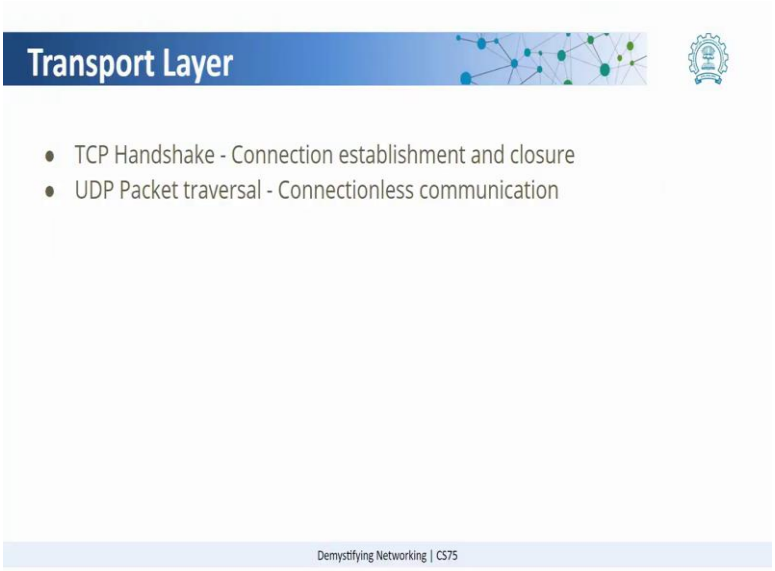
Demystifying Networking
Prof. Sridhar Iyer
Department of Computer Science and Engineering
Indian Institute of Technology, Bombay

Lecture - 59
Exploring UDP on Cisco Packet Tracer

So now that we have seen how does the connection oriented protocol TCP work and how does the connection less protocol called UDP work, let us go to the packet tracer and see how this action happens in a virtual network.

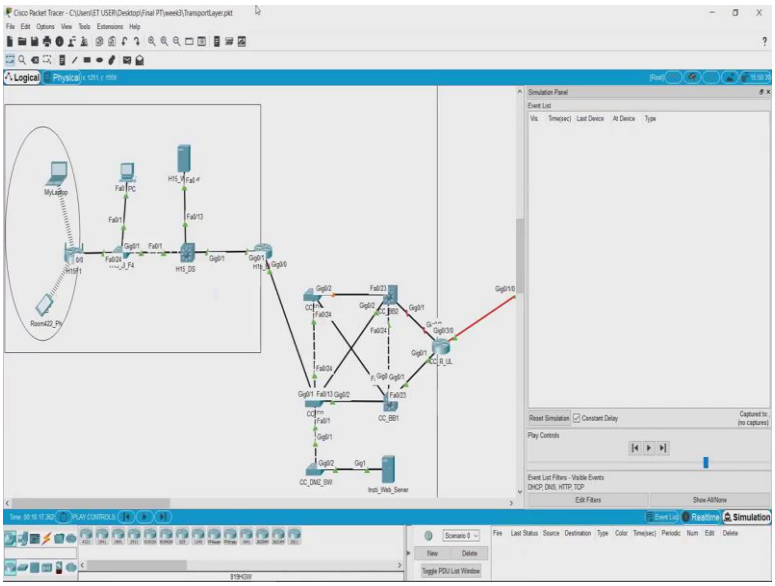
Welcome to this video on transport layer in packet tracer.

(Refer Slide Time: 00:21)



