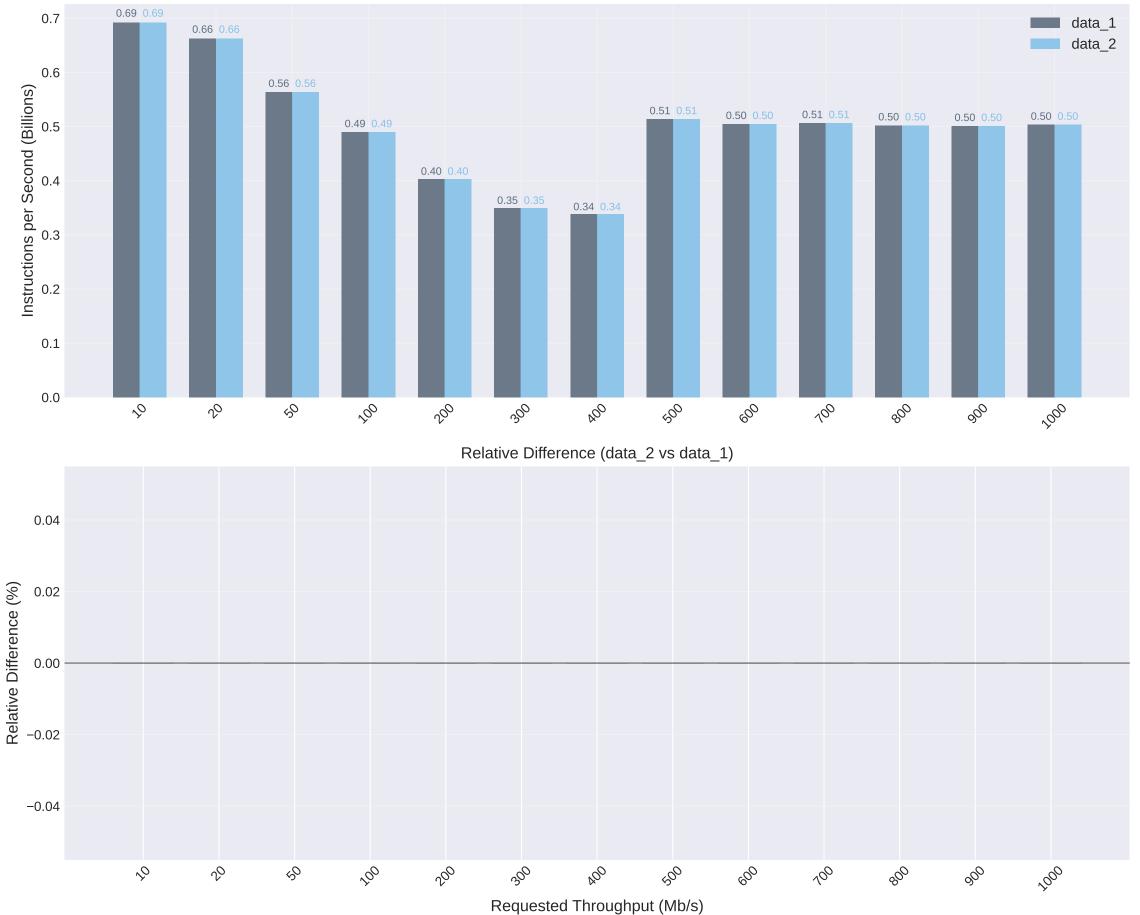
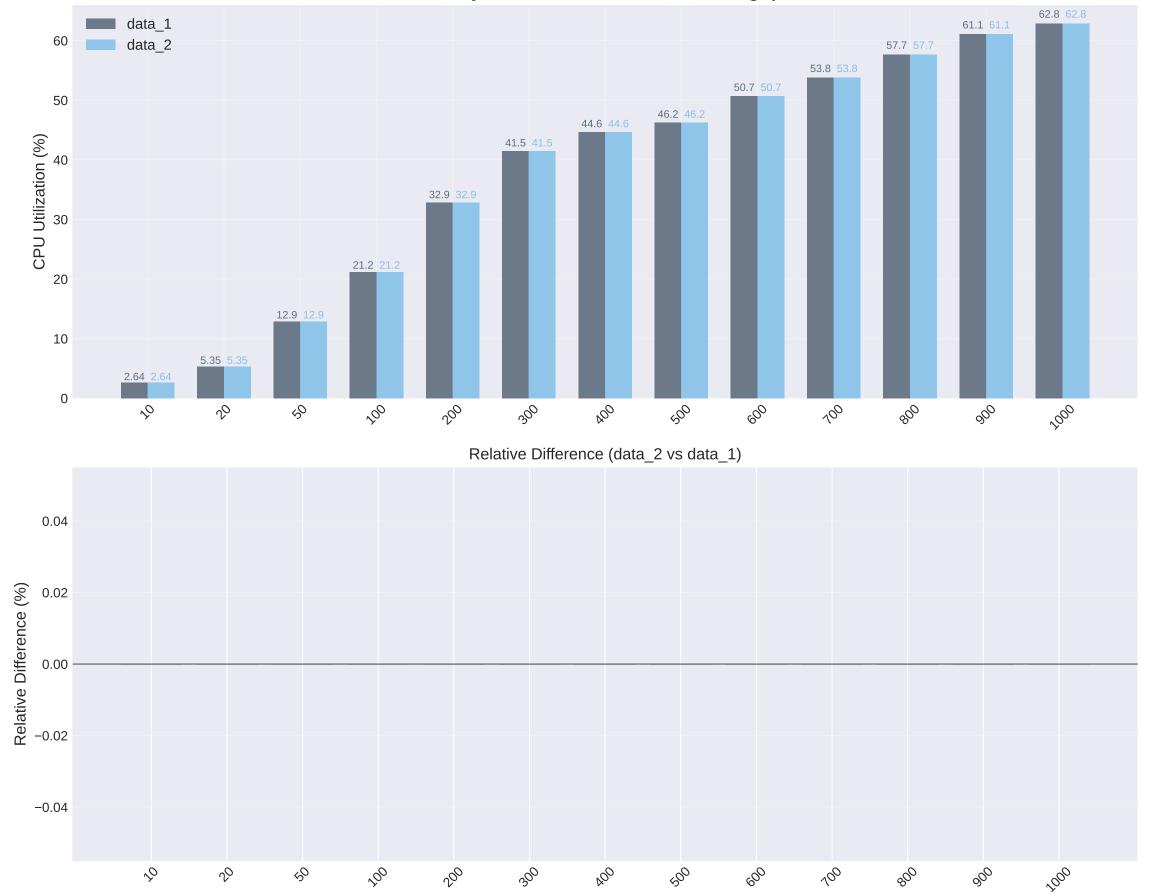
Instructions per Second vs Throughput



