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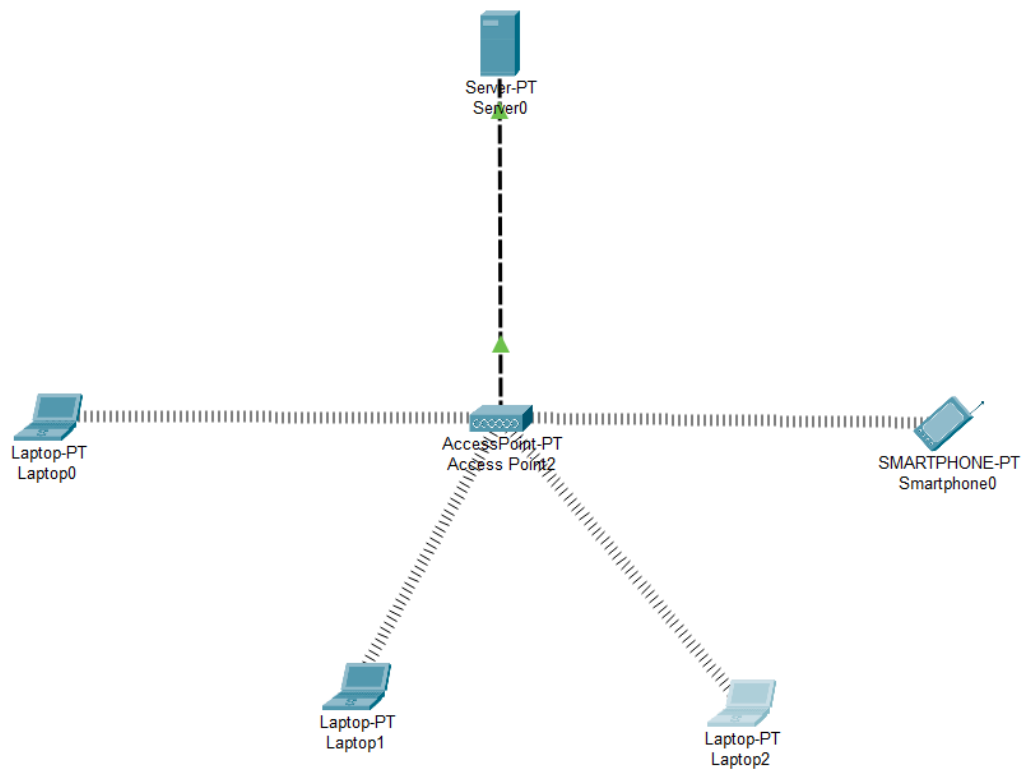
Section:A

Lab 07

Task 01

WLAN Configuration on Packet Tracer

Topology:



Laptop2

Physical

Config

Desktop

Programming

Attributes

MODULES

WPC300N

PT-LAPTOP-NM-1AM

PT-LAPTOP-NM-1CE

PT-LAPTOP-NM-1CFE

PT-LAPTOP-NM-1CGE

PT-LAPTOP-NM-1FFE

PT-LAPTOP-NM-1FGE

PT-LAPTOP-NM-1W

PT-LAPTOP-NM-1W-A

PT-LAPTOP-NM-1W-AC

PT-LAPTOP-NM-3G/4G

PT-HEADPHONE


PT-MICROPHONE

Physical Device View

Zoom In

Original Size

Zoom Out



Customize Icon in Physical View


Customize Icon in Logical View

The Linksys-WPC300N module provides one 2.4GHz wireless interface suitable for connection to wireless networks. The module supports protocols that use Ethernet for LAN access.

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▬

▾



☐ Top

Physical Config Desktop Programming Attributes

IP Configuration X

Interface Wireless0 ▾

IP Configuration

☒ DHCP☐ Static

DHCP failed. APIPA is being used.

