A Commands

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

aaa accounting logsize

To set the size of the local accounting log file, use the **aaa accounting logsize** command to set the size of the local accounting log file. To revert to the default log file size of 250000 bytes, use the **no** form of the command.

aaa accounting logsize *integer*

no aaa accounting logsize

Syntax Description

logsize	Configures local accounting log file size (in bytes).
integer	The size limit of the local accounting log file in bytes from 0 to 250000.

Defaults

25,0000.

Command Modes

Configuration mode.

Command History

Release	Modification
1.0(2)	This command was introduced.
2.0	This command was deprecated.

Usage Guidelines

None.

Examples

The following example shows the log file size configured at 29000 bytes:

```
switch# config terminal
switch(config)# aaa accounting logsize 29000
```

Related Commands

Command	Description
show accounting logsize	Displays the configured log size.
show accounting log	Displays the entire log file.

aaa accounting default

To configure the default accounting method, use the **aaa accounting default** command. To revert to the default local accounting, use the **no** form of the command.

aaa accounting default {**group** *group-name* [**none**] | **none**} | **local** [**none**] | **none**}

no aaa accounting default {**group** *group-name* [**none**] | **none**} | **local** [**none**] | **none**}

Syntax Description

group *group-name*	Specifies the group authentication method. The group name is a maximum of 127 characters.
none	(Optional) No authentication, everyone permitted.
local	Specifies the local authentication method.

Defaults

Local accounting.

Command Modes

Configuration mode.

Command History

Release	Modification
1.3(1)	This command was introduced.

Usage Guidelines

Specify the currently configured command preceded by a **no** in order to revert to the factory default.

Examples

The following example enables accounting to be performed using remote TACACS+ servers which are members of the group called TacServer, followed by the local accounting method:

```
switch# config t
switch(config)# aaa accounting default group TacServer
```

The following example turns off accounting:

```
switch(config)# aaa accounting default none
```

The following example reverts to the local accounting (default):

```
switch(config)# no aaa accounting default group TacServer
```

Related Commands

Command	Description
show aaa accounting	Displays the configured accounting methods.

aaa authentication login chap enable

To enable CHAP authentication for login, use the **aaa authentication login chap enable** command. To disable CHAP authentication, use the **no** form of the command.

aaa authentication login chap enable

no aaa authentication login chap enable

Syntax Description

This command has no arguments or keywords.

Defaults

None.

Command Modes

Configuration mode.

Command History

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

Usage Guidelines

None.

Examples

The following example shows how to enable CHAP authentication for login:

```
switch(config)# aaa authentication login chap enable
switch(config)#
```

Related Commands

Command	Description
show aaa authentication login CHAP	Displays CHAP authentication for login.

aaa authentication dhchap default

To configure DHCHAP authentication method, use the **aaa authentication dhchap default** command in configuration mode. To revert to factory defaults, use the **no** form of the command.

aaa authentication dhchap default {**group** *group-name* [**none**] | **none**} | **local** [**none**] | **none**}}

no aaa authentication dhchap default {**group** *group-name* [**none**] | **none**} | **local** [**none**] | **none**}

Syntax Description

group *group-name*	Specifies the group name authentication method. The group name is a maximum of 127 characters.
none	(Optional) Specifies no authentication.
local	Specifies local user name authentication (default).

Defaults

Local user name authentication.

Command Modes

Configuration mode.

Command History

Release	Modification
1.3(1)	This command was introduced.

Usage Guidelines

The **local** option disables other authentication methods and configures local authentication to be used exclusively.

Specify the currently configured command preceded by a **no** in order to revert to the factory default.

Examples

The following example enables all DHCHAP authentication to be performed using remote TACACS+ servers which are members of the group called TacServers, followed by the local authentication:

```
switch# config terminal
switch(config)# aaa authentication dhchap default group TacServer
```

The following example reverts to the local authentication method (default):

```
switch(config)# no aaa authentication dhcahp default group TacServer
```

Related Commands

Command	Description
show aaa authentication	Displays the configured authentication methods.

aaa authentication iscsi default

To configure the iSCSI authentication method, use the **aaa authentication iscsi default** command in configuration mode. To negate the command or revert to factory defaults, use the **no** form of this command.

aaa authentication iscsi default {**group** *group-name* [**none**] | **none**} | **local** [**none**] | **none**}}

no aaa authentication iscsi default {**group** *group-name* [**none**] | **none**} | **local** [**none**] | **none**}}

Syntax Description

group *group-name*	Specifies the group name. The group name is a maximum of 127 characters.
none	(Optional) Specifies no authentication.
local	Specifies local user name authentication (default).

Defaults

Local user name authentication.

Command Modes

Configuration mode.

Command History

Release	Modification
1.3(1)	This command was introduced.

Usage Guidelines

The **local** option disables other authentication methods and configures local authentication to be used exclusively.

Specify the currently configured command preceded by a **no** in order to revert to the factory default.

Examples

The following example enables all iSCSI authentication to be performed using remote TACACS+ servers which are members of the group called TacServers, followed by the local authentication:

```
switch# config terminal
switch(config)# aaa authentication iscsi default group TacServer
```

The following example reverts to the local authentication method (default):

```
switch(config)# no aaa authentication iscsi default group TacServer
```

Related Commands

Command	Description
show aaa authentication	Displays the configured authentication methods.

aaa authentication login

To configure the authentication method for a login, use the **aaa authentication login** command in configuration mode. To revert to local authentication, use the **no** form of the command.

aaa authentication login {**default | fallback | error | local | group** *group-name* [**none**] | **none**} | **local** [**none**] | **none**} | **console** {**fallback | error | local** | *group-name* [**none**] | **none**} | **local** [**none**] | **none**} | **error-enable | mschap enable**}

no aaa authentication login {**default | fallback | error | local | group** *group-name* [**none**] | **none**} | **local** [**none**] | **none**} | **console** {**fallback | error | local |** *group-name* [**none**] | **none**} | **local** [**none**] | **none**} | **error-enable | mschap enable**}

Syntax Description

default	Specifies the default method.
fallback	Specifies the fallback mechanism configuration error.
error	Specifies the authentication error. The maximum size is 32 characters.
local	Specifies the fallback to local authentication.
group *group-name*	Specifies the group name. The group name is a maximum of 127 characters.
none	(Optional) Sets no authentication; everyone is permitted.
local	Specifies the local authentication method.
console	Configures the console authentication login method.
error-enable	Enables login error message display.
mschap enable	Enables MS-CHAP authentication for login.

