INTERNETWORKING WITH ROUTERS

AIM : (a)

Internetworking with routers in CISCO PACKET TRACER simulator

DESIGN & CONFIGURE A SIMPLE INTERNETWORK USING A ROUTER :

Computers are connected with routers using a copper straight - through cable. After forming the network, check connectivity a simple PDU is transferred from PC₀ to PC₁

PROCEDURE :

STEP 1 (CONFIGURING ROUTER1) :

1) Select router & open CLI.

2) Press ENTER to start configuration.

3) Type enable to activate the privileged mode.

STEP 2 (CONFIGURING PCs) :

1) Assign IP Addresses to every PC in the network

2) Select the PC, Go to the desktop & select IP configuration & assign an IP address, subnet mask.

3) Assign the default gateway of PC₀ as 192.168.10.1

4) Assign the default gateway of PC₁ as 192.168.20.1

STEP 3 (CONNECTING PCS WITH ROUTER) :

1) Connect FastEthernet₀ port of PC₀ with Fast-Ethernet₀/₀ of Router1 using a copper straight through cable.

2) Connect FastEthernet₀ port of PC1 with Fast-Ethernet₀/₁ port of Router 1

DEVICE NAME	IP ADDRESS FASTETHERNET	SUBNET MASK	GATEWAY
ROUTER1	192.168.10.1	255.255.255.0	
PC0	192.168.10.2	255.255.255.0	192.168.10.1
PC1	192.168.20.2	255.255.255.0	192.168.20.1

AIM: (b)

Design & configure an internetwork using wireless router, DHCP server & Internet cloud.

OBJECTIVES:

PART1: Build a simple Network in the logical Topology

PART2: Configure the Network Devices

PART3: Test connectivity between Network devices

PART4: Save the File & close Packet Tracer

PART1:

STEP1: Launch Packet Tracer

STEP2: Build the topology

→ Add network devices to the workspace

Using the device selection box, add the network devices to the workspace as shown in topology.

First choose a device type from the Device Type Selection box. Then, click on desired device model.

→ change display names of the network devices

To change the names of network devices

click on the device icon on the Packet Tracer Logical workspace, the click on the config tab in the device configuration window.

→ Add physical cabling between devices

The PC will need a copper straight-through cable to connect to the wireless router. Attach the wire to the FastEthernet0 interface of the PC & the Ethernet 1 interface the wireless router.

PART 2 :

STEP1 : Configure wireless router

→ Create wireless network on the router

Click on the wireless Router icon on the Packet Tracer Logical workspace to open the device configuration window.

→ Click save settings tab

STEP2: Configure the laptop

→ click on laptop to access the wireless network and in the laptop configuration windows select the physical tab.

In the Physical tab you will need to remove the Ethernet copper module & replace it with the WPC300N module.

STEP3: Configure the PC

→ In the IP configuration window, select DCHP radio button so the PC will use DCHP to receive an IPV4 address

STEP4: Configure the Internet cloud

→ Install network modules if necessary The cloud device will need two modules if they are not already on the tab.

→ Identify the From & To Ports

STEP 5: Configure Cisco.com server
→ Configure Cisco.com server as DHCP server
→ Configure Cisco.com server as DNS

PART 3:
STEP 1: Refresh the IVP4 Configuration information
→ Refresh the IP settings by issuing the
   commands ipconfig / release & then ipconfig /
   renew.

→ Test connectivity to the Cisco.com server from
   the PC
   Issue the command ping cisco.com. It may
   take a few seconds for the ping to return.

RESULT:
Internetworking with routers in CISCO PACKET
TRACKER simulator implemented successfully