



Cisco IOS Commands for the Catalyst 6500 Series Switches

This chapter contains an alphabetical listing of Cisco IOS commands unique to the Catalyst 6500 series switches. For information about Cisco IOS commands not contained in this publication, refer to the current Cisco IOS documentation including:

- *Cisco IOS Release 12.1 Configuration Fundamentals Configuration Guide*
- *Cisco IOS Release 12.1 Command Reference*

action

To set the packet action clause, use the **action** command. Use the **no** form of this command to remove an action clause.

```
action {{ drop [log] } | { forward [capture] } | { redirect { interface interface-number } } | { port-channel channel-id } { interface interface-number } | { port-channel channel-id } ... }
```

```
no action {{ (drop [log] ) | { forward [capture] } | { redirect { interface interface-number } } | { port-channel channel-id } { interface interface-number } | { port-channel channel-id } ... }
```

Syntax Description

drop	Drops the packets.
log	(Optional) Logs the dropped packets in software.
forward	Forwards (switched by hardware) the packets to its destination.
capture	(Optional) Sets the capture bit for the forwarded packets so that ports with the capture function enabled also receive the packets.
redirect <i>interface</i>	Redirects packets to the specified interfaces; possible valid values are ethernet , fastethernet , gigabitethernet , tengigabitethernet , pos , atm , and ge-wan .
<i>interface-number</i>	Module and port number; see the “Usage Guidelines” section for valid values.
port-channel <i>channel-id</i>	Port channel to redirect traffic; see the “Usage Guidelines” section for valid values.

Defaults

This command has no default settings.

Command Modes

VLAN access-map submode

Command History

Release	Modification
12.1(8a)EX	Support for this command was introduced on the Catalyst 6500 series switches.
12.1(11b)E	This command was changed to include the ge-wan , atm , and pos keywords.

Usage Guidelines

The *interface-number* argument designates the module and port number. Valid values for *interface-number* depend on the specified interface type and the chassis and module used. For example, if you specify a Gigabit Ethernet interface and have a 48-port 10/100BASE-T Ethernet module installed in a 13-slot chassis, valid values for the module number are from 2 to 13 and valid values for the port number are from 1 to 48.

Each redirect action allows you to specify a list of up to five destination interfaces. There is also a limit of up to 255 different interface lists that can be used by redirect actions.

The redirect action supports interface lists instead of single interfaces as shown in the following example:

```
[...] { redirect { { ethernet | fastethernet | gigabitethernet | tengigabitethernet } slot/port } |
      { port-channel channel-id } }
```

The action clause specifies the action to be taken when a match occurs.

The number of valid values for **port-channel** *number* depends on the software release. For releases prior to Release 12.1(3a)E3, valid values are from 1 to 256; for Releases 12.1(3a)E3, 12.1(3a)E4, and 12.1(4)E1, valid values are from 1 to 64. Release 12.1(5c)EX and later support a maximum of 64 values ranging from 1 to 256. Release 12.1(13)E and later support a maximum of 64 values ranging from 1 to 282; values 257 to 282 are supported on the CSM and FWSM only.

The forwarded packets are subject to any applied Cisco IOS ACLs. The **capture** action sets the capture bit in VACL-forwarded packets. Ports with the capture function enabled can receive VACL-forwarded packets that have the capture bit set. Only VACL-forwarded packets that have the capture bit set can be captured.

The **log** option is supported on Supervisor Engine 2 only. When the **log** option is specified, dropped packets are logged in software. Only dropped IP packets can be logged. The **redirect** option allows you to specify up to five interfaces, which can be physical interfaces or EtherChannels. An EtherChannel member is not allowed to be a redirect interface.

The **log** and **redirect** keywords are not supported for VACLs on WAN interfaces.

The action clause in a VACL can be forward, drop, capture, or redirect. Traffic can also be logged. VACLs applied to WAN interfaces do not support the redirect or log actions.

For systems with a Supervisor Engine 1, the redirect interface must be in the redirected packet's source VLAN.

For systems with a Supervisor Engine 2, the redirect interface must be in the VLAN for which the VACL map is configured.

In a VLAN access map, if at least one ACL is configured for a packet type (IP, IPX, or MAC), the default action for the packet type is **drop** (deny).

If an ACL is not configured for a packet type, the default action for the packet type is **forward** (permit).

If an ACL for a packet type is configured and the ACL is empty or undefined, the configured action will be applied to the packet type.

