



NATIONAL UNIVERSITY
of Computer & Emerging Sciences

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Sec: 5A

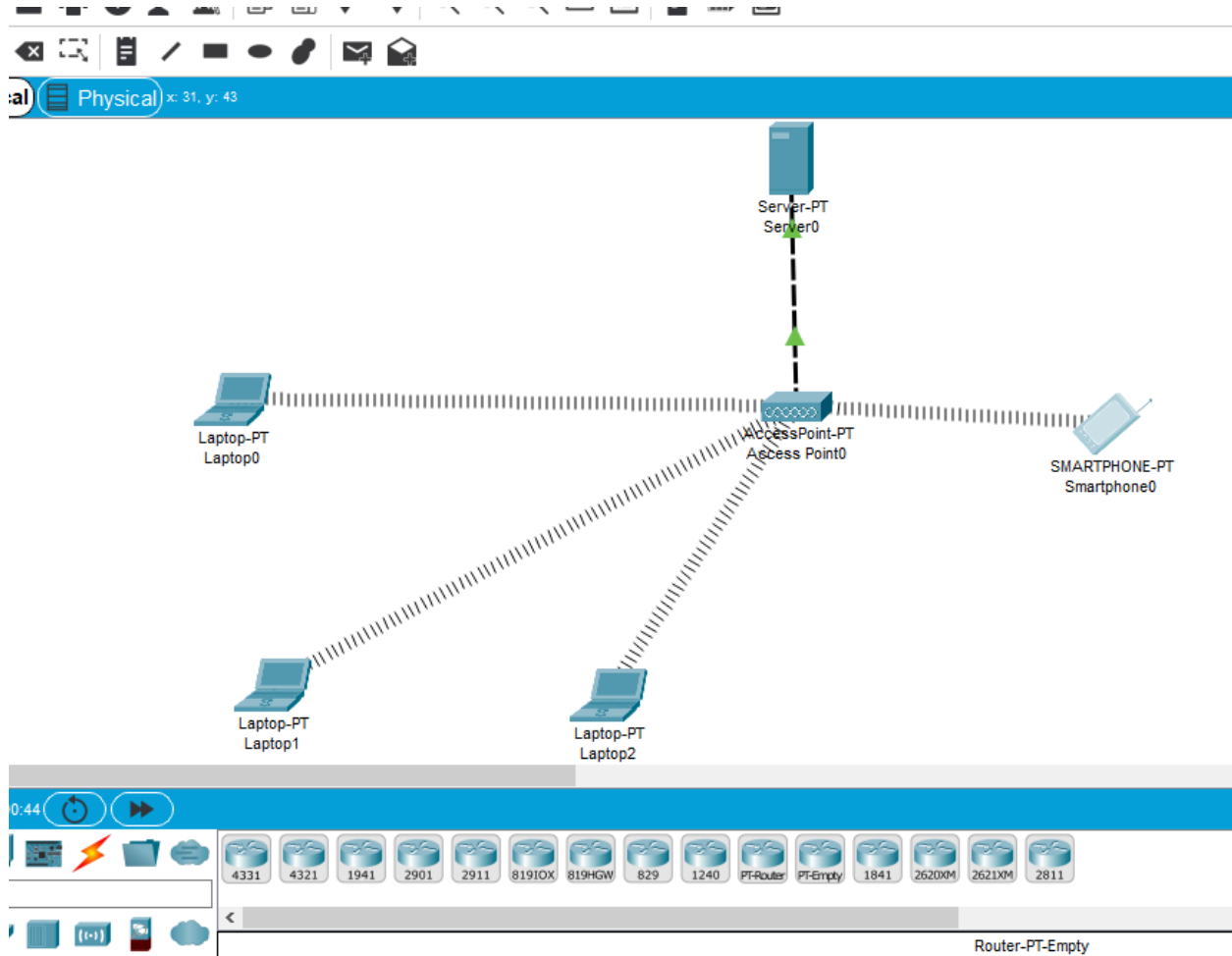
Roll no 20P-0646

Course: Computer Network LAB

LAB 7 TASKS

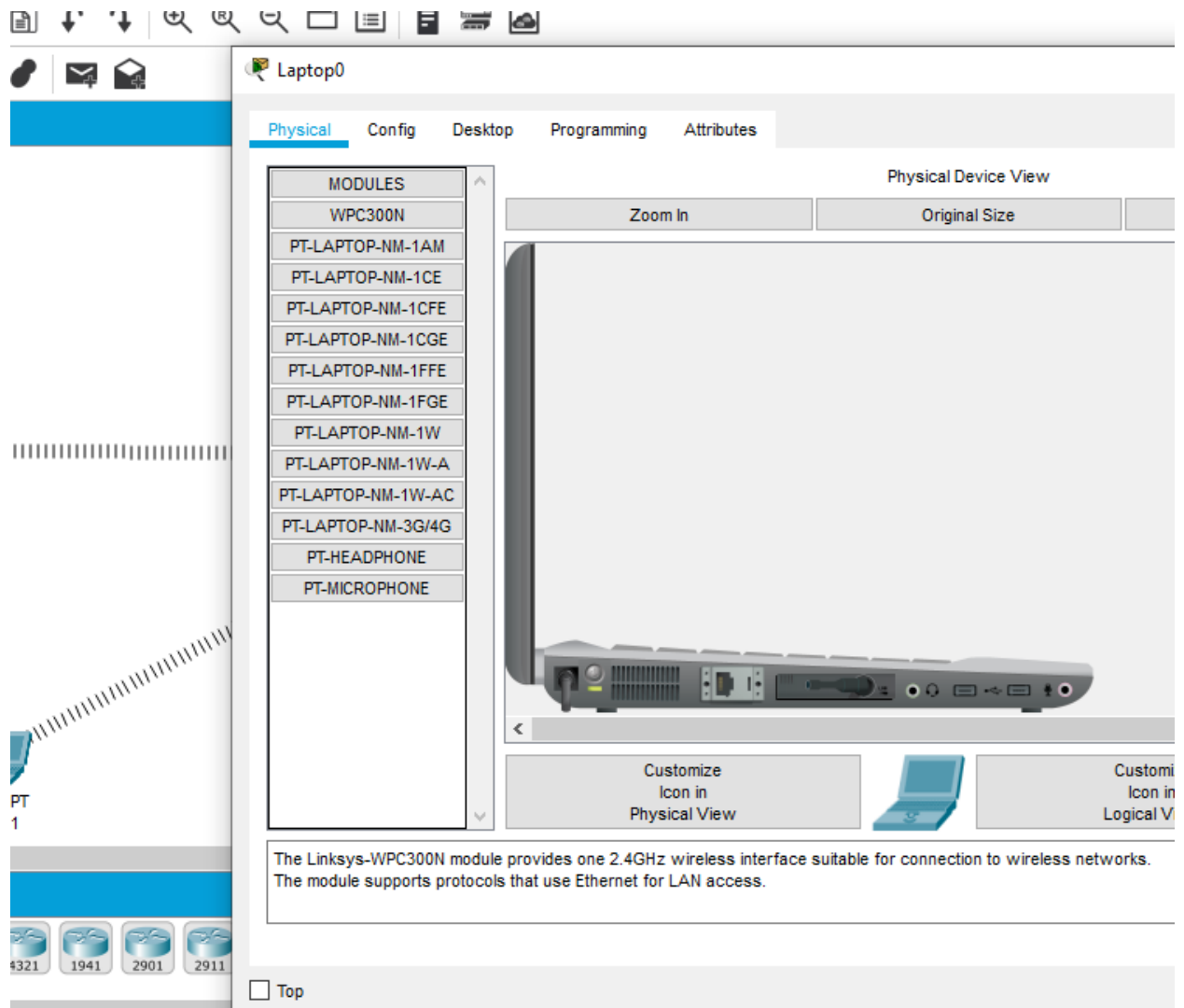
