

Name =

Abubaker Attique

Class =

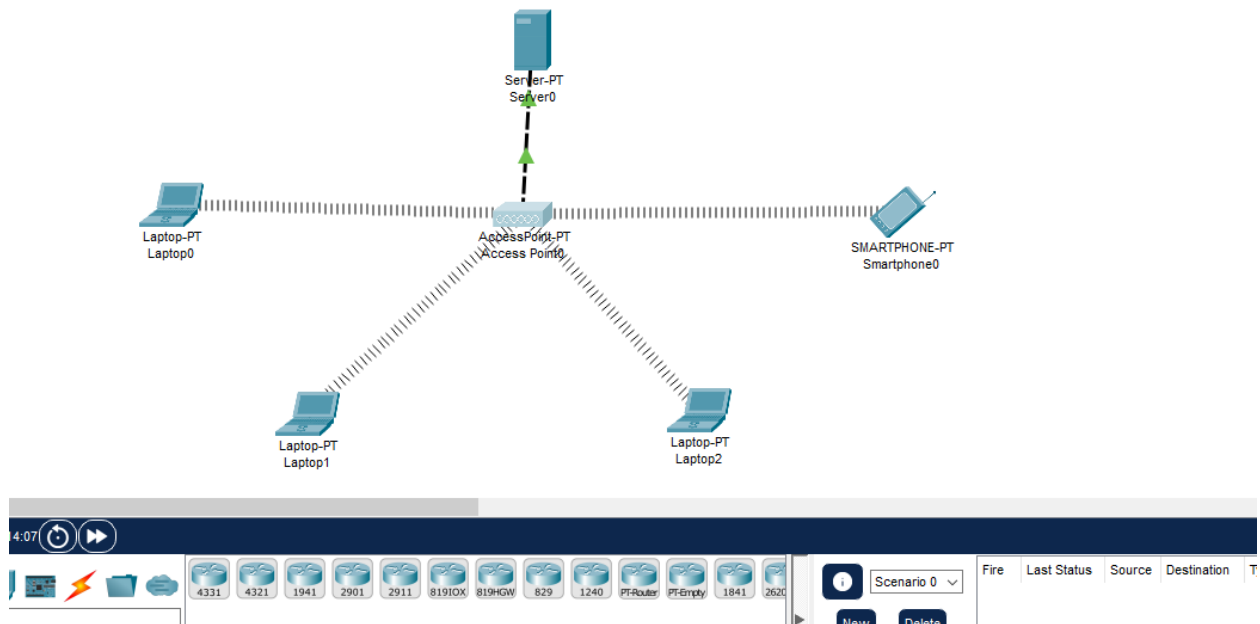
5-A

Roll no =

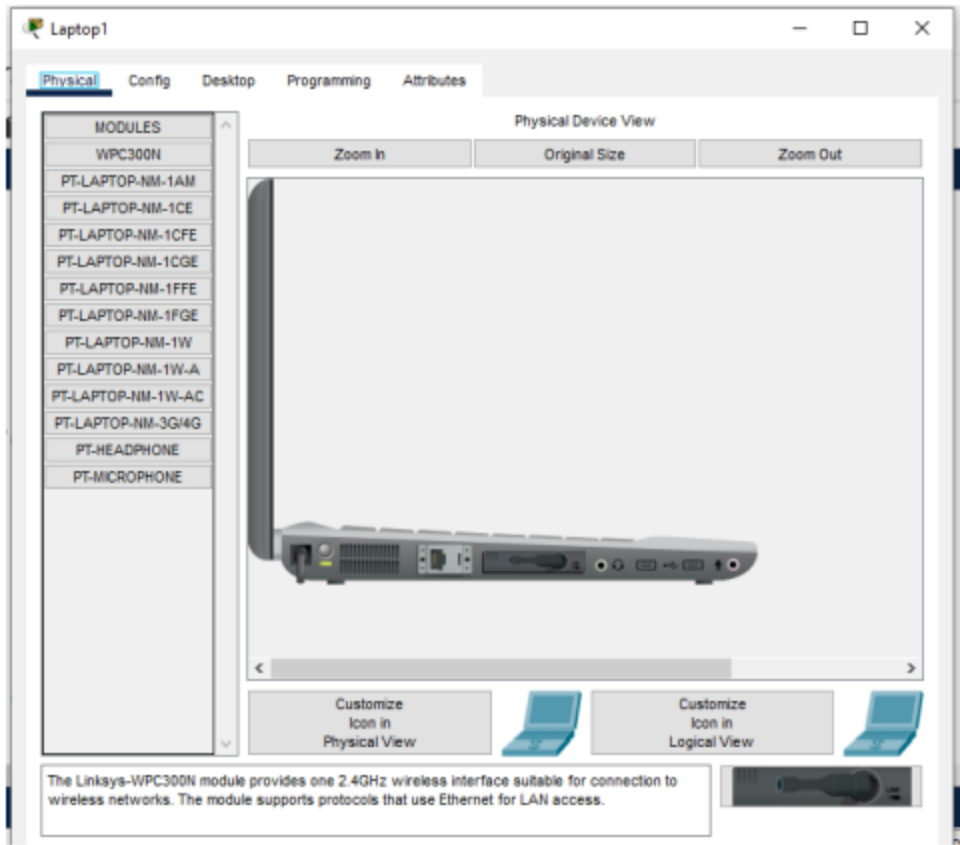
P20-0560

Lab 7

Task 1: WLAN Configuration on Packet Tracer



Place Wireless Interface Card to Laptops



IP Check on WLAN Devices

The screenshot displays the Windows Network Setup Wizard. On the left, a network diagram shows a PC connected to a switch labeled 'PT 0', which is then connected to a router. Below the router, two laptops are labeled 'Laptop-1' and 'Laptop2'. The main window is titled 'IP Configuration' and has three sections:

- IP Configuration:** The 'Static' radio button is selected. The fields are: IPv4 Address (172.16.0.3), Subnet Mask (255.255.0.0), Default Gateway (172.16.0.1), and DNS Server (172.16.0.2).
- IPv6 Configuration:** The 'Static' radio button is selected. The fields are: IPv6 Address (empty), Link Local Address (FE80::201:64FF:FED3:5196), Default Gateway (empty), and DNS Server (empty).
- 802.1X:** The 'Use 802.1X Security' checkbox is unchecked. The 'Authentication' dropdown is set to 'MD5'. The 'Username' and 'Password' fields are empty.

DHCP Server Configuration

After the DHCP Services configuration on DHCP Server, we will configure one more thing on this DHCP Server. This is the IP address and subnet mask of the Server.

Server0

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP**
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DHCP

