Demystifying Networking
Department of Computer Science and Engineering
Indian Institute of Technology, Bombay

Lecture - 17
Inspecting the packets in Simulation Mode

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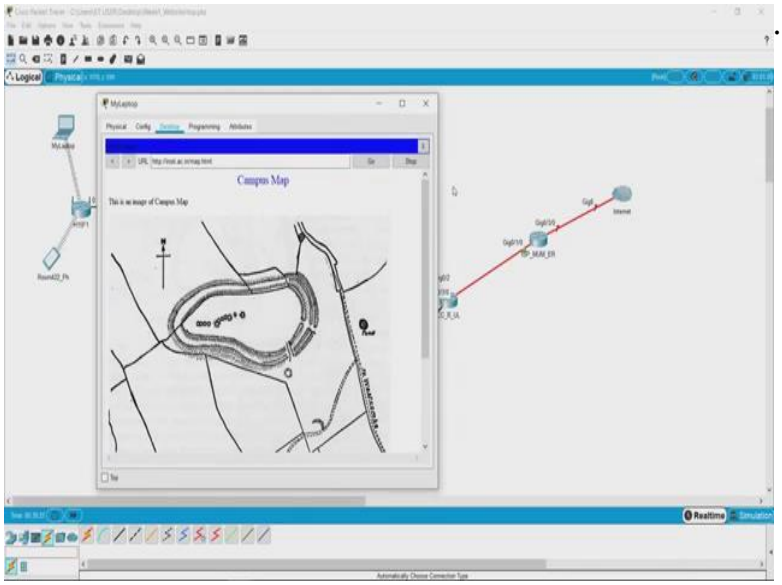

So, now, what we can do is, go back to the simulation mode. So, will I go back. I will try to reload this web page and hit run play.

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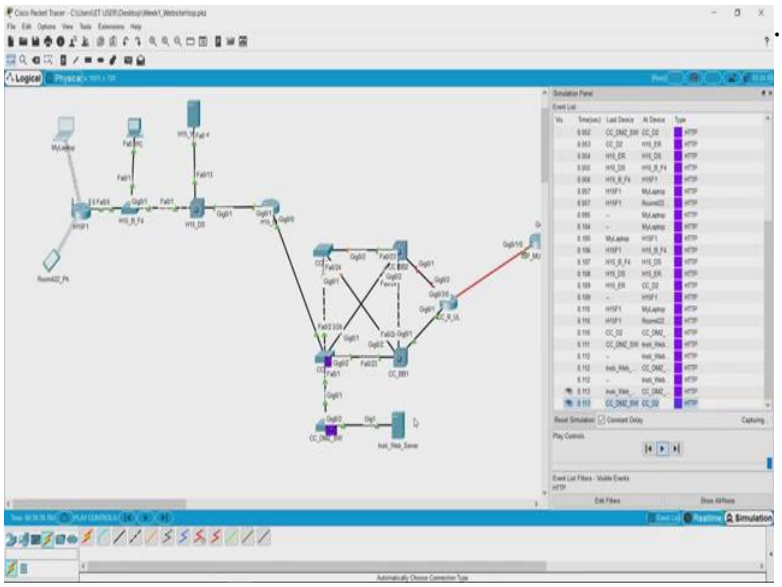

We let a few packets go around. So, we have a packet going to the hostel router and then to the switch and then to the server. So, in the future, we will see how these packets are able to determine on which path they are suppose to go and here what we see is one of the packets reaches the phone also, but the phone rejects it because it was not requested by the phone.

So, the second round of packets have started coming up and now we see a stream of packets has started going from the web server directly to the laptop.

So, what we can do is, we can pause this here and let us try to look at the information that is inside these packets. So, let us see the first one from my laptop.

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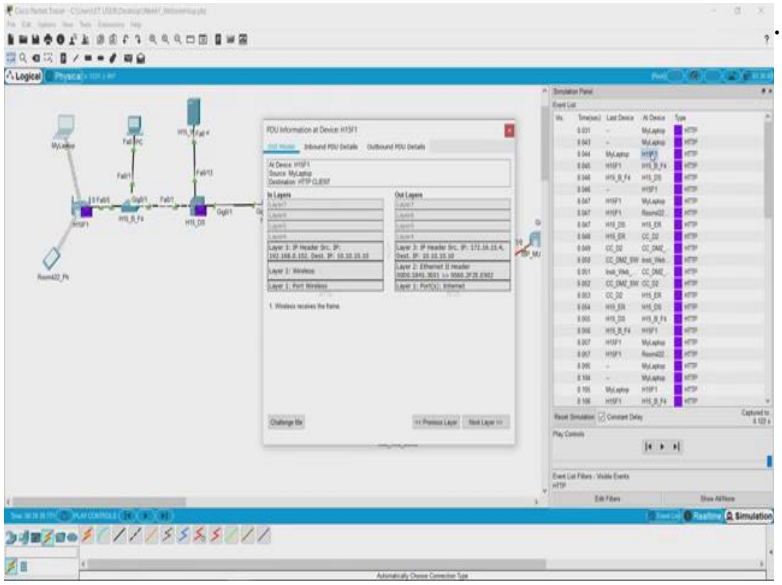

