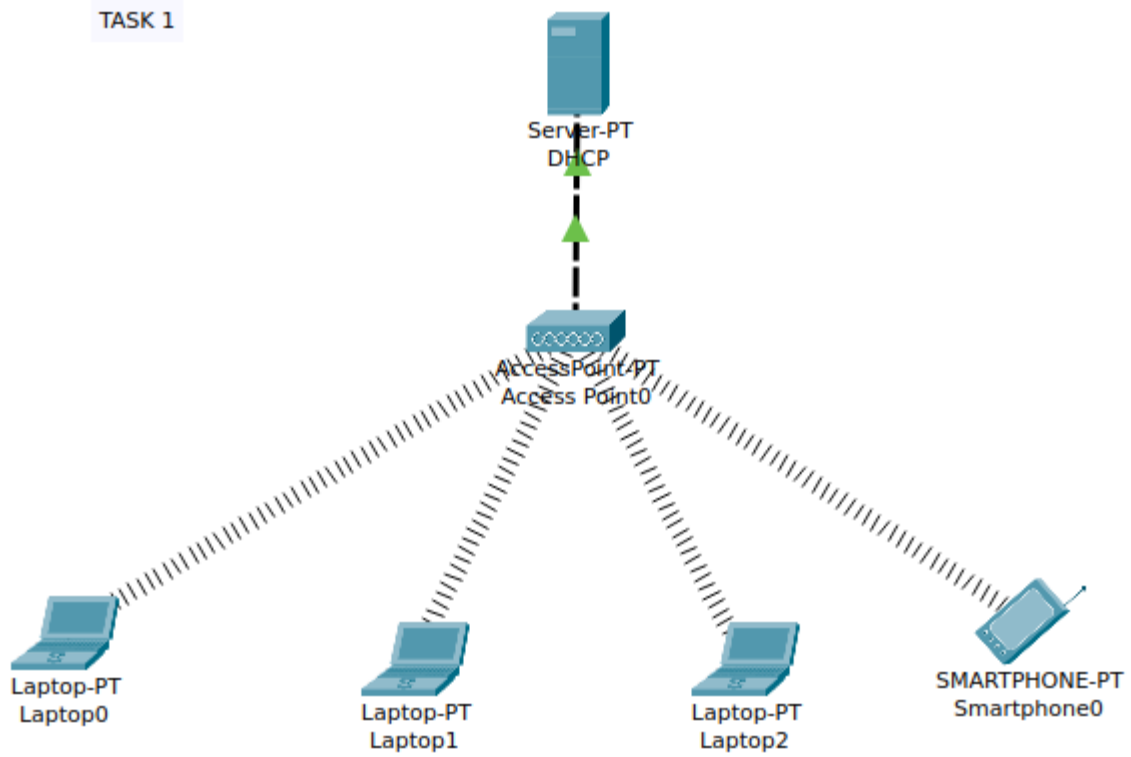


Haq Nawaz

[illegible]

TASK 1 :

Network Topology :



Place Wireless Interface Card to Laptops (WPC300N) :

Laptop0

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.



Set pool and DHCP Ip :

DHCP

Physical

Config

Services

Desktop

Programming

Attributes

IP Configuration

X

IP Configuration

DHCP

Static

IPv4 Address

192.168.1.10

Subnet Mask

255.255.255.0

Default Gateway

0.0.0.0

DNS Server

0.0.0.0

DHCP

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

0.0.0.0

DNS Server

0.0.0.0

Start IP Address :

192

168

1

0

Subnet Mask:

255

255

255

0

Maximum Number of Users :

256

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	0.0.0.0	0.0.0.0	192.16...	255.25...	256	0.0.0.0	0.0.0.0

Automatic IP Addressing on Pc's :

Laptop0

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface Wireless0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.1.1

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

Laptop1

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface Wireless0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.1.2

