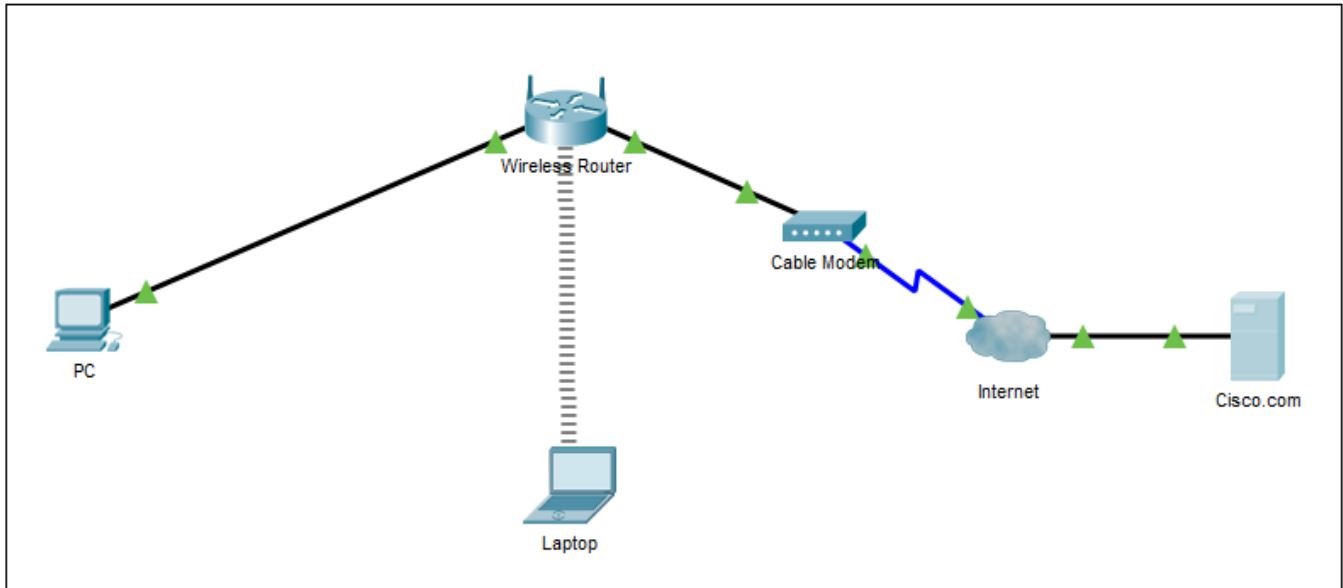


Packet Tracer – Explore Network Functionality Using PDUs

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
PC	Ethernet0	DHCP		192.168.0.1
Wireless Router	LAN	192.168.0.1	255.255.255.0	
Wireless Router	Internet	DHCP		
Cisco.com Server	Ethernet0	208.67.220.220	255.255.255.0	
Laptop	Wireless0	DHCP		

