QTECH
МИР ДОСТУПНЕЕ

РУКОВОДСТВО ПОЛЬЗОВАТЕЛЯ

DHCP-Snooping Configuration Commands

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1.1.1. ip dhcp-relay snooping

Syntax

ip dhcp-relay snooping

no ip dhcp-relay snooping

To enable the DHCP-relay snooping function in a VLAN, run **ip dhcp-relay snooping**. To resume the default settings, run **no dhcp-relay snooping**.

Parameter

None

Default value

The dhcp-relay snooping function is disabled by default.

Usage guidelines

None

Example

The following example shows how to enable the DHCP-relay snooping function:

switch(config)# ip dhcp-relay snooping

switch(config)#

1.1.2. ip dhcp-relay snooping vlan

Syntax

ip dhcp-relay snooping vlan *vlan_id*

no ip dhcp-relay snooping vlan *vlan_id*

Parameter

Parameter	Description
vlan id	ID of a VLAN Range: 1-4094

Default value

None

Usage guidelines

This command is used to configure the VLAN of DHCP snooping.

Example

The following example shows how to conduct the snooping inspection to the DHCP packets in VLAN2.

switch(config)# ip dhcp-relay snooping vlan 2

switch(config)#

1.1.3. ip dhcp-relay snooping vlan *vlan_id* max-client

Syntax

ip dhcp-relay snooping vlan *vlan_id* **max-client** *number*

no ip dhcp-relay snooping vlan *vlan_id* **max-client**

Parameter

Parameter	Description
vlan_id	VLAN ID. The value ranges from 1 to 4094.
number	Available max user number: 0~65535

Default value

The max user number is 65535 by default.

Usage Guidelines

The command is used to configure the max user number of VLAN. If the user number reaches the top number, no new client will be distributed.

Example

The following example shows how to conduct snooping of DCHP packets on VLAN 2 and set the max user number to 3.

Switch_config#ip dhcp-relay snooping vlan 2 max-client 3

Switch_config#

1.1.4. ip dhcp-relay snooping database-agent

Syntax

ip dhcp-relay snooping database-agent *A.B.C.D*

no ip dhcp-relay snooping database-agent

To configure the TFTP server for backing up DHCP-snooping binding, run **ip dhcp-relay snooping database-agent A.B.C.D**.

Parameter

Parameter	Description
A.B.C.D	Stands for the IP address of the TFTP server.

Default value

There is no standby servers by default.

Usage guidelines

If the address of the TFTP server is not configured, the binding backup is not conducted.

Example

The following example shows how to set the address of a server of backing up DHCP snooping binding to 192.168.1.1.

switch(config)# ip dhcp-relay snooping database-agent 192.168.1.1

switch(config)#

1.1.5. dhcp-relay snooping db-file

Syntax

ip dhcp-relay snooping db-file *name*

no ip dhcp-relay snooping db-file

Parameter

Parameter	Description
Name	File name which is saved during DHCP snooping binding backup.

Default value

There is no file.

Usage guidelines

If the file name is not configured, the binding backup is not conducted.

Example

The following example shows how to set the file name of binding backup to **dhcp_binding.txt**.

switch(config)# ip dhcp-relay snooping db-file dhcp_binding.txt

switch(config)#

1.1.6. dhcp-relay snooping write-time

Syntax

ip dhcp-relay snooping write-time *num*

no ip dhcp-relay snooping write-time

Parameter

Parameter	Description
Num	Stands for the interval of backing up the DHCP snooping binding.

Default value

The default value of the interval is 30 minutes.

Usage guidelines

The binding update will be checked during interval configuration. If the binding is updated, the binding information need be backed up.

Example

The following example shows how to set the interval of backing up the binding to 60 minutes.

switch(config)# ip dhcp-relay snooping write 60

switch(config)#

1.1.7. ip dhcp-relay snooping write-immediately

Syntax

ip dhcp-relay snooping write-immediately

no ip dhcp-relay snooping write-immediately

Parameter

None

Default value

None

Usage Guidelines

If there is any entry update, the entry will be written into the entry database immediately. It is suggested do not enable this function if there are many entries working.

Example

The following example shows how to back up the binding table immediately after the configuration entry is updated.

Switch_config#ip dhcp-relay snooping write-immediately

Switch_config#

1.1.8. ip dhcp-relay snooping log

Syntax

ip dhcp-relay snooping log

no ip dhcp-relay snooping log

Parameter

None

Default value

None

Usage Guidelines

After enabling log, if there are packets if dhcp serve on the non-trust port, there will be syslog and indicates in which port there is dhcp server.