IPv4 Address

169.254.174.70

Subnet Mask

255.255.0.0

Default Gateway

0.0.0.0

DNS Server

0.0.0.0

IPv6 Configuration

☐ Automatic☒ Static

IPv6 Address

 /

Link Local Address

FE80::20D:BDFF:FE66:AE46

Default Gateway

DNS 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

IPCisco Pool

Default Gateway

172.16.0.1

DNS Server

172.16.0.1

Start IP Address :

172

16

0

2

Subnet Mask:

255

255

255

0

Maximum Number of Users :

254

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
IPCisco Pool	172.16.0.1	172.16.0.1	172.16.0.2	255.255.255.0	254	0.0.0.0	0.0.0.0
serverPool	0.0.0.0	0.0.0.0	172.16.0.0	255.255.0.0	512	0.0.0.0	0.0.0.0

Server0

Physical

Config

Services

Desktop

Programming

Attributes

IP Configuration

IP Configuration

DHCP

Static

IPv4 Address

172.16.0.1

Subnet Mask

255.255.0.0

Default Gateway

0.0.0.0

DNS Server

0.0.0.0

IPv6 Configuration

Automatic

Static

IPv6 Address

Link Local Address

FE80::201:63FF:FE6A:92E5

Default Gateway

DNS Server

802.1X

Use 802.1X Security

Authentication

MD5

Username

Password

Top

Laptop0

Physical

Config

Desktop

Programming

Attributes

IP Configuration

X

Interface

Wireless0

IP Configuration

☒ DHCP

☐ Static

DHCP request successful.

IPv4 Address

172.16.0.3

Subnet Mask

255.255.0.0

Default Gateway

0.0.0.0

DNS Server

0.0.0.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

/

Link Local Address

FE80::204:9AFF:FE2A:881C

Default Gateway

DNS Server

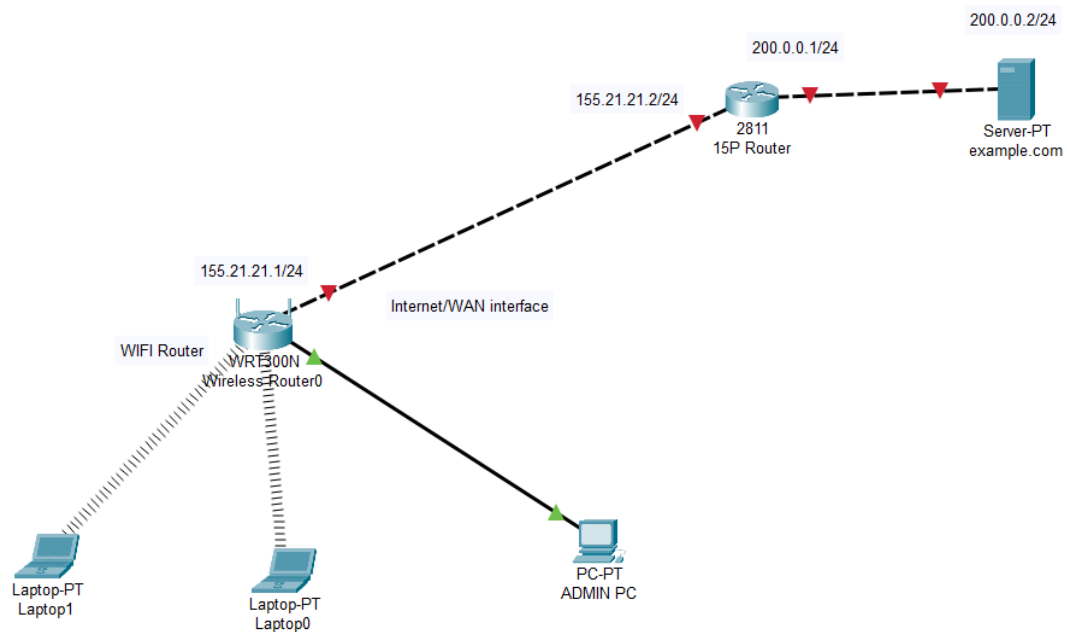
Task 02:

Wireless Router configuration in Cisco Packet Tracer

We'll go through wireless LAN configuration, wireless security and configuring the wireless router for internet connectivity. Briefly, here are the configurations we'll perform on the wireless router:

- Wireless LAN administration.
- Wireless LAN network setup.
- Securing a wireless network with WPA and WEP security features.
- Setting up internet connectivity on the wireless router.

