



Configuring MAC Security

This document describes the MAC security feature and configuration steps to implement MAC security.

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Prerequisites for Configuring MAC Security

Information About MAC Security

You can use the MAC security feature to restrict input to an interface by limiting and identifying MAC addresses of the devices that are allowed to access the port. When you assign secure MAC addresses to a secure port, the port does not forward packets with source addresses outside the group of defined addresses. If you limit the number of secure MAC addresses to one and assign a single secure MAC address, the device attached to that port is assured the full bandwidth of the port.

How to Provision MAC Security

Configuring Port Security

DETAILED STEPS

	Command or Action	Purpose
Step 1	ConfigureNID Example: UCS# Configure NID 1	Opens a new session for NID 1.
Step 2	ProvisionMacTableSecurityType Example: UCS# ProvisionMacTableSecurityType	Enters the ProvisionMacTableSecurityType mode.
Step 3	portSecurityGlobalConfig portSecurityGlobalConfigReq {mode {disable enable} agingTime {time time disable}} Example: UCS (ProvisionMacTableSecurityType) # portSecurityGlobalConfig portSecurityGlobalConfigReq agingTime time 60 UCS (ProvisionMacTableSecurityType) # portSecurityGlobalConfig portSecurityGlobalConfigReq mode enable	Port Security Global Configuration. • portSecurityGlobalConfigReq—Specifies port security global configuration. • mode—Option to enable/disable port security. • disable—Disables port security globally. • enable—Enables port security globally. • agingTime—Enables or disables port security aging. • time—Enables and sets time. • time—Time. The valid range is from 10 to 10000000 seconds. • disable—Disables aging.
Step 4	portSecurityGlobalConfig review Example: UCS (ProvisionMacTableSecurityType) # portSecurityGlobalConfig review	Displays the configuration.
Step 5	portSecurityGlobalConfig commit Example: UCS (ProvisionMacTableSecurityType) # portSecurityGlobalConfig commit	Sends the configuration to NID.
Step 6	portSecurityInterfaceConfig portSecurityInterfaceConfigReq {interface_id interface_id port_security {mode {disable enable} mac_limit	Interface mode Port Security Configuration. • interface_id—Specifies the interface ID.

	Command or Action	Purpose
	{maximum<i>max_mac_number</i> disable} violation {protect shutdown traponly trap-shutdown disable}} Example: <pre>UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq interface_id 2 UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq port_security mode enable UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq interface_id 2 UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq port_security mac_limit maximum 100 UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq interface_id 2 UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq port_security violation shutdown</pre>	• <i>interface_id</i>—Interface ID. The valid range is from 1 to 6. • port_security—Configures port security. • mode—Specifies the mode for port security. • disable—Disables port security. • enable—Enables port security. • mac_limit—Specifies MAC address learning limit. • maximum—Specifies the maximum number of MAC addresses. • <i>max_mac_number</i>—Maximum number of MAC addresses. The valid range is from 1 to 1024. • disable—Removes the MAC limit. • violation—Specifies the action when exceeding the limit. • protect—Specifies no action. • shutdown—Shuts down the port. • traponly—Sends an SNMP trap. • trap-shutdown—Sends an SNMP trap and shuts down the port. • disable—Disables violation type.
Step 7	portSecurityInterfaceConfig review Example: <pre>UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig review</pre>	Displays the configuration.
Step 8	portSecurityInterfaceConfig commit Example: <pre>UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig commit</pre>	Sends the configuration to NID.
Step 9	exit Example: <pre>UCS (ProvisionMacTableSecurityType) # exit</pre>	Exits the ProvisionMacTableSecurityType mode.

