

M Commands

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management-method

Use the **management-method est** command to specify the protocol for certificate renewal in a trust point and enter the submode to configure related parameters. Use the **no** form of the command to disable this protocol.

management- method est

no management- method est

Syntax Description

est	Specifies to use Enrollment over Secure Transport (EST) protocol for certificate renewal requests.

Command Default

None.

Command Modes

Config-trustpoint configuration submode

Command History

Release	Modification
9.4(5)	This command was introduced.

Usage Guidelines

None

Examples

```
switch# configure terminal
switch(config)# crypto ca trustpoint engineering-est-tp
switch(config-trustpoint)# management-method est
```

Related Commands

Command	Description
client-trustpoint	Specifies the trustpoint containing the switch client certificates.
crypto ca trustpoint	Configures a PKI certificate profile.
enrollment	Enable the certificate enrollment functionality for a specific trustpoint using the Enrollment over Secure Transport (EST) protocol.
renew lifetime	Configures when to start certificate renewal.
show crypto ca trustpoint	Displays CA information.

match

To configure QoS class map match criteria, use the **match** command in class map configuration submode. Remove QoS class map match criteria, use the **no** form of the command.

match {**any** | **destination-address** *fc-id* [**mask** *address-mask*] | **destination-device-alias** *name* | **destination-wwn** *wwn-id* | **input-interface fc** *slot/port* | **source-address** *fc-id* [**mask** *address-mask*] | **source-device-alias** *name* | **source-wwn** *wwn-id*}
nomatch {**any** | **destination-address** *fc-id* [**mask** *address-mask*] | **destination-device-alias** *name* | **destination-wwn** *wwn-id* | **input-interface fc** *slot/port* | **source-address** *fc-id* [**mask** *address-mask*] | **source-device-alias** *name* | **source-wwn** *wwn-id*}

Syntax Description

any	Enables matching of any frame.
destination-address *fc-id*	Specifies the destination FCID to match frames.
mask *address-mask*	(Optional) Specifies an address mask to match frames. The range is 0x0 to 0xffffffff.
destination-device-alias *name*	Specifies the destination device alias to match frames. Maximum length is 64 characters.
destination-wwn *wwn-id*	Specifies the destination WWN to match frames.
input-interface fc *slot/port*	Specifies the source Fibre Channel interface to match frames.
source-address *fc-id*	Specifies the source FCID to match frames.
source-device-alias *name*	Specifies the source device alias to match frames. Maximum length is 64 characters.
source-wwn *wwn-id*	Specifies the source WWN to match frames.

Command Default

None.

Command Modes

Class map configuration submode.

Command History

Release	Modification
1.3(1)	This command was introduced.
2.0(x)	Added the **destination-device-alias** and **source-device-alias** options.

Usage Guidelines

You can access this command only if you enable the QoS data traffic feature using the **qos enable** command.

Examples

The following example creates a class map called MyClass1 and places you in the class map configuration submode to match any (default) criteria specified for this class:

```
switch# config terminal
switch(config)# qos class-map MyClass1 match-any
switch(config-cmap)# match any
```

The following example specifies a destination address match for frames with the specified destination FCID:

```
switch(config-cmap)# match destination-address 0x12ee00
```

The following example specifies a source address and mask match for frames with the specified source FCID. Mask refers to a single or entire area of FCIDs:

```
switch(config-cmap)# match source-address 0x6d1090 mask 0
```

The following example specifies a destination WWN to match frames:

```
switch(config-cmap)# match destination-wwn 20:01:00:05:30:00:28:df
Operation in progress. Please check class-map parameters
```

The following example specifies a source WWN to match frames:

```
switch(config-cmap)# match source-wwn 23:15:00:05:30:00:2a:1f
Operation in progress. Please check class-map parameters
```

The following example specifies a source interface to match frames:

```
switch(config-cmap)# match input-interface fc 2/1
Operation in progress. Please check class-map parameters
```

The following example removes a match based on the specified source interface:

```
switch(config-cmap)# no match input-interface fc 3/5
```

Related Commands

Command	Description
qos enable	Enables QoS.
show qos	Displays QoS information.

match (fcroute-map configuration submode)

To configure Fibre Channel route map match criteria, use the **match** command in Fibre Channel route map configuration submode. To remove the match criteria, use the **no** form of the command.

