

INHA UNIVERSITY TASHKENT DEPARTMENT OF ICE

SPRING SEMESTER 2025

Computer Networks

[202501-SOC3040-001]

BONUS ACTIVITIES REPORT

submitted by

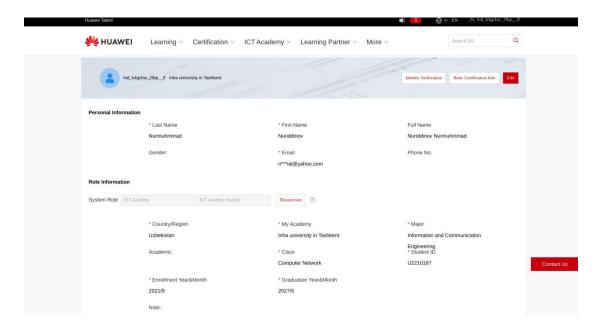
Nurmuhammad Nuriddinov U2210167 ICE-22-01

Professor: Seth Ashish

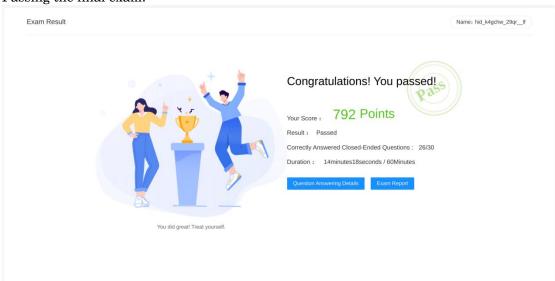
Assistant: Abbosova Munisa

BONUS ACTIVITY #1 huawei course

personal profile:



Passing the final exam:

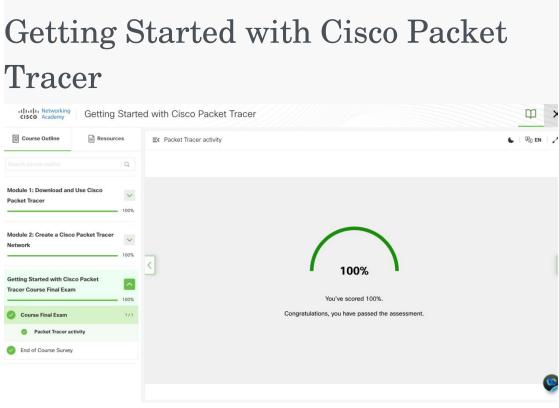


Final certificate:



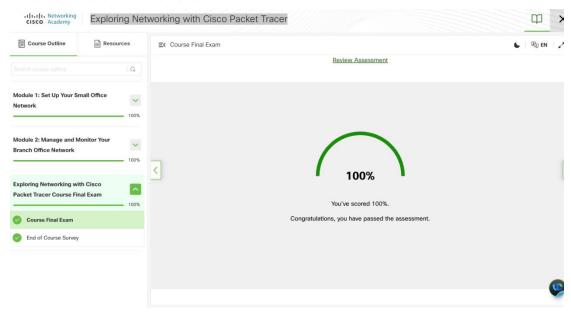
Bounus activity #2

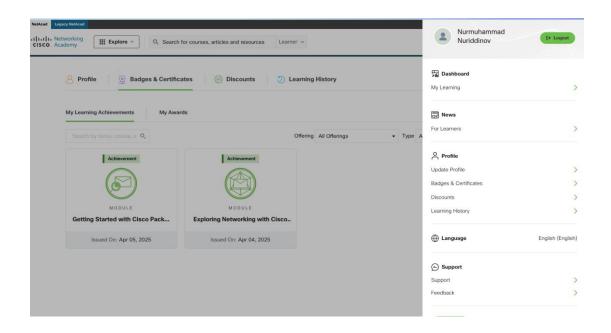
act i

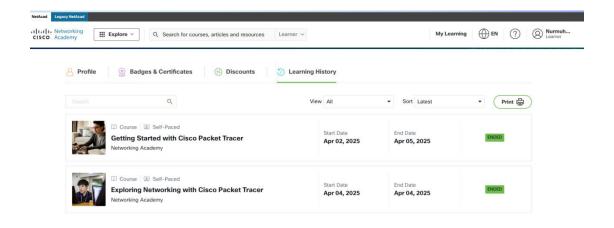


act ii

Exploring Networking with Cisco Packet Tracer





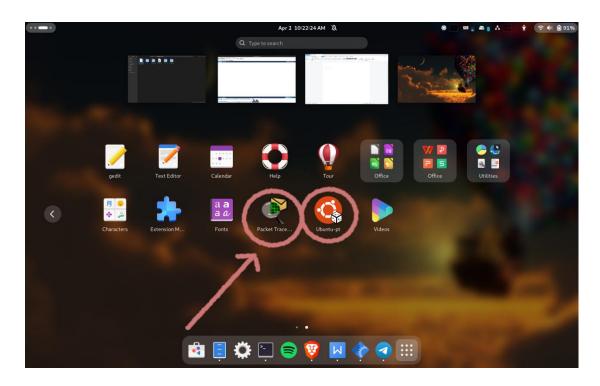




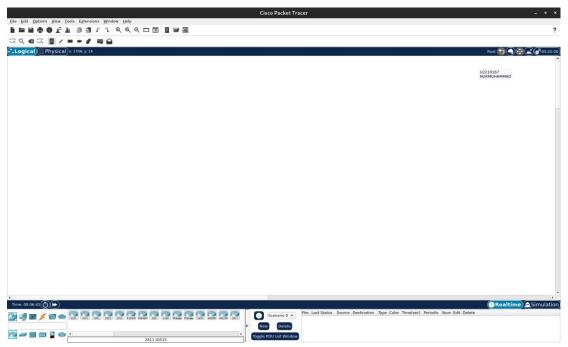
Bonus activity #3 act iii

Part 1- Build a Simple Network in the Logical Topology Workspace

Step 1- Launch Packet Tracer



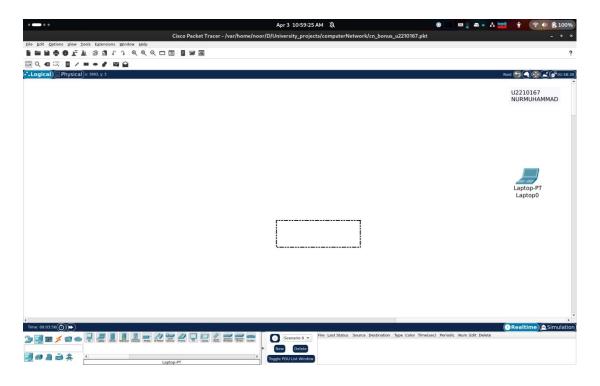
Since I use Fedora Linux, I had to install Ubuntu-pt to install and run packet tracker, becouse Packet Tracker only supports Debian based linux distros



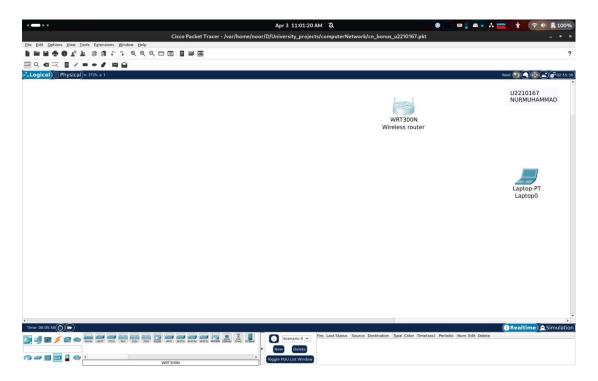
Packet Tracker Installed and ready to use

STEP 2: Build the topology

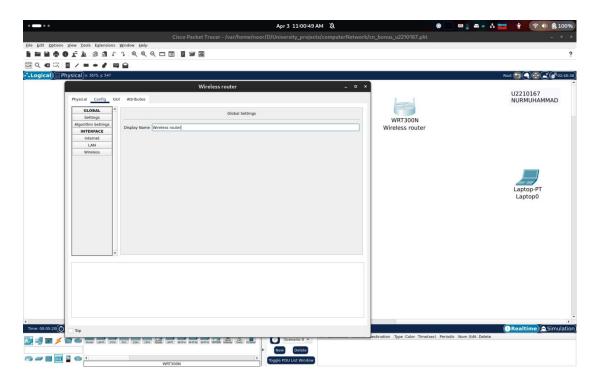
a. Add network devices to the workspace.



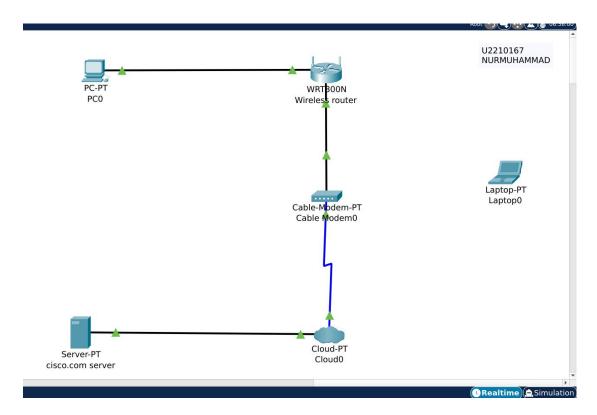
b. Add network devices to the workspace.



c. Change display names of the nework devices.