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool

Default Gateway: 172.16.0.1

DNS Server: 172.16.0.2

Start IP Address: 172 16 0 11

Subnet Mask: 255 255 0 0

Maximum Number of Users: 512

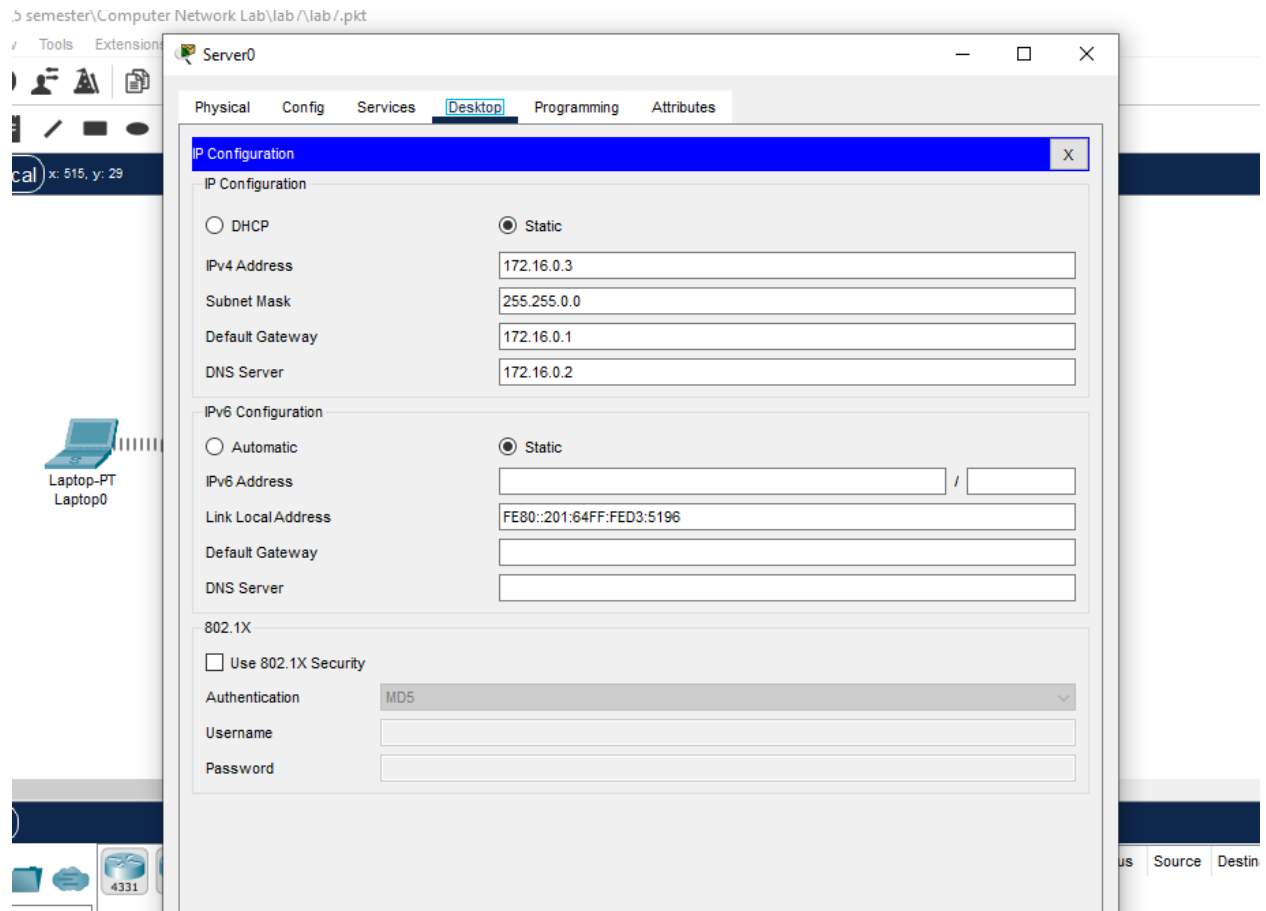
TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

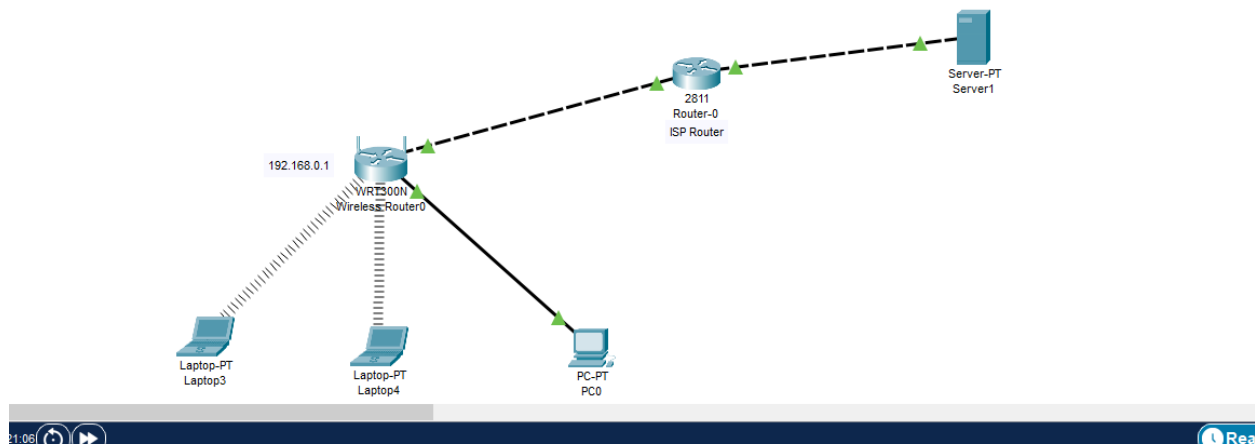
Add Save Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
serverPool	172.16.0.1	172.16.0.2	172.16.0.11	255.255....	512	0.0.0.0	0.0.0.0