Received Throughput vs Requested with CPU Utilization Overlay 1000 data_1 Recv Throughput 957.3957.3 100 data_2 Recv Throughput data_1 CPU Util 900.0900.0 data_2 CPU Util 800.0800.0 800 80 700.0700.0 Received Throughput (Mb/s) 62.8% 600.0600.0 61.1% 600 CPU Utilization (%) 57.7% 53.8% 500.0500.0 50.7% 46.2% 44.6% 41.5% 400 300.0300.0 200.0200.0 200 20 12.9% 100.0100.0 50.0 50.0 2.6% 20.0 20 0 900 200 NOO 400 700 300 600 100 900 2000 30 20 50

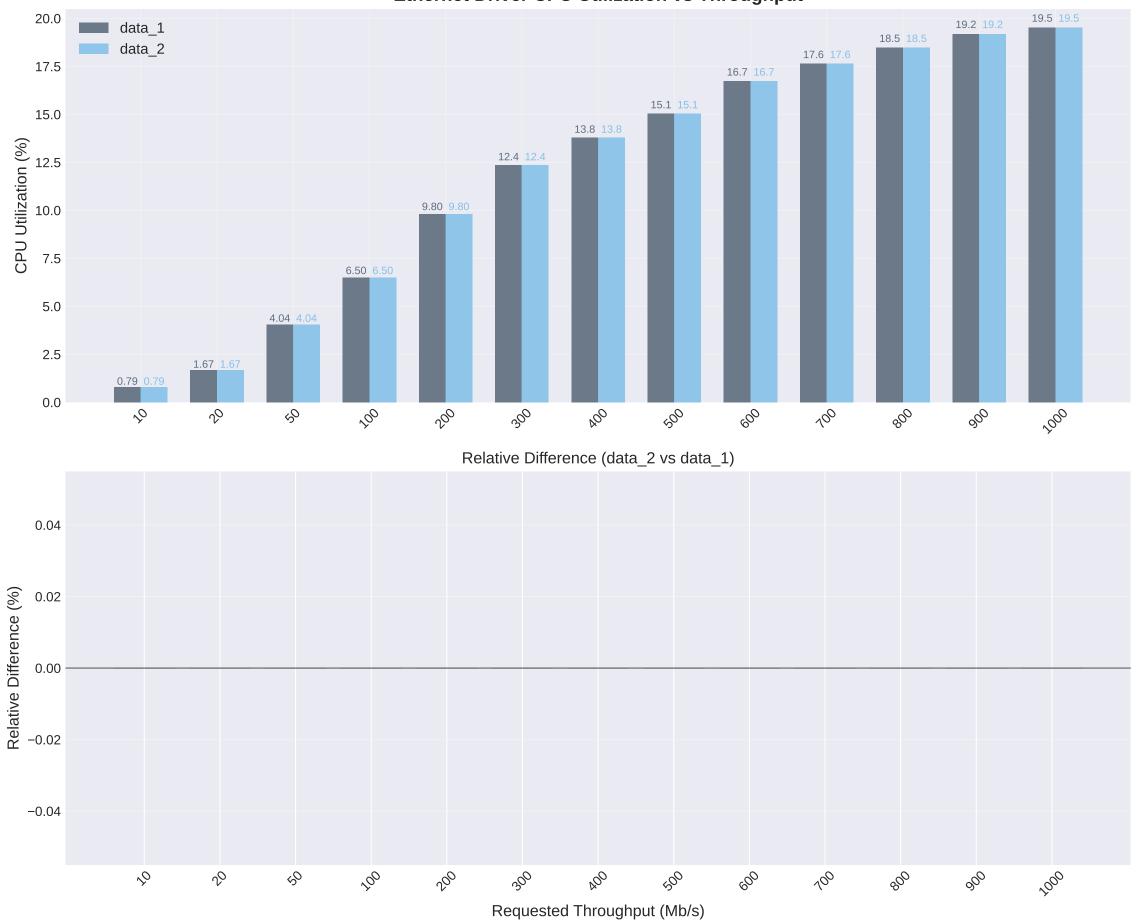
Requested Throughput (Mb/s)

Total System CPU Utilization vs Throughput

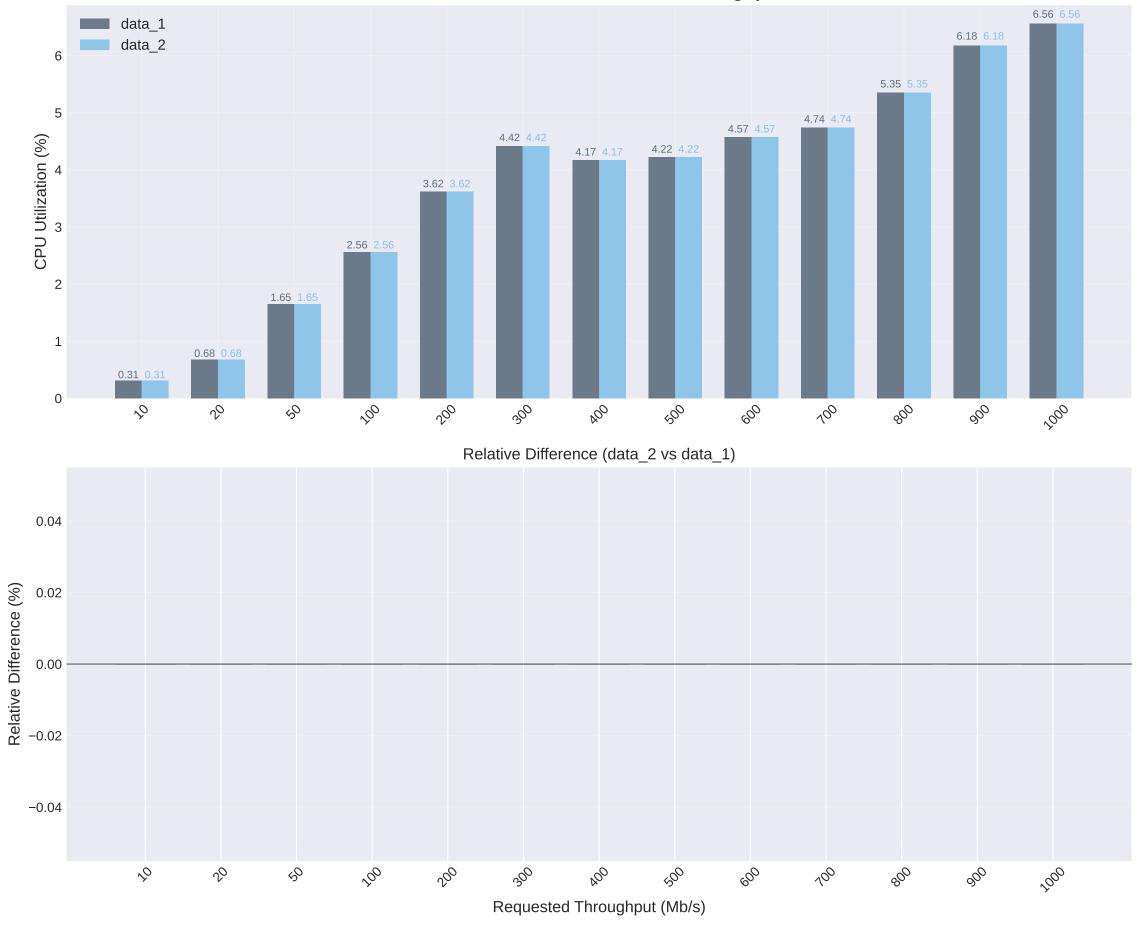


Requested Throughput (Mb/s)

