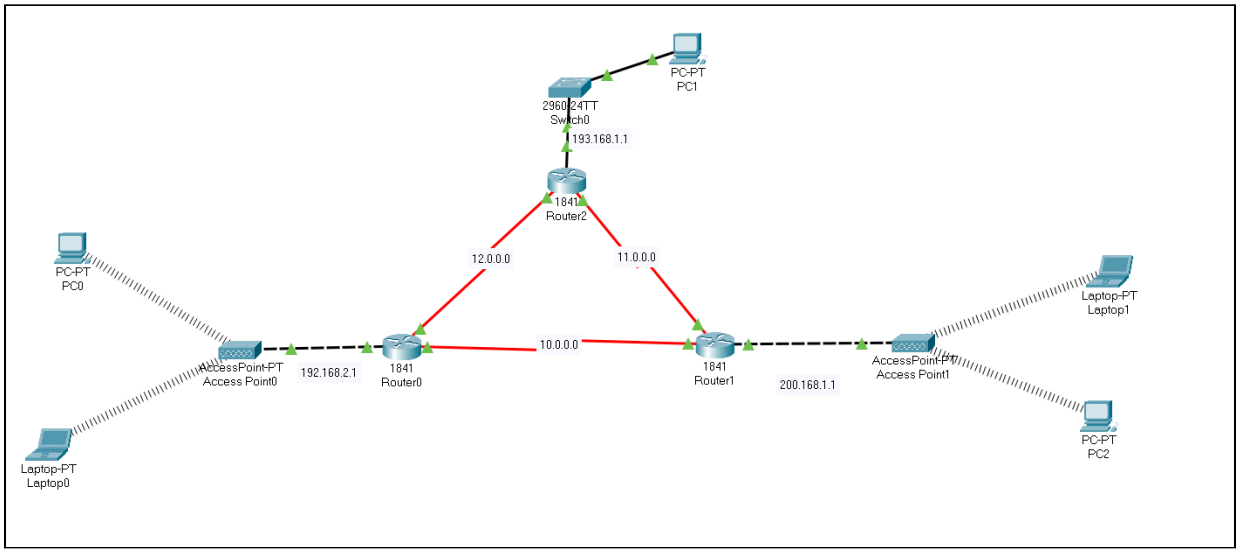
Experiment

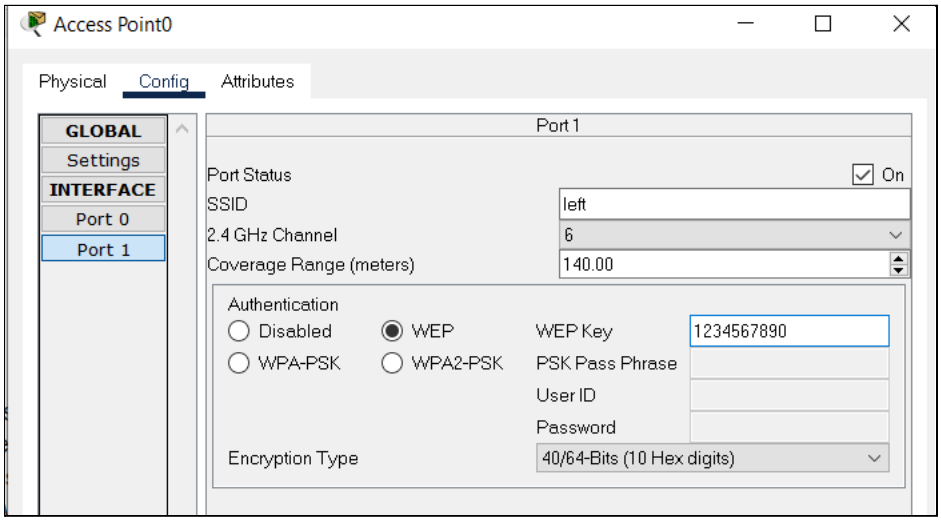
Aim : Implement OSPF routing protocol in Packet Tracer.
Implement the experiment to configure wireless networks in cisco packet tracer.

Diagram :

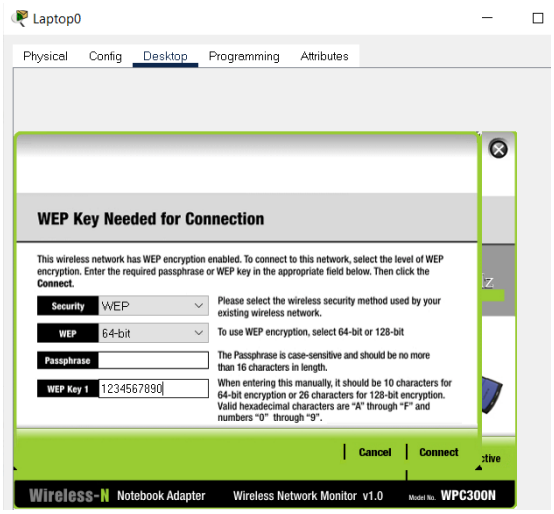


Procedure/code:

1. For wireless access lets take AccessPoint-PT device from hubs section
2. Take 3 routers and insert WIC-2T module
3. Connect the laptops/pcs/accesspoints as shown above
    - Connection between laptop and access point is shown later.
4. Assume necessary network ids as shown above
5. Let's configure AccessPoint0
    - Click the device >Port0 , turn on the port status , make everything as auto
    - Goto port1 , let's set as SSID “left” (SSID will be the name shown on laptop screen to connect) , set an WEP key =1234567890 (note: it has to be 10 digits to work)