Objectives

Part 1: Create a Simple PDU in Simulation Mode

Part 2: View Contents of PDUs

Part 3: Create a Complex PDU in Simulation Mode

Background / Scenario

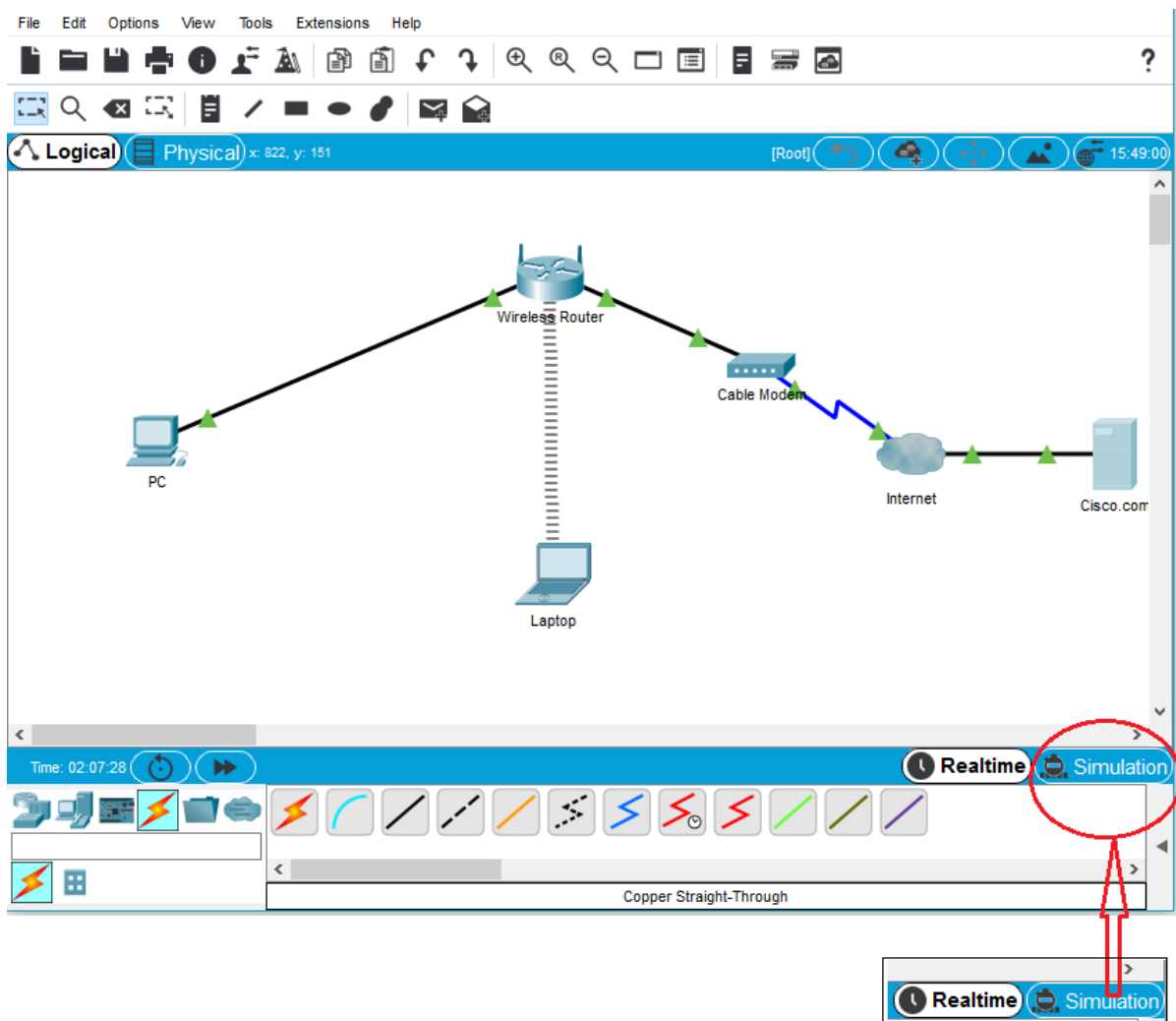
In this activity, you will open the saved Packet Tracer activity that was completed in Chapter 2, and use the Simulation mode to create PDUs to explore network functionality.

Part 1: Create a Simple PDU in Simulation Mode

Step 1: Open the .pka activity

- a. Navigate to the .pka activity that was completed in Chapter 2.

Navigate to the directory that contains the Packet Tracer Activity that was completed in Chapter 2. Open the activity and click the **Simulation** mode icon in the bottom-right corner of the Packet Tracer window to open the **Simulation** panel.



