

Lab 4: Step-by-Step Instruction

Kui Wu

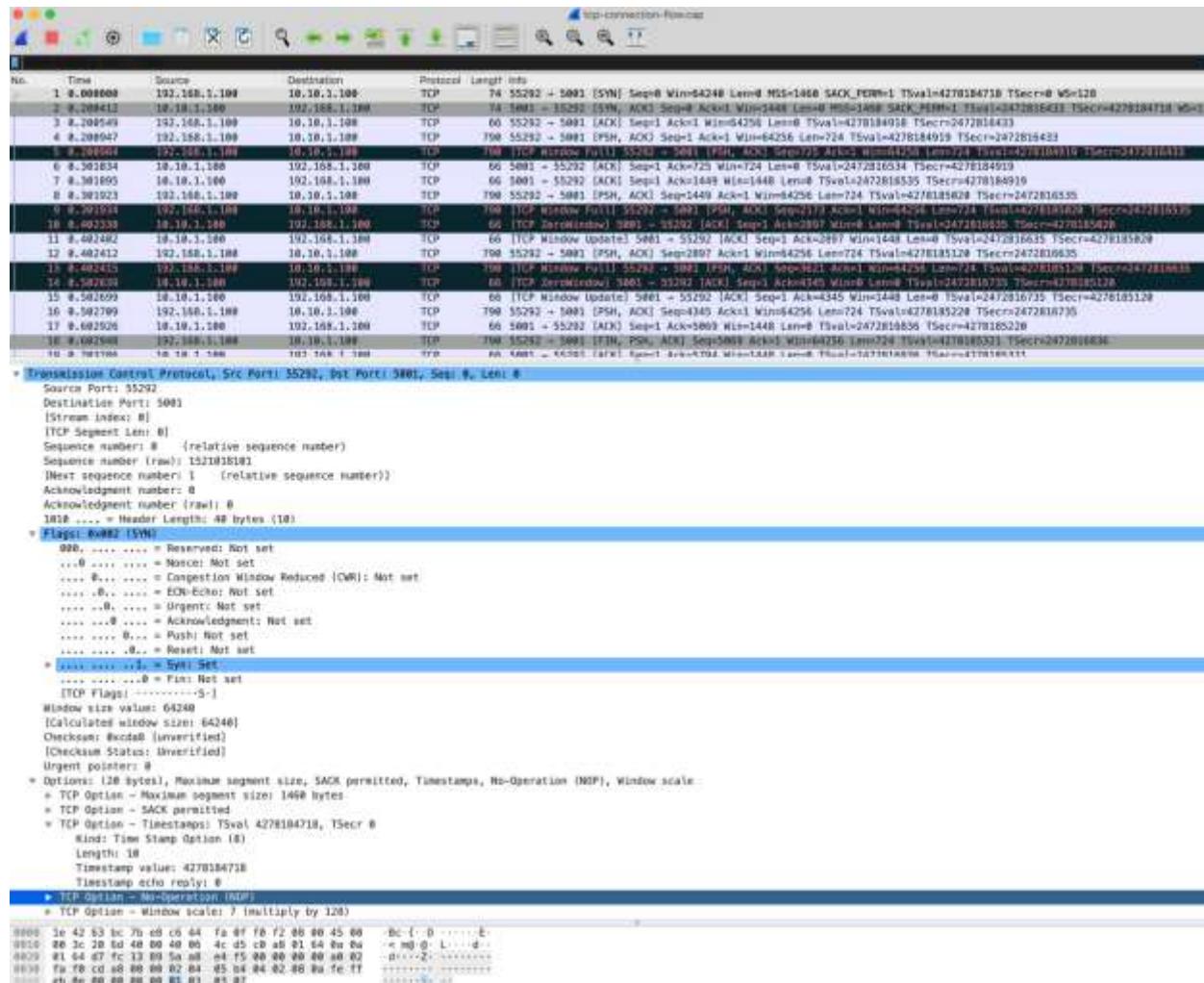
Objective: Understand TCP connection management and flow control

Note: This lab can be done at home using your local machine or at the ECS 360 virtual lab.

Step 1: If you have not installed wireshark (<https://www.wireshark.org/>) in your local computer, download and install wireshark in your local computer.