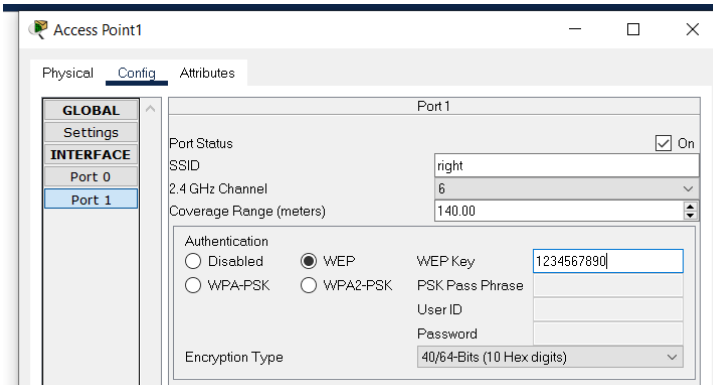


- Now we have our access point configured. Lets configure laptop
- Click laptop>physical . switch of the laptop, remove the fast ethernet module and insert the WPC 300N module and turn on the laptop.
- Laptop>Desktop>PC Wireless>connect>refresh and connect to the network named left, enter the WEP key which we set above.



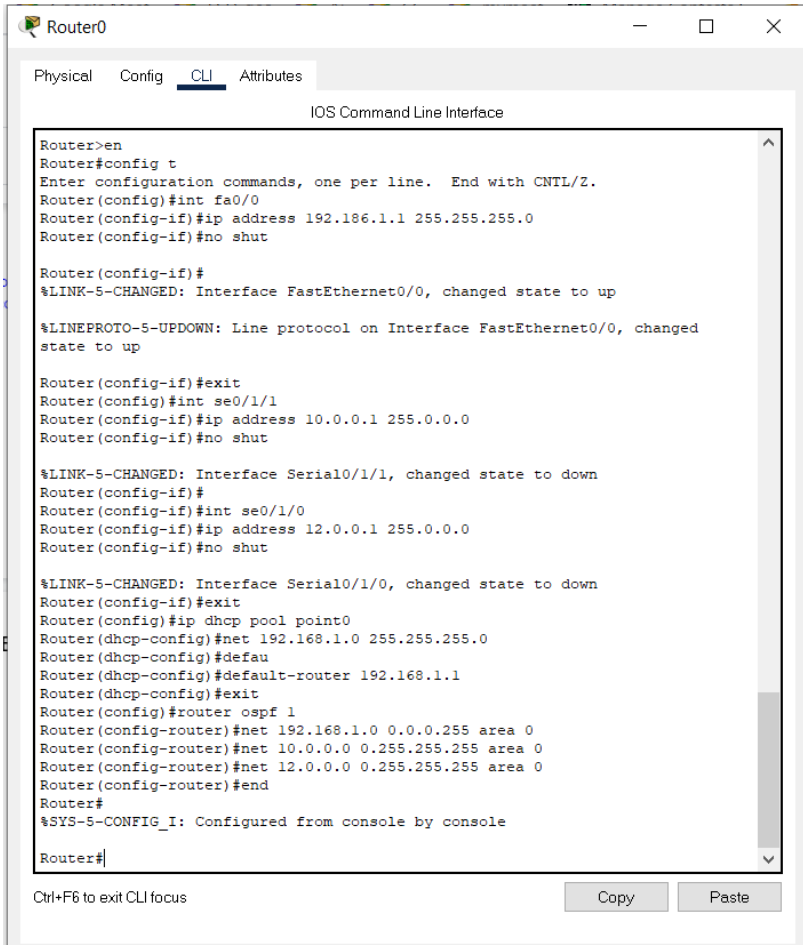
- Now u can see some curved wifi like symbol btw laptop and accesspoint0 which means connection is established.
- Do the same for the other PC. (install module, connect to point0)

6. Now let's configure the AccessPoint1
   - Turn on port status, keep all as auto, goto port1 name SSID as " right " , set WEP key as 1234567890 . (using the same key, but you can change it)



- Install modules in laptop/pc and connect it as we did for AccessPoint0 but connect to right this time.

7. Let's configure router0
   - Set all the interface ip addresses, create a dhcp pool and ospf routing protocol.



   - Save the config
8. Configure router 1 and 2 the same way with respective ip addresses as in diagram.
9. After all routers are configured , click all EndDevices>desktop>IP configuration and select DHCP.
10. We have everything configured now. Lets test these things
11. Lets ping laptop0 from (192.168.1.0) to laptop1 (200.168.1.0)

```
Pinging 200.168.1.3 with 32 bytes of data:

Reply from 200.168.1.3: bytes=32 time=75ms TTL=126
Reply from 200.168.1.3: bytes=32 time=59ms TTL=126
Reply from 200.168.1.3: bytes=32 time=58ms TTL=126
Reply from 200.168.1.3: bytes=32 time=64ms TTL=126

Ping statistics for 200.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 58ms, Maximum = 75ms, Average = 64ms

C:\>
```

- Ping was a success which proves ,network connection is proper.

12. Lets check ospf protocol
    - Type tracert 200.168.1.3 in the same laptop as above.

```
C:\>tracert 200.168.1.3

Tracing route to 200.168.1.3 over a maximum of 30 hops:

  1    29 ms     15 ms     14 ms     192.168.1.1
  2    32 ms     31 ms     17 ms     10.0.0.2
  3    67 ms     84 ms     38 ms     200.168.1.3

Trace complete.

C:\>
```

    -
    - So clearly from here it chose the shortest path that is router 0 to router1 , another way which is long was router 0 > router 2 > router 1. Which proves ospf.

Conclusion: The ospf protocol and a wireless network was implemented successfully.