

IFT 266 Introduction to Network Information Communication Technology (ICT)

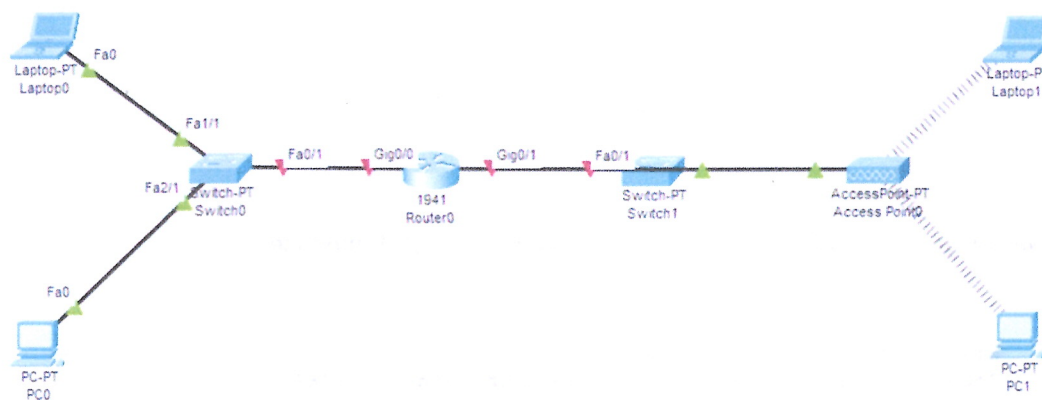
Lab 27

IPv6 Autoconfiguration (Wired + Wireless Networks)

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This lab practices setup of a wired and wireless networks on separate subnets with IPv6 autoconfiguration.

1. Setup the following topology in Packet Tracer



Completed



2. For the computers in the wireless network to connect, we must first swap out the network cards in PC1 and Laptop1. PC1 will use a WMP300N and Laptop1 will use a WPC300N.

Completed



3. Next, we assign subnet 2001:db8:abcd:a::1/64 to the router g0/0 interface.

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#ipv6 unicast-routing
Router(config)#int g0/0
Router(config-if)#ipv6 address 2001:db8:abcd:a::1/64
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/0,
changed state to up
```

Completed



4. Next, we assign subnet 2001:db8:abcd:b::1/64 to the router g0/1 interface.

```
Router(config-if)#int g0/1
Router(config-if)#ipv6 address 2001:db8:abcd:b::1/64
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface GigabitEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet0/1,
changed state to up
```

Completed



5. Set up WAP2-PSK Authentication on the Access Point. Create SSID name and PSK Pass Phrase. Wireless connection indicators to PC1 and Laptop1 will now be gone from the topology.

The screenshot shows the 'Access Point' configuration window with the 'Config' tab selected. On the left, under 'INTERFACE', 'Port 1' is highlighted. The main configuration area for 'Port 1' includes:

- Port Status:** Checked (indicated by a checkmark in a box).
- SSID:** Lab49
- 2.4 GHz Channel:** 6
- Coverage Range (meters):** 140.00
- Authentication:** WPA2-PSK is selected with a radio button. The 'PSK Pass Phrase' is set to 'wireless'.
- Encryption Type:** AES

At the bottom left, there is a 'Top' button with a small square icon next to it.

Completed 

6. Select WAP2-PSK Authentication and enter Pass Phrase and SSID in PC1 and Laptop1.

Completed 

7. Go to the Desktop and configure IPv6 Configuration as Automatic for all four host computers.



8. Ping PC1 from Laptop0 using the assigned IPv6 address. If unsuccessful, then troubleshoot.

Insert screenshot of successful ping

