

# CS 171 Assignment 2 Grading

All sites are started at the same time using the tmux command 'setw synchronizes-mode on'. Some tests use network delays. The delays are simulated with the traffic control utility tc using the following command:

**tc qdisc add dev lo root netem delay {number of milliseconds}ms**

## Simple

Setup

Bidirectional between 1 and 2 and between 2 and 3

No Delays

Command Files

Site 1	Site 2	Site 3
send 2 5	send 1 3	send 2 9
sleep 3	sleep 2	sleep 3
	snapshot	
	send 3 1	

Expected Output

Site 1	Site 2	Site 3
2.1: 8 0	2.1: 21 0 0	2.1: 1 0

## Message in Channel

Setup

Fully Connected

Delay communication on all channels by 100 ms

## Command Files

Site 1	Site 2	Site 3
send 3 6	send 3 5	sleep 2
	sleep 2	send 1 11
	send 3 1	snapshot

## Expected Output

Site 1	Site 2	Site 3
3.1: 15 0 0	3.1: 4 0 0	3.1: 10 0 1

## Simultaneous Snapshots

### Setup

Bidirectional between 1 and 2 and between 2 and 3

Delay communication on all channels by 200 ms

## Command Files

Site 1	Site 2	Site 3
send 2 4	send 3 4	send 2 2
sleep 1	sleep 1	sleep 1
snapshot	snapshot	send 2 5
sleep 2	sleep 2	sleep 2
	send 3 2	

## Expected Output

Site 1	Site 2	Site 3
1.1: 6 0	1.1: 12 0 0	1.1: 12 0
2.1: 6 0	2.1:12 0 5	2.1: 7 0

Or

Site 1	Site 2	Site 3
1.1: 6 0	1.1: 12 0 <b>5</b>	2.1: <b>7</b> 0
2.1: 6 0	2.1:12 0 5	1.1: 7 0

## (5) Ring Network

Setup

Ring network (1 -> 2 -> 3 -> 1)

Command Files

Site 1	Site 2	Site 3
send 2 1	send 3 1	send 1 1
sleep 1	send 3 1	send 1 4
send 2 1	send 3 1	sleep 2
send 2 1	sleep 4	snapshot
snapshot	send 3 1	send 1 1
send 2 1	send 3 2	sleep 2
sleep 3	sleep 2	send 1 1
send 2 1	send 3 1	send 1 1
sleep 1	send 3 1	sleep 2
send 2 1	snapshot	
snapshot	send 3 1	
send 2 1	send 3 1	
sleep 1		
send 2 1		

### Expected Output

Each file contains four snapshots, 1.1, 1.2, 2.1, and 3.1 not necessarily in that order. Each snapshot's numbers should add up to 30 across the 3 outputs.