

# WIDE AREA NETWORKS: Project 1

## RELIABLE UDP TRANSPORT RESULTS

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The best transfer rate was obtained using window size 200 for both LAN and WAN. The best timeout for LAN is 805 microseconds and 40950 microseconds for WAN.

WAN has been emulated using VMs node-0 and node-1 with 20ms latency which makes it a total of 40ms round trip delay.

The results are as follows.

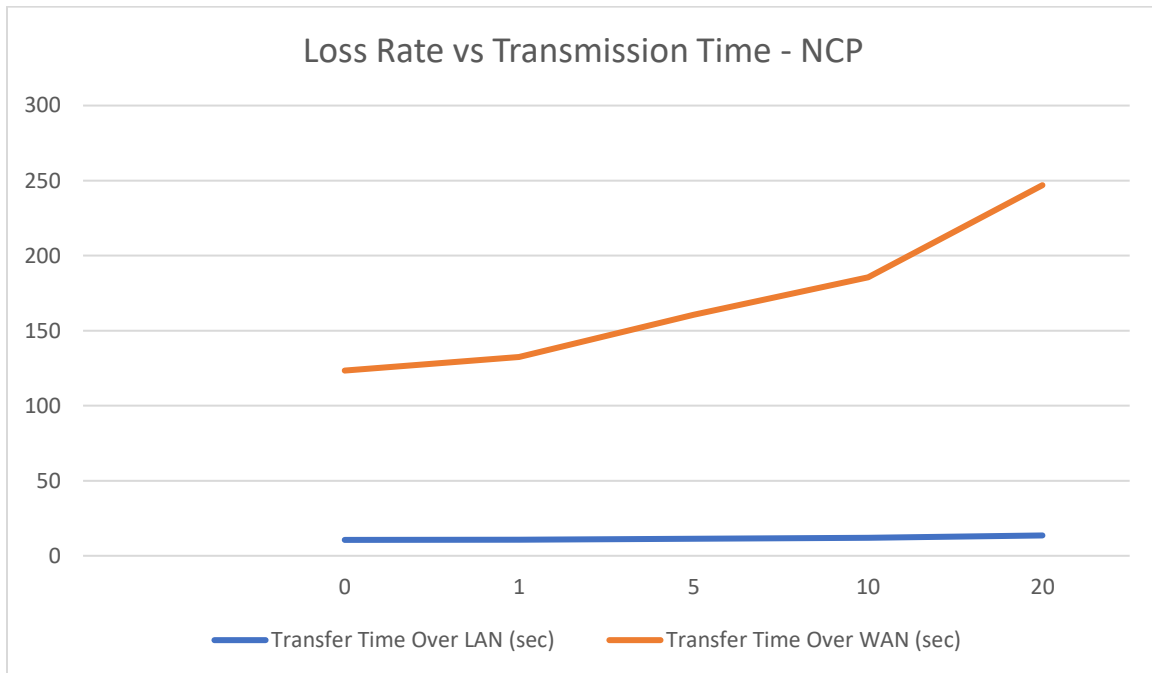


Table for NCP Transfer Time:

Loss Rate %	Transfer Time Over LAN (sec)	Transfer Time Over WAN (sec)
0	10.58	123.42
1	10.81	132.38
5	11.30	160.71
10	11.96	185.45
20	13.55	246.95
30	15.73	328.74

