# IMMERSIVE LEARNING ENVIRONMENT

## LAB: THREE-WAY HANDSHAKE LAB

### INSTRUCTIONS

Client Machine

Remote Server

Three-way handshake is a method, which is used to establish a connection between local host/client and server. It is a three-step method in which both client and server exchange SYN and ACK packets before actual data communication begins.

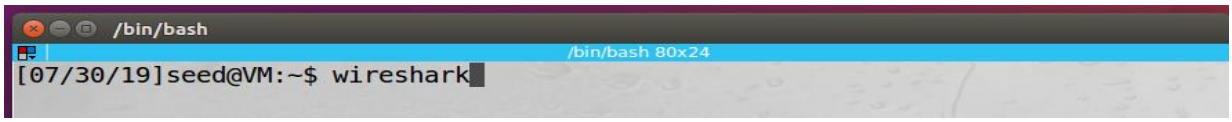
**STEP 1: Establish a TCP session between client and remote server**

Open a web browser on your Linux virtual machine. Select the Firefox web browser icon from quick lunch bar on left side of your screen.

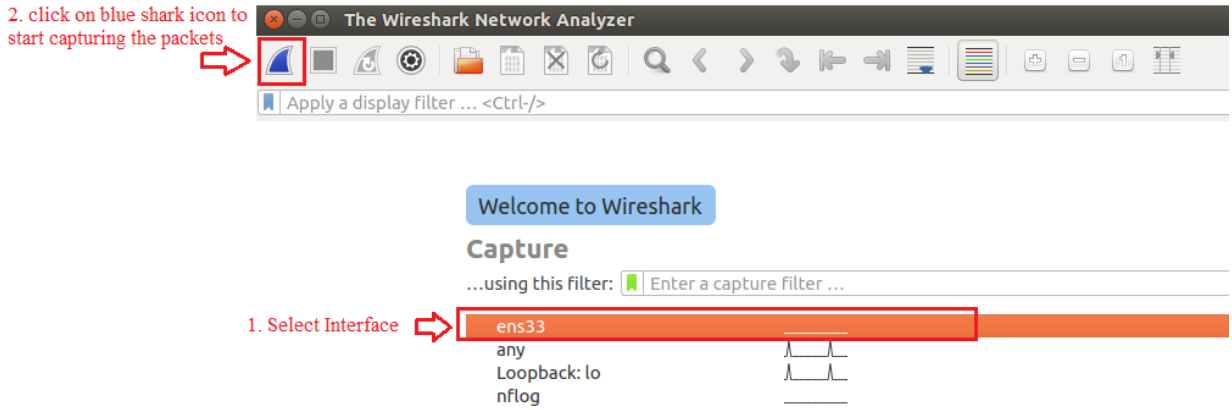
NOTE: Make sure your virtual machine is connected to an internet.


Now let's open Wireshark on our virtual machine from quick lunch bar or open terminal and type wireshark and hit enter on your terminal.


