Marwadi University Marwadi Chandarana Group	**Marwadi University** **Faculty of Engineering and Technology** **Department of Information and Communication Technology**	
Subject: Computer Networks (01CT0503)	**Aim: Simulate star topology and check the connectivity between devices.**	
Experiment No: 02	**Date: 01-08-2024**	**Enrolment No: 92200133021**

Aim: **Perform** basic CLI commands to **configure** switch and router.

Step – 1: Open up Cisco packet tracer put one router and pc

Step – 2 : Connect both router with PC using the console cable by connecting one end to Console port of Router and Other end of the cable to the RS232 port of PC.

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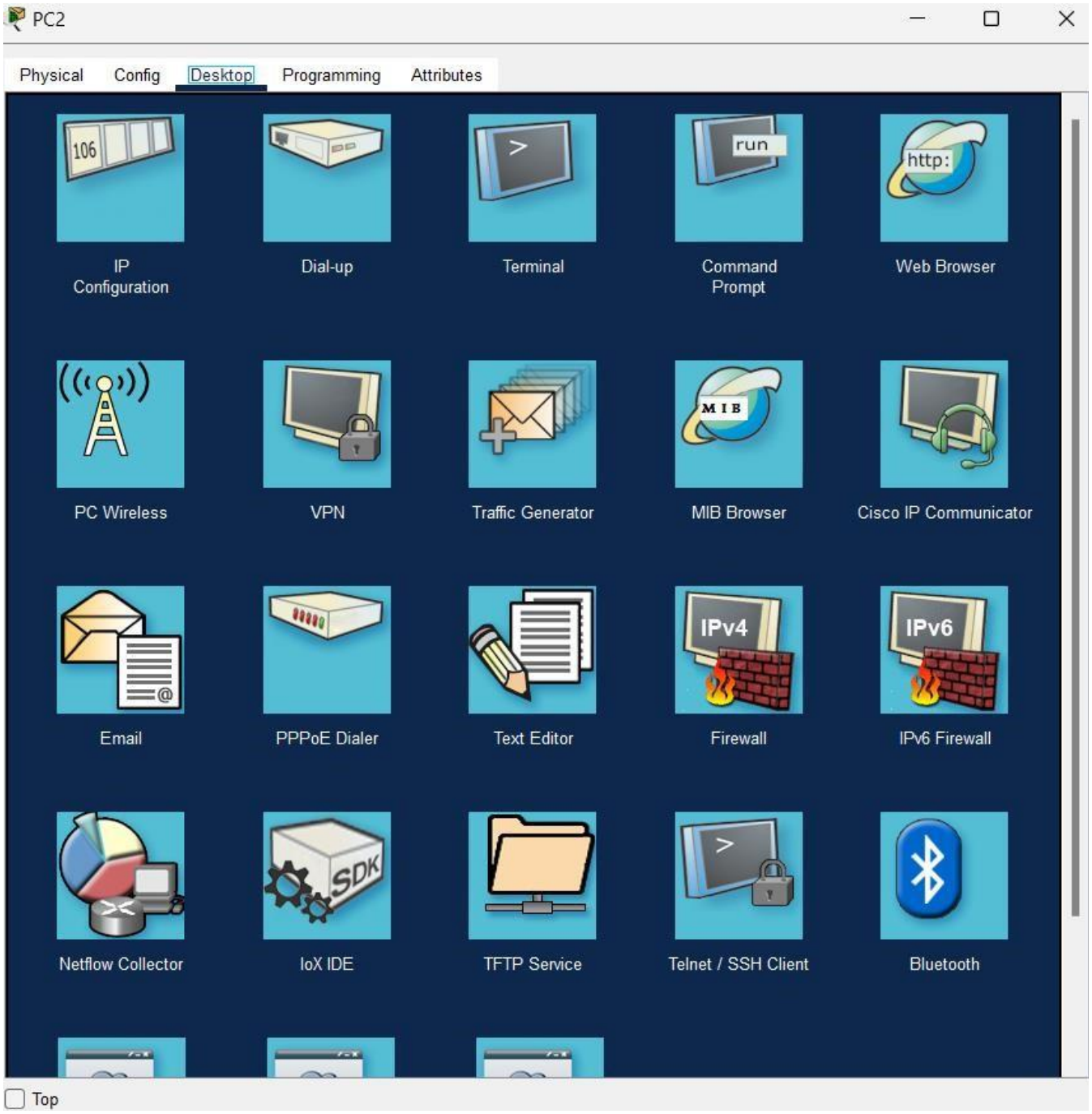
Step – 3 : After connecting the pc with router open pc and go to desktop



