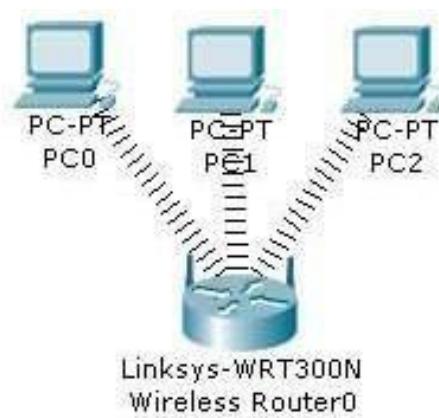


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Practical-8

AIM:-b) Configuration of Wireless LAN using CISCO Packet Tracer.

Design a topology with three PCs connected from Linksys Wireless routers.



Perform following configuration:-

- Configure Static IP on PC and Wireless Router
- Set SSID to MotherNetwork
- Set IP address of router to 192.168.0.1, PC0 to 192.168.0.2, PC1 to 192.168.0.3 and PC2 to 192.168.0.4.
- Secure your network by configuring WAP key on Router
- Connect PC by using WAP key

To complete these tasks follow these step by step instructions:-

Step1:- Click on wireless router,

- Select Administration tab from top Menu, set username and password to admin and click on Save Setting.



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- Next click on wireless tab and set default SSID to MotherNetwork.
- Now Select wireless security and change Security Mode to WEP



- Set Key1 to 0123456789

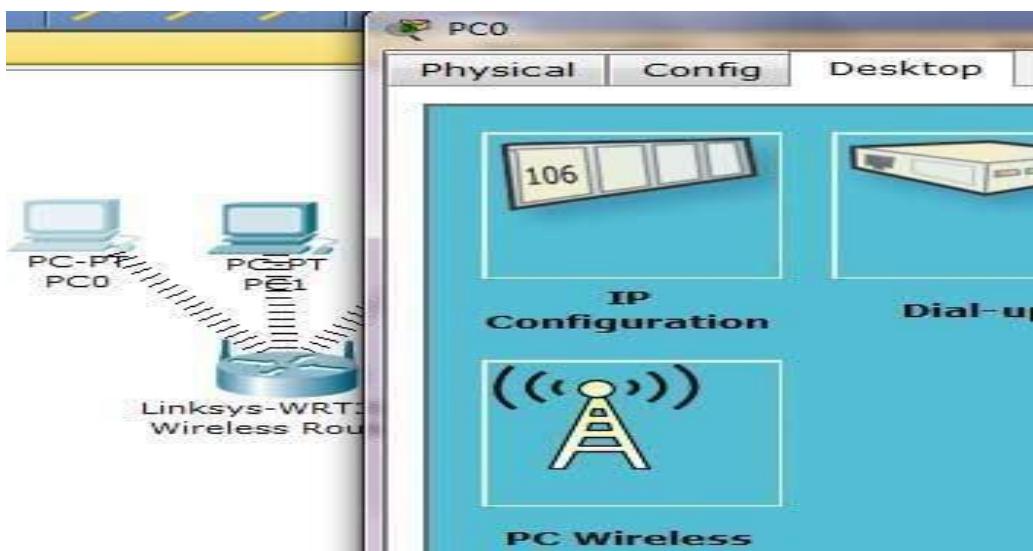


- Again go in the end of page and Click on Save Setting
- Now we have completed all given task on Wireless router. Now configure the static IP on all three PC's
- Double click on pc select Desktop tab click on IP configuration select Static IP and set IP as given below

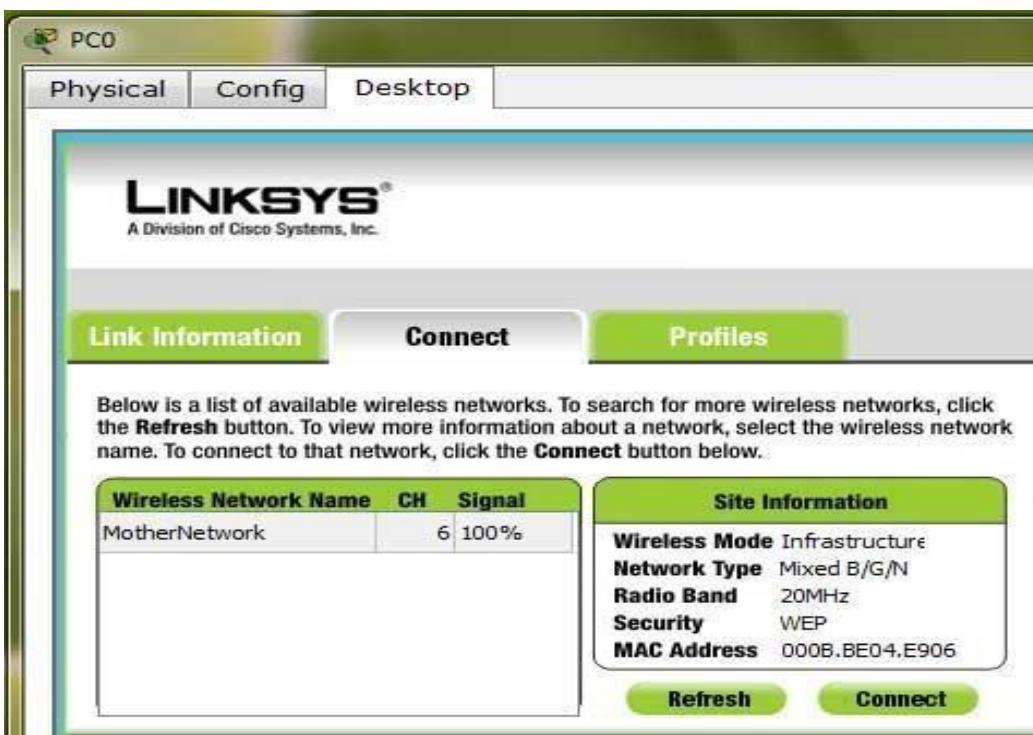
PC	IP	Subnet Mask	Default Gateway
PC0	192.168.0.2	255.255.255.0	192.168.0.1
PC1	192.168.0.3	255.255.255.0	192.168.0.1
PC2	192.168.0.4	255.255.255.0	192.168.0.1