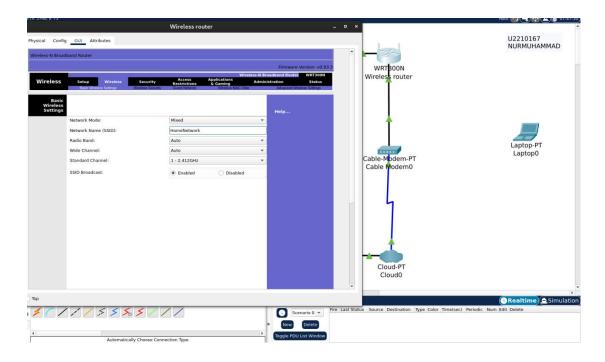
d. Add the physical cabling between devices on the workspace



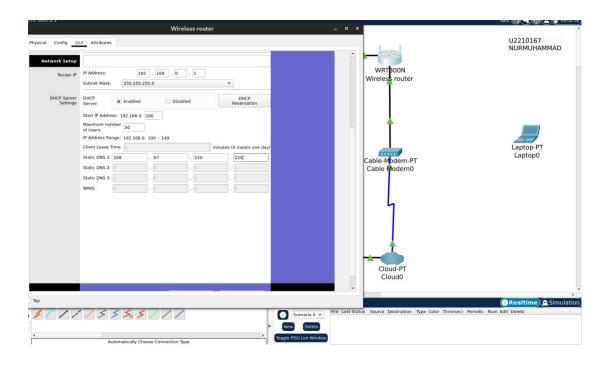
Part 2: Configure the Network Devices

Step 1: Configure the Wireless Router

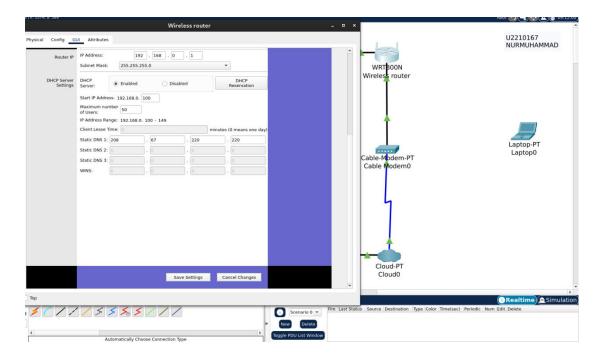
a. Create the wireless network on the Wireless Router



b. Configure the Internet connection on the Wireless Router

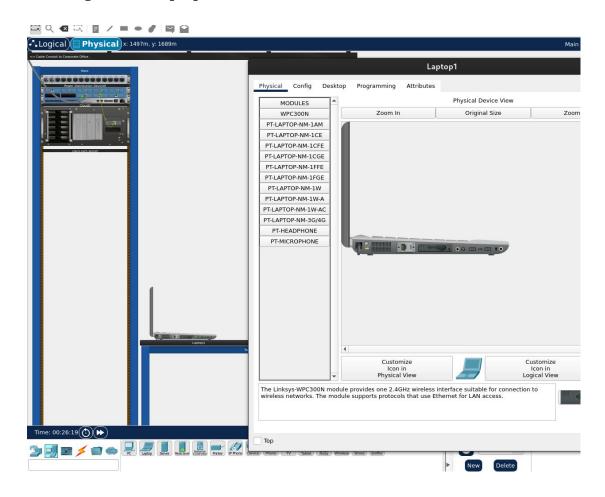


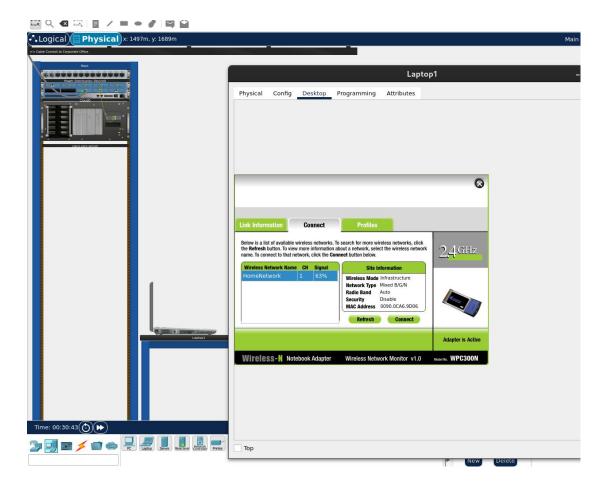
c. Click on the Save Settings tab.