Defaults

Local user name authentication.

Command Modes

Configuration mode.

Command History

Release	Modification
NX-OS 5.0(1a)	Added **fallback**, **error**, and **local** keywords to the syntax description.
1.3(1)	This command was introduced.
3.0(1)	Added the **mschap** option.

Usage Guidelines

Use the **console** option to override the console login method.

Specify the currently configured command preceded by a **no** to revert to the factory default.

Examples

The following example shows how to configure a default method:

```
switch# config t
switch(config)# aaa authentication login default fallback error local
switch(config)#
```

The following example shows how to configure a console method:

```
switch# config t
switch(config)# aaa authentication login console fallback error local
switch(config)#
```

The following example enables all login authentication to be performed using remote TACACS+ servers, which are members of the group called TacServer, followed by the local login method:

```
switch# config t
switch(config)# aaa authentication login default group TacServer
```

The following example enables console authentication to use the group called TacServer, followed by the local login method:

```
switch(config)# aaa authentication login console group TacServer
```

The following example turns off password validation:

```
switch(config)# aaa authentication login default none
```

The following example reverts to the local authentication method (default):

```
switch(config)# no aaa authentication login default group TacServer
```

The following example enables MS-CHAP authentication for login:

```
switch(config)# aaa authentication login mschap enable
```

The following example reverts to the default authentication method for login, which is the Password Authentication Protocol (PAP):

```
switch(config)# no aaa authentication login mschap enable
```

Related Commands

Command	Description
show aaa authentication	Displays the configured authentication methods.

aaa authentication login ascii-authentication

To enable ASCII authentication, use the **aaa authentication login ascii-authentication** command. To disable this feature, use the **no** form of the command.

aaa authentication login ascii-authentication

no aaa authentication login ascii-authentication

Syntax Description

This command has no arguments or keywords.

Defaults

None.

Command Modes

Configuration mode.

Command History

Release	Modification
NX-OS 4.1(3a)	**aaa authentication login password-aging enable** command changed to **aaa authentication login ascii-authentication.**

Usage Guidelines

Password aging notification is initiated when the user authenticates to a Cisco MDS 9000 switch with a TACACS+ account. The user is notified when a password is about to expire or has expired. If the password has expired, the user is prompted to change the password.

Note As of Cisco MDS SAN-OS Release 3.2(1), only TACACS+ supports password aging notification. If you try to use RADIUS servers by enabling this feature, RADIUSs will generate a SYSLOG message and authentication will fall back to the local database. Cisco ACS TACACS+ server must have chpass enabled as well.

- Password change—You can change your password by entering a blank password.
- Password aging notification—Notifies password aging. Notification happens only if the AAA server is configured and MSCHAP and MSCHAPv2 is disabled.
- Password change after expiration—Initiates password change after the old password expires. Initiation happens from the AAA server.

Note Password aging notification fails if you do not disable MSCHAP and MSCHAPv2 authentication.

Examples

The following example shows how to enable ASCII authentication:

```
switch(config)# aaa authentication login ascii-authentication
switch#(config)#
```

Related Commands

Command	Description
show aaa authentication login ascii-authentication	Displays the configured ASCII authentication method.

aaa authentication login mschapv2 enable

To enable MS-CHAPv2 authentication for login, use the **aaa authentication login mschapv2 enable** command. To disable MS-CHAPv2 authentication, use the **no** form of the command.

aaa authentication login mschapv2 enable

no aaa authentication login mschapv2 enable

Syntax Description

This command has no arguments or keywords.

Defaults

None.

Command Modes

Configuration mode.

Command History

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

Usage Guidelines

MS-CHAPv2 cannot be configured when MS-CHAP or ASCII authentication is configured and also when a TACACS group is configured for authentication.

Examples

The following example shows how to enable MS-CHAPv2 authentication for login:

```
switch(config)# aaa authentication login mschapv2 enable
switch(config)#
```

Related Commands

Command	Description
show aaa authentication login mschapv2	Displays MS-CHAPv2 authentication for login.

auth-mechanism plain

To set the authentication mechanism as plain, use the **auth-mechanism plain** command in configuration mode. To disable this feature, use the **no** form of the command.

auth-mechanism plain

no auth-mechanism plain

Syntax Description

This command has no arguments or keywords.

Defaults

Plain.

Command Modes

Configuration mode

Command History

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

Usage Guidelines

None.

Examples

The following example shows how to set the authentication mechanism as plain:

```
switch(config-ldap)# auth-mechanism plain
switch(config-ldap)#
```

Related Commandss

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

aaa authorization

To configure authorization for a function, use the **aaa authorization** command. To disable authorization for a function, use the **no** form of the command.

aaa authorization {**commands** | **config-commands**}{**default**} {{[**group** *group-name*] | [**local**]} |{[**group** *group-name*] | [**none**]}}

no aaa authorization {commands | config-commands}{default}{{[group *group-name*] | [**local**]} |{[**group** *group-name*] | **[none**]}}

Syntax Description

commands	Specifies authorization for all exec-mode commands.
config-commands	Specifies authorization for all commands under config mode L2 and L3.
default	Specifies the default methods.
group *group-name*	(Optional) Specifies the server group and group name..
local	(Optional) Specifies the local username authentication.
none	(Optional) Specifies no authorization.

Defaults

Authorization is disabled for all actions (equivalent to the method keyword **none**). If the **aaa authorization** command for a particular authorization type is entered without a specifies named method list. The default method list is automatically applied to all interfaces or lines (where this authorization type applies for except those that have a named method list explicitly defined. A defined method list overrides the default method list if no default method list is defined, then no authorization takes place.

