



# CHAPTER 1

## Port Unicast and Multicast Flood Blocking

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This chapter describes how to configure multicast and unicast flood blocking on the Catalyst 4000 family switch. This chapter contains these topics:

- [About Flood Blocking, page 1-1](#)
- [Configuring Port Blocking, page 1-1](#)



### Note

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For complete syntax and usage information for the switch commands used in this chapter, see the *Cisco Catalyst 4500 Series Switch Command Reference* and related publications at this location:

<http://www.cisco.com/en/US/products/hw/switches/ps4324/index.html>

If a command is not in the *Catalyst 4500 Series Switch Command Reference*, you can locate it in the Cisco IOS library. See the *Cisco IOS Command Reference* and related publications at this location:

<http://www.cisco.com/en/US/products/ps6350/index.html>

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## About Flood Blocking

Occasionally, unknown unicast or multicast traffic is flooded to a switch port because a MAC address has timed out or has not been learned by the switch. (This condition is especially undesirable for a private VLAN isolated port.) To guarantee that no unicast and multicast traffic is flooded to the port, use the **switchport block unicast** and **switchport block multicast** commands to enable flood blocking on the switch.



### Note

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The flood blocking feature is supported on all switched ports (including PVLAN ports) and is applied to all VLANs on which the port is forwarding.

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## Configuring Port Blocking

By default, a switch floods packets with unknown destination MAC addresses to all ports. If unknown unicast and multicast traffic is forwarded to a switch port, there might be security issues. To prevent forwarding such traffic, you can configure a port to block unknown unicast or multicast packets.

**Note**

Blocking of unicast or multicast traffic is not automatically enabled on a switch port; you must explicitly configure it.

## Blocking Flooded Traffic on an Interface

**Note**

The interface can be a physical interface (for example, GigabitEthernet 1/1) or an EtherChannel group (such as port-channel 5). When you block multicast or unicast traffic for a port channel, it is blocked on all ports in the port channel group.

**Note**

Starting with Cisco IOS Release 12.2(52)SG, only IPV4 and IPV6 unknown multicast traffic flooding is blocked; Layer 2 unknown multicast flooding is not. This behavior stems from a fix for the following problem: when you configure blocking of unknown multicast flooding on a port, broadcast traffic to the port is also blocked.

To disable the flooding of multicast and unicast packets to an interface, perform this task:

	Command	Purpose
Step 1	Switch# <b>configure terminal</b>	Enters global configuration mode.
Step 2	Switch(config)# <b>interface</b> <i>interface-id</i>	Enters interface configuration mode and enter the type and number of the switch port interface (for example, <b>GigabitEthernet 1/1</b> ).
Step 3	Switch(config-if)# <b>switchport block multicast</b>	Blocks unknown multicast forwarding to the port.
Step 4	Switch(config-if)# <b>switchport block unicast</b>	Blocks unknown unicast forwarding to the port.
Step 5	Switch(config)# <b>end</b>	Returns to privileged EXEC mode.
Step 6	Switch# <b>show interface</b> <i>interface-id</i> <b>switchport</b>	Verifies your entry.
Step 7	Switch# <b>copy running-config startup-config</b>	(Optional) Saves your entries in the configuration file.

This example shows how to block unicast and multicast flooding on a GigabitEthernet interface1/1 and how to verify the configuration:

```
Switch# configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)# interface gigabitethernet1/1
Switch(config-if)# switchport block multicast
Switch(config-if)# switchport block unicast
Switch(config-if)# end
Switch# show interface gigabitethernet1/1 switchport
Name: Gi1/3
Switchport: Enabled
```

```
<output truncated>
```

```
Port Protected: On
Unknown Unicast Traffic: Not Allowed
Unknown Multicast Traffic: Not Allowed
```

```
Broadcast Suppression Level: 100
Multicast Suppression Level: 100
Unicast Suppression Level: 100
```

## Resuming Normal Forwarding on a Port

To resume normal forwarding on a port, perform this task:

	Command	Purpose
Step 1	Switch# <b>configure terminal</b>	Enters global configuration mode.
Step 2	Switch(config)# <b>interface</b> <i>interface-id</i>	Enters interface configuration mode and enter the type and number of the switch port interface (GigabitEthernet1/1).
Step 3	Switch(config-if)# <b>no switchport</b> <b>block multicast</b>	Enables unknown multicast flooding to the port.
Step 4	Switch(config-if)# <b>no switchport</b> <b>block unicast</b>	Enables unknown unicast flooding to the port.
Step 5	Switch(config)# <b>end</b>	Returns to privileged EXEC mode.
Step 6	Switch# <b>show interface</b> <i>interface-id</i> <b>switchport</b>	Verifies your entry.
Step 7	Switch# <b>copy running-config</b> <b>startup-config</b>	(Optional) Saves your entries in the configuration file.