Configuration Example

The example shows how to configure port security:

```
UCS (ProvisionMacTableSecurityType) # portSecurityGlobalConfig portSecurityGlobalConfigReq
agingTime time 60
UCS (ProvisionMacTableSecurityType) # portSecurityGlobalConfig portSecurityGlobalConfigReq
mode enable
UCS (ProvisionMacTableSecurityType) # portSecurityGlobalConfig review
UCS (ProvisionMacTableSecurityType) # portSecurityGlobalConfig commit

UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq
interface_id 2
UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq
port_security mode enable
UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq
interface_id 2
UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq
port_security mac_limit maximum 100
UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq
interface_id 2
UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig portSecurityInterfaceConfigReq
port_security violation shutdown

UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig review
UCS (ProvisionMacTableSecurityType) # portSecurityInterfaceConfig commit
UCS (ProvisionMacTableSecurityType) # exit
```

Configuring MAC Security

DETAILED STEPS

	Command or Action	Purpose
Step 1	ConfigureNID Example: UCS# Configure NID 1	Opens a new session for NID 1.
Step 2	ProvisionMacTableSecurityType Example: UCS# ProvisionMacTableSecurityType	Enters the ProvisionMacTableSecurityType mode.
Step 3	setMacGlobalConfig setMacGlobalConfigReq {macAgingTime {setAgingTime <i>aging_time</i> disable} staticMacEntry learning} Example: UCS (ProvisionMacTableSecurityType) # setMacGlobalConfig setMacGlobalConfigReq macAgingTime setAgingTime 100	Global Configuration for MAC address table. • macAgingTime—Configures MAC aging time. • setAgingTime—Specifies aging time. • aging_time—Aging time in seconds. Valid range is from 10 to 1000000. • disable—Disables MAC aging. • staticMacEntry—Specifies static MAC address. • learning—Specifies MAC learning on VLAN.

	Command or Action	Purpose
Step 4	setMacGlobalConfig review Example: UCS(ProvisionMacTableSecurityType)# setMacGlobalConfig review	Displays the configuration.
Step 5	setMacGlobalConfig commit Example: UCS(ProvisionMacTableSecurityType)# setMacGlobalConfig commit	Sends the configuration to NID.
Step 6	setMacInterfaceConfig setMacInterfaceConfigReq {interface_id interface-id mode {learning {enable disable} secure {enable disable}}} Example: UCS(ProvisionMacTableSecurityType)# setMacInterfaceConfig setMacInterfaceConfigReq interface-id 3 UCS(ProvisionMacTableSecurityType)# setMacInterfaceConfig setMacInterfaceConfigReq mode learning enable	Interface mode for MAC configuration. • interface_id—Specifies the interface ID. • <i>interface_id</i>—Interface ID. • mode—Specifies the learning mode. • learning—Specifies port default learning mode. • enable—Enables MAC learning. • disable—Disables MAC learning. • secure—Specifies port secure learning mode. • enable—Enables secure MAC learning. • disable—Disables secure MAC learning.
Step 7	setMacInterfaceConfig review Example: UCS(ProvisionMacTableSecurityType)# setMacInterfaceConfig review	Displays the configuration.
Step 8	setMacInterfaceConfig commit Example: UCS(ProvisionMacTableSecurityType)# setMacInterfaceConfig commit	Sends the configuration to NID.
Step 9	exit Example: UCS(ProvisionMacTableSecurityType)# exit	Exits the ProvisionMacTableSecurityType mode.

Configuration Example

The example shows how to configure MAC table learning:

```
UCS(ProvisionMacTableSecurityType)# setMacGlobalConfig setMacGlobalConfigReq macAgingTime
setAgingTime 100
```

```

UCS (ProvisionMacTableSecurityType) # setMacGlobalConfig review
UCS (ProvisionMacTableSecurityType) # setMacGlobalConfig commit

UCS (ProvisionMacTableSecurityType) # setMacInterfaceConfig setMacInterfaceConfigReq
interface_id 3
UCS (ProvisionMacTableSecurityType) # setMacInterfaceConfig setMacInterfaceConfigReq mode
learning enable
UCS (ProvisionMacTableSecurityType) # setMacInterfaceConfig review
UCS (ProvisionMacTableSecurityType) # setMacInterfaceConfig commit

UCS (ProvisionMacTableSecurityType) # exit