Command Modes

Configuration mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to configure authorization for a configuration command function:

```
switch(config)# aaa authorization config-commands default group tac1 local
switch(config)#
```

The following example shows how to configure authorization for a command function:

```
switch(config)# aaa authorization commands default group tac1 local none
switch(config)#
```

Related Commands

Command	Description
show aaa authorization all	Displays all authorization information.

aaa authorization ssh-certificate

To configure SSH certificate authorization, use the **aaa authorization ssh-certificate** command. To disable this feature, use the **no** form of the command.

aaa authorization ssh-certificate default [**group** | **local**]

Syntax Description

default	Specifies default SSH methods.
group	Specifies server groups.
local	Specifies local user name authentication.

Defaults

None

Command Modes

Configuration mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to use local user name authentication:

```
switch(config)# aaa authorization ssh-certificate default local
switch(config)#
```

The following example shows how to specify server groups:

```
switch(config)# aaa authorization ssh-certificate default group ldap1
switch#
```

Related Commands

Command	Description
show aaa authorization all	Displays all authorization information.

aaa authorization ssh-publickey

To configure SSH public key authorization, use the **aaa authorization ssh-publickey** command. To disable this feature, use the **no** form of the command.

aaa authorization ssh-publickey default [**group | local**]

no aaa authorization ssh-publickey default [**group | local**]

Syntax Description

default	Specifies default SSH methods.
group	(Optional) Specifies server groups.
local	(Optional) Specifies local user name authentication.

Defaults

None

Command Modes

Configuration mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to use local user name authentication:

```
switch(config)# aaa authorization ssh-publickey default local
switch(config)#
```

The following example shows how to specify server groups:

```
switch(config)# aaa authorization ssh-publickey default group ldap1
switch#
```

Command	Description
show aaa authorization all	Displays all authorization information.

aaa group server

To configure one or more independent server groups, use the **aaa group server** command in configuration mode. To remove the server group, use the **no** form of this command to remove the server group.

aaa group server {**radius** | **tacacs+** | **ldap**} *group-name* **server** *server-name* **no server** *server-name*

no aaa group server {**radius** | **tacacs+** | **ldap**} *group-name* **server** *server-name* **no server** *server-name*

Syntax Description

radius	Specifies the RADIUS server group.
tacacs+	Specifies the TACACS+ server group.
ldap	Specifies LDAP server group name.
group-name	Identifies the specified group of servers with a user-defined name. The name is limited to 64 alphanumeric characters.
no server *server-name*	Specifies the server name to add or remove from the server group.

Defaults

None

Command Modes

Sub configuration mode

Command History

Release	Modification
NX-OS 5.0(1)	Added **ldap** keyword to the syntax description.
1.3(1)	This command was introduced.

Usage Guidelines

You can configure these server groups at any time but they only take effect when you apply them to a AAA service using the **aaa authentication login** or the **aaa accounting** commands.

LDAP groups cannot be used for **AAA accounting** commands.

Examples

The following example shows how to configure LDAP server group name:

```
switch(config)# aaa group server ldap a
switch(config-ldap)#

switch# config terminal
switch(config)# aaa group server tacacs+ TacacsServer1
switch(config-tacacs+)# server ServerA
switch(config-tacacs+)# exit
switch(config)# aaa group server radius RadiusServer19
switch(config-radius)# server ServerB
switch(config-radius)# no server ServerZ
```

Related Commands

Command	Description
show aaa groups	Displays all configured server groups.
show radius-server groups	Displays configured RADIUS server groups.
show tacacs-server groups	Displays configured TACACS server groups.

abort

To discard a Call Home configuration session in progress, use the **abort** command in Call Home configuration submode.

abort

Syntax Description

This command has no other arguments or keywords.

Defaults

None

Command Modes

Call Home configuration submode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to discard a Call Home configuration session in progress:

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

Related Commands

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

action cli

To configure a VSH command string to be executed when an Embedded Event Manager (EEM) applet is triggered, use the **action cli** command. To disable the VSH command string, use the **no** form of the command.

action *number* [*.number2*] **cli** *command1* [*command2...*] [**local**]

no action *number* [*.number2*] **cli** *command1* [*command2...*] [**local**]

Syntax Description

number	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.
local	(Optional) Specifies the action that is to be executed in the same module on which the event occurs.

Defaults

None.

Command Modes

Embedded Event Manager mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to configure a CLI command:

```
switch# configure terminal
switch(config)# event manager applet cli-applet
switch(config-applet)# action 1.0 cli "show interface e 3/1"
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

action counter

To specify a setting or modify a named counter when an Embedded Event Manager (EEM) applet is triggered, use the **action counter** command. To restore the default value to the counter, use the **no** form of the command.

action *number* [.*number2*] **counter name** *counter* **value** *val* **op** {**dec | inc | nop | set**}

no action *number* [.*number2*] c**ounter name** *counter* **value** *val* **op** {**dec | inc | nop | set**}

Syntax Description

number .number2	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.
name *name*	The counter name can be any case-sensitive, alphanumeric string up to 32 characters.
value *val*	Specifies the value of the counter. The *value* can be an integer from 0 to 2147483647 or a substituted parameter.
op {**dec	inc	nop	set**}	The following operations can be performed: • **dec**—Decrement the counter by the specified value. • **inc**—Increment the counter by the specified value. • **nop**—Only print the specified value. • **set**—Set the counter to the specified value.

Defaults

None

Command Modes

Embedded Event Manager mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to set or modify the counter when the EEM counter applet is triggered:

```
switch# configure terminal
switch(config)# event manager applet counter-applet
switch(config-applet)# action 2.0 counter name mycounter value 20 op
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

action event-default

To execute the default action for the associated event, use the **action event-default** command. To disable the default action, use the **no** form of the command.

action *number* [.*number2*] **event-default**

no action *number* [.*number2*] **event-default**

Syntax Description

number . *number2*	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.

Defaults

None

Command Modes

Embedded Event Manager mode

Command History

Release	Modification
NX-OS 4.2(1)	Added a note.
NX-OS 4.1(3)	This command was introduced.

Usage Guidelines

If you want to allow the triggered event to process any default actions, you must configure the EEM policy to allow the event default action statement. For example, if you match a CLI command in a match statement, you must add the event-default action statement to the EEM policy or EEM will not allow the CLI command to execute.