Topology:



Laptop1

Physical

Config

Desktop

Programming

Attributes

MODULES

WPC300N

PT-LAPTOP-NM-1AM

PT-LAPTOP-NM-1CE

PT-LAPTOP-NM-1CFE

PT-LAPTOP-NM-1CGE

PT-LAPTOP-NM-1FFE

PT-LAPTOP-NM-1FGE

PT-LAPTOP-NM-1W

PT-LAPTOP-NM-1W-A

PT-LAPTOP-NM-1W-AC

PT-LAPTOP-NM-3G/4G

PT-HEADPHONE

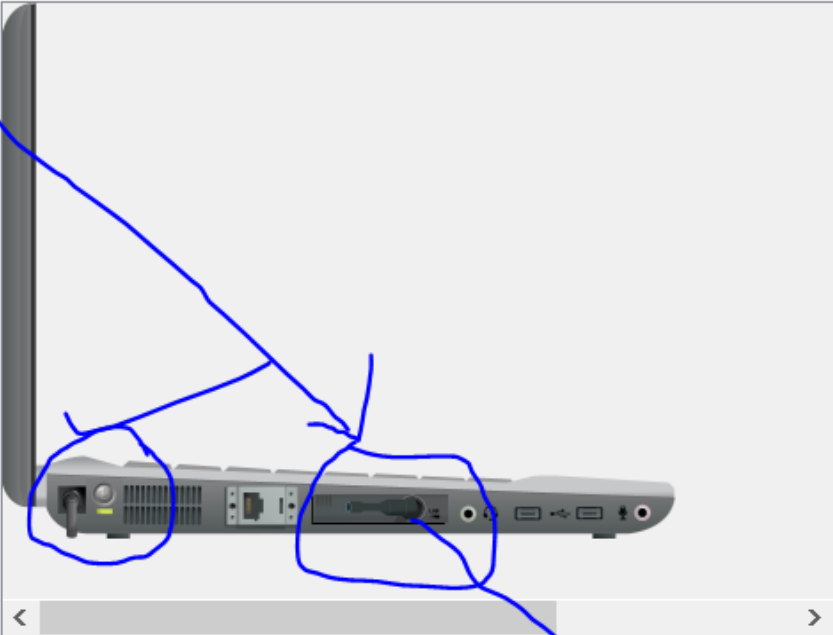
PT-MICROPHONE

Physical Device View

Zoom In

Original Size


Zoom Out



Customize Icon in Physical View

Customize Icon in Logical View

The Linksys-WPC300N module provides one 2.4GHz wireless interface suitable for connection to wireless networks. The module supports protocols that use Ethernet for LAN access.



☐ Top

Physical Config **Desktop** Programming Attributes

IP Configuration

X

Interface FastEthernet0

IP Configuration

☒ DHCP☐ Static

IPv4 Address

192.168.0.103

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::201:42FF:FE85:BE74

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication

MD5

Username

Password

☐ Top

ADMIN PC



Physical Config Desktop Programming Attributes

Web Browser



URL

http://192.168.0.1

Go

Stop



Authorization



User Name: admin

Password:

Cancel

OK

Physical Config **Desktop** Programming Attributes

Web Browser X

< > URL Go Stop

Wireless-N Broadband Router

Setup Setup **Wireless** Security Access Restrictions Applica & Gan
Basic Setup DDNS MAC Address Clone

Internet Setup

Internet Connection type

Optional Settings (required by some internet service providers)

Host Name:

Domain Name:

MTU: Size:

Network Setup

Router IP

IP Address: . . .