Example

The following example shows how to enable log of dhcp snooping.

Switch_config#ip dhcp-relay snooping log

Switch_config#

1.1.9. ip dhcp-relay snooping rapid-refresh-bind

Syntax

To enable dhcp snooping rapid refresh bind, run the following command. To return to the default setting, use the no form of this command.

ip dhcp-relay snooping rapid-refresh-bind

no ip dhcp-relay snooping rapid-refresh-bind

Parameter

None

Default value

None

Usage Guidelines

If this function is enabled, dchp attack which fakes mac will be shut down and this function allows the user end to acquire address before the expiration of ip address leasing after the client changes the access port.

If this function is disabled, if the client changes the access port, the device configured snooping will be takes as dchp packet attack of fake mac, the dhcp packet will be dropped.

Example

None

1.1.10. dhcp-relay snooping information option

Syntax

ip dhcp-relay snooping information option [format snmp-ifindex | manual | hw-type | cm-type | hn-type [host]]

no ip dhcp-relay snooping information option [format snmp-ifindex | manual | hw-type | cm-type | hn-type [host]]

Parameter

Parameter	Description
format snmp-ifindex	Fills in option 82 in **SNMP ifindex** mode (optional).
format manual	Fills in option 82 in manual operation mode (optional).
format hw-type	Fills in option 82 in hw-type (optional).

format cm-type	Fills in option 82 in cm-type (optional).

Default value

Option 82 will not be added to or removed from the report by default.

Usage guidelines

This command is used to set whether DHCP option82 can be handled when a switch is conducting DHCP snooping. If **format snmp-ifindex** is designated, Use the **SNMP ifindex** mode to fill in option 82; otherwise, fill in option 82 according to RFC3046.

Example

The following example shows how to fill in option 82 in **SNMP ifindex** mode.

Switch_config#ip dhcp-relay snooping information option format snmp-ifindex

1.1.11. ip verify source vlan

Syntax

ip verify source vlan *vlanid*

no ip verify source vlan *vlanid*

Parameter

Parameter	Description
vlan id	ID of a VLAN Range: 1-4094

Default value

None

Usage guidelines

This command is used to configure a VLAN for monitoring the source IP address. The “no” form of this command is used to cancel this VLAN.

Example

The following example shows how to conduct source IP address monitoring to the packets from all physical interfaces (except trusted interfaces) in VLAN2.

switch(config)# ip verify source vlan 2

switch(config)#

1.1.12. ip arp inspection vlan

Syntax

ip arp inspection vlan *vlanid*

no ip arp inspection vlan *vlanid*

Parameter

Parameter	Description
vlan id	Queries the time of the timer. Range: 1-255

Default value

None

Usage guidelines

This command is used to configure a VLAN for monitoring the source address of the ARP packet. The “no” form of this command is used to cancel this VLAN.

Example

The following example shows how to conduct source address monitoring to the ARP packets from all physical interfaces (except trusted interfaces) in VLAN2.

switch(config)# ip arp inspection vlan 2

switch(config)#

1.1.13. ip source binding

Syntax

ip source binding *xx-xx-xx-xx-xx-xx A.B.C.D* interface *name*

no ip source binding *xx-xx-xx-xx-xx-xx A.B.C.D*

To add MAC-to-IP binding to an interface, run **ip source binding *xx-xx-xx-xx-xx-xx A.B.C.D* interface *name***.

Parameter

Parameter	Description
xx:xx:xx:xx:xx:xx	MAC address.
A.B.C.D	IP address
Name	Name of the interface
vlan-id	vlan id

Default value

None

Usage guidelines

None

Example

The following example shows how to bind MAC address **08:00:3e:00:00:01** to IP address **192.168.1.2** on interface **fastEthernet0/0**.

```
switch(config)# ip source binding 08:00:3e:00:00:01 192.168.1.2 interface fastEthernet0/0
switch(config)#
```

1.1.14. arp inspection trust

Syntax

arp inspection trust

Parameter

None

Default value

The interfaces are distrusted ones by default.

Usage guidelines

The ARP monitoring is not conducted to the ARP-trusted interface. The “no” form of this command is used to configure the default value of this interface.

Example

The following example shows how to set interface fastEthernet 0/0 to an ARP-trusted interface.

```
Switch_config_f0/0# arp inspection trust
```

1.1.15. dhcp snooping trust

Syntax

dhcp snooping trust

Parameter

None

Default value

The default interface is a distrusted one.

Usage guidelines

DHCP snooping is not conducted to the DHCP-trusted interface. The “no” form of this command is used to resume the default value of this interface.

Example

The following example shows how to set interface fastEthernet 0/0 to a DHCP-trusted interface.

