no authentication is performed) to 100,000 minutes.

Command Default

Auto-passive mode.

Command Modes

Interface configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

To use this command, FC-SP must be enabled using the **fcsp enable** command.

Examples

The following example turns on the authentication mode for Fibre Channel interface in port 1 of slot 2:

```
switch(config)# interface fc 2/1
switch(config-if)# fcsp on
switch(config-if)#
```

The following example reverts to the factory default of auto-passive for the selected interface:

```
switch(config-if)# no fcsp
```

The following example changes the selected interface to initiate FC-SP authentication, but does not permit reaunthentication:

```
switch(config-if)# fcsp auto-active 0
```

Related Commands

Command	Description
fcsp enable	Enables FC-SP.
show interface	Displays an interface configuration for a specified interface.

fcsp dhchap

To configure DHCHAP options in a switch, use the **fcsp dhchap** command in configuration mode. This command is only available when the FC-SP feature is enabled. Use the **no** form of the command to revert to factory defaults.

fcsp dhchap {**devicename** *switch-wwn* **password** [**0** | **7**] *password* |
dhgroup [**0**] [**1**][**2**][**3**][**4**] | **hash** [**md5** | **sha1**] | **password** [**0** | **7**] *password* [**wwn** *wwn-id*] }

no fcsp dhchap {**devicename** *switch-wwn* **password** [**0** | **7**] *password* |
dhgroup [**0** | **1**| **2** | **3** | **4**] | **hash** [**md5**] [**sha1**] | **password** [**0** | **7**] *password* [*wwn-id*] }

Syntax Description

devicename	Configures a password of another device in the fabric.
switch-wwn	Provides the WWN of the device being configured.
password	Configures DHCHAP password for the local switch.
0	(Optional) Specifies a clear text password.
7	(Optional) Specifies a password in encrypted text.
dhgroup	Configures DHCHAP Diffie-Hellman group priority list.
0	(Optional) Null DH—no exchange is performed (default).
1| **2**	**3**	**4**	(Optional) Specifies one or more of the groups specified by the standards.
hash	Configures DHCHAP hash algorithm priority list in order of preference.
md5	(Optional) Specifies the MD5 hash algorithm.
sha1	(Optional) Specifies the SHA-1 hash algorithm.
wwn *wwn-id*	(Optional) The WWN ID with the format hh:hh:hh:hh:hh:hh:hh:hh.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

You can only see the **fcsp dhchap** command if you enter the **fcsp enable** command.

Using SHA-1 as the hash algorithm may prevent RADIUS or TACACS+ usage.

If you change the DH group configuration, ensure to change it globally for all switches in the fabric.

Examples

The following example enables FC-SP:

```
switch(config)# # fcsp enable
```

The following example configures the use of only the SHA-1 hash algorithm:

```
switch(config)# fcsp dhchap hash sha1
```

The following example configures the use of only the MD-5 hash algorithm:

```
switch(config)# fcsp dhchap hash md5
```

The following example defines the use of the default hash algorithm priority list of MD-5 followed by SHA-1 for DHCHAP authentication:

```
switch(config)# fcsp dhchap hash md5 sha1
```

The following example reverts to the factory default priority list of the MD-5 hash algorithm followed by the SHA-1 hash algorithm:

```
switch(config)# no fcsp dhchap hash sha1
```

The following example prioritizes the use of DH group 2, 3, and 4 in the configured order:

```
switch(config)# fcsp dhchap group 2 3 4
```

The following example configures a clear text password for the local switch:

```
switch(config)# fcsp dhchap password 0 mypassword
```

The following example configures a clear text password for the local switch to be used for the device with the specified WWN:

```
switch(config)# fcsp dhchap password 0 mypassword 30:11:bb:cc:dd:33:11:22
```

The following example configures a password entered in an encrypted format for the local switch:

```
switch(config)# fcsp dhchap password 7 sfsfdf
```

Related Commands

Command	Description
fcsp enable	Enable FC-SP.
show fcsp	Displays configured FC-SP information.

fcsp enable

To enable the Fibre Channel Security Protocol (FC-SP) in a switch, use the **fcsp enable** command in configuration mode. Additional FC-SP commands are available when the FC-SP feature is enabled. To disable FC-SP, use the **no** form of the command.

fcsp enable

no fcsp enable

Syntax Descriptionf

fcsp	Specifies the FC-SP feature in the switch.
enable	Enables the FC-SP feature in this switch.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example enables FC-SP:

```
switch(config)# fcsp enable
```

Related Commands

Command	Description
show fcsp	Displays configured FC-SP information.

fcsp reauthenticate

To reauthenticate a Fibre Channel or virtual Fibre Channel interface, use the **fcsp reauthenticate** command in EXEC mode. Use the **no** form of the command to revert to factory defaults.

fcsp reauthenticate interface { **fc** *slot*/*port* | **vfc** *vig-num*/*vint-id* }

no fcsp reauthenticate interface { **fc** *slot*/*port* | **vfc** *vig-num*/*vint-id* }

Syntax Description

interface	Specifies the interface on which to perform the reauthentication.
interface fc *slot*/*port*	Specifies the Fibre Channel interface by slot and port number.
vfc *vig-num*/*vint-id*	Specifies the virtual Fibre Channel interface by virtual interface group number and virtual interface ID.

Command Default

30 seconds

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example configures the FCSP reauthentication on a virtual Fibre Channel interface:

```
switch# fcsp reauthenticate vfc 1/1
```

Related Commands

Command	Description
fcsp enable	Enable FC-SP.
show fcsp	Displays configured FC-SP information.

fcsp timeout

To configure the timeout value for FC-SP message, use the **fcsp timeout** command in configuration mode. Use the **no** form of the command to revert to factory defaults.

fcsp timeout *timeout-period*

no fcsp timeout *timeout-period*

Syntax Description

timeout-period	Specifies the time out period. The time ranges from 20 to 100 seconds.

Command Default

30 seconds.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

You can only see the **fcsp timeout** command if you enter the **fcsp enable** command.

Examples

The following example configures the FCSP timeout value:

```
switch(config)# fcsp enable
switch(config)# fcsp timeout 60
```

Related Commands

Command	Description
fcsp enable	Enable FC-SP.
show fcsp	Displays configured FC-SP information.

fctimer

To change the default Fibre Channel timers, use the **fctimer** command in configuration mode. To revert to the default values, use the **no** form of the command.

fctimer {**d_s_tov** *milliseconds* | **e_d_tov** *milliseconds* | **r_a_tov** *milliseconds*} [**vsan** *vsan-id*]

no fctimer {**d_s_tov** *milliseconds* | **e_d_tov** *milliseconds* | **r_a_tov** *milliseconds*} [**vsan** *vsan-id*]

Syntax Description

d_s_tov *milliseconds*	Specifies the distributed services timeout value (DS_TOV). The range is 5000 to 100000 milliseconds.
e_d_tov *milliseconds*	Specifies the error detect timeout value (ED_TOV). The range is 1000 to 100000 milliseconds, with a default of 2000.
r_a_tov *milliseconds*	Specifies the resolution allocation timeout value (RA_TOV). The range is 5000 to 100000 milliseconds with a default of 10000.
vsan *vsan-id*	(Optional) Specifies the VSAN ID. The range is 1 to 4096.

Command Default

The Fibre Channel timers have the following default values:

- 30 seconds for DS_TOV.
- 2 seconds for ED_TOV.
- 10 seconds for RA_TOV.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

The Cisco, Brocade, and McData FC Error Detect (ED_TOV) and Resource Allocation (RA_TOV) timers default to the same values. They can be changed if needed. In accordance with the FC-SW2 standard, these values must be the same on each switch in the fabric.

Use the **vsan** option to configure different TOV values for specific VSANs.

Examples

The following example shows how to change the default Fibre Channel timers:

```
switch(config)# fctimer e_d_tov 5000
switch(config)# fctimer r_a_tov 7000
```

Related Commands

Command	Description
show fctimer	Displays the configured Fibre Channel timer values.

fctimer abort

To discard a Fibre Channel timer (fctimer) Cisco Fabric Services (CFS) distribution session in progress, use the **fctimer abort** command in configuration mode.**, fctimer abort**

Syntax Description

This command has no other arguments or keywords.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	This command was introduced.

Usage Guidelines

None.

Examples

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

```
switch(config)# fctimer abort
```

Related Commands

Command	Description
fctimer distribute	Enables CFS distribution for fctimer.
show fctimer	Displays fctimer information.

fctimer commit

To apply the pending configuration pertaining to the Fibre Channel timer (fctimer) Cisco Fabric Services (CFS) distribution session in progress in the fabric, use the **fctimer commit** command in configuration mode. **, fctimer commit**

Syntax Description

This command has no other arguments or keywords.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to commit changes to the active Fibre Channel timer configuration:

```
switch(config)# fctimer commit
```

Related Commands

Command	Description
fctimer distribute	Enables CFS distribution for fctimer.
show fctimer	Displays fctimer information.

fctimer distribute

To enable Cisco Fabric Services (CFS) distribution for Fibre Channel timer (fctimer), use the **fctimer distribute** command. To disable this feature, use the **no** form of the command.

fctimer distribute

no fctimer distribute

Syntax Description

This command has no other arguments or keywords.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Before distributing the Fibre Channel timer changes to the fabric, the temporary changes to the configuration must be committed to the active configuration using the **fctimer commit** command.

Examples

The following example shows how to change the default Fibre Channel timers:

```
switch(config)# fctimer distribute
```

Related Commands

Command	Description
fctimer commit	Commits the Fibre Channel timer configuration changes to the active configuration.
show fctimer	Displays fctimer information.

fctrace

To trace the route to an N port, use the **fctrace** command in EXEC mode.**, fctrace** {**device-alias** *aliasname* | **fcid** *fcid* | **pwwn** *pwwn-id*} **vsan** *vsan-id* [**timeout** *seconds*]

Syntax Description

device-alias *aliasname*	Specifies the device alias name. Maximum length is 64 characters.
fcid *fcid*	The FCID of the destination N port, with the format **0x***hhhhhh*
pwwn *pwwn-id*	The PWWN of the destination N port, with the format *hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.
timeout *seconds*	Configures the timeout value. The range is 1 to 10.

Command Default

By default, the period to wait before timing out is 5 seconds.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example traces a route to the specified fcid in VSAN 1:

```
switch# fctrace fcid 0x660000 vsan 1
```

The following example traces a route to the specified device alias in VSAN 1:

```
switch# fctrace device-alias x vsan 1
```

fdmi suppress-updates

To suppress FDMI updates, use the **fdmi suppress-updates** command in configuration mode.**, fdmi suppress-updates vsan** *vsan-id*

Syntax Description

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

Command Default

By default, FDMI updates are not suppressed.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example suppresses FDMI updates in VSAN 1:

```
switch# fdmi suppress-updates vsan 1
```

feature fcoe

To enable virtual and native Fibre Channel interfaces after installing the FC_FEATURES_PKG license, use the **feature fcoe** command. To disable Fibre Channel interfaces and return the FC_FEATURES_PKG license to the license manager software, use the **no** form of the command.

feature fcoe

no feature fcoe

Syntax Description

This command has no arguments or keywords.