Examples

The following example shows how to specify that the default action of the event be performed when an EEM applet is triggered:

```
switch# configure terminal
switch(config)# event manager applet default-applet
switch(config-applet)# action 1.0 event-default
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

action exception log

To log an exception if the specific conditions are encountered when an Embedded Event Manager (EEM) applet is triggered, use the **action exception log** command.

action *number* [*.number2*] **exception log module** *module* **syserr** *error* **devid** *id* **errtype** *type* **errcode** *code* **phylayer** *layer* **ports** *list* **harderror** *error* [**desc** *string*]

Syntax Description

number .number2	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.
module *module*	Records an exception for the specified module. Enter a module word.
syserr *error*	Records an exception for the specified system error. Enter an error word.
devid *id*	Records an exception for the specified device ID. Enter an ID word.
errtype *type*	Records an exception for the specified error type. Enter a type word.
errcode *code*	Records an exception for the specified error code. Enter a code word.
phylayer *layer*	Records an exception for the specified physical layer. Enter a layer word.
ports *list*	Records an exception for the specified ports. Enter a list word.
harderror *error*	The reset reason is a quoted alphanumeric string up to 80 characters.
desc *string*	(Optional) Describes the exception logging condition.

Defaults

None

Command Modes

Embedded Event Manager mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to log an EEM applet exception:

```
switch# configure terminal
switch(config)# event manager applet exception-applet
switch(config-applet)# action 1.42 exceptionlog module 1 syserr 13 devid 1 errtype fatal
errcode 13 phylayer 2 ports 1-42 harderror 13 desc "fatal exception logging"
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

action forceshut

To configure a forced shutdown of a module, a crossbar, ASCII, or the entire switch when an Embedded Event Manager (EEM) applet is triggered, use the **action forceshut** command.

action *number* [.*number2*] **forceshut** [**module** *slot* | **xbar** *xbar-number*] **reset-reason** *string*

Syntax Description

number .number2	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.
module *slot*	(Optional) Specifies slot range. The range is from 1 to 10, or a substituted parameter.
xbar *xbar-number*	(Optional) Specifies an xbar number. The range is from 1 to 4 or a substituted parameter.
reset-reason *string*	Specifies reset reason. The reason is an alphanumeric string up to 80 characters.

Defaults

None

Command Modes

Embedded Event Manager mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to log an EEM applet exception:

```
switch# configure terminal
switch(config)# event manager applet exception-applet
switch(config-applet)# action 1.0 forceshut module 2 reset-reason “flapping links”
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

action overbudgetshut

To configure the shutdown of a module or the entire switch due to an overbudget power condition when an Embedded Event Manager (EEM) applet is triggered, use the **action overbudgetshut** command.

action *number* [*.number2*] **overbudgetshut [module** *slot* [*- slot*]]

Syntax Description

number .number2	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.
module *slot -slot*	(Optional) Specifies the slot range: • For 6slot the range is from 1 to 6. • For 9slot the range is from 1 to 9. • For 13slot the range is from 1 to 13.

Defaults

None

Command Modes

Embedded Event Manager

Command History

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

Usage Guidelines

None

Examples

The following example shows how to configure a power overbudget shutdown of module 3-5 when an EEM applet is triggered:

```
switch# configure terminal
switch(config)# event manager applet overbudget-applet
switch(config-applet)# action 1.0 overbudgetshut module 3-5
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

action policy-default

To enable the default actions of the policy being overridden, use the **action policy-default** command.

action *number* [.*number2*] **policy-default**

Syntax Description

number .number2	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.

Defaults

None

Command Modes

Embedded Event Manager mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to enable the default action of a policy being overridden when an EEM applet is triggered:

```
switch# configure terminal
switch(config)# event manager applet default-applet
switch(config-applet)# action 1.0 policy-default
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

action reload

To configure the reloading or to reload the switch software when an Embedded Event Manager (EEM) applet is triggered, use the **action reload** command. To remove the software reload configuration, use the **no** form of this command.

action *number* [*.number2*] **reload** [***module*** *slot* [*- slot*]]

Syntax Description

number .number2	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.
module *slot -slot*	(Optional) Specifies the slot range. The range is from 1 to 10, or a substituted parameter.

Defaults

None

Command Modes

Embedded Event Manager mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to enable the default action of a policy being overridden when an EEM applet is triggered:

```
switch# configure terminal
switch(config)# event manager applet default-applet
switch(config-applet)# action 1.0 policy-default
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

add-session vsan

To add sessions to a job, use the **add-session vsan** command in configuration mode.

add-session vsan *vsan-id* **pwwn** *tgt-pwwn* **all-luns | lun** *lun-id* **algorithm** *name/id*

Syntax Description

vsan-id	Specifies the VSAN ID of the target.
pwwn *tgt-pwwn*	Specifies the pWWN of the target.
all-luns	Specifies all of the LUNs in the Secure Erase session.
lun *lun-id*	Specifies the LUN ID of the Secure Erase session.
algorithm *name/id*	Specifies the algorithm that should be used for the session.

Defaults

None

Command Modes

Configuration Secure Erase job submode

Command History

Release	Modification
6.2(1)	This command was deprecated.
3.3(1a)	This command was introduced.

Usage Guidelines

None.

Examples

The following example shows how to add a VI to a specific Secure Erase job:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# secure-erase module 2 job 1
switch(config-se-job)# add-session vsan 1 pwwn 20:04:00:a0:b8:16:92:18 all-luns algorithm
RCMP
```

Related Commands

Command	Description
add-session job	Adds sessions to the job.

add-step dynamic

To add a dynamic pattern step to a specific algorithm, use the **add-step dynamic** command in configuration mode.

add-step dynamic [**0** | **1**]

Syntax Description

0	(Optional) Specifies that the pattern is generated using a random number generator.
1	(Optional) Specifies that the pattern is complimentary to the previous pattern.

Defaults

None

Command Modes

Configuration Secure Erase algorithm submode

Command History

Release	Modification
6.2(1)	This command was deprecated.
3.3(1a)	This command was introduced.

Usage Guidelines

None

Examples

The following example shows how to add a dynamic pattern step to a specific algorithm:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# secure-erase module 2 algorithm 0
switch(config-se-algo)#
switch(config-se-algo)# add-step dynamic 0
```

Related Commands

Command	Description
add-step static	Adds static pattern step to a specific algorithm.

add-step static

To add a static pattern step to a specific algorithm, use the **add-step static** command in configuration mode.

add-step static *pattern*

Syntax Description

pattern	Specifies the static pattern step. The pattern is to write ranges from 1 to 512 bytes and can consist of only characters 0 to 9 and A to F.