Here, our Server IP address will be 172.16.0.3 and the mask will be 255.255.255.0.

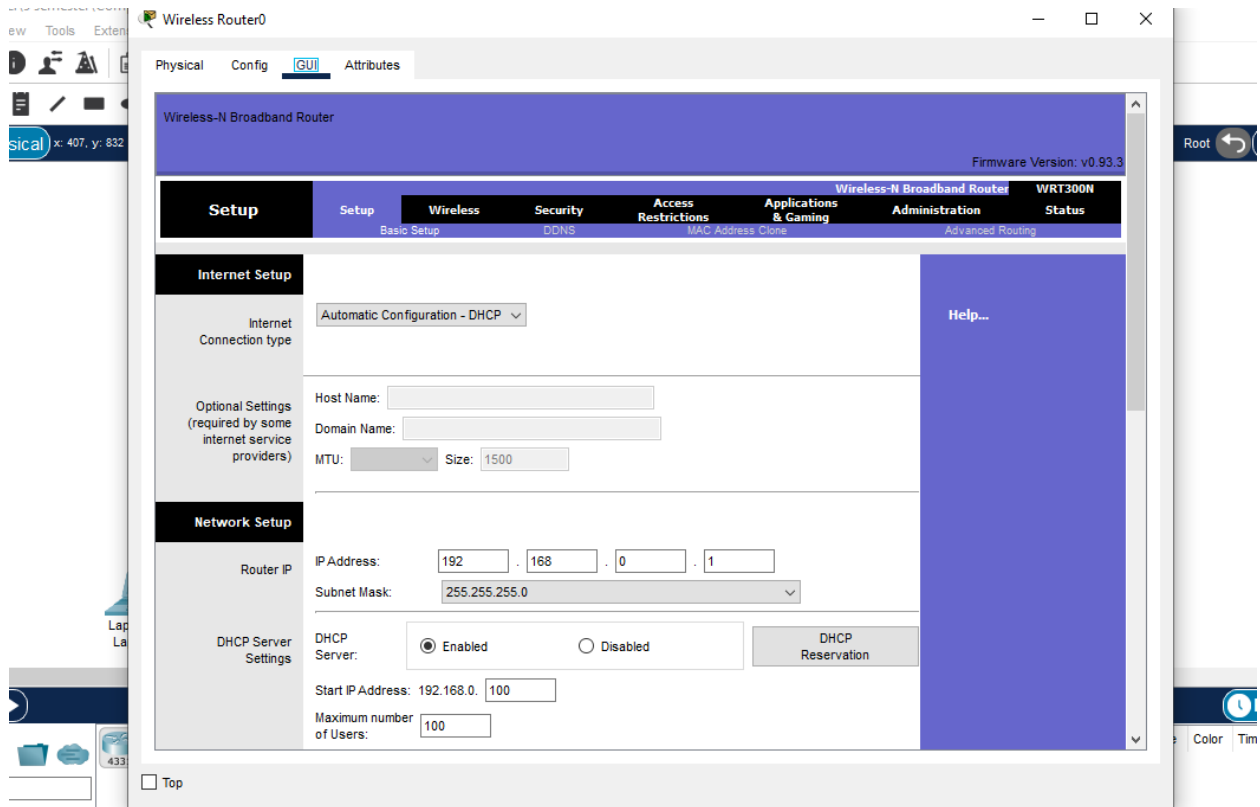


Task 2: Wireless Router configuration in Cisco Packet Tracer



In this setup, we will have two laptops and a PC which should connect to a LAN provided by one wireless router. The PC is used by the network Admin and connects to the LAN via an Ethernet port of the wireless router. The laptops should connect to the same LAN by wireless means, and for this reason, we'll install wireless adapters on them. Still, we'll need to connect the LAN to the internet via an ISP router.