Examples

This example shows how to define a drop and log action:

```
Router(config-access-map)# action drop log
Router(config-access-map)#
```

This example shows how to define a forward action:

```
Router(config-access-map)# action forward
Router(config-access-map)#
```

Related Commands

[show vlan access-map](#)
[vlan access-map](#)

apply

To implement the proposed new VLAN database, increment the database configuration number, save it in NVRAM, and propagate it throughout the administrative domain, use the **apply** command.

apply

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes VLAN configuration

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Usage Guidelines The **apply** command implements the configuration changes you made after you entered VLAN database mode and uses them for the running configuration. This command keeps you in VLAN database mode. You cannot use this command when the Catalyst 6500 series switch is in the VTP client mode. You can verify that VLAN database changes occurred by entering the **show vlan** command in privileged EXEC mode.

Examples This example shows how to implement the proposed new VLAN database and recognize it as the current database:

```
Router(config-if-vlan)# apply
Router(config-if-vlan)#
```

Related Commands

- abort** (refer to the *Cisco IOS Release 12.1 Command Reference*)
- exit** (refer to the *Cisco IOS Release 12.1 Command Reference*)
- reset**
- show vlan**
- shutdown vlan** (refer to the *Cisco IOS Release 12.1 Command Reference*)
- vtp**

attach

To remotely connect to a specific module, use the **attach** command.

attach *num*

Syntax Description	<i>num</i> Module number; see the “Usage Guidelines” section for valid values.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Privileged EXEC
----------------------	-----------------

Command History	Release	Modification
	12.1(5c)EX	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(8a)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Usage Guidelines



Caution

When you enter the **attach** or **remote login** command to access another console from your switch, if you enter global or interface configuration mode commands, the switch might reset.

The valid values for *num* depend on the chassis used. For example, if you have a 13-slot chassis, valid values for the module number are from 1 to 13.

This command is supported on DFC-equipped modules and the supervisor engine only.

When you execute the **attach** *num* command, the prompt changes to Router-dfcx# or Switch-sp#, depending on the type of module to which you are connecting.

The **attach** command is identical to the **remote login module** *num* command.

There are two ways to end this session:

- You can enter the **exit** command as follows:

```
Router-dfc3# exit

[Connection to Switch closed by foreign host]
Router#
```

- You can press **Ctrl-C** three times as follows:

```
Router-dfc3# ^C
Router-dfc3# ^C
Router-dfc3# ^C
Terminate remote login session? [confirm] y
[Connection to Switch closed by local host]
```

```
Router#
```

Examples

This example shows how to remotely log in to the DFC-equipped module:

```
Console (enable)# attach 3  
Trying Switch ...  
Entering CONSOLE for Switch  
Type "^C^C^C" to end this session
```

```
Router-dfc3#
```

Related Commands

[remote login](#)

auto-sync

To enable automatic synchronization of the configuration files in NVRAM, use the **auto-sync** command. Use the **no** form of this command to disable automatic synchronization.

auto-sync { **startup-config** | **config-register** | **bootvar** | **running-config** | **standard** }

no auto-sync { **startup-config** | **config-register** | **bootvar** | **standard** }

Syntax Description

startup-config	Automatic synchronization of the startup configuration.
config-register	Automatic synchronization of the configuration register configuration.
bootvar	Automatic synchronization of the BOOTVAR configuration.
running-config	Automatic synchronization of the running configuration.
standard	Automatic synchronization of the startup-config, BOOTVAR, and config-registers.

Defaults

running-config

Command Modes

Main-cpu redundancy mode

Command History

Release	Modification
12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
12.1(13)E	This command was changed to include the running-config keyword and change the default to running-config .

Usage Guidelines

For releases prior to Release 12.1(13)E, the default is **standard**.

If you enter the **no auto-sync standard** command, no automatic synchronizations occur. If you want to enable any of the options, you have to enter the appropriate command for each option.

The **auto-sync** commands are not supported in RPR+ mode.

Examples

This example shows how (from the default configuration) to enable automatic synchronization of the configuration register in the main CPU:

```
Router# configure terminal
Router (config)# redundancy
Router (config-r)# main-cpu
Router (config-r-mc)# no auto-sync standard
Router (config-r-mc)# auto-sync configure-register
Router (config-r-mc)#
```

Related Commands [redundancy](#)

boot config

To specify the device and filename of the configuration file from which the system configures itself during initialization (startup), use the **boot config** command. Use the **no** form of this command to remove the specification.

boot config {*device:file-name*}

no boot config

Syntax Description

<i>device:</i>	Device identification; valid values are bootflash: , const_nvram: , flash: , nvram: , slot0: , sup-bootflash: , or disk0: .
<i>file-name</i>	Configuration filename.

