MAC Filtering

This feature enables/disables MAC address filter on the backhaul interface.

Your software release may not support all the features that are documented in this module. For the latest feature information and caveats, see the release notes for your platform and software release. The Feature Information Table at the end of this document provides information about the documented features and lists the releases in which each feature is supported.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to http://tools.cisco.com/ITDIT/CFN/. An account on http://www.cisco.com/ is not required.

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Hardware Compatibility Matrix for the Cisco cBR Series Routers

Note The hardware components that are introduced in a given Cisco IOS-XE Release are supported in all subsequent releases unless otherwise specified.

Table 1: Hardware Compatibility Matrix for the Cisco cBR Series Routers

Cisco CMTS Platform	Processor Engine	Interface Cards
Cisco cBR-8 Converged Broadband Router	**Cisco IOS-XE Release 16.5.1 and Later Releases** Cisco cBR-8 Supervisor: • PID—CBR-SUP-250G • PID—CBR-CCAP-SUP-160G	**Cisco IOS-XE Release 16.5.1 and Later Releases** Cisco cBR-8 CCAP Line Cards: • PID—CBR-LC-8D30-16U30 • PID—CBR-LC-8D31-16U30 • PID—CBR-RF-PIC • PID—CBR-RF-PROT-PIC • PID—CBR-CCAP-LC-40G • PID—CBR-CCAP-LC-40G-R • PID—CBR-CCAP-LC-G2-R • PID—CBR-SUP-8X10G-PIC • PID—CBR-2X100G-PIC Digital PICs: • PID—CBR-DPIC-8X10G • PID—CBR-DPIC-2X100G Cisco cBR-8 Downstream PHY Module: • PID—CBR-D31-DS-MOD Cisco cBR-8 Upstream PHY Modules: • PID—CBR-D31-US-MOD

Note Do not use DPICs (8X10G and 2x100G) to forward IP traffic, as it may cause buffer exhaustion, leading to line card reload.

The only allowed traffic on a DPIC interface is DEPI, UEPI, and GCP traffic from the Cisco cBR-8 router to Remote PHY devices. Other traffic such as DHCP, SSH, and UTSC should flow via another router, since DPICs cannot be used for normal routing.

Information About MAC Filtering

With this feature, only the packet whose destination MAC address is the MAC address of the router interface can be forwarded. It supports 32 unicast filter entries per interface. It is disabled by default.

Note When port-channel is enabled, MAC filtering must be enabled on backhaul interface to take effect.

Note When both dot1q l2vpn and MAC filtering are enabled on backhaul interface, only 1 unicast filter entry is supported per backhaul interface. The MAC filtering is only supported for non-l2vpn unicast packets.

How to Configure MAC Filtering

This section describes the configuration tasks that are performed to manage MAC filtering. You can use the command-line interface (CLI) commands to complete the configuration.

Configuring MAC Filtering

To configure MAC filtering, follow the steps below:

```
enable
configure terminal
interface tenGigabitEthernet slot/subslot/port
mac-addr-filter
end
```

Verifying MAC Filtering

To verify the MAC filtering configuration on the backhaul interface, use**show running-config interface** command as shown below:

```
Router# show running-config interface tenGigabitEthernet 4/1/0
Building configuration...

Current configuration : 73 bytes
!
interface TenGigabitEthernet4/1/0
 no ip address
 mac-addr-filter
end
```

To verify the MAC filtering status on a specific SUP slot and SUP-PIC bay, use**show platform software iomd** command as shown below:

```
Router# show platform software iomd 4/4 mac-filter
IOMD (Input Output Module Driver) Mac Filter Status
```

```
port: 0     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   1
    Index      Mode    Action            Entry MAC           Entry MASK             Match
Count
       00    enable      pass    c4:14:3c:16:7c:04    ff:ff:ff:ff:ff:ff
    0


port: 1     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   1
    Index      Mode    Action            Entry MAC           Entry MASK             Match
Count
       00    enable      pass    c4:14:3c:16:7c:05    ff:ff:ff:ff:ff:ff
 1729


port: 2     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   1
    Index      Mode    Action            Entry MAC           Entry MASK             Match
Count
       00    enable      pass    c4:14:3c:16:7c:06    ff:ff:ff:ff:ff:ff
    0


port: 3     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   1
    Index      Mode    Action            Entry MAC           Entry MASK             Match
Count
       00    enable      pass    c4:14:3c:16:7c:07    ff:ff:ff:ff:ff:ff
    0


port: 4     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   1
    Index      Mode    Action            Entry MAC           Entry MASK             Match
Count
       00    enable      pass    c4:14:3c:16:7c:08    ff:ff:ff:ff:ff:ff
    0


port: 5     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   1
    Index      Mode    Action            Entry MAC           Entry MASK             Match
Count
```

```
       00    enable      pass    c4:14:3c:16:7c:09    ff:ff:ff:ff:ff:ff
   15


port: 6     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   1
    Index      Mode    Action            Entry MAC           Entry MASK             Match
Count
       00    enable      pass    c4:14:3c:16:7c:0a    ff:ff:ff:ff:ff:ff
    0


port: 7     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   1
    Index      Mode    Action            Entry MAC           Entry MASK             Match
Count
       00    enable      pass    c4:14:3c:16:7c:0b    ff:ff:ff:ff:ff:ff
    0
```

If the MAC filtering is disabled, the output of the **show platform software iomd** command is shown as below:

```
Router# show platform software iomd 4/5 mac-filter
IOMD (Input Output Module Driver) MAC filter Status


port: 0     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   0


port: 1     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   0


port: 2     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   0


port: 3     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
            Entry Number:   0


port: 4     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                      0      Total Drop cnt:
    0
```

```
            Entry Number:   0

port: 5     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                    0      Total Drop cnt:
    0
            Entry Number:   0

port: 6     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                    0      Total Drop cnt:
    0
            Entry Number:   0

port: 7     promiscuous mode:     unicast:  enable   multicast:  enable      broadcast:
enable
            Input Drop cnt:                    0      Total Drop cnt:
    0
            Entry Number:   0
```

Configuration Examples for MAC Filtering

This section describes a sample configuration example for configuring the MAC filtering.

```
router> enable
router# configure terminal
router(config)# interface tenGigabitEthernet 4/1/0
router(config-if)# mac-addr-filter
router(config-if)# end
```

Feature Information for MAC Filtering

Use Cisco Feature Navigator to find information about the platform support and software image support. Cisco Feature Navigator enables you to determine which software images support a specific software release, feature set, or platform. To access Cisco Feature Navigator, go to the https://cfnng.cisco.com/ link. An account on the Cisco.com page is not required.

Note The following table lists the software release in which a given feature is introduced. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Table 2: Feature Information for MAC Filtering

Feature Name	Releases	Feature Information
MAC Filtering	Cisco IOS XE Everest 16.6.1	This feature was integrated into Cisco IOS XE Everest 16.6.1 on the Cisco cBR Series Converged Broadband Routers.