Submitted to Miss Hurmat Hidayat

TASK



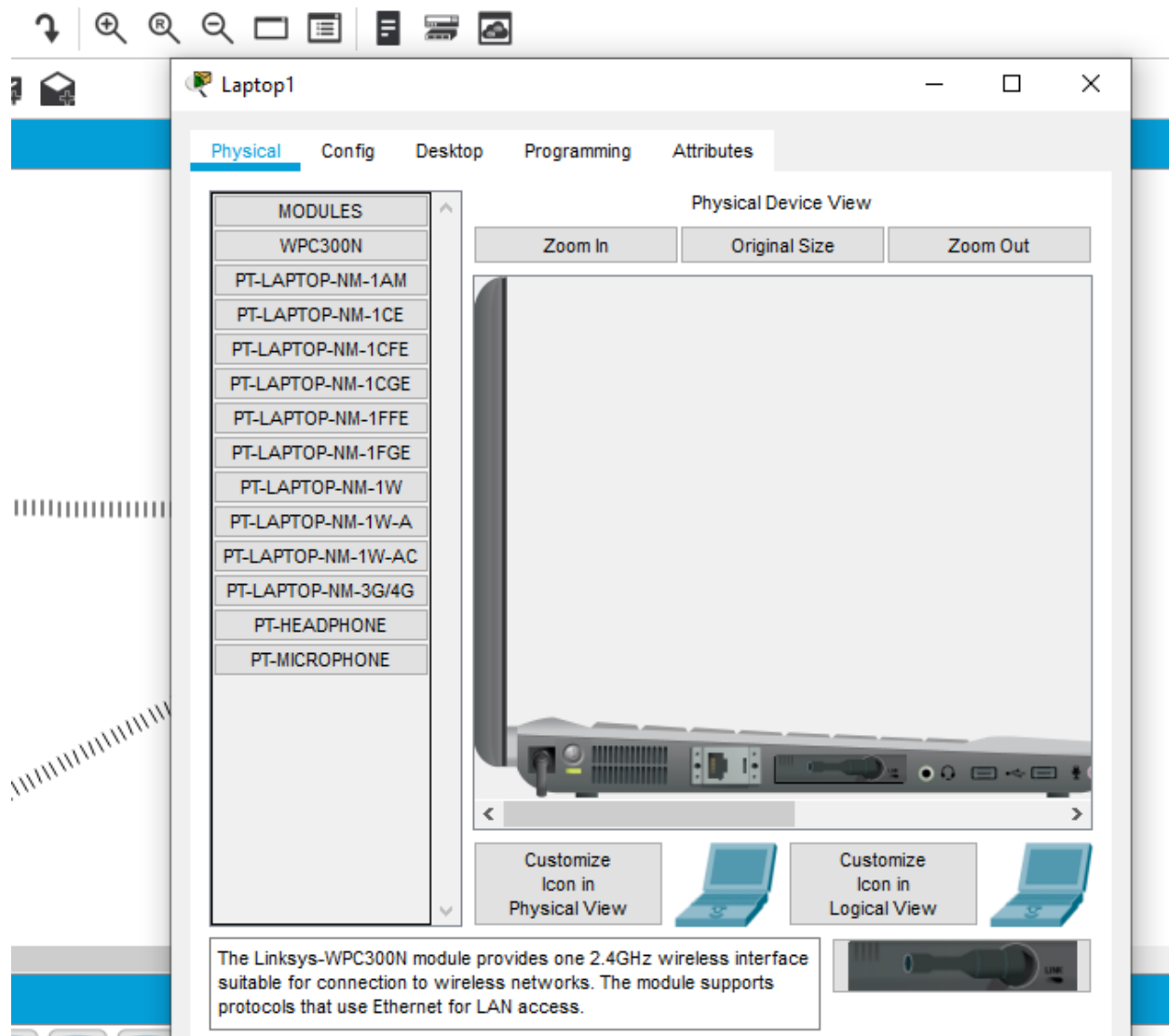
Description:

We have made a topology to that consist of one wireless access point by using one server, three Laptops and one smartphone.



