Video – Viewing the Contents of PDUs

Hello everyone. This is our Cisco Packet Tracer viewing the contents of PDUs, which are protocol data units, walkthrough video. In this video we're going to go through and watch the actual movement of data from source to one destination, and we're going to take a look inside the PDU information as the traffic moves.

So once PDUs are created and captured, we'll be able to view the contents of the PDU by either clicking on the actual PDU inside of our event list, or by literally clicking on the message in the topology itself. So this is great, so let's get started. So what we need to do first is be in simulation mode, and that's right here in the bottom right corner. Once you're in simulation mode, you'll see your simulation panel and event list. After you're in this mode, we're going to go ahead and click add complex PDU. We'll click on that button. After we click on the complex PDU button, we'll click on our source, which is the PC, and then for that destination IP, we can either type in the IP of that server or we can just click on it and it auto fills. I love that feature. We need a sequence number, so we'll give the sequence number a one. The size, let's give it a 10, because we, and then periodic, we're going to put this thing on an interval of five seconds. We can go ahead and click create PDU, and down below in this little panel window, we'll see that we have a ping in progress from our PC to that server. It is ICMP, which is a ping. Also at the top, in our simulation panel, we can see that the ping is ready to go with no last device, but the current device the ping is being created from is the PC. I unchecked the constant delay, we want that empty, and then I just sped it up a little bit with this scroll bar so our pings will move faster across. When you're ready, we can hit the play button, but right before you do, verify your event list filters. I had used the show all none, and then the edit filters button, I'd selected ICMP only. Make sure that you only have ICMP selected. From there, we are ready to hit that play button. I hit play, the ping crosses from the PC to the router, router to the modem, modem to the internet, internet to the cisco.com web server, and that'll respond all the way back through that pathway. Once it hits back to the PC, I'm going to uncheck that play button, because I don't want that thing firing out at the fifth second. And there we go. I unchecked it because of the five second mark hit the PC was about to send out again. So this time, I'm just going to go ahead and click back to my select tool, in the top left corner.

There we go, and now we can see all of these messages in our event list. And in our event list here, we can left click just once on any one of these and we'll be able to open up the message at that device. For example, if I open up the first message just by clicking on ICMP, it says at device PC. What we'll see here is OSI model, those seven layers, it digresses and gives us the information occurring at those layers. From the frame being sent out of FA0, the port on the PC, to clicking on layer two, talking about the next hop IP being a Unicast. ARP, looking up and getting us a MAC address. Layer three, being the next one, talking about the IP header having a source IP of our PC's IP address, and a destination IP of the cisco.com web server. All of this is broken down and explained to you as the packet is leaving the PC. If you want to see what the header actually looks like if you were to rip it apart, you can click on outbound PDU details. When you click on it, it gives you a sample of what the header would look like. Here we can see a protocol, check sum, source IP, destination IP. Down below you get a little bit more info as well, including a field for data. This is awesome, and it's all simulated. At the top, don't forget, we do have a destination MAC address as well as a source MAC address for our frame as well. Now this is just one packet.

What we can do is close this off and we can take a look at, alright, when the traffic is going from the wireless router here, is arrived from the PC to the wireless router, we can click on that packet, and take a look. The inbound, so coming in, what did the header look like? This is the info from the header leaving my wireless router and going out to the internet. Source IP is a public address, destination IP is the public address of that web server. And again, the MAC address is being updated as the traffic is moving. You can click on inbound PDU details, you can view what's happening as the traffic is arriving at the wireless router from the PC. You can see the PC's IP address, The wireless router's IP address, and then outbound PDU details. The router is now sending the traffic outwards towards the internet. The source IP of my router's IP address. As it leaves, destination IP of the web server cisco.com. You can literally read through the actual outputs of the frame messages and packets itself as your traffic moves. So spend some time, click through these devices, and be able to get comfortable reading through Cisco Packet Tracer, reading these messages as they are simulated moving through a network and being updated by network devices. So that's it for this video. Make sure you practice and play with traffic

moving across the network and being able to open up this traffic, utilizing these PDU features. Experience Cisco Packet Tracer to it's fullest.