Subnet Mask:

< >

☐ Top

Physical Config **Desktop** Programming Attributes

Web Browser X

< > URL http://192.168.0.1/Management.asp Go Stop

Wireless-N Broadband Router Firmware

Administration Setup Wireless Security Access Restrictions Applications & Gaming Administration **WRT300N** Status

Management Log Diagnostics Factory Defaults Firmware Upgrade

Management

Router Access Router Password: Re-enter to confirm:

Web Access Web Utility Access: ☒ HTTP ☐ HTTPS

Web Utility Access via Wireless: ☐ Enabled ☐ Disabled

Remote Access Remote Management: ☐ Enabled ☒ Disabled

Web Utility Access: ☒ HTTP ☐ HTTPS

Help...

Physical Config **GUI** Attributes

Network Setup

Router IP IP Address: 192 . 168 . 0 . 1 Subnet Mask: 255.255.255.0

DHCP Server Settings DHCP Server: ☒ Enabled ☐ Disabled DHCP Reservation

Start IP Address: 192.168.0. 100

Maximum number of Users: 50

IP Address Range: 192.168.0. 100 - 149

Client Lease Time: 0 minutes (0 means one day)

Static DNS 1: 0 . 0 . 0 . 0

Static DNS 2: 0 . 0 . 0 . 0

Static DNS 3: 0 . 0 . 0 . 0

WINS: 0 . 0 . 0 . 0

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface Wireless0 ▾

IP Configuration

☒ DHCP☐ Static

IPv4 Address

192.168.0.101

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::20A:41FF:FEDD:CBD7

Default Gateway

DNS Server

Physical Config Services **Desktop** Programming AttributesIP Configuration X

IP Configuration

☐ DHCP ☒ StaticIPv4 Address Subnet Mask Default Gateway DNS Server

IPv6 Configuration

☐ Automatic ☒ StaticIPv6 Address / Link Local Address Default Gateway DNS Server

802.1X

☐ Use 802.1X SecurityAuthentication Username Password ☐ Top

Physical Config CLI Attributes

FastEthernet0/1	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	<input type="radio"/> 100 Mbps <input type="radio"/> 10 Mbps <input checked="" type="checkbox"/> Auto
Duplex	<input type="radio"/> Half Duplex <input checked="" type="radio"/> Full Duplex <input checked="" type="checkbox"/> Auto
MAC Address	0050.0F51.3502
IP Configuration	
IPv4 Address	200.0.0.1
Subnet Mask	255.255.255.0
Tx Ring Limit	10

Equivalent IOS Commands

```
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)#exit  
Router(config)#interface FastEthernet0/1  
Router(config-if)#
```



Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

FastEthernet0/0

Port Status

☒ On

Bandwidth

☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex

☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address

0050.0F51.3501

IP Configuration

IPv4 Address

155.21.21.2

Subnet Mask

255.255.0.0

Tx Ring Limit

10

Equivalent IOS Commands

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

```
Router(config-if)#exit
```

```
Router(config)#interface FastEthernet0/1
```

```
Router(config-if)#
```