So, as you click on this, you can see this information that is available here. So, what you see here is the layered architecture of the communication and it says there are certain information like IP header source, there is some address over here and there is a destination address over here and then again there is another type of address called the MAC address over here and another is the destination MAC address over here.

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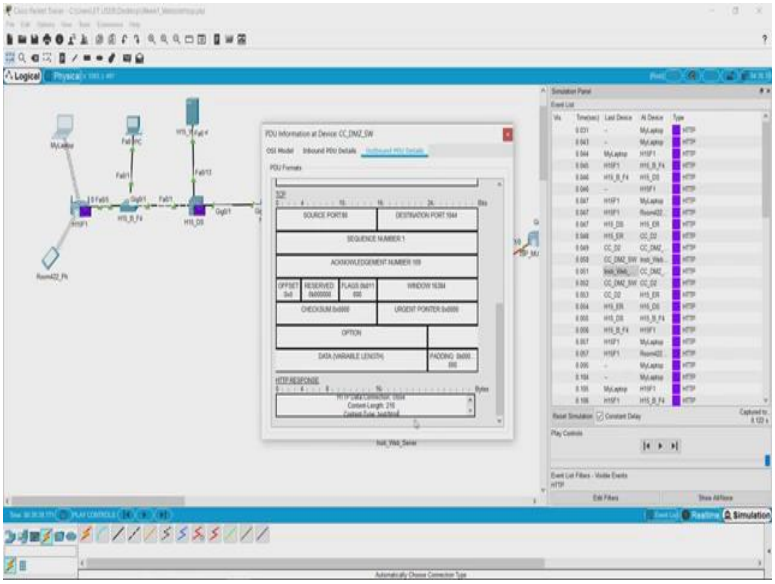

So, if you want to look at how the packets look actually, this is how they look. Now, let us close this one and we will go down and try to see what happens at the institute web server. This was the first one which said 200 content length was 2016, that is when the web page just loaded.

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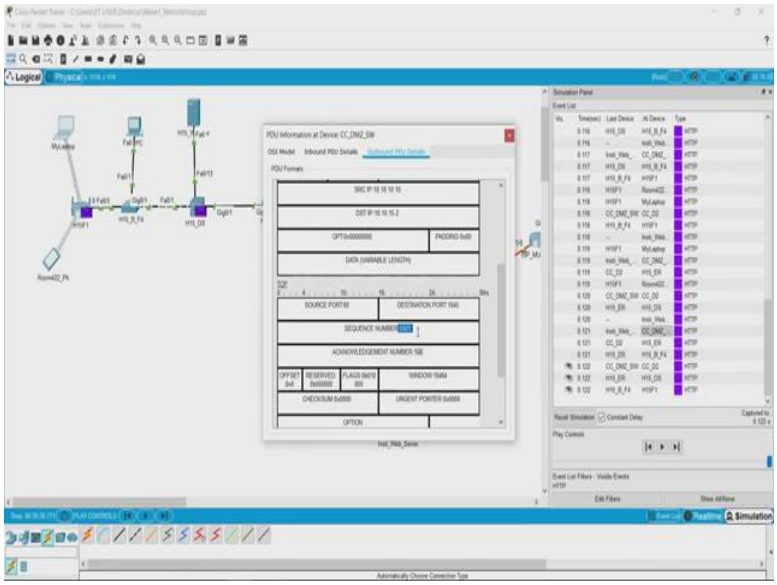

Now, let us go back and see what is the information that is available on packets which were streaming out of the issued server. So, what we see here is, there is a huge sequence number. Earlier what we saw was, the sequence number was 1 and the acknowledgement number was 1. So, now, what we see here is the sequence number is huge, that means, there are these many

packets which will have to be sent to send the entire image and the laptop has already received these many images.

This way the laptop is able to tell the server that these are the numbers I have received and based on these, the server and the laptop keep a track of how many more are to come. So, we just saw how communication happens over the network when you request a website and the server responds back.