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(AUTONOMOUS)
(Affiliated to Osmania University)
Hyderabad - 500 031.

DEPARTMENT OF : _ECE_

NAME OF THE LABORATORY : _Computer Networks_

Name _G.Sri Ganga Pranav_ Roll No. _1602-21-735-117_ Page No. _____

4.6.5 :- Connect a wired and wireless LAN

Aim:- To connect a wired and wireless LAN using CISCO packet tracer.

Apparatus:- A PC loaded with CISCO packet tracer.

Procedure:-

connections:-

1) cloud (eth 6) → Router 0 (copper straight through) (f0/0)

2) Router 0 (ser 0/0/0) → Router 1 (ser 0/0) (serial DCE)

3) Router 0 (F 0/1) → netaccad·pka F0 (copper cross-over)

4) Router 0 (console) → configure terminal RS232 (console)

5) Router 1 (F1/0) → switch (f0/1) (serial JDE)

6) Cabel modem (port 1) to wireless Router Internet Copper straight through

7) Wireless Router Ethernet 1 → family PC (copper straight through)

Addressing Table

Device	Interface	IP address	Connects to
Cloud	Eth 6	N/A	F0/0
	Coax 7	N/A	Port 0
Cable modem	Port 0	N/A	Coax 7
	Port1	N/A	Internet
Router 0	console	N/A	RS232
	F0/0	192.168.2.1/24	Eth 6
	F0/1	10.0.0.1/24	F0
	ser 0/0/0	172.31.0.1/24	ser 0/0
Router1	ser 0/0	172.31.0.2/24	ser 0/0/0
	F1/0	172.16.0.1/24	F0/1
Wireless Router	Internet	192.168.2.2/24	Port1
	Eth1	192.168.1.1	F0
Family PC	F0	192.168.1.102	Eth1
Switch	F0/1	172.16.0.2	F1/0
Netacad.pka	F0	10.0.0.254	F0/1
Configuration Terminal	RS232	N/A	Console

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Part 1:- Connect to the cloud

step 1:- Connect the cloud to Router 0

a) At the bottom left, click the orange lightning icon to open the available connections.

b) Choose the correct cable to connect "Router 0 ≠ 0/0" to cloud Eth 6". Cloud is a type of switch, If you attached the correct cable, the link lights on the cable turn green

step 2:- Connect the cloud to cable modem

a) choose the correct cable to connect "cloud coax 7" to "modem port 0". If you attached the correct cable, the link lights on the cable turn green

Part 2:- Connect Router 0

step 1:- Connect Router 0 to Router 1

choose the correct cable to connect "Router 0 ser 0/0" to "Router 1 ser 0/0". Use one of the available serial cables.

step 2:- Connect Router 0 to netacad·pka

choose the correct cable to connect "Router 0 ≠ 0/1" to "netacad·pka ≠0". Routers and computers traditionally, use the same wires to transmit (1 and 2) and receive (3 and 6). The correct cable to choose consists of these crossed wires. Although many NIC's can now

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autosense which pair is used to transmit and receive Router0 and netacad.pka do not have autosensing NIC's.

Step 3 :- Connect Router0 to the configuration terminal

Choose the correct cable to connect Router 0 console to configuration terminal RS232. This cable does not provide network access to "configure terminal" but allows you to configure Router 0 through its terminal. If you attached the correct cable, the link lights on the cable turns black.

Part 3 :- Connect Remaining Devices

Step 1 :- Connect Router1 to switch

choose the correct cable to connect "Router 1 F1/0" to "Switch F0/1". If you attached the correct cable then color change from amber to green.

Step 2 :- Connect cable modem to wireless router

Choose the correct cable to connect "cable modem port" to "wireless router internet" port.

Step 3 :- Connect wireless router to family PC

choose the correct cable to connect "Wireless Router Ethernet 1" to family PC.

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Part 4:- Verify connections

step 1:- Test the connection from family PC to netacad.pka •pka

a) Open the "Family PC" command prompt and ping netacad.pka

b) Open the "web browser" and the web address https//netacad.pka

step 2:- Ping the switch from Home PC.

Open the "Home PC" command prompt and ping the "switch" IP address of to verify the connection.

step 3:- Open Router 0 from configuration terminal

a) Open the "terminal" of "Configuration Terminal" and accept the default settings.

b) Press "Enter" to view "Router 0" command prompt.

c) type "show ip interface brief" to view interface ~~satuses~~ stasuses.

Part 5:- Examine the physical Topology

step 1:- Examine the cloud

a) Click on the physical workspace tab (or) press shift+p

b) click on the home city icon.

c) click on the cloud icon.

d) click back to return to home city.

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step 2):- Examine the primary network

a) click the "primary network" icon. Hold the mouse pointer over the various cables.

b) click "Back" to return "Home city".

step 3):- Examine the secondary network.

(a) click the "secondary network" icon. Hold the mouse pointer over the various cables

(b) click "Back" to return home city.

step 4):- Examine the home network.

(a) click the "Home network" icon

(b) click the "logical workspace" tab to return to the logical topology

Result :- Wired and wireless LAN is connected using CISCO packet tracer.