Address Table Commands

bridge multicast filtering

To enable the filtering of multicast addresses, use the **bridge multicast filtering** command in switch configuration mode. To disable multicast address filtering, use the **no** form of this command.

bridge multicast filtering
no bridge multicast filtering

Syntax Description

This command has no arguments or keywords.

Command Default

Multicast address filtering is disabled. All multicast addresses are flooded to all ports.

Command Modes

Switch configuration (config-switch)

Command History

Release	Modification
3.5.1	This command was introduced.

Usage Guidelines

When this feature is enabled, unregistered multicast traffic (as opposed to registered) are still flooded. All registered multicast addresses are forwarded to the multicast groups.

Example

The following example enables bridge multicast filtering:

```
nfvis(config-switch)# bridge multicast filtering
nfvis(config-switch)# commit
nfvis(config-switch)# end
```

bridge multicast unregistered

To configure the forwarding or filtering of unregistered multicast addresses, use the **bridge multicast unregistered** command in interface switch configuration mode. To restore the default configuration, use the **no** form of this command.

bridge multicast unregistered {**forwarding** | **filtering**}
no bridge multicast unregistered

Syntax Description

forwarding	Forwards unregistered multicast packets.
filtering	Filters unregistered multicast packets.

Command Default

Unregistered multicast packets are forwarded.

Command Modes

Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)

Command History

Release	Modification
3.5.1	This command was introduced.

Usage Guidelines

Do not enable unregistered multicast filtering on ports that are connected to routers because the 224.0.0.x address range should not be filtered. Routers do not necessarily send IGMP reports for the 224.0.0.x range. You can run this command before the VLAN is created.

Example

The following example specifies that unregistered multicast packets are filtered on port channel 1:

```
nfvis(config-switch)# interface port-channel 1
nfvis(config-switch-if)# bridge multicast unregistered filtering
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

bridge unicast unknown

To enable egress filtering of unicast packets where the destination MAC address is unknown to the device, use the **bridge unicast unknown** command in interface switch configuration mode. To restore the default configuration, use the **no** form of this command.

bridge unicast unknown {**forwarding** | **filtering**}
no bridge unicast unknown

Syntax Description

forwarding	Forwards the unicast packets with unknown destination MAC address.
filtering	Filters the unicast packets with unknown destination MAC address.

Command Default

Unicast packets with unknown destination MAC address are forwarded.

Command Modes

Interface (Gigabit Ethernet, Port Channel) switch configuration (config-switch-if)

Command History

Release	Modification
3.5.1	This command was introduced.

Example

The following example filters the unicast packets on Gigabit Ethernet interface 1/1 when the destination is unknown:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch-if)# bridge unicast unknown filtering
nfvis(config-switch-if)# commit
nfvis(config-switch-if)# end
```

mac address-table aging-time

To set the aging time of the address table, use the **mac address-table aging-time** command in switch configuration mode. To restore the default, use the **no** form of this command.

mac address-table aging-time *seconds*
no mac address-table aging-time

Syntax Description

seconds	Time in seconds. Valid range is from 10 to 630 seconds.

Command Default

300

Command Modes

Switch configuration (config-switch)

Command History

Release	Modification
3.5.1	This command was introduced.

Example

The following example sets the aging time of the address table to 600 seconds:

```
nfvis(config-switch)# mac address-table aging-time 600
nfvis(config-switch)# commit
nfvis(config-switch)# end
```

mac address-table static

To add a MAC-layer station source address to the MAC address table for a Gigabit Ethernet or port channel interface, use the **mac address-table static** command in switch configuration mode. To delete the MAC address, use the **no** form of this command.

mac address-table static *mac-address* **vlan** *vlan-id* **interface** {**gigabitEthernet** | **port-channel**} *interface-id* {**permanent** | **delete-on-reset** | **delete-on-timeout**}
no mac address-table static *mac-address* **vlan** *vlan-id*

Syntax Description

mac-address	Specify a valid MAC address.
vlan *vlan-id*	Specify the VLAN ID.
interface	Specifies the interface type.
gigabitEthernet	Specifies Gigabit Ethernet as the interface type.
port-channel	Specifies port channel as the interface type.
interface-id	Specify an interface ID.
permanent	Specifies the permanent static MAC address. The keyword is applied by the default.
delete-on-reset	Specifies the delete-on-reset static MAC address.
delete-on-timeout	Specifies the delete-on-timeout static MAC address.

Command Default

No static addresses are defined. The default mode for an added address is permanent.

Command Modes

Switch configuration (config-switch)

Command History

Release	Modification
3.6.1	The port-channel parameter was added.
3.5.1	This command was introduced.

Usage Guidelines

Use the command to add a static MAC address with a given time-to-live.

Each MAC address in the MAC address table is assigned two attributes: **type** and **time-to-live**.

The following value of time-to-live is supported:

- **permanent**: MAC address is saved until it is removed manually.
- **delete-on-reset**: MAC address is saved until the next reboot.
- **delete-on-timeout**: MAC address may be removed by the aging timer.

The following types are supported:

- **static**: a MAC address manually added by the command with the following keywords that specify its time-to-live: **permanent**, **delete-on-reset**, **delete-on-timeout**.

  A static MAC address may be added in any port mode.

- **dynamic**: a MAC address learned by the switch in a non-secure mode. The value of its **time-to-live** attribute is **delete-on-timeout**.

