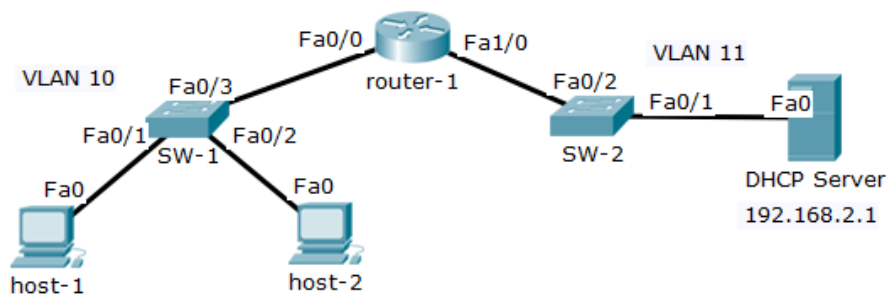


DHCP Snooping

Lab Summary

Enable DHCP snooping to prevent unauthorized (rogue) DHCP servers from sending IP addressing to DHCP hosts.

Figure 1 Lab Topology



Click Fast Forward Time several times for DHCP server update

Lab Configuration

Start Packet Tracer File: **DHCP Snooping**

Switch-1

Click on the *switch-1* icon and select the *CLI* folder. Hit the <enter> key for user mode prompt (>).

Step 1: Enter global configuration mode

```
switch-1> enable
Password: cisco
switch-1# configure terminal
```

Step 2: Enable DHCP Snooping globally on switch-1.

```
switch-1(config)# ip dhcp snooping
```

Step 3: Enable DHCP Snooping for VLAN 1 and VLAN 10.

```
switch-1(config)# ip dhcp snooping vlan 1,10
```

Step 4: Enable switch-1 interface Fa0/3 as trusted with rate limiting of packets.

```
switch-1(config)# interface fastethernet0/3
switch-1(config-if)# ip dhcp snooping trust
switch-1(config-if)# ip dhcp snooping limit rate 40
```

Switch-2

Click on the *switch-2* icon and select the *CLI* folder. Hit the <enter> key for user mode prompt (>).

Step 5: Enter global configuration mode

```
switch-2> enable  
Password: cisconet  
switch-2# configure terminal
```

Step 6: Enable DHCP Snooping globally on switch-2.

```
switch-2(config)# ip dhcp snooping
```

Step 7: Enable DHCP Snooping for VLAN 1 and VLAN 11.

```
switch-2(config)# ip dhcp snooping vlan 1,11
```

Step 8: Enable switch-2 interface as trusted with rate limiting of packets.

```
switch-2(config)# interface range fastethernet0/1-2  
switch-2(config-if)# ip dhcp snooping trust  
switch-2(config-if)# ip dhcp snooping limit rate 40
```

Router-1

Click on Router-1 icon and select the *CLI* folder. Hit <enter> key for user prompt.

Step 9: Enter global configuration mode

```
router-1> enable  
Password: cisconet  
router-1# configure terminal
```

Step 10: Configure DHCP relay on LAN interface Fastethernet0/0.

```
router-1(config)# interface fastethernet0/0  
router-1(config)# ip helper-address 192.168.2.1  
router-1(config-if)# end  
router-1# copy running-config startup-config
```

Step 11: Verify Lab

Confirm the configuration and verify DHCP snooping is enabled on switch-2.

```
switch-2# show running-config  
switch-2# show ip dhcp snooping
```

Enable dynamic ARP inspection on VLAN 1 and VLAN 11 to detect and prevent ARP table poisoning and man in the middle attacks.

```
switch-2(config)# ip arp inspection vlan 1,11  
switch-2(config-if)# end  
switch-2# copy running-config startup-config
```