Defaults

None

Command Modes

Configuration Secure Erase algorithm submode

Command History

Release	Modification
6.2(1)	This command was deprecated.
3.3(1a)	This command was introduced.

Usage Guidelines

None

Examples

The following example shows how to add a static step to a specific algorithm:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# secure-erase module 2 algorithm 0
switch(config-se-algo)#
switch(config-se-algo)# add-step static 1
```

Related Commands

Command	Description
add-step dynamic	Adds a dynamic pattern step to a specific algorithm.

add-tgt vsan

To define target enclosure and add multiple target ports for a specific Secure Erase job, use the **add-tgt vsan** command in configuration mode.

add-tgt vsan *vsan-id* **pwwn** *target port pwwn*

Syntax Description

vsan-id	Specifies the VSAN ID of the target port added to a Secure Erase job.
pwwn *target port pwwn*	Specifies the port world-wide name (pWWN) of the target port.

Defaults

None

Command Modes

Configuration Secure Erase job submode

Command History

Release	Modification
6.2(1)	This command was deprecated.
3.3(1a)	This command was introduced.

Usage Guidelines

The target ports added to a specific job can be part of a different VSAN. The Secure Erase application creates VIs in a specific VSAN.

Note VIs and targets from different VSANs can be added to a job. A storage array may have multiple storage ports belonging to a different VSAN. You can create one job for one storage array.

Examples

The following example shows how to define a target enclosure and add multiple target ports for a specific Secure Erase job:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# secure-erase module 2 job 1
switch(config-se-job)# add-tgt vsan 1 pwwn 20:04:00:a0:b8:16:92:18
```

Related Commands

Command	Description
add-session vsans	Adds sessions to a job.
add-VI job	Adds a VI to a specific Secure Erase job.
secure-erase create job	Creates a Secure Erase job.

add-vi vsan

To add a VI to a specific Secure Erase job, use the **add-vi vsan** command in configuration mode.

add-vi vsan *vsan-id* **all | pwwn** *VI pwwn*

Syntax Description

vsan-id	Specifies the VSAN ID of the target where a VI exists.
all	Adds all the VSAN IDs of the target.
pwwn *VI pwwn*	Adds a specific VI in a given VSAN to the job.

Defaults

None

Command Modes

Configuration Secure Erase job submode

Command History

Release	Modification
6.2(1)	This command was deprecated.
3.3(1a)	This command was introduced.

Usage Guidelines

You must add at least one VI in each VSAN where a Secure Erase target is present.

All VIs that are part of the same job and the VSAN must have same target view. The same set of targets and LUNs must be exposed for all VIs in the same VSAN.

Note VI-CPP can not be added to a job. To know the WWN of the VI-CPP, please run the **show isapi virtual-nport database** command on SSM module.

Examples

The following example shows how to add all VIs to a given Secure Erase job:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# secure-erase module 2 job 1
switch(config-se-job)# add-vi vsan 1 all
```

The following example shows how to add a VI to a given Secure Erase job:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# secure-erase module 2 job 1
switch(config-se-job)# add-vi vsan 1 pwwn 2c:0d:00:05:30:00:43:64
```

Related Commands

Command	Description
add-session job	Adds sessions to the job.
add-VI job	Adds a VI to a specific Secure Erase job.
secure-erase create job	Creates a Secure Erase job.

action snmp-trap

To specify the generation of a Simple Network Management Protocol (SNMP) trap when an Embedded Event Manager (EEM) applet is triggered, use the **action snmp-trap** command. To disable the SNMP trap, use the **no** form of this command.

action *number*[*.number2*] **snmp-trap** {[**intdata1** *integer* [**intdata2** *integer*] [**str***data string*]]}

no action *number*[*.number2*] **snmp-trap** {[**intdata1** *integer* [**intdata2** *integer*] [**str***data string*]]}

Syntax Description

number .number2	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.
intdata1 *integer*	(Optional) Specifies an integer to be sent in the SNMP trap message to the SNMP agent.
intdata2 *integer*	(Optional) Specifies a second integer to be sent in the SNMP trap message to the SNMP agent.
str*data string*	(Optional) Specifies a string to be sent in the SNMP trap message to the SNMP agent. If the string contains embedded blanks, enclose it in double quotation marks.

Defaults

None

Command Modes

Embedded Event Manager mode.

Command History

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

Usage Guidelines

None

Examples

The following example shows how to specify an SNMP trap to generate when an EEM applet is triggered:

```
switch# configure terminal
switch(config)# event manager applet snmp-applet
switch(config-applet)# action 1.0 snmp-trap strdata "temperature problem"
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

action syslog

To configure a syslog message to generate when an Embedded Event Manager (EEM) applet is triggered, use the **action syslog** command. To disable the syslog message, use the **no** form of this command.

action *number*[.*number2*] **syslog** [**priority** *prio-val*] **msg** *error-message*

no action *number*[.*number2*] **syslog** [**priority** *prio-val*] **msg** *error-message*

Syntax Description

number	Number can be any number up to 16 digits. The range for *number2* is from 0 to 9.
priority *prio-val*	(Optional) Specifies the priority level of the syslog messages. If this keyword is not selected, all syslog messages are set at the informational priority level. If this keyword is selected, the priority level argument must be defined. There are three ways of defining the priority level: • Define the priority level using one of these methods: – 0—System is unusable. – 1—Immediate action is needed. – 2—Critical conditions. – 3—Error conditions. – 4—Warning conditions. – 5—Normal but significant conditions. – 6—Informational messages. This is the default. – 7—Debugging messages. • Enter the priority by selecting one of the priority keywords: –emergencies—System is unusable. – alerts—Immediate action is needed. – critical—Critical conditions. – errors—Error conditions. – warnings—Warning conditions. – notifications—Normal but significant conditions. – informational—Informational messages. This is the default. – debugging—Debugging messages.
msg *error message*	Specifies the error message. The message can be any quoted alphanumeric string up to 80 characters.

Defaults

None

Command Modes

Embedded Event Manager mode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to configure a syslog message to save when an EEM applet is triggered:

```
switch# configure terminal
switch(config)# event manager applet syslog-applet
switch(config-applet)# action 1.0 syslog priority notifications msg "cpu high"
switch(config-applet)#
```

Related Commands

Command	Description
event manager applet	Displays an applet with the Embedded Event Manager.

active equals saved

To automatically write any changes to the block, prohibit or port an address name to the IPL file, use the **active equals saved** command. To disable the configuration or to revert to factory defaults, use the **no** form of the command.

active equals saved

no active equals saved

Syntax Description

This command has no other arguments or keywords.

Defaults

Disabled.

Enabled (when a FICON VSAN is configured).

Command Modes

FICON configuration submode

Command History

Release	Modification
1.3(1)	This command was introduced.

Usage Guidelines

Enabling **active equals saved** ensures that you do not have to perform the **copy running-config startup-config** command to save the FICON configuration as well as the running configuration. If your switch or fabric consists of multiple FICON-enabled VSANs, and one of these VSANs has **active equals saved** enabled, changes made to the non-FICON configuration causes all FICON-enabled configurations to be saved to the IPL file.

The following example enables the automatic save feature for a VSAN:

```
switch(config)# ficon vsan 2
switch(config-ficon)# active equals saved
```

The following example disables the automatic save feature for this VSAN:

```
switch(config-ficon)# no active equals saved
```

Related Commands

Command	Description
copy running-config startup-config	Saves the running configuration to the startup configuration.
ficon vsan	Enables FICON on the specified VSAN.
show ficon	Displays configured FICON details.

alert-group

To customize a Call Home alert group with user-defined **show** commands, use the **alert-group** command in Call Home configuration submode. To remove the customization, user the **no** form of the command.

alert-group *event-type* **user-def-cmd** *command*

no alert-group *event-type* **user-def-cmd** *command*

Syntax DescriptionT

event-type	Specifies event types by the following alert groups.
Avanti	Displays Avanti events.
Environmental	Displays power, fan, and temperature related events.
Inventory	Displays inventory status events.
License	Displays events related to licensing.
RMON	Displays events related to Remote Monitoring (RMON).
Supervisor-Hardware	Displays supervisor related events.
Syslog-group-port	Displays events relate to syslog messages filed by the the port manager.
System	Displays software related events.
test	Displays user-generated test events.
user-def-cmd *command*	Configures a CLI command for an alert-group. The maximum size is 512.

Defaults

None

Command Modes

Call Home configuration submode

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines

The **user-def-cmd** argument allows you to define a command whose outputs should be attached to the Call Home message being sent. Only **show** commands can be specified and they must be associated with an alert group. Five commands can be specified per alert group. Invalid commands are rejected.

Note Make sure the destination profiles for the non-Cisco-TAC alert group, with a predefined **show** command, and the Cisco-TAC alert group are not the same.

Examples

The following example configures a user-defined command, called **show license usage**, for an alert group license:

```
switch(config-callhome)# alert-group license user-def-cmd "show license usage"
```

The following example removes a user-defined command, called **show license usage**, for an alert group license:

```
switch(config-callhome)# no alert-group license user-def-cmd "show license usage"
```

Related Commands

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

arp

To enable the Address Resolution Protocol (ARP) for the switch, use the **arp** command.To disable ARP for the switch, use the **no** form of the command.

arp *hostname*

no arp *hostname*

Syntax Description

hostname	Specifies the name of the host. Maximum length is 20 characters.

Defaults

Enabled

Command Modes

Configuration mode

Command History

Release	Modification
1.0(2)	This command was introduced.

Usage Guidelines

None.

Examples

The following example disables the Address Resolution Protocol configured for the host with the IP address 10.1.1.1:

```
switch(config)# no arp 10.1.1.1
switch(config)#
```

Related Commands

Command	Description
clear arp	Deletes a specific entry or all entries from the ARP table.
show arp	Displays the ARP table.

attach

To connect to a specific module, use the **attach** command in EXEC mode.

attach module *slot-number*

Syntax Description		
	module *slot-numbe*r	Specifies the slot number of the module.

Defaults None

Command Modes EXEC mode

Command History	Release	Modification
	1.0(2)	This command was introduced.

Usage Guidelines You can use the **attach module** command to view the standby supervisor module information, but you cannot configure the standby supervisor module using this command.

You can also use the **attach module** command on the switching module portion of the Cisco MDS 9216 supervisor module, which resides in slot 1 of this two-slot switch.

To disconnect, use the **exit** command at the module-number# prompt, or type **$.** to forcibly abort the attach session.

Examples The following example connects to the module in slot 2. Note that after you connect to the image on the module using the **attach module** command, the prompt changes to module-*number*#:

```
switch# attach module 1
Attaching to module 1 ...
To exit type 'exit', to abort type '$.'
module-1# exit
switch#
```

Related Commands	Command	Description
	exit	Disconnects from the module.
	show module	Displays the status of a module.

attachpriv

To connect to a specific ILC line card as a privilege, use the **attachpriv** command in EXEC mode.

attachpriv module *slot-number*

Syntax Description

module *slot-number*	Specifies the slot number of the module.

Defaults

None

Command Modes

EXEC mode

Command History

Release	Modification
3.1(3)	This command was introduced.

Usage Guidelines

None

Examples

The following example shows how to connect to a specific ILC line card as a privilege:

```
switch# attachpriv module 1
Attaching to module 1 ...
To exit type 'exit', to abort type '$.'
module-1# exit
```

Related Commands

Command	Description
exit	Disconnects from the module.
show module	Displays the status of a module.

attributes (DMM job configuration submode)

To set the attributes of a data migration job, use the **attributes** command in DMM job configuration submode. To remove the attributes of a data migration job, use the **no** form of the command.

attributes job_type {**1** | **2**} **job_mode** {**1** | **2**} **job_rate** {**1** | **2** | **3** | **4**} **job_method** {**1|2**}

no attributes job_type {**1** | **2**} **job_mode** {**1** | **2**} **job_rate** {**1** | **2** | **3** | **4**} **job_method** {**1|2**}

Syntax Description

job_type 1 | 2	Specifies the job type. Specify 1 for a server type job and 2 for a storage type job.
job_mode 1 | 2	Specifies the job mode. Specify 1 for an online job and 2 for an offline job.
job_rate 1 | 2 | 3 | 4	Specifies the job rate. Specify 1 for the default rate, 2 for a slow rate, 3 for a medium rate, and 4 for a fast rate.
job_method 1|2	Specifies the job method. Specify 1 for Method 1 and 2 for Method 2.

Defaults

None

Command Modes

DMM job configuration submode

Command History

Release	Modification
3.3(1a)	This command was introduced.

Usage Guidelines

None

Examples

The following example sets the job type to storage, the job mode to online, and the job rate to fast:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# dmm module 3 job 1 create
Started New DMM Job Configuration.
Do not exit sub-mode until configuration is complete and committed
switch(config-dmm-job)# attributes job_type 2 job_mode 1 job_rate 4 job_method 1
switch(config-dmm-job)#
```

Related Commands

Command	Description
show dmm job	Displays job information.
show dmm srvr-vt-login	Displays server VT login information.

attribute failover auto

To configure an automatic fallback failover for a virtual device, use the **attribute failover auto** command. To revert to the default, use the **no** form of the command.

attribute failover auto [**fallback**]

no attribute failover auto [**fallback**]

Syntax Description

fallback	(Optional) Enables a switchback with an automatic failover.

Defaults

Disabled

Command Modes

Virtual device submode

Command History

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

Usage Guidelines

None

Examples

The following example shows how to configure an automatic failover for a specific virtual device:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# sdv virtual-device name vdev1 vsan 1
switch#(config-sdv-virt-dev)# attribute failover auto
switch#(config-sdv-virt-dev)#
```

The following example shows how to configure an attribute of a virtual device:

```
switch# config t
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# sdv virtual-device name vdev1 vsan 1
switch#(config-sdv-virt-dev)# attribute failover auto fallback
switch(config-sdv-virt-dev)#
```

attribute qos

To configure a QoS attribute, use the **attribute qos** command in Inter-VSAN Routing (IVR) zone configuration submode. To disable this feature, use the **no** form of this command.

attribute qos {high | low | medium}

no attribute qos {high | low | medium}

Syntax Description

high	Configures frames matching zone to get high priority.
low	Configures frames matching zone to get low priority (default).
medium	Configures frames matching zone to get medium priority.

Defaults

Disabled

Command Modes

IVR zone configuration submode

Command History

Release	Modification
2.1(1a)	This command was introduced.

Usage Guidelines

None

Examples

The following example shows how to configure an IVR zone QoS attribute to low priority:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# ivr zone name IvrZone
switch(config-ivr-zone)# attribute qos priority low
```

Related Commands

Command	Description
show ivr zone	Displays IVR zone configuration.

authentication

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

authentication {**compare** [**password-attribute** *password-attribute*] | **bind-first** [**append-with-baseDN** *string*]}

no authentication {**compare** [**password-attribute** *password-attribute*] | **bind-first** [**append-with-baseDN** *string*]}

Syntax Description

compare	Specifies the compare option to be used for authentication.
password-attribute *password-attribute*	(Optional) Overides the default password attribute.The maximum length is 128 characters.
bind-first	Specifies that the client use bind and search instead of search and bind.
append-with-baseDN *string*	(Optional) Overrides the default string appended with baseDN.

Defaults

userPassword.

append-with-baseDN default value is (cn=$userid).

Command Modes

Configuration submode

Command History

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

Usage Guidelines

The **password-attribute** keyword provdes a method for chaning the attribute type of password.

Examples

The following example shows how to change the default attribute:

```
switch(config-ldap)# authentication compare password-attribute 1
switch(config-ldap)#
```

Related Commandss

Command	Description
show aaa authentication	Displays the configured authentication methods.

authentication (IKE policy configuration submode)

To configure the authentication method for an IKE protocol policy, use the **authentication** command in IKE policy configuration submode. To revert to the default authentication method, use the **no** form of the command.

authentication {**pre-share** | **rsa-sig**}

no authentication {**pre-share** | **rsa-sig**}

Syntax Description

pre-share	Configures the preshared key as the authentication method.
rsa-sig	Configures RSA signatures as the authentication method.

Defaults

Preshared key.

Command Modes

IKE policy configuration submode.

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines

To use this command, enable the IKE protocol using the **crypto ike enable** command. In addition, you must configure the identity authentication mode using the fully qualified domain name (FQDN) before you can use RSA signatures for authentication. Use the **identity hostname** command for this purpose.

Examples

The following example shows how to configure the authentication method using the preshared key:

```
switch# config terminal
switch(config)# crypto ike domain ipsec
switch(config-ike-ipsec)# policy 1
switch(config-ike-ipsec-policy)# authentication pre-share
```

The following example shows how to configure the authentication method using the RSA signatures:

```
switch(config-ike-ipsec-policy)# authentication rsa-sig
```

The following example shows how to revert to the default authentication method (preshared key):

```
switch(config-ike-ipsec-policy)# no authentication rsa-sig
```

Related Commands

Command	Description
crypto ike domain ipsec	Enters IKE configuration mode.
crypto ike enable	Enables the IKE protocol.
identity hostname	Configures the identity for the IKE protocol.
show crypto ike domain ipsec	Displays IKE information for the IPsec domain.

autonomous-fabric-id (IVR topology database configuration)

To configure an autonomous fabric ID (AFID) into the Inter-VSAN Routing (IVR) topology database, use the **autonomous-fabric-id** command. To remove the fabric ID, use the **no** form of the command.

autonomous-fabric-id *fabric-id* **switch-wwn** *swwn* **vsan-ranges** *vsan-id*

no autonomous-fabric-id *fabric-id* **switch-wwn** *swwn* **vsan-ranges** *vsan-id*

Syntax Description

fabric-id	Specifies the fabric ID for the IVR topology. **Note** For Cisco MDS SAN-OS images prior to Release 2.1(1a), the *fabric-id* value is limited to 1. For Releases 2.1(1a) and later images, the *fabric-id* range is 1 to 64.
switch-wwn *swwn*	Configures the switch WWN in dotted hex format.
vsan-ranges *vsan-id*	Configures up to five ranges of VSANs to be added to the database. The range is 1 to 4093.