OR

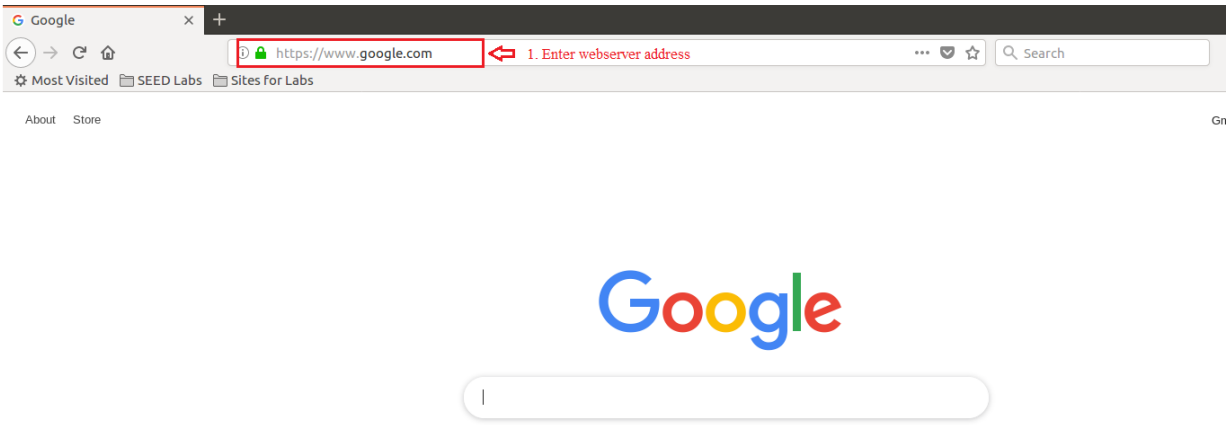




Select your virtual machine physical interface from Wireshark home screen. Most of the case it is usually first interface option on your Wireshark home screen.



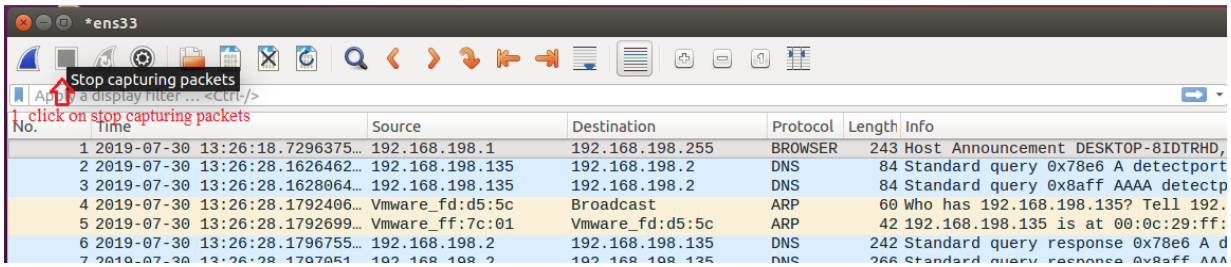
After selecting the interface form the Wireshark home screen click on blue shark icon on your Wireshark home screen.

Now let's enter web address on our Firefox web browser web address field and open the website.




## STEP 2: Analyze the captured packet on Wireshark

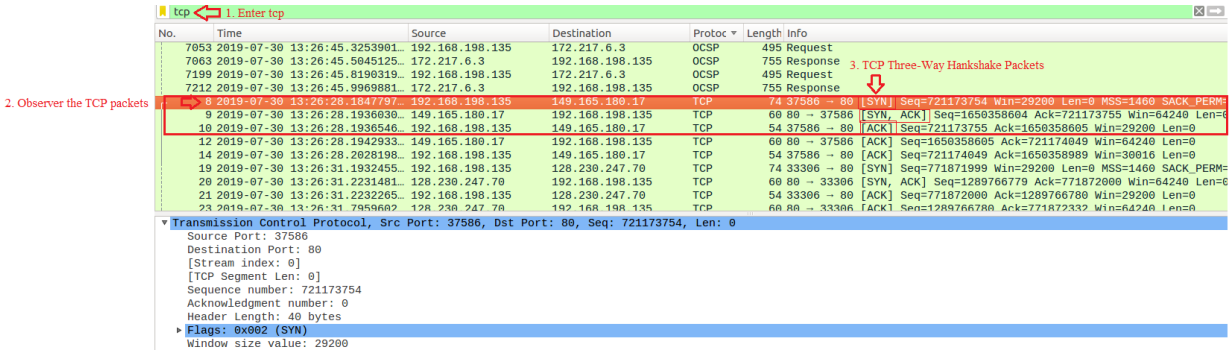
Once we have successfully opened the web address on our Firefox web browser. Let get back to our Wireshark active packet capture windows and stop capturing the packets.




Click on stop capturing packets icon on top of your Wireshark menu icon next to blue icon.

let's analyze the captured packets on Wireshark. You will notice a lot of packets.

Enter TCP on filter column below the menu icon and hit enter. The packets will be selected based on the filter option which makes easy to search capture packets. Lets focused on TCP protocol packets and observe the TCP packets follow. You will notice TCP SYN , SYN ACK and ACK packets stream with identical source and destination IP address associated with specific Destination port request. In our case it web request port 80. Find the detail on screenshot below.




## WHAT TO SUBMIT

Submit you work with detailed screenshots.