V 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 the "Command Modes" section to determine the appropriate mode for each command. For more information, refer to the *Cisco MDS 9000 Family Configuration Guide*.

vsan database

To create multiple fabrics sharing the same physical infrastructure, to assign which ports are in which VSAN, whether Interop mode is on or off, and whether load balancing is per exchange or src-dest ID., use the **vsan** command.

vsan database
vsan *vsan-id*
interface fc *slot/port* **| fv** *slot/dpp-number/fv-port* **| port-channel** *portchannel-number.subinterface-number* **|**
interop *mode* **| (loadbalancing src-dst-id | src-dst-ox-id) |**
loadbalancing [src-dst-id | src-dst-ox-id] |
name *name* **[interop (** *mode)* **|(loadbalancing src-dst-id | src-dst-ox-id) | suspend (interop | loadbalancing) |**
suspend [interop (*mode)* **| (loadbalancing src-dst-id | src-dst-ox-id)]**

Syntax Description

vsan	Configures VSAN information or membership.
vsan-id	The ID of the VSAN is from 1 to 4093.
interface	Adds interfaces to VSAN.
fc *slot/port*	Displays the Fibre Channel interface in the specified slot/port.
fv *slot/dpp-number/fv-port*	Displays the virtual F port (FV port) interface in the specified slot along with the data path processor (DPP) number and the FV port number.
port-channel *portchannel-number.subinterface-number*	Displays the PortChannel interface specified by the PortChannel number followed by a dot (.) indicator and the subinterface number.
interop	Turns on interoperability mode.
mode	Specifies the interoperability mode (1 or 2).
loadbalancing	Configures loadbalancing scheme.
src-dst-id	Sets src-id/dst-id for loadbalancing.
src-dst-ox-id	Sets ox-id/src-id/dst-id for loadbalancing (default).
suspend	Suspends VSAN.

Defaults

None.

Command Modes

Configuration mode.

Command History

This command was modfied in Cisco MDS SAN-OS Release 1.2(2).

Usage Guidelines

Change to the VSAN database submode to issue this command.

The interface range must be in ascending order and nonoverlapping. You can specify a range using a hyphen and several interfaces using commas:

- The interface range format for a FC interface range is fc*slot/port - port* , fc*slot/port* , fc*slot/port*
  (For example, **`show int fc1/1 - 3 , fc1/5 , fc2/5`**)
- The interface range format for a FV interface range is fv*slot/dpp/fvport - fvport* , fv*slot/dpp/port* , fv*slot/dpp/port*
  (For example, **`show int fv2/1/1 - 3 , fv2/1/5 , fv2/2/5`**)
- The format for a PortChannel is port-channel *portchannel-number. subinterface-number*
  (For example, **show int port-channel** *portchannel-number. subinterface-number)*

Examples

The following examples show how to create multiple fabrics sharing the same physical infrastructure and to assign which ports are in which VSAN.

```
switch# config t
switch(config)# vsan database
switch(config-db)#
switch-config-db# vsan 2
switch(config-vsan-db)#
switch(config-vsan-db)# vsan 2 name TechDoc
updated vsan 2
switch(config-vsan-db)#
switch(config-vsan-db)# vsan 2 loadbalancing src-dst-id
switch(config-vsan-db)#
switch(config-vsan-db)# vsan 2 loadbalancing src-dst-ox-id
switch(config-vsan-db)#
switch(config-vsan-db)# vsan 2 suspend
switch(config-vsan-db)#
switch(config-vsan-db)# no vsan 2 suspend
switch(config-vsan-db)#
switch(config-vsan-db)# vsan 2 interface fv2/8/2
switch(config-vsan-db)#
switch(config-vsan-db)# end
switch#
```

vsan policy deny

To configure a vsan-based role, use the **vsan policy deny** command in configuration mode. Use the **no** form of this command to delete a configured role.

vsan policy deny {permit vsan vsan *vsan-id* **]**

no vsan policy deny {permit vsan vsan *vsan-id* **]**

Syntax Description

vsan policy deny	Configures VSAN based roles.
vsan-id	The ID of the VSAN is from 1 to 4093.
permit	Remove commands from the role.

Defaults

Permit.

Command Modes

Configuration mode—role name submode.

Command History

This command was introduced in Cisco MDS SAN-OS Release 1.2(1).

Usage Guidelines

You can configure a role so that it only allows commands to be performed for a selected set of VSANs. By default, the VSAN policy of a role is **permit**. In other words, the role can perform commands configured by the **rule** command in all VSANs. In order to selectively allow VSANs for a role, the VSAN policy needs to be set to **deny** and then the appropriate VSANs need to be permitted.

Examples

The following example places you in sangroup role submode.

```
switch# config t
switch(config)# role name sangroup
switch(config-role)#
```

The following example changes the VSAN policy of this role to deny and places you in a submode where VSANs can be selectively permitted.

```
switch(config)# vsan policy deny
switch(config-role-vsan)
```

The following example deletes the configured VSAN role policy and reverts to the factory default (permit).

```
switch(config-role)# no vsan policy deny
```

The following example permits this role to perform the allowed commands for VSANs 10 through 30.

```
switch(config-role)# permit vsan 10-30
```

The following example removes the permission for this role to perform commands for vsan 15 to 20.

```
switch(config-role-vsan)# no permit vsan 15-20
```

vrrp

To enable VRRP, use the **vrrp** command in configuration mode. Use the **no** form of the command to revert to the factory defaults or to negate a command.

vrrp *vrrp-number*
[address | advertisement-interval | authentication | preempt | priority | shutdown | track]

no vrrp *vrrp-number*
[address | advertisement-interval | authentication | preempt | priority | shutdown | track]

Syntax Description

vrrp *vrrp-number*	Configures a VRRP on the selected VSAN or management interface
address	Adds or removes an IP address to the virtual router.
advertisement-interval	Sets the time interval between advertisements.
authentication	Sets the authentication method.
preempt	Enables preemption of lower priority master.
priority	[1-254] Configure the virtual router priority.
shutdown	Enables or disables a virtual router.
track	Tracks the availability of another interface.

Defaults

Disabled.

Command Modes

Configuration mode.

Command History

This command was introduced in Cisco MDS SAN-OS Release 1.0(2).

Usage Guidelines

Enter the Virtual Router configuration submode to access the options for this command. From the VSAN or mgmt0 (management) interface configuration submode, enter **vrrp** *number* to enter the `switch(config-if-vrrp)#` prompt. By default, a virtual router is always disabled (**shutdown**). VRRP can be configured only if this state is disabled. Be sure to configure at least one IP address before attempting to enable a VR.

Refer to the Cisco MDS 9000 Family Configuration Guide.

Examples

The following example enables VRRP configuration.

```
switch(config-if-vrrp)# no shutdown
```

The following example disables VRRP configuration.

```
switch(config-if-vrrp)# shutdown
```

The following example configures an IP address for the selected VRRP.

```
switch# config t
switch(config)# interface vsan 1
switch(config-if)# vrrp 250
switch(config-if-vrrp)# address 10.0.0.10
```