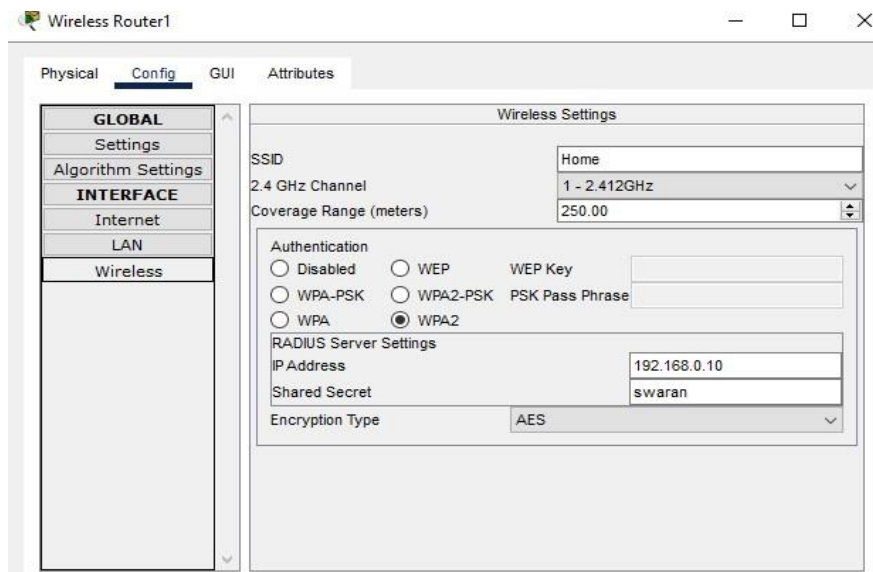


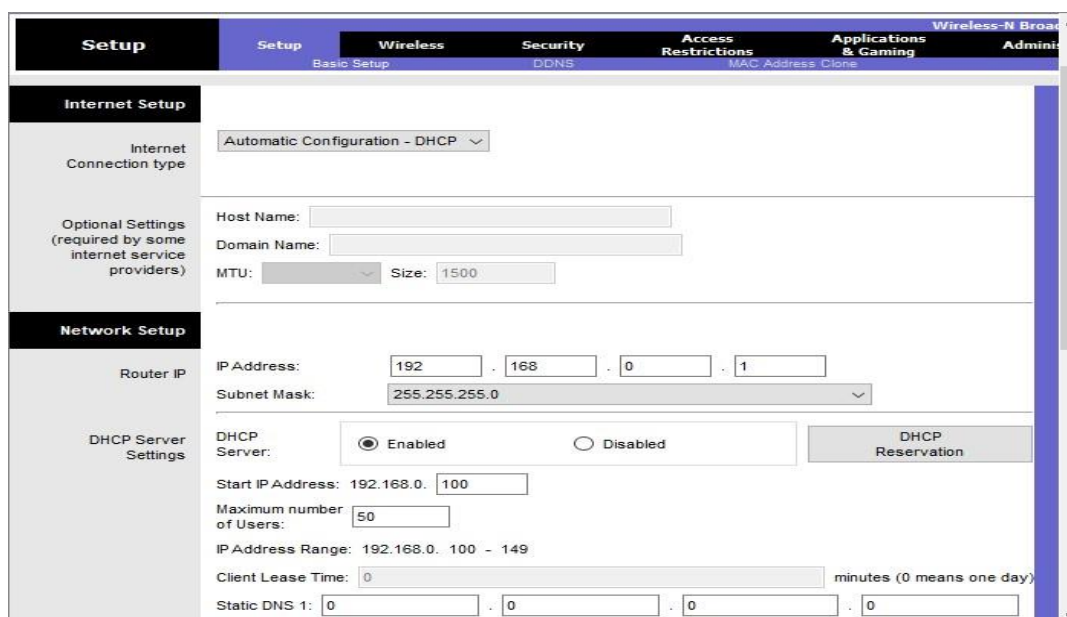
**Experiment 6: Implementation of Smart home using Cisco packet tracer and verify the configuration.**

**Step 1: Add devices WRT300N Wireless Router,2960-24Tswitch,Server-pt Laptop-PT.**

**Step 2: open router got to config tab make changes shown in image**



wireless



GUI

Physical Config **GUI** Attributes

Wireless

SetupWirelessSecurityAccess RestrictionsApplications & GamingWireless

Basic Wireless SettingsWireless SecurityGuest NetworkWireless MAC Filter

Wireless Security

Security Mode:

WPA2 Enterprise

Encryption:

AES

RADIUS Server:

192

.

