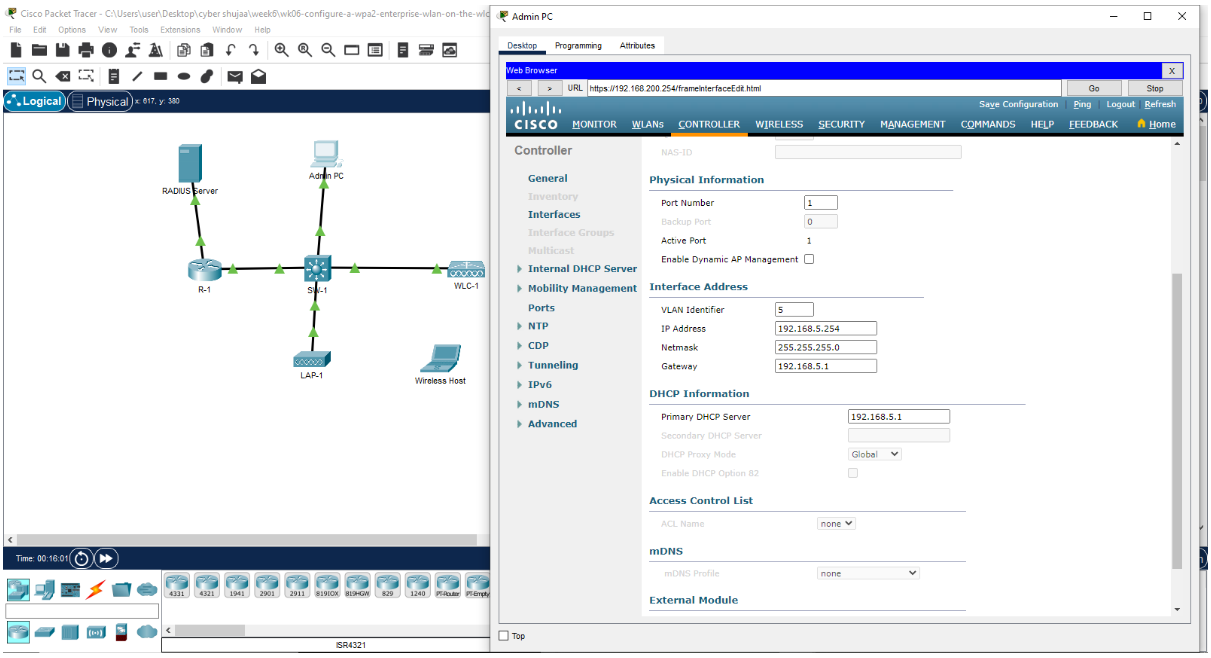
# Packet Tracer - Configure a WPA2 Enterprise WLAN on the WLC

