

Verifying That DHCP Snooping Is Working Correctly

Purpose Verify that DHCP snooping is working on the switch and that the DHCP snooping database is correctly populated with both dynamic and static bindings.

Action Send some DHCP requests from network devices (here they are DHCP clients) connected to the switch.

Display the DHCP snooping information when the interface on which the DHCP server connects to the switch is trusted. The following output results when requests are sent from the MAC addresses and the server has provided the IP addresses and leases:

```
user@switch> show dhcp snooping binding
DHCP Snooping Information:
MAC address      IP address      Lease (seconds) Type      VLAN      Interface
00:05:85:3A:82:77 192.0.2.17      600             dynamic   employee   ge-0/0/1.0
00:05:85:3A:82:79 192.0.2.18      653             dynamic   employee   ge-0/0/1.0
00:05:85:3A:82:80 192.0.2.19      720             dynamic   employee   ge-0/0/2.0
00:05:85:3A:82:81 192.0.2.20      932             dynamic   employee   ge-0/0/2.0
00:05:85:3A:82:83 192.0.2.21      1230            dynamic   employee   ge-0/0/2.0
00:05:85:27:32:88 192.0.2.22      -               static    data       ge-0/0/4.0
```

Meaning When the interface on which the DHCP server connects to the switch has been set to trusted, the output (see preceding sample) shows, for each MAC address, the assigned IP address and lease time—that is, the time, in seconds, remaining before the lease expires. Static IP addresses have no assigned lease time. The statically configured entry never expires.

If the DHCP server had been configured as untrusted, the output would look like this:

```
user@switch> show dhcp snooping binding
DHCP Snooping Information:
MAC address      IP address      Lease (seconds) Type      VLAN      Interface
00:05:85:3A:82:77 0.0.0.0         -               dynamic   employee   ge-0/0/1.0
00:05:85:3A:82:79 0.0.0.0         -               dynamic   employee   ge-0/0/1.0
00:05:85:3A:82:80 0.0.0.0         -               dynamic   employee   ge-0/0/2.0
00:05:85:3A:82:81 0.0.0.0         -               dynamic   employee   ge-0/0/2.0
00:05:85:3A:82:83 0.0.0.0         -               dynamic   employee   ge-0/0/2.0
00:05:85:27:32:88 192.0.2.22      -               static    data       ge-0/0/4.0
```

In the preceding output sample, IP addresses and lease times are not assigned to the dynamically learned bindings because the DHCP clients do not have a trusted server to which they can send requests. In the database, the clients' MAC addresses are shown with no assigned IP addresses (hence the 0.0.0.0 content in the IP Address column) and no leases (the lease time is shown as a dash – in the Lease column).

- Related Topics**
- Enabling DHCP Snooping (CLI Procedure)
 - Enabling DHCP Snooping (J-Web Procedure)
 - Configuring Static IP Addresses for DHCP Bindings on Access Ports (CLI Procedure)
 - Example: Configuring Port Security, with DHCP Snooping, DAI, MAC Limiting, and MAC Move Limiting, on an EX Series Switch
 - Example: Configuring DHCP Snooping, DAI , and MAC Limiting on an EX Series Switch with Access to a DHCP Server Through a Second Switch
 - Example: Configuring DHCP Snooping and DAI to Protect the Switch from ARP Spoofing Attacks
 - Monitoring Port Security
 - Troubleshooting Port Security

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