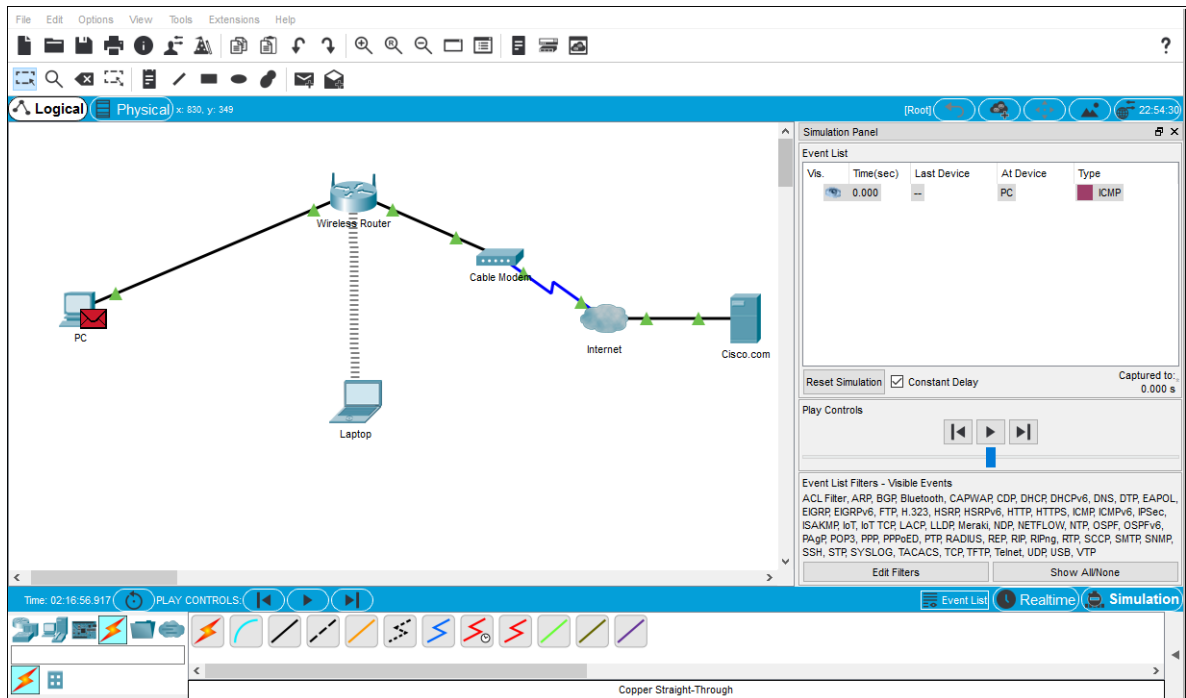
Step 2: Create a simple PDU.

- a. Create a simple PDU that sends a ping from the PC to the laptop

Click the **Add Simple PDU** icon (looks like a closed envelope) in the top pane of the Packet Tracer window. The cursor will change to an envelope with a plus sign. Click the PC first so that it will become the source of the ping and then click the Laptop so that it will become the destination.

Expand the **Event Simulation** pane by clicking the gray arrow at the bottom right of the Packet Tracer Window.

Packet Tracer – Explore Network Functionality Using PDUs



- b. Observe traffic moving through the network.

Click the **Capture/Forward** button and observe the traffic move through the network each time the button is clicked. Notice also that each time the **Capture/Forward** button is clicked, sent packets are displayed in the **Event List** window. Continue clicking the **Capture/Forward** button until the return ICMP packet makes it back to the PC.