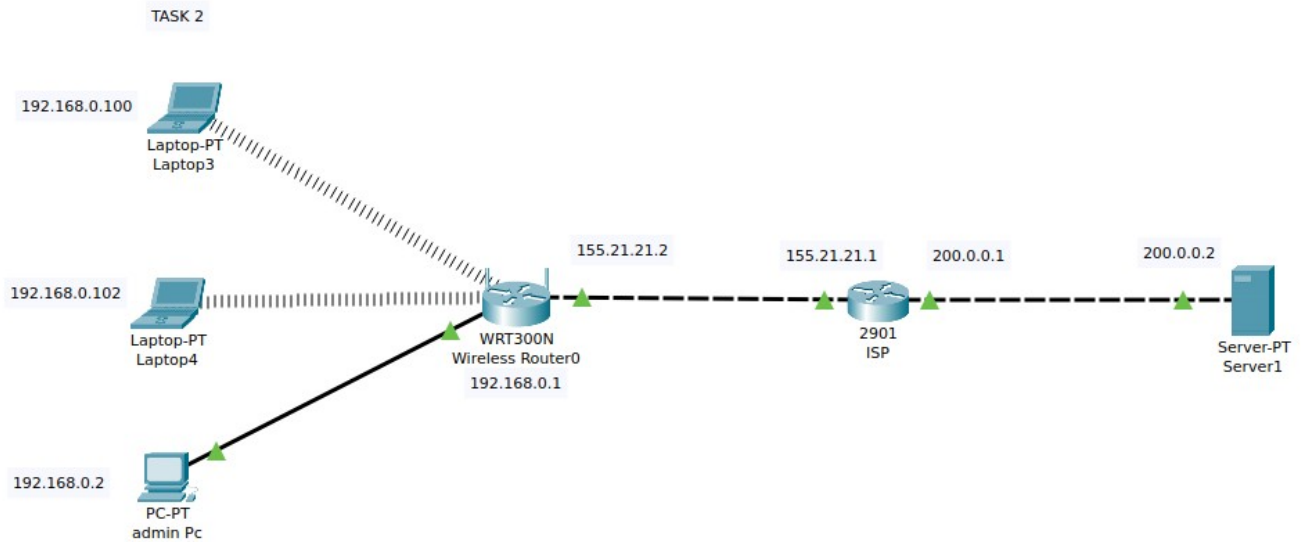
Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