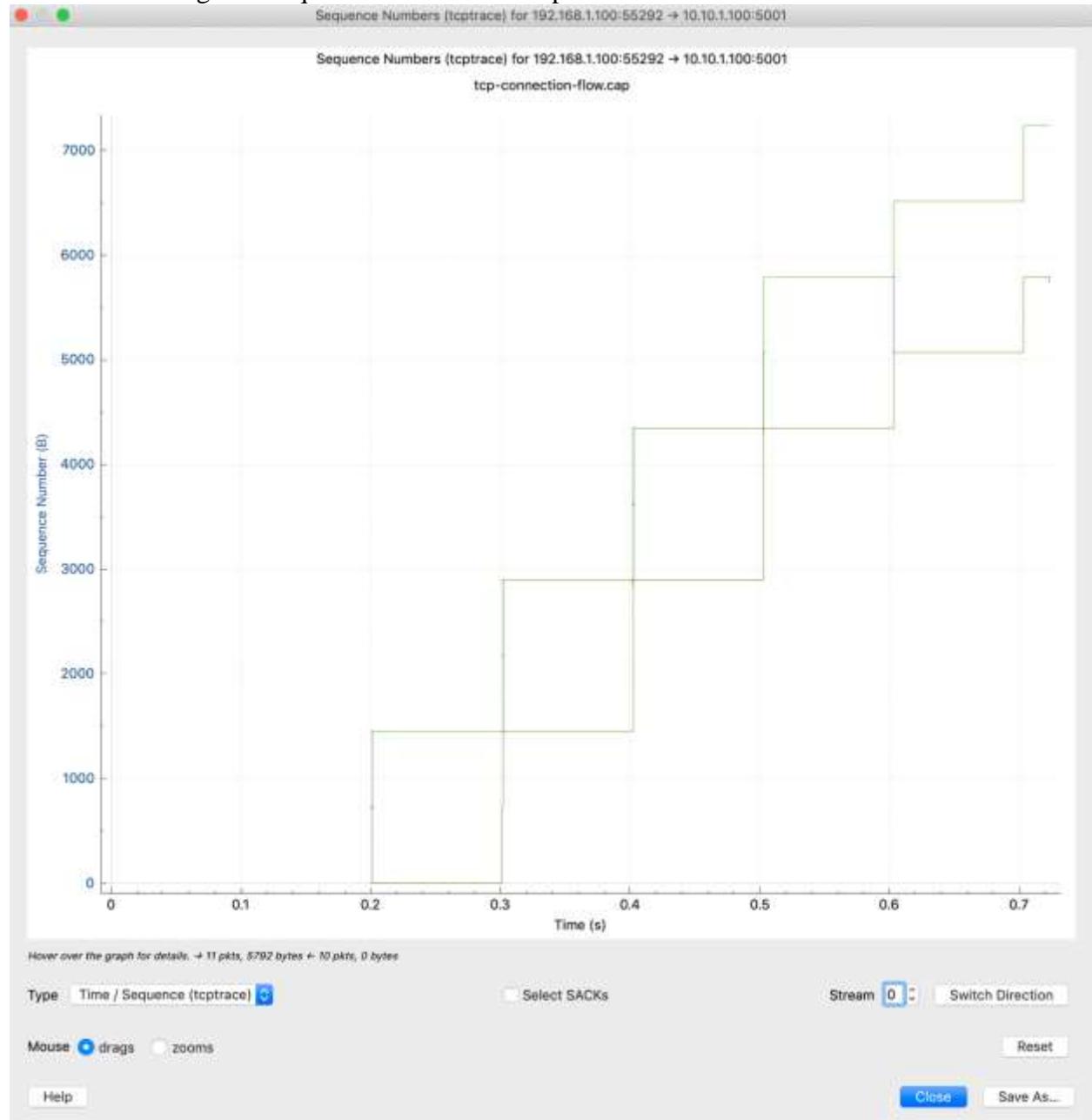
Step 2: Download *tcp-connection-flow.cap* from brightspace to your local computer and open it with WireShark. The file TracefileDescription.pdf in brightspace explains how the tcp trace file was captured.

Click on each individual packet. The information included in the TCP header of this packet is described at the bottom. Click on the “Flags” field (8 bits) to find out the value of each bit in this field.