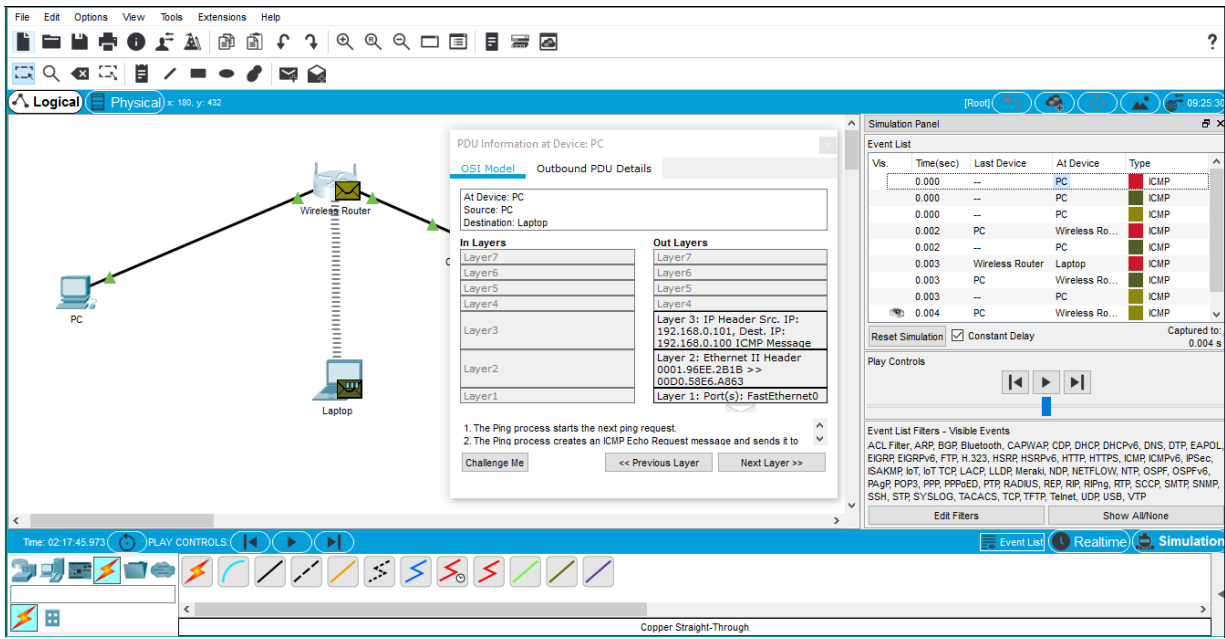
Vis.	Time(sec)	Last Device	At Device	Type
	0.000	--	PC	ICMP
	0.000	--	PC	ICMP
	0.001	PC	Wireless Ro...	ICMP
	0.001	--	PC	ICMP
	0.002	PC	Wireless Ro...	ICMP
	0.002	Wireless Router	Laptop	ICMP
	0.003	Wireless Router	Laptop	ICMP
	0.007	--	Laptop	ICMP
	0.008	Laptop	Wireless Ro...	ICMP

Part 2: View Contents of PDUs

Step 1: Use event list to see PDU information

- a. View the information of the first ICMP PDU packet from the PC.

In the **Event List** window, click the green square under the **Type** column for the first ICMP PDU at the top of the list. This will open the **PDU Information at Device: PC** window.



Observe the information in the **OSI Model** tab. Notice that this is an outbound Layer 3 PDU and the source and destination IPv4 address is shown.

The screenshot shows the 'PDU Information at Device: PC' window. It has two tabs: 'OSI Model' and 'Outbound PDU Details'. The 'Outbound PDU Details' tab is active. The window displays the following information:

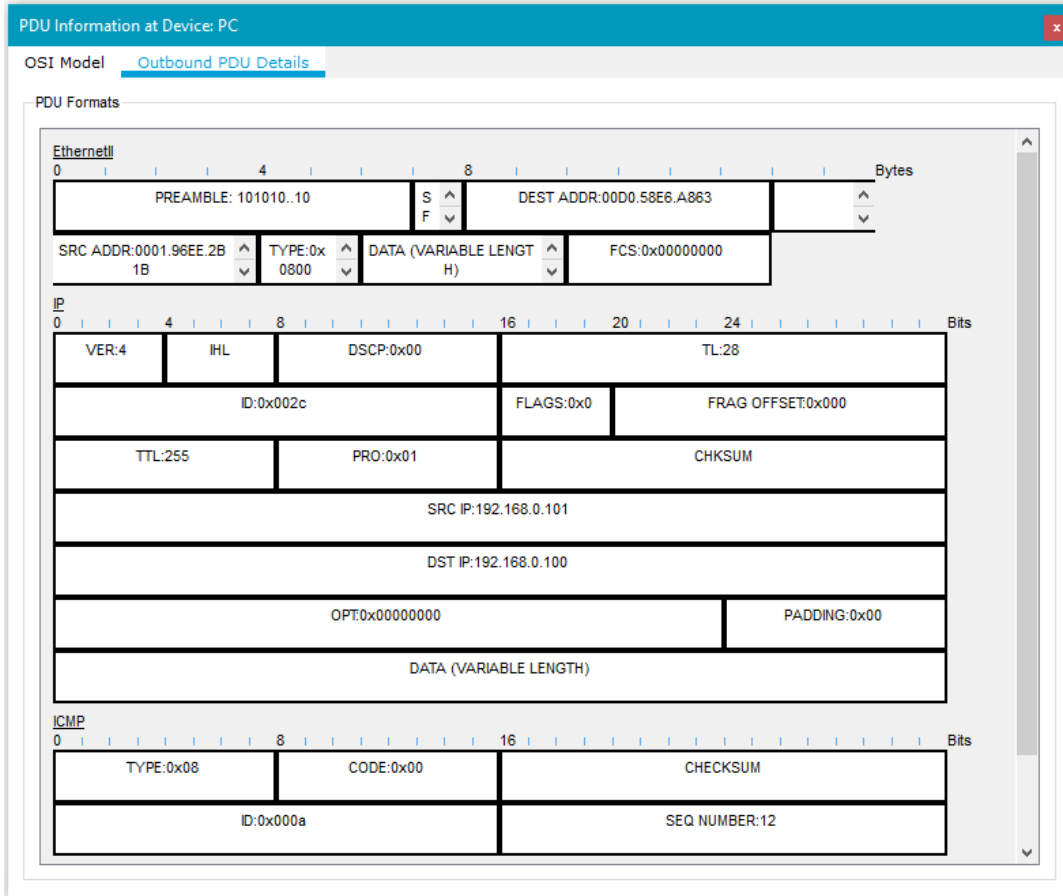
At Device: PC
Source: PC
Destination: Laptop

In Layers	Out Layers
Layer7	Layer7
Layer6	Layer6
Layer5	Layer5
Layer4	Layer4
Layer3	Layer 3: IP Header Src. IP: 192.168.0.101, Dest. IP: 192.168.0.100 ICMP Message
Layer2	Layer 2: Ethernet II Header 0001.96EE.2B1B >> 00D0.58E6.A863
Layer1	Layer 1: Port(s): FastEthernet0

1. The Ping process starts the next ping request.
2. The Ping process creates an ICMP Echo Request message and sends it to

Challenge Me << Previous Layer Next Layer >>

Next, click the **Outbound PDU Details** tab. Notice that this tab shows details of the protocol headers.



- b. Explore the contents of other PDUs that are listed in the **Simulation** panel and review the information that is available in each.

Step 2: Delete the simple PDU

- c. Delete the simple PDU using the **Event Simulation** pane.

Click the **Delete** button in the **Event Simulation** pane at the bottom of the Packet Tracer window. Notice that this removes the simple PDU and clears out all PDUs from the Simulation Panel Event List.

Part 3: Create a Complex PDU in Simulation Mode

Step 1: Create a complex PDU

- a. Add a complex PDU to send pings from the PC to the laptop.

Click the **Add Complex PDU** icon, the one that looks like an open envelope, in the right pane of the Packet Tracer window. The cursor will change to an envelope with a plus sign. Click the PC first so that it will be the source device of the pings and then click the laptop so that it will be the destination.

The **Create Complex PDU** window will display.

- b. Configure complex PDU settings to send the pings every 5 seconds.

In the **Create Complex PDU** window, there are many settings which can be customized. To send a ping every 5 seconds from the PC to the laptop, the **Destination IP Address** field must have the IPv4 address of the laptop, 192.168.0.100. The **Source IP Address** field should be the IP address of the PC, 192.168.0.101. At the bottom in the **Simulation Settings** section click **Periodic** and set the **Interval** to 5 seconds.

- c. Observe traffic moving through the network.

Click the **Auto Capture / Play** button and watch the traffic move through the network and notice the PDUs populating the Simulation Panel Event List. Because we set the complex PDU to an Interval of 5 seconds, a new PDU will be created every 5 seconds. Click the **Auto Capture / Play** button again to stop the simulation.

To delete the complex PDU, click the **Delete** button in the **Event Simulation** pane at the bottom of the Packet Tracer window.