## Part 1: Create a new WLAN

### Step 1: Create a new VLAN interface.



URL https://192.168.200.254/frameInterfaceEdit.html

NAS-ID

**Physical Information**

Port Number 1

Backup Port 0

Active Port 1

Enable Dynamic AP Management □

**Interface Address**

VLAN Identifier 5

IP Address 192.168.5.254

Netmask 255.255.255.0

Gateway 192.168.5.1

**DHCP Information**

Primary DHCP Server 192.168.5.1

Secondary DHCP Server

DHCP Proxy Mode Global

Enable DHCP Option 82 □

**Access Control List**

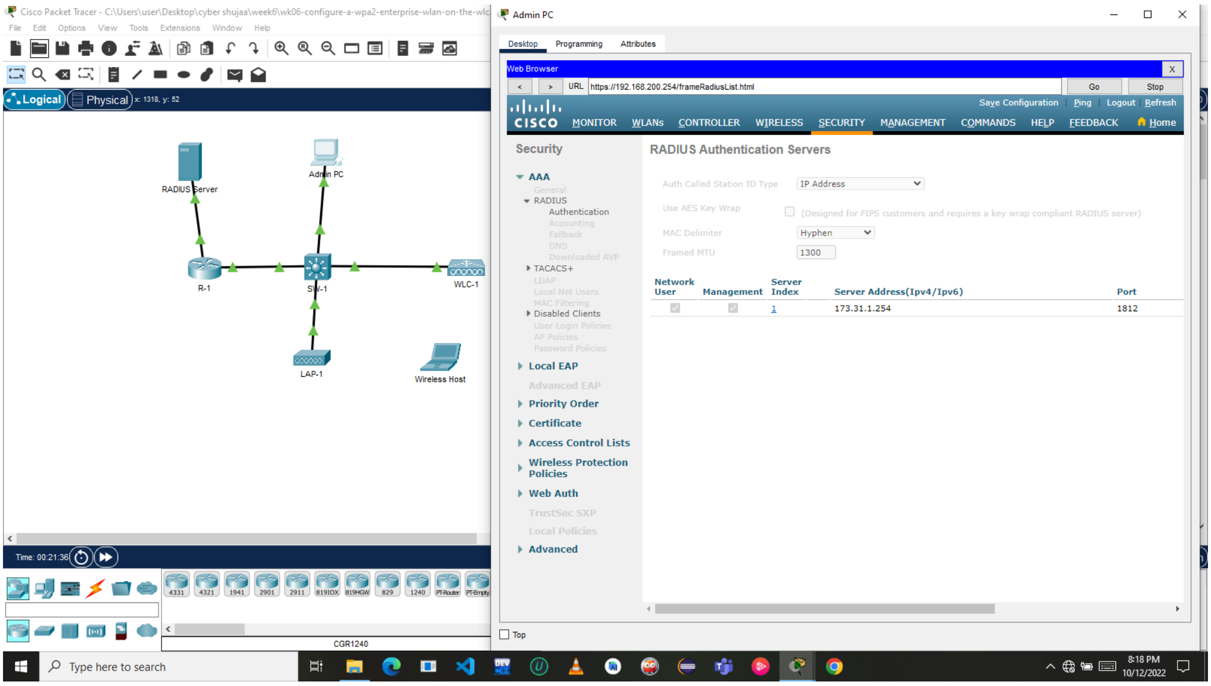
ACL Name none

**mDNS**

mDNS Profile none

**External Module**

### Step 2: Configure the WLC to use a RADIUS server



URL https://192.168.200.254/frameRadiusList.html

**RADIUS Authentication Servers**

Auth Called Station ID Type IP Address

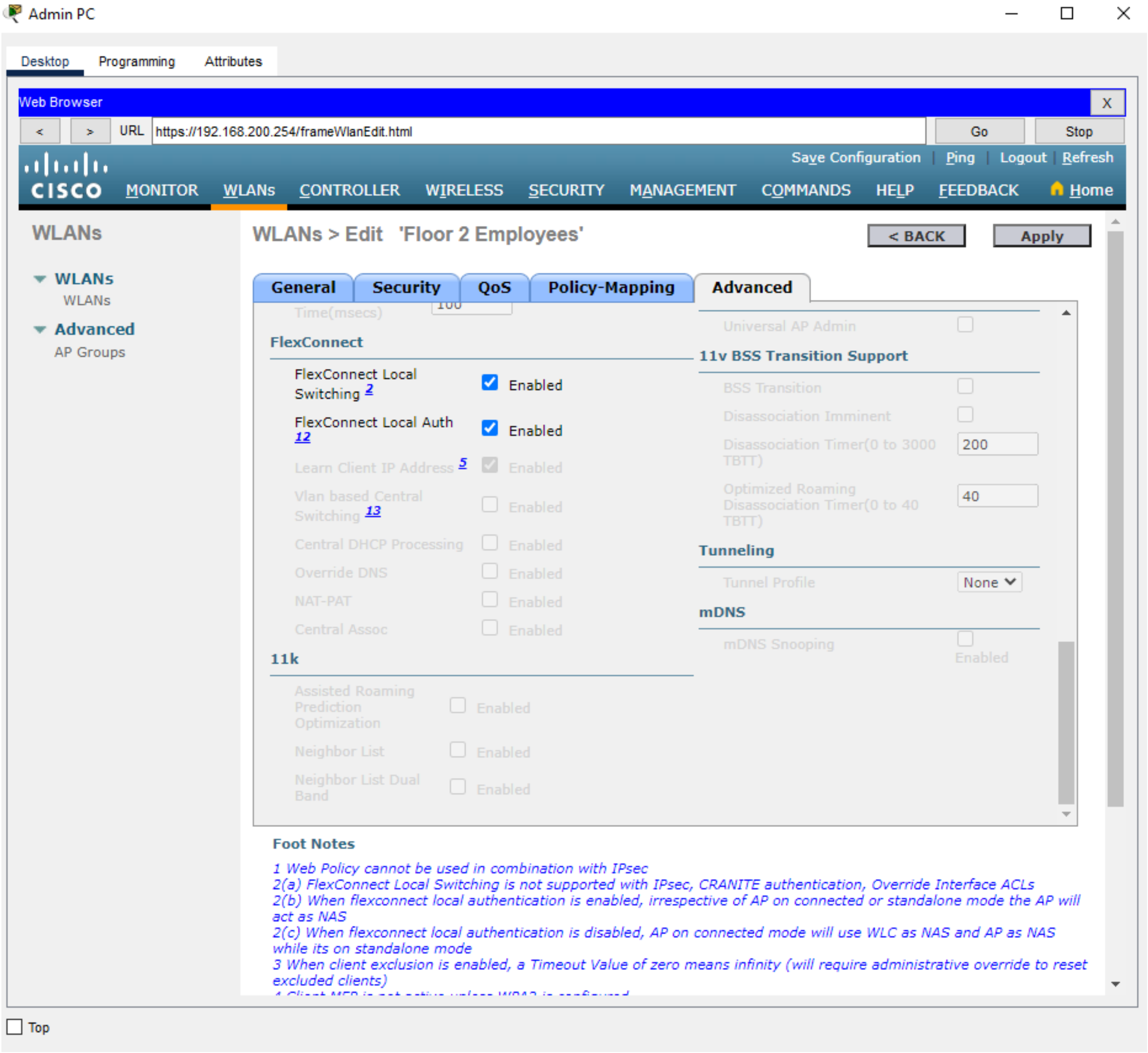
Use AES Key Wrap □ (Designed for FIPS customers and requires a key wrap compliant RADIUS server)

