IT1080C Computer Networking

Packet Tracer Lab 3

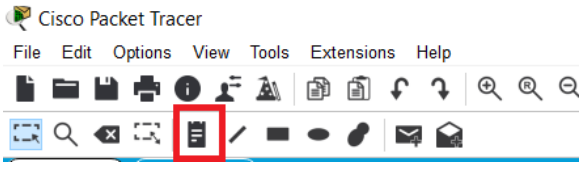
Create a local area network in Packet Tracer.

In this lab, you will create a local area network composed of five departments plus a DMZ. Assign each LAN private IP address range in the 192.168.x.x range with a CIDR of 24 (subnet mask 255.255.255.0).

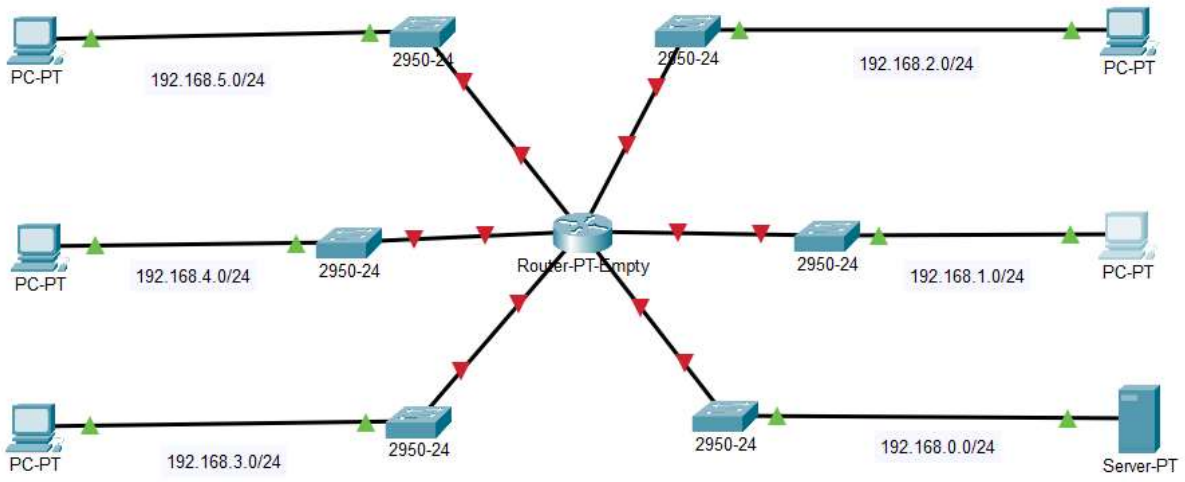
In Packet Tracer, create a local area network with six switches connected to a single router.

1. Use Switch 2950-24 (24 interfaces) switches
2. Use PT-Router-Empty and add six modules
    a. Open the physical tab on the router
    b. Power down the router; on/off switch located on right-hand side in the physical view
    c. Install six (6) 1CGE (gigabit Ethernet) modules – drag and drop
    d. Turn power on
3. Connect switches to the router using a Copper Straight-Through cable.
    a. DMZ on interface GigabitEthernet0/0
    b. Exec Staff on interface GigabitEthernet1/0
    c. Finance & Accounting on interface GigabitEthernet2/0
    d. Sales on interface GigabitEthernet3/0
    e. Human Relations on interface GigabitEthernet4/0
    f. Research & Development on interface GigabitEthernet5/0
4. Add a PC-PT to each department and attach a Server-PT on the DMZ
5. Connect each device to its switch using a Copper Straight-Through cable
6. Assign a private network address with CIDR to each subnet.
    a) DMZ: 192.168.0.0/24
    b) Exec Staff: 192.168.1.0/24
    c) Finance & Accounting: 192.168.2.0./24
    d) Sales: 192.168.3.0/24
    e) Human Relations: 192.168.4.0/24
    f) Research & Development: 192.168.5.0/24

NOTE: Annotate all configuration on the network diagram. To annotate the address on the diagram, use the Place Note icon from the tools menu:



Example:



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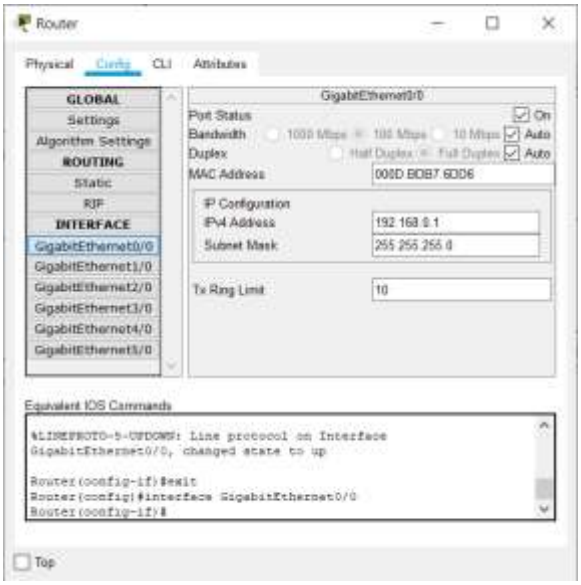
Assign the first available IP address from each subnet to the default gateway.

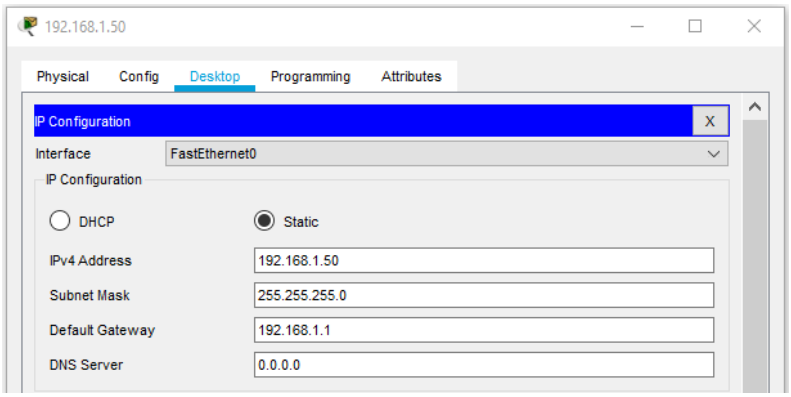
1. Open configuration tab on the router. Select INTERFACE and assign IP address, subnet mask, and check the "on" box for the Port Status for each interface.
2. IP addressing assignment:
    a. Interface GigabitEthernet0/0
    IP address 192.168.0.1
    subnet mask 255.255.255.0
    b. Interface GigabitEthernet1/0
    IP address 192.168.1.1
    subnet mask 255.255.255.0
    c. Interface GigabitEthernet2/0
    IP address 192.168.2.1
    subnet mask 255.255.255.0
    d. Interface GigabitEthernet3/0
    IP address 192.168.3.1
    subnet mask 255.255.255.0
    e. Interface GigabitEthernet4/0
    IP address 192.168.4.1
    subnet mask 255.255.255.0
    f. Interface GigabitEthernet5/0
    IP address 192.168.5.1
    subnet mask 255.255.255.0



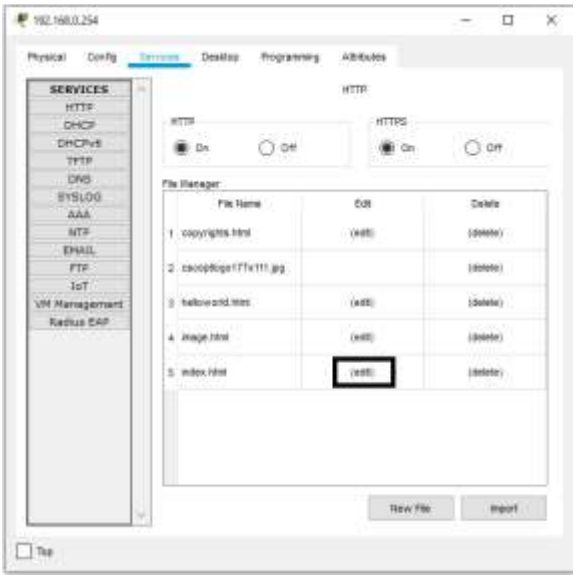
Statically assign an IP address to each device