Step 2: Configure the Laptop

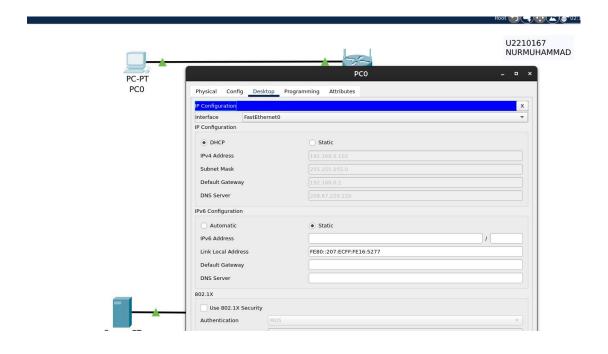
a. Configure the Laptop to access the wireless network



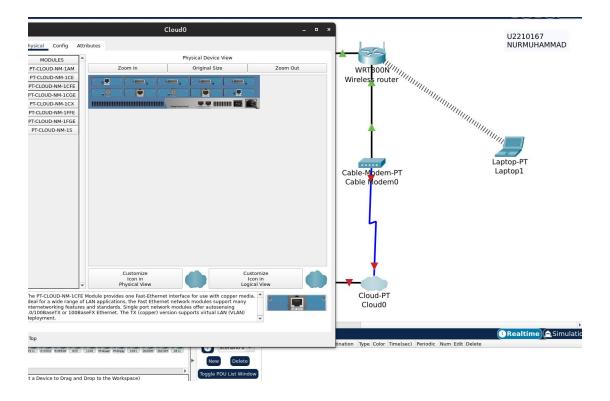


Step 3: Configure the PC

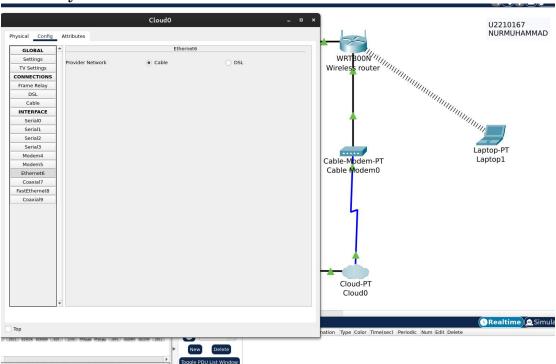
a. Configure the PC for the wired network



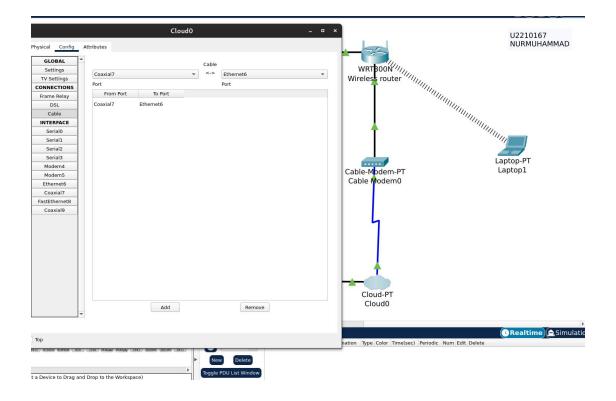
Step 4: Configure the Internet cloud a. Install network modules if necessary