Defaults

The configuration file is located in NVRAM.

Command Modes

Global configuration

Command History

Release	Modification
12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.

Usage Guidelines

The configuration file must be an ASCII file located in the specified file system.

disk0: is a Class C file system.

bootflash:, **slot0:**, **slot1:**, and **sup-bootflash:** are Class A file systems.

For Class A Flash file systems, the CONFIG_FILE environment variable specifies the file system and filename of the configuration file to use for initialization (startup). You set the CONFIG_FILE environment variable in the current running memory when you use the **boot config** command. This variable specifies the configuration file used for initialization (startup).

When you use the **boot config** command, you affect only the running configuration. You must save the environment variable setting to your startup configuration to place the information under ROM monitor control and to have the environment variable function as expected. Use the **copy system:running-config nvram:startup-config** command to save the environment variable from your running configuration to your startup configuration.

The software displays an error message and does not update the CONFIG_FILE environment variable in the following situations:

- You specify **nvram:** as the file system, and it contains only a distilled version of the configuration. (A distilled configuration does not contain access lists.)
- You specify a configuration file in the filename argument that does not exist or is not valid.

During initialization, the NVRAM configuration is used when the CONFIG_FILE environment variable does not exist or when it is null (such as at a first-time startup). If the software detects a problem with NVRAM or the configuration it contains, the device enters setup mode.

When you use the **no** form of this command, the NVRAM configuration is used as the startup configuration.

You can view the contents of the BOOT, BOOTLDR, and the CONFIG_FILE environment variables using the **show bootvar** command. This command displays the settings for these variables as they exist in the startup configuration as well as in the running configuration if a running configuration setting differs from a startup configuration setting.

The **disk0:** keyword is supported only on systems configured with a Supervisor Engine 2.

Examples

This example shows how to set the configuration file located in the internal Flash memory to configure itself during initialization. The third line copies the specification to the startup configuration, ensuring that this specification takes effect upon the next reload.

```
Router (config)# boot config flash:router-config
Router (config)# end
Router# copy system:running-config nvram:startup-config
Router#
```

Related Commands

copy system:running-config nvram:startup-config (refer to the *Cisco IOS Release 12.1 Command Reference*)
show bootvar

cd

To change the default directory or file system, use the **cd** command.

```
cd [filesystem:][directory]
```

Syntax Description	
<i>filesystem</i> :	(Optional) URL, alias of the directory, or file system followed by a colon; valid values are bootflash: , const_nvram: , flash: , nvram: , slot0: , sup-bootflash: , sup-image: , sup-slot0: , or disk0: .
<i>directory</i>	(Optional) Name of the directory.

Defaults	
	Initial default file system is slot0: .

Command Modes	
	EXEC

Command History	Release	Modification
	12.0(7)XE	Support for this command was introduced on the Catalyst 6500 series switches.
	12.1(1)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release.
	12.1(8a)EX	This command was changed to support the disk0: keyword.

Usage Guidelines	
	For all EXEC commands that have an optional <i>filesystem</i> argument, the system uses the file system specified by the cd command when you omit the optional <i>filesystem</i> argument. For example, the dir command, which displays a list of files on a file system, contain an optional <i>filesystem</i> argument. When you omit this argument, the system lists the files on the file system specified by the cd command.
	If you do not specify a directory on a file system, the default is the root directory on that file system.
	The disk0: keyword is supported only on systems configured with a Supervisor Engine 2.

Examples	
	This example sets the default file system to the Flash PC card inserted in slot 0:

```
Router# cd slot0:
Router# pwd
slot0:/
```

Related Commands

copy (refer to the *Cisco IOS Release 12.1 Command Reference*)

delete (refer to the *Cisco IOS Release 12.1 Command Reference*)

dir (refer to the *Cisco IOS Release 12.1 Command Reference*)

mkdir disk0:

pwd (refer to the *Cisco IOS Release 12.1 Command Reference*)

show file system (refer to the *Cisco IOS Release 12.1 Command Reference*)

undelete