Wireless LAN configuration



Click on the Administration tab and set a new password for administrative access. Scroll down and Save settings. You will be prompted for a username and the new password you just set. Type them and click OK. Wait a bit. A new screen appears confirming settings are successful. You can click on continue to continue with configurations.

Wireless	Setup	Wireless	Security	Access Restrictions	Applications & Gaming	Administration
	Basic Wireless Settings		Wireless Security	Guest Network	Wireless MAC Filter	Advanced Wire

Basic Wireless Settings

Network Mode:

Mixed

Network Name (SSID):

Abubaker

Radio Band:

Auto

Wide Channel:

Auto

Standard Channel:

1 - 2.412GHz

SSID Broadcast:

☒ Enabled ☐ Disabled

Help...

Wireless-N Broadband Router

Firmware Version: v0.93.3

Wireless	Setup	Wireless	Security	Access Restrictions	Applications & Gaming	Administration	Status
	Basic Wireless Settings		Wireless Security	Guest Network	Wireless MAC Filter	Advanced Wireless Settings	

Wireless Security

Security Mode:

WPA Personal

Encryption:

AES

Passphrase:

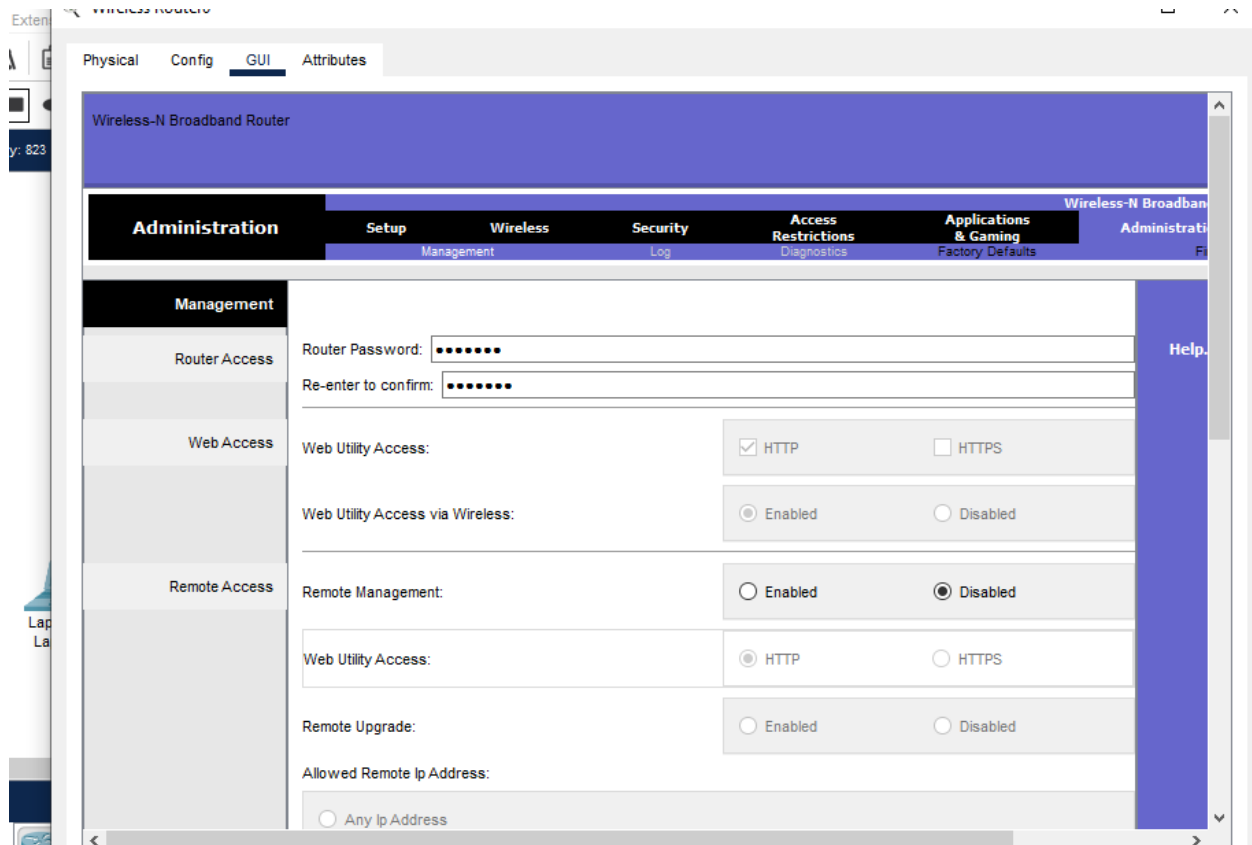
abubaker

Key Renewal:

3600

seconds

Help...



LAN Setup and Internet Setup

providers)	MTU: <input type="text" value="1500"/>
Network Setup	
Router IP	IP Address: <input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="0"/> . <input type="text" value="1"/> Subnet Mask: <input type="text" value="255.255.255.0"/>
DHCP Server Settings	DHCP Server: <input checked="" type="radio"/> Enabled <input type="radio"/> Disabled DHCP Reservation Start IP Address: 192.168.0. <input type="text" value="100"/> Maximum number of Users: <input type="text" value="100"/> IP Address Range: 192.168.0. 100 - 199 Client Lease Time: <input type="text" value="0"/> minutes (0 means one day) Static DNS 1: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> Static DNS 2: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> Static DNS 3: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> WINS: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/>

IP Configuration

Interface Wireless0

IP Configuration

☒ DHCP☐ Static

DHCP request successful.