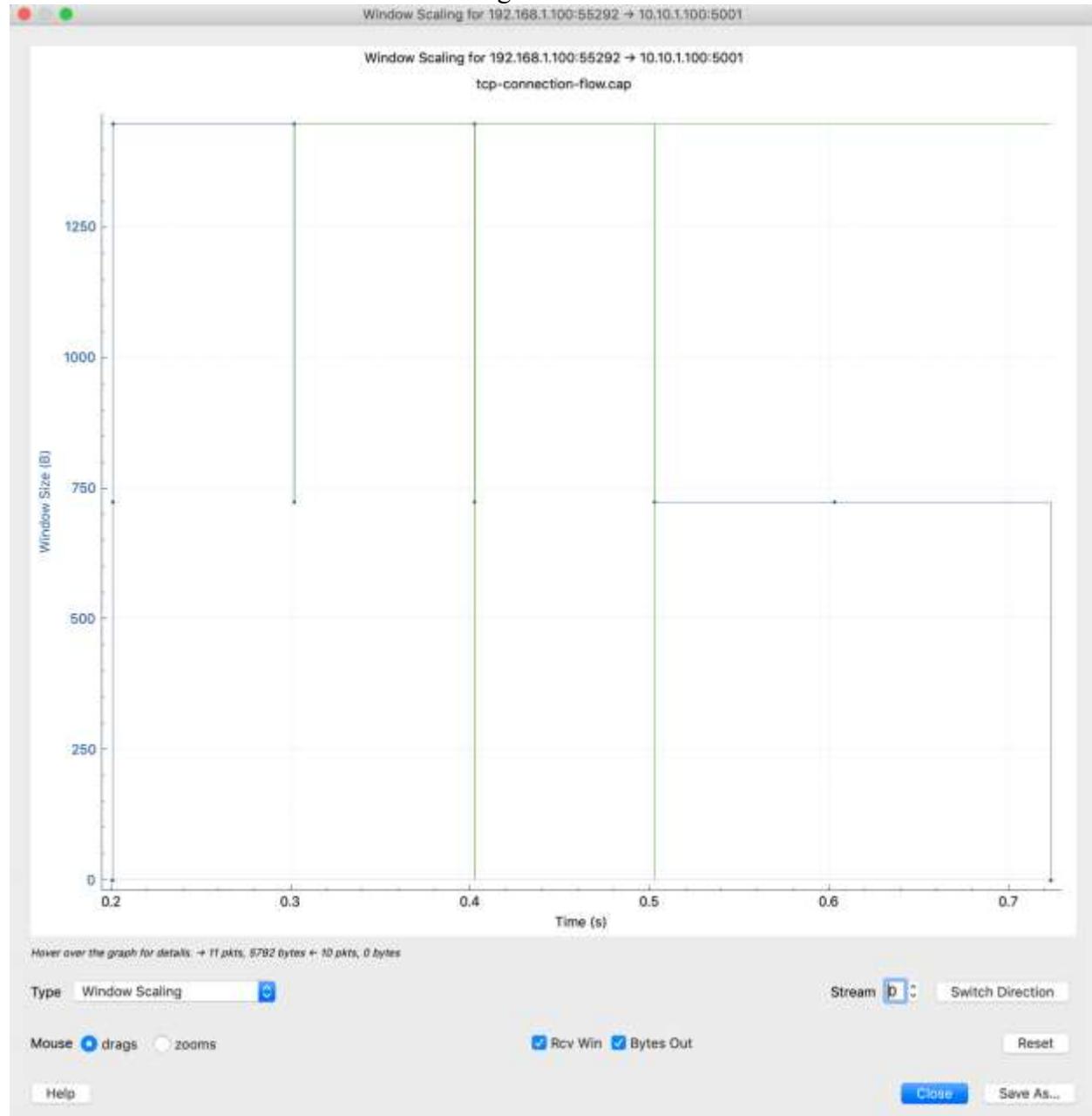
Step 3: Understand the changes of sequence numbers.

Statistics -> TCP Stream Graphs -> Time Sequence (tcptrace), Click “Switch Direction” to observe the changes of sequence numbers in the packets.



Step 4: Understand TCP flow control.

Statistics -> TCP Stream Graphs -> Window Scaling (Flow control). Click on “Switch Direction” to observe the window size changes on each side.



Step 5: Based on your analysis of the TCP trace, finish Homework 4 (posted in brightspace).