

Topology A:

Latency:

Use the ping command in the terminal. Latency = RTT / 2

To acquire enough data to assume normal distribution, I let the PING command run 50 times for each link

L1: Avg RTT = 82.139 ms; Latency = 41.0695 → **41.07 ms**

Command: h1 ping h3

L2: Avg RTT = 22.134 ms; Latency = **11.067 ms**

Command: h3 ping h4

L3: Avg RTT = 41.869 ms; Latency = 20.9345 → **20.935 ms**

Command: h4 ping h5

L4: Avg RTT = 62.118 ms; Latency = **31.059 ms**

Command: h4 ping h8

Throughput:

Use the iperf command in terminals.

L1: 18.4 Mbits/sec

Commands (in order):

1. xterm h3 & xterm h1 (open terminals on hosts h3 and h1)
2. h3 terminal: iperf -s -p 4000 (run an iPerf server on h3)
3. h1 terminal: iperf -c 10.0.0.3 -p 4000 (run an iPerf client on h1 that connects to the server on h3)

L2: 37.1 Mbits/sec

Commands (in order):

1. xterm h3 & xterm h4 (open terminals on hosts h3 and h4)
2. h3 terminal: iperf -s -p 4000 (run an iPerf server on h3)
3. h4 terminal: iperf -c 10.0.0.3 -p 4000 (run an iPerf client on h4 that connects to the server on h3)

L3: 28.0 Mbits/sec

Commands (in order):

1. xterm h4 & xterm h5 (open terminals on hosts h4 and h5)
2. h4 terminal: iperf -s -p 4000 (run an iPerf server on h4)
3. h5 terminal: iperf -c 10.0.0.4 -p 4000 (run an iPerf client on h5 that connects to the server on h4)

L4: 18.7 Mbits/sec

Commands (in order):

1. xterm h4 & xterm h8 (open terminals on hosts h4 and h8)
2. h4 terminal: iperf -s -p 4000 (run an iPerf server on h4)
3. h8 terminal: iperf -c 10.0.0.4 -p 4000 (run an iPerf client on h8 that connects to the server on h4)

Topology B:

Latency: Using ping command , which was run 10 times.

Link between e1 and a1 (h1 ping h2)

L1: Avg RTT = 41.609 ms; Latency = 20.80 ms

Command: h1 ping h2

Link between a1 and c1 (h3 ping h5)

L2: Avg RTT = 246.578 ms; Latency = 123.289 ms

Command: h3 ping h5

Link between e1 and h1 (h1 ping h2)

L3: Avg RTT = 41.609 ms; Latency = 20.80 ms

Command: h1 ping h2

Throughput:

Use the iperf command in terminals.

L1: 9.49 Mbits/sec

Commands (in order):

4. xterm h2 & xterm h1 (open terminals on hosts h2 and h1)
5. h2 terminal: iperf -s -p 4000 (run an iPerf server on h2)
6. h1 terminal: iperf -c 10.0.0.2 -p 4000 (run an iPerf client on h1 that connects to the server on h2)

L2: 9.02 Mbits/sec

Commands (in order):

4. xterm h3 & xterm h5 (open terminals on hosts h3 and h5)
5. h3 terminal: iperf -s -p 4000 (run an iPerf server on h3)
6. h5 terminal: iperf -c 10.0.0.3 -p 4000 (run an iPerf client on h5 that connects to the server on h3)

L3: 9.49 Mbits/sec

Commands (in order):

4. xterm h2 & xterm h1 (open terminals on hosts h2 and h1)
5. h2 terminal: iperf -s -p 4000 (run an iPerf server on h2)
6. h1 terminal: iperf -c 10.0.0.2 -p 4000 (run an iPerf client on h1 that connects to the server on h2)