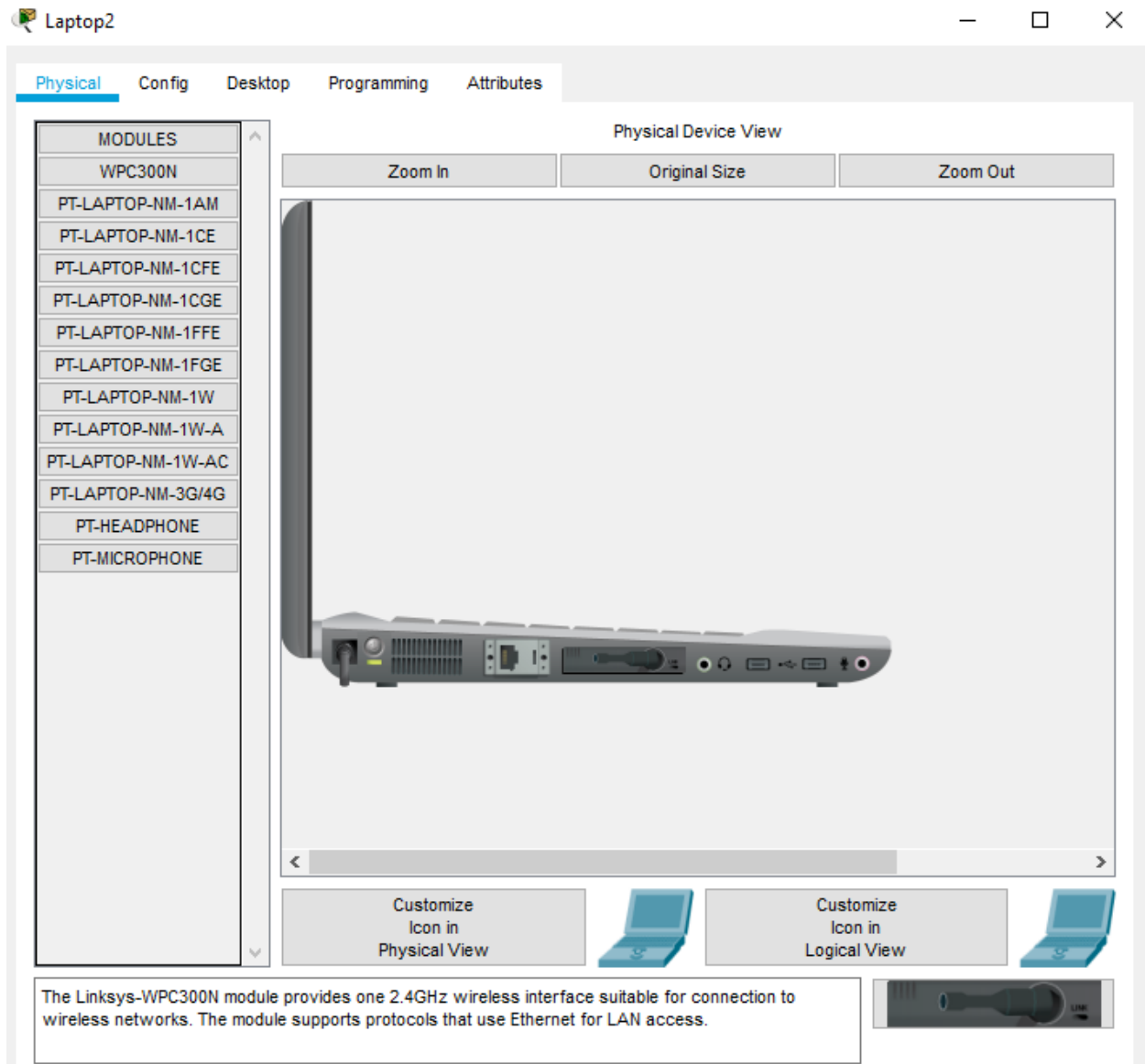
Description:

After that we have remove a card from laptop device and put the wireless internet card on Laptop.



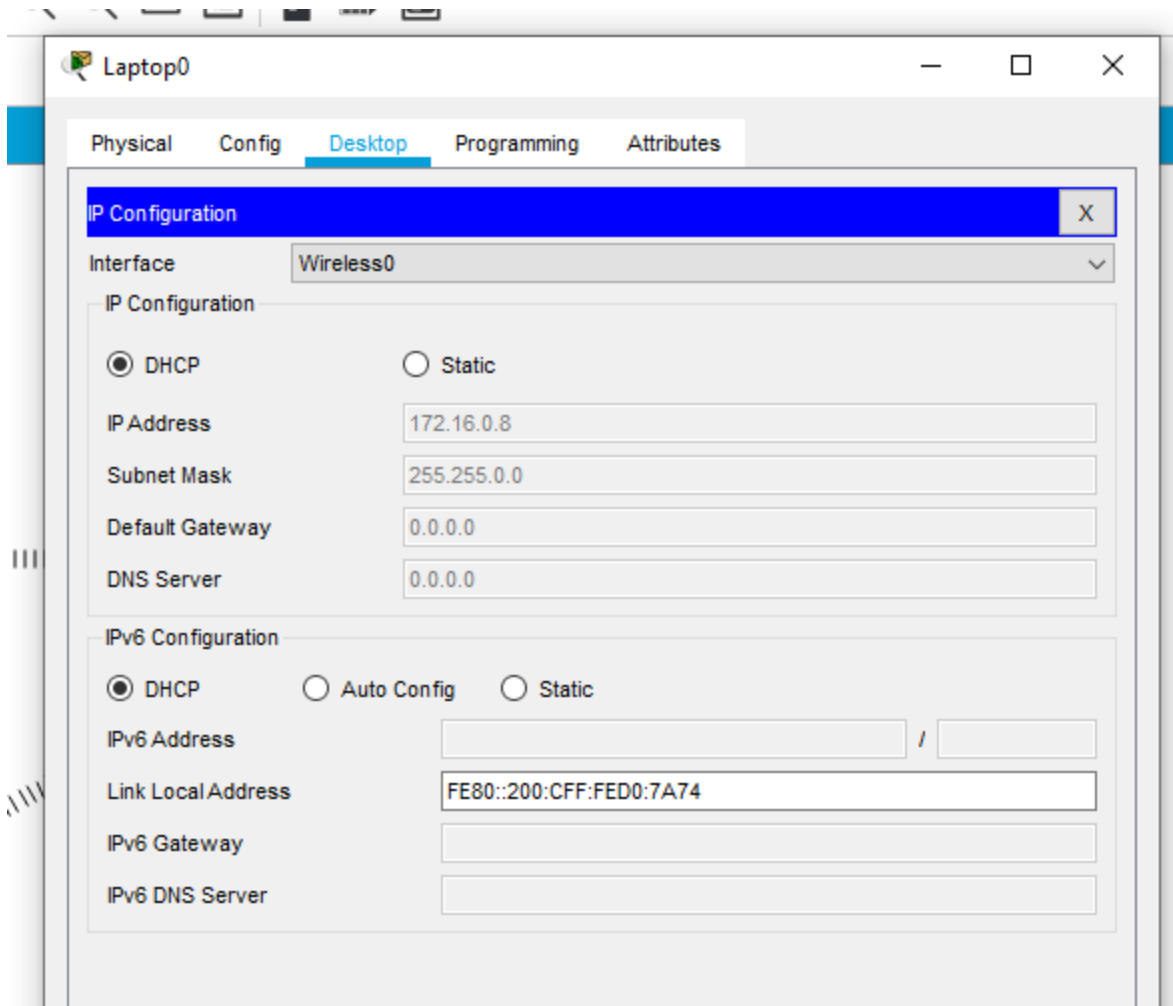
Description:

After that we have remove a card from laptop2 device and put the wireless internet card on Laptop.