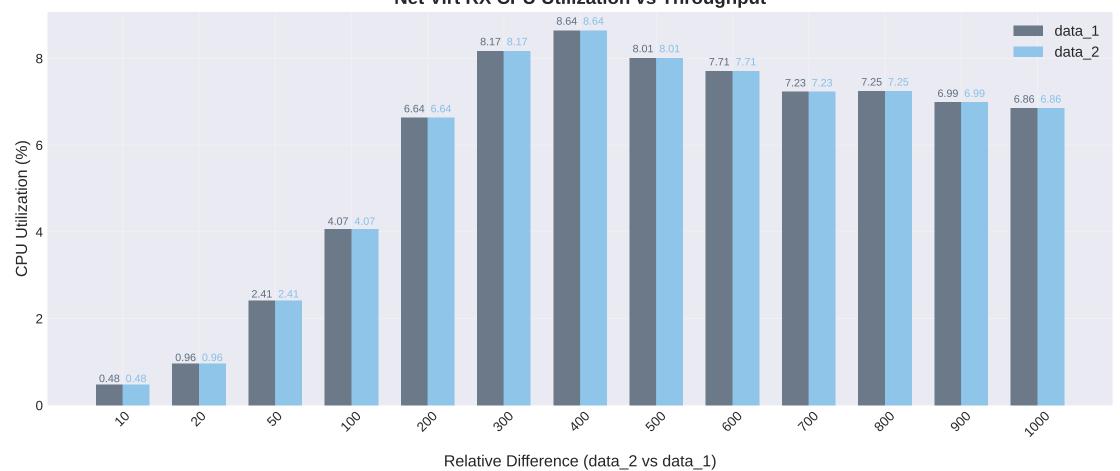
Ethernet Driver CPU Utilization vs Throughput