match source-fcid *source-fcid* [*network-mask*] **dest-fcid** *destination-fcid* [*network-mask*]
no match source-fcid *source-fcid* [*network-mask*] **dest-fcid** *destination-fcid* [*network-mask*]

Syntax Description

source-fcid *source-fcid*	Specifies the source FC ID match criteria. The format is **0x***hhhhhh*.
network_mask	Specifies the network mask of the FC ID. The range is **0x***0* to **0x***ffffff*.
dest-fcid *destination-fcid*	Specifies the destination FC ID. The format is **0x***hhhhhh*

Command Default

The FC ID match criteria mask default value is **0x***ffffff*.

Command Modes

Fibre Channel route map configuration submode.

Command History

Release	Modification
3.0(3)	This command was introduced.

Usage Guidelines

None.

Examples

The following example specifies the FC ID match criteria with the default mask value of **0x***ffffff*.

```
switch# config terminal
switch(config)# fcroute-map vsan 2 12
switch(config-fcroute-map)# match source-fcid 0x123456 dest-fcid 0x567890
```

The following example specifies the FC ID match criteria with a mask value of **0x***ffffff*.

```
switch# config terminal
switch(config)# fcroute-map vsan 2 12
switch(config-fcroute-map)# match source-fcid 0x123456 0xffffff dest-fcid 0x567890 0xffffff
```

The following example removes the FC ID match criteria.

```
switch(config-fcroute-map)# no match source-fcid 0x123456 0xffffff dest-fcid 0x567890
0xffffff
```

Note The only valid mask value is **0x***ffffff*.

Related Commands

Command	Description
fcroute	Specifies Fibre Channel routes and activates policy routing.
fcroute-map vsan	Specifies a preferred path Fibre Channel route map.
show fcroute-map	Displays the preferred path route map configuration and status.
set (fcroute-map configuration submode)	Specifies the interface, the preference level for this interface, and the IVR next hop VSAN ID for this interface.

match address

To configure match addresses in an IPsec crypto map with an access control list (ACL), use the **match address** command in IPsec crypto map configuration submode. To not match addresses, use the **no** form of the command.

match address *acl-name*
no match address [*acl-name*]

Syntax Description

acl-name	Specifies the ACL name. Maximum length is 64 characters.

Command Default

None.

Command Modes

IPsec crypto map configuration submode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

To use this command, the IKE protocol must be enabled using the **crypto ike enable** command.

Examples

The following example shows how to match addresses in an IPsec crypto map with an ACL:

```
switch# config terminal
switch(config)# crypto map domain ipsec x 1
switch(config-crypto-map-ip)# match address UserACL
```

Related Commands

Command	Description
crypto ike domain ipsec	Enters IKE configuration mode.
crypto ike enable	Enables the IKE protocol.
show crypto map domain ipsec	Displays IPsec crypto map information.

mcast root

To configure the multicast feature, use the **mcast root** command in configure mode. To revert to the default, use the **no** form of the command.

mcast root {**lowest** | **principal**} **vsan** *vsan-id*
no mcast root {**lowest** | **principal**} **vsan** *vsan-id*

Syntax Description

lowest	Specifies the lowest domain switch as root.
principal	Specifies the principal switch as root.
vsan *vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.

Command Default

principal

Command Modes

Configure mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to configure the multicast root VSAN:

```
switch# config terminal
switch(config)#mcast root principal vsan 4001
```

Related Commands

Command	Description
show mcast	Displays multicast information.

member (fcalias configuration submode)

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

member {**device-alias** *aliasname* [**lun** *lun-id*] | **domain-id** *domain-id* [**lun** *lun-id*] | **fcid** *fc-id* [**lun** *lun-id*] | **fwwn** *fwwn-id* | **interface fc** *slot/port* [**domain-id** *domain-id* | **swwn** *swwn-id*] | **ip-address** *ipv4ipv6* | **pwwn** *pwwn-id* [**lun** *lun-id*] | **symbolic-nodename** *nodename*}
nomember {**device-alias** *aliasname* [**lun** *lun-id*] | **domain-id** *domain-id* [**lun** *lun-id*] | **fcid** *fc-id* [**lun** *lun-id*] | **fwwn** *fwwn-id* | **interface fc** *slot/port* [**domain-id** *domain-id* | **swwn** *swwn-id*] | **ip-address** *ipv4ipv6* | **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*	(Optional) 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.
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.
ip-address *ipv4*|*ipv6*	Specifies a member IP address in either IPv4 format, *A.B.C.D* , or IPv6format, *X:X:X::X/n* .
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
3.0(1)	This command was introduced.

