

# Section 7: Project 3 Intro



CSE 461 Computer Networks

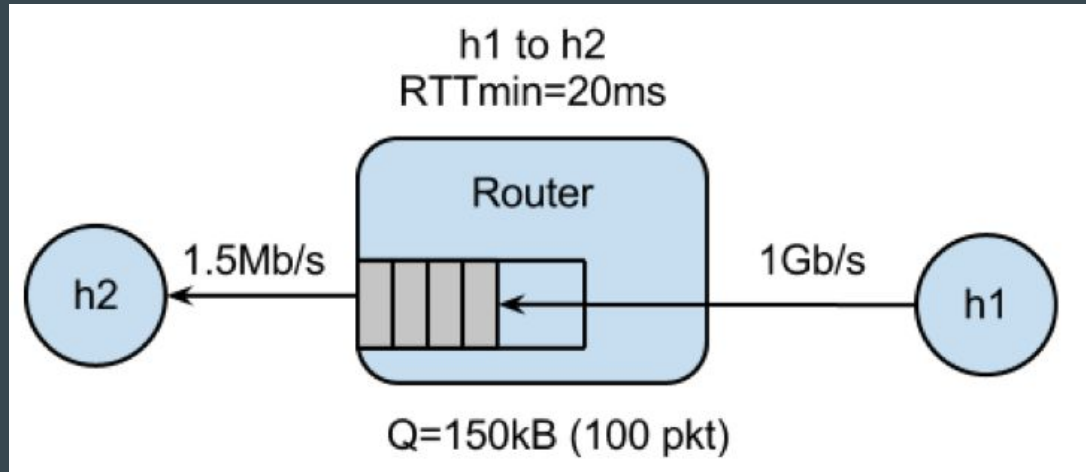
# Administrivia

- Quiz 3 is on Monday May 17
  - The topics are Application Layer and Network Security
- Homework 4 is due on May 25
- Project 3 is released! It is due on June 2

# Project 3: Bufferbloat

# What is Bufferbloat?

From Wikipedia, “bufferbloat is a cause of high latency in packet-switched networks caused by excess buffering of packets”



# Project 3

- We will simulate bufferbloat on our mininet network.
- Part 1: Setup
  - The same vagrant VM for project 2
  - We'll be using python3

# Project 3

- Part 2: TCP Reno
  - Modify `run.sh` and `bufferbloat.py` to set up the network and do the measurement on two queue length:  $q=20$  and  $q=100$
- Part 3: TCP BBR
  - Modify Part 2 to run the experiment using BBR

# Starter Code

- `run.sh`
  - Run the entire experiment
    - Run `bufferbloat.py` on  $q=20$  and  $q=100$
    - Generate latency and queue length graphs
- `bufferbloat.py`
  - Complete the TODOs
    - Setup the mininet topology and the experiment
    - Write shell commands to do the measurements

# Note

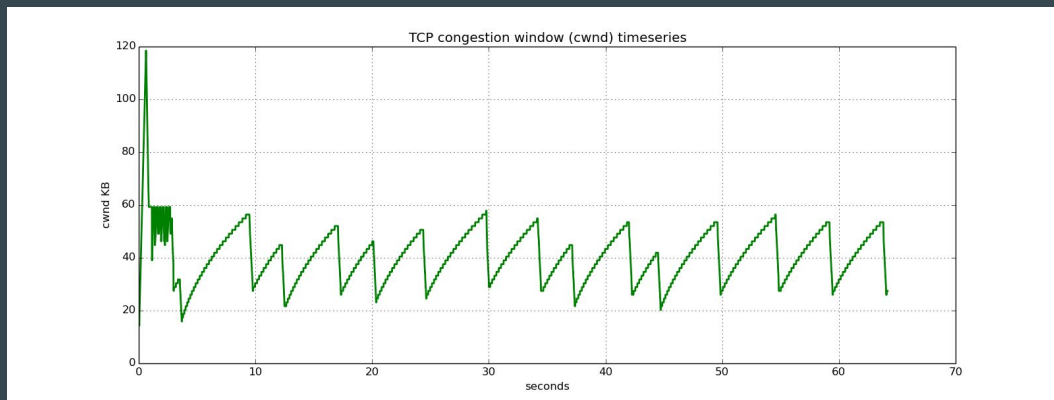
- `Sudo mn -c` to restart mininet
- Run `CLI()` in python to enter an interactive shell. This will be useful for debugging/ testing commands to run in h1/h2.
- Make sure that your curl command receives a valid response from the server before you use its time measurement



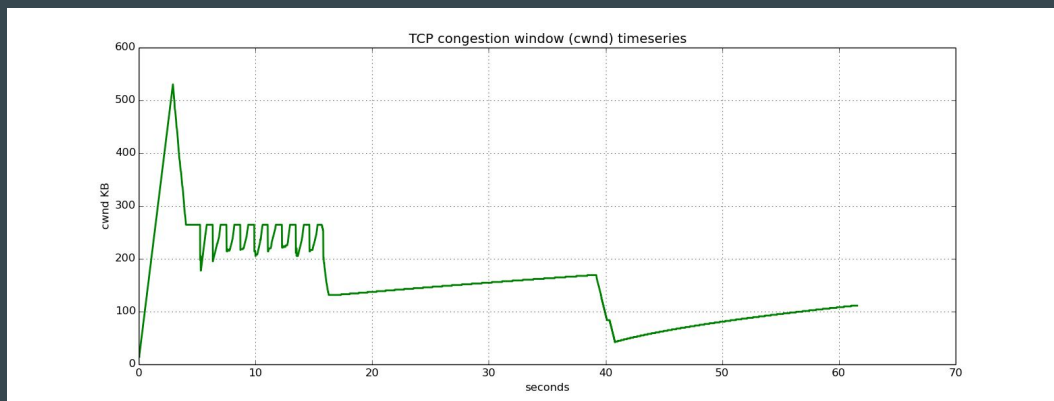
# Deliverables

- A zip file of
  - Final Code
  - README
  - 8 Plots

# Example Plots (TCP CWND)



$Q = 20$



$Q = 100$