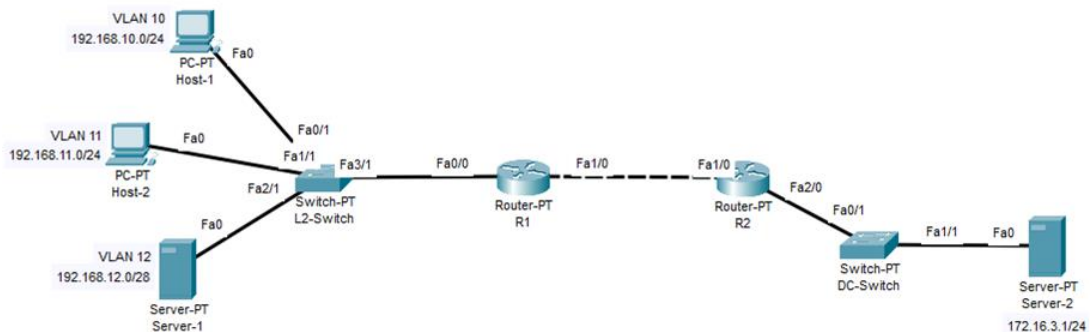


Router on a Stick

Lab Summary

Configure L2 switch for InterVLAN connectivity with router-on-a-stick configuration method for hosts and server.

Figure 1 Lab Topology



Lab Configuration

Start Packet Tracer File: **router on a stick.pkt**

Click on *L2-Switch* icon and select *CLI* folder.

Step 1: Enter global configuration mode

```
L2-Switch> enable  
L2-Switch# configure terminal
```

Configure VLANs on Layer 2 Switch

Step 2: Configure interface Fa0/1 as an access port and assign it to VLAN 10.

```
L2-Switch(config)# interface fastethernet 0/1  
L2-Switch(config-if)# switchport mode access  
L2-Switch(config-if)# switchport access vlan 10
```

Step 3: Configure interface Fa1/1 as an access port and assign it to VLAN 11.

```
L2-Switch(config)# interface fastethernet 1/1  
L2-Switch(config-if)# switchport mode access  
L2-Switch(config-if)# switchport access vlan 11
```

Step 4: Configure interface Fa2/1 as an access port and assign it to VLAN 12.

```
L2-Switch(config)# interface fastethernet 2/1  
L2-Switch(config-if)# switchport mode access  
L2-Switch(config-if)# switchport access vlan 12  
L2-Switch(config-if)# exit
```

Step 5: Configure interface Fa3/1 as trunk to R1 and only allow VLAN range 10-12.

```
L2-Switch(config)# interface fastethernet 3/1  
L2-Switch(config-if)# description trunk link to R1  
L2-Switch(config-if)# switchport mode trunk  
L2-Switch(config-if)# switchport trunk allowed vlan 10-12  
L2-Switch(config-if)# end  
L2-Switch# copy run start
```

Click on *R1* icon and select *CLI* folder. .

Step 6: Enter global configuration mode

```
R1> enable  
R1# configure terminal
```

Step 7: Remove IP address configured on physical interface Fa0/0 and enable.

```
R1(config)# interface fastethernet0/0  
R1(config-if)# description physical interface to L2-Switch  
R1(config-if)#no ip address  
R1(config-if)# no shut  
R1(config-if)# exit
```

Step 8: Configure subinterface Fa0/0.20 as default gateway for VLAN 10

```
R1(config)# interface fastethernet0/0.10  
R1(config-if)# description default gateway for VLAN 10  
R1(config-if)# encapsulation dot1q 10  
R1(config-if)# ip address 192.168.10.254 255.255.255.0  
R1(config-if)# exit
```

Step 9: Configure subinterface Fa0/0.20 as default gateway for VLAN 11.

```
R1(config)# interface fastethernet0/0.20  
R1(config-if)# description default gateway for VLAN 11  
R1(config-if)# encapsulation dot1q 11  
R1(config-if)# ip address 192.168.11.254 255.255.255.0  
R1(config-if)# exit
```

Step 10: Configure subinterface Fa0/0.30 as default gateway for VLAN 12.

```
R1(config)# interface fastethernet0/0.30  
R1(config-if)# description default gateway for VLAN 12  
R1(config-if)# encapsulation dot1q 12  
R1(config-if)# ip address 192.168.12.14 255.255.255.240  
R1(config)# end  
R1# copy run start
```

Step 11: Configure default gateway on hosts.

host-1: Config Folder
Default Gateway: **192.168.10.254**

host-2: Config Folder
Default Gateway: **192.168.11.254**

server-1: Config Folder
Default Gateway: **192.168.12.14**

Step 12: Verify Lab

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

host-1: **ping 192.168.12.1**

host-1: **ping 172.16.3.1**

host-2: **ping 192.168.12.1**

host-2: **ping 172.16.3.1**