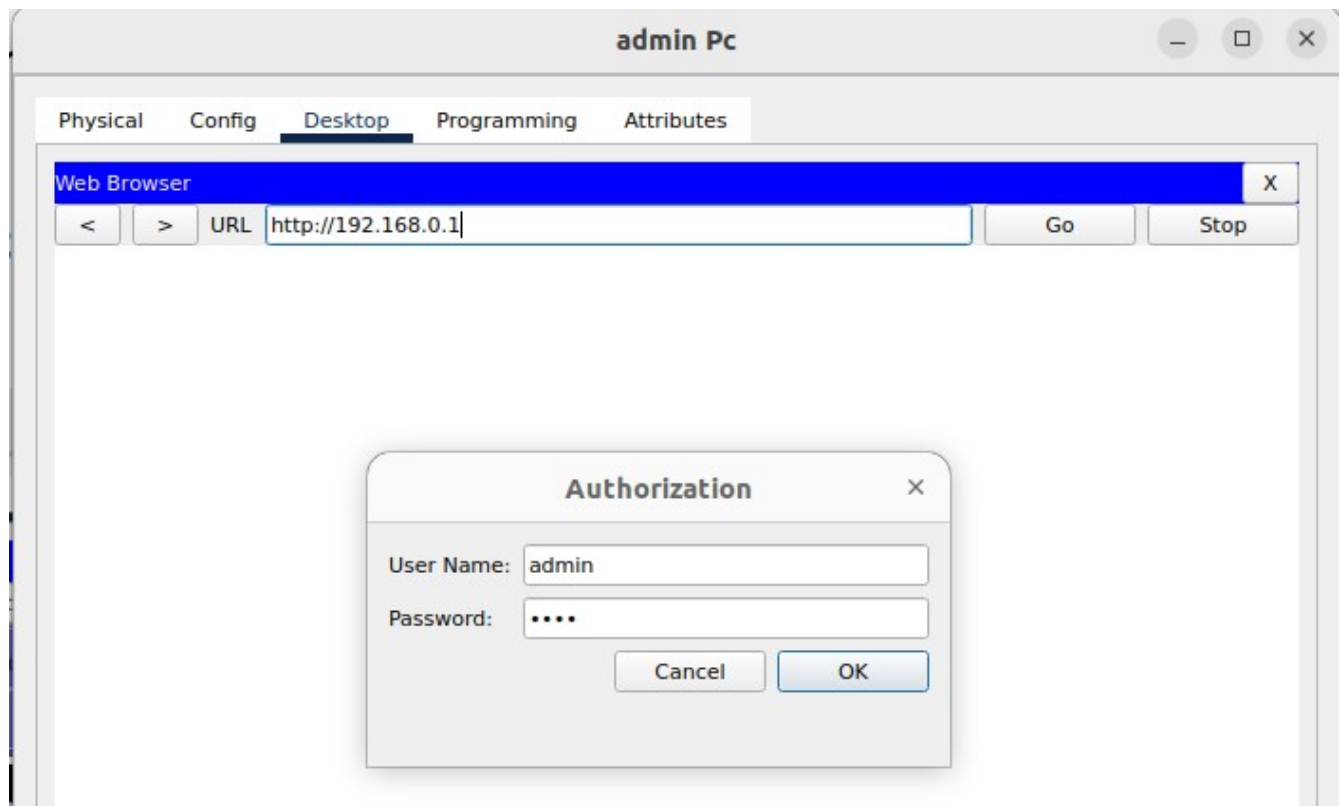
DNS Server 0.0.0.0

TASK 2 :

Network Topology :



Let's use the PC to access the router GUI.



Also Set Router Password :

admin Pc

Physical Config **Desktop** Programming Attributes

Web Browser X

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

Wireless-N Broadband Router

Wireless-N Broadband Router

Administration Setup Wireless Security Access Restrictions Applications & Gaming Administration

Management Log Diagnostics Factory Defaults Firmware Upgrade

Router Access

Router Password:

Re-enter to confirm:

Web Access

Web Utility Access: ☒ HTTP ☐ HTTPS

Web Utility Access via Wireless: ☒ Enabled ☐ Disabled

Network Setup :

Wireless Router0

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. 1

Maximum number of Users: 50

IP Address Range: 192.168.0. 1 - 50

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

Static DNS 1: 0 . 0 . 0 . 0

IP configuration tab for each PC and enable DHCP :

Laptop3

Physical Config **Desktop** Programming Attributes

IP Configuration X

Interface Wireless0

IP Configuration

☒ DHCP ☐ Static

IPv4 Address 192.168.0.100

Subnet Mask 255.255.255.0

Default Gateway 192.168.0.1

DNS Server 0.0.0.0

Laptop4

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

Adding security for wireless LAN access :

Wireless Router0

Physical Config **GUI** Attributes

Wireless-N Broadband Router

Firmware Version: v0.93

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

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

Basic Wireless Settings

Network Mode: Mixed

Network Name (SSID): CN_Lab_8

Radio Band: Auto

Wide Channel: Auto

Standard Channel: 1 - 2.412GHz

SSID Broadcast: ☒ Enabled ☐ Disabled

Help...

