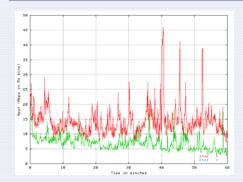


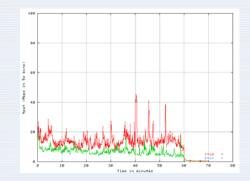
## **Experiments using GENI-Tmix**



THE UNIVERSITY
of NORTH CAROLINA
at CHAPEL HILL

## Tmix on ProtoGENI





Throughput in the two directions – same experiment, different scales on Y-axis ~150,000 TCP connections over one hour on two ProtoGENI nodes

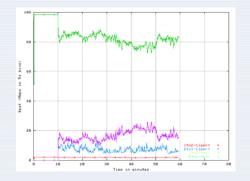
## Tmix as background traffic w/ 1 lperf flow

Tmix (same as above) running as background traffic with one Iperf flow as the main application.

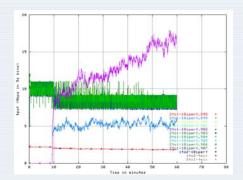
Iperf flow started at time t=0 and Tmix started at time t=10min

Note the change in throughput of the Iperf flow at time t=10min

Compare the throughput of Tmix on the right vs. the throughput above



## Tmix w/ 10 Iperf flows



Tmix (same as before), now with ten Iperf flows

Iperf flows started at time t=0 and Tmix started at time t=10min

Note the change in throughput of the Iperf flows (solid green) at time t=10min

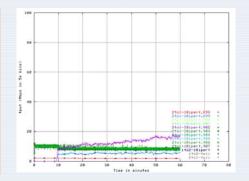
Compare the throughput of Tmix on the left vs. the throughput of Tmix with no Iperf flows.

Throughput in the two directions – same experiment (above and below), but different scales on Y-axis

Experiment is same as above with Tmix and ten Iperf flows.

The ten Iperf flows are identified by their different port numbers.

Note the change in throughput for the ten Iperf flows sharing the 100Mbps link at time t=10min when the Tmix flows started.



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