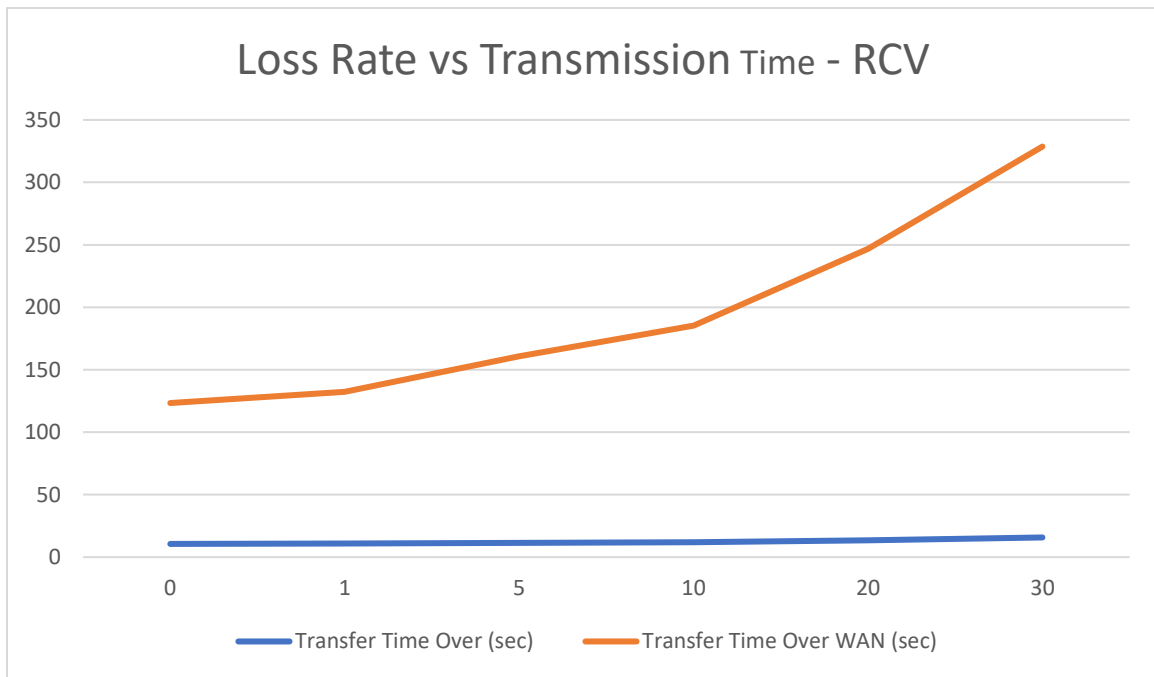


Table for RCV Transfer Time:

Loss Rate %	Transfer Time Over LAN (sec)	Transfer Time Over WAN (sec)
0	10.57	123.34
1	10.81	132.30
5	11.30	160.62
10	11.96	185.36
20	13.54	246.87
30	15.73	328.66

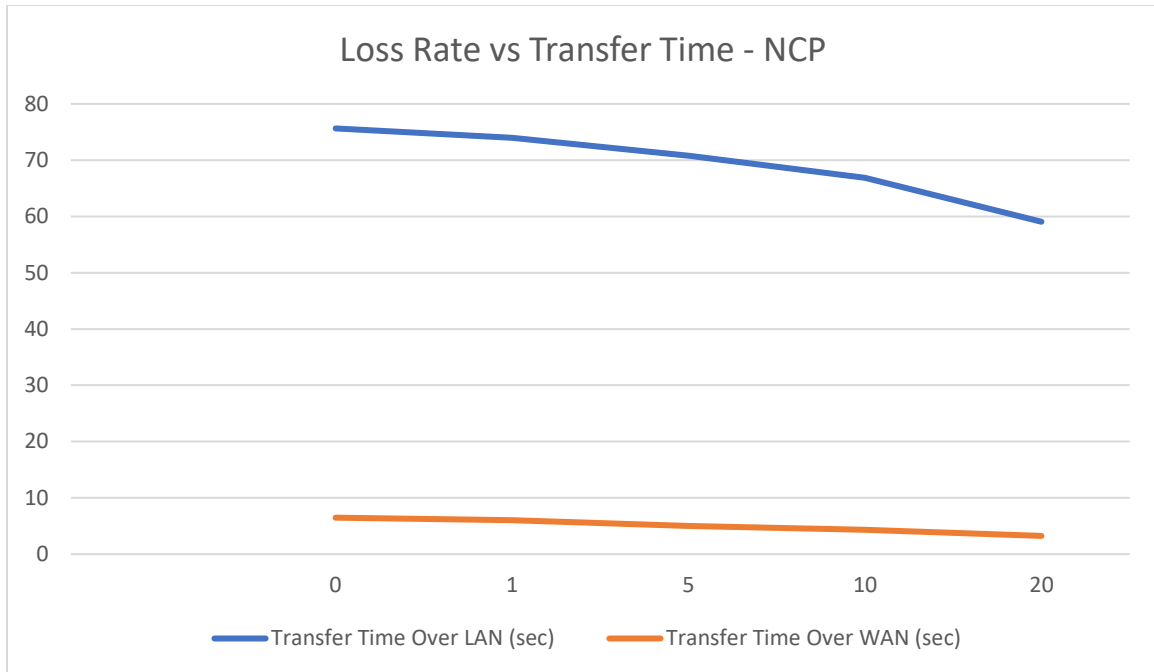


Table for NCP Transfer Rate:

Loss Rate %	Transfer Rate Over LAN (Mbits/sec)	Transfer Rate Over WAN (Mbits/sec)
0	75.64	6.48
1	74.00	6.04
5	70.78	4.98
10	66.88	4.31
20	59.06	3.24
30	50.84	2.43