Command Default

FCoE is disabled.

Command Modes

Configuration mode

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

You must save the configuration, and then reboot the switch to enable or disable the FCoE feature.

Examples

This example shows how to enable FCoE on the switch:

```
switch(config)# feature fcoe
```

fspf config

To configure an FSPF feature for an entire VSAN, use the **fspf config** command in configuration mode. This command enters FSPF configuration mode, which includes four commands (each with a **no** form).

To delete FSPF configuration for the entire VSAN, use the **no** form of the command.

fspf config vsan *vsan-id*

min-ls-arrival *ls-arrival-time*
min-ls-interval *ls-interval-time*
region *region-id*
spf {**hold-time** *spf-holdtime* | **static**}

no min-ls-arrival
no min-ls-interval
no region
no spf {**hold-time** | **static**}

no fspf config vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.
min-ls-arrival *ls-arrival-time*	This command specifies the minimum time before a new link state update for a domain will be accepted by switch. The parameter *ls-arrival-time* is an integer specifying time in milliseconds. The range is 0 to 65535.
min-ls-interval *ls-interval-time*	This command specifies the minimum time before a new link state update for a domain will be generated by the switch. The parameter *ls-interval-time* is an integer specifying time in milliseconds. The range is 0 to 65535.
region *region-id*	This command specifies the autonomous region to which the switch belongs. The backbone region has *region-id*=0. The parameter *region-id* is an unsigned integer value ranging from 0 to 255.
spf	This command specifies parameters related to SPF route computation.
hold-time *spf-holdtime*	Specifies the time between two consecutive SPF computations. If the time is small then routing will react faster to changes but CPU usage will be more. The parameter *spf-holdtime* is an integer specifying time in milliseconds. The range is 0 to 65535.
static	Forces static SPF computation.

Command Default

In FSPF configuration mode, the default is dynamic SPF computation.

If configuring spf hold-time, the default value for FSPF is 0.

If configuring min-ls-arrival, the default value for FSPF is 1000 milliseconds.

If configuring min-ls-interval, the default value for FSPF is 5000 milliseconds.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

The **fspf config** command enters FSPF configuration mode for the specified VSAN. In FSPF configuration mode, the commands configure FSPF for this VSAN .

Examples

The following example configures static SPF computation in VSAN 1 and deletes the FSPF configuration in VSAN 3:

```
switch(config)# fspf config vsan 1
switch(fspf-config)# spf static
switch(fspf-config)# exit
switch(config)#
switch(config)# no fspf config vsan 3
switch(config)#
```

Related Commands

Command	Description
show fspf interface	Displays information for each selected interface.
fspf enable	Enables FSPF routing protocol in the specified VSAN
fspf cost	Configures the cost for the selected interface in the specified VSAN
fspf hello-interval	Specifies the hello message interval to verify the health of a link in the VSAN
fspf passive	Disables the FSPF protocol for the specified interface in the specified VSAN
fspf retransmit	Specifies the retransmit time interval for unacknowledged link state updates in specified VSAN

fspf cost

To configure FSPF link cost for an FCIP interface, use the **fspf cost** command. To revert to the default value, use the **no** form of the command.

fspf cost *link-cost* **vsan** *vsan-id*

no fspf cost *link-cost* **vsan** *vsan-id*

Syntax Description

link-cost	Enters FSPF link cost in seconds. The range is 1 to 65535.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.

Command Default

1000 seconds for 1 Gigabits per second interfaces.

500 seconds for 2 Gigabits per second interfaces.

Command Modes

Interface configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command is not applicable to virtual Fibre Channel interfaces.

FSPF tracks the state of links on all switches in the fabric, associates a cost with each link in its database, and then chooses the path with a minimal cost. The cost associated with an interface can be changed using the **fspf cost** command to implement the FSPF route selection.

Examples

The following example configures the FSPF link cost on an FCIP interface:

```
switch(config)# interface fc 2/1
switch(config-if)# fspf cost 5000 vsan 1
```

Related Commands

Command	Description
show fspf interface	Displays information for each selected interface.
show interface fc	Displays an interface configuration for a specified Fibre Channel interface.

fspf dead-interval

To set the maximum interval for which a hello message must be received before the neighbor is considered lost, use the **fspf dead-interval** command. To revert to the default value, use the **no** form of the command.

fspf dead-interval *seconds* **vsan** *vsan-id*

no fspf dead-interval *seconds* **vsan** *vsan-id*

Syntax Description

seconds	Specifies the FSPF dead interval in seconds. The range is 2 to 65535.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.

Command Default

80 seconds.

Command Modes

Interface configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command is not applicable to virtual Fibre Channel interfaces., This value must be the same in the ports at both ends of the ISL.

Caution An error is reported at the command prompt if the configured dead time interval is less than the hello time interval.

Examples

The following example configures the maximum interval of 400 seconds for a hello message before the neighbor is considered lost:

```
switch(config)# interface fc 2/1
switch(config-if)# fspf dead-interval 4000 vsan 1
```

Related Commands

Command	Description
show fspf interface	Displays information for each selected interface.
show interface fc	Displays an interface configuration for a specified Fibre Channel interface.

fspf enable

To enable FSPF for a VSAN, use the **fspf enable** command in configuration mode. To disable FSPF routing protocols, use the **no** form of the command.

fspf enable vsan *vsan-id*

no fspf enable vsan *vsan-id*

Syntax Description

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

Command Default

Enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command configures FSPF on VSANs globally.

Examples

The following example enables FSPF in VSAN 5 and disables FSPF in VSAN 7:

```
switch## configure
switch(config)# fspf enable vsan 5
switch(config)# no fspf enable vsan 7
```

Related Commands

Command	Description
fspf config vsan	Configures FSPF features for a VSAN.
show fspf interface	Displays information for each selected interface.

fspf hello-interval

To verify the health of the link, use the **fspf hello-interval** command. To revert to the default value, use the **no** form of the command.

fspf hello-interval *seconds* **vsan** *vsan-id*

no fspf hello-interval *seconds* **vsan** *vsan-id*

Syntax Description

hello-interval *seconds*	Specifies the FSPF hello-interval in seconds. The range is 2 to 65535.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.

Command Default

20 seconds.

Command Modes

Interface configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command is not applicable to virtual Fibre Channel interfaces.

This command configures FSPF for the specified Fibre Channel interface. , This value must be the same in the ports at both ends of the ISL.

Examples

The following example configures a hello interval of 3 seconds on VSAN 1:

```
switch(config)# interface fc 2/1
switch(config-if)# fspf hello-interval 3 vsan 1
```

Related Commands

Command	Description
show fspf interface	Displays information for each selected interface.

fspf passive

To disable the FSPF protocol for selected interfaces, use the **fspf passive** command. To revert to the default state, use the **no** form of the command.

fspf passive vsan *vsan-id*

no fspf passive vsan *vsan-id*

Syntax Description

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

Command Default

FSPF is enabled.

Command Modes

Interface configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command is not applicable to virtual Fibre Channel interfaces.

By default, FSPF is enabled on all E ports and TE ports. FSPF can be disabled by setting the interface as passive using the **fspf passive** command., FSPF must be enabled on the ports at both ends of the ISL for the protocol to operate correctly.

Examples

The following example disables the FSPF protocol for the selected interface on VSAN 1:

```
switch(config)# interface fc 2/1
switch(config-if)# fspf passive vsan 1
```

Related Commands

Command	Description
show fspf interface	Displays information for each selected interface.
show interface fc	Displays an interface configuration for a specified FCIP interface.

fspf retransmit-interval

To specify the time after which an unacknowledged link state update should be transmitted on the interface, use the **fspf retransmit-interval** command. To revert to the default value, use the **no** form of the command.

fspf retransmit-interval *seconds* **vsan** *vsan-id*

no spf retransmit-interval *seconds* **vsan** *vsan-id*

Syntax Description

seconds	Specifies FSPF retransmit interval in seconds. The range is 1 to 65535.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.

Command Default

5 seconds.

Command Modes

Interface configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command is not applicable to virtual Fibre Channel interfaces., This value must be the same in the ports at both ends of the ISL.

Examples

The following example specifies a retransmit interval of 6 seconds after which an unacknowledged link state update should be transmitted on the interface for VSAN 1:

```
switch(config)# interface fc 2/1
switch(config-if)# fspf retransmit-interval 6 vsan 1
```

Related Commands

Command	Description
show fspf interface	Displays information for each selected interface.
show interface fc	Displays an interface configuration for a specified FCIP interface.

in-order-guarantee

To enable in-order delivery, use the **in-order-guarantee** command in configuration mode. To disable in-order delivery, use the **no** form of the command.

in-order-guarantee [**vsan** *vsan-id*]

no in-order-guarantee [**vsan** *vsan-id*] [**,**] [**-**]

Syntax Description

vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.
[**,**] [**-**]	(Optional) Allows you to enter multiple VSANs separated by commas, or a range of VSANs separated by a dash.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

In-order delivery of data frames guarantees frame delivery to a destination in the same order that they were sent by the originator.

Examples

The following example shows how to enable in-order delivery for the entire switch:

```
switch(config) # in-order-guarantee
```

The following example shows how to disable in-order delivery for the entire switch:

```
switch(config)# no in-order-guarantee
```

The following example shows how to enable in-order delivery for a specific VSAN:

```
switch(config)# in-order-guarantee vsan 3452
```

The following example shows how to disable in-order delivery for a specific VSAN:

```
switch(config)# no in-order-guarantee vsan 101
```

Related Commands

Command	Description
show in-order-guarantee	Displays the in-order-guarantee status.

interface fc

To configure a Fibre Channel interface on a Cisco Nexus 5000 Series switch, use the **interface fc** command in configuration mode. The **interface fc** command enters interface configuration mode, which includes five commands (each with a **no** form).