MAC Delimiter Hyphen

Framed MTU 1300

| Network User | Management | Server Index | Server Address(Ipv4/Ipv6) | Port |
|---|---|---|---|---|
| ☑ | ☑ | 1 | 173.31.1.254 | 1812 |

Step 3: Create a new WLAN.



URL: https://192.168.200.254/frameWlanEdit.html

WLANs > Edit 'Floor 2 Employees'

Time(msecs) 100

**FlexConnect**

- FlexConnect Local Switching 2 ☑ Enabled
- FlexConnect Local Auth 12 ☑ Enabled
- Learn Client IP Address 5 ☑ Enabled
- Vlan based Central Switching 13 □ Enabled
- Central DHCP Processing □ Enabled
- Override DNS □ Enabled
- NAT-PAT □ Enabled
- Central Assoc □ Enabled

**11k**

- Assisted Roaming Prediction Optimization □ Enabled
- Neighbor List □ Enabled
- Neighbor List Dual Band □ Enabled

Universal AP Admin □

**11v BSS Transition Support**

- BSS Transition □
- Disassociation Imminent □
- Disassociation Timer(0 to 3000 TBTT) 200
- Optimized Roaming Disassociation Timer(0 to 40 TBTT) 40

**Tunneling**

- Tunnel Profile None

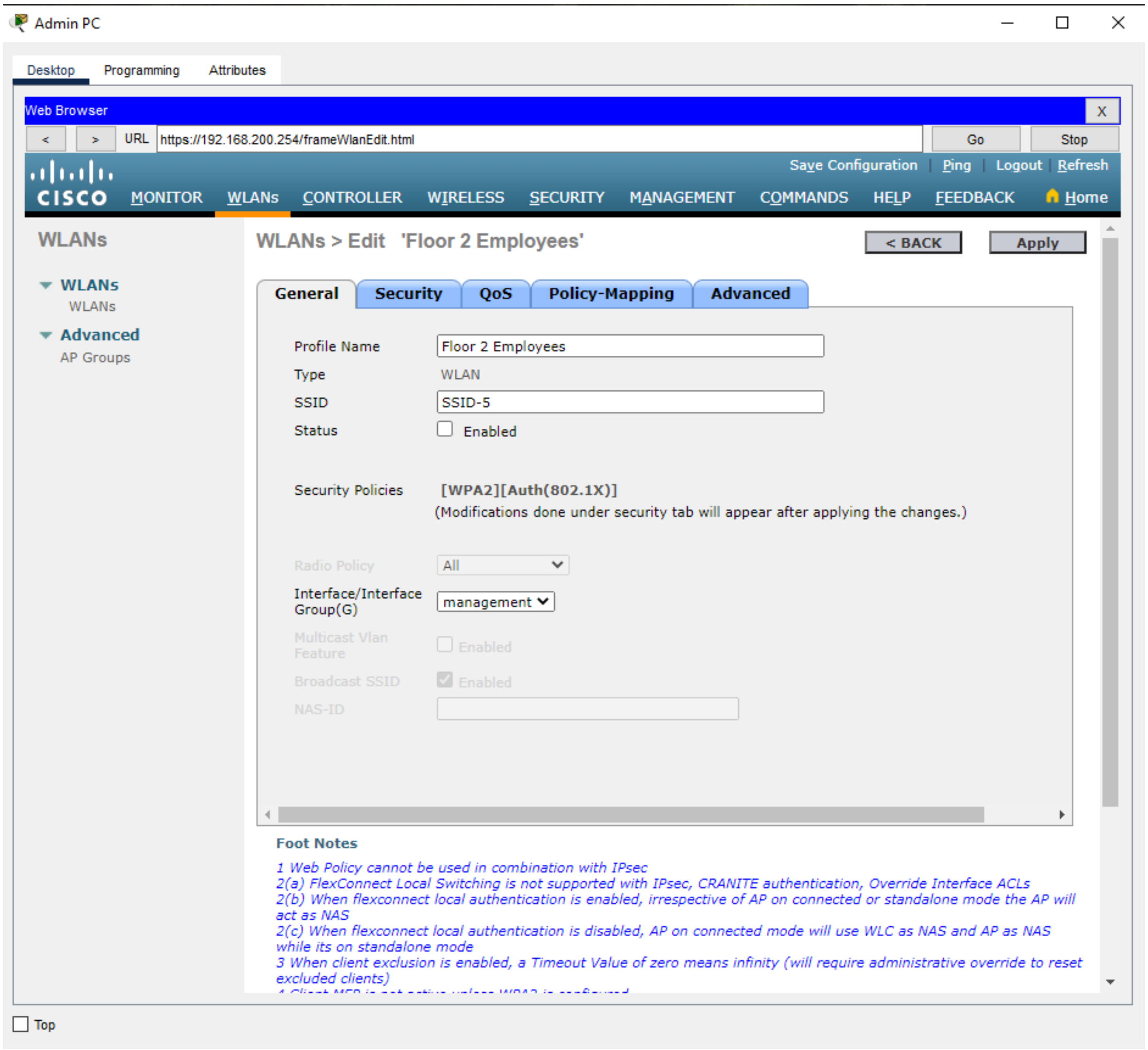
**mDNS**

- mDNS Snooping □ Enabled

**Foot Notes**

*1 Web Policy cannot be used in combination with IPsec*
*2(a) FlexConnect Local Switching is not supported with IPsec, CRANITE authentication, Override Interface ACLs*
*2(b) When flexconnect local authentication is enabled, irrespective of AP on connected or standalone mode the AP will act as NAS*
*2(c) When flexconnect local authentication is disabled, AP on connected mode will use WLC as NAS and AP as NAS while its on standalone mode*
*3 When client exclusion is enabled, a Timeout Value of zero means infinity (will require administrative override to reset excluded clients)*
*4 Client MFP is not active unless WPA2 is configured*

Step 4: Configure WLAN security



URL https://192.168.200.254/frameWlanEdit.html

WLANs > Edit 'Floor 2 Employees'

Profile Name: Floor 2 Employees

Type: WLAN

SSID: SSID-5

Status: □ Enabled

Security Policies: [WPA2][Auth(802.1X)]

(Modifications done under security tab will appear after applying the changes.)

