

Настройка

управления MAC-адресами
на коммутаторах SWPC/SWC
через CLI

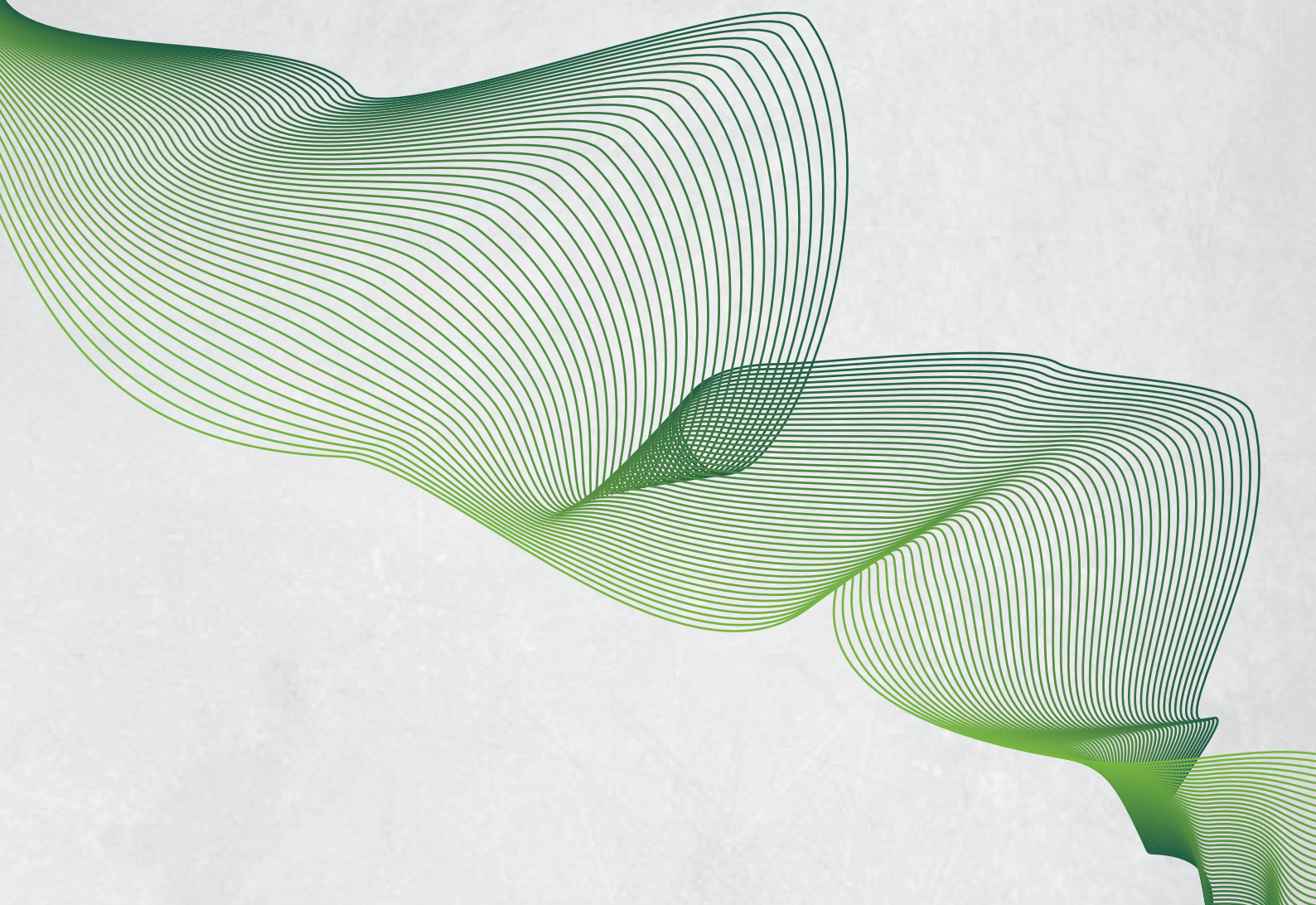


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1 MAC Address Table

clear collision-mac-address-table

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| Syntax | clear collision-mac-address-table |
| Parameter | none |
| Default | none |
| Mode | Admin Mode |
| Usage | If enable the function of the hash collision mac table that issued ffp (mac-address-table avoid-collision), the mac cannot be cleared. |
| Example | Clear the hash collision mac table. Switch#clear collision-mac-address-table |