To revert to defaults, use the **no** form of the command.

interface fc *slot/port*
channel-group {*group-id* [**force**] | **auto**}
fcdomain rcf-reject vsan *vsan-id*
fcsp {**auto-active** | **auto-passive** | **on** | **off**} [*timeout-period*]
fspf {**cost** *link-cost* **vsan** *vsan-id* | **dead-interval** *seconds* **vsan** *vsan-id* | **hello-interval** *seconds* **vsan** *vsan-id* | **passive vsan** *vsan-id* | **retransmit-interval** *seconds* **vsan** *vsan-id*}
switchport

no interface fc *slot/port*
no channel-group {*group-id* [**force**] | **auto**}
no fcdomain rcf-reject vsan *vsan-id*
no fcsp {**auto-active** | **auto-passive** | **on** | **off**}
no fspf {**cost** *link_cost* **vsan** *vsan-id* | **dead-interval** *seconds* **vsan** *vsan-id* | **hello-interval** *seconds* **vsan** *vsan-id* | **passive vsan** *vsan-id* | **retransmit-interval** *seconds* **vsan** *vsan-id*}
switchport

Syntax Description

slot/port	Specifies a slot number and port number.
channel-group	Adds to or removes from a Port Channel.
group-id	Specifies a Port Channel group number from 1 to 128.
force	Forcefully adds a port.
auto	Enables autocreation of port channels.
fcdomain	Enters the interface submode.
rcf-reject	Configures the rcf-reject flag.
vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.
fspf	Configures FSPF parameters.
cost *link-cost*	Configures FSPF link cost. The range is 1 to 65535.
dead-interval *seconds*	Configures FSPF dead interval in seconds. The range is 2 to 65535.
hello-interval *seconds*	Configures FSPF hello-interval. The range is 1 to 65535.
passive	Enables or disables FSPF on the interface.
retransmit-interval *seconds*	Configures FSPF retransmit interface in seconds. The range is 1 to 65535.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

You can specify a range of interfaces by entering a command with the following example format:

interface*space***fc1/1***space***-***space***5***space***,***space***fc2/5***space***-***space***7**

Refer to the *Cisco Nexus 5000 Series CLI Configuration Guide* for information on port number allocation.

Use the **no shutdown** command to enable the interface.

The **channel-group auto** command enables autocreation of port channels. If autocreation of port channels is enabled for an interface, you must first disable this configuration before downgrading to earlier software versions or before configuring the interface in a manually configured channel group.

Examples

The following example configures ports 1 to 4 in Fibre Channel interface 3:

```
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# int fc3/1 - 4
```

The following example enables the Fibre Channel interface in port 1 of slot 3:

```
switch(config)# interface fc3/1
switch(config-if)# no shutdown
```

Related Commands

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

interface san-port-channel

To configure a SAN port channel interface on a Cisco Nexus 5000 Series switch, use the **interface san-port-channel** command in configuration mode. The **interface san-port-channel** command enters interface configuration mode, which includes six commands (each with a **no** form).

To revert to defaults, use the **no** form of the command.

interface san-port-channel *port*
description *line*
shutdown [**force**]
switchport {
mode { **E** | **auto**}|
speed { **1000** | **2000** | **4000** | **auto**}|
trunk { **allowed vsan** { *vsan-id* | **add** *vsan-id* | **all**}| **mode** { **auto** | **on** | **off**}}
}

no interface san-port-channel *port*
no description
no shutdown
no switchport {
no mode |
no speed |
no trunk { **allowed vsan** { *vsan-id* | **add** *vsan-id* | **all**}| **mode** }

Syntax Description

port	Specifies a port number.
description *line*	Enters a line of text to describe the interface.
shutdown	Changes the interface state to administrative down.
force	Forces the interface state to administrative down.
switchport	Enters configuration parameters for the SAN port channel .

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Use the **no shutdown** command to enable the interface.

Examples

The following example configures SAN port channel interface 3:

```
switch(config)# interface san-port-channel 3
```

Related Commands

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

interface vig

To configure a virtual interface group (VIG) on a Cisco Nexus 5000 Series switch, use the **interface vig** command in configuration mode. The **interface vig** command enters interface configuration mode, which provides one command (and its **no** form).

To revert to defaults, use the **no** form of the command.

interface vig *vig-num*
  bind interface ethernet *slot/port*

no interface vig *vig-num*
  no bind interface ethernet *slot/port*

Syntax Description

vig-num	Specifies the virtual interface group number.
bind interface	Specifies the interface to associate with this VIG.
ethernet *slot/port*	Specifies the slot and port of physical Ethernet interface.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command creates a virtual Interface Group (if it does not already exist) and enters interface configuration mode for the specified VIG.

Examples

The following example creates virtual interface group 3 and associates it with a physical Ethernet interface:

```
switch(config)# interface vig 3
switch(config-if)# bind interface ethernet 1/15
```

Related Commands

Command	Description
show vig	Displays the configuration for the specified VIG.

interface vfc

To configure a virtual Fibre Channel interface on a Cisco Nexus 5000 Series switch, use the **interface vfc** command in configuration mode. To revert to defaults, use the **no** form of the command.

interface vfc *vig-num/vint-id*
description *line*
shutdown [**force**]
switchport {**mode F**}

no interface vfc *vig-num/vint-id*
no description
no shutdown
no switchport mode

Syntax Description

vig-num/vint-id	Specifies a VIG number and a virtual interface ID.
description *line*	Enters a line of text to describe the interface.
shutdown	Changes the interface state to administrative down.
switchport mode F	Specifies the mode of the virtual Fibre Channel interface.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

You can specify a range of interfaces by entering a command with the following example format:

interface vfc1/1,vfc2/1

Refer to the *Cisco Nexus 5000 Series CLI Configuration Guide* for information on port number allocation.

Use the **no shutdown** command to enable the interface.

Examples

The following example configures port 1 in virtual Fibre Channel interface 3:

```
switch(config)# interface vfc3/1
```

The following example enables the virtual Fibre Channel interface:

```
switch(config)# interface vfc3/1
switch(config-if)# no shutdown
```

Related Commands

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

lldp

To configure the Link Layer Discovery Protocol (LLDP) global options, use the **lldp** command. To remove the LLDP settings, use the **no** form of this command.

lldp {**holdtime** *seconds* | **reinit** *seconds* | **timer** *seconds*}

no lldp {**holdtime** | **reinit** | **timer**}

Syntax Description

holdtime *seconds*	Specifies the hold time (in seconds) to set the length of time that a device should save LLDP information received before discarding it. The range is from 10 to 255, and the default is 120 seconds.
reinit *seconds*	Specifies the length of time (in seconds) to wait before performing LLDP initialization on any interface. The range is from 1 to 10 seconds, and the default is 2 seconds.
timer *seconds*	Specifies the rate (in seconds) at which LLDP packets are sent. The range is from 5 to 254 seconds, and the default is 30 seconds.

Command Default

Holdtime: 120 seconds.

Reinit: 2 seconds.

Timer: 30 seconds.

Command Modes

Global configuration mode

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

The LLDP settings include the length of time before discarding LLDP information received from peers, the length of time to wait before performing LLDP initialization on any interface, and the rate at which LLDP packets are sent.

Examples

This example shows how to configure the global LLDP holdtime to 200 seconds:

```
switch(config)# lldp holdtime 200
switch(config)#
```

Related Commands

Command	Description
lldp (Interface)	Configures the LLDP feature on an interface.
show lldp	Displays the LLDP configuration information.

lldp (interface)

To enable the reception, or transmission, of Link Layer Discovery Protocol (LLDP) packets on an interface, use the **lldp** command. To disable the reception or transmission of LLDP packets, use the **no** form of this command.

lldp {**receive** | **transmit**}

no lldp {**receive** | **transmit**}

Syntax Description

receive	Specifies that the interface receive LLDP packets.
transmit	Specifies that the interface transmit LLDP packets.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Examples

This example shows how to set an interface to transmit LLDP packets:

```
switch(config)# interface ethernet 2/1
switch(config-if)# lldp transmit
switch(config-if)#
```

Related Commands

Command	Description
show interface	Displays configuration information about interfaces.

logging abort

To discard the logging Cisco Fabric Services (CFS) distribution session in progress, use the **logging abort** command in configuration mode.**, logging abort**

Syntax Description

This command has no other arguments or keywords.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

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

```
switch(config)# logging abort
```

Related Commands

Command	Description
show logging	Displays logging information.

logging commit

To apply the pending configuration pertaining to the logging Cisco Fabric Services (CFS) distribution session in progress in the fabric, use the **logging commit** command **in configuration mode., logging commit**

Syntax Description

This command has no other arguments or keywords.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to commit changes to the active logging configuration:

```
switch(config)# logging commit
```

Related Commands

Command	Description
show logging	Displays logging information.

logging distribute

To enable Cisco Fabric Services (CFS) distribution for logging, use the **logging distribute** command. To disable this feature, use the **no** form of the command.

logging distribute

no logging distribute

Syntax Description

This command has no other arguments or keywords.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Before distributing the Fibre Channel timer changes to the fabric, the temporary changes to the configuration must be committed to the active configuration using the **logging commit** command.

Examples

The following example shows how to change the distribute logging configuration changes:

```
switch(config)# logging distribute
```

Related Commands

Command	Description
logging commit	Commits the logging configuration changes to the active configuration.
show logging	Displays logging information.

member (fcalias configuration submode)

To add a member name to a Fibre Channel alias on a VSAN, use the **member** command in fcalias configuration submode. To remove a member name from a Fibre Channel alias, use the **no** form of the command.

member {**device-alias** *aliasname* | **domain-id** *domain-id* **port-number** *port-number* | **fcid** *fc-id* | **fwwn** *fwwn-id* | **interface fc** *slot*/*port* [**domain-id** *domain-id* | **swwn** *swwn-id*] | **pwwn** *pwwn-id* | **symbolic-nodename** *nodename*}

no member {**device-alias** *aliasname* | **domain-id** *domain-id* **port-number** *port-number* | **fcid** *fc-id* | **fwwn** *fwwn-id* | **interface fc** *slot*/*port* [**domain-id** *domain-id* | **swwn** *swwn-id*] | **pwwn** *pwwn-id* | **symbolic-nodename** *nodename*}

Syntax Description

device-alias *aliasname*	Specifies the member device alias. Maximum length is 64 characters.
domain-id *domain-id*	Specifies the member domain ID. The range is 1 to 239.
fcid *fc-id*	Specifies the member FC ID. The format is *0***x***hhhhhh,* where *h* is a hexadecimal digit.
fwwn *fwwn-id*	Specifies the member fWWN ID. The format is *hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh,* where *h* is a hexadecimal digit.
interface fc *slot*/*port*	Specifies the member interface ID.
swwn *swwn-id*	(Optional) Specifies the member sWWN ID. The format is *hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh,* where *h* is a hexadecimal digit.
port-number *port-number*	Specifies a port number in the range of 0 to 255.
pwwn *pwwn-id*	Specifies the member pWWN ID. The format is *hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh,* where *h* is a hexadecimal digit.
symbolic-nodename *nodename*	Specifies the member symbolic node name. The maximum length is 255 characters.

Command Default

None.

