MAC Learning Command Reference

This chapter describes commands to configure MAC learning.

clear mac-address-table

To remove a specified address (or set of addresses) from the MAC address table, use the **clear mac-address-table** command in privileged EXEC mode.

clear mac-address-table [**address** *mac-addr*] [**bridge-domain** *bridgedomain-id*] [**interface** *type number*]

Syntax Description

address *mac-addr*	(Optional) Specifies the MAC address to clear.
bridge-domain *bridgedomain-id*	(Optional) Clears the MAC address from the specified bridge domain.
interface *type number*	(Optional) Clears the MAC address from the specified interface.

Command Default

When no options are specified, all the dynamically added MAC addresses are cleared.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
9.3.0	This command was introduced.

Usage Guidelines

If the **clear mac-address-table** command is used without options, all the MAC addresses are removed. If you specify an address but do not specify an interface, the address is deleted from all the interfaces. If you specify an interface but do not specify an address, all the addresses on the specified interface are removed.

Examples

The following example shows how to remove a MAC address from the MAC address table on a bridge domain:

```
Router# clear mac-address-table address
0000.bbbb.cccc interface TenGigabitEthernet 4/1 bridge-domain 100
```

The following example shows how to remove a MAC address from the MAC address table on all the bridge domains:

```
Router# clear mac-address-table address 0000.bbbb.cccc
```

Related Commands

Command	Description
show mac-address-table	Displays information about the MAC address table.

mac learning

To reenable MAC learning on the bridge domain, use the **mac learning** command in bridge domain configuration mode. To disable MAC learning, use the **no** form of this command.

mac learning

no mac learning

Syntax Description

This command has no arguments or keywords.

Command Default

MAC learning is enabled on the bridge domains by default.

Command Modes

Bridge domain configuration (config-bdomain)

Command History

Release	Modification
9.3.0	This command was introduced.

Usage Guidelines

MAC address learning is enabled by default only for point–to–multipoint bridge domains and can also be disabled.

Examples

The following example shows how to reenable MAC learning on a bridge domain:

```
Router> enable
Router# configure terminal
Router(config)# bridge-domain 100
Router(config-bdomain)# mac learning
Router(config-bdomain)# end
```

The following example shows how to disable MAC learning on a bridge domain:

```
Router> enable
Router# configure terminal
Router(config)# bridge-domain 100
Router(config-bdomain)# no mac learning
Router(config-bdomain)# end
```

Related Commands

Command	Description
mac static address	Configures a static MAC address on a service instance.

Command	Description
mac limit maximum addresses	Configures the maximum number of MAC addresses allowed on a bridge domain.

mac limit maximum addresses

To configure the maximum number of MAC addresses allowed on a bridge domain, use the **mac limit maximum addresses** command in bridge domain configuration mode. To return to the default state, use the **no** form of this command.

mac limit maximum addresses *maximum-addresses*

no mac limit maximum addresses *maximum-addresses*

Syntax Description

maximum-addresses	Integer that specifies the maximum number of MAC addresses allowed on a bridge domain. The range is from 1 to 128000.

Command Default   Maximum number of MAC addresses are allowed on the bridge domain.

Command Modes   Bridge domain configuration (config-bdomain)

Command History

Release	Modification
9.3.0	This command was introduced.

Examples   The following example shows how to set the maximum number of MAC addresses on a specific bridge domain to 1000:

```
Router> enable
Router# configure terminal
Router(config)# bridge-domain 100
Router(config-bdomain)# mac limit maximum addresses 1000
Router(config-bdomain)# end
```

Related Commands

Command	Description
mac learning	Enables MAC learning on a bridge domain.

mac static address

To configure a static MAC address on a service instance, use the **mac static address** command in service instance configuration mode. To remove a static MAC address, use the **no** form of this command.

mac static address *mac-addr*

no mac static address *mac-addr*

Syntax Description

mac-addr	The 48-bit static MAC address.

Command Default   MAC static addresses are not configured.

Command Modes   Service instance configuration (config-if-srv)

Command History

Release	Modification
9.3.0	This command was introduced.

Usage Guidelines   Static MAC address configuration is supported only on Ethernet virtual circuit (EVC) bridge domain interfaces. The static MAC address configuration does not apply to the Multicast VLAN Registration (MVR) bridge domain.

Examples   The following example shows how to configure a MAC static address in service instance configuration mode:

```
Router> enable
Router# configure terminal
Router(config)# interface TenGigabitEthernet 4/1
Router(config-if)# service instance 1 ethernet
Router(config-if-srv)# encapsulation dot1q 100
Router(config-if-srv)# bridge-domain 100
Router(config-if-srv)# mac static address 0000.bbbb.cccc
Router(config-if-srv)# exit
Router(config-if)# end
```

Related Commands

Command	Description
mac learning	Enables MAC learning on a bridge domain.

show mac-address-table

To display information about the MAC address table, use the **show mac-address-table** command in privileged EXEC mode.

show mac-address-table [**address** *mac-addr*] [**bridge-domain** *bridgedomain-id*] [**interface** *type number*] [**count**]

Syntax Description

address *mac-addr*	(Optional) Displays information about the MAC address table for a specific MAC address.
bridge-domain *bridgedomain-id*	(Optional) Displays information about the MAC address table for a specific bridge domain.
interface *type number*	(Optional) Displays information about the MAC address table for a specific interface.
count	(Optional) Displays the number of entries that are currently in the MAC address table.

Command Default

When no options are specified, the command displays the entire MAC address table.

Command Modes

Privileged EXEC (#)

Command History

Release	Modification
9.3.0	This command was introduced.

Usage Guidelines

The *mac-addr* is a 48–bit MAC address and the valid format is H.H.H. The *bridgedomain-id* is the bridge domain number.

Examples

The following example shows how to display the MAC address table information for a specific MAC address:

```
Router# show mac-address-table address 0000.1000.0001
```

```
BD Index    MAC Address      Type      Ports
---------------------------------------------
 2          0000.1000.0001   dynamic   Te4/2
```

The following example shows how to display the MAC address table information for a specific bridge domain:

```
Router# show mac-address-table bridge-domain 2
```

```
BD Index    MAC Address     Type     Ports
-------------------------------------------
2           0000.1000.001e  dynamic  Te4/2
2           0000.1000.001d  dynamic  Te4/2
2           0000.1000.001c  dynamic  Te4/2
2           0000.1000.001b  dynamic  Te4/2
2           0000.1000.001a  dynamic  Te4/2
2           0000.1000.0019  dynamic  Te4/2
```

The following example shows how to display the MAC address table information for a specific interface:

```
Router# show mac-address-table interface tenGigabitEthernet4/2
```

```
BD Index    MAC Address     Type      Ports
-------------------------------------------
2           0000.1000.001e  dynamic   Te4/2
2           0000.1000.001d  dynamic   Te4/2
2           0000.1000.001c  dynamic   Te4/2
2           0000.1000.001b  dynamic   Te4/2
2           0000.1000.001a  dynamic   Te4/2
2           0000.1000.0019  dynamic   Te4/2
```

Related Commands

Command	Description
clear mac-address-table	Deletes entries from the MAC address table.