```

Clearing MAC Address Table

DETAILED STEPS

	Command or Action	Purpose
Step 1	ConfigureNID Example: UCS# Configure NID 1	Opens a new session for NID 1.
Step 2	ProvisionMacTableSecurityType Example: UCS# ProvisionMacTableSecurityType	Enters the ProvisionMacTableSecurityType mode.
Step 3	clearMacTable clearMacTableReq clearAll Example: UCS (ProvisionMacTableSecurityType) # clearMacTable clearMacTableReq clearAll	Clears MAC address table. • clearAll —Clears all entries.
Step 4	clearMacTable review Example: UCS (ProvisionMacTableSecurityType) # clearMacTable review	Displays the configuration.
Step 5	clearMacTable commit Example: UCS (ProvisionMacTableSecurityType) # clearMacTable commit	Sends the configuration to NID.
Step 6	exit Example: UCS (ProvisionMacTableSecurityType) # exit	Exits the ProvisionMacTableSecurityType mode.

Configuration Example

The example shows how to configure port security:

```
UCS (ProvisionMacTableSecurityType)# clearMacTable clearMacTableReq clearAll
UCS (ProvisionMacTableSecurityType)# clearMacTable review
UCS (ProvisionMacTableSecurityType)# clearMacTable commit
UCS (ProvisionMacTableSecurityType)# exit
```

Verifying MAC Security

Use the following command to verify the MAC security status on the UCS controller.

- **showMacTableLearningReq mode**

This command displays the MAC table learning status. The following is a sample output from the command:

```
UCS (ProvisionMacTableSecurityType)# showmacTablelearning showMacTableLearningReq mode
UCS (ProvisionMacTableSecurityType)# showmacTablelearning review
```

Commands in queue:

```
showMacTableLearning showMacTableLearningReq mode
```

```
UCS (ProvisionMacTableSecurityType)# showmacTablelearning commit
```

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```
ShowMacTableLearning_Output.showMacTableLearngResp.status[0].interface_
= 1
ShowMacTableLearning_Output.showMacTableLearngResp.status[0].mode =
'Auto'
ShowMacTableLearning_Output.showMacTableLearngResp.status[1].interface_
= 2
ShowMacTableLearning_Output.showMacTableLearngResp.status[1].mode =
'Auto'
ShowMacTableLearning_Output.showMacTableLearngResp.status[2].interface_
= 3
ShowMacTableLearning_Output.showMacTableLearngResp.status[2].mode =
'Auto'
ShowMacTableLearning_Output.showMacTableLearngResp.status[3].interface_
= 4
ShowMacTableLearning_Output.showMacTableLearngResp.status[3].mode =
'Auto'
ShowMacTableLearning_Output.showMacTableLearngResp.status[4].interface_
= 5
ShowMacTableLearning_Output.showMacTableLearngResp.status[4].mode =
'Auto'
ShowMacTableLearning_Output.showMacTableLearngResp.status[5].interface_
= 6
ShowMacTableLearning_Output.showMacTableLearngResp.status[5].mode =
'Auto'
ShowMacTableLearning Commit Success!!!
```

- **showMacTableEntriesReq all**

This command displays the list of all MAC entries. The following is a sample output from the command:

```
UCS (ProvisionMacTableSecurityType)# showMacTableEntries showMacTableEntriesReq all
UCS (ProvisionMacTableSecurityType)# showmacTableentries review
```

Commands in queue:

```
showMacTableEntries showMacTableEntriesReq all
```

UCS(ProvisionMacTableSecurityType)# **showmacTableentries commit**

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```
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].mac_address
= '00:00:0c:07:ac:03'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].mac_address
= '00:09:e8:74:36:c5'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].mac_address
= '00:14:1b:ec:18:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].mac_address
= '00:19:a9:a2:9e:80'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].mac_address
= '00:1c:b0:f5:b4:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].mac_address
= '00:1c:b1:9a:00:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].vlan_id
= 1
```

```

ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].mac_address
= '00:1c:b1:f9:d0:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].mac_address
= '00:1c:b1:fa:48:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].mac_address
= '00:3a:99:fd:4b:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].ports
= ' CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].mac_address
= '18:9c:5d:a7:f4:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].mac_address
= '33:33:00:00:00:01'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].mac_address
= '33:33:00:00:00:02'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].mac_address
= '33:33:ff:fd:4b:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].type
= 'Static '
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].mac_address
= 'ff:ff:ff:ff:ff:ff'

