

IFT 259 Introduction to Internet Networking

Lab 25 IP Phone Connection

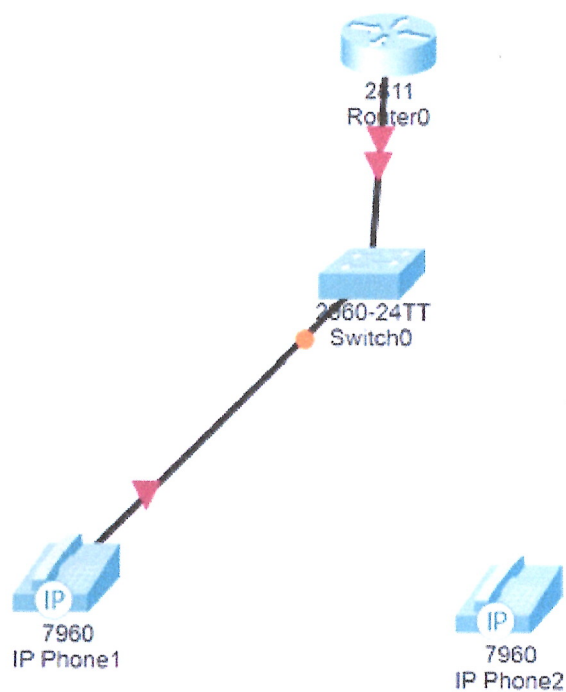
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After you complete each step, put a '√' or 'x' in the completed box

1. Set up the following topology in Packet Tracer.

Connect Phone1 to the switch with copper straight through cable.

Do not connect the second phone yet !



Completed ☒

2. Assign an IP address to interface fa 0/0 on the router.

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#int fa0/0
Router(config-if)#ip address 192.168.10.1 255.255.255.0
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
!
```

Completed 

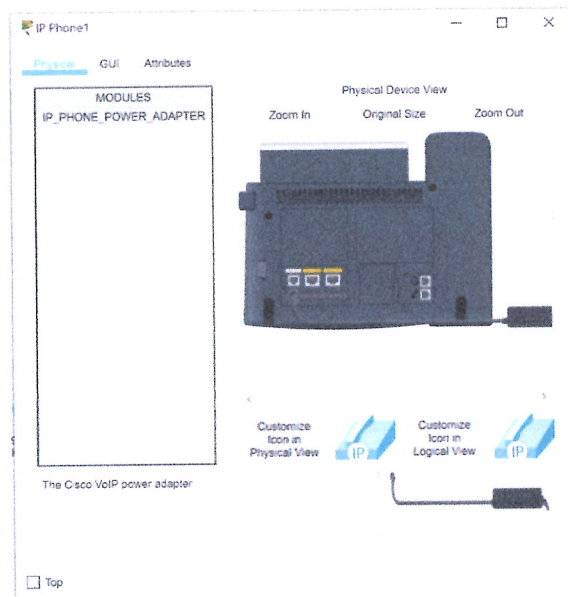
3. We will need to configure a dhcp server in order to make sure that the phones have an IP address.

Option 150 is the command that we use to determine the ip address of the TFTP server which stores the configuration files for VOIP phones.

```
Router(config-if)#ip dhcp pool Voice
Router(dhcp-config)#network 192.168.10.0 255.255.255.0
Router(dhcp-config)#default-router 192.168.10.1
Router(dhcp-config)#option 150 ip 192.168.10.1
```

Completed 

4. Power on phone one by dragging the power cable (from the modules section) onto the physical interface (under the three phone ports) on the phone.



Completed 


5. We will now configure the Cisco Call Manager on the router.

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#telephony-service
Router(config-telephony)#max-dn 5
Router(config-telephony)#max-ephones 5
Router(config-telephony)#ip source-address 192.168.10.1 port 2000
Router(config-telephony)#auto assign 4 to 6
Router(config-telephony)#auto assign 1 to 5|
```

Completed 

6. Next, we will configure a vlan on the switch. The vlan will enable us to separate the voice data from the other data on the network.

```
Switch>
Switch>en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int range fa0/1-5
Switch(config-if-range)#switchport mode access
Switch(config-if-range)#switchport voice vlan 1
```

Completed 

7. Now we need to set up the phone for some additional configuration so that it can communicate properly.

```
Router(config)#ephone-dn 1
Router(config-ephone-dn)*LINK-3-UPDOWN: Interface ephone_dsp DN 1.1,
changed state to up
```

```
Router(config-ephone-dn)#number 54001
```

Completed 

8. Connect phone 2 and power it up as we did with phone 1.

Completed ☒

9. Configure the phone directory for the new phone.

```
Router(config)#ephone-dn 2
Router(config-ephone-dn)##LINK-3-UPDOWN: Interface ephone_dsp DN 2.1,
changed state to up

Router(config-ephone-dn)#number 54002
Router(config-ephone-dn)#
*IPPHONE-6-REGISTER: ephone-2 IP:192.168.10.3 Socket:2 DeviceType:Phone
has registered.
|
```

Completed ☒

10. Select the physical interface of phone 1 and dial 54002 and then hit return to make the call.



Completed ☒

11. Make sure that phone 2 received the call by clicking on phone two.

Completed ☒