IPv4 Address

155.21.0.2

Subnet Mask

255.255.255.0

Default Gateway

192.168.0.1

DNS Server

0.0.0.0

IPv6 Configuration

☐ Automatic☒ Static

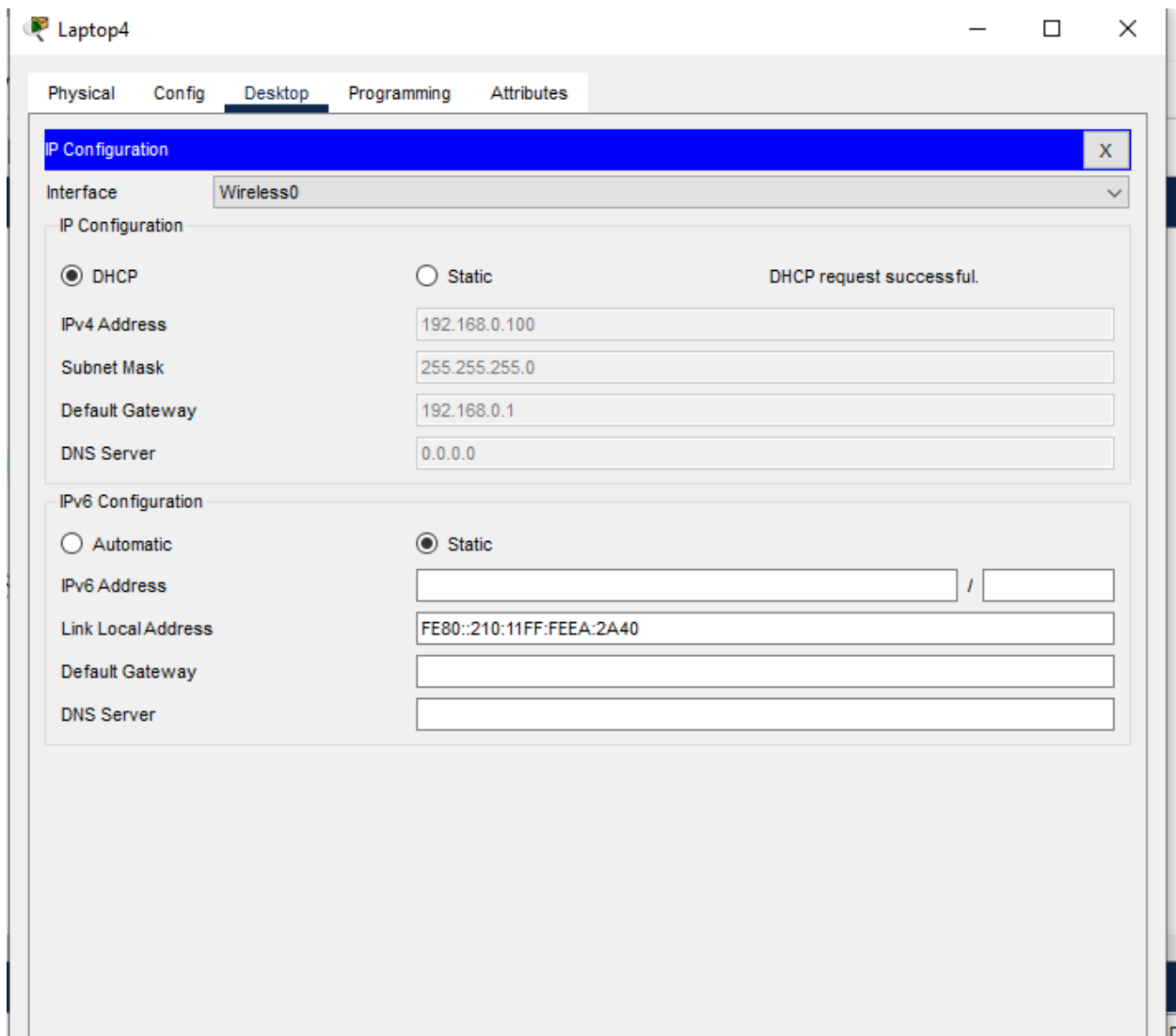
IPv6 Address

Link Local Address

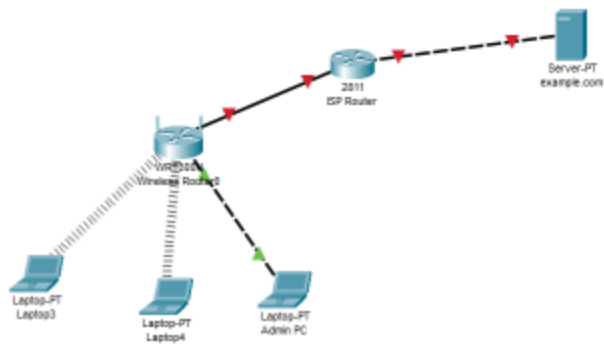
FE80::20C:85FF:FEDA:1DA4

Default Gateway

DNS Server



Ping PC2 from PC1. Ping should succeed. Try also to ping the LAN interface of the router from one of the PCs ,say, PC1 . It should be successful.



Adding security for wireless LAN access