Command Modes

Fcalias configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to add a member to an alias called samplealias:

```
switch(config)# fcalias name samplealias
```

The following example defines a Fibre Channel interface for the member:

```
switch(switch(config-fcalias)# member interface fc3/1
```

The following example shows how to delete the specified member:

```
switch(config-fcalias)# no member interface fc3/1
```

Related Commands

Command	Description
fcalias name	Configures an alias.
show fcalias	Displays the member name information in an alias.

member (zone configuration submode)

To add a member name to a Fibre Channel zone, use the **member** command in zone configuration submode. To remove a member name from a zone, use the **no** form of the command.

member {**device-alias** *aliasname* | **domain-id** *domain-id* **port-number** *port* | **fcalias** *alias-name* | **fcid** *fc-id* | **fwwn** *fwwn-id* | **interface fc** *slot*/*port* [**domain-id** *domain-id* | **swwn** *swwn-id*] | **pwwn** *pwwn-id* [**lun** *lun-id*] | **symbolic-nodename** *nodename*}

no member {**device-alias** *aliasname* | **domain-id** *domain-id* **port-number** *port* | **fcid** *fc-id* | **fwwn** *fwwn-id* | **interface fc** *slot*/*port* [**domain-id** *domain-id* | **swwn** *swwn-id*] | | **pwwn** *pwwn-id* [**lun** *lun-id*] | **symbolic-nodename** *nodename*}

Syntax Description

device-alias *aliasname*	Specifies the member device alias. Maximum length is 64 characters.
lun *lun-id*	Specifies the member LUN ID. The format is *0***x***hhhh*[**:***hhhh*[**:***hhhh*[**:***hhhh*]]], where *h* is a hexadecimal digit.
domain-id *domain-id*	Specifies the member domain ID. The range is 1 to 239.
alias-name	The name of the fcalias. Maximum length is 64 characters.
port-number *port*	Specifies the member port number. The range is 0 to 255.
fcid *fc-id*	Specifies the member FC ID. The format is *0***x***hhhhhh,* where *h* is a hexadecimal digit.
fwwn *fwwn-id*	Specifies the member fWWN ID. The format is *hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh,* where *h* is a hexadecimal digit.
interface fc *slot*/*port*	Specifies the member interface ID.
swwn *swwn-id*	Specifies the member sWWN ID. The format is *hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh,* where *h* is a hexadecimal digit.
pwwn *pwwn-id*	Specifies the member pWWN ID. The format is *hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh***:***hh,* where *h* is a hexadecimal digit.
symbolic-nodename *nodename*	Specifies the member symbolic node name. The maximum length is 255 characters.

Command Default

This command can be used in both zone configuration submode and zoneset-zone configuration submode.

Command Modes

Zone set zone configuration submode and zoneset-zone configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Create a zone set zone member only if you need to add member to a zone from the zone set prompt.

Examples

The following example shows how to add a member to a zone called zs1 on VSAN 1:

```
switch(config)# zone name zs1 vsan 1
switch(config-zone)# member fcid 0x111112
```

The following example shows how to add a zone to a zoneset called Zoneset1 on VSAN 1:

```
switch(config)# zoneset name ZoneSet1 vsan 1
switch(config-zoneset-zone)# member fcid 0x111112
```

The following example shows how to assign a Fibre Channel interface member into a zone:

```
switch(config)# zoneset name ZoneSet1 vsan 1
switch(config-zoneset-zone)# member interface fc 3/1
```

The following example shows how to delete the specified device from a zone:

```
switch(config-zoneset-zone)# no member interface fc 3/1
```

Related Commands

Command	Description
zoneset (configuration submode)	Used to specify a name for a zone set.
zone name (zone set configuration submode)	Configures a zone in a zoneset.
show zoneset	Displays zone set information.

member (zoneset configuration submode)

To configure zone set members, use the **member** command in zone set configuration submode. To remove a zone set member, use the **no** form of the command.

member *member-name*

no member *member-name*

Syntax Description

member-name	Specifies the member name. Maximum length is 64 characters.

Command Default

None.

Command Modes

Zone set configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to add a member zone to a zone set:

```
switch(config)# zoneset name Zoneset1 vsan 10
switch(config-zoneset)# member ZoneA
```

Related Commands

Command	Description
show zone	Displays zone information.
zoneset name	Creates a zone set.

npiv enable

To enable N Port Identifier Virtualization (NPIV) for all VSANs on a switch, use the **npiv enable** command in configuration mode. To disable NPIV, use the **no** form of the command.

npiv enable

no npiv enable

Syntax Description

This command has no arguments or keywords.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

NPIV provides a means to assign multiple port IDs to a single N port. This feature allows multiple applications on the N port to use different identifiers and allows access control, zoning, and port security to be implemented at the application level.

You must globally enable NPIV for all VSANs on the switch to allow the NPIV-enabled applications to use multiple N port identifiers.

Examples

The following example enables NPIV for all VSANs on the switch:

```
switch(config)# npiv enable
```

The following example disables NPIV for all VSANs on the switch:

```
switch(config)# no npiv enable
```

Related Commands

Command	Description
show interface	Displays interface configurations.

npv auto-load-balance disruptive

To enable N Port Virtualization (NPV) disruptive load-balancing, use the **npv auto-load-balance disruptive** command in configuration mode. To disable this feature, use the **no** form of the command.

npv auto-load-balance disruptive

no npv auto-load-balance disruptive

Syntax Description

This command has no other arguments or keywords.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(2a)	This command was introduced.

Usage Guidelines

Disruptive load-balancing can be configured only in NPV mode.

When disruptive load-balancing is enabled, NPV redistributes the server interfaces across all available NP uplinks when a new NP uplink becomes operational. To move a server interface from one NP uplink to another NP uplink, NPV forces reinitialization of the server interface so that the server performs a new login to the core switch. This action causes traffic disruption on the attached end devices.

To avoid disruption of server traffic, enable this feature only after adding a new NP uplink, and then disable it again after the server interfaces have been redistributed.

Examples

The following example shows how to enable disruptive load-balancing:

```
switch# config
switch(config)# npv auto-load-balance disruptive
```

Related Commands

Command	Description
npv enable	Enables NPV mode.
show npv status	Displays the NPV current status.

npv enable

To enable N Port Virtualization (NPV) mode, use the **npv enable** command in configuration mode. To disable this feature, use the **no** form of the command.

npv enable

no npv enable

Syntax Description

This command has no other arguments or keywords.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

When NPV mode is enabled, switch configuration related to interfaces is erased and the switch is rebooted. The switch restarts in NPV mode. Configuration and verification commands for NPV are available only when NPV is enabled on the switch. When you disable NPV mode, all related configurations are automatically erased and the switch is rebooted.

Examples

The following example shows how to enable NPV mode:

```
switch# config
switch(config)# npv enable
```

Related Commands

Command	Description
show npv status	Displays the NPV current status.

port-security

To configure port security features and reject intrusion attempts, use the **port-security** command in configuration mode. Use the **no** form of the command to negate the command or revert to factory defaults.

port-security {**activate vsan** *vsan-id* [**force** | **no-auto-learn**] | **auto-learn vsan** *vsan-id* | **database vsan** *vsan-id* }

no port-security {**activate vsan** *vsan-id* [**force** | **no-auto-learn**] | **auto-learn vsan** *vsan-id* | **database vsan** *vsan-id* }

Syntax Description

activate	Activates a port security database for the specified VSAN and automatically enables auto-learning.
auto-learn	Enables auto-learning for the specified VSAN.
database	Enters the port security database configuration mode for the specified VSAN.
vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.
force	(Optional) Forces the database activation.
no-auto-learn	(Optional) Disables the auto-learning feature for the port security database.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

When you activate the port security feature, the **auto-learn** option is also automatically enabled. You can choose to activate the port-security feature and disable auto-learning using the **port-security activate vsan** *number* **no-auto-learn** command. In this case, you need to manually populate the port security database by individually securing each port.

If the **auto-learn** option is enabled on a VSAN, you cannot activate the database for that VSAN without the **force** option.

Examples

The following example activates the port security database for the specified VSAN, and automatically enables auto-learning:

```
switch(config)# port-security activate vsan 1
```

The following example deactivates the port security database for the specified VSAN, and automatically disables auto-learning:

```
switch(config)# no port-security activate vsan 1
```

The following example disables the auto-learning feature for the port security database in VSAN 1:

```
switch(config)# port-security activate vsan 1 no-auto-learn
```

The following example enables auto-learning so the switch can learn about any device that is allowed to access VSAN 1. These devices are logged in the port security active database:

```
switch(config)# port-security auto-learn vsan 1
```

The following example disables auto-learning and stops the switch from learning about new devices accessing the switch:

```
switch(config)# no port-security auto-learn vsan 1
```

The following example enters the port security database mode for the specified VSAN:

```
switch(config)# port-security database vsan 1
switch(config-port-security)#
```

The following example forces the VSAN 1 port security database to activate even if there are conflicts:

```
switch(config)# port-security activate vsan 1 force
```

Related Commands

Command	Description
show port-security database	Displays configured port security information.

port-security abort

To discard the port security Cisco Fabric Services (CFS) distribution session in progress, use the **port-security abort** command **in configuration mode., port-security abort** vsan *vsan-id*

Syntax Description

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

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

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

```
switch(config)# port-security abort vsan 33
```

Related Commands

Command	Description
port-security distribute	Enables CFS distribution for port security.
show port-security	Displays port security information.

port-security commit

To apply the pending configuration pertaining to the port security Cisco Fabric Services (CFS) distribution session in progress in the fabric, use the **port-security commit** command in configuration mode.**, port-security commit** vsan *vsan-id*

Syntax Description

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

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to commit changes to the active port security configuration:

```
switch(config)# port-security commit vsan 13
```

Related Commands

Command	Description
port-security distribute	Enables CFS distribution for port security.
show port-security	Displays port security information.

port-security database

To copy the port security database or to view the difference within the port security database, use the **port-security database** command in EXEC mode.**, port-security database {copy | diff** {**active | config**}} **vsan** *vsan-id*

Syntax Description

copy	Copies the active database to the configuration database.
diff	Provides the difference between the active and configuration port security database.
active	Writes the active database to the configuration database.
config	Writes the configuration database to the active database.
vsan *vsan-id*	Specifies the VSAN ID. The ranges is 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

If the active database is empty, the port-security database is empty.

Use the **port-security database diff active** command to resolve conflicts.

Examples

The following example copies the active to the configured database:

```
switch# port-security database copy vsan 1
```

The following example provides the differences between the active database and the configuration database:

```
switch# port-security database diff active vsan 1
```

The following example provides information on the differences between the configuration database and the active database:

```
switch# port-security database diff config vsan 1
```

Related Commands

Command	Description
port-security database	Copies and provides information on the differences within the port security database.
show port-security database	Displays configured port security information.

port-security distribute

To enable Cisco Fabric Services (CFS) distribution for port security, use the **port-security distribute** command. To disable this feature, use the **no** form of the command.

port-security distribute

no port-security distribute

Syntax Description

This command has no other arguments or keywords.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Before distributing the Fibre Channel timer changes to the fabric, the temporary changes to the configuration must be committed to the active configuration using the **port-security commit** command.