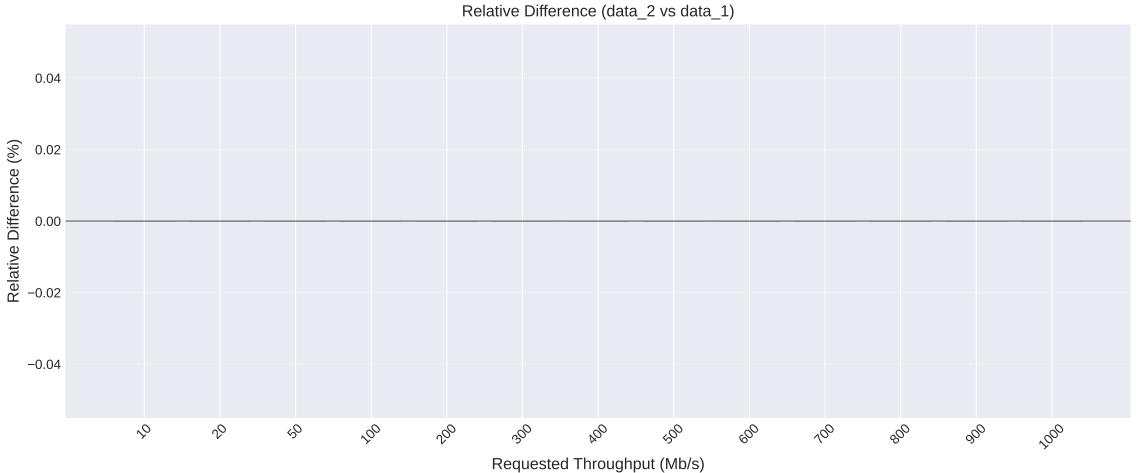


Net Virt TX CPU Utilization vs Throughput

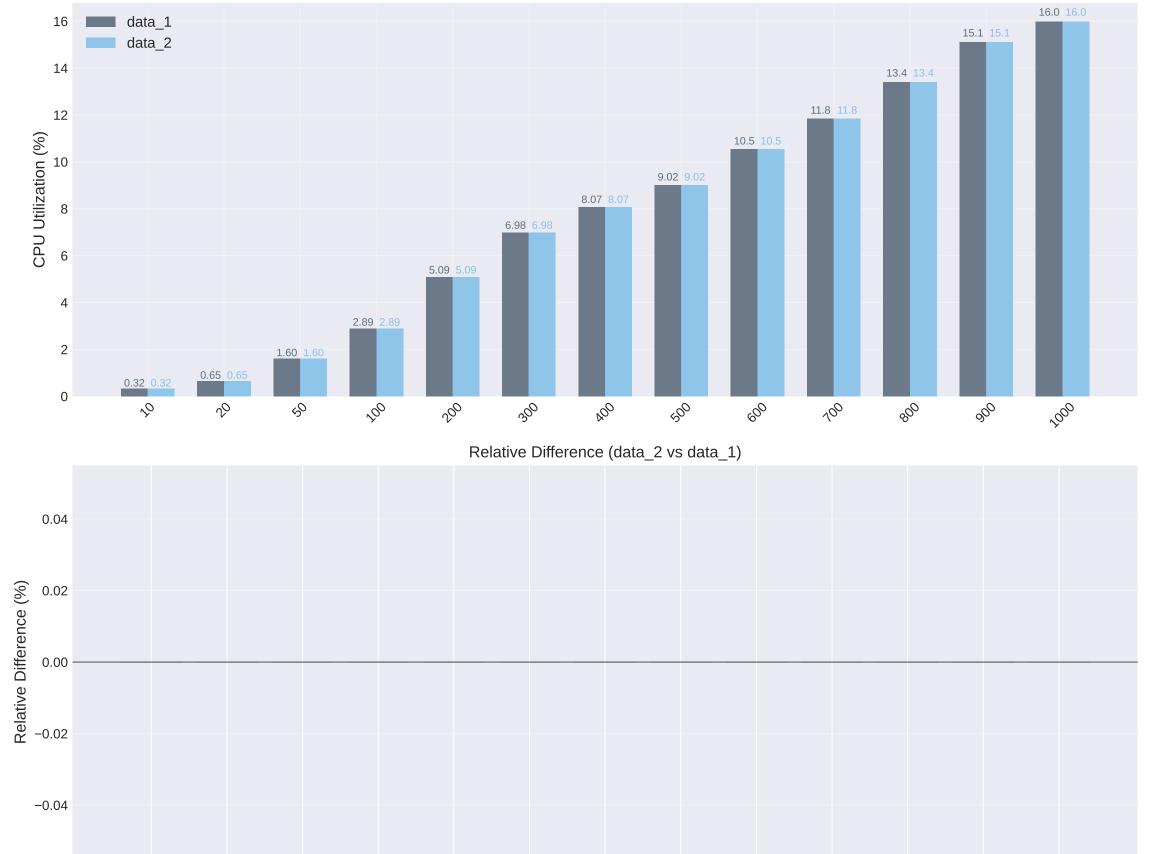


Net Virt RX CPU Utilization vs Throughput





Client0 CPU Utilization vs Throughput

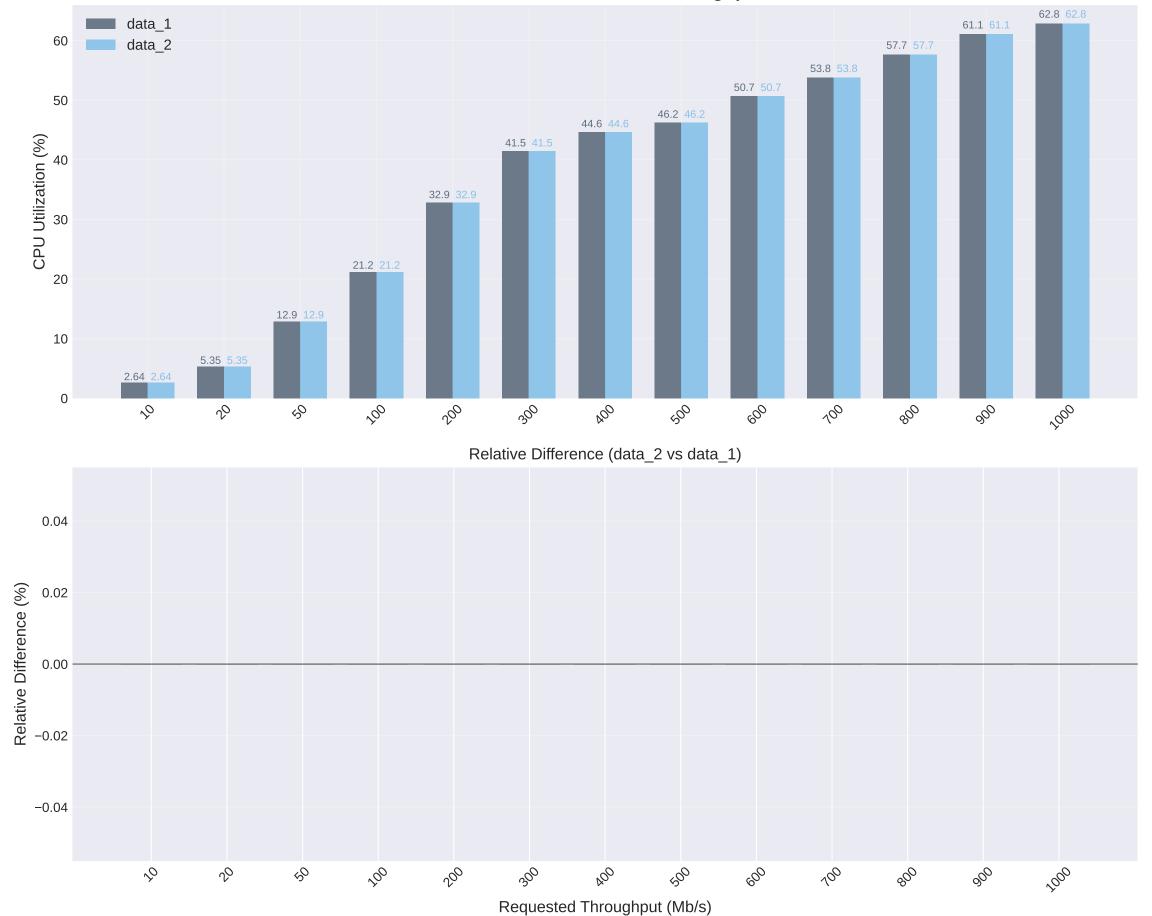


NOO

Requested Throughput (Mb/s)

Client0 Net Copier CPU Utilization vs Throughput 14 13.4 13.4 data_1 13.1 13.1 12.7 12.7 data_2 11.9 11.9 12 10.7 10.7 10 9.44 9.44 9.02 9.02 CPU Utilization (%) 7.97 7.97 6.23 6.23 3.76 3.76 2.18 2.18 2 0.87 0.87 0.43 0.43 0 200 300 NOO 100 400 600 100 900 900 2000 \$ 20 80 Relative Difference (data_2 vs data_1) 0.04 Relative Difference (%) 0.02 0.00 -0.02 -0.04200 200 300 NOO 900 30 20 50 500 100 Requested Throughput (Mb/s)