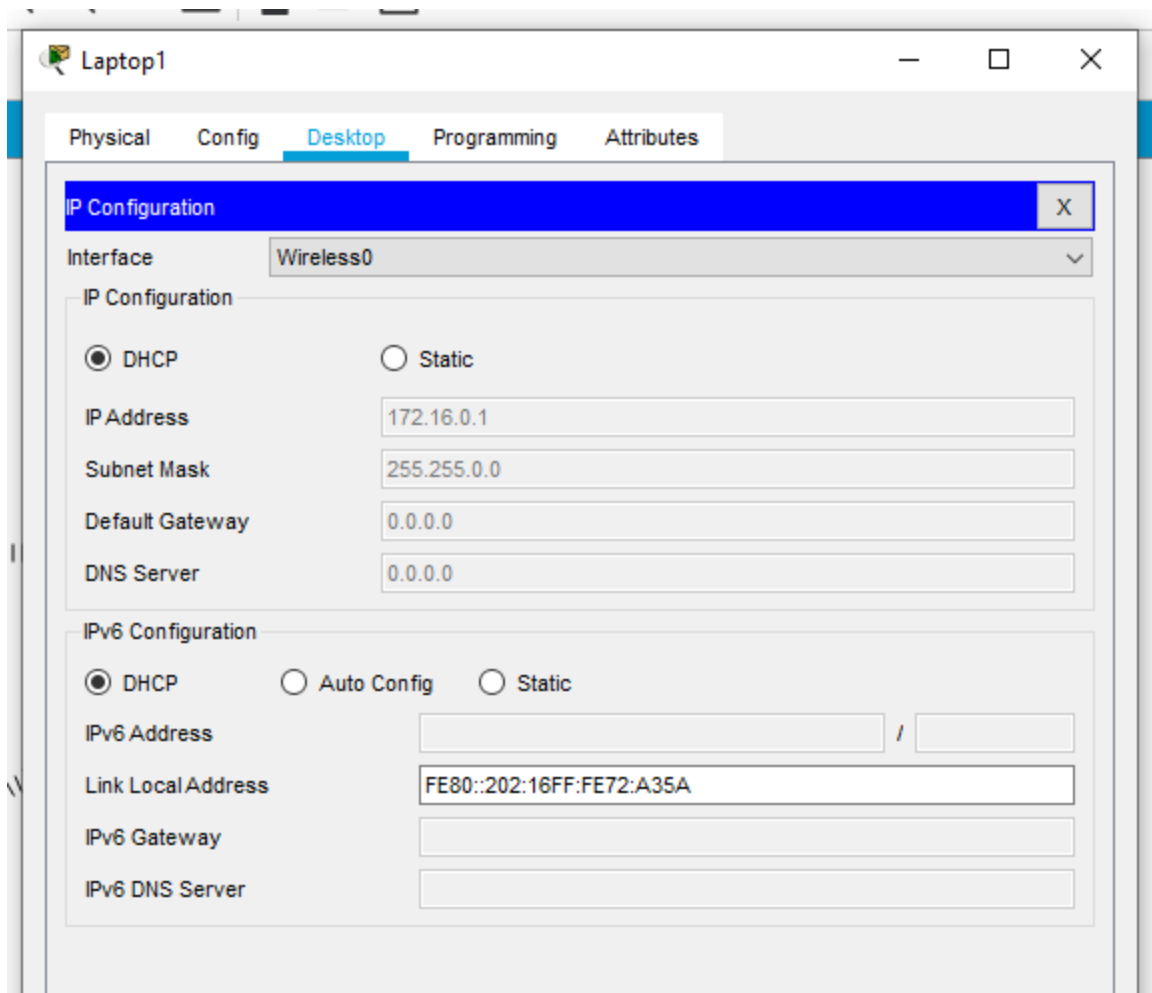
Description:

After that we have remove a card from laptop3 device and put the wireless internet card on Laptop.