Radio Policy: All

Interface/Interface Group(G): management

Multicast Vlan Feature: □ Enabled

Broadcast SSID: ☑ Enabled

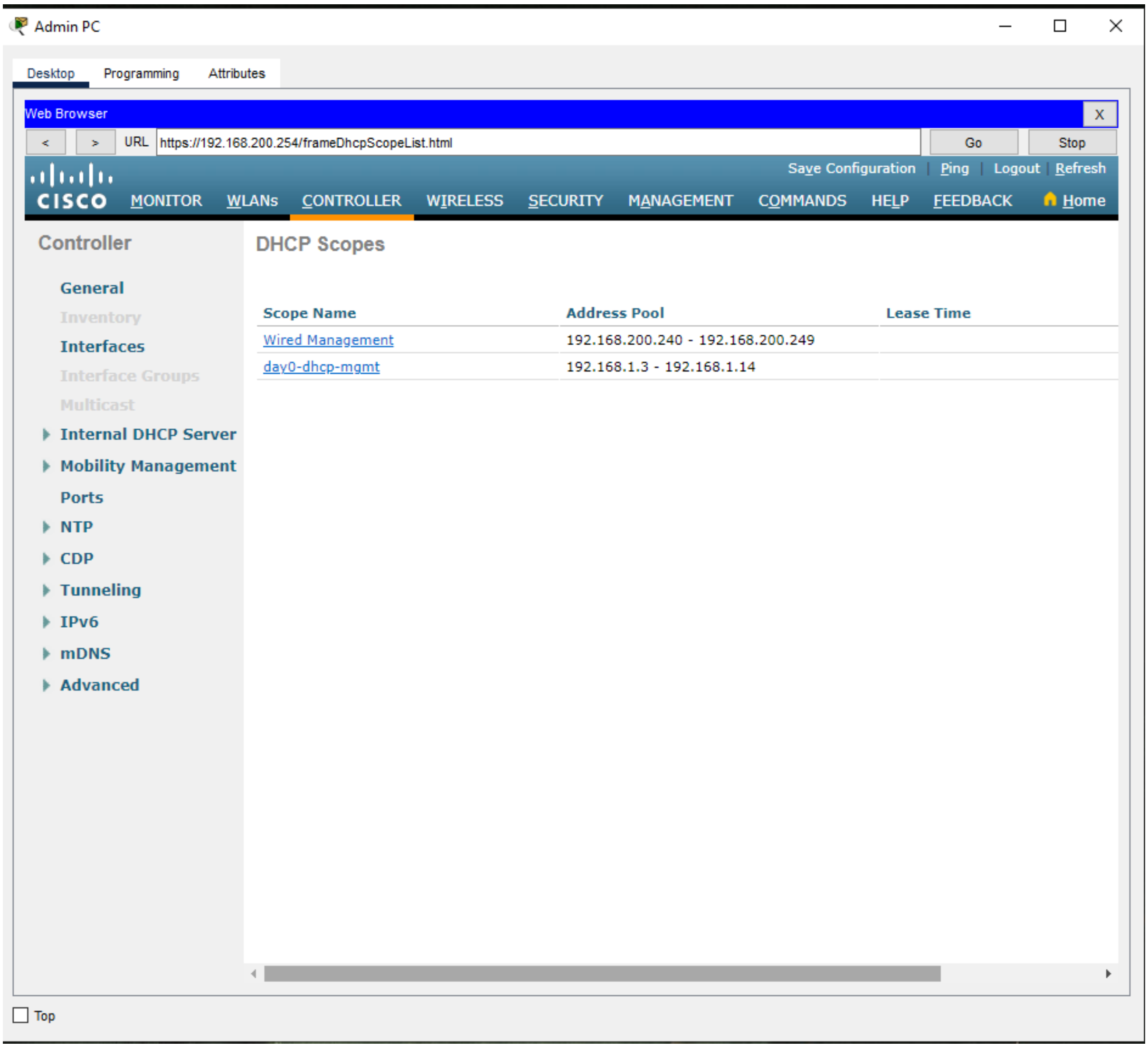
NAS-ID:

Foot Notes

*1 Web Policy cannot be used in combination with IPsec*
*2(a) FlexConnect Local Switching is not supported with IPsec, CRANITE authentication, Override Interface ACLs*
*2(b) When flexconnect local authentication is enabled, irrespective of AP on connected or standalone mode the AP will act as NAS*
*2(c) When flexconnect local authentication is disabled, AP on connected mode will use WLC as NAS and AP as NAS while its on standalone mode*
*3 When client exclusion is enabled, a Timeout Value of zero means infinity (will require administrative override to reset excluded clients)*

