C Commands

This chapter describes the Cisco NX-OS Fibre Channel, virtual Fibre Channel, and Fibre Channel over Ethernet (FCoE) commands that begin with C.

cfs distribute

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

cfs distribute

no cfs distribute

Syntax Description

This command has no arguments or keywords.

Command Default

CFS distribution is enabled.

Command Modes

Global configuration mode

Command History

Release	Modification
5.0(2)N1(1)	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

This example shows how to disable CFS distribution:

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

This 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. To disable this feature, use the **no** form of this 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

Global configuration mode

Command History

Release	Modification
5.0(2)N1(1)	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

This 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]
```

This 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. To disable this feature, use the **no** form of this command.

cfs ipv4 mcast-address *ipv4-address*

no cfs ipv4 mcast-address *ipv4-address*

Syntax Description

ipv4-address	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

Global configuration mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Usage Guidelines

Before using this command, enable CFS distribution over IPv4 by 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

This 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
```

This 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. To disable this feature, use the **no** form of this 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

Global configuration mode

Command History

Release	Modification
5.0(2)N1(1)	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

This 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]
```

This 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. To disable this feature, use the **no** form of this command.

cfs ipv6 mcast-address *ipv6-address*

no cfs ipv6 mcast-address *ipv6-address*

Syntax Description

ipv6-address	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

Global configuration mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Usage Guidelines

Before using this command, enable CFS distribution over IPv6 by 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

This 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
```

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

```
switch(config)# no 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
```

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

cfs region *region-id*

no cfs region *region-id*

Syntax Description

region-id	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

Global configuration mode

Command History

Release	Modification
5.0(2)N1(1)	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

This example shows how to create a region ID:

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

This example shows how to assign an application to a region:

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

This example shows how to remove an application assigned to a region:

```
switch(config)# 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

To enable Cisco Fabric Series (CFS) to merge the data from multiple Virtual SANs (VSANs), use the **cfs staggered-merge** command. To disable this feature, use the **no** form of this command.

cfs staggered-merge enable

no cfs staggered-merge enable

Syntax Description

enable	Enables the CFS staggered-merge option.

Command Default

Staggered merge is disabled.

Command Modes

Global configuration mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Examples

This 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.

channel mode active (SAN PortChannel)

To configure a SAN port channel interface as an active channel port, use the **channel mode active** command. To revert to the default settings, use the **no** form of this command.

channel mode active

no channel mode [**active**]

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

SAN port channel configuration mode

Command History

Release	Modification
5.1(3)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure a SAN port channel interface 3 as an active channel:

```
switch# configure terminal
switch(config)# interface san-port-channel 3
switch(config-if)# channel mode active
switch(config-if)#
```

This example shows how to revert a SAN port channel interface to the default setting:

```
switch# configure terminal
switch(config)# interface san-port-channel 3
switch(config-if)# no channel mode
switch(config-if)#
```

Related Commands

Command	Description
show interface	Displays an interface configuration for a specified interface.
shutdown	Disables and enables an interface.
switchport (SAN PortChannel)	Configures switchport parameters for a SAN port channel interface.
interface san-port-channel	Configures a SAN port channel interface.

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
5.0(2)N1(1)	This command was introduced.

Examples

This 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.

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
5.0(2)N1(1)	This command was introduced.

Usage Guidelines

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

Examples

This 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.

clear fcflow stats [**aggregated**] **index** *flow-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	Flow index number.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Examples

This 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.

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
	5.0(2)N1(1)	This command was introduced.

Examples This 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 Fibre Channel Signal Modeling (FCSM) log, use the **clear fcsm log** command.

clear fcsm log

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Examples

This 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.

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
5.0(2)N1(1)	This command was introduced.

Examples

This 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 arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Examples

This 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.

clear fspf counters vsan *vsan-id* [**interface** *type*]

Syntax Description

vsan	Indicates that the counters are to be cleared for a VSAN.
vsan-id	VSAN ID. The range is from 1 to 4093.
interface *type*	(Optional) Specifies that 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
5.0(2)N1(1)	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

This example shows how to clear the FSPF statistics on VSAN 1:

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

This example shows how to clear the 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 fc-port-security

To clear the port security information on the switch, use the **clear fc-port-security** command.

clear fc-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.
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 from 1 to 128.
session	Clears the port security CFS configuration session and locks.
statistics	Clears the port security counters.
vsan *vsan-id*	Clears entries for a specified VSAN ID. The range is from 1 to 4093.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Usage Guidelines

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

Examples

This example shows how to clear all existing statistics from the port security database for a specified VSAN:

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

This example shows how to clear the learned entries in the active database for a specified interface within a VSAN:

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

This example shows how to clear the learned entries in the active database up to for the entire VSAN:

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

Related Commands

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

clear rlir

To clear Registered Link Incident Report (RLIR) information, use the **clear rlir** command.

clear rlir {**history** | **recent** {**interface fc** *slot*/*port* | **portnumber** *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.
portnumber *port*	Displays the port number for the link incidents.
statistics	Clears the RLIR statistics.
vsan *vsan-id*	Clears the RLIR statistics for a Virtual SAN (VSAN). The ID of the VSAN is from 1 to 4093.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Examples

This example shows how to clear the 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 Virtual SAN (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
5.0(2)N1(1)	This command was introduced.

Examples

This example shows how to clear 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 Virtual SAN (VSAN), use the **clear rscn statistics** command.

clear rscn statistics vsan *vsan-id*

Syntax Description

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

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Examples

This example shows how to clear the 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 Virtual SAN (VSAN), use the **clear zone** command.

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	ID of the VSAN. The range is from 1 to 4093.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Usage Guidelines

After entering a **clear zone database** command, you must explicitly enter the **copy running-config startup-config** command 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

This 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.