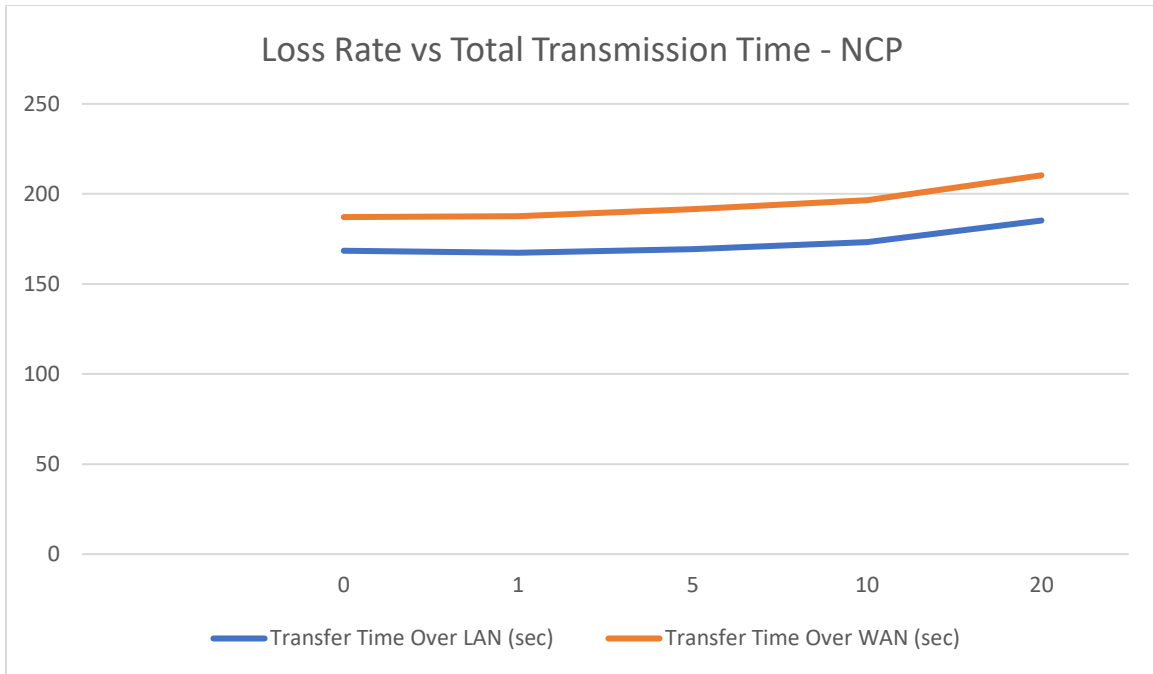


Table for NCP Total Transmission (Including retransmission):

Loss Rate %	Total Transmission (MB) Over LAN	Total Transmission (MB) Over WAN
0	168.53	187.16
1	167.35	187.63
5	169.39	191.54
10	173.31	196.49
20	185.24	210.34
30	197.66	226.12

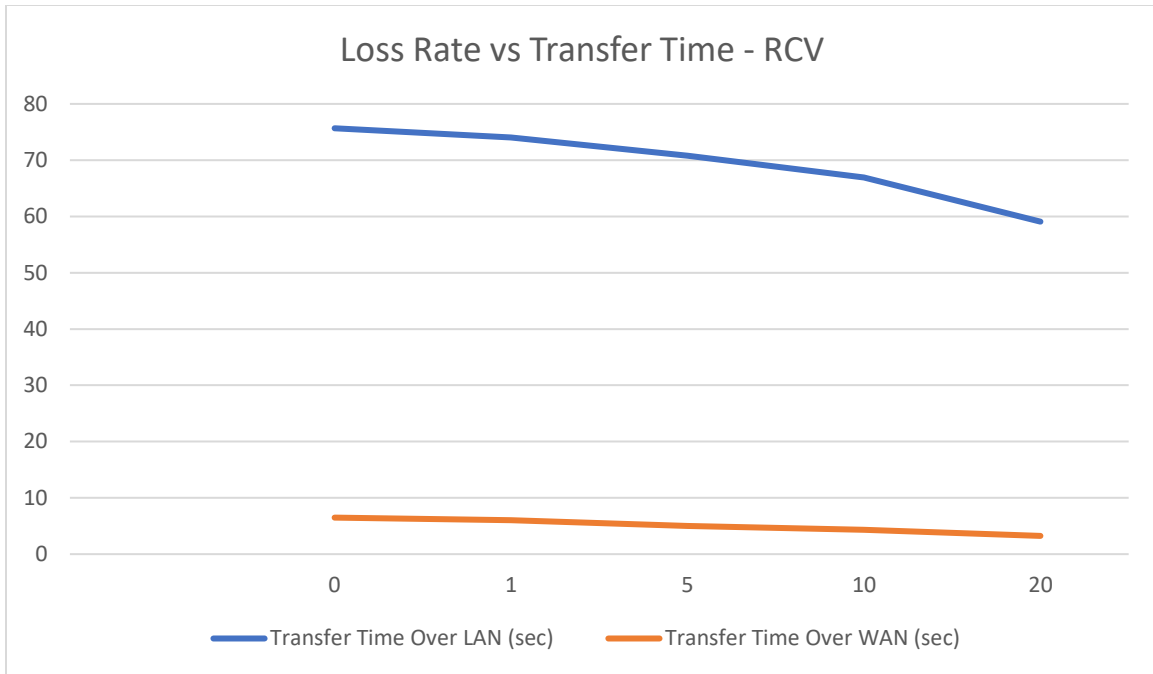


Table for RCV Transfer Rate:

Loss Rate %	Transfer Rate Over LAN (Mbits/sec)	Transfer Rate Over WAN (Mbits/sec)
0	75.67	6.49
1	74.02	6.05
5	70.80	4.98
10	66.90	4.32
20	59.08	3.24
30	50.86	2.43