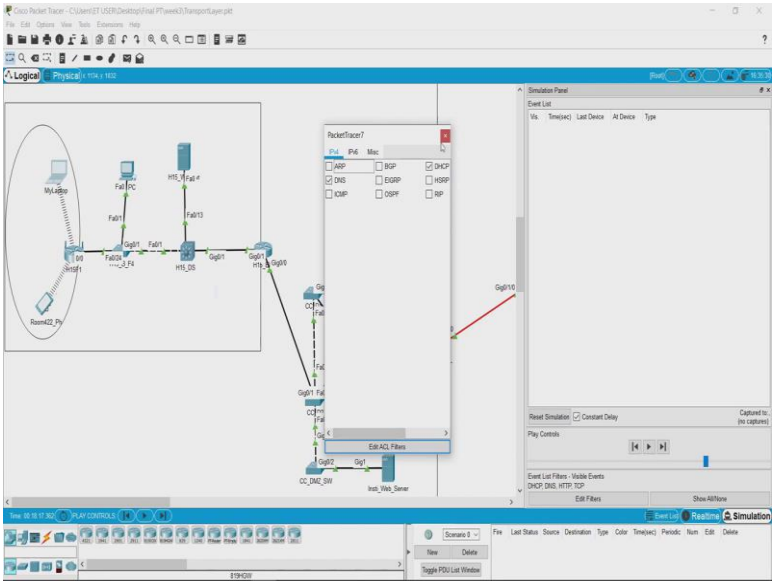
In this video, we are going to see two concepts of TCP and UDP in transport layer. We have already seen that TCP is a connection oriented protocol and UDP is a connectionless protocol. So, we will look in detail how does these two work.

(Refer Slide Time: 00:41)



Here, I have the same network which you have been seeing from past couple of weeks. I have a campus network here with this being the network of a hostel and this being the backbone and the campus web server which is connecting the computers on the campus computers and devices on the campus to the outside world.

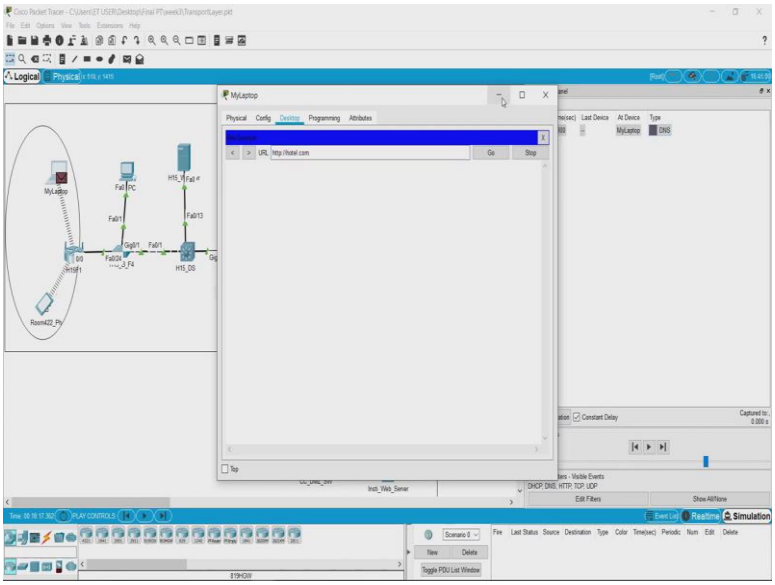
(Refer Slide Time: 01:25)



Let us try to access a web site from a laptop, from a hostel and see when a website is being accessed, it initially sends a DNS request; DNS protocol works on top of UDP. So, we can also see how UDP works while we access a website. But before that you have to

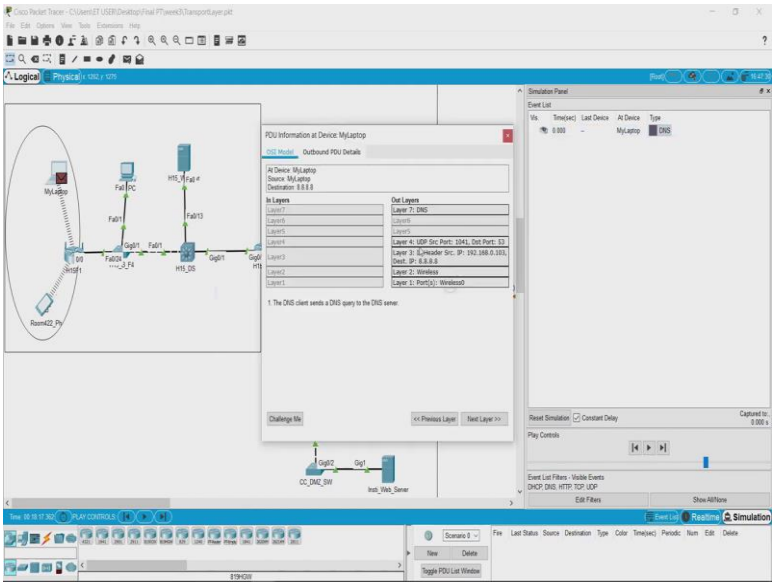
make sure that you have turned on all the required packets to be seen in the simulation mode.