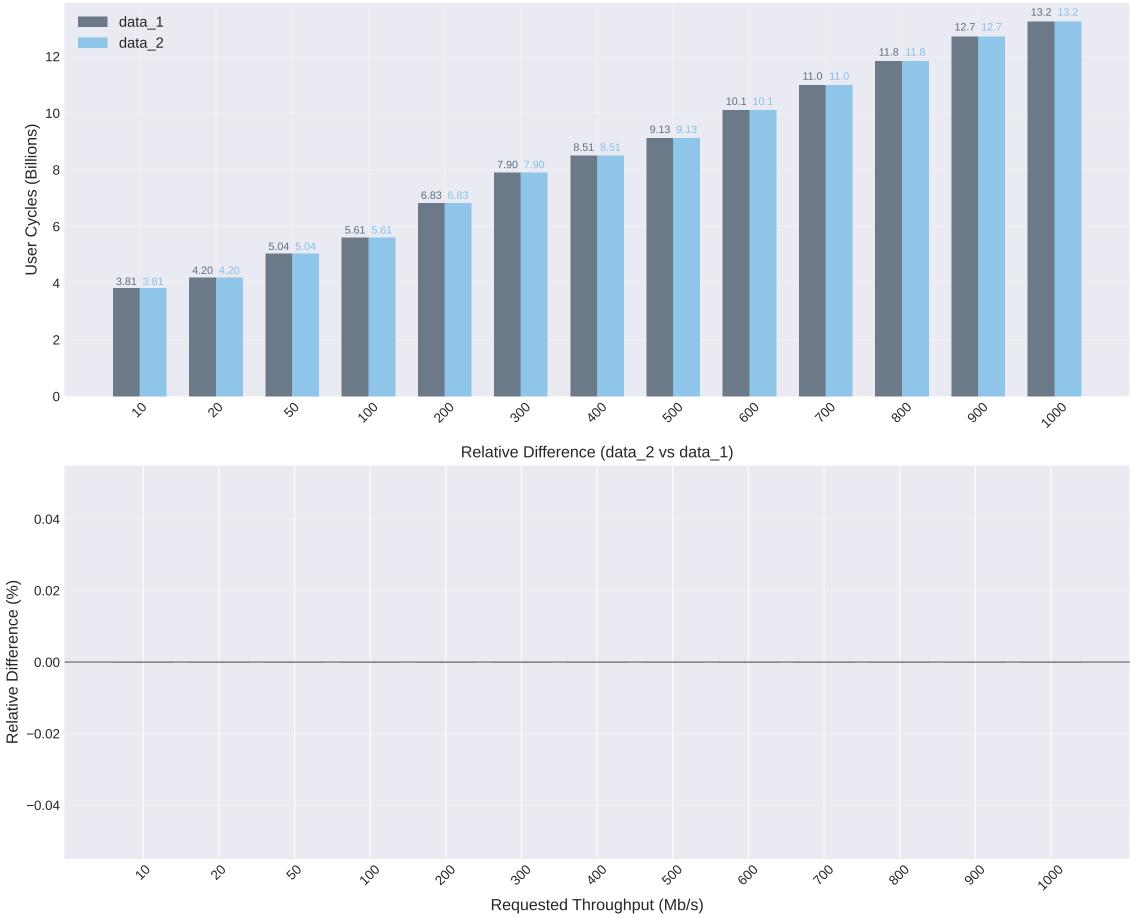
Total CPU Utilization vs Throughput



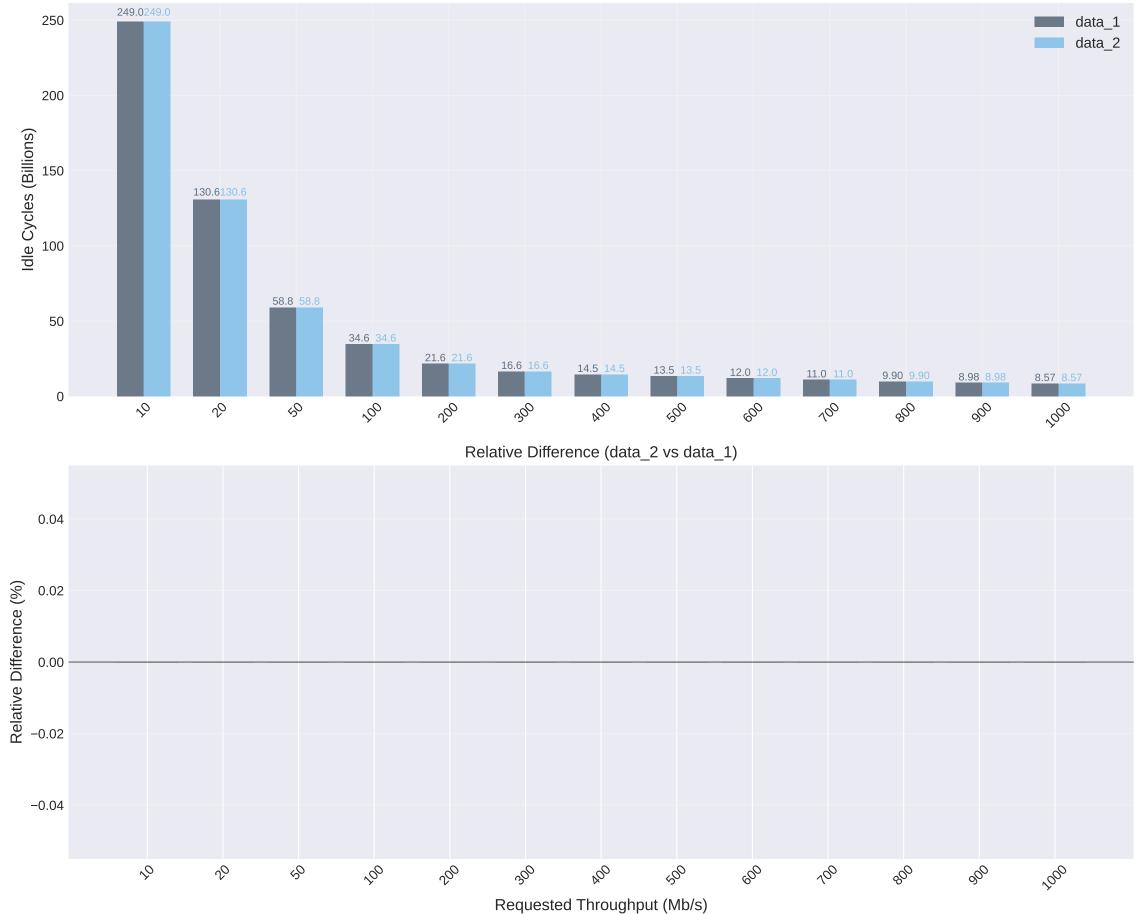
Total CPU Cycles vs Throughput 255.8255.8 data_1 250 data_2 200 Total Cycles (Billions) 138.0138.0 67.5 67.5 50 43.9 43.9 32.2 32.2 28.3 28.3 26.3 26.3 25.1 25.1 24.3 24.3 23.8 23.8 23.4 23.4 23.1 23.1 23.1 23.1 0 Ď 100 200 300 NOO 400 600 100 900 900 1000 20 50 Relative Difference (data_2 vs data_1) 0.04 Relative Difference (%) 0.02 0.00 -0.02 -0.0420 60 100 200 300 NOO 500 700 900 30 Requested Throughput (Mb/s)