```

```
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries Commit Success!!!
```

- **showMacTableEntriesReq interface_id 2**

This command displays the list of all MAC entries for a given interface. The following is a sample output from the command:

```
UCS (ProvisionMacTableSecurityType) # showMacTableEntries showMacTableEntriesReq
interface_id 2
UCS (ProvisionMacTableSecurityType) # showmacTableentries review
```

```
Commands in queue:
  showMacTableEntries showMacTableEntriesReq interface_id 2
```

```
UCS (ProvisionMacTableSecurityType) # showmactableentries commit
```

```
Clearing Socket 4
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].mac_address
= '33:33:00:00:00:01'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].mac_address
= '33:33:00:00:00:02'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].mac_address
= '33:33:ff:fd:4b:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].mac_address
= 'ff:ff:ff:ff:ff:ff'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].ports
= 'GigabitEthernet 1/1-6 CPU'

ShowMacTableEntries Commit Success!!!
```

- **showMacTableEntriesReq mac_address ff:ff:ff:ff:ff:ff**

This command displays the list of all MAC entries for a given MAC address. The following is a sample output from the command:

```
UCS (ProvisionMacTableSecurityType) # showMacTableEntries showMacTableEntriesReq
mac-address ff:ff:ff:ff:ff:ff
UCS (ProvisionMacTableSecurityType) # showmacTableentries review
```

```
Commands in queue:
  showMacTableEntries showMacTableEntriesReq mac_address
ff:ff:ff:ff:ff:ff
```

```
UCS (ProvisionMacTableSecurityType) # showmactableentries commit
```

```
Clearing Socket 4
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].mac_address
= 'ff:ff:ff:ff:ff:ff'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].ports
= 'GigabitEthernet 1/1-6 CPU'

ShowMacTableEntries Commit Success!!!
```

- **showMacTableEntriesReq static**

This command displays all the static MAC entries. The following is a sample output from the command:

```
UCS (ProvisionMacTableSecurityType) # showMacTableEntries showMacTableEntriesReq static
UCS (ProvisionMacTableSecurityType) # showmacTableentries review
```

```
Commands in queue:
  showMacTableEntries showMacTableEntriesReq static
```

```
UCS (ProvisionMacTableSecurityType) # showmactableentries commit
```

```
Clearing Socket 4
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].mac_address
= '00:00:0c:07:ac:03'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].mac_address
= '00:09:e8:74:36:c5'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].mac_address
= '00:14:1b:ec:18:00'
```

```

ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].mac_address
= '00:19:a9:a2:9e:80'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].mac_address
= '00:1c:b0:f5:b4:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].mac_address
= '00:1c:b1:9a:00:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].mac_address
= '00:1c:b1:f9:d0:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].mac_address
= '00:1c:b1:fa:48:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].mac_address
= '00:3a:99:fd:4b:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].ports
= ' CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].mac_address
= '18:9c:5d:a7:f4:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].ports
= 'GigabitEthernet 1/1 CPU'

```

```

ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].mac_address
= '33:33:00:00:00:01'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].mac_address
= '33:33:00:00:00:02'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].mac_address
= '33:33:ff:fd:4b:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].mac_address
= 'ff:ff:ff:ff:ff:ff'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries Commit Success!!!