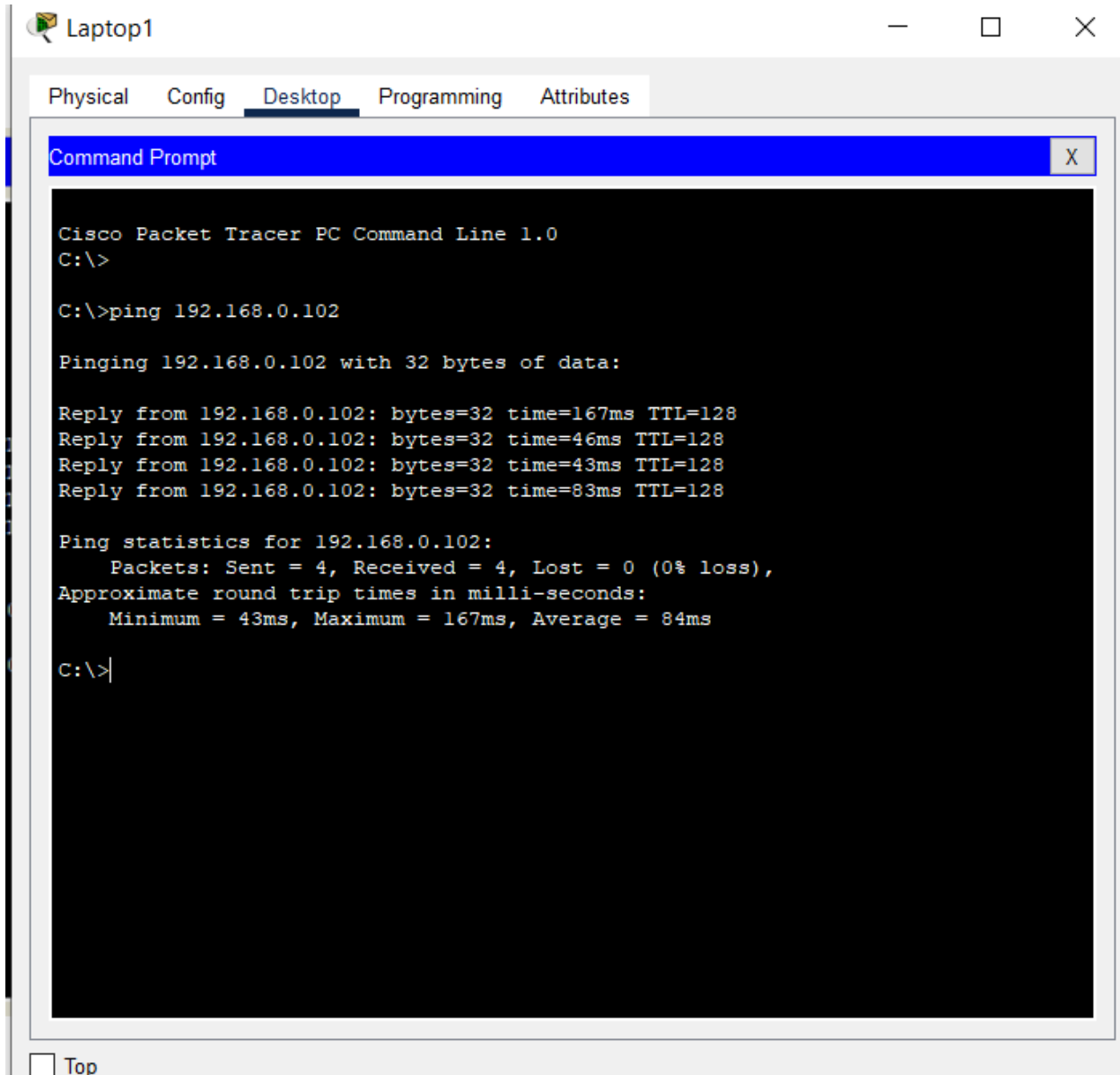
```
Router(config-if)#exit
```

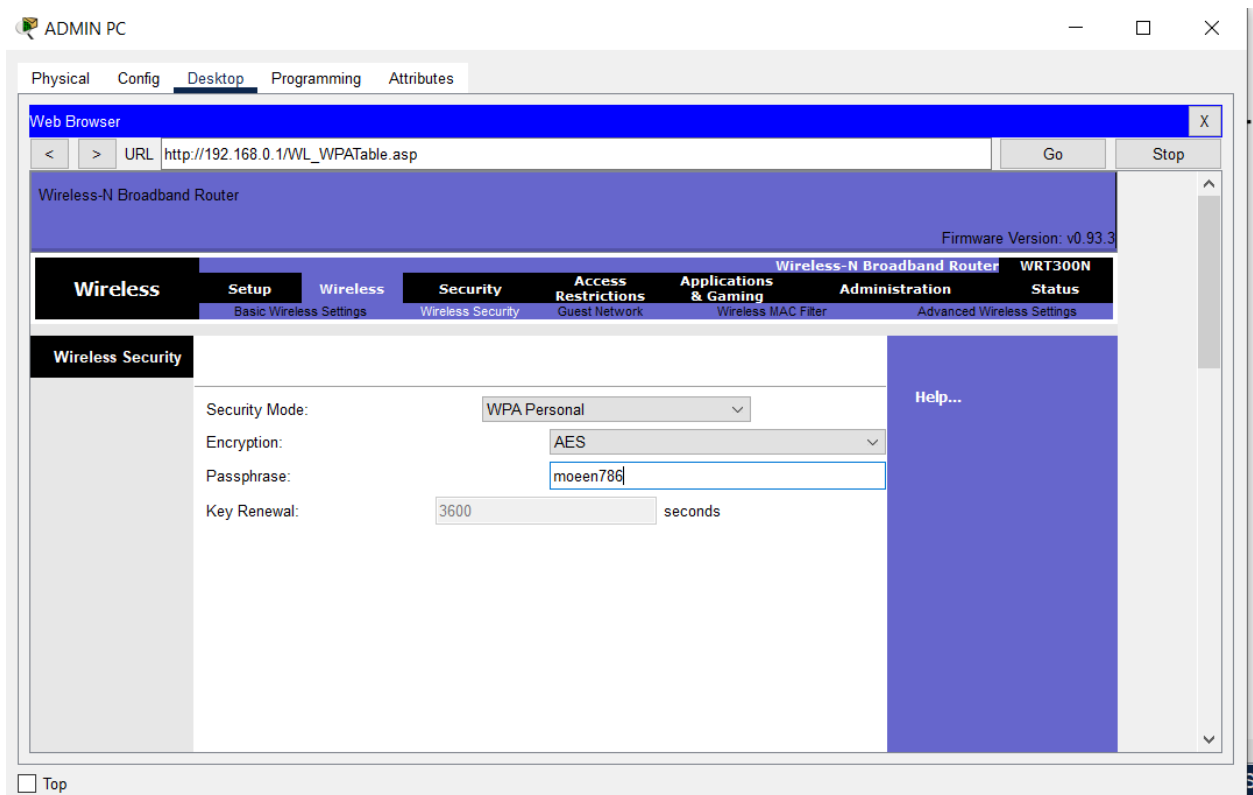