Usage Guidelines

None.

Examples

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

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

The following example defines an IPv6 address for the member:

```
switch(switch(config-fcalias)# member ip-address 2020:dbc0:80::4076
```

The following example shows how to delete the specified member:

```
switch(config-fcalias)# no member ip-address 2020:dbc0:80::4076
```

Related Commands

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

member (ivr zone configuration)

To add a member name to an Inter-VSAN Routing (IVR) zone, use the **member** command in IVR zone configuration submode. To remove a member name from an fcalias, use the **no** form of the command.

member {**device-alias** *aliasname* {**lun** *lun-id* **vsan** *vsan-id* **autonomous-fabric-id** *afid*} | **vsan** *vsan-id* **autonomous-fabric-id** *afid*} | **pwwn** *pwwn-id* {**lun** *lun-id* **vsan** *vsan-id* **autonomous-fabric-id** *afid* | **vsan** *vsan-id* **autonomous-fabric-id** *afid*}}
no member {**device-alias** *aliasname* {**lun** *lun-id* **vsan** *vsan-id* **autonomous-fabric-id** *afid* | **vsan** *vsan-id* **autonomous-fabric-id** *afid*} | **pwwn** *pwwn-id* {**lun** *lun-id* **vsan** *vsan-id* **autonomous-fabric-id** *afid* | **vsan** *vsan-id* **autonomous-fabric-id** *afid*}}

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.
vsan*vsan-id*	Specifies the VSAN ID. The range is 1 to 4093.
autonomous-fabric-id *afid*	Specifies the AFID to the local VSAN.
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.

Command Default

None.

Command Modes

IVR zone configuration submode.

Command History

Release	Modification
1.3(1)	This command was introduced.
2.1(1a)	Added **lun** parameter.

Usage Guidelines

You can configure an IVR zone member based on the specified pWWN and LUN value or, based on the specified pWWN, LUN value, and AFID.

Note The CLI interprets the LUN identifier value as a hexadecimal value whether or not the 0x prefix is included.

Examples

The following example shows how to configures an IVR zone member based on the device alias VSAN, and the AFID:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# ivr zone name IvrLunZone
switch(config-ivr-zone)# member device-alias Switch4 vsan 1 autonomous-fabric-id 14
```

The following example shows how to configures an IVR zone member based on the pWWN, VSAN, and the AFID:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# ivr zone name IvrLunZone
switch(config-ivr-zone)# member pwwn 29:00:00:05:30:00:06:ea vsan 1 autonomous-fabric-id
14
```

Related Commands

Command	Description
show ivr zone	Displays the IVR zone information.

member (zone configuration and zoneset-zone configuration submode)

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

member {**device-alias** *aliasname* [**lun** *lun-id*] | **domain-id** *domain-id* [**lun** *lun-id*] | **fcid** *fc-id* [**lun** *lun-id*] | **fwwn** *fwwn-id* | **interface fc** *slotport* [**domain-id** *domain-id* | **swwn** *swwn-id*] | **ip-address** *ipv4/ipv6* | **pwwn** *pwwn-id* [**lun** *lun-id*] | **symbolic-nodename** *nodename*}
nomember {**device-alias** *aliasname* [**lun** *lun-id*] | **domain-id** *domain-id* [**lun** *lun-id*] | **fcid** *fc-id* [**lun** *lun-id*] | **fwwn** *fwwn-id* | **interface fc** *slotport* [**domain-id** *domain-id* | **swwn** *swwn-id*] | **ip-address** *ipv4/ipv6* | **pwwn** *pwwn-id* [**lun** *lun-id*] | **symbolic-nodename** *nodename*}

Syntax Description

device-alias *aliasname*	Specifies the member device alias. Maximum length is 64 characters.
both	Specifies the device type as both.
initiator	Specifies the device type as initiator.
target	Specifies the device type as target.
lun *lun-id*	(Optional) 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.
ip-address *ipv4*|*ipv6*	Specifies a member IP address in either IPv4 format, *A.B.C.D* , or IPv6format, *X:X:X::X/n* .
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
5.2(6)	Added the keywords both, initiator, target to the syntax description.
1.0(2)	This command was introduced.
2.1(1a)	Added zoneset-zone configuration submode.
3.0(1)	Added the **IPv6** IP address format.