Example 1

The following example adds a permanent static MAC address:

```
nfvis(config-switch)# mac address-table static 00:3f:bd:45:5a:b1 vlan 1 interface
gigabitEthernet 1/1 permanent
nfvis(config-switch)# commit
nfvis(config-switch)# end
```

Example 2

The following example adds a deleted-on-reset static MAC address:

```
nfvis(config-switch)# mac address-table static 00:3f:bd:45:5a:b1 vlan 1 interface
gigabitEthernet 1/1 delete-on-reset
nfvis(config-switch)# commit
nfvis(config-switch)# end
```

port security enable

To enable port security learning mode on an interface, use the **port security** command. To disable port security learning mode on an interface, use the no form of this command.

port security enable

noport security enable

Syntax Description

enable	Enable port security on an interface.

Command Default

The feature is disabled by default.

Command Modes

Switch configuration (config-switch)

Command History

Release	Modification
3.10.1	This command was introduced.

Usage Guidelines

None

Example

The following example enables port security:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch)# port-security enable
nfvis(config-switch)# commit
```

port security max

To configure the maximum number of addresses that can be learned on the port while the port is in port, max-addresses or secure mode, use the **port security max** command. To restore the default configuration, use the no form of this command.

port security max *max-addr*

noport securitymax

Syntax Description

max-addr	Specifies the maximum number of addresses that can be learned on the port. Valid range is from 0 to 256.

Command Default

This default maximum number of addresses is 1.

Command Modes

Switch configuration (config-switch)

Command History

Release	Modification
3.10.1	This command was introduced.

Usage Guidelines

The command may be used only when the interface in the regular (non-secure with unlimited MAC learning) mode.

Use this command to change the default value before the **port security** command.

Example

The following example configures max mac address:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch)# port-security max 5
nfvis(config-switch)# commit
```

port security violation

To discard packets or shutdown interface with unlearned source address, use **port-security violation** command.

port security violation [**discardshutdown**]

Syntax Description

discard	Discards packets with unlearned source addresses.
shutdown	Discards packets with unlearned source addresses and shuts down the port.

Command Default

The default mode is discard.

Command Modes

Switch configuration (config-switch)

Command History

Release	Modification
3.10.1	This command was introduced.

Usage Guidelines

None

Example

The following example enables port security:

```
nfvis(config-switch)# interface gigabitEthernet 1/1
nfvis(config-switch)# port-security violation shutdown
nfvis(config-switch)# commit
```

switch clear mac address-table

To remove learned or secure entries from the forwarding database (FDB) for a Gigabit Ethernet or port channel interface, use the **switch clear mac address-table** command in privileged EXEC mode.

switch clear mac address-table dynamic [{**gigabitEthernet** | **port-channel**} *interface-id*]

Syntax Description

dynamic	Deletes all dynamic (learned) addresses.
gigabitEthernet	Specifies gigabitEthernet as the interface type.
port-channel	Specifies port channel as the interface type.
interface-id	Specifies the interface ID.

Command Default

If *interface-id* is not provided, all dynamic entries are deleted.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
3.6.1	The port-channel parameter was added.
3.5.1	This command was introduced.

Example

Delete all dynamic entries from the FDB.

```
nfvis# switch clear mac address-table dynamic
```

show ports security

To display the port-lock status, use the **show ports security** command.

showports security [*interface-id* | **detailed**]

Syntax Description

detailed	Displays information for non-present ports in addition to present ports.
interface-id	Specifies an interface ID. The interface ID can be one of the following types: Ethernet port or port-channel.

Command Default

Display for all interfaces. If detailed is not used, only present ports are displayed.

Command Modes

Switch configuration (config-switch)

Command History

Release	Modification
3.10.1	This command was introduced.

Usage Guidelines

None

Example

The following example verifies the configuration:

```
nfvis# show switch interface port-security
MAC
VIOLATION ADDRESS MAX MAC
PORT STATUS LEARNING HANDLING COUNT ADDRESS
-------------------------------------------------------------
1/0 Disabled Delete-On-Reset Discard 0 0
1/1 Enabled Delete-On-Reset Discard 1 5
1/2 Disabled Delete-On-Reset Discard 0 0
1/3 Disabled Delete-On-Reset Discard 0 0
1/4 Disabled Delete-On-Reset Discard 0 0
1/5 Disabled Delete-On-Reset Discard 0 0
1/6 Disabled Delete-On-Reset Discard 0 0
1/7 Disabled Delete-On-Reset Discard 0 0
```

show switch mac addr-table

To display entries in the MAC address table, use the **show switch mac addr-table** command in privileged EXEC mode.

show switch mac addr-table *vlan-id*

Syntax Description

vlan-id	Specifies the VLAN ID.

Command Default

None

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
3.5.1	This command was introduced.

Example

The following is a sample output of the **show switch mac addr-table** command:

```
nfvis# show switch mac addr-table 1
VLAN  MAC ADDRESS        PORT   TYPE
------------------------------------------------------------
1     00:22:bd:fb:af:41  gi1/6  dynamic
1     00:22:bd:fb:af:42  gi1/7  dynamic
1     00:22:bd:fb:af:80  gi1/5  dynamic
1     00:25:45:92:e7:aa  gi1/1  dynamic
1     00:3a:7d:94:78:92  gi1/1  dynamic
1     00:a6:ca:d6:31:34  none   self
1     0c:d9:96:91:06:06  gi1/4  dynamic
```