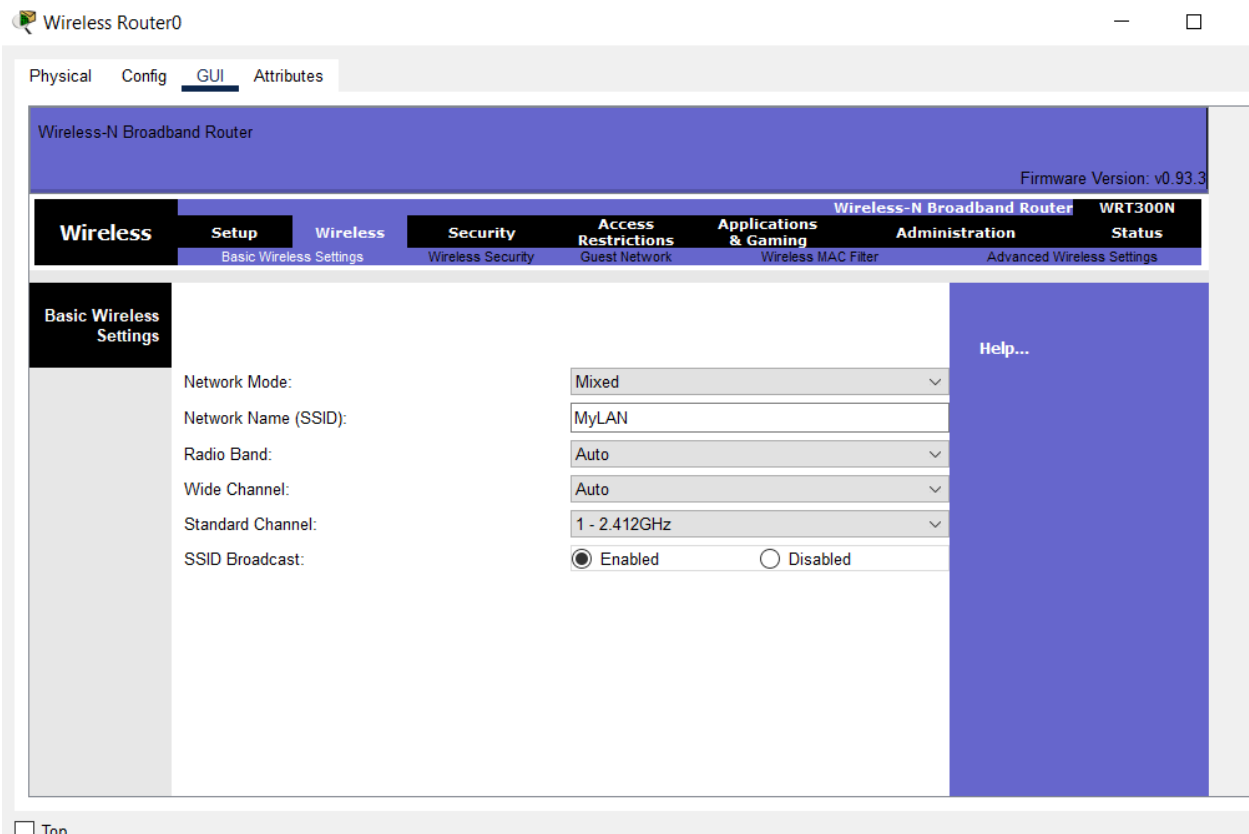
```
Router(config)#interface FastEthernet0/0
```

```
Router(config-if)#
```

