

Applying Layer 2 Port Mirroring to a Logical Interface

You can apply a Layer 2 port-mirroring firewall filter to the input or to the output of a logical interface, including an aggregated Ethernet logical interface. Only packets of the address-type family specified by the filter action are mirrored.

Before you begin, complete the following task:

- Define a Layer 2 port-mirroring firewall filter to be applied to the input to a logical interface or output to a logical interface. For details, see Defining a Layer 2 Port-Mirroring Firewall Filter.



NOTE: This configuration task shows two Layer 2 port-mirroring firewall filters: one filter applied to the logical interface ingress traffic, and one filter applied to the logical interface egress traffic.

To apply a Layer 2 port-mirroring firewall filter to an input or output logical interface:

1. Configure the underlying physical interface for the logical interface.
 - a. Enable configuration of the underlying physical interface:

```
[edit]
user@host# edit interfaces interface-name
```



NOTE: A port-mirroring firewall filter can also be applied to an aggregated-Ethernet logical interface.

- b. For Fast Ethernet and Gigabit Ethernet interfaces and aggregated Ethernet interfaces configured for VPLS, enable the reception and transmission of 802.1Q VLAN-tagged frames on the interface:

```
[edit interfaces interface-name]
user@host# set vlan-tagging
```

- c. For Ethernet interfaces that have IEEE 802.1Q VLAN tagging and bridging enabled and that must accept packets carrying TPID 0x8100 or a user-defined TPID, set the logical link-layer encapsulation type:

```
[edit interfaces interface-name]
user@host# set encapsulation extended-vlan-bridge
```

2. Configure the logical interface to which you want to apply a Layer 2 port-mirroring firewall filter.

- a. Specify the logical unit number:

```
[edit interfaces interface-name]
user@host# edit unit logical-unit-number
```

- b.

For a Fast Ethernet, Gigabit Ethernet, or Aggregated Ethernet interface, bind an 802.1Q VLAN tag ID to the logical interface:

```
[edit interfaces interface-name unit logical-unit-number]  
user@host# set vlan-id number
```

3. Enable specification of an input or output filter to be applied to Layer 2 packets that are part of bridging domain, Layer 2 switching cross-connects, or virtual private LAN service (VPLS).

- If the filter is to be evaluated when packets are received on the interface:

```
[edit interfaces interface-name unit logical-unit-number]  
user@host# set family family filter input pm-filter-name-a
```

- If the filter is to be evaluated when packets are sent on the interface:

```
[edit interfaces interface-name unit logical-unit-number]  
user@host# set family family filter output pm-filter-name-b
```

The value of the *family* option can be `bridge`, `ccc`, or `vpls`.



NOTE: If port-mirroring firewall filters are applied at both the input and output of a logical interface, two copies of each packet are mirrored. To prevent the router from forwarding duplicate packets to the same destination, include the optional `mirror-once` statement at the `[edit forwarding-options]` hierarchy level.

4. Verify the minimum configuration for applying a named Layer 2 port mirroring firewall filter to a logical interface:

```
[edit interfaces interface-name unit logical-unit-number family family filter ... ]  
user@host# top  
[edit]  
user@host# show interfaces
```

```
interfaces {  
  interface-name {  
    vlan-tagging;  
    encapsulation extended-vlan-bridge;  
    unit number { # Apply a filter to the input of this interface  
      vlan-id number;  
      family (bridge | ccc | vpls) {  
        filter {  
          input pm-filter-for-logical-interface-input;  
        }  
      }  
    }  
    unit number { # Apply a filter to the output of this interface  
      vlan-id number;  
      family (bridge | ccc | vpls) {  
        filter {  
          output pm-filter-for-logical-interface-output;  
        }  
      }  
    }  
  }  
}
```

```
}  
}
```

- Related Topics**
- Layer 2 Port Mirroring Overview
 - Layer 2 Port Mirroring Firewall Filters
 - Defining a Layer 2 Port-Mirroring Firewall Filter
 - Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a Bridge Domain
 - Applying Layer 2 Port Mirroring to Traffic Forwarded or Flooded to a VPLS Routing Instance
 - Example: Layer 2 Port Mirroring at a Logical Interface
 - Example: Layer 2 Port Mirroring for a Layer 2 VPN
 - Example: Layer 2 Port Mirroring for a Layer 2 VPN with LAG Links

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