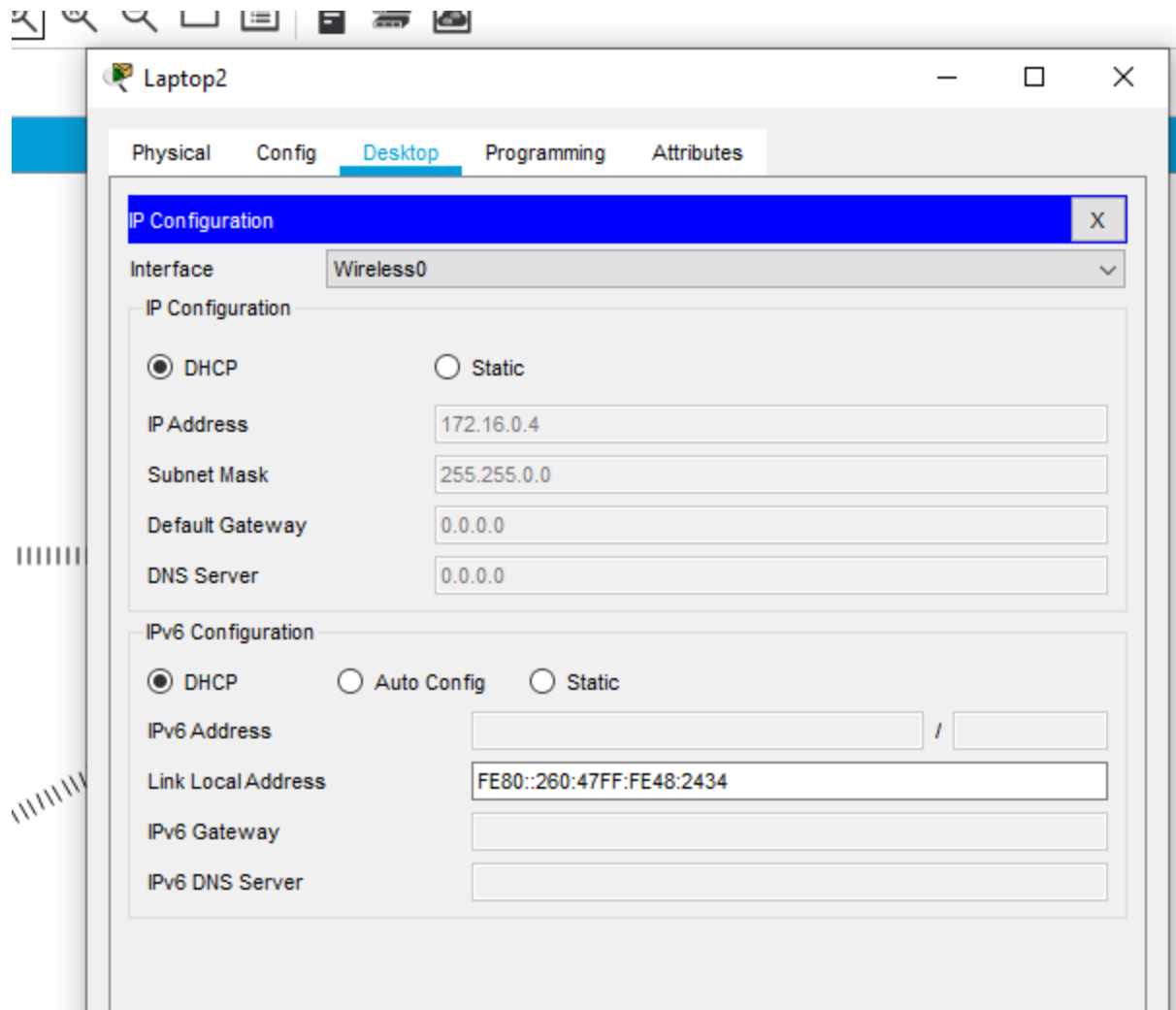


Description:

Afterthat, we have configure Laptops device by DHCP.

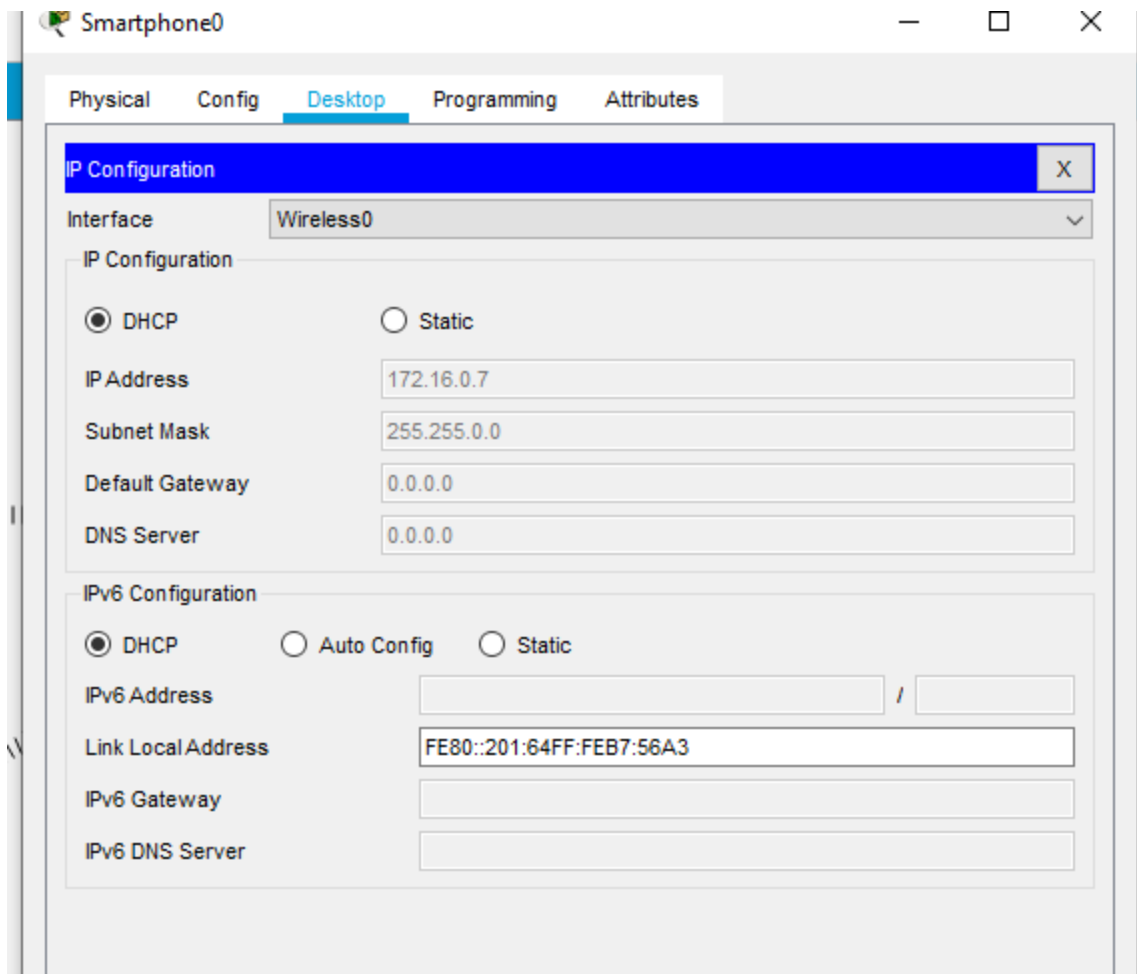
**Description:**

Afterthat, we have configure Laptop2 device by DHCP.



