

# channel-group

To assign and configure an EtherChannel interface to an EtherChannel group, use the **channel-group** command. Use the **no** form of this command to remove the channel-group configuration from the interface.

```
channel-group number mode { active | on | { auto [non-silent] } | { desirable [non-silent] } | passive }
```

```
no channel-group number
```

Syntax Description	<i>number</i>	Specifies the channel group number; see the “Usage Guidelines” section for valid values.
	<b>mode</b>	EtherChannel mode of the interface.
	<b>active</b>	Enables LACP unconditionally.
	<b>on</b>	Enables EtherChannel only.
	<b>auto</b>	Places a port into a passive negotiating state in which the port responds to PAgP packets it receives but does not initiate PAgP packet negotiation.
	<b>non-silent</b>	(Optional) Used with the <b>auto</b> or <b>desirable</b> mode when traffic is expected from the other device.
	<b>desirable</b>	Places a port into an active negotiating state in which the port initiates negotiations with other ports by sending PAgP packets.
	<b>passive</b>	Enables LACP only if an LACP device is detected.

**Defaults** No channel groups are assigned.

**Command Modes** Interface 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.
	12.1(3a)E3	The number of valid values for <i>number</i> was changed; see the “Usage Guidelines” section for valid values.
	12.1(5c)EX	Two restrictions were added regarding DFC-equipped modules; see the “Usage Guidelines” section for additional information.
	12.1(11b)EX	This command was changed to support LACP.
	12.1(13)E	This command was changed to support the configuration of Layer 2 EtherChannels that include interfaces on different DFC-equipped switching modules. CSCdt27074

**Usage Guidelines**

The number of valid values for the **channel-group** *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 channel group number is global and is shared between all the channeling protocols. If a specific channel number is used for the PAgP-enabled interfaces of a channel group, that same channel number cannot be used for configuring a channel that has LACP-enabled interfaces or vice versa.

Entering the **auto** or **desirable** keyword enables PAgP on the specified interface; the command will be rejected if it is issued on an LACP-enabled interface.

The **active** and **passive** keywords are valid on PAgP-disabled interfaces only.

You can change the mode for an interface only if it is the only interface designated to the specified channel group.

The **on** keyword forces the bundling of the interface on the channel without any negotiation.

You can manually configure a switch with PAgP on one side and LACP on the other side in the **on** mode.

With the **on** mode, a usable EtherChannel exists only when a port group in **on** mode is connected to another port group in **on** mode.

If you enter this command on an interface that is added to a channel with a different protocol (than the protocol you are entering), the command is rejected.

If the interface belongs to a channel, the **no** form of this command is rejected.

All ports in an EtherChannel must use the same protocol; you cannot run two protocols on one module.

PAgP and LACP are not compatible; both ends of a channel must use the same protocol.

You can change the protocol at any time, but this change causes all existing EtherChannels to reset to the default channel mode for the new protocol.

Configure all ports in an EtherChannel to operate at the same speed and duplex mode (full duplex only for LACP mode).

On systems configured with nonfabric-enabled modules and fabric-enabled modules, you can bundle ports across all modules, but those bundles cannot include a DFC-equipped module port.

You do not have to create a port channel interface before assigning a physical interface to a channel group. A port channel interface is created automatically when the channel group gets its first physical interface, if it is not already created.

You do not have to disable the IP address that is assigned to a physical interface that is part of a channel group, but it is highly recommended.

You can create both Layer 2 and Layer 3 port channels by entering the **interface port-channel** command or when the channel group gets its first physical interface assignment. The port channels are not created at runtime or dynamically.

Any configuration or attribute changes you make to the port channel interface are propagated to all interfaces within the same channel group as the port channel (for example, configuration changes are also propagated to the physical interfaces that are not part of the port channel but are part of the channel group).

**Caution**

Do not enable Layer 3 addresses on the physical EtherChannel interfaces. Assigning bridge groups on the physical EtherChannel interfaces causes loops in your network.

For a complete list of guidelines, refer to the “Configuring EtherChannel” section of the *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide*.

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**Examples**

This example shows how to add EtherChannel interface 1/0 to the EtherChannel group specified by port-channel 1:

```
Router(config-if)# channel-group 1 mode on  
Router(config-if)#
```

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**Related Commands**

**interface port-channel**

**show interfaces port-channel** (refer to the *Cisco IOS Release 12.1 Command Reference*)

# channel-protocol

To set the protocol used on an interface to manage channeling, use the **channel-protocol** command. Use the **no** form of this command to deselect the protocol.

**channel-protocol { lacp | pagp }**

**no channel-protocol**

## Syntax Description

<b>lacp</b>	Specifies LACP to manage channeling.
<b>pagp</b>	Specifies PAGP to manage channeling.

## Defaults

**pagp**

## Command Modes

Interface configuration

## Command History

Release	Modification
12.1(11b)EX	Support for this command was introduced on the Catalyst 6500 series switches.
12.1(13)E	Support for this command on the Catalyst 6500 series switches was extended to the 12.1 E release. This command was changed to support the entry of the <b>no channel-protocol</b> command (without arguments) to deselect the protocol.

