

**Experiment No : 06**

**Experiment Name:** Implementation of Wireless LAN using Wireless Access Point and DHCP server.

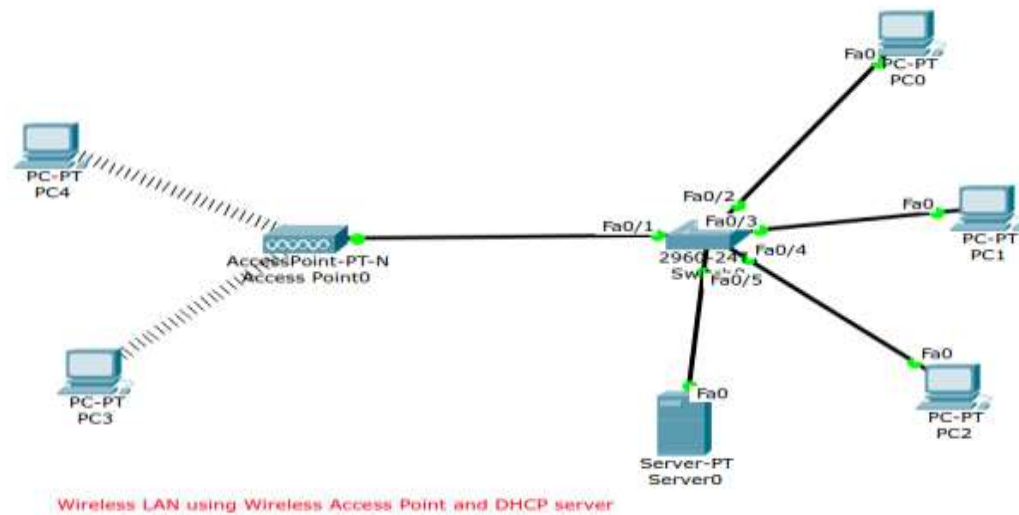
**Objective:**

In this experiment, we are going to implement Wireless LAN using Wireless Access Point and DHCP server on 'CISCO Packet Tracer'.

Here, we use a sample network diagram it contains 1 switch, 1 Wireless Access Point, 1 server and 5 PCs.

**Design Procedure:**

Let us implement the network like below:



Server Configuration:

- a) DHCP configure:

Server0

Physical Config **Services** Desktop Attributes Software/Services

**SERVICES**

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoE
- VM Management

**DHCP**

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

Start IP Address: 192 168 2 1

Subnet Mask: 255 255 255 0

Maximum number of Users: 512

TFTP Server: 0.0.0.0

Add Save Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server
serverPool	0.0.0.0	0.0.0.0	0.0.0.0	0.0.0.0	512	0.0.0.0

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b) IP configure:

Server0

Physical Config Services **Desktop** Attributes Software/Services

**IP Configuration** [X]

Interface: FastEthernet0

**IP Configuration**

☐ DHCP ☒ Static

IP Address: 192.168.2.3

Subnet Mask: 255.255.255.0

Default Gateway:

DNS Server:

**IPv6 Configuration**

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address: /

Link Local Address: FE80::2E0:A3FF:FE7D:B6E6

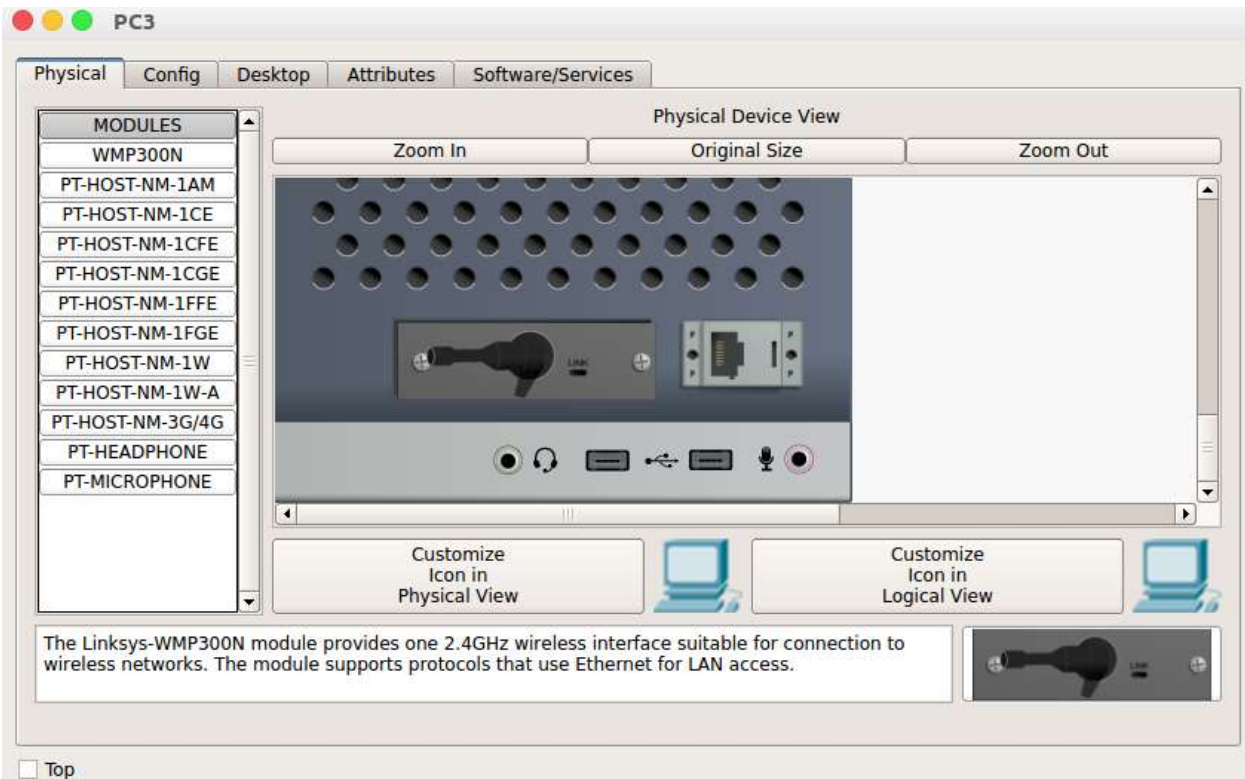
IPv6 Gateway:

IPv6 DNS Server:

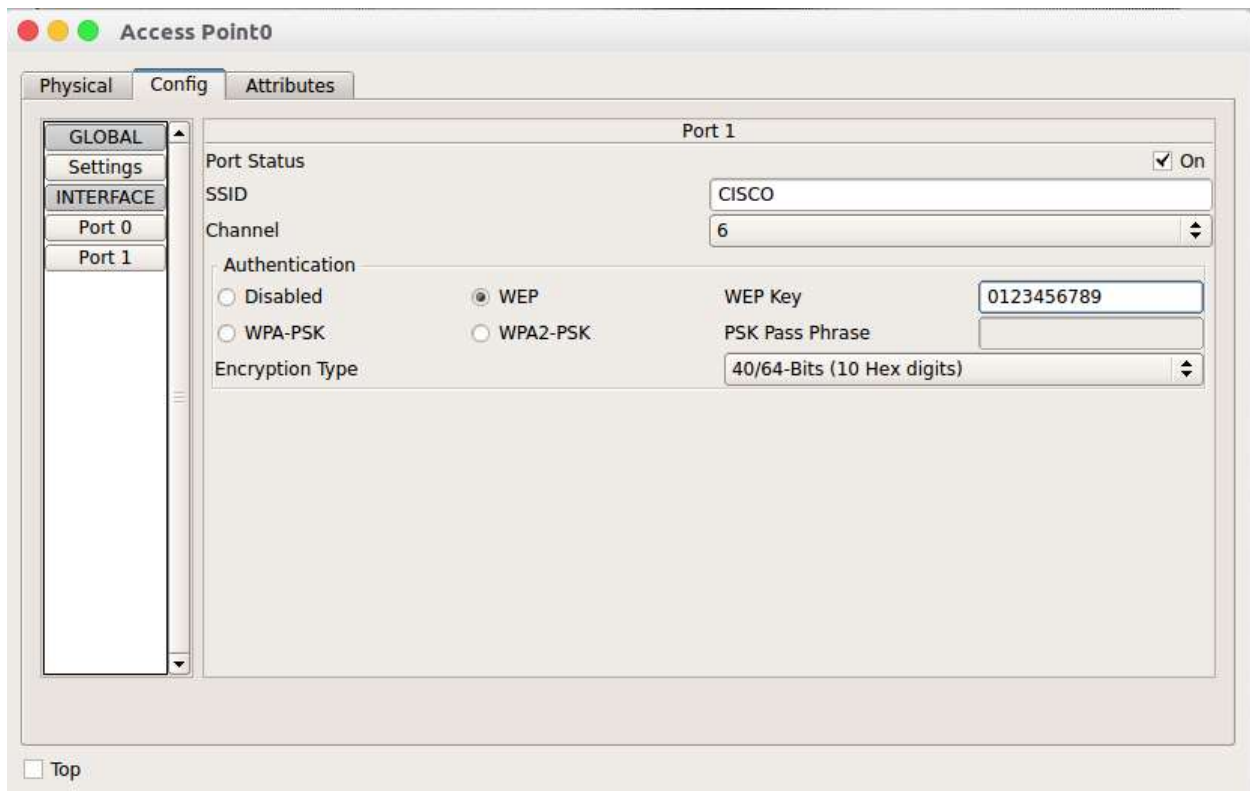
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Install WLAN card for PC-3:

→ At first off the connection. Then add the 'Linksys-WMP300N' WLAN card for PC-3 and same for PC 4.



Configure the access point like below:



Connect it as SSID: CISCO and WEP Key: 0123456789 on PC-3 and PC-4

## Link Information

## Connect

## Profiles

Below is a list of available wireless networks. To search for more wireless networks, click the **Refresh** button. To view more information about a network, select the wireless network name. To connect to that network, click the **Connect** button below.

Wireless Network Name	CH	Signal
CISCO	I	84%

## Site Information

**Wireless Mode** Infrastructure  
**Network Type** Mixed B/G/N  
**Radio Band** Auto  
**Security** WEP  
**MAC Address** 0060.3E34.845A

Refresh

Connect

2.4GHz



Adapter is Active

Wireless-N Notebook Adapter

Wireless Network Monitor v1.0

Model No. WPC300N

PC3

Physical Config Desktop Attributes Software/Services

### WEP Key Needed for Connection

This wireless network has WEP encryption enabled. To connect to this network, select the level of WEP encryption. Enter the required passphrase or WEP key in the appropriate field below. Then click the **Connect**.

Security	WEP	Please select the wireless security method used by your existing wireless network.
WEP	64-bit	To use WEP encryption, select 64-bit or 128-bit
Passphrase		The Passphrase is case-sensitive and should be no more than 16 characters in length.
WEP Key 1	0123456789	When entering this manually, it should be 10 characters for 64-bit encryption or 26 characters for 128-bit encryption. Valid hexadecimal characters are "A" through "F" and numbers "0" through "9".

**Cancel** **Connect** Active

**Wireless-N** Notebook Adapter Wireless Network Monitor v1.0 Model No. **WPC300N**

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Make DHCP configuration on PC0, PC1 and PC2 in IP address configuration.  
The IP of DHCP server is 192.168.2.3. Try to connect to the sever from PC3 using URL as: 192.168.2.3.