Switch_config_f0/0# dhcp snooping trust

1.1.16. dhcp snooping deny

Syntax

dhcp snooping deny

Parameter

None

Default value

DHCP snooping is allowed on the default interface.

Usage guidelines

After this command is configured, DHCP snooping trust, IP-sourcetrust and ARP inspection trust are automatically enabled. The “no” form of this command is used to configure the default value of this interface.

Example

The following example shows how to disable DHCP snooping on interface fastEthernet0/0.

Switch_config_f0/0# dhcp snooping deny

1.1.17. dhcp snooping information circuit-id

Syntax

dhcp snooping information circuit-id {string [STRING] | hex *xx-xx-xx-xx-xx-xx***}**

Parameter

Parameter	Description
string *STRING*	Means the character string of option82 circuit-id sub-option
hex *xx-xx-xx-xx-xx-xx*	Means hex of option82 circuit-id sub-option

Default value

None

Usage Guidelines

The command can be configured on every port connecting with clients. This command enables to configure dhcp packet option82 sub-option which sent to dhcp server by dhcp client which monitored by dchp snooping. (Configure option82 manually, refer to the command **ip dhcp-relay snooping information option format manual**)

Example

The following example shows how to manually configure option82 sub-option on port g0/3 as group 1 and g0/3 belongs to vlan1.

Switch_config#ip dhcp-relay snooping

Switch_config#ip dhcp-relay snooping vlan 1

Switch_config#ip dhcp-relay snooping information option format manual

Switch_config#interface g0/3

Switch_config_g0/3#dhcp snooping information circuit-id string group1

1.1.18. dhcp snooping information remote-id string

Syntax

dhcp snooping information remote-id {string [STRING] | hex *xx-xx-xx-xx-xx-xx***}**

Parameter

Parameter	Description
string STRING	Means the character string of option82 remote-id sub-option
hex xx-xx-xx-xx-xx-xx	Means hex of option remote-id sub-option

Default value

None

Usage Guidelines

The command can be configured on every port connecting with clients. This command enables to configure dhcp packet option82 sub-option which sent to dhcp server by dhcp client which monitored by dchp snooping. (Configure option82 manually, refer to the command **ip dhcp-relay snooping information option format manual**)

Example

The following example shows how to manually configure option82 sub-option on port g0/3 as group 1 and g0/3 belongs to vlan1.

Switch_config# ip dhcp-relay snooping

Switch_config# ip dhcp-relay snooping vlan 1

Switch_config#ip dhcp-relay snooping information option format manual

Switch_config#interface g0/3

Switch_config_g0/3# dhcp snooping information remote-id string group1

1.1.19. dhcp snooping information vendor-specific

Syntax

dhcp snooping information vendor-specific {string [STRING] | hex *xx-xx-xx-xx-xx-xx***}**

Parameter

Parameter	Description
string STRING	Means the character string of option82 verdor-specific sub-option
hex xx-xx-xx-xx-xx-xx	Means the hex of option82 verdor-specific sub-option

Default value

None

Usage Guidelines

The command can be configured on every port connecting with clients. This command enables to configure dhcp packet option82 sub-option which sent to dhcp server by dhcp client which monitored by dchp snooping. (Configure option82 manually, refer to the command **ip dhcp-relay snooping information option format manual**)

Example

On port g0/3, configure option82 vendor-specific(suboption 9) with the hex: 00-00-00-09-0d-01-0b-78-69-61-6f-6d-69-6e-37-31-31-34.

Switch_config# ip dhcp-relay snooping

Switch_config# ip dhcp-relay snooping vlan 1

Switch_config#ip dhcp-relay snooping information option format manual

Switch_config#interface g0/3

Switch_config_g0/3# dhcp snooping information vendor-specific hex 00-00-00-09-0d-01-0b-78-69-61-6f-6d-69-6e-37-31-31-34

1.1.20. dhcp snooping information append

Syntax

dhcp snooping information append

dhcp snooping information append first-subop9-param { hex *xx-xx-xx-xx-xx-xx* **| hostname | vlanip }**

dhcp snooping information append second-subop9-param { hex *xx-xx-xx-xx-xx-xx* **| hostname | vlanip }**

no dhcp snooping information append

no dhcp snooping information append first-subop9-param

no dhcp snooping information append second-subop9-param

Parameter

Parameter	Description
first-subop9-param hex [xx-xx-xx-xx-xx-xx]	Means hex of the first parameter of the option82 vendor-specific (suboption9)
second-subop9-param hex [xx-xx-xx-xx-xx-xx]	Means hex of the second parameter of the option82 vendor-specific(suboption9)
hostname	The parameter of the option82 vendor-specific (suboption9) is host name.
vlanip	The parameter of option82 vendor-specific (suboption9) is ip address of interface vlan.