Defaults

None

Command Modes

IVR topology database configuration submode

Command History

Release	Modification
1.3(1)	This command was introduced.
2.1(1a)	Modified range for *fabric-id*.

Usage Guidelines

The following rules apply to configuring AFIDs to VSANs:

- The default AFID of a VSAN is 1.
- Each VSAN belongs to one and only one AFID.
- A switch can be a member of multiple AFIDs.
- AFIDs at a switch must not share any VSAN identifier (for example, a VSAN at a switch can belong to only one AFID).
- A VSAN identifier can be reused in different AFIDs, without merging the VSANs, as long as those AFIDs do not share a switch.

You can have up to 64 VSANs (or 128 VSANs for Cisco MDS SAN-OS Release 2.1(1a) or later) in an IVR topology. Specify the IVR topology using the following information:

- The switch WWNs of the IVR-enabled switches.
- A minimum of two VSANs to which the IVR-enabled switch belongs.

- The autonomous fabric ID (AFID), which distinguishes two VSANs that are logically and physically separate, but have the same VSAN number. Cisco MDS SAN-OS Release 1.3(1) and NX-OS Release 4.1(1b) supports only one default AFID (AFID 1) and does not support non-unique VSAN IDs in the network. As of Cisco MDS SAN-OS Release 2.1(1a), you can specify up to 64 AFIDs.

Note Two VSANs with the same VSAN number but different fabric IDs are counted as two VSANs out of the 128 total VSANs allowed in the fabric.

Examples

The following command enters the configuration mode, enables the IVR feature, enters the VSAN topology database, and configures the pWWN-VSAN association for VSANs 2 and 2000:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# ivr enable
switch(config)# ivr vsan-topology database
switch(config-ivr-topology-db)# autonomous-fabric-id 1 switch 20:00:00:00:30:00:3c:5e
vsan-ranges 2,2000
```

Related Commands

Command	Description
ivr enable	Enables the Inter-VSAN Routing (IVR) feature.
ivr vsan-topology database	Configures a VSAN topology database.
show autonomous-fabric-id database	Displays the contents of the AFID database.
show ivr	Displays IVR feature information.

autonomous-fabric-id (IVR service group configuration)

To configure an autonomous fabric ID (AFID) into an IVR service group, use the **autonomous-fabric-id** command in IVR service group configuration submode. To remove the autonomous fabric ID, use the **no** form of the command.

autonomous-fabric-id *afid* **vsan-ranges** *vsan-id*

no autonomous-fabric-id *afid* **vsan-ranges** *vsan-id*

Syntax Description

afid	Specifies the AFID to the local VSAN.
vsan-ranges *vsan-id*	Configures up to five ranges of VSANs to be added to the service group. The range is 1 to 4093.

Defaults

None

Command Modes

IVR service group configuration submode

Command History

Release	Modification
2.1	This command was introduced.

Usage Guidelines

Before configuring an IVR service group, you must enable the following:

- IVR using the **ivr enable** command
- IVR distribution using the **ivr distribute** command
- Automatic IVR topology discovery using the **ivr vsan-topology auto** command

To change to IVR service group configuration submode, use the **ivr service-group activate** command**.**

Examples

The following command enters the IVR service group configuration submode and configures AFID 10 to be in IVR service group serviceGroup1:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# ivr enable
switch(config)# ivr distribute
switch(config)# ivr vsan-topology auto
switch(config)# ivr service-group name serviceGroup1
switch(config-ivr-sg)# autonomous-fabric-id 10 vsan 1-4
```

Related Commands

Command	Description
ivr enable	Enables the Inter-VSAN Routing (IVR) feature.
ivr service-group name	Configures an IVR service group and changes to IVR service group configuration submode.
show autonomous-fabric-id database	Displays the contents of the AFID database.
show ivr	Displays IVR feature information.

autonomous-fabric-id database

To configure an autonomous fabric ID (AFID) database, use the **autonomous-fabric-id database** command. To remove the fabric AFID database, use the **no** form of the command.

autonomous-fabric-id database

no autonomous-fabric-id database

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Configuration mode

Command History

Release	Modification
2.1(1a)	This command was introduced.

Usage Guidelines

You must configure the IVR VSAN topology to auto mode, using the **ivr vsan-topology auto** command, before you can use the **autonomous-fabric-id database** command to modify the database. The **autonomous-fabric-id database** command also enters AFID database configuration submode.

Note In user-configured VSAN topology mode, the AFIDs are specified in the IVR VSAN topology configuration itself and a separate AFID configuration is not needed.

Examples

The following example shows how to create an AFID database and enters AFID database configuration submode:

```
switch# config terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# autonomous-fabric-id database
switch(config-afid-db)#
```

Related Commands

Command	Description
ivr vsan-topology auto	Configures a VSAN topology for Inter-VSAN Routing (IVR) to auto configuration mode.
switch-wwn	Configures a switch WWN in the autonomous fabric ID (AFID) database
show autonomous-fabric-id database	Displays the contents of the AFID database.
show ivr	Displays IVR feature information.

auto-volgrp

To configure the automatic volume grouping, use the **auto-volgrp** command. To disable this feature, use the **no** form of the command.

auto-volgrp

no auto-volgrp

Syntax Description

This command has no arguments or keywords.

Defaults

Disabled

Command Modes

Cisco SME cluster configuration submode

Command History

Release	Modification
3.2(2)	This command was introduced.

Usage Guidelines

If Cisco SME recognizes that the tape's barcode does not belong to an existing volume group, then a new volume group is created when automatic volume grouping is enabled.

Examples

The following example enables automatic volume grouping:

```
switch# config t
switch(config)# sme cluster c1
switch(config-sme-cl)# auto-volgrp
switch(config-sme-cl)#
```

The following example disables automatic volume grouping:

```
switch# config t
switch(config)# sme cluster c1
switch(config-sme-cl)# auto-volgrp
switch(config-sme-cl)#
```

Related Commands

Command	Description
show sme cluster	Displays Cisco SME cluster information.