Examples

The following example shows how to distribute the port security configuration to the fabric:

```
switch(config)# port-security distribute
```

Related Commands

Command	Description
port-security commit	Commits the port security configuration changes to the active configuration.
show port-security	Displays port security information.

port-security enable

To enable port security, use the **port-security enable** command in configuration mode. To disable port security, use the **no** form of the command.

port-security enable

no port-security enable

Syntax Description

This command has no other arguments or keywords.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Entering the **port-security enable** command enables the other commands that are used to configure port security.

Examples

The following example shows how to enable port security:

```
switch(config)# port-security enable
```

The following example shows how to disable port security:

```
switch(config)# no port-security enable
```

Related Commands

Command	Description
show port-security	Displays port security information.

port-track enable

To enable port tracking for indirect errors, use the **port-track enable** command in configuration mode. To disable this feature, use the **no** form of the command.

port-track enable

no port-track enable

Syntax Description

This command has no other arguments or keywords.

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

The software brings the linked port down when the tracked port goes down. When the tracked port recovers from the failure and comes back up again, the tracked port is also brought up automatically (unless otherwise configured).

Examples

The following example shows how to enable port tracking:

```
switch(config)# port-track enable
```

The following example shows how to disable port tracking:

```
switch(config)# no port-track enable
```

Related Commands

Command	Description
show interface fc	Displays configuration and status information for a specified Fibre Channel interface.
show interface san-port-channel	Displays configuration and status information for a specified SAN port channel interface.

port-track force-shut

To force a shutdown of a tracked port, use the **port-track force-shut** command in interface configuration submode. To reenable the port tracking, use the **no** form of the command.

port-track force-shut

no port-track force-shut

Syntax Description

This command has no other arguments or keywords.

Command Default

None.

Command Modes

Interface configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Use the **port-track force-shut** command to keep the linked port down, even though the tracked port comes back up. You must explicitly bring the port up when required using the **no port-track force-shut** command.

Examples

The following example shows how to force the shutdown of an interface and the interfaces that it is tracking:

```
switch(config)# interface fc 2/2
switch(config-if)# no port-track force-shut
```

Related Commands

Command	Description
port-track enable	Enables port tracking.
show interface fc	Displays configuration and status information for a specified Fibre Channel interface.
show interface san-port-channel	Displays configuration and status information for a specified SAN port channel interface.

port-track interface

To enable port tracking for specific interfaces, use the **port-track interface** command in interface configuration submode. To disable this feature, use the **no** form of the command.

port-track interface {**fc** *slot*/*port* | **san-port-channel** *port*} [**vsan** *vsan-id*]

no port-track interface {**fc** *slot*/*port* | **san-port-channel** *port*} [**vsan** *vsan-id*]

Syntax Description

fc *slot*/*port*	Specifies a Fibre Channel interface.
san-port-channel *port*	Specifies a SAN port channel interface. The range is 1 to 128.
vsan *vsan-id*	(Optional) Specifies a VSAN ID. The range is 1 to 4093.

Command Default

None.

Command Modes

Interface configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

When the port that an interface is tracking goes down, the interface also goes down. When the tracked port comes back up, the linked interface also comes back up. Use the **port-track force-shut** command to keep the linked interface down.

Examples

The following example shows how to enable port tracking for specific interfaces:

```
switch(config)# interface fc 2/3
switch(config-if)# port-track interface san-port-channel 2
```

Related Commands

Command	Description
port-track enable	Enables port tracking.
port-track force-shut	Forcefully shuts an interface for port tracking.
show interface fc	Displays configuration and status information for a specified Fibre Channel interface.
show interface san-port-channel	Displays configuration and status information for a specified SAN port channel interface.

purge fcdomain fcid

To purge persistent FCIDs, use the **purge fcdomain fcid** command in EXEC mode., purge fcdomain fcid vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Indicates that FCIDs are to be purged for a VSAN ID. The range is 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to purge all dynamic, unused FCIDs in VSAN 4:

```
switch# purge fcdomain fcid vsan 4
```

The following example shows how to purge all dynamic, unused FCIDs in VSANs 4, 5, and 6:

```
switch# purge fcdomain fcid vsan 4-6
```

rlir preferred-cond fcid

To specify a preferred host to receive Registered Link Incident Report (RLIR) frames, use the **rlir preferred-cond fcid** command in configuration mode. To remove a preferred host, use the **no** form of the command.

rlir preferred-cond fcid *fc-id* **vsan** *vsan-id*

no rlir preferred-cond fcid *fc-id* **vsan** *vsan-id*

Syntax Description

fcid *fc-id*	Specifies the FC ID. The format is **0x***hhhhhh*.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.

Command Default

By default, the switch sends RLIR frames to one of the hosts in the VSAN with the register function set to “conditionally receive” if no hosts have the register function set to “always receive.”

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

The switch sends RLIR frames to the preferred host only if it meets the following conditions:

- No host in the VSAN is registered for RLIR with the registration function set to “always receive.” If one or more hosts in the VSAN are registered as “always receive,” then RLIR sends only to these hosts and not to the configured preferred host.
- The preferred host is registered with the registration function set to “conditionally receive.”, If all registered hosts have the registration function set to “conditionally receive,” then the preferred host receives the RLIR frames.

You can specify only one RLIR preferred host per VSAN.

Examples

The following example specifies FC ID 0x654321 as the RLIR preferred host for VSAN 2:

```
switch(config)# rlir preferred-cond fcid 0x654321 vsan 2
```

The following example removes FC ID 0x654321 as the RLIR preferred host for VSAN 2:

```
switch(config)# no rlir preferred-cond fcid 0x654321 vsan 2
```

Related Commands

Command	Description
show rlir	Displays information about RLIR, Link Incident Record Registration (LIRR), and Distribute Registered Link Incident Record (DRLIR) frames.
clear rlir	Clears the RLIRs.
debug rlir	Enables RLIR debugging.

rscn

To configure a registered state change notification (RSCN), which is a Fibre Channel service that informs N ports about changes in the fabric, use the **rscn** command in configuration mode.**, rscn {multi-pid | suppress domain-swrscn} vsan** *vsan-id*

Syntax Description

multi-pid	Sends RSCNs in multiple port ID (multi-PID) format.
suppress domain-swrscn	Suppresses transmission of domain format SW-RCSNs.
vsan *vsan-id*	Configures VSAN information or membership. The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example configures RSCNs in multi-PID format:

```
switch(config)# rscn multi-pid vsan 1
```

Related Commands

Command	Description
show rscn src-table	Displays state change registration table,
show rscn statistics	Displays RSCN statistics.

rscn abort

To cancel a Registered State Change Notification (RSCN) configuration on a VSAN, use the **rscn abort** command in configuration mode. To reverse the cancellation, use the **no** form of the command.

rscn abort vsan *vsan-id*

no rscn abort vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Specifies a VSAN where the RSCN configuration should be cancelled. The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example cancels an RSCN configuration on VSAN 1:

```
switch(config)# rscn abort vsan 1
```

Related Commands

Command	Description
rscn commit	Commits a pending RSCN configuration on a specified VSAN.
rscn distribute	Enables the distribution of an RSCN configuration.
rscn event-tov	Configures an RSCN event timeout.
clear rscn session vsan	Clears the RSCN session for a specified VSAN.
show rscn	Displays RSCN configuration information.

rscn commit

To apply a pending Registered State Change Notification (RSCN) configuration, use the **rscn commit** command in configuration mode. To discard a pending RSCN configuration, use the **no** form of the command.

rscn commit vsan *vsan-id*

no rscn commit vsan *vsan-id*

Syntax Description

vsan *vsan-id*	Specifies a VSAN where the RSCN configuration should be committed. The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

If you commit the changes made to the active database, the configuration is committed to all the switches in the fabric. On a successful commit, the configuration change is applied throughout the fabric and the lock is released.

Examples

The following example commits an RSCN configuration on VSAN 1:

```
switch(config)# rscn commit vsan 1
```

Related Commands

Command	Description
rscn abort	Cancels a pending RSCN configuration on a specified VSAN.
rscn distribute	Enables the distribution of an RSCN configuration.
rscn event-tov	Configures an RSCN event timeout.
clear rscn session	Clears the RSCN session for a specified VSAN.
show rscn	Displays RSCN configuration information.

rscn distribute

To enable distribution of a Registered State Change Notification (RSCN) configuration, use the **rscn distribute** command in configuration mode. To disable the distribution, use the **no** form of the command.

rscn distribute

no rscn distribute

Syntax Description

This command has no arguments or keywords.

Command Default

RSCN timer distribution is disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

The RSCN timer configuration must be the same on all switches in the VSAN. Cisco Fabric Service (CFS) automatically distributes the RSCN timer configuration to all switches in a fabric. Only the RSCN timer configuration is distributed.

Examples

The following example enables the distribution of an RSCN configuration:

```
switch(config)# rscn distribute
```

Related Commands

Command	Description
rscn abort	Cancels a pending RSCN configuration on a specified VSAN.
rscn commit	Applies a pending RSCN configuration.
rscn event-tov	Configures an RSCN event timeout.
clear rscn session	Clears the RSCN session for a specified VSAN.
show rscn	Displays RSCN configuration information.

rscn event-tov

To configure an event timeout value for a Registered State Change Notification (RSCN) on a specified VSAN, use the **rscn event-tov** command in configuration mode. To cancel the event timeout value and restore the default value, use the **no** form of the command.

rscn event-tov *timeout* **vsan** *vsan-id*

no rscn event-tov *timeout* **vsan** *vsan-id*

Syntax Description

timeout	Specifies an event timeout value in milliseconds. The range is 0 to 2000.
vsan *vsan-id*	Specifies a VSAN where the RSCN event timer should be used. The ID of the VSAN is from 1 to 4093.

Command Default

The default timeout values are 2000 milliseconds for Fibre Channel VSANs.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Before changing the timeout value, you must enable RSCN configuration distribution using the **rscn distribute** command.

The RSCN timer is registered with Cisco Fabric Services (CFS) during initialization and switchover.

Examples

The following example configures an RSCN event timeout value on VSAN 1:

```
switch(config)# rscn event-tov 20 vsan 1
```

Related Commands

Command	Description
rscn abort	Cancels a pending RSCN configuration on a specified VSAN.
rscn commit	Applies a pending RSCN configuration.
rscn distribute	Enables distribution of an RSCN configuration.
clear rscn session	Clears the RSCN session for a specified VSAN.
show rscn	Displays RSCN configuration information.

san-port-channel persistent

To convert an autocreated SAN port channel to a persistent SAN port channel, use the **san-port-channel persistent** command in EXEC mode., san-port-channel *port-channel-id* persistent

Syntax Description

port-channel-id	Specifies the port channel ID. The range is 1 to 128.
persistent	

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command is not reversible. A user-created channel group cannot be converted to an autocreated channel group.When the **san-port-channel persistent** command is applied to an autocreated channel group, the channel group number does not change and the member ports properties change to those of a user-created channel group. The channel mode remains active.