clear mac-address-table dynamic

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| Syntax | clear mac-address-table dynamic [address <mac-addr>] [vlan <vlan-id>] [interface [ethernet portchannel] <interface-name>] |
| Parameter | <mac-addr> MAC address will be deleted <vlan-id> Vlan id <interface-name> port name for forwarding the MAC packets |
| Default | None |
| Mode | Admin mode. |
| Usage | Delete all dynamic address entries which exist in MAC address table, except application, system entries. MAC address entries can be classified according to different sources, the types are as follows: DYNAMIC, STATIC, APPLICATION, SYSTEM. DYNAMIC is the dynamic MAC address entries learned by switch, it can be aged by switch automatically. |
| Example | Delete all dynamic MAC Switch#clear mac-address-table dynamic |

mac-address-learning enable | disable

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| Syntax | mac-address-learning (enable disable) (vlan <vlan-id> interface ethernet <interface-name>) |
| Parameter | enable Enable MAC learning through port disable Disable MAC learning through port <vlan-id> VLAN ID,range:1-4094 <interface-name> Port name |
| Default | all port auto learning mac address |

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| Mode | Global mode |
| Usage | After disabling the MAC address learning function of the port, the port will not be able to automatically learn the MAC address, and the user can manage it by statically adding the MAC address. |
| Example | Disable the MAC learning function of port 8 Switch#config Switch(config)#mac-address-learning disable interface ethernet 1/0/8 |

mac-address-table aging-time

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| Syntax | mac-address-table aging-time <0 aging-time> no mac-address-table aging-time |
| Parameter | 0 0 to disable aging. aging-time aging-time seconds, range from 10 to 1000000; |
| Default | Default aging-time is 300 seconds. |
| Mode | Global Mode. |
| Usage | If no destination address of the packets is same with the address entry in aging-time, the address entry will get aged. The user had better set the aging-time according to the network condition, it usually use the default value. |
| Example | Set the aging-time to 600 seconds. Switch#config Switch(config)#mac-address-table aging-time 600 |

mac-address-table static | blackhole

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| Syntax | mac-address-table {static blackhole} address <mac-addr> vlan <vlan-id> [interface ethernet <interface-name>] [source destination both] no mac-address-table {static blackhole dynamic} [address <mac-addr>] [vlan <vlan-id>] [interface ethernet <interface-name>] |
| Parameter | static static entries blackhole filter entries, which is for discarding frames from specific MAC address, it can filter source address, destination address or the both. When choose the filter entries, blackhole address can't based on port, and not configure to interface; dynamic dynamic address entries <mac-addr> MAC address to be added or deleted <vlan-id> vlan number <interface-name> name of the port transmitting the MAC data packet |

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| | source | based on source address filter |
| | destination | based on destination address filter |
| | both | based on source address and destination address filter, the default is both |
| Default | When VLAN interface is configured and is up, the system will generate a static address mapping entry of which the inherent MAC address corresponds to the VLAN number. | |
| Mode | Global Mode | |
| Usage | <p>In certain special applications or when the switch is unable to dynamically learn the MAC address, users can use this command to manually establish mapping relation between the MAC address and port and VLAN.</p> <p>no mac-address-table command is for deleting all dynamic, static, filter MAC address entries existing in the switch MAC address list, except application, system entries. MAC address entries can be classified according to the different source, the types are as follows: DYNAMIC, STATIC, APPLICATION, SYSTEM. DYNAMIC is the dynamic MAC address entries learned by switch, it can be aged by switch automatically. STATIC is the static MAC address entries (including blackhole entries) added by user. APPLICATION is the static MAC address entries added by application protocol (such as dot1x, security port...). SYSTEM is the additive static MAC address entries according to VLAN interface. When adding STATIC entries, it can cover the conflictive DYNAMIC, except APPLICATION, SYSTEM entries.</p> <p>After configure the static multicast MAC by this command, the multicast MAC traffic will be forwarded to the specified port of the specified VLAN.</p> | |
| Example | <p>Port 1/0/1 belongs to VLAN200, and establishes address mapping with MAC address 00-03-0f-f0-00-18.</p> <pre>Switch#config Switch(config)#mac-address-table static address 00-03-0f-f0-00-18 vlan 200 interface ethernet 1/0/1</pre> | |