Default value

None

Usage Guidelines

The command can be configured on every port connecting with clients. This command enables to configure dhcp packet option82 sub-option which sent to dhcp server by dhcp client which monitored by dchp snooping.

The command without parameter is enable/disable. If append is enabled, the information will be added to suboption9 of option82. The added information is first-subop9-param and second-subop9-param.

Example

On port g0/3 expand dhcp packets with option82 and configure suboption9 adding to parameter 1 with the hex: 61-62-63-61-62-63.

Switch_config_g0/3# dhcp snooping information append

Switch_config_g0/3#dhcp snooping information append first-subop9-param hex 61-62-63-61-62-63

Among which 61-62-63-61-62-63 is the hex of the added parameter.

1.1.21. dhcp snooping information drop

Syntax

dhcp snooping information drop

no dhcp snooping information drop

Parameter

None

Default value

None

Usage Guidelines

The command can be configured on every port connecting with clients.

After the command is configured, the requirement packets including option82 will be dropped on the certain port.

Example

The following example shows how to drop dhcp packets with option82 on g0/3.

Switch_config_g0/3# dhcp snooping information drop

1.1.22. dhcp snooping information replace

Syntax

dhcp snooping information replace

no dhcp snooping information replace

Parameter

None

Default value

None

Usage Guidelines

The command can be configured on every port connecting with clients.

After the command is configured, the option82 field of dhcp requirement packets will be replaced on the certain port.

Example

Replace dhcp packets of option82 on g0/3.

Switch_config_g0/3# dhcp snooping information replace

1.1.23. dhcp snooping information transmit

Syntax

dhcp snooping information transmit

no dhcp snooping information transmit

Parameter

None

Default value

None

Usage Guidelines

The command can be configured on every port connecting with clients.

After the command is configured, the DCHP packets with option82 from relay will be transparently transmitted.

Example

On port g0/3, configure dhcp packets with option82 from relay will be transparently transmitted.

Switch_config_g0/3# dhcp snooping information transmit

1.1.24. ip-source trust

Syntax

ip-source trust

Parameter

None

Default value

The default interface is a distrusted one.

Description

Source IP address snooping is not conducted to the source-IP-trusted interface. The “no” form of this command is used to resume the default value of this interface.

Example

The following example shows how to set interface fastEthernet 0/0 to a source-ip-trusted interface.

Switch_config_f0/0# ip-source trust

1.1.25. show ip dhcp-relay snooping

Syntax

show ip dhcp-relay snooping

Parameter

None

Default value

None

Usage guidelines

This command is used to display the information about DHCP-relay snooping configuration.

Example

The following example shows how to display the information about DHCP-relay snooping configuration.

switch(config)# show ip dhcp-relay snooping

1.1.26. show ip dhcp-relay snooping binding

Syntax

show ip dhcp-relay snooping binding [all]

Parameter

None

Default value

None

Usage guidelines

This command is used to display the binding information about DHCP-relay snooping.

If the **all** parameter is in the command sentence, all binding information about DHCP-relay snooping will be displayed.

Example

The following example shows how to display the binding information about DHCP-relay snooping.

switch(config)# show ip dhcp-relay snooping binding

1.1.27. debug ip dhcp-relay snooping

Syntax

debug ip dhcp-relay snooping

no debug ip dhcp-relay snooping

Parameter

None

Default value

None

Usage guidelines

This command is used to enable or disable the debugging switch of DHCP-relay snooping.

Example

The following example shows how to enable the debugging switch of DHCP-relay snooping.

switch(config)# debug ip dhcp-relay snooping

switch(config)#

1.1.28. debug ip dhcp-relay event

Syntax

debug ip dhcp-relay eventr

no debug ip dhcp-relay event

Parameter

None

Default value

None

Usage guidelines

This command is used to enable or disable the event debugging switch of DHCP-relay.

Example

The following example shows how to enable the event debugging switch of DHCP-relay.

switch(config)# debug ip dhcp-relay event

switch(config)#

1.1.29. debug ip dhcp-relay binding

Syntax

debug ip dhcp-relay binding

no debug ip dhcp-relay binding

Parameter

None

Default value

None

Usage guidelines

This command is used to enable or disable the binding debugging switch of DHCP-relay snooping.

Example

The following example shows how to enable the binding debugging switch of DHCP-relay snooping.

```
switch(config)# debug ip dhcp-relay binding
switch(config)#
```