168

.

0

.

10

RADIUS Port:

1645

Shared Secret:

swaran

Key Renewal:

3600

seconds

## wireless security

step 3:open server and go to config tab

Physical **Config** Services Desktop Programming Attributes

**GLOBAL**  
 Settings  
 Algorithm Settings  
**INTERFACE**  
 FastEthernet0

### FastEthernet0

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00E0.8FEE.84CD

IP Configuration

☐ DHCP

☒ Static

IPv4 Address 192.168.0.10

Subnet Mask 255.255.255.0

IPv6 Configuration

☐ Automatic

☒ Static

IPv6 Address

Link Local Address: FE80::2E0:8FFF:EEEE:84CD

AAA  
step 4: open  
laptop

Physical Config **Services** Desktop Programming Attributes

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

### AAA

Service ☒ On ☐ Off Radius Port 1645

Network Configuration

Client Name Client IP Secret ServerType Radius

	Client Name	Client IP	Server Type	Key	
1	Home	192.168.0.1	Radius	swaran	Add
					Save
					Remove

User Setup

Username Password

	Username	Password	
1	cam	cam	Add
2	door	door	
3	fan	fan	Save
4	garage	garage	
5	light	light	Remove
6	window	window	

Global Settings

Display Name:

Interfaces:

Gateway/DNS IPv4

☒ DHCP

☐ Static

Default Gateway:

DNS Server:

FastEthernet0

Port Status: ☒ On

Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address:

IP Configuration

☒ DHCP

☐ Static

IPv4 Address:

Subnet Mask:

on pc go to desktop and open iot monitor

Physical Config Desktop Programming Attributes

IoT Monitor







IoT Server Address:

User Name:

Password:

IoT Monitor X

IoT Server - Devices Home | Conditions | Editor | Log Out

▶  IoT1 (PTT0810D6GG-)	Ceiling Fan
▶  IoT2 (PTT081078Q2-)	Light
▶  IoT3 (PTT0810SS2G-)	Window
▶  IoT4 (PTT0810OUIJ-)	Door
▶  IoT0 (PTT081049H6-)	Garage Door
▶  IoT5 (PTT081041S9-)	Webcam

**step 5: add devices like light,ceiling fan>window,door,garage door,webcam select a device go to config wireless setting and update similarly update in server AAA tab.**

Wireless0	
Port Status	<input checked="" type="checkbox"/> On
Bandwidth	300 Mbps
MAC Address	000B.BEE1.26C1
SSID	Home
<b>Authentication</b> <input type="radio"/> Disabled <input type="radio"/> WEP      WEP Key: <input type="text"/> <input type="radio"/> WPA-PSK <input type="radio"/> WPA2-PSK      PSK Pass Phrase: <input type="text"/> <input type="radio"/> WPA <input checked="" type="radio"/> WPA2      User ID: <input type="text" value="light"/> <input type="radio"/> 802.1X      Method: <input type="text" value="MD5"/> Password: <input type="text" value="light"/> <input type="text"/> User Name: <input type="text"/> <input type="text"/> Password: <input type="text"/>	
Encryption Type	<input type="text" value="AES"/>
<b>IP Configuration</b> <input checked="" type="radio"/> DHCP <input type="radio"/> Static IPv4 Address: <input type="text" value="192.168.0.108"/> Subnet Mask: <input type="text" value="255.255.255.0"/>	
<b>IPv6 Configuration</b> <input checked="" type="radio"/> Automatic <input type="radio"/> Static IPv6 Address: <input type="text" value="FE80::20B:BEFF:FEE1:26C1"/> Link Local Address: <input type="text" value="FE80::20B:BEFF:FEE1:26C1"/>	

## In global setting update

Display Name	<input type="text" value="IoT2"/>
Serial Number	<input type="text" value="PTT081078Q2-"/>
Interfaces	<div>Wireless0 </div>

Gateway/DNS IPv4

☒ DHCP

☐ Static

Default Gateway

DNS Server

Gateway/DNS IPv6

☒ Automatic

☐ Static

Default Gateway

DNS Server

IoT Server

☐ None

☐ Home Gateway

☒ Remote Server

Server Address

User Name

Password