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## V Commands

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

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## vsan

To create multiple fabrics sharing the same physical infrastructure, assign ports to Virtual SANs (VSANs), turn on or off interop mode, load balance either per originator exchange or by source-destination ID, and VSAN membership, use the **vsan** command. To remove a configuration, use the **no** form of this command.

```
vsan vsan-id
  [interface {fc slot/port | san-port-channel port | vfc vfc-id} |
  interop [mode] [loadbalancing {src-dst-id | src-dst-ox-id}] |
  loadbalancing {src-dst-id | src-dst-ox-id} |
  name name [interop [mode] [loadbalancing {src-dst-id | src-dst-ox-id}] | loadbalancing
  {src-dst-id | src-dst-ox-id}] | suspend [interop [mode] [loadbalancing {src-dst-id |
  src-dst-ox-id}] | loadbalancing {src-dst-id | src-dst-ox-id}] |
  suspend [interop [mode] [loadbalancing {src-dst-id | src-dst-ox-id}] | loadbalancing
  {src-dst-id | src-dst-ox-id}]]
```

```
no vsan vsan-id
  [interop [mode] [loadbalancing {src-dst-id | src-dst-ox-id}] |
  loadbalancing {src-dst-id | src-dst-ox-id} |
  name name [interop [mode] [loadbalancing {src-dst-id | src-dst-ox-id}] | loadbalancing
  {src-dst-id | src-dst-ox-id}] | suspend [interop [mode] [loadbalancing {src-dst-id |
  src-dst-ox-id}] | loadbalancing {src-dst-id | src-dst-ox-id}] |
  suspend [interop [mode] [loadbalancing {src-dst-id | src-dst-ox-id}] | loadbalancing
  {src-dst-id | src-dst-ox-id}]]
```

Syntax Description		
<b>vsan</b> <i>vsan-id</i>		Specifies the VSAN ID. The range is from 1 to 4094.
<b>interface</b> <b>fc</b> <i>slot/port</i>		(Optional) Specifies the Fibre Channel interface by slot and port number on the switch.
<b>san-port-channel</b> <i>port</i>		Configures the SAN port channel interface specified by the SAN port channel number.
<b>vfc</b> <i>vfc-id</i>		Specifies the virtual Fibre Channel interface.
<b>interop</b>		(Optional) Turns on interoperability mode.
<i>mode</i>		(Optional) Interop mode. The range is from 1 to 4.
<b>loadbalancing</b>		(Optional) Configures the load balancing scheme.
<b>src-dst-id</b>		Sets src-id/dst-id for load-balancing.
<b>src-dst-ox-id</b>		Sets ox-id/src-id/dst-id for load balancing (default).
<b>name</b> <i>name</i>		Assigns a name to the VSAN. The name can be a maximum of 32 characters.
<b>suspend</b>		Suspends the VSAN.

**Command Default** None

**Command Modes** VSAN database configuration mode

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Command History	Release	Modification
	4.0(0)N1(1a)	This command was introduced.
	4.2(1)N1(1)	The VSAN ID range is increased to 4094.

### Usage Guidelines

To use this command, change to the VSAN database mode.

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

- The interface range format for a Fibre Channel interface range is  
fcslot/port - port , fcslot/port , fcslot/port:  
For example, `show int fc2/1 - 3 , fc2/4 , fc3/2`
- The format for a SAN port channel is  
san-port-channel portchannel-number.subinterface-number:  
For example, `show int san-port-channel 5.1`

There are four interop modes:

- Interop mode 1 — Standards based interop mode that requires all other vendors in the fabric to be in interop mode.
- Interop mode 2 — Brocade native mode (Core PID 0).
- Interop mode 3 — Brocade native mode (Core PID 1).
- Interop mode 4 — McData native mode. Before you configure Interop mode 4 (or remove the configuration), you must suspend the VSAN. You should unsuspend the VSAN only after you configure a VSAN-dependent switch WWN with the McData OUI [08:00:88].

The **no** form of the **vsan vsan-id interface** command is not supported. To remove a VSAN membership of an interface (for example, interface fc1/8 from VSAN 7), you must assign the interface to another VSAN. The best practice is to assign the interface back to the default VSAN (VSAN 1).

### Examples

This example shows how to create multiple fabrics sharing the same physical infrastructure and how to assign ports to VSANs:

```
switch(config)# vsan database
switch-config-vsan-db# vsan 2
switch(config-vsan-db)# vsan 2 name TechDoc
switch(config-vsan-db)# vsan 2 loadbalancing src-dst-id
switch(config-vsan-db)# vsan 2 loadbalancing src-dst-ox-id
switch(config-vsan-db)# vsan 2 suspend
switch(config-vsan-db)# no vsan 2 suspend
switch(config-vsan-db)# end
```

This example shows how to suspend a VSAN and enable Interop mode 4:

```
switch(config)# vsan database
switch(config-vsan-db)# vsan 100 suspend
switch(config-vsan-db)# vsan 100 interop 4
switch(config-vsan-db)# exit
```

This example shows how to configure a VSAN to create a FCOE-VLAN to VSAN mapping:

```
switch(config)# vsan database
switch(config-vsan-db)# vsan 377
```

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```
switch(config-vsan-db)# exit
switch(config)# vlan 30
switch(config-vlan)# fcoe vsan 337
switch(config-vlan)#
```

This example shows how to remove interface fc2/1 from VSAN 7:

```
switch(config)# vsan database
switch(config-vsan-db)# vsan 1 interface fc2/1
switch(config-vsan-db)#
```

### **Related Commands**

<b>Command</b>	<b>Description</b>
<b>show vsan</b>	Displays the configuration information of VSANs.
<b>show vlan fcoe</b>	Displays the FCoE VLAN to VSAN mappings.
<b>show vsan membership</b>	Displays VSAN membership information.
<b>wwn vsan</b>	Configures a WWN for a suspended VSAN that has interop mode 4 enabled.

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## vsan database

To enter Virtual SAN (VSAN) database mode to configure VSAN information and membership, use the **vsan database** command.

**vsan database**

**Syntax Description** This command has no arguments or keywords.

**Command Default** None

**Command Modes** Global configuration mode

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

**Usage Guidelines** To exit from the VSAN database configuration mode, use the **exit** command.

**Examples** This example shows how to enter the VSAN database configuration mode:

```
switch(config)# vsan database
switch(config-vsan-db)# exit
switch(config)#
```

This example shows how to configure the association between a VSAN and virtual Fibre Channel interface:

```
switch# configure terminal
switch(config)# vsan database
switch(config-vsan-db)# vsan 2 interface vfc 4
switch(config-vsan-db)#
```

Related Commands	Command	Description
	<b>show vsan</b>	Displays the configuration information of VSANs.
	<b>show vlan fcoe</b>	Displays the FCoE VLAN to VSAN mappings.
	<b>show vsan membership</b>	Displays VSAN membership information.
	<b>vsan</b>	Configures VSAN information or membership.

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