## Part 2: Configure a DHCP Scope and SNMP

### Step 1: Configure a DHCP Scope



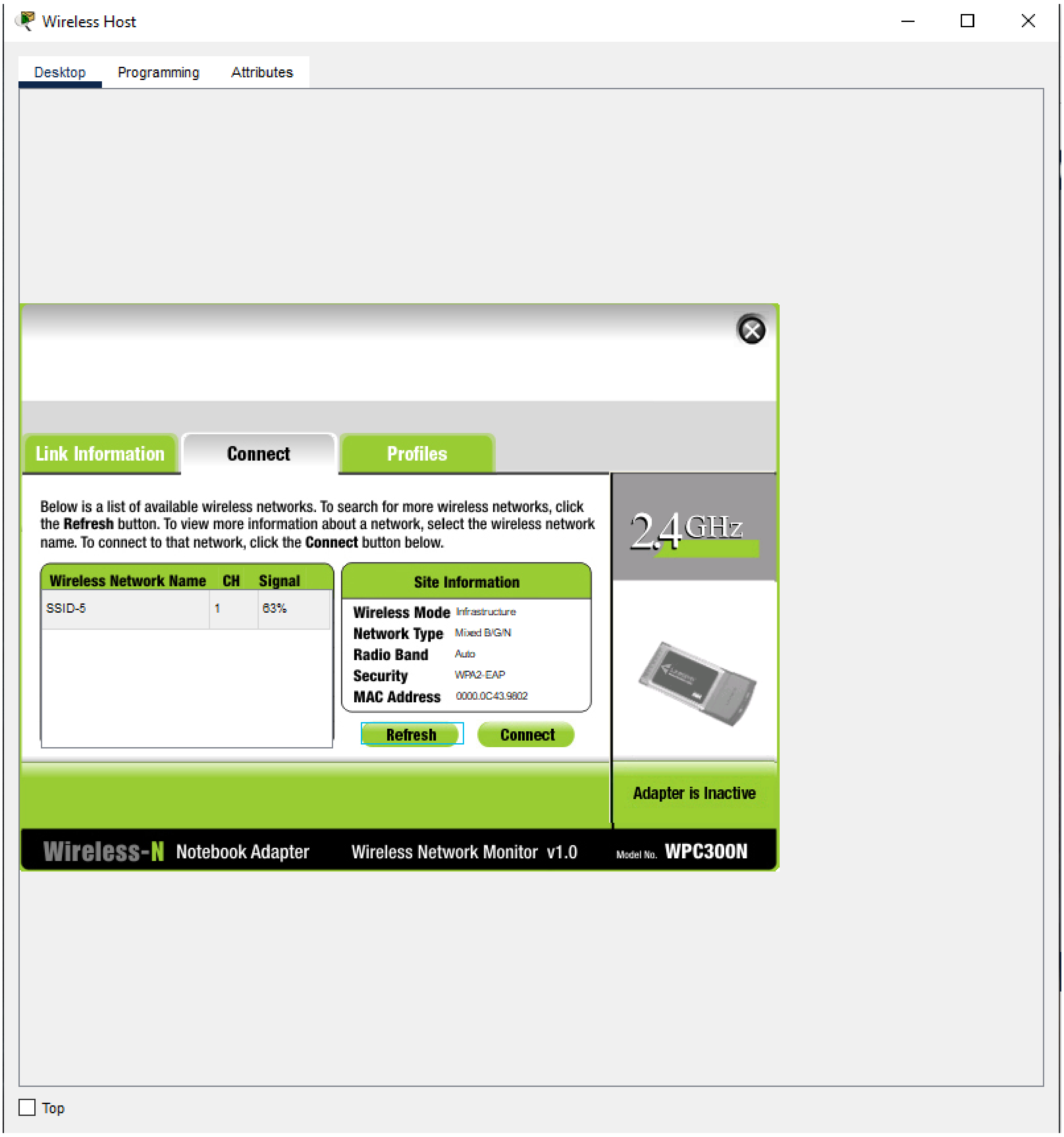
URL https://192.168.200.254/frameDhcpScopeList.html

DHCP Scopes

| Scope Name | Address Pool | Lease Time |
|---|---|---|
| Wired Management | 192.168.200.240 - 192.168.200.249 | |
| day0-dhcp-mgmt | 192.168.1.3 - 192.168.1.14 | |

Part 3: Connect Hosts to the Network

Step 1: Configure a host to connect to the enterprise network.