Set Password :

admin Pc

Physical Config **Desktop** Programming Attributes

Web Browser X

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

Wireless-N Broadband Router

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

Basic Wireless Settings Wireless Security Guest Network Wireless MAC Filter

Wireless Security

Security Mode: WPA Personal

Encryption: AES

Passphrase: nawaz2002

Key Renewal: 3600 seconds

Connect Laptop to Wifi :

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

nawaz2002

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

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
Default	1	59%
CN_Lab_8	1	87%

Site Information

Wireless Mode

Infrastructure

Network Type

Mixed B/G/N

Radio Band

Auto

Security

WPA1-PSK


MAC Address

0009.7C85.1B06

Refresh

Connect

2.4GHz



Adapter is Active

Wireless-N Notebook Adapter

Wireless Network Monitor v1.0

Model No. WPC300N

Internet Setup :

admin Pc

Physical Config **Desktop** Programming Attributes

Web Browser X

< > URL Go Stop

Wireless-N Broadband Router

Setup Setup Wireless Security Access Restrictions Applications & Gaming Wireless-

Basic Setup DDNS MAC Address Clone

Internet Setup

Internet Connection type

Internet IP Address: . . .

Subnet Mask: . . .

Default Gateway: . . .

Set Wireless Router Static IP :

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

Server Configuration :

Server1

Physical Config Services **Desktop** Programming Attributes

IP Configuration X

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 200.0.0.2

Subnet Mask 255.255.255.0

Default Gateway 200.0.0.1

DNS Server 0.0.0.0

Edit index.html file :

Server1

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP

File Name: index.html

```
<html>
<center><font size='+2' color='blue'>Cisco Packet Tracer</font></center>
<hr>Welcome Haq Nawaz to Cisco Packet Tracer. Opening doors to new opportunities.
Mind Wide Open.
<p>Quick Links:
<br><a href='helloworld.html'>A small page</a>
<br><a href='copyrights.html'>Copyrights</a>
<br><a href='image.html'>Image page</a>
<br><a href='cscoptlogo177x111.jpg'>Image</a>
</html>
```

ISP Router :

Connect ISP with Router :

Command Line : ip route 192.168.0.0 255.255.255.0 155.21.21.2

```
Router(config-if)#ip route 192.168.0.0 255.255.255.0 fa0/0
%Default route without gateway, if not a point-to-point interface, may impact performance
%Invalid interface type and number
Router(config)#ip route 192.168.0.0 255.255.255.0 155.21.21.2
Router(config)#
```

Interface 0/0 and 0/1 IP :

The screenshot shows the 'ISP' configuration window with the 'Config' tab selected. The left sidebar has a tree view with categories: GLOBAL, ROUTING, SWITCHING, and INTERFACE. Under INTERFACE, 'GigabitEthernet0/0' is selected. The main area displays configuration for 'GigabitEthernet0/0'. The 'Port Status' is 'On'. 'Bandwidth' is set to '100 Mbps' (selected) with options for 1000 Mbps, 10 Mbps, and Auto. 'Duplex' is set to 'Full Duplex' (selected) with options for Half Duplex and Auto. The 'MAC Address' is '0001.6371.C601'. The 'IP Configuration' section shows 'IPv4 Address' as '155.21.21.1' and 'Subnet Mask' as '255.255.0.0'.

The screenshot shows the 'ISP' configuration window with the 'Config' tab selected. The left sidebar has a tree view with categories: GLOBAL, ROUTING, SWITCHING, and INTERFACE. Under INTERFACE, 'GigabitEthernet0/1' is selected. The main area displays configuration for 'GigabitEthernet0/1'. The 'Port Status' is 'On'. 'Bandwidth' is set to '100 Mbps' (selected) with options for 1000 Mbps, 10 Mbps, and Auto. 'Duplex' is set to 'Full Duplex' (selected) with options for Half Duplex and Auto. The 'MAC Address' is '0001.6371.C602'. The 'IP Configuration' section shows 'IPv4 Address' as '200.0.0.1' and 'Subnet Mask' as '255.255.255.0'. The 'Tx Ring Limit' is set to '10'.

Access Server Index File From Laptop :



Check Connection Setup :

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	Lapt...	Laptop4	IC...		0.000	N	0	(e...	
	Successful	Lapt...	Server1	IC...		0.000	N	1	(e...	
	Successful	Lapt...	admin Pc	IC...		0.000	N	2	(e...	
	Successful	Lapt...	ISP	IC...		0.000	N	3	(e...	