**Lab 5**

**Metropolitan Area network (MAN)**

**Office ONE.**

* **Two PCs**
* **One Switch**
* **Basic IP Configuration**
* **Testing connectivity using ping**

**Lab Steps: Setting Up a Simple LAN**

**Step 1: Open Cisco Packet Tracer**

Launch Cisco Packet Tracer and create a new project.

**Step 2: Add Network Devices**

Drag and drop the following devices onto the workspace:

1 x Switch

2 x PC (PC-0 to PC-2)

**Step 3: Connect the Devices**

Use Copper Straight-Through Cables to connect:

PC-0 to Switch (**FastEthernet0**) and Switches 2950-24 (**FastEthernet0/1**)

PC-1 to Switch (**FastEthernet0**) and Switches 2950-24 (**FastEthernet0/2**)

**Step 4: Assign IP Addresses to PCs**

**Click on PC-0** → Go to Desktop → Open IP Configuration:

**IP Address:** 192.168.1.2

**Subnet Mask:** 255.255.255.0

**Click on PC-1**

**IP Address:** 192.168.1.3

**Subnet Mask:** 255.255.255.0

**Office Two.**

* **Two PCs**
* **One Switch**
* **Basic IP Configuration**
* **Testing connectivity using ping**

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PC-1 to Switch (**FastEthernet0**) and Switches 2950-24 (**FastEthernet0/2**)

**Step 4: Assign IP Addresses to PCs**

**Click on PC-0** → Go to Desktop → Open IP Configuration:

**IP Address:** 192.168.2.2

**Subnet Mask:** 255.255.255.0

**Click on PC-1**

**IP Address:** 192.168.2.3

**Subnet Mask:** 255.255.255.0

**Office Three.**

* **Two PCs**
* **One Switch**
* **Basic IP Configuration**
* **Testing connectivity using ping**

**Lab Steps: Setting Up a Simple LAN**

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PC-0 to Switch (**FastEthernet0**) and Switches 2950-24 (**FastEthernet0/1**)

PC-1 to Switch (**FastEthernet0**) and Switches 2950-24 (**FastEthernet0/2**)

**Step 4: Assign IP Addresses to PCs**

**Click on PC-0** → Go to Desktop → Open IP Configuration:

**IP Address:** 192.168.3.2

**Subnet Mask:** 255.255.255.0

**Click on PC-1**

**IP Address:** 192.168.3.3

**Subnet Mask:** 255.255.255.0

**SO WE NOW WE CONMECTED FOUR LABS.**

**To connected the four labs we use Router connects different networks and directs data between them.**

We give router four ip address by providing them with the holes they are connected to in networks.

* **You can follow all networks on any computer.**

1. **Ip address comes Office ONE.** (**FastEthernet0/0)** 192.168.1.1. Make sure is on this port.
2. **Ip address Comes Office TWO.** (**FastEthernet0/1)** 192.168.2.1. Make sure is on this port.
3. **Ip address Comes Office THREE.** (**FastEthernet0/1/0)** 192.168.3.1. Make sure is on this port.

This ip address you give router was called Default Gateway.

**Office ONE.**

* Now Go back to your network and open each PC and type the following.
* **Click on PC-0** → Go to Desktop → Open IP Configuration.
* **Default Gateway**: 192.168.1.1

**Office Two.**

* Now Go back to your network and open each PC and type the following.
* **Click on PC-0** → Go to Desktop → Open IP Configuration.
* **Default Gateway**: 192.168.2.1.

**Office Three.**

* Now Go back to your network and open each PC and type the following.
* **Click on PC-0** → Go to Desktop → Open IP Configuration.
* **Default Gateway**: 192.168.3.2.

Test it using this Command.

* Open one pc in network land one.
* **Click on PC-0** → Go to Desktop → Command Prompt.
* Write Ping 192.168.3.2.