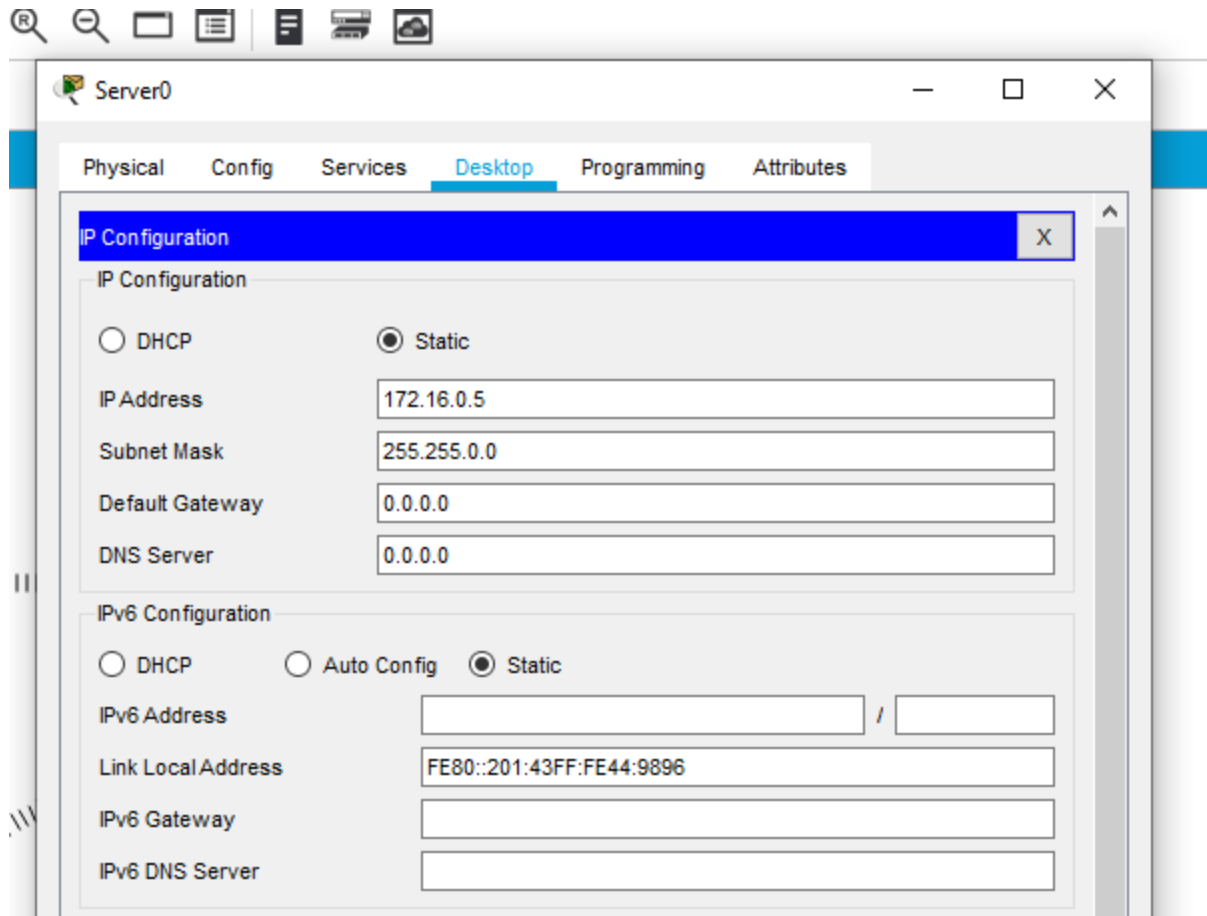
Description:

Afterthat, we have configure Laptops device by DHCP.



Description:

Afterthat, we have configure Smart Phone Device through DHCP.



Description:

We have configure Server device by providing static IP's.

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

0.0.0.0

DNS Server

0.0.0.0

Start IP Address :

172

16

0

0

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

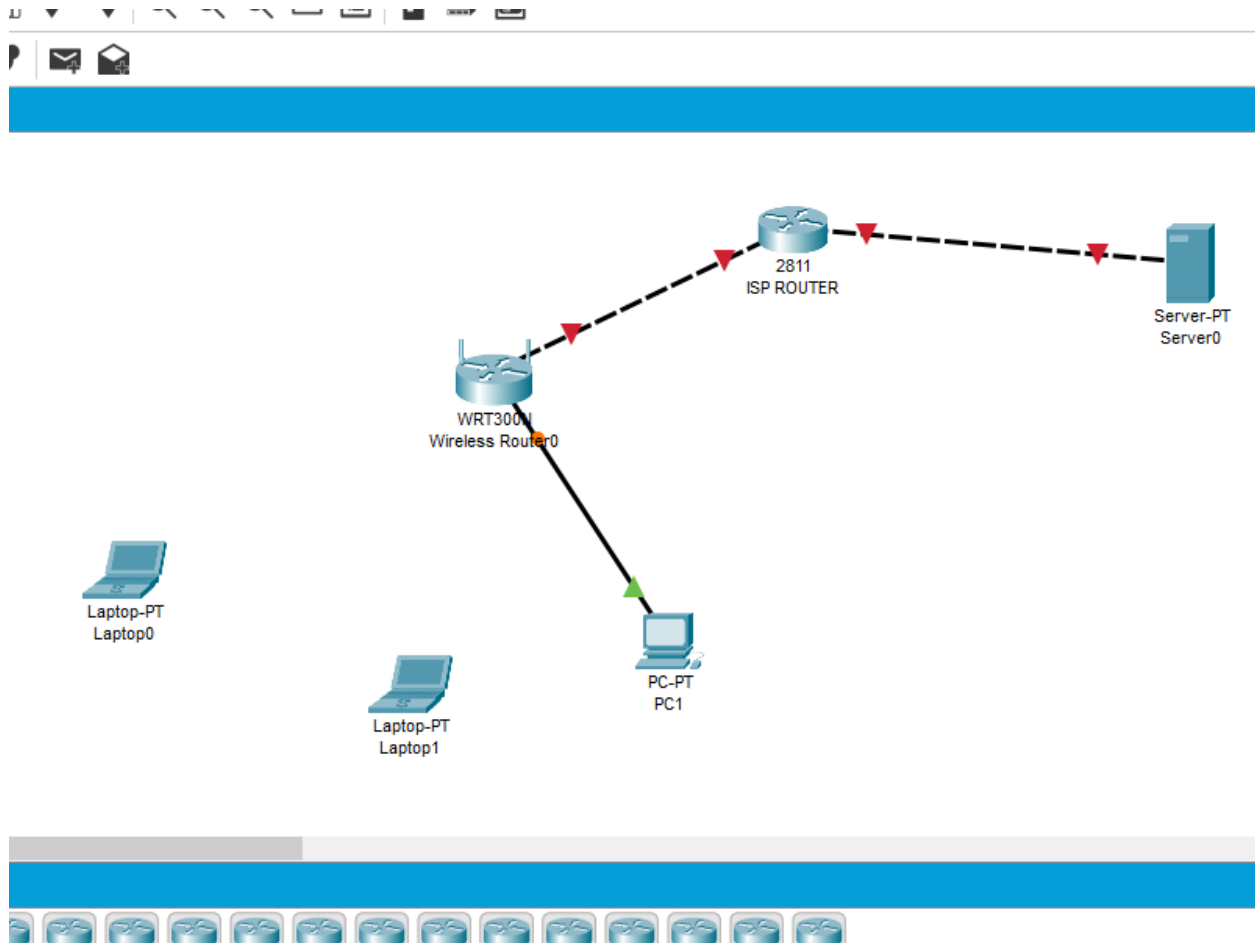
Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server	WLC Address
mypool	172.16.0.3	172.16.0.2	172.16.0.0	255.255.0.0	255	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