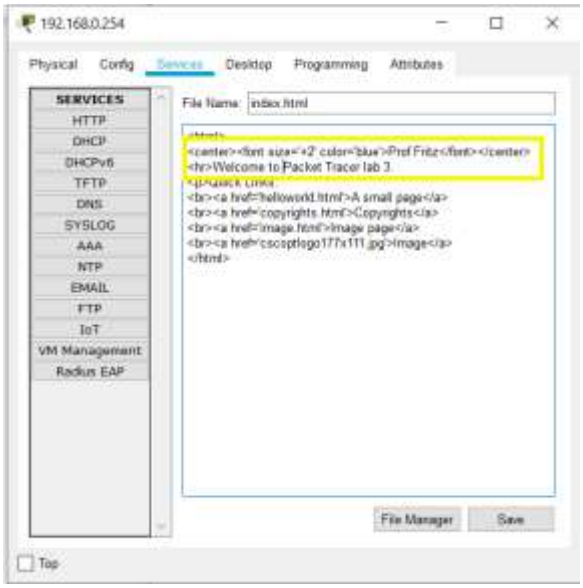
1. DMZ Server: 192.168.0.254
2. Exec Staff PC: 192.168.1.50
3. Finance & Accounting PC: 192.168.2.100
4. Sales PC: 192.168.3.50
5. Human Relations PC: 192.168.4.100
6. Research & Development PC: 192.168.5.150

Open the PC and select the Desktop tab, then select IP Configuration.



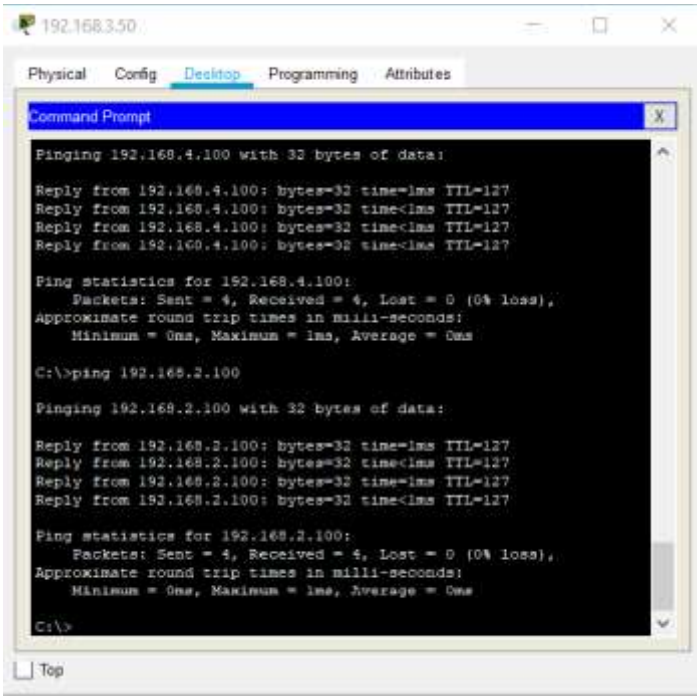
Modify the index.html page to reflect your name and a personalized greeting.



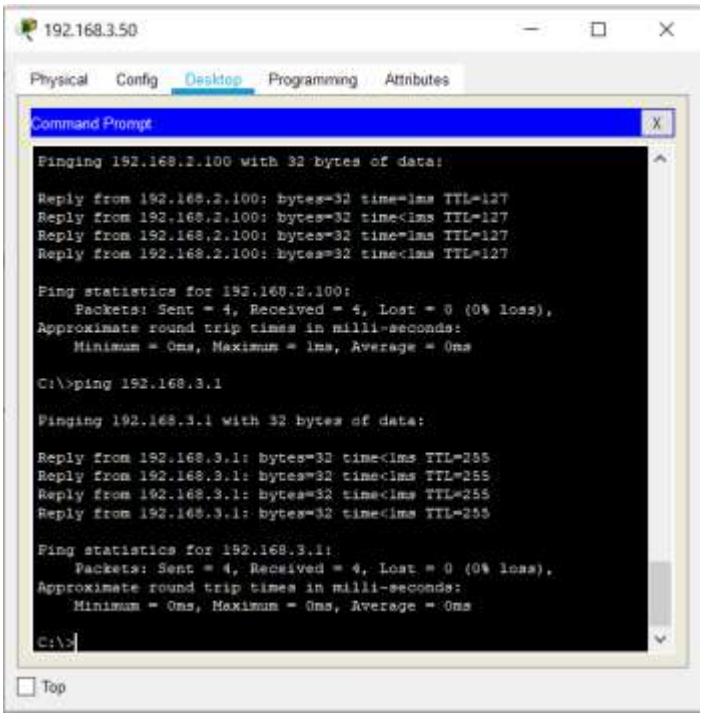


Ping between computers.