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 enter the device type as target:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# zone name zs1 vsan 1
switch(config-zone)# member device-alias a target
switch(config-zone)#
```

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

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
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 terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# zoneset name ZoneSet1 vsan 1
switch(config-zoneset-zone)# member fcid 0x111112
```

The following example shows how to assign an iSCSI IPv6 address-based membership into a zone:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# zoneset name ZoneSet1 vsan 1
switch(config-zoneset-zone)#member ipv6-address 2001:0DB8:800:200C::417A
```

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

```
switch(config-zoneset-zone)# no member ipv6-address 2001:0DB8:800:200C::417A
```

Related Commands

Command	Description
show zoneset	Displays zone set information.

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.

member (zoneset configuration submode)

To configure zone set zone 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
1.0(2)	This command was introduced.

Usage Guidelines

None.

Examples

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

```
switch# config terminal
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.

member (zoneset-zone configuration submode)

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

member {**device-alias** *aliasname* [**lun** *lun-id*] | **domain-id** *domain-id* **port-number** *port* | **fcalias** *alias-name* [**lun** *lun-id*] | **fcid** *fc-id* [**lun** *lun-id*] | **fwwn** *fwwn-id* | **interface fc** *slot/port* [**domain-id** *domain-id* | **swwn** *swwn-id*] | **ip-address** *ip-address* | **pwwn** *pwwn-id* [**lun** *lun-id*] | **symbolic-nodename** *nodename*}
no member {**device-alias** *aliasname* [**lun** *lun-id*] | **domain-id** *domain-id* **port-number** *port* | **fcalias** *alias-name* [**lun** *lun-id*] | **fcid** *fc-id* [**lun** *lun-id*] | **fwwn** *fwwn-id* | **interface fc** *slot/port* [**domain-id** *domain-id* | **swwn** *swwn-id*] | **ip-address** *ip-address* | **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.
ip-address *ip-address*	Specifies a member IP address.
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

Zone set zone configuration submode.

Command History

Release	Modification
2.1(1)	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 configure an fcalias called AliasSample on VSAN 3.

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# zoneset name ZoneSet1 vsan 1
switch(config-zoneset)# zone name InLineZone1
switch(config-zoneset-zone)# member fcid 0x111112
```

Related Commands

Command	Description
show zoneset	Displays zone set information.

member pwwn

To explicitly include or exclude a device as a congested device, use the **member pwwn** *pwwn* **vsan** *id* [**credit-stall**]command. To return to the default configuration, use the **no** form of the command.

member pwwn *pwwn* **vsan** *id* [**credit-stall**]
no member pwwn *pwwn* **vsan** *id* [**credit-stall**]

Syntax Description

pwwn	Specifies the congested device's pWWN.
vsan *id*	Specifies a VSAN.
credit-stall	Specifies to explicitly add a congested device with the portguard action as credit stall.

Command Default

Congested devices are not configured.

Command Modes

Congested device configuration mode (config-congested-dev-static)
Congested device configuration mode (config-congested-dev-exc)

Command History

Release	Modification
8.5(1)	This command was introduced.

Examples

This example shows how to manually configure a device as a congested device. The configured device will be permanently treated as a congested device until it is removed from congestion isolation. All traffic to this device traversing the device's ISLs that are in ER_RDY flow-control mode will be routed to the low-priority VL (VL2).

```
switch# configure
switch(config)# fpm congested-device static list
switch(config-congested-dev-static)# member pwwn 10:00:00:00:c9:f9:16:8d vsan 4 credit-stall
```

This example shows how to configure a device that is to be excluded from automatic congestion isolation by the port monitor. Even when the rising threshold of a port-monitor counter is reached and the portguard action is set to cong-isolate, this device will not be isolated as a congested device, and traffic to this device traversing the device's ISLs that are in ER_RDY flow-control mode will not be routed to the low-priority VL (VL2).