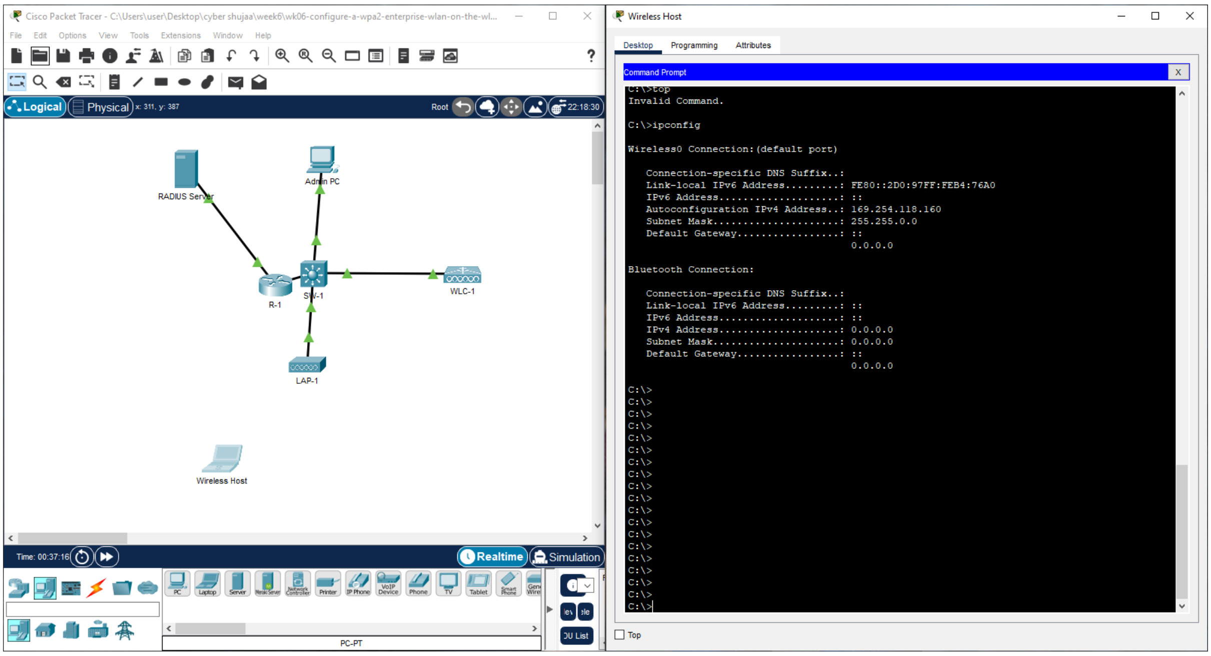
Below is a list of available wireless networks. To search for more wireless networks, click the **Refresh** button. To view more information about a network, select the wireless network name. To connect to that network, click the **Connect** button below.

| Wireless Network Name | CH | Signal |
|---|---|---|
| SSID-5 | 1 | 63% |

**Site Information**

| | |
|---|---|
| Wireless Mode | Infrastructure |
| Network Type | Mixed B/G/N |
| Radio Band | Auto |
| Security | WPA2-EAP |
| MAC Address | 0000.0C43.9802 |

Step 2: Test Connectivity.



```
C:\>top
Invalid Command.

C:\>ipconfig

Wireless0 Connection:(default port)

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.........: FE80::2D0:97FF:FEB4:76A0
   IPv6 Address....................: ::
   Autoconfiguration IPv4 Address..: 169.254.118.160
   Subnet Mask.....................: 255.255.0.0
   Default Gateway.................: ::
                                     0.0.0.0

Bluetooth Connection:

   Connection-specific DNS Suffix..:
   Link-local IPv6 Address.........: ::
   IPv6 Address....................: ::
   IPv4 Address....................: 0.0.0.0
   Subnet Mask.....................: 0.0.0.0
   Default Gateway.................: ::
                                     0.0.0.0

C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
C:\>
```