1. Go to the command prompt in the Desktop tab on one of the PC and ping the PCs in the other subnets.

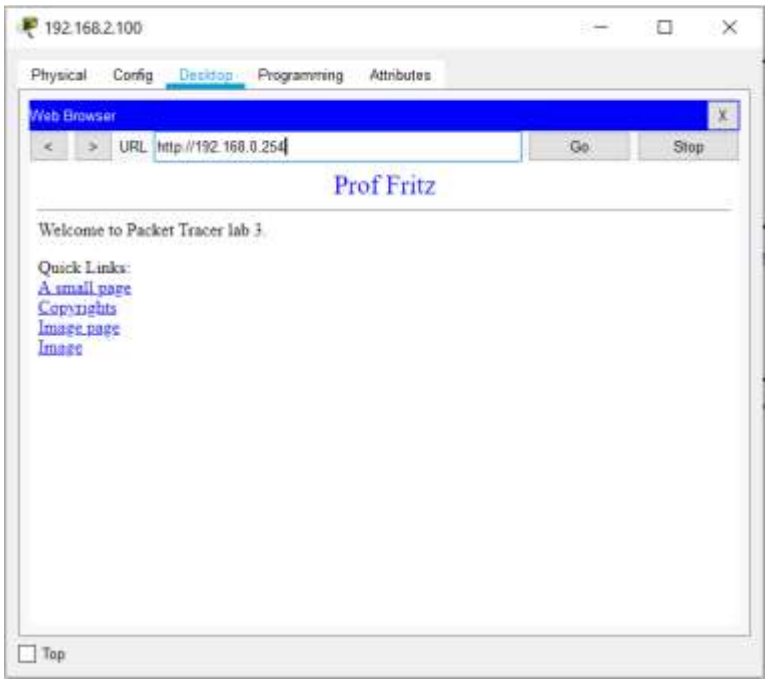


2. Ping the default gateway. Example from 192.168.3.50 to its default gateway at 192.168.3.1:

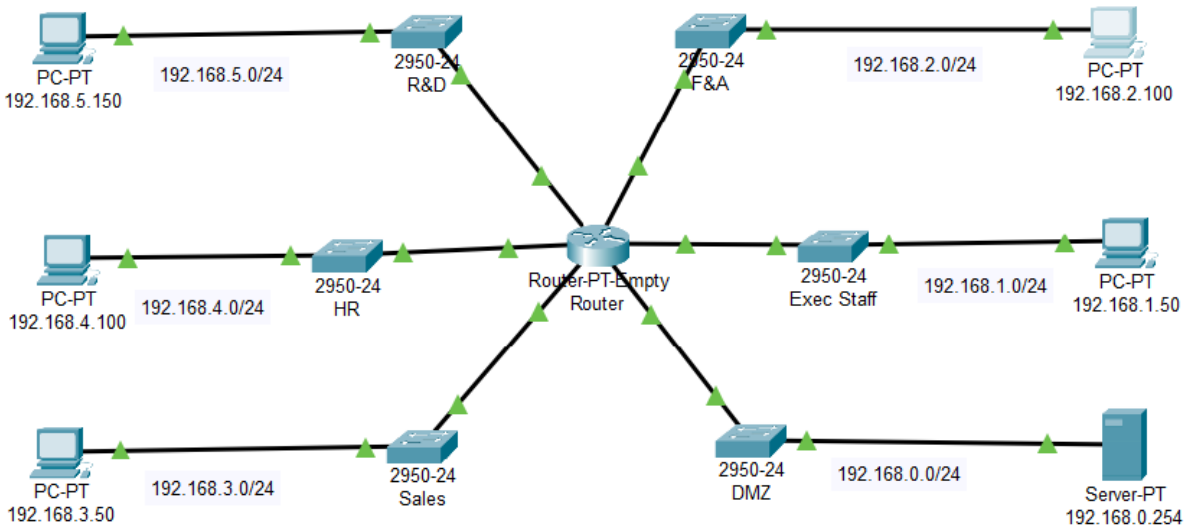


Open the web page via Web Browser.

1. Open Desktop tab on any one of the PCs and go to Web Browser
2. Type in the IP address for the web server 192.168.0.254



Example of the completed network.



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