(Refer Slide Time: 02:15)



Let us go and try to access a website called hotel.com, you can see that a DNS request is made.

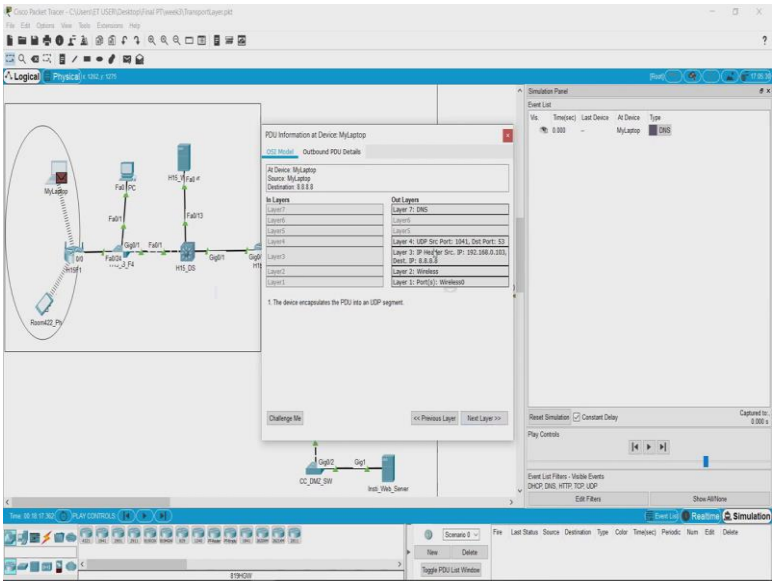
(Refer Slide Time: 02:27)



And if we go and see the DNS request you can see that it is working on top of UDP protocol. Both the protocols in the transport layer TCP and UDP, make use of what is known as port numbers. So, here we can see that a port number of 1041 has been

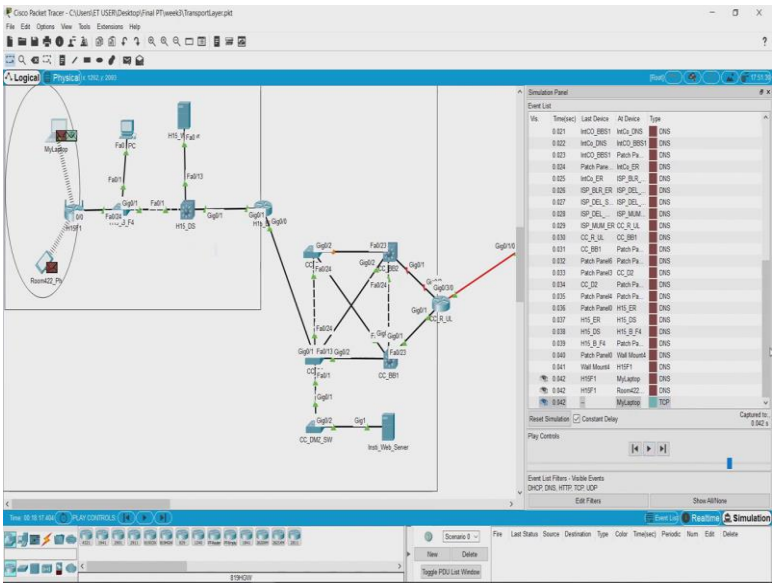
assigned as the source port and destination port is 53 which is the port number for DNS service. So, the DNS request is wrapped in a UDP packet,

(Refer Slide Time: 02:55)



encapsulated in UDP segment and it is sent off the network.

(Refer Slide Time: 03:05)



Now, what happened was the laptop sent a DNS query to its DNS server and got back a reply. If you compare the path travelled by the DNS packets while going and while coming back, it need not be the same path because DNS traverses on UDP which is a connection less protocol.