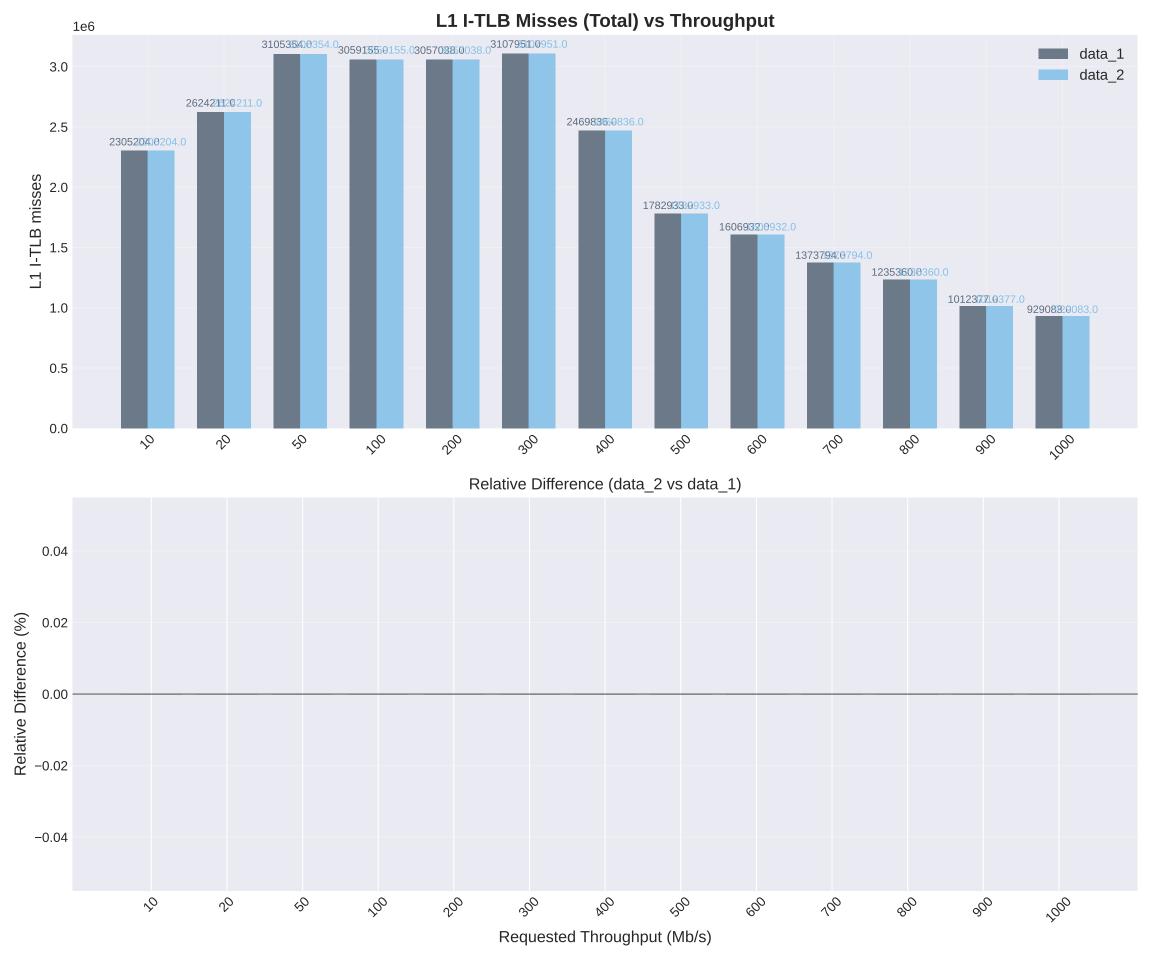
Kernel CPU Cycles vs Throughput 3.5 data_1 3.30 3.30 data_2 3.10 3.10 3.02 3.02 2.99 2.99 3.0 2.52 2.52 Kernel Cycles (Billions) 2.36 2.36 2.26 2.26 2.10 2.10 1.73 1.73 1.55 1.55 1.27 1.27 1.15 1.15 1.0 0.5 0.0 100 200 300 NOO 400 600 100 900 900 2000 30 20 50 Relative Difference (data_2 vs data_1) 0.04 Relative Difference (%) 0.02 0.00 -0.02 -0.0420 100 200 300 NOO 500 700 900 30 60 Requested Throughput (Mb/s)