Examples

The following example shows how to change the properties of an autocreated channel group to a persistent channel group:

```
switch# san-port-channel 10 persistent
```

Related Commands

Command	Description
san-port-channel protocol	Enables the SAN port channel protocol.
show interface port-channel	Displays SAN port channel interface information.
show port-channel	Displays SAN port channel information.

scsi-target

To configure SCSI target discovery, use the **scsi-target** command in configuration mode. To remove SCSI target discovery, use the **no** form of the command.

scsi-target {**auto-poll** [**vsan** *vsan-id*] | **discovery** | **ns-poll** [**vsan** *vsan-id*] | **on-demand** [**vsan** *vsan-id*]}

no scsi-target {**auto-poll** [**vsan** *vsan-id*] | **discovery** | **ns-poll** [**vsan** *vsan-id*] | **on-demand** [**vsan** *vsan-id*]}

Syntax Description

auto-poll	Configures SCSI target auto-polling globally or per VSAN.
vsan *vsan-id*	Specifies a VSAN ID. The range is 1 to 4093.
discovery	Configures SCSI target discovery.
ns-poll	Configures SCSI target name-server polling globally or per VSAN.
on-demand	Configures SCSI targets on-demand globally or per VSAN.

Command Default

SCSI target discovery for each option is enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Automatic global SCSI target discovery is on by default. Discovery can also be triggered for specific VSANs using on-demand, name server polling, or auto-polling options. All options are on by default. Use the **no scsi-target discovery** command to turn off all discovery options. You can also turn off specific options by using the **no** form of the command.

Examples

The following example configures SCSI target auto-polling discovery for VSAN 1:

```
switch(config)# scsi-target auto-poll vsan 1
```

The following example removes SCSI target auto-polling discovery for VSAN 1:

```
switch(config)# no scsi-target auto-poll vsan 1
```

The following example configures a SCSI target discovery:

```
switch(config)# scsi-target discovery
```

The following example configures SCSI target ns-polling discovery for VSAN 1:

```
switch(config)# scsi-target ns-poll vsan 1
```

The following example removes SCSI target ns-polling discovery for VSAN 1:

```
switch(config)# no scsi-target ns-poll vsan 1
```

The following example configures SCSI target on-demand discovery for VSAN 1:

```
switch(config)# scsi-target on-demand vsan 1
```

The following example removes SCSI target on-demand discovery for VSAN 1:

```
switch(config)# no scsi-target on-demand vsan 1
```

Related Commands

Command	Description
discover scsi-target	Discovers SCSI targets on local storage to the switch or remote storage across the fabric.
show scsi-target	Displays information about existing SCSI target configurations.

switchport

To configure a switch port parameter on a Fibre Channel or virtual Fibre Channel interface, use the **switchport** command in interface configuration submode. To discard the configuration, use the **no** form of the command.

Fibre Channel Interface:

switchport { **encap eisl** |
fcrxbbcredit {*credit* [**mode E** | **F**] | **default** | } |
mode {**auto** | **E** | **F** | **SD** |} |
speed {**1000** | **2000** | **4000** | **auto** [**max 2000**]} |
trunk {**allowed vsan** {[**add**] *vsan-id* | **all**} | **mode** {**auto** | **off** | **on**}}}

no switchport { **encap eisl** | **fcrxbbcredit**| **fcrxbufsize** *size* | **mode** | **rate** | **speed** | **trunk allowed vsan** [[**add**] *vsan-id* | **all**]}

Virtual Fibre Channel Interface:

switchport mode F

Syntax Description

encap eisl	Configures extended ISL (EISL) encapsulation for the interface.
fcrxbbcredit	Configures receive BB_credit for the port.
credit	Specifies receive BB_credit. The range is 1 to 255
mode	Configures receive BB_credit for the specific port mode.
E	Configures receive BB_credit for E or TE port mode.
F	Configures receive BB_credit for F port mode.
default	Configures default receive BB_credits depending on the port mode and capabilities.
mode	Configures the port mode.
auto	Configures autosense mode.
E	Configures E port mode.
F	Configures F port mode.
SD	Configures SD port mode.
speed	Configures the port speed.
1000	Configures 1000-Mbps speed.
2000	Configures 2000-Mbps speed.
4000	Configures 4000-Mbps speed.
auto	Configures autosense speed.
max 2000	Configures 2-Gbps as the maximum bandwidth reserved in auto mode for 24-port and 48-port 4-Gbps switching module interfaces.
trunk	Configures trunking parameters on the interface.
allowed	Specifies the allowed list for interface(s).
vsan	Configures the VSAN range.
add	(Optional) Adds the VSAN ID to the range of allowed VSAN list
vsan-id	Specifies the VSAN ID. The range is 1 to 4093.

all	Adds all the VSANs to allowed VSAN list.
mode	Configures the trunking mode.
auto	Configures automatic trunking mode.
off	Disables the trunking mode.
on	Enables the trunking mode.

Command Default

The EISL encapsulation is disabled.

The default receive data buffer size is 2112 bytes.

The port mode is auto.

The speed is auto.

The maximum auto speed is 2000.

The trunk mode is on.

Command Modes

Interface configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

You can specify a range of interfaces by entering a command with the following example format:

interface*space***fc2/1***space*-*space***2***space*,*space***fc3/2***space*-*space***4**

The port speed on an interface determines the amount of shared resources available to the ports in the port group. Port group resources are reserved even though the bandwidth is not used. For example, if an interface is configured for autosensing (**auto**), then 4 Gbps of bandwidth is reserved even though the maximum operating speed is 2 Gbps. For the same interface, if autosensing with a maximum speed of 2 Gbps (**auto max 2000**) is configured, then only 2 Gbps of bandwidth is reserved and the unused 2 Gbps is shared with the other interface in the port group.

When configuring port modes, observe the following guidelines:

- Auto port mode and E port mode cannot be configured in shared rate mode.
- Shared to dedicated ports should be configured in this order: speed, port mode, credit.
- Dedicated to shared ports should be configured in this order: credit, port mode, speed., For a virtual Fibre Channel interface, you can set the port mode to F. The remaining switch port parameters are not configurable.

Examples

The following example configures switch port parameters for a Fibre Channel interface:

```
switch(config)# interface fc 2/3
switch(config-if)# switchport description techdocsSample
switch(config-if)# switchport mode E
switch(config-if)# switchport trunk mode auto
switch(config-if)# switchport trunk allowed vsan all
```

```
switch(config-if)# switchport trunk allowed vsan 3
switch(config-if)# switchport trunk allowed vsan add 2
switch(config-if)# switchport encap eisl
switch(config-if)# switchport fcrxbbcredit 20
```

The following example configures the mode of a virtual Fibre Channel interface:

```
switch(config)# interface vfc 2/1
switch(config-if)# switchport mode F
```

Related Commands

Command	Description
fcrxbbcredit extended enable	Enables extended BB_credits on the switch.
show interface	Displays an interface configuration for a specified interface.

switchport ignore bit-errors

To prevent the detection of bit error threshold events from disabling the interface on Fibre Channel interfaces, use the **switchport ignore bit-errors** command. To revert to the default, use the **no** form of the command.

switchport ignore bit-errors

no switchport ignore bit-errors

Syntax Description

This command has no arguments or keywords.

Command Default

None.

Command Modes

Interface configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

The bit error rate threshold is used by the switch to detect an increased error rate before performance degradation seriously affects traffic.

Bit errors can occur for the following reasons:

- Faulty or bad cable
- Faulty or bad SFP
- SFP is specified to operate at 1 Gbps but is used at 2 Gbps
- Short haul cable is used for long haul or long haul cable is used for short haul
- Momentary sync loss
- Loose cable connection at one or both ends
- Improper SFP connection at one or both ends

A bit error rate threshold is detected when 15 error bursts occur in a 5-minute period. By default, the switch disables the interface when the threshold is reached. You can enter a **shutdown/no shutdown** command sequence to reenable the interface., Regardless of the setting of the **switchport ignore bit-errors** command, the switch generates a syslog message when bit error threshold events are detected.

Examples

The following example shows how to prevent the detection of bit error events from disabling the interface:

```
switch(config)# interface fc2/1
switch(config-if)# switchport ignore bit-errors
```

The following example shows how to allow the detection of bit error events from disabling the interface:

```
switch(config)# interface fc2/1
switch(config-if)# no switchport ignore bit-errors
```

Related Commands

Command	Description
show interface	Displays interface information.

system default switchport

To configure port attributes for Fibre Channel interfaces, use the **system default switchport** command in configuration mode. To disable port attributes, use the **no** form of the command.

system default switchport {**shutdown** | **trunk mode** {**auto** | **off** | **on**} }

no system default switchport {**shutdown** | **trunk mode** {**auto** | **off** | **on**} }

Syntax Description

shutdown	Disables or enables switch ports by default.
trunk	Configures the trunking parameters as a default.
mode	Configures the trunking mode.
auto	Enables autosense trunking.
off	Disables trunking.
on	Enables trunking.

Command Default

Enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

Attributes configured using this command are applied globally to all future switch port configurations, even if you do not individually specify them at that time.

This command changes the configuration of the following ports to administrative mode F:

- All ports that are down.
- All F ports that are up, whose operational mode is F, and whose administrative mode is not F.

This command does not affect non-F ports that are up; however, if non-F ports are down, this command changes the administrative mode of those ports.

Examples

The following example shows how to configure port shutdown:

```
switch(config)# system default switchport shutdown
```

The following example shows how to configure the trunk mode:

```
switch(config)# system default switchport trunkmode auto
```

Related Commands

Command	Description
show system default switchport	Displays default values for switch port attributes.
show interface brief	Displays Fibre Channel port modes.

system default zone default-zone permit

To configure default values for a zone, use the **system default zone default-zone permit** command in configuration mode. To revert to the defaults, use the **no** form of the command.

system default zone default-zone permit

no system default zone default-zone permit

Syntax Description

This command has no arguments or keywords.

Command Default

No default values for zones.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

This command defines the default values for the default zone for all VSANs. The default values are used when you initially create a VSAN and it becomes active. If you do not want to use the default values, use the **zone default-zone permit vsan** command to define the operational values for the default zone.

The **system default zone default-zone permit** command should only be used in conjunction with VSANs that have not yet been created; it has no effect on existing VSANs., Because VSAN 1 is the default VSAN and is always present, this command has no effect on it.

Examples

The following example sets the default zone to use the default values:

```
switch(config)# system default zone default-zone permit
```

The following example restores the default setting:

```
switch(config)# no system default zone default-zone permit
```

Related Commands

Command	Description
zone default-zone permit vsan	Defines whether a default zone (nodes not assigned a created zone) permits or denies access to all in the default zone.
show system default zone	Displays default values for the default zone.

system default zone distribute full

To configure default values for distribution to a zone set, use the **system default zone distribute full** command in configuration mode. To revert to the defaults, use the **no** form of the command.

system default zone distribute full

no system default zone distribute full

Syntax Description

This command has no arguments or keywords.

