

Cisco Packet Tracer

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

Server-PT Server0  
10.0.0.1  
def gateway 10.0.0.0

Laptop-PT Laptop0  
10.0.0.4

PC-PT PC0  
10.0.0.2

PC-PT PC1  
10.0.0.3

Switch-PT  
Fa0/1 Fa3/1  
Fa1/1 Fa2/1

PC0

Physical Config Desktop Custom Interface

Command Prompt

```
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>SSS
```

Time: 00:15:13 Power Cycle Devices Fast Forward Time

Connections

Copper Straight-Through

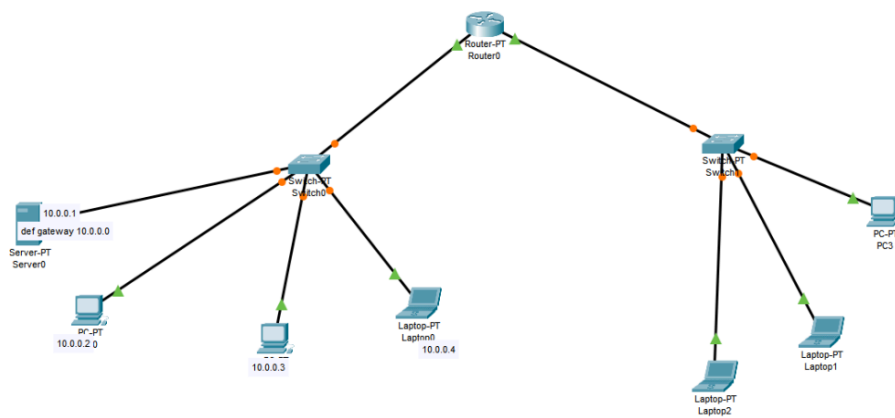
Scenario 0

New Delete

Toggle PDU List Window

Fire Last Status Source Destination Type Color Time (sec) Periodic Num Edit Delete