b. Identify the From and To Ports

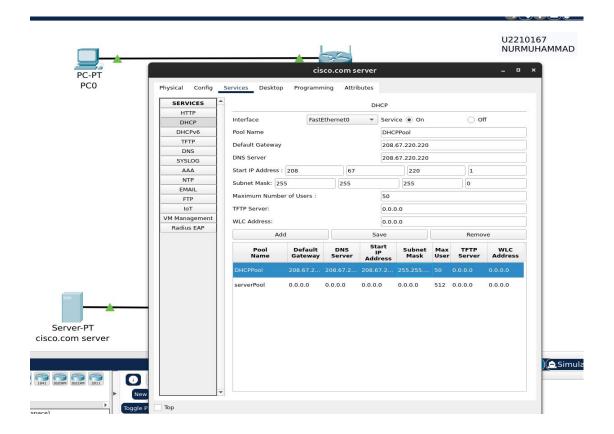


d. Identify the type of provider

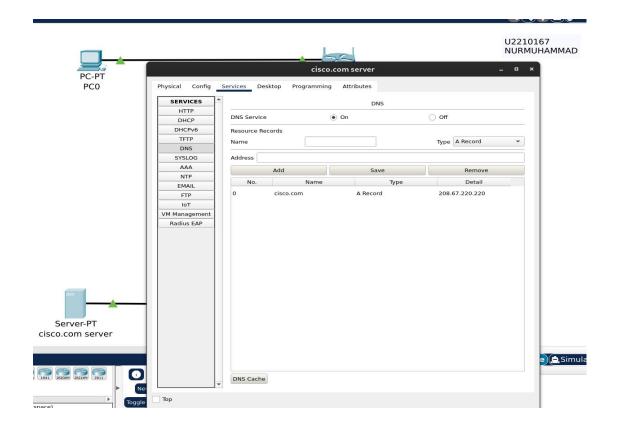


Step 5: Configure the Cisco.com server

a. Configure the Cisco.com server as a DHCP server



b. Configure the Cisco.com server as a DNS server to provide domain name to IPv4 address resolution.



c. Configure the Cisco.com server Global settings.

GLOBAL	^		Global Settings		
Settings		-	SCA SCA AND A SECURITY OF THE	-	
Algorithm Settings		Display Name cisco	o.com server		
INTERFACE	-			Ħ	
FastEthernet0		Gateway/DNS IPv	4		
		○ DHCP			
		Static			
		Default Gateway	208.67.220.1		
		DNS Server	208.67.220.220		
		Gateway/DNS IPve	6		
		 Automatic 			
		Static			
		Default Gateway		7/	
		DNS Server			
		Dito Sciver		4	

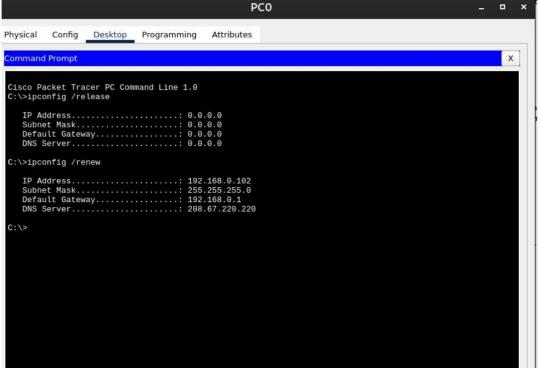
cisco.com server Physical Config Services Desktop Programming Attributes FastEthernet0 GLOBAL Settings Port Status **√** On Algorithm Settings ○ 100 Mbps (10 Mbps 🗸 Auto Bandwidth INTERFACE ○ Half Duplex ● Full Duplex ✔ Auto Duplex FastEthernet0 MAC Address 00E0.B066.C24C IP Configuration O DHCP Static IPv4 Address 208.67.220.220 Subnet Mask 255.255.255.0 IPv6 Configuration Automatic Static IPv6 Address Link Local Address: FE80::2E0:B0FF:FE66:C24C

d. Configure the Cisco.com server FastEthernet0 Interface settings.

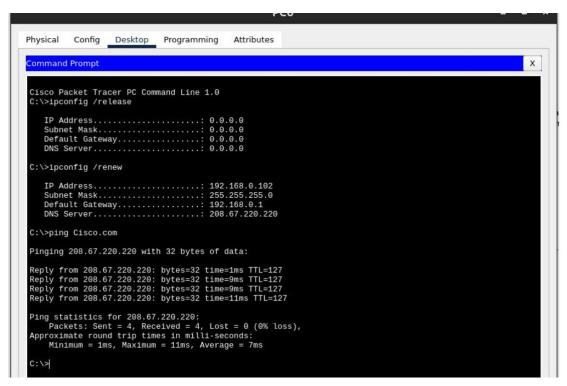
Part 3: Verify Connectivity

Step 1: Refresh the IPv4 settings on the PC

a) Verify that the PC is receiving IPv4 configuration information from DHCP.



b) Test connectivity to the Cisco.com server from the PC



Part 4: Save the File and Close Packet Tracer



Conclusion

Through this activity, I successfully built and configured a functional small-scale network. The network setup ensured that devices could communicate efficiently using DHCP, DNS, and wireless connectivity. By configuring a wireless router, assigning IP addresses dynamically, and verifying connectivity, I gained hands-on experience with essential networking concepts.

Additionally, this exercise helped me understand the importance of proper device connections, the role of DHCP in simplifying IP address management, and how DNS facilitates domain name resolution. Troubleshooting connectivity issues and ensuring all devices could communicate effectively reinforced my practical skills in network configuration.

Overall, this project provided valuable insights into real-world network setups, and the structured approach to designing and testing the network improved my problem-solving skills in networking.