```
switch# configure terminal
switch(config)# fpm congested-device exclude list
switch(config-congested-dev-exc)# member pwwn 10:00:00:00:c9:f9:16:8d vsan 4
```

Related Commands

Command	Description
feature fpm	Enables Fabric Performance Monitor (FPM).

Command	Description
fpm congested-device	Configures a congested device.
show fpm	Displays FPM information.

metric (iSLB initiator configuration)

To assign a load-balancing metric for an iSLB initiator, use the **metric** command in iSLB initiator configuration submode. To revert to the default load-balancing metric, use the **no** form of the command.

metric *metric*
no metric *metric*

Syntax Description

metric *metric*	Specifies a load-balancing metric. The range is 10 to 10000.

Command Default

1000

Command Modes

iSLB initiator configuration submode.

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines

You can assign a load metric to each initiator for weighted load balancing. The load calculated is based on the number of initiators on a given iSCSI interface. This feature accommodates initiators with different bandwidth requirements. For example, you could assign a higher load metric to a database server than to a web server. Weighted load balancing also accommodates initiators with different link speeds.

Examples

The following example specifies a load-balancing metric for the iSLB initiator:

```
switch# config t
switch(config)# islb initiator ip-address 100.10.10.10
switch (config-islb-init)# metric 100
```

The following example reverts to the default load-balancing metric:

```
switch (config-islb-init)# no
 metric 100
```

Related Commands

Command	Description
islb initiator	Assigns an iSLB name and IP address to the iSLB initiator and enters iSLB initiator configuration submode.
show islb initiator configured	Displays iSLB initiator information for the specified configured initiator.
show islb initiator detail	Displays detailed iSLB initiator information.
show islb initiator summary	Displays iSLB initiator summary information.

mkdir

To create a directory in the flash file system, use the **mkdir** command in EXEC mode.

mkdir *directory*

Syntax Description

directory	Name of the directory to create.

Command Default

None.

Command Modes

EXEC

Command History

Release	Modification
1.0(2)	This command was introduced.

Usage Guidelines

This command is only valid on Class C flash file systems.

You can specify whether to create the directory on bootflash:, slot0, or volatile:. If you do not specify the device, the switch creates the directory on the current directory.

Examples

The following example creates a directory called test in the slot0: directory:

```
switch# mkdir slot0:test
```

The following example creates a directory called test at the current directory level. If the current directory is slot0:mydir, this command creates a directory called slot0:mydir/test.

```
switch# mkdir test
```

Related Commands

Command	Description
dir	Displays a list of files on a file system.
rmdir	Removes an existing directory in the flash file system.

mode

To configure the ESP mode, use the mode command. To delete the ESP mode, use the no form of the command.

mode {**gcm** | **gmac**}
no mode {**gcm** | **gmac**}

Syntax Description

gcm	Specifies the GCM mode for the interface.
gmac	Specifies the GMAC mode for the interface.

Command Default

None.

Command Modes

Configuration submode.

Command History

Release	Modification
NX-OS 4.2(1)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to configure the GCM mode for the interface:

```
switch(config-if-esp)# mode gcm
switch(config-if-esp)#
```

The following example shows how to configure the GMAC mode for the interface:

```
switch(config-if-esp)# mode gmac
switch(config-if-esp)#
```

Related Commands

Command	Description
fcsp enable	Enables FCSP.

modem connect line

To enable a modem connection when the switch is already in operation, use the **modem connect line** command in EXEC mode.

modem connect line {**com1** | **console**}

Syntax Description

com1	Connects the modem through a COM1 line connection.
console	Connects the modem through a console line connection.

Command Default

Disabled.

Command Modes

EXEC mode.

Command History

Release	Modification
1.2(2)	This command was introduced.

Usage Guidelines

If the switch is already in operation when the modem is connected, issue this command to notify the software that a modem is going to be added.

You must issue the **modem connect line** command before setting the user-input string for initialization.

Examples

The following example announces a modem connection from the line console:

```
switch# modem connect line console
```

The following example announces a modem connection from the COM1 port:

```
switch# modem connect line com1
```

monitor counter (port-group-monitor configuration mode)

To configure monitoring of a specific counter within a Port Group Monitor policy, use the monitor counter command. To remove polling functionality for a specific counter within Port Group Monitor policy, use the no form of the command.

monitor counter {**rx-performance** | **tx-performance**} **poll-interval** *interval* **delta rising-threshold** *rising threshold* **falling-threshold** *low threshold*
no monitor counter {**rx-performance** | **tx-performance**} **poll-interval** *interval* **delta rising-threshold** *rising threshold* **falling-threshold** *low threshold*

Syntax Description

rx-performance	Counfigures RX performance counter.
tx-performance	Configures TX performance counter.
poll-interval	Configures poll interval for counter.
interval	Displays poll interval in seconds. The range is from 0 to 2147483647.
delta	Displays the threshold type.
rising-threshold	Configures the upper threshold value.
rising-threshold	Sets numerical upper threshold limit. The range is from 0 to 100.
falling-threshold	Configures the lower threshold value.
low-threshold	Sets numerical low threshold limit. The range is from 0 to 100.

Command Default

None.

Command Modes

Configuration Port Group Monitor mode.

Command History

Release	Modification
NX-OS 4.2(1)	This command was introduced.

Usage Guidelines

When the no monitor counter command is used in the config-port-group-monitor mode, it turns-off the monitoring of that specific counter in the given policy.

Examples

The following example shows how to configure monitoring of a specific counter within a Port Group Monitor policy:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)#port-group-monitor name pgmon
switch(config-port-group-monitor)# monitor counter rx-performance
switch(config-port-group-monitor)# monitor counter tx-performance
switch(config-port-group-monitor)#
```

The following example shows how to turn off the monitoring of a specific counter in the given policy:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# no port-group-monitor name pgmon
switch(config-port-group-monitor)# no port-group-monitor rx-performance
switch(config-port-group-monitor)# no port-group-monitor tx-performance
switch(config-port-group-monitor)# show port-group-monitor
------------------------------------------------------------------------------
-----------
Port Group Monitor : enabled
------------------------------------------------------------------------------
-----------
Policy Name : pgmonAdmin status : Not Active
Oper status  : Not Active
Port type    : All Port Groups
-----------------------------------------------------------------------------------------Counter
 Threshold Interval %ge Rising Threshold %ge Falling Threshold portguard------- ---------
-------- -------------------- ---------------------- ------RX Performance Delta 60 80 20
YesTX Performance Delta 60 80 20
No-------------------------------------------------------------------------
```

Related Commands

Command	Description
show port-group-monitor	Displays Port Group Monitor information.

monitor counter (port-monitor configuration mode)

To configure monitoring of a specific counter within a Port Monitor policy, use the monitor counter command. To remove polling functionality for a specific counter within Port Monitor policy, use the no form of the command.

monitor counter {**credit-loss-reco** | **invalid-crc** | **invalid-words** | **link-loss** | **lr-rx** | **lr-tx** | **rx-datarate** | **signal-loss** | **sync-loss** | **timeout-discards** | **tx-credit-not-available** | **tx-datarate** | **tx-discards**}
no monitor counter {**credit-loss-reco** | **invalid-crc** | **invalid-words** | **link-loss** | **lr-rx** | **lr-tx** | **rx-datarate** | **signal-loss** | **sync-loss** | **timeout-discards** | **tx-credit-not-available** | **tx-datarate** | **tx-discards**}

Syntax Description

credit-loss-reco	Counfigures credit loss recovery counter.
invalid-crc	Configures invalid crc counter.
invalid-words	Configures invalid words counter.
link-loss	Configures link failure counter.
lr-rx	Configures the number of link reset responses received by the Fc port.
lr-tx	Configures link reset responses transmitted by the FC port.
rx-datarate	Configure rx performance counter.
signal-loss	Configures the signal loss counter.
sync-loss	Configures the sync loss counter.
timeout-discards	Configure timeout discards counter.
tx-credit-not-available	Configure credit not available counter.
tx-datarate	Configure tx performance counter.
tx-discards	Configure tx discards counter.

Command Default

All counters are monitored by default in this release.

Command Modes

Configuration Port Monitor mode.

Command History

Release	Modification
NX-OS 4.2(1)	This command was introduced.

Usage Guidelines

When the **no monitor counter** command is used in the config-port-group-monitor mode, it turns-off the monitoring of that specific counter in the given policy.

This command is available in **port-monitor-configuration** mode.

Examples

The following example shows how to configure the credit loss recovery counter within a Port Monitor policy:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# port-monitor name pgmon
switch(config-port-monitor)# monitor counter credit-loss-reco
switch(config-port-monitor)#
```