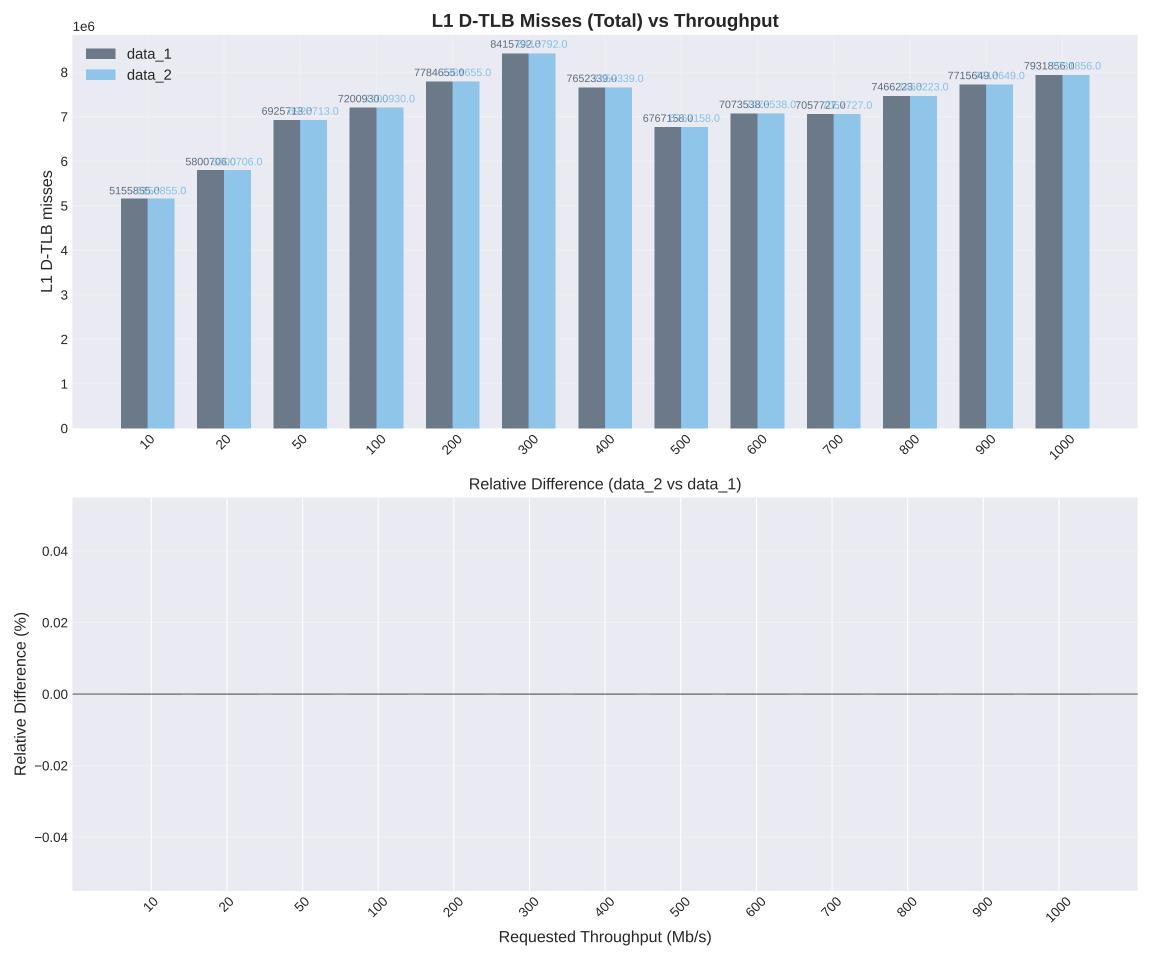
User CPU Cycles vs Throughput

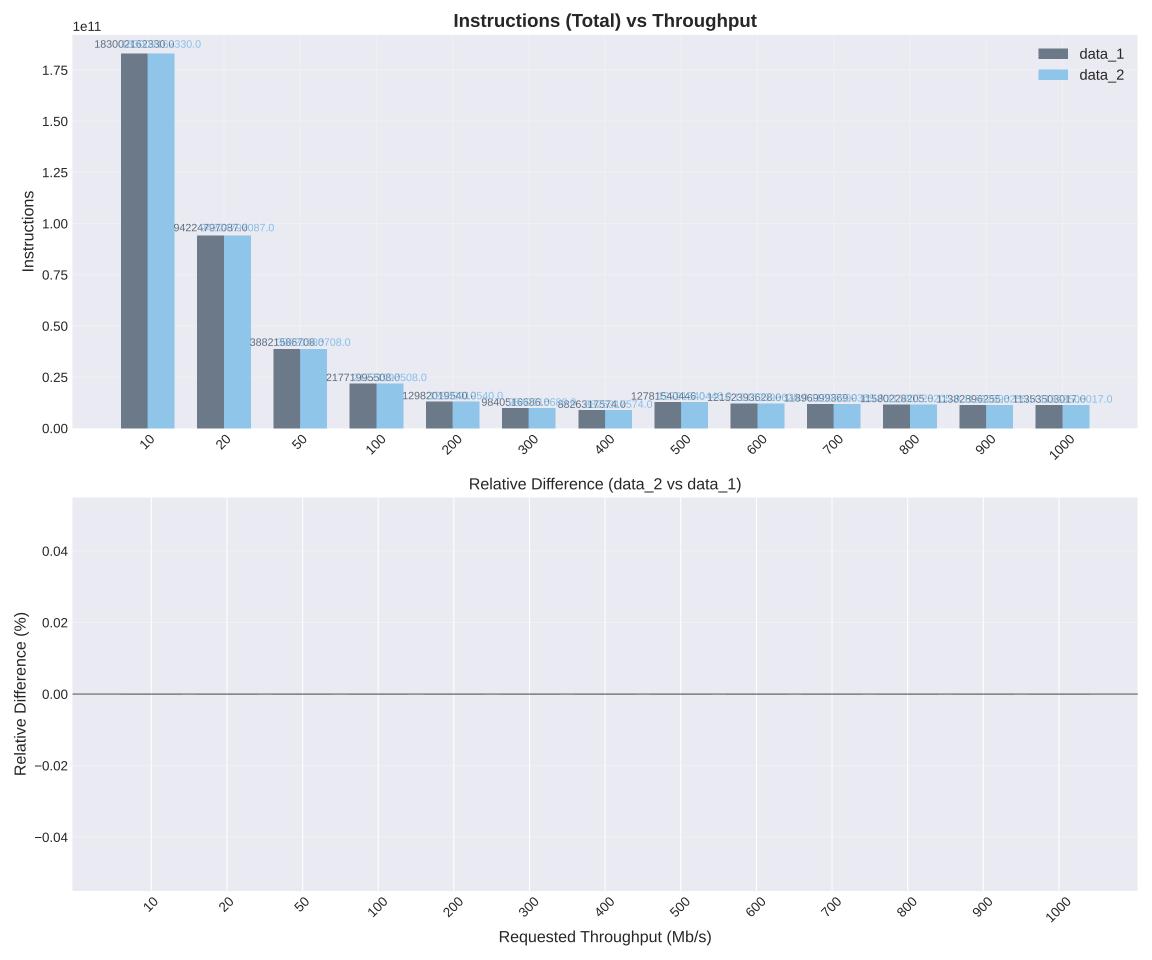


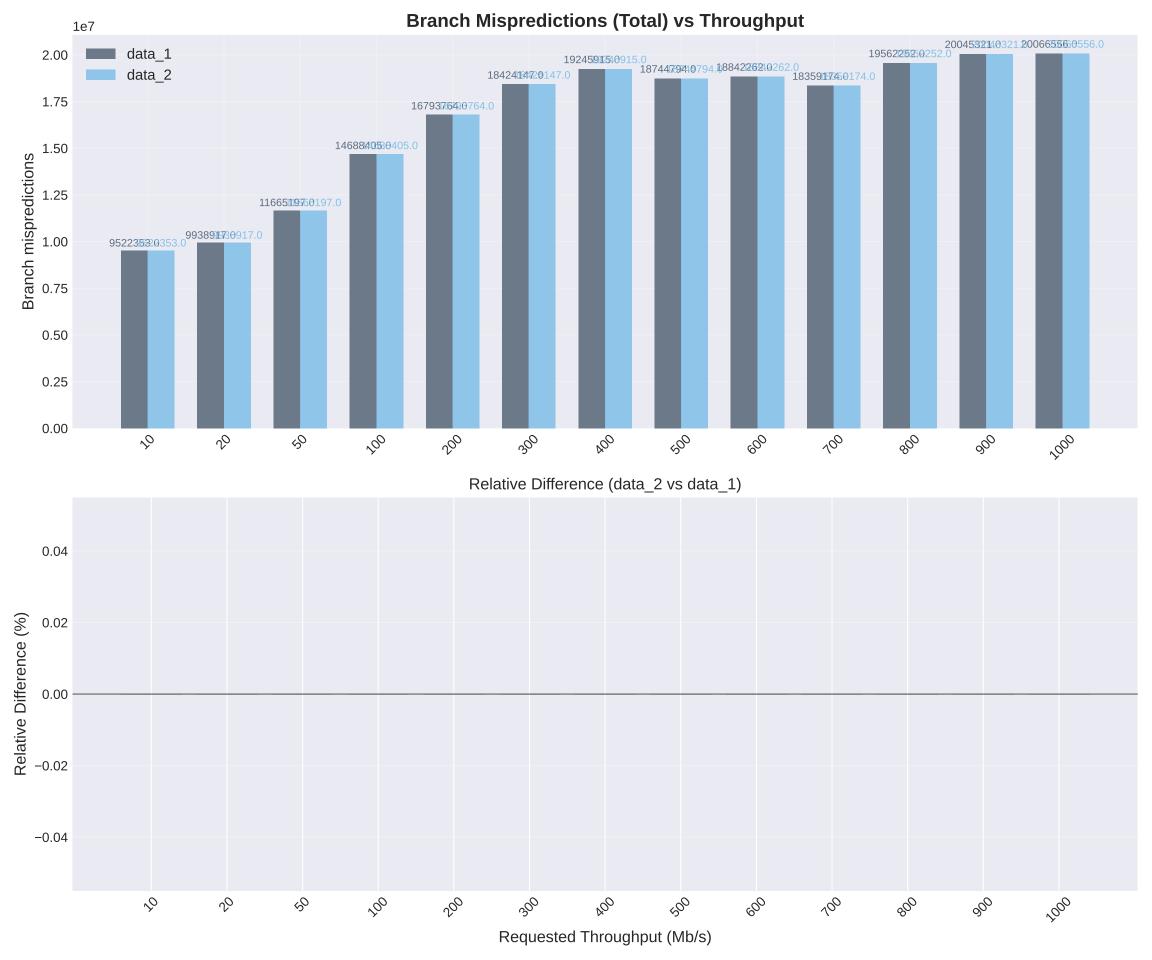
