

```
ssh zma4@cs.wpi.edu
ssh mlcneta.cs.wpi.edu
sudo -s
sysctl net.ipv4.tcp_congestion_control
echo "cubic" >
/proc/sys/net/ipv4/tcp_congestion_control
ip route show
curl
tcpdump -i any -c 5
ssh glomma
screen
control a d -> detached
screen -ls (still running at the back ground)
<ctrl+a> d
iperf3 -s
do screen before run iperf3
screen -x
splitting terminal: tumax
iperf3 -s
iperf3 -c glomma.cs.wpi.edu
cat /etc/hosts.allow
cat /etc/sudoers.d    add our usernames&PWD
scp pcap
tshark tcap -> csv
```

Remote SSH

GitHub/Satellite/Experiments/ThroughputTrails  
change cleanup/start\_iperf part

sudo tcptraceroute google.com

trace on both glomma & server

downstream traffic

from mlca to client

run iperf3 on mlca -r

tshark -r pcap mb/s

0.0101 1405, group parameter as 5ms

ssh -key to login without password

logout/exit

sudo both

iperf3 mlcnetA

iperf

tcpdump -i ens2

ifconfig

iperf3 mlcnetA -r

-r(reverse)

tcptrace pcap

tshark

make a graph

x-axis: time

y-axis: MB/s (0-150)

Then

scp for 1GB

mosh mlneta

mosh glomma

scp -p zma4@mlneta.cs.wpi.edu

>20 secs of slow start

TCP flow control???

Large congestion window for future trials

Sudo sysctl -w net.ipv4.tcp\_mem= '600000 600000  
600000'

net.ipv4.tcp\_mem rmem wmem

MB/s >24

Script for running 1 trial to set proxy on/off for trace

Script for rerunning the above script for 5+ times

Script cross 4 servers

(Timestamp on pcap)

Throughput over time graph

UDP Ping?

250ms

Loops order:

Iteration

Protocol

Proxy

Steady state

Overall