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- Now it's time to connect PC's from Wireless router. To do so click PC select Desktop click on PC Wireless



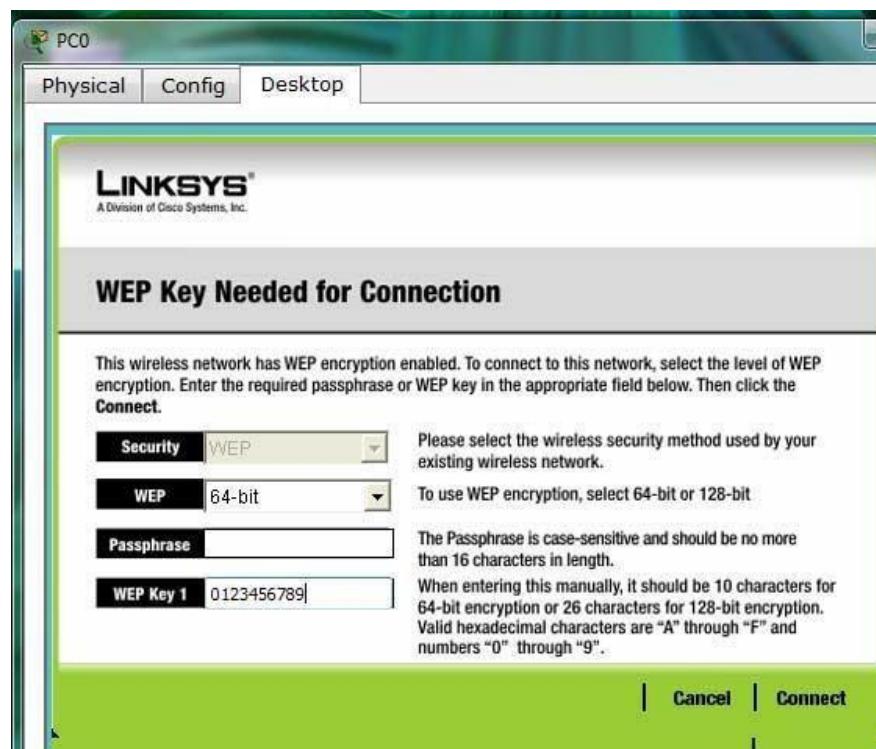
- Click on connect tab and click on Refresh button



As you can see in image that Wireless device is accessing MotherNetwork on CH 6 and signal strength is 100%. In left side you can see that WEP security is configured in network. Click on connect button to connect MotherNetwork

- It will ask for WAP key insert 0123456789 and click connect

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It will connect you with wireless router.

As you can see in image below that system is connected. And PCI card is active.



- Repeat same process on PC1 and PC2.

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Student observation:

- c) **What is SSID of a wireless router?**
- d) **What is a security key in wireless router?**
- e) **Configure a simple Wireless LAN in your lab using a real access point and write down the configurations in your notebook.**

The SSID, or Service Set Identifier, of a wireless router is essentially the name given to the wireless network. It is the identifier that devices scan for when searching for available Wi-Fi networks to connect to. By default, most routers come with a generic SSID, but for easier management and identification, users typically change it to a custom name that reflects the network or location. The SSID is broadcast by the router, making it visible to any device in range unless the broadcast is intentionally disabled for security reasons.

A security key in a wireless router is a password that protects the wireless network from unauthorized access. It enforces security by requiring users to enter this key before gaining connectivity to the router's Wi-Fi. The key works by encrypting the wireless data with algorithms such as WPA2 or WPA3, ensuring that data transmitted between the router and client devices is secure. This key is vital for preventing intrusions, protecting the network's resources, and maintaining the privacy of users connected to the network.

To configure a simple Wireless LAN using a real access point in your lab, one would typically start by physically connecting the access point to the existing wired network, usually via an Ethernet cable to a switch or router. Then, access the access point's configuration interface through a web browser or dedicated software. Set the SSID to a recognizable name and configure the security settings by enabling WPA2 or WPA3 encryption and setting a strong security key. DHCP on the main network device should ideally be enabled to automatically assign IP addresses to wireless clients. Optionally, configure channel settings to reduce interference or set MAC address filtering for added security. Record all configurations including SSID, encryption type, security key, and IP addressing scheme in your lab notebook to maintain a proper reference. This setup ensures wireless devices in the lab can connect securely and function seamlessly within the broader network environment.

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