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– 4 : Click on terminal and click ok after that the Packet tracer's cli will open up and at the first load it will ask to load initial configuration kindly say no by entering 'n'. then press enter by default you will use the terminal in User mode.

```
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cisco ISR4331/K9 (1RU) processor with 1795999K/6147K bytes of memory.
Processor board ID FLM232010G0
3 Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
4194304K bytes of physical memory.
3207167K bytes of flash memory at bootflash:.
0K bytes of WebUI ODM Files at webui:.


Press RETURN to get started!



Dhruvi>
```

To switch Roles :

There are 3 modes 1. User mode 2. Privileged mode 3. Global mode

The User mode is for the end user in this mode only the usage of the network device is allowed the user cannot see any configurations and neither can change them The Privileged mode is for showing the current configuration of the network device.
The Global mode is for setting the configuration of the network devices.
Note: - the command of the one mode can't be used in the other mode by default there are few exceptions we will see as we go

Each mode is represented by a symbol in the terminal.
">" is for User mode
"#" is for Privileged mode
"config(#)" is for Global config mode

By default we start up in the user mode
To switch to privileged mode, we can either write "enable" or "en" in terminal and hit enter we can see the role symbol change in the next line form ">" to "#" Output:

```
Router>enable
Router#config t
```

e

To Switch to Global config mode from prevailed mode we can either type "config terminal" or "config"

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```
vidys#
vidys#config t
Enter configuration commands, one per line.  End with CNTL
vidys(config)#
vidys(config)#
vidys(config)#
```

Now to roll back to previous roll we can write exit

It will go back to previous privilege level that is from config to privilege and from there to the user

```
vidys(config)#
vidys(config)#exit
vidys#
%SYS-5-CONFIG_I: Configured from console by console
```

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```
vidys#en
vidys#exit




vidys con0 is now available



Press RETURN to get started.









vidys>
```

To set hostname:

The string you see before the role symbol is the hostname it is used specify or modify the host name for the network server, use the **hostname** global configuration command. The host name is used in prompts and default configuration filenames. The **setup** command facility also prompts for a host name at startup.
You can set up by typing the hostname and then name of the host after space

```
vidys#enable
vidys#config t
Enter configuration commands, one per line.  End with CNTL/Z.
vidys(config)#hostname vidya_29
vidya_29(config)#
vidya_29(config)#
```

As I said before it a config command so it needs to be executed in the config mode

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To see brief information about interfaces :

The other important command is “show ip internet brief” or “sh ip int br”. This command shows brief information about all the available interfaces on the router or switch. This is the most common command used by network administrators to check and troubleshoot network issues. It is command that can be executed in both config and privileged mode

```
vidya_29#sh ip int br
Interface              IP-Address      OK? Method Status                Protocol
GigabitEthernet0/0/0   unassigned      YES unset  administratively down down
GigabitEthernet0/0/1   unassigned      YES unset  administratively down down
GigabitEthernet0/0/2   unassigned      YES unset  administratively down down
Vlan1                  unassigned      YES unset  administratively down down
vidya_29#
```

To set password:

Using this command “enable password” you can set up the password each time you enter privileged mode.

```
vidya_29>enable
vidya_29#config t
Enter configuration commands, one per line.  End with CNTL/Z.
vidya_29(config)#enable password 123
vidya_29(config)#
vidya_29(config)#exit
vidya_29#
```

```
vidya_29>
vidya_29>en
Password:
vidya_29#config t
Enter configuration commands, one per line.  End with CNTL/Z.
vidya_29(config)#
```

You’ll have to write the password and I won’t be shown in there after that you’ll hit enter and if your password is right then it will show the privileged mode else the password prompt will be there again indicating you typed wrong password

To see running configurations :

The command “show running-config” shows the current configuration of device.

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```
vidya_29(config)#
vidya_29(config)#do show running-config
Building configuration...

Current configuration : 670 bytes
!
version 16.6.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname vidya_29
!
!
!
enable password 123
!
!
!
!
!
!
ip cef
no ipv6 cef
 --More--
```

Here we can see the password is not hidden we can use other command to hide it or hash it

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```
vidya_29(config)#
vidya_29(config)#
vidya_29(config)#enable secret pass
vidya_29(config)#do show running-config
Building configuration...

Current configuration : 717 bytes
!
version 16.6.4
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname vidya_29
!
!
!
enable secret 5 $1$mERr$WWYFDFflcd5FpJh6NNHr41
enable password 123
!
!
!
!
!
!
ip cef
 --More-- |
```

To relaod the the configurations :

It is used to reload the system

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```
San Jose, California 95134-1706

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SOFTWARE(fc3)
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Press RETURN to get started!
```

Conclusion:

This experiment was an excellent way to become familiar with Cisco Packet Tracer commands. It offered a beginner-friendly introduction to the CLI in computer networking. By simulating real-world networking processes, it provided a clear understanding of how networks function and how these commands help manage them effectively.