Physical Config **GUI** Attributes

Wireless-N Broadband Router Firmware

Wireless Setup Wireless **Security** Access Restrictions Applications & Gaming Administration

Basic Wireless Settings Wireless Security Guest Network Wireless MAC Filter Advanced W

Basic Wireless Settings

Network Mode: Mixed

Network Name (SSID): Abubaker

Radio Band: Auto

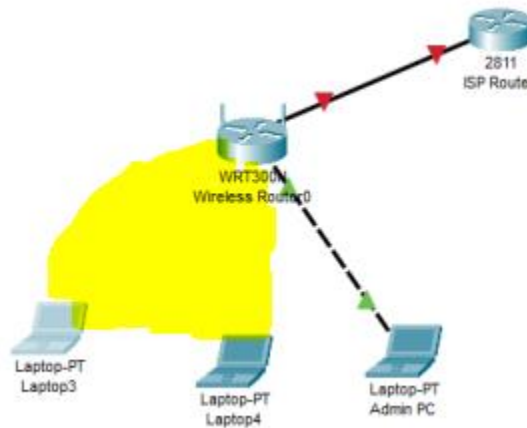
Wide Channel: Auto

Standard Channel: 1 - 2.412GHz

SSID Broadcast: ☒ Enabled ☐ Disabled

Help...