Description:

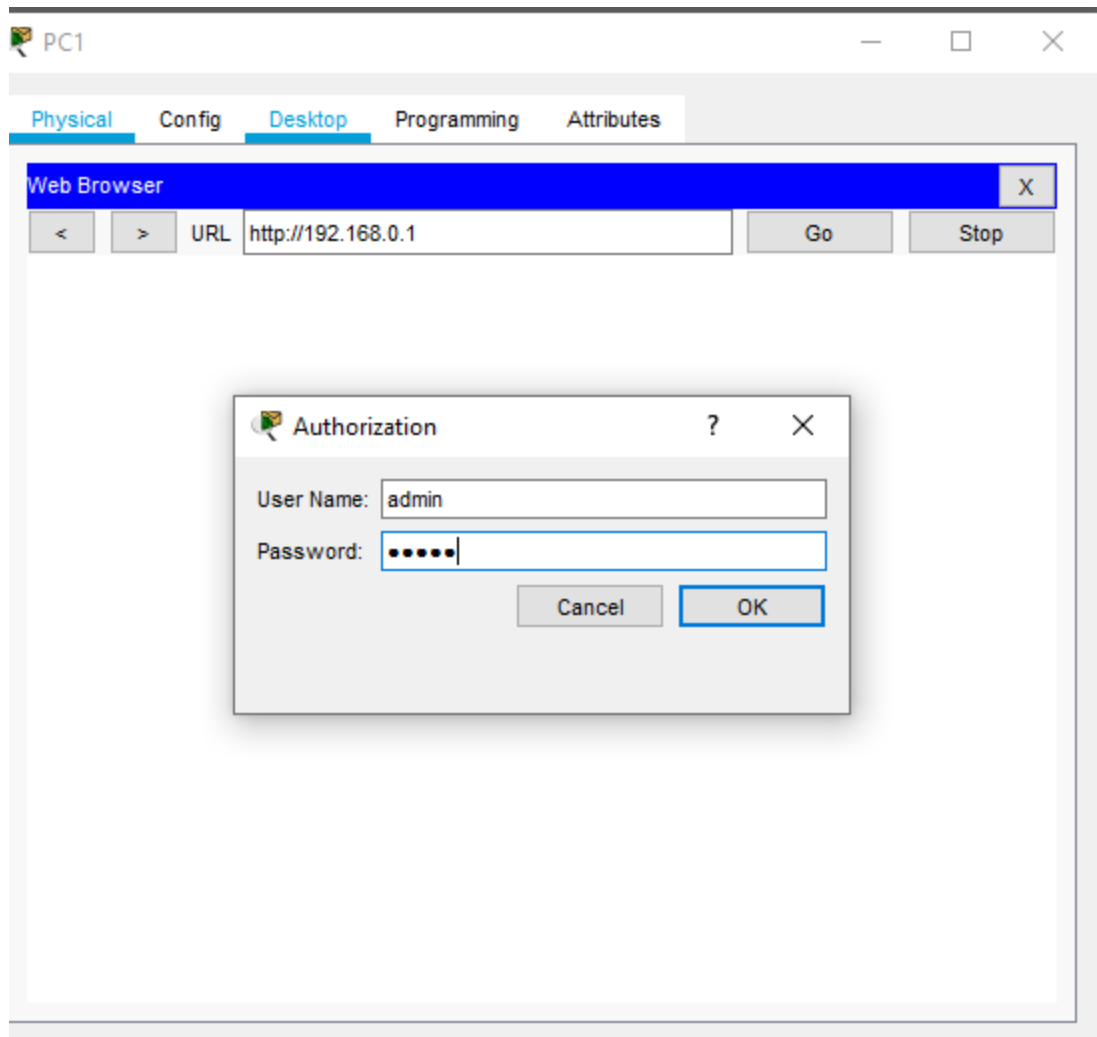
We have make a pool here for assigning the IP's in Devices.

TASK 2



Description:

We have made a topology that consist of one wireless router, one ISP router and one server. There is one network which is connect to Wireless router. Now we want to connect device through WLAN.



Description:

We have configure all devices first then we access web browser through PC0.

Administration

Setup

Wireless

Security

Access
RestrictionsApplications
& Gaming

Wireless-N Broadband Router

Administration

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

Remote Upgrade:

☐ Enabled☐ Disabled

Allowed Remote Ip Address:

☐ Any Ip Address☐ 0 . 0 . 0 . 0 to 0

Help...

Wireless-N Broadband Router
Firmware

Setup

Setup
Wireless
Security
Access Restrictions
Applications & Gaming
Administration

Basic Setup
DDNS
MAC Address Clone
Advanced Routing

Internet Setup

Internet Connection type
Automatic Configuration - DHCP

Optional Settings required by some internet service providers
Host Name:
Domain Name:
MTU:
Size: 1500

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. 50
Maximum number of Users: 50
IP Address Range: 192.168.0. 50 - 99
Client Lease Time: 0 minutes (0 means one day)

Help...

Description:

We have configured Wireless Router to assign the IP's through DHCP, that is called automatic configuration.

Physical Config **GUI** Attributes

Wireless-N Broadband Router

Wireless

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

Basic Wireless Settings Wireless Security Guest Network Wireless MAC Filter Advanced

Basic Wireless Settings

Network Mode: Mixed

Network Name (SSID): Usama

Radio Band: Auto

Wide Channel: Auto

Standard Channel: 1 - 2.412GHz

SSID Broadcast: ☒ Enabled ☐ Disabled

Help.

Description:

We have make a network name here which is shown in our device while we are accessing it.

Wireless-N Broadband Router

Firmware

Wireless-N Broadband Router

Wireless

Setup

Wireless

Security

Access Restrictions

Applications & Gaming

Administration

Basic Wireless Settings

Wireless Security

Guest Network

Wireless MAC Filter

Advanced V

Wireless Security

Help...