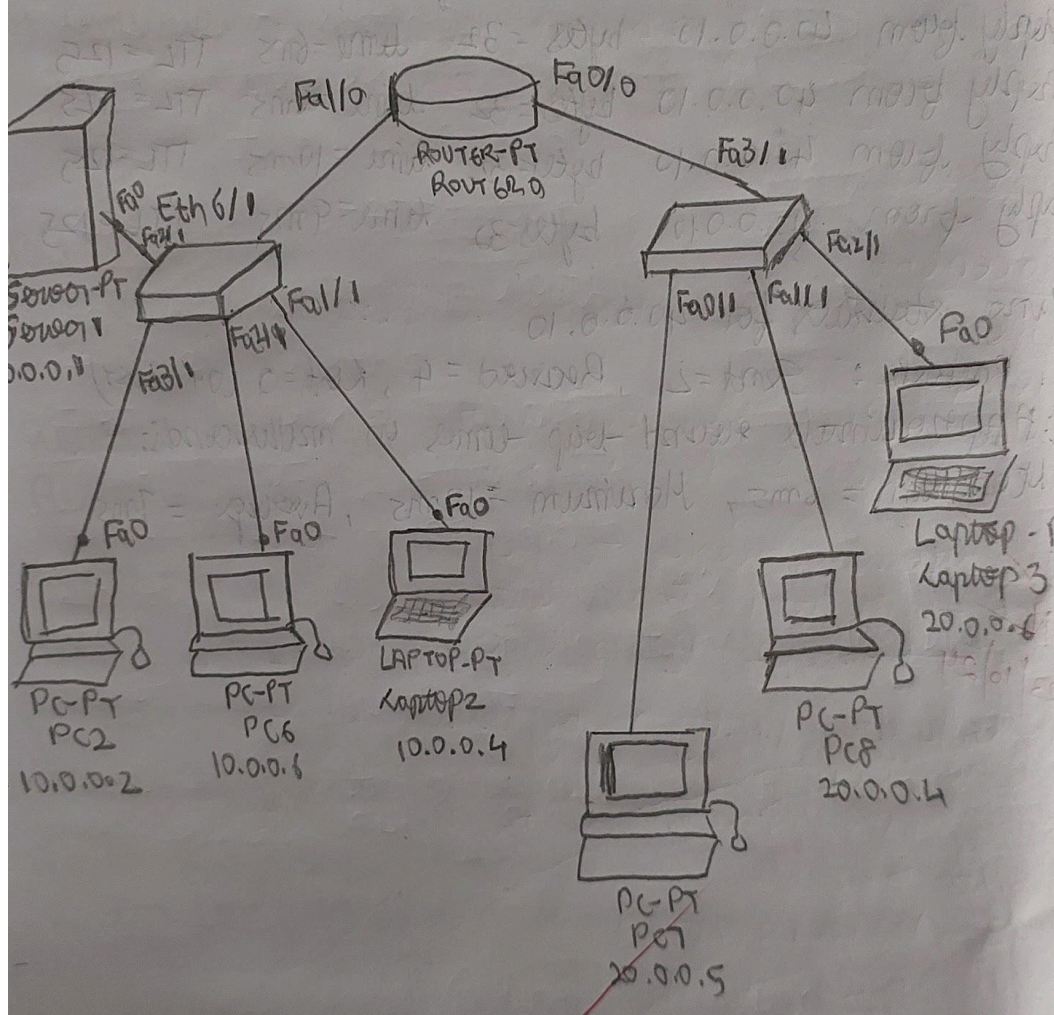
Realtime



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AIM: To connect multiple devices to a server through 2 switches and a router.

Torowgi:



Server address :

Default server

Pool name: zorroPool

Default gateway: 0.0.0.0

DNS Server 0.0.0.0

Static IP Address : 10.0.0.0

Subnet mask: 255.0.0.0

Maximum number of



### Switch 1:

Hostname: switch 1  
Default gateway: 10.0.0.1  
Start IP Address: 10.0.0.3  
Subnet mask: 255.0.0.0  
Maximum number of users: 100

### Switch 2

Hostname: switch 2  
Default gateway: 20.0.0.1  
DNS Server: 0.0.0.0  
Start IP Address: 20.0.0.3  
Subnet Mask: 255.0.0.0  
Maximum number of users: 100

### Router configuration

```
Router > enable  
Router # config terminal  
Router (config) # interface fastEthernet 1/0  
Router (config-if) # ip address 10.0.0.1 255.0.0.0  
Router (config-if) # ip helper-address 10.0.0.2  
Router (config-if) # no shut  
exit
```

```
Router (config) # interface fastEthernet 0/0  
Router (config-if) # ip address 20.0.0.1 255.0.0.0  
Router (config-if) # ip helper-address 10.0.0.2  
Router (config-if) # no shut  
exit
```

Procedure: Open word packet tracer and drag the following components

- Router: Place 1 router in the middle
- Switch: Connect two switches to Router 0
- PC: Take 3 PC's and connect it to switch 0 and another 3 PC's to switch 1.
- Server: Place one server and connect it to the switch 1 via copper straight-through cable



Configure router0 by clicking on the router and  
click IP configuration. 18

Set IP address as 10.0.0.2  
Subnet mask as 255.0.0.0  
Default gateway 10.0.0.1

- In DHCP services, add switch 0 config with  
Pool Name - switch 0  
Start IP address - 10.0.0.0  
Default gateway - 0.0.0.0  
Subnet Mask - 255.0.0.0

- In DHCP services, add switch 1 config with  
Pool Name - Switch 1  
Start IP address - 10.0.0.3  
Default gateway - 0.0.0.1  
Subnet mask - 255.0.0.0

- Set the IP configuration of all PC's. PC0 to PC1 to  
DHCP due to which each PC attains its IP address,  
Subnet Mask, default gateway.

- Configure Router0 by clicking on the router  
and selecting CLI.

### OBSERVATION

- If config and testing are correct, you  
will receive successful ping replies b/w two  
PC's

PC > ping 10.0.0.3

Pinging 10.0.0.3 with 32 bytes of data:

Reply from 10.0.0.3 : bytes = 32 time = 1ms TTL = 128

Reply from 10.0.0.5 : bytes = 32 time = 0ms TTL = 120

Reply from 10.0.0.3 : bytes = 32 time = 0ms TTL = 120



Reply from 10.0.0.3: bytes=32 time=2ms TTL=120  
Ping statistics for 10.0.0.3:

Packets: Sent=4, Received=4, Loss=0 (0% loss)  
Approximate round trip times in milliseconds:  
Minimum=0ms, Maximum=2ms, Average=0ms

Within a LAN: Placing the DHCP server in the same subnet as clients to ensure broadcasts reach the server directly. Dynamic IPs are given to the systems connected in same network. When we have to dynamically assign IP addresses to another network we do it using a router and a server.

If the connections are successful the IP addresses are assigned within the LAN and outside the LAN.