Disconnect pcs because you are now secure



These yellow is now disconnected because the router have now secured having password.

For Connection :

Again, click connect, then provide the security pre-shared key for the WiFi that you set, then connect. Laptop 1 is now connected to the WiFi network. You can see at the bottom right of the screen that the wireless network adapter on the laptop is active. Repeat this process for the Laptop2.

Laptop4

PhysicalConfigDesktopProgrammingAttributes

Link InformationConnectProfiles

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
Abubaker	1	100%

Site Information

Wireless ModeInfrastructureNetwork TypeMixed B/G/NRadio BandAutoSecurityWPA1-PSKMAC Address00D0.BC7B.2A06

RefreshConnect

2.4GHz



Adapter is Active

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

WPA-Personal Needed for Connection

This wireless network has WPA-Personal, also known as Pre-Shared Key, enabled. To connect to this network, select the encryption type. Enter the required Pre-Shared Key in the appropriate field below. Then click the **Connect**.

Security WPA-Personal

Please select the wireless security method used by your existing wireless network.

Encryption AES

Please select an encryption type used to protect your wireless data transmissions.

Pre-shared Key

Please enter a Pre-shared Key that is 8 to 63 characters in length.

Cancel

Connect

Active

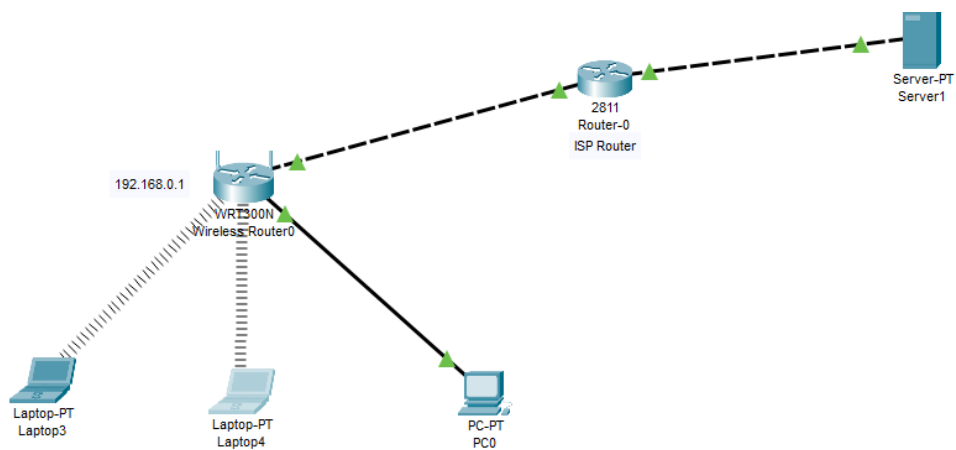
Wireless-N Notebook Adapter

Wireless Network Monitor v1.0

Model No. **WPC300N**



Now the pc is connected.



Internet Setup

```
Router>en
Router#config terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip add 155.21.21.1 255.255.0.0
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router(config-if)#int fa0/1
Router(config-if)#ip add 1
^
% Invalid input detected at '^' marker.

Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

Router(config-if)#exit
Router(config)#ip dhcp pool mypool
Router(dhcp-config)#net 155.21.0.0 255.255.0.0
Router(dhcp-config)#default-router 155.21.21.1
Router(dhcp-config)#dns-server 0.0.0.0
Router(dhcp-config)#
```

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