☐ Top

Ping pc2 from pc1:








Physical Config **Desktop** Programming Attributes

Link Information

Connect

Profiles

No association with access point



Signal Strength

Link Quality

Adapter is Inactive

Wireless-N Notebook Adapter

Wireless Network Monitor v1.0

Model No. WPC300N

☐ Top

Laptop1

PhysicalConfigDesktopProgrammingAttributes

WPA-Personal Needed for Connection

This wireless network has WPA-Personal, also know 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

moeen786

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

☐ Top

Laptop1

Physical

Config

Desktop

Programming

Attributes

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
MyLAN	1	100%

Site Information

Wireless Mode

Infrastructure

Network Type

Mixed B/G/N

Radio Band

Auto

Security

WPA1-PSK


MAC Address

0001.C752.A206

Refresh

Connect

2.4GHz



Adapter is Active

Wireless-N

Notebook Adapter

Wireless Network Monitor v1.0

Model No. WPC300N

☐ Top

```

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

Router(config-if)#ip add 200.0.0.1
% Incomplete command.
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#ip address 200.0.0.1 255.255.255.0
Router(config-if)#no shut
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
      ^
% Invalid input detected at '^' marker.

Router(dhcp-config)#dns-server 0.0.0.0
Router(dhcp-config)#

```

Wireless Router0

Physical **Config** GUI Attributes

GLOBAL

- Settings
- Algorithm Settings

INTERFACE

- Internet**
- LAN
- Wireless

Internet Settings

IP Configuration

☒ DHCP

☐ Static

☐ PPPoE

UserName

Password

IPv4 Address

Subnet Mask

Default Gateway

DNS Server

155.21.0.1

255.255.0.0

155.21.21.1

0.0.0.0

```

Router(config)#ip route 192.168.0.0 255.255.255.0 fa0/0

```