Command Default

Distribution to active zone sets only.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0	This command was introduced.

Usage Guidelines

This command distributes the default values for the default zone to all VSANs. The default values are used when you initially create a VSAN and it becomes active. If you do not want to use the default values, use the **zoneset distribute full vsan** command to distribute the operational values for the default zone.

The **system default zone distribute full** command should only be used in conjunction with VSANs that have not yet been created; it has no effect on existing VSANs., Because VSAN 1 is the default VSAN and is always present, this command has no effect on it.

Examples

The following example distributes default values to the full zone set:

```
switch(config)# system default zone distribute full
```

The following example distributes default values to the active zone set only:

```
switch(config)# no system default zone distribute full
```

Related Commands

Command	Description
zoneset distribute full vsan	Distributes the operational values for the default zone to all zone sets.
show system default zone	Displays default values for the default zone.

trunk protocol enable

To configure the trunking protocol for Fibre Channel interfaces, use the **trunk protocol enable** command in configuration mode. To disable this feature, use the **no** form of the command.

trunk protocol enable

no trunk protocol enable

Syntax Description

This command has no other arguments or keywords.

Command Default

Enabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

If the trunking protocol is disabled on a switch, no port on that switch can apply new trunk configurations. Existing trunk configurations are not affected, and the TE port continues to function in trunking mode, but only supports traffic in VSANs that it negotiated previously (when the trunking protocol was enabled). Also, other switches that are directly connected to this switch are similarly affected on the connected interfaces. In some cases, you may need to merge traffic from different port VSANs across a nontrunking ISL. Before you merge traffic, you need to disable the trunking protocol.

Examples

The following example shows how to disable the trunk protocol feature:

```
switch(config)# no trunk protocol enable
```

The following example shows how to enable the trunk protocol feature:

```
switch(config)# trunk protocol enable
```

Related Commands

Command	Description
show trunk protocol	Displays the trunk protocol status.

vsan database

To create multiple fabrics sharing the same physical infrastructure, assign ports to VSANs, turn on or off interop mode, load balance either per originator exchange or by source-destination ID, and enter VSAN database submode, use the **vsan database** command. To remove a configuration, use the **no** command in VSAN database submode.

vsan database
vsan *vsan-id*
[**interface** {**fc** *slot*/*port* | **san-port-channel** *port* | **vfc** *vig-num*/*vint-id*} |
interop [*mode*] [**loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] |
loadbalancing {**src-dst-id** | **src-dst-ox-id**} |
name *name* [**interop** [*mode*] [**loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] | **loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] | **suspend** [**interop** [*mode*] [**loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] | **loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] |
suspend [**interop** [*mode*] [**loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] | **loadbalancing** {**src-dst-id** | **src-dst-ox-id**}]]

vsan database
no vsan *vsan-id*
[**interop** [*mode*] [**loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] |
loadbalancing {**src-dst-id** | **src-dst-ox-id**} |
name *name* [**interop** [*mode*] [**loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] | **loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] | **suspend** [**interop** [*mode*] [**loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] | **loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] |
suspend [**interop** [*mode*] [**loadbalancing** {**src-dst-id** | **src-dst-ox-id**}] | **loadbalancing** {**src-dst-id** | **src-dst-ox-id**}]]

Syntax Description

vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.
interface fc *slot*/*port*	(Optional) Specifies the Fibre Channel interface by slot and port number on the switch.
san-port-channel *portchannel-number*.*subinterface-number*	Configures the SAN port channel interface specified by the SAN port channel number followed by a dot (.) indicator and the subinterface number.
interop	Turns on interoperability mode.
mode	Specifies the interop mode. The range is 1 to 4.
loadbalancing	Configures load-balancing scheme.
src-dst-id	Sets src-id/dst-id for load-balancing.
src-dst-ox-id	Sets ox-id/src-id/dst-id for load-balancing (default).
name *name*	Assigns a name to the VSAN. Maximum length is 32 characters.
suspend	Suspends the VSAN.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

To use this command, change to the VSAN database submode.

The interface range must be in ascending order and nonoverlapping. You can specify a range using a hyphen and several interfaces using commas:

- The interface range format for a Fibre Channel interface range is fcslot/port - port , fcslot/port , fcslot/port:

  For example, **`show int fc2/1 - 3 , fc2/4 , fc3/2`**

- The format for a SAN port channel is san-port-channel portchannel-number.subinterface-number:

  For example, **`show int san-port-channel 5.1`**

There are four interop modes:

- Interop mode 1 — Standards based interop mode that requires all other vendors in the fabric to be in interop mode.
- Interop mode 2 — Brocade native mode (Core PID 0).
- Interop mode 3 — Brocade native mode (Core PID 1).
- Interop mode 4 — McData native mode. , Before you configure Interop mode 4 (or remove the configuration), you must suspend the VSAN. You should unsuspend the VSAN only after you configure a VSAN-dependent switch WWN with the McData OUI [08:00:88].

The **no** form of the **vsan** *vsan-id* **interface** command is not supported. To remove a VSAN membership of an interface (for example, interface fc1/8 from VSAN 7), you must assign the interface to another VSAN. The best practice is to assign the interface back to the default VSAN (VSAN 1).

Examples

The following example shows how to create multiple fabrics sharing the same physical infrastructure and how to assign ports to VSANs:

```
switch(config)# vsan database
switch(config-db)#
switch-config-db# vsan 2
switch(config-vsan-db)# vsan 2 name TechDoc
updated vsan 2
switch(config-vsan-db)# vsan 2 loadbalancing src-dst-id
switch(config-vsan-db)# vsan 2 loadbalancing src-dst-ox-id
switch(config-vsan-db)# vsan 2 suspend
switch(config-vsan-db)# no vsan 2 suspend
switch(config-vsan-db)# end
switch#
```

The following example shows how to suspend a VSAN and enable Interop mode 4:

```
switch# config t
switch(config)# vsan database
switch(config-vsan-db)# vsan 100 suspend
switch(config-vsan-db)# vsan 100 interop 4
switch(config-vsan-db)# exit
```

This example shows how to remove interface fc2/1 from VSAN 7:

```
switch(config)# vsan database
switch(config-vsan-db)# vsan 1 interface fc2/1
switch(config-vsan-db)#
```

Related Commands

Command	Description
vsan wwn	Configures a WWN for a suspended VSAN that has Interop mode 4 enabled.

wwn secondary-mac

To allocate a secondary MAC address to a SAN node, use the **wwn secondary-mac** command., wwn secondary-mac *wwn-id* **range** *address-range*

Syntax Description

secondary-mac *wwn-id*	The secondary MAC address with the format *hh*:*hh*:*hh*:*hh*:*hh*:*hh*:*hh*.
range *address-range*	The range for the specified WWN. The only valid value is 64.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command cannot be undone.

Changes to the worldwide names are only performed as required. They should not be changed on a daily basis. These changes should be made by an administrator or individual who is completely familiar with switch operations.

For more information, refer to the *Cisco Nexus 5000 Series CLI Configuration Guide*.

Examples

The following example allocates a secondary range of MAC addresses:

```
switch(config)# wwn secondary-mac 00:99:55:77:55:55 range 64
This command CANNOT be undone.
Please enter the BASE MAC ADDRESS again: 00:99:55:77:55:55
Please enter the mac address RANGE again: 64
From now on WWN allocation would be based on new MACs.
Are you sure? (yes/no) yes
```

wwn vsan

To configure a WWN for a suspended VSAN that has interop mode 4 enabled, use the **wwn vsan** command in configuration mode. To discard the configuration, use the **no** form of the command.

wwn vsan *vsan-id* **vsan-wwn** *wwn*

no wwn vsan *vsan-id* **vsan-wwn** *wwn*

Syntax Description

vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.
vsan-wwn *wwn*	Specifies the WWN for the VSAN. The format is hh:hh:hh:hh:hh:hh:hh:hh.

Command Default

None.

Command Modes

Configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

This command can succeed only if the following conditions are satisfied:

- The VSAN must be suspended.
- The VSAN must have interop mode 4 enabled before you can specify the switch WWN for it.
- The switch WWN must be unique throughout the entire fabric.
- The configured switch WWN must have McData OUI [08:00:88].

Examples

The following example shows how to assign a WWN to a VSAN:

```
switch(config)# wwn vsan 100 vsan-wwn 20:64:08:00:88:0d:5f:81
WWN can be configured for vsan in suspended state only
switch(config)# vsan database
switch(config-vsan-db)# vsan 100 suspend
switch(config-vsan-db)# exit
switch(config)# wwn vsan 100 vsan-wwn 20:64:08:00:88:0d:5f:81
switch(config)#
```

Related Commands

Command	Description
vsan database	Creates multiple fabrics sharing the same physical infrastructure, assigns ports to a VSAN, turns on or off interop mode, and load balances either per originator exchange or source-destination ID.

zone clone

To clone a zone name, use the **zone clone** command in configuration mode. , zone clone *current-zone-name new-zone-name* vsan *vsan-id*

Syntax Description

current-zone-name new-zone-name	Clones a zone attribute group from the current name to a new name. Maximum length of names is 64 characters.
vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Use the **no** form of the **zone name (configuration mode)** command to delete the zone name.

Examples

The following example creates a clone of the original zone group named origZone into the clone zone group cloneZone on VSAN 45:

```
switch(config)# zone clone origZone cloneZone vsan 45
```

Related Commands

Command	Description
show zone	Displays zone information.

zone commit

To commit zoning changes to a VSAN, use the **zone commit** command in configuration mode. To negate the command, use the **no** form of the command.

zone commit vsan *vsan-id* [**force**]

no zone commit vsan *vsan-id* [**force**]

Syntax Description

vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.
force	(Optional) Forces the commit.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Use the **no** form of the **zone commit** command to clear a session lock on a switch where the lock originated.

Examples

The following example commits zoning changes to VSAN 200:

```
switch(config)# zone commit vsan 200
```

Related Commands

Command	Description
show zone	Displays zone information.

zone compact

To compact a zone database in a VSAN, use the **zone compact** command., zone compact vsan *vsan-id*

Syntax Description

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

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

8000 zones are supported in a Cisco Nexus 5000 Series switch.

If you attempt to merge VSANs, the merge will fail if more than 2000 zones are present in a VSAN and the neighboring VSAN cannot support more than 2000 zones.

Activation will fail if more than 2000 zones are present in the VSAN and one or more switches in the fabric cannot support more than 2000 zones.