Idle CPU Cycles vs Throughput



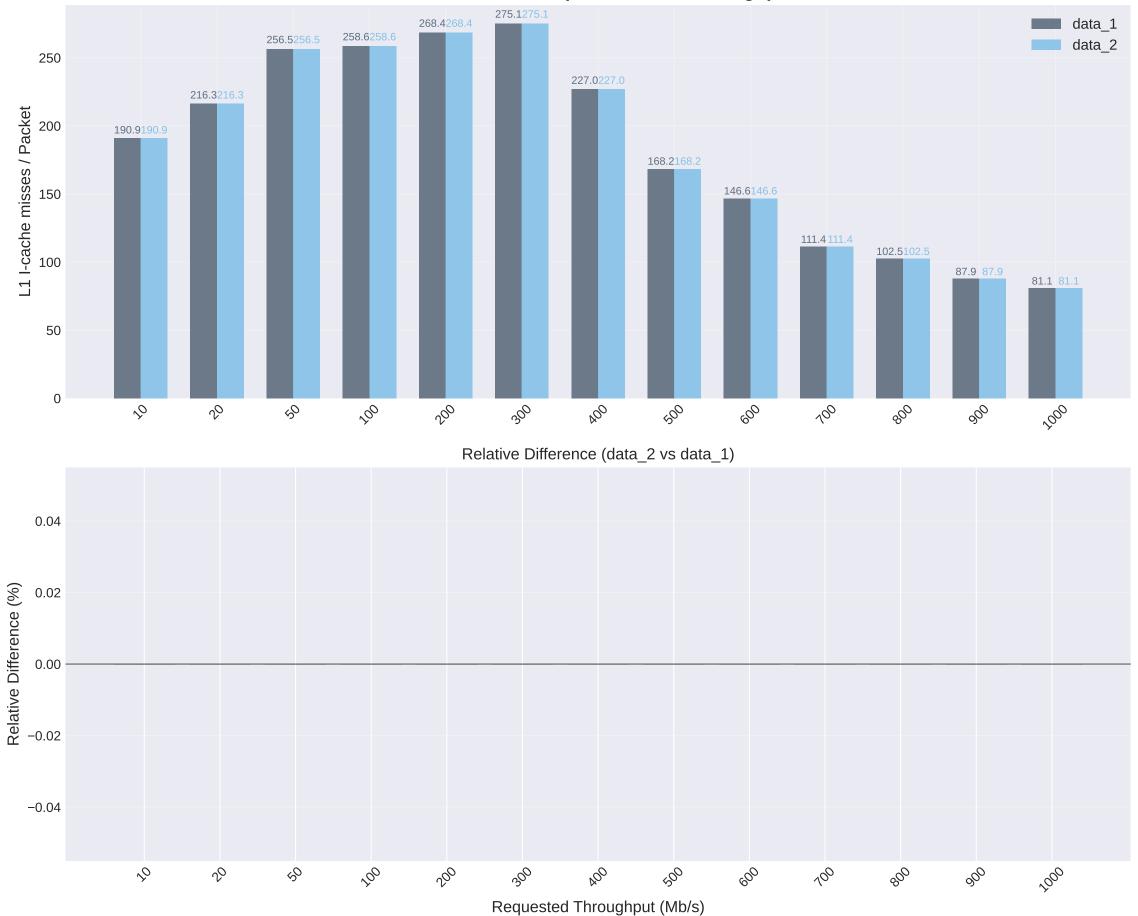




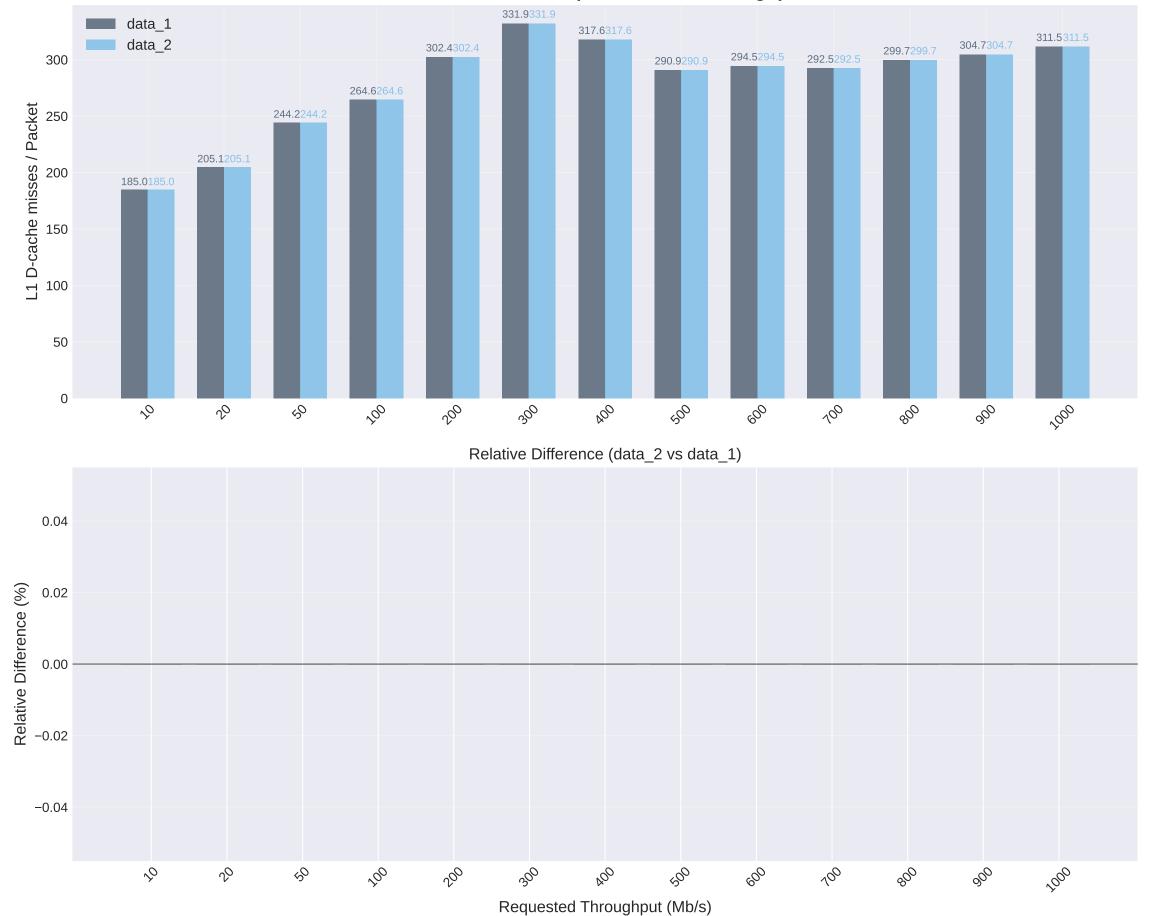