## Usage Guidelines

This command is not supported on systems configured with a Supervisor Engine 1.

You can also select the protocol using the **channel-group** command.

If the interface belongs to a channel, the **no** form of this command is rejected.

All ports in an EtherChannel must use the same protocol.

PAGP and LACP are not compatible; both ends of a channel must use the same protocol.

You can change the protocol at any time, but this change causes all existing EtherChannels to reset to the default channel mode for the new protocol. You can use the **channel-protocol** command to restrict anyone from selecting a mode that is not applicable to the selected protocol.

Configure all ports in an EtherChannel to operate at the same speed and duplex mode (full duplex only for LACP mode).

For a complete list of guidelines, refer to the “Configuring EtherChannel” section of the *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide*.

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**Examples**

This example shows how to select LACP to manage channeling on the interface:

```
Router(config-if)# channel-protocol lacp  
Router(config-if)#
```

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**Related Commands**

**channel-group**  
**show etherchannel**

# class-map

To access the QoS class map configuration mode to configure QoS class maps, use the **class-map** command. Use the **no** form of this command to delete a class map.

**class-map** *name* [**match-all** | **match-any**]

**no class-map** *name* [**match-all** | **match-any**]

## Syntax Description

<i>name</i>	Class map name.
<b>match-all</b>	(Optional) Matches all match criteria in the class map.
<b>match-any</b>	(Optional) Matches one or more match criteria.

## Defaults

When you do not specify the **match-all** or **match-any** option, the default is **match-all**.

## 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

You apply the **class-map** command and its subcommands on a per-interface basis to define packet classification, marking, aggregate, and flow policing as part of a globally named service policy.

After you are in QoS class map configuration mode, these configuration commands are available:

- **exit**—Used to exit from QoS class map configuration mode.
- **no**—Used to remove a match statement from a class map.
- **match**—Used to configure classification criteria.

These optional **match** subcommands are available:

- **access-group** {*acl-index* | *acl-name*}
- **ip** {**dscp** | **precedence**} *value1 value2 ... value8*

These subcommands appear in the CLI help but are not supported on LAN interfaces or WAN interfaces on the OSMs:

- **input-interface** {{*interface interface-number*} | {**null** *number*} | {**vlan** *vlan-id*}}
- **protocol** *linktype*
- **destination-address** **mac** *mac-address*
- **source-address** **mac** *mac-address*

PFC QoS does not support these subcommands:

- **input-interface** *{{ interface interface-number } | { null number } | { vlan vlan-id } }*
- **protocol** *linktype*
- **destination-address** **mac** *mac-address*
- **source-address** **mac** *mac-address*
- **qos-group** *group-value*

If you enter these subcommands, PFC QoS does not detect the unsupported keywords until you attach a policy map to an interface. When you try to attach the policy map to an interface, you get an error message. For additional information, refer to the *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide* and the *Cisco IOS Command Reference* publications.

After you have configured the class map name and are in class map configuration mode, you can enter the **match** subcommands. The syntax for these subcommands is as follows:

```
match {{ access-group acl-index } | acl-name } | {{ ip dscp } | { precedence value } }
```

See [Table 2-1](#) for a syntax description of the **match** subcommands.

**Table 2-1 match Syntax Description**

Optional Subcommand	Description
<b>access-group</b> <i>acl-index   acl-name</i>	Specifies the access list index or access list names; valid access list index values are from 1 to 2699.
<b>access-group</b> <i>acl-name</i>	Specifies the named access list.
<b>ip dscp</b> <i>value1 value2</i> ... <i>value8</i>	Specifies IP DSCP values to match; valid values are from 0 to 63. Enter up to 8 DSCP values separated by white spaces.
<b>ip precedence</b> <i>value1</i> <i>value2 ... value8</i>	Specifies IP precedence values to match; valid values are from 0 to 7. Enter up to 8 precedence values separated by white spaces.

## Examples

This example shows how to access the **class-map** commands and subcommands, configure a class map named **ipp5**, and enter a match statement for ip precedence 5:

```
Router# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)# class-map ipp5
Router(config-cmap)# match ip precedence 5
Router(config-cmap)#
```

This example shows how to configure the class map to match an already configured access list:

```
Router(config-cmap)# match access-group IPacl1
Router(config-cmap)#
```

## Related Commands

[policy-map](#)  
[show class-map](#)  
[show policy-map](#)  
[show policy-map interface](#)

# clear catalyst6000 traffic-meter

To clear the traffic meter counters, use the **clear catalyst6000 traffic-meter** command.

**clear catalyst6000 traffic-meter**

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

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

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**Command Modes** Privileged EXEC

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Command History	Release	Modification
	12.1(13)E	Support for this command was introduced on the Catalyst 6500 series switches.

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**Examples** This example shows how to clear the traffic meter counters:

```
Router# clear catalyst6000 traffic-meter
Router#
```