```

• showMacTableEntriesReq vlan_id 1

This command displays all the MAC entries for a specified VLAN ID. The following is a sample output from the command:

```

UCS (ProvisionMacTableSecurityType) # showMacTableEntries showMacTableEntriesReq vlan-id
1
UCS (ProvisionMacTableSecurityType) # showmacTableentries review

```

Commands in queue:

```
showMacTableEntries showMacTableEntriesReq vlan_id 1
```

```
UCS (ProvisionMacTableSecurityType) # showMacTableEntries commit
```

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```

ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].mac_address
= '00:00:0c:07:ac:03'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[0].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].vlan_id

```

```

= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].mac_address
= '00:09:e8:74:36:c5'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[1].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].mac_address
= '00:14:1b:ec:18:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[2].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].mac_address
= '00:19:a9:a2:9e:80'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[3].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].mac_address
= '00:1c:b0:f5:b4:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[4].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].mac_address
= '00:1c:b1:9a:00:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[5].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].mac_address
= '00:1c:b1:f9:d0:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[6].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].mac_address
= '00:1c:b1:fa:48:00'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[7].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].mac_address

```

```

= '00:3a:99:fd:4b:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[8].ports
= ' CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].mac_address
= '18:9c:5d:a7:f4:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[9].ports
= 'GigabitEthernet 1/1 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].mac_address
= '33:33:00:00:00:01'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[10].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].mac_address
= '33:33:00:00:00:02'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[11].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].vlan0_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].mac_address
= '33:33:ff:fd:4b:1c'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[12].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].type
= 'Static'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].vlan_id
= 1
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].mac_address
= 'ff:ff:ff:ff:ff:ff'
ShowMacTableEntries_Output.showMacTableEntriesResp.macEntries[13].ports
= 'GigabitEthernet 1/1-6 CPU'
ShowMacTableEntries Commit Success!!!

```

• showMacAddressCountReq count

This command displays count of MAC addresses learnt per interface. The following is a sample output from the command:

```

UCS (ProvisionMacTableSecurityType) # showMacTableCount showMacAddressCountReq count
UCS (ProvisionMacTableSecurityType) # showmacTablecount review

```

Commands in queue:

```
showMacTableCount showMacAddressCountReq count
```

```
UCS (ProvisionMacTableSecurityType) # showmacTablecount commit
```

```

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ShowMacTableCount_Output.showMacAddressCountResp.macCount[0].Interface_id
= 1
ShowMacTableCount_Output.showMacAddressCountResp.macCount[0].count =
9
ShowMacTableCount_Output.showMacAddressCountResp.macCount[1].Interface_id
= 2
ShowMacTableCount_Output.showMacAddressCountResp.macCount[1].count =
0
ShowMacTableCount_Output.showMacAddressCountResp.macCount[2].Interface_id
= 3
ShowMacTableCount_Output.showMacAddressCountResp.macCount[2].count =
0
ShowMacTableCount_Output.showMacAddressCountResp.macCount[3].Interface_id
= 4
ShowMacTableCount_Output.showMacAddressCountResp.macCount[3].count =
0
ShowMacTableCount_Output.showMacAddressCountResp.macCount[4].Interface_id
= 5
ShowMacTableCount_Output.showMacAddressCountResp.macCount[4].count =
0
ShowMacTableCount_Output.showMacAddressCountResp.macCount[5].Interface_id
= 6
ShowMacTableCount_Output.showMacAddressCountResp.macCount[5].count =
0
ShowMacTableCount Commit Success!!!

```

- **showMacTableAgingReq agingTimeValue**

This command displays the MAC aging time. The following is a sample output from the command:

```

UCS (ProvisionMacTableSecurityType) # showMacTableAgingTime showMacTableAgingReq
agingTimeValue
UCS (ProvisionMacTableSecurityType) # showmactableagingTime review

```

```

Commands in queue:
showMacTableAgingTime showMacTableAgingReq agingTimeValue

```

```

UCS (ProvisionMacTableSecurityType) # showmactableagingTime commit

```

```

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ShowMacTableAgingTime_Output.showMacTableAgingResp.macAgingTime = 'MAC
Age Time: 300'

ShowMacTableAgingTime Commit Success!!!

```