Related Commands

Command	Description
port-monitor	
counter	Displays the individual counter.
show port-monitor	Displays Port Monitor information.

monitor counter tx-slowport-count

To configure monitoring of the tx-slowport-count counter, use the monitor counter tx-slowport-count command. To remove monitoring of tx-slowport-count, use the no form of the command.

monitor counter tx-slowport-count
no monitor counter tx-slowport-count

Syntax Description

There are no keywords or arguments for this command.

Command Default

None.

Command Modes

Configuration Port Group Monitor mode.

Command History

Release	Modification
6.2(13)	This command was introduced.

Examples

The following example shows how to configure monitoring of the tx-slowport-count counter within a Port Monitor policy:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# port-monitor name pmon
switch(config-port-monitor)# monitor counter tx-slowport-count
switch(config-port-monitor)#
```

The following example shows how to turn off monitoring of the tx-slowport-count counter within a Port Monitor policy:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# port-monitor name pmon
switch(config-port-monitor)# no monitor counter tx-slowport-count
switch(config-port-monitor)#
```

Related Commands

Command	Description
show port-monitor	Displays Port Monitor information.

monitor counter tx-slowport-oper-delay

To configure monitoring of the tx-slowport-oper-delay counter, use the monitor counter tx-slowport-oper-delay command. To remove monitoring of tx-slowport-count, use the no form of the command.

monitor counter tx-slowport-oper-delay
no monitor counter tx-slowport-oper-delay

Syntax Description

There are no keywords or arguments for this command.

Command Default

None.

Command Modes

Configuration Port Group Monitor mode.

Command History

Release	Modification
6.2(13)	This command was introduced.

Examples

The following example shows how to configure monitoring of the tx-slowport-oper-delay counter within a Port Monitor policy:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# port-monitor name pmon
switch(config-port-monitor)# monitor counter tx-slowport-oper-delay
switch(config-port-monitor)#
```

The following example shows how to turn off monitoring of the tx-slowport-oper-delay counter within a Port Monitor policy:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# port-monitor name pmon
switch(config-port-monitor)# no monitor counter tx-slowport-oper-delay
switch(config-port-monitor)#
```

Related Commands

Command	Description
show port-monitor	Displays Port Monitor information.

monitor counter txwait

To configure monitoring of the txwait counter, use the no monitor counter txwait command. To remove monitoring of txwait, use the no form of the command.

monitor counter txwait
no monitor counter txwait

Syntax Description

There are no keywords or arguments for this command.

Command Default

None.

Command Modes

Configuration Port Group Monitor mode.

Command History

Release	Modification
6.2(13)	This command was introduced.

Examples

The following example shows how to configure monitoring of the txwait counter within a Port Monitor policy:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# port-monitor name pmon
switch(config-port-monitor)# monitor counter txwait
switch(config-port-monitor)#
```

The following example shows how to turn off monitoring of the txwait counter within a Port Monitor policy:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# port-monitor name pmon
switch(config-port-monitor)# no monitor counter txwait
switch(config-port-monitor)#
```

Related Commands

Command	Description
show port-monitor	Displays Port Monitor information.

monitor session

To configure a SPAN session, use the **monitor session** command. To remove a configured SPAN feature or revert it to factory defaults, use the no form of the command.

monitor session *session-id*
no span session *session-id*

Syntax Description

session-id	Specifies the SPAN session ID. The range is 1 to 48.

Command Default

None.