I2-address-table static-multicast address

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|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Syntax | I2-address-table static-multicast address {<ip-addr> <mac-addr>} vlan <vlan-id> interface [ethernet <interface-name>] port-channel <port-channel-id> no I2-address-table static-multicast (address {<ip-addr> <mac-addr>} vlan <vlan-id>) [interface (ethernet <interface-name>] port-channel <port-channel-id>)] | |
| Parameter | <ip-addr> | IP address add or delete IP address |
| | <mac-addr> | add or delete MAC address |
| | <interface-name> | port that transfer MAC data packets |
| | <port-channel-id> | aggregate port name of transfer MAC data packets |
| | <vlan-id> | VLAN number |
| Default | When VLAN interface is configured and is up, the system will generate a static address mapping entry of which the inherent MAC address corresponds to the VLAN number | |
| Mode | Global Mode | |

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|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Usage | In certain special applications or when the switch is unable to dynamically learn the MAC address, users can use this command to manually establish mapping relation between the MAC address and port and VLAN. After configure the static multicast MAC by this command, the multicast MAC traffic will be forwarded to the specified port of the specified VLAN. |
| Example | Configure a static multicast ip 232.0.0.1, the egress is ethernet 1/0/1. Switch#config Switch(config)# l2-address-table static-multicast address 232.0.0.1 vlan 200 interface ethernet 1/0/1 |

show collision-mac-address-table

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|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Syntax | show collision-mac-address-table |
| Parameter | None |
| Default | None |
| Mode | Global Mode. |
| Usage | If enable the function of the hash collision mac table that issued ffp (mac-address-table avoid-collision), the collision mac which issued ffp use * to sign. |
| Example | Show the hash collision mac table. Switch#config Switch(config)#show collision-mac-address-table The max number can be recorded is 200 The max number of collision is 0 The current number recorded is 0 <pre> MAC Address VLAN Collision-count </pre> |

show mac-address-table

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| Syntax | show mac-address-table [static blackhole aging-time <aging-time> count] [address <mac-addr>] [vlan <vlan-id>] [count] [interface <interface-name>] |
| Parameter | static static entries blackhole filter entries <aging-time> address aging time count entry's number <mac-addr> entry's MAC address <vlan-id> entry's VLAN number <interface-name> entry's interface name |
| Default | MAC address table is not displayed by default |
| Mode | Admin and Configuration Mode. |
| Usage | This command can display various classes of MAC address entries. Users can also use show mac-address-table to display all the MAC address entries. |
| Example | Display all the filter MAC address entries. |

mac-address-table notification history-size

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| Syntax | mac-address-table notification history-size <0-500> no mac-address-table notification history-size |
| Parameter | history-size data length of sending the notification, its range from 1 to 500 |
| Default | 10 |
| Mode | Global Mode |
| Usage | After the global switch is disabled, this command is also able to be configured sequentially. |
| Example | Change the maximum history-size to be 256. Switch#config Switch(config)#mac-address-table notification history-size 256 |

mac-address-table notification interval

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| Syntax | mac-address-table notification interval <1-30> no mac-address-table notification interval |
| Parameter | interval interval for sending the notification, unit is second, its range from 0 to 30。 |
| Default | 30s |
| Mode | Global Mode |
| Usage | After the global switch is disabled, this command is also able to be configured sequentially. |
| Example | Configure the interval as 30s for sending the MAC address notification Switch#config Switch(config)#mac-address-table notification interval 30 |

mac-notification

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| Syntax | mac-notification {added all removed} no mac-notification |
| Parameter | added added MAC address all added and the removed MAC addresses removed removed MAC address |
| Default | No MAC address notification. |
| Mode | Port mode |
| Usage | After the global switch is disabled, this command is also able to be configured sequentially. |
| Example | Send the trap notification after the MAC address is added to Ethernet 1/0/1. Switch#config Switch(config)#interface ethernet 1/0/1 |

```
Switch(config-if-ethernet1/0/1)# mac-notification added
```

show mac-notification summary

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| Syntax | show mac-notification summary |
| Parameter | none |
| Default | Do not show the summary. |
| Mode | Admin mode |
| Usage | With this command, check the configuration of MAC address and the sending status of MAC notification trap. |
| Example | Switch#show mac-notification summary MAC address notification:enabled MAC address snmp traps:disabled MAC address notification interval = 5 MAC address notification history log size = 10 MAC address added = 0 MAC address removed = 0 MAC address moved = 0 MAC address snmp traps generated = 0 |

snmp-server enable traps mac-notification

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|------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Syntax | snmp-server enable traps mac-notification no snmp-server enable traps mac-notification |
| Parameter | none |
| Default | Disable trap notification globally. |
| Mode | Global Mode |
| Usage | This command is used with MAC notification switch. When the switch is disabled, other configuration can be shown, but the function is invalid. |
| Example | Enable the trap notification of MAC address Switch#config Switch(config)#snmp-server enable traps mac-notification |

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