Security Mode: WPA Personal

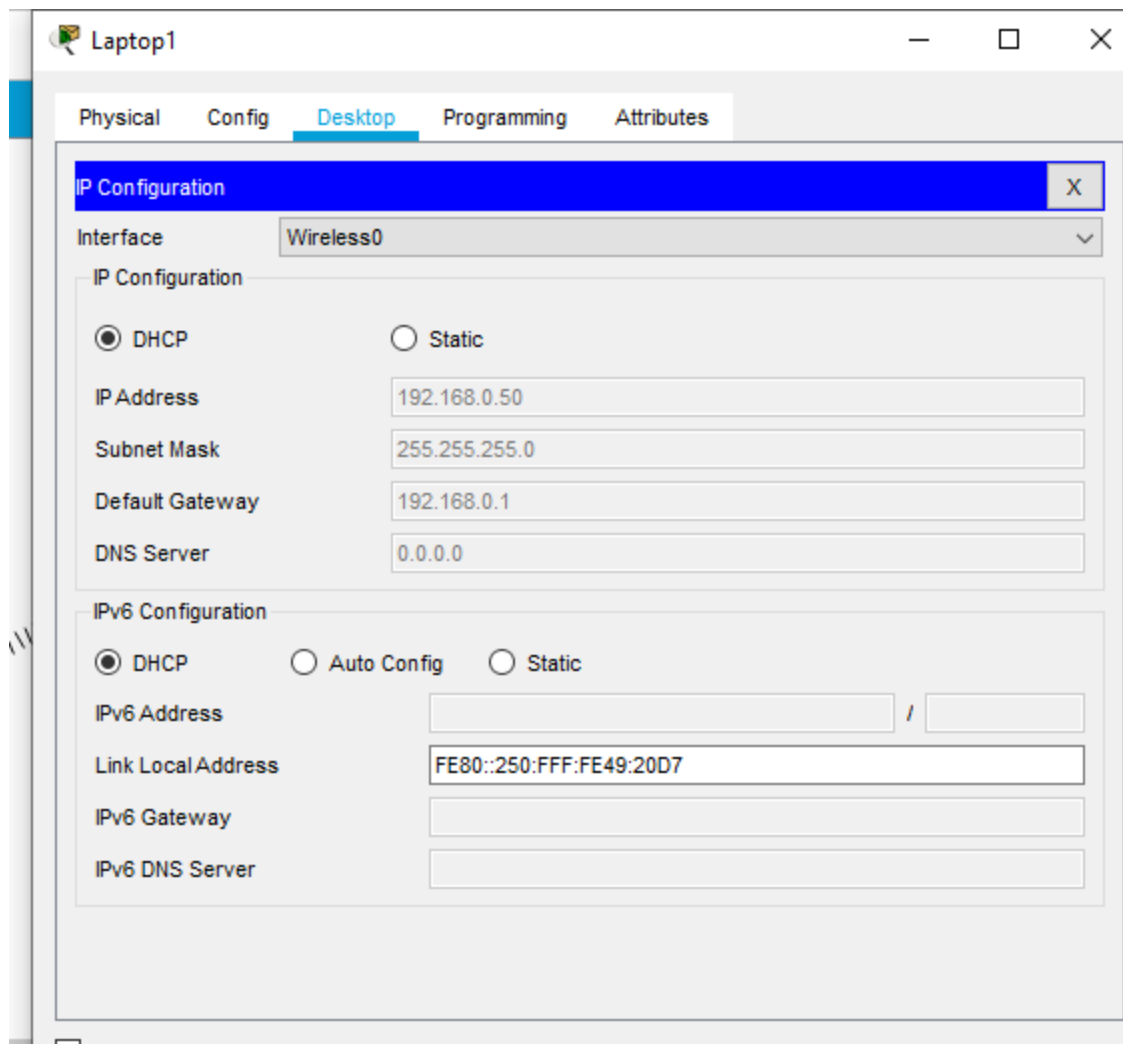
Encryption: AES

Passphrase: hello123

Key Renewal: 3600 seconds

Description:

We have set a network password here by using AES encryption which is require while we want to use this network.



Description:

Assigning IP to Laptop 01 through DHCP.



Description:

Now we are connect our device to wireless network by providing same password.

```
Enter configuration commands, one per line. End with Ctrl/Z.
Router(config)#
Router(config)#
%SYS-5-CONFIG_I: Configured from console by console

Router(config)#int fa0/0
Router(config-if)#ip add 155.21.21.1 255.255.0.0
      ^
% Invalid input detected at '^' marker.

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 192.168.0.12
% Incomplete command.
Router(config-if)#ip add 192.168.0.12 255.255.0.0
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
      ^
% Invalid input detected at '^' marker.

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

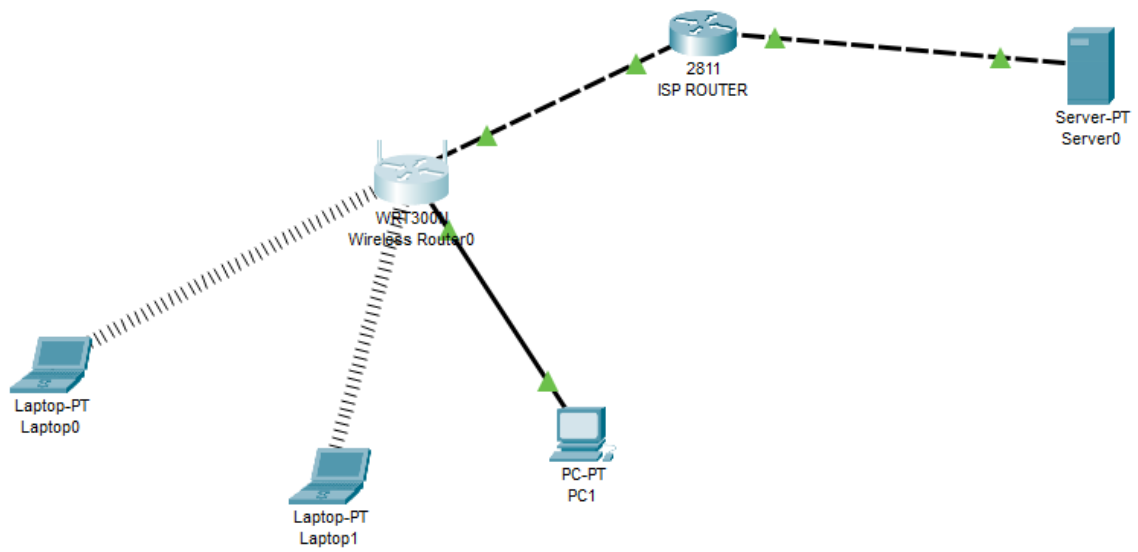
Ctrl+F6 to exit CLI focus

Description:

This is the configuration of ISP Router.

Description:

This is the configuration of ISP Router.



Description:

After configuration our Topology look like this.