Examples

The following example shows how to compact a zone database in VSAN 1:

```
switch(oongif)# zone compact vsan 1
```

Related Commands

Command	Description
show zone	Displays zone information.
show zone analysis	Displays detailed analysis and statistical information about the zoning database.

zone copy

To copy the active zone set to the full zone set, use the **zone copy** command in EXEC mode. Use the **no** form of the command to negate the command or revert to the factory defaults.

zone copy active-zoneset full-zoneset [**include-auto-zones**] **vsan** *vsan-id*

zone copy vsan *vsan-id* **active-zoneset** {**bootflash:** | **ftp:** | **full-zoneset** | **scp:** | **sftp:** | **tftp:** | **volatile:**}

no zone copy

Syntax Description

active-zoneset	Copies from the active zone set.
vsan *vsan-id*	Configures to copy active zone set on a VSAN to full zone set. The ID of the VSAN is from 1 to 4093.
full-zoneset	Copies the active zone set to the full-zone set.
bootflash:	Copies the active zone set to a location in the bootflash: directory.
ftp:	Copies the active zone set to a remote location using the FTP protocol.
scp:	Copies the active zone set to a remote location using the SCP protocol.
sftp:	Copies the active zone set to a remote location using the SFTP protocol.
slot0:	Copies the active zone set to a location in the slot0: directory.
tftp:	Copies the active zone set to a remote location using the TFTP protocol.
volatile:	Copies the active zone set to a location in the volatile: directory.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example copies the active zone set to the full zone set:

```
switch# zone copy active-zoneset full-zoneset vsan 1
```

The following example copies the active zone set in VSAN 3 to a remote location using SCP:

```
switch# zone copy vsan 3 active-zoneset scp://guest@myserver/tmp/active_zoneset.txt
```

Related Commands

Command	Description
show zone	Displays zone information.

zone default-zone

To define whether a default zone (assigned to nodes not assigned to a created zone) permits or denies access to all nodes in the default zone, use the **zone default-zon**e command in configuration mode. Use the **no** form of the command to negate the command or revert to the factory defaults.

zone default-zone permit vsan *vsan-id*

no zone default-zone permit vsan *vsan-id*

Syntax Description

permit	Permits access to all nodes in the default zone.
vsan *vsan-id*	Sets default zoning behavior for the specified VSAN. The ID of the VSAN is from 1 to 4093.

Command Default

All default zones are permitted access.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Use the **zone default-zone permit vsan** command to define the operational values for the default zone in a VSAN. This command applies to existing VSANs; it has no effect on VSANs that have not yet been created.

Use the **system default zone default-zone permit** command to use the default values defined for the default zone for all VSANs. The default values are used when you initially create a VSAN and it becomes active.

Examples

The following example permits default zoning in VSAN 2:

```
switch(config)# zone default-zone permit vsan 2
```

Related Commands

Command	Description
system default zone default-zone permit	Configures default values for a zone.
show zone	Displays zone information.

zone merge-control restrict vsan

To restrict zone database merging, use the **zone merge-control restrict vsan** command in configuration mode. To disable this feature, use the **no** form of the command.

zone merge-control restrict vsan *vsan-id*

no zone merge-control restrict vsan *vsan-id*

Syntax Description

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

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
Release 4.0	This command was introduced.

Usage Guidelines

If merge control is set to restricted and the two databases are not identical, the merge fails and ISLs between the switches become isolated.

Examples

The following example shows how to set zone merge control for VSAN 10 to restricted:

```
switch(config)# zone merge-control restrict vsan 10
```

Related Commands

Command	Description
show zone	Displays zone information.

zone mode enhanced

To enable enhanced zoning for a VSAN, use the **zone mode enhanced** command in configuration mode. To disable this feature, use the **no** form of the command.

zone mode enhanced vsan *vsan-id*

no zone mode enhanced vsan *vsan-id*

Syntax Description

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

Command Default

Disabled.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Before using the **zone mode enhanced** command, verify that all switches in the fabric are capable of working in enhanced zoning mode. If one or more switches are not capable of working in enhanced zoning mode, the request to enable enhanced zoning mode is rejected.

When the **zone mode enhanced vsan** command completes successfully, the software automatically starts a session, distributes the zoning database using the enhanced zoning data structures, applies the configuration changes, and sends a release change authorization (RCA) to all switches in the fabric. All switches in the fabric then enable enhanced zoning mode.

Examples

The following example shows how to enable enhanced zoning mode:

```
switch(config)# zone mode enhanced vsan 10
```

Related Commands

Command	Description
show zone	Displays zone information.

zone name (configuration mode)

To create a zone, use the **zone name** command in configuration mode. Use the **no** form of the command to negate the command or revert to the factory defaults.

zone name *zone-name* **vsan** *vsan-id*
member

zone name *zone-name* **vsan** *vsan-id*
no member

no zone name *zone-name* **vsan** *vsan-id*

Syntax Description

zone-name	Specifies the name of the zone. Maximum length is 64 characters.
vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Zones are assigned to zone sets. Zone sets are then activated from one switch and propagate across the fabric to all switches. Zones allow security by permitting and denying access between nodes (hosts and storage). **zone name** commands are entered from the configuration mode. Configure a zone for a VSAN from the config-zone submode.

Use the **show wwn switch** command to retrieve the switch world wide name (sWWN). If you do not provide an sWWN, the software automatically uses the local sWWN.

Examples

The following example configures attributes for the specified zone (Zone1) based on the member type (pWWN, fabric pWWN, FCID, or Fibre Channel alias) and value specified:

```
switch(config)# zone name Zone1 vsan 10
switch(config-zone)# member device-alias device1
```

The following example configures members for the specified zone (Zone2) based on the member type (pWWN, fabric pWWN, FCID, or Fibre Channel alias) and value specified:

```
switch(config)# zone name Zone2 vsan 10
switch(config-zone)# member fcalias Payroll
switch(config-zone)# member domain-id 2 portnumber 23
```

Related Commands

Command	Description
show zone	Displays zone information.
zone rename	Renames zones.
zone-attribute-group name	Configures zone attribute groups.

zone name (zone set configuration submode)

To configure a zone in a zone set, use the **zone name** command in zone set configuration submode. To delete the zone from the zone set, use the **no** form of the command.

zone name *zone-name*

no zone name *zone-name*

Syntax Description

zone-name	Specifies the name of the zone. Maximum length is 64 characters.

Command Default

None.

Command Modes

Zone set configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example configure a zone in a zone set:

```
switch(config)# zoneset name Sample vsan 1
switch(config-zoneset)# zone name MyZone
```

The following example deletes a zone from a zone set:

```
switch(config-zoneset)# no zone name Zone2
```

Related Commands

Command	Description
show zoneset	Displays zone set information.
zone name (configuration mode)	Configure zones.
zoneset	Configures zone set attributes.

zone rename

To rename a zone, use the **zone rename** command in configuration mode., zone rename *current-name new-name* vsan *vsan-id*

Syntax Description

current-name	Specifies the current fcalias name. Maximum length is 64 characters.
new-name	Specifies the new fcalias name. Maximum length is 64 characters.
vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.

Command Default

None.

Command Modes

Configuration submode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to rename a zone:

```
switch# zone rename ZoneA ZoneB vsan 10
```

Related Commands

Command	Description
show zone	Displays zone information.
zone name	Creates and configures zones.

zoneset (configuration mode)

To group zones under one zone set, use the **zoneset** command in configuration mode. To negate the command or revert to the factory defaults, use the **no** form of the command.

zoneset {**activate** [**name** *zoneset-name*] **vsan** *vsan-id* | **clone** *zoneset-currentName zoneset-cloneName* **vsan** *vsan-id* | **distribute full vsan** *vsan-id* **name** *zoneset-name* **vsan** *vsan-id* | **rename** *current-name new-name* **vsan** *vsan-id*}

no zoneset {**activate** [**name** *zoneset-name*] **vsan** *vsan-id* | **clone** *zoneset-currentName zoneset-cloneName* **vsan** *vsan-id* | **distribute full vsan** *vsan-id* **name** *zoneset-name* **vsan** *vsan-id* | **rename** *current-name new-name* **vsan** *vsan-id*}

Syntax Description

activate	Activates a zone set
clone *zoneset-currentName zoneset-cloneName*	Clones a zone set from the current name to a new name. Maximum length of names is 64 characters.
name *zoneset-name*	(Optional) Specifies a name for a zone set. Maximum length is 64 characters.
distribute full	Enables zone set propagation.
vsan *vsan-id*	Activates a zone set on the specified VSAN. The range is 1 to 4093.
rename	Renames a zone set.
current-name	Specifies the current fcalias name.
new-name	Specifies the new fcalias name.

Command Default

None.

Command Modes

Configuration mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

Zones are activated by activating the parent zone set.

The **zoneset distribute full vsan** command distributes the operational values for the default zone to all zone sets in a VSAN. If you do not want to distribute the operation values, use the **system default zone distribute full** command to distribute the default values.The default values are used when you initially create a VSAN and it becomes active.

The **zoneset distribute full vsan** command applies to existing VSANs; it has no effect on VSANs that have not yet been created.

Examples

The following example activates a zone set named zSet1 in VSAN 333:

```
switch(config)# zoneset activate name zSet1 vsan 333
```

The following example clones a zone set named zSet1 into a new zoneset named zSetClone in VSAN 45:

```
switch(config)# zoneset clone existing zSet1 zSetClone vsan 45
```

The following example distributes the operational values for the default zone to all zone sets in VSAN 22:

```
switch(config)# zoneset distribute full vsan 22
```

Related Commands

Command	Description
system default zone distribute full	Configures default values for distribution to a zone set
show zoneset	Displays zone set information.

zoneset (EXEC mode)

To merge zone set databases, use the **zoneset** command in EXEC mode., zoneset {distribute | export | import interface {*fc slot/port* | san-port-channel *port-number*}} vsan *vsan-id*

Syntax Description

distribute	Distributes the full zone set in the fabric.
export	Exports the zone set database to the adjacent switch on the specified VSAN. The active zone set in this switch becomes the activated zone set of the merged SAN.
import	Imports the zone set database to the adjacent switch on the specified interface. The active zone set in the adjacent switch becomes the activated zone set of the merged SAN.
interface	Configures the interface.
fc *slot/port*	(Optional) Configures a Fibre Channel interface for the specified slot number and port number.
san-port-channel *port-number*	Specifies SAN port channel interface.
vsan *vsan-id*	Merges the zone set database of a VSAN on the specified interface. The ID of the VSAN is from 1 to 4093.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
4.0(0)N1(1a)	This command was introduced.

Usage Guidelines

You can also enter the **zoneset import** and the **zoneset export** commands for a range of VSANs.

The **zoneset distribute vsan** *vsan-id* command is supported in **interop 2** and **interop 3** modes, and not in **interop 1** mode.

Examples

The following example imports the zone set database from the adjacent switch connected through the VSAN 2 interface:

```
switch# zoneset import interface fc2/3 vsan 2
```

The following example exports the zone set database to the adjacent switch connected through VSAN 5:

```
switch# zoneset export vsan 5
```

The following example distributes the zone set in VSAN 333:

```
switch# zoneset distribute vsan 333
```

Related Commands

Command	Description
show zone status vsan	Displays the distribution status for the specified VSAN.
show zoneset	Displays zone set information.