Command Modes

Configuration mode

Command History

Release	Modification
6.2(1)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to configure a local SPAN session in RX mode:

```
switch# config terminal
switch(config)# monitor session 1 rx
switch(config-monitor)#
```

The following example shows how to delete a local SPAN session in RX mode:

```
switch(config)# no
 monitor session 1 rx
```

The following example shows how to configure a local SPAN with port-channel as source in tx mode:

```
switch(config)# monitor session 1 tx
switch(config-monitor)#
```

Related Commands

Command	Description
destination interface	Configures a SPAN destination interface.
source	Configures a SPAN source.
show monitor session	Displays specific information about a SPAN session.

move

To remove a file from the source file and place it in the destination file, use the **move** command in EXEC mode.

move {**bootflash:** | **slot0:** | **volatile:**} [*directory* /] *filename* {**bootflash:** | **slot0:** | **volatile:**} [*directory* /] *filename*

Syntax Description

bootflash:	Source or destination location for internal bootflash memory.
slot0:	Source or destination location for the CompactFlash memory or PCMCIA card.
volatile:	Source or destination location for volatile memory.
directory	(Optional) Specifies the name of the directory.
filename	(Optional) Specifies the name of the file to move or create.

Command Default

None.

Command Modes

EXEC mode.

Command History

Release	Modification
1.0(2)	This command was introduced.

Usage Guidelines

If you do not specify the directory name in the command line, the switch prompts you for it.

Examples

The following example moves the file called samplefile from the slot0 directory to the mystorage directory:

```
switch# move slot0:samplefile slot0:mystorage/samplefile
```

Related Commands

Command	Description
dir	Displays a list of files on a file system.
mkdir	Creates a directory in the flash file system.
rmdir	Removes an existing directory in the flash file system.

mutual-chap username (iSCSI initiator configuration and iSLB initiator configuration)

To assign a username for the initiator's challenge, use the **mutual-chap username** command in iSCSI initiator configuration submode. To remove the username, use the **no** form of the command.

mutual-chap username*username* **password** {**0** *cleartext-password* | **7** *encrypted-passwordpassword*}
no mutual-chap username *username* **password** {**0** *cleartext-password* | **7** *encrypted-passwordpassword*}

Syntax Description

username *username*	Specifies a username. The maximum size is 32.
password	Specifies a password for the initiator's challenge.
0 *cleartext-password*	Specifies that the password is a cleartext CHAP password.
7 *encrypted-password*	Specifies that the password is an encrypted CHAP password.
password	Specifies a password for the username. The maximum size is 32.

Command Default

None.

Command Modes

iSCSI initiator configuration submode.
iSLB initiator configuration submode.

Command History

Release	Modification
2.0(1b)	This command was introduced.
3.0(1)	Added iSLB initiator configuration submode.

Usage Guidelines

The iSLB initiator can authenticate the Cisco MDS switch's initiator target during the iSCSI login phase. This authentication requires the user to configure a username and password for the switch to present to the iSLB initiator. The provided password is used to calculate a CHAP response to a CHAP challenge sent to the IPS port by the initiator.

Examples

The following example shows how to configure a username, password type, and password for an iSCSI initiator challenge (mutual CHAP):

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# iscsi initiator name iqn.1987-02.com.cisco.initiator
switch(config-iscsi-init)# mutual-chap username userName password 0 cisco
switch(config-iscsi-init)# mutual-chap username userNameTest password 0 test
switch(config-iscsi-init)#
```

The following example assigns a username and password to the initiator's challenge for an iSLB initiator:

```
switch# config t
switch(config)# islb initiator ip-address 100.10.10.10
switch (config-islb-init)# mutual-chap username tester password K9c4*1
```

The following example removes the username and password from the initiator's challenge for an iSLB initiator:

```
switch (config-islb-init)# no mutual-chap username tester password K9c4*1
```

Related Commands

Command	Description
islb initiator	Assigns an iSLB name and IP address to the iSLB initiator and enter s iSLB initiator configuration submode.
iscsi initiator name	Assigns an iSCSI name and changes to iSCSI initiator configuration submode.
show iscsi initiator	Displays iSCSI initiator information.
show iscsi initiator configured	Displays iSCSI initiator information for the configured iSCSI initiator.
show iscsi initiator detail	Displays detailed iSCSI initiator information.
show iscsi initiator summary	Displays iSCSI initiator summary information.
show islb initiator	Displays iSLB initiator information.
show islb initiator configured	Displays iSLB initiator information for the configured iSLB initiator.
show islb initiator detail	Displays detailed iSLB initiator information.
show islb initiator summary	Displays iSLB initiator summary information.