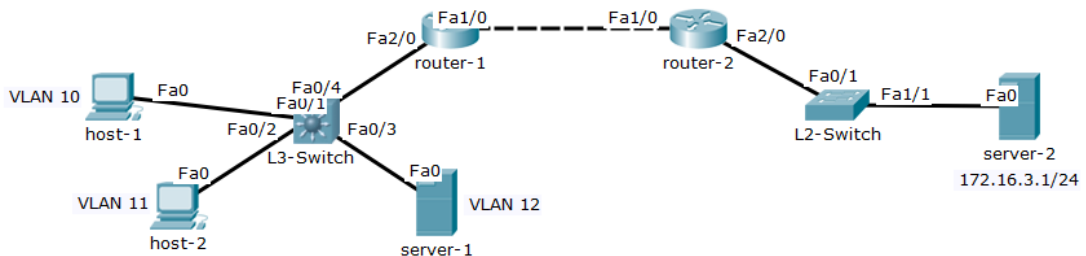


Layer 3 Switching

Lab Summary

Configure Layer 3 switch to enable network connectivity for connected hosts to both servers.

Figure 1 Lab Topology



Lab Configuration

Start Packet Tracer File: **Layer 3 Switching**

Click on the *L3-Switch* icon and select the *CLI* folder. Hit <enter> key for user mode prompt.

Step 1: Configure VLAN 10, VLAN 11 and VLAN 12.

Enter global configuration mode

```
L3-Switch> enable
```

```
Password: cisco
```

```
L3-Switch# configure terminal
```

Configure interface Fa0/1 as an access port and assign it to VLAN 10.

```
L3-Switch(config)# interface fastethernet 0/1
```

```
L3-Switch(config-if)# switchport mode access
```

```
L3-Switch(config-if)# switchport access vlan 10
```

Configure interface Fa0/2 as an access port and assign it to VLAN 11.

```
L3-Switch(config)# interface fastethernet 0/2
```

```
L3-Switch(config-if)# switchport mode access
```

```
L3-Switch(config-if)# switchport access vlan 11
```

Configure interface Fa0/3 as an access port and assign it to VLAN 12.

```
L3-Switch(config)# interface fastethernet 0/3  
L3-Switch(config-if)# switchport mode access  
L3-Switch(config-if)# switchport access vlan 12  
L3-Switch(config-if)# exit
```

Step 2: Enable IP Routing

```
L3-Switch(config)# ip routing
```

Step 3: Configure SVI per Host VLAN

```
L3-Switch(config)# interface vlan 10  
L3-Switch(config-if)# ip address 172.16.10.254 255.255.255.0  
L3-Switch(config-if)# no shut
```

```
L3-Switch(config-if)# interface vlan 11  
L3-Switch(config-if)# ip address 172.16.11.254 255.255.255.0  
L3-Switch(config-if)# no shut
```

```
L3-Switch(config)# interface vlan 12  
L3-Switch(config-if)# ip address 172.16.12.254 255.255.255.0  
L3-Switch(config-if)# no shut  
L3-Switch(config-if)# exit
```

Step 4: Configure Default Gateway (SVI) on Connected Hosts

host-1: Config Folder

host-1: Gateway/DNS IPv4

host-1: **172.16.10.254**

host-2: Config Folder

host-2: Gateway/DNS IPv4

host-2: **172.16.11.254**

server-1: Config Folder

server-1: Gateway/DNS IPv4

server-1: **172.16.12.254**

Step 5: Configure Uplink Interface to Router

```
L3-Switch(config)# interface fastethernet0/4  
L3-Switch(config-if)# no switchport
```

```
L3-Switch(config-if)# ip address 172.16.1.1 255.255.255.0  
L3-Switch(config-if)# no shut  
L3-Switch(config-if)# exit
```

Step 6: Configure Default Route to Router

```
L3-Switch(config)# ip route 0.0.0.0 0.0.0.0 172.16.1.2  
L3-Switch(config)# end  
L3-Switch# copy running-config startup-config
```

Step 7: Verify Lab

Ping server-1 and server-2 from host-1 and host-2 to verify there is network connectivity.

host-1: **ping 172.16.12.1**

host-2: **ping 172.16.12.1**

host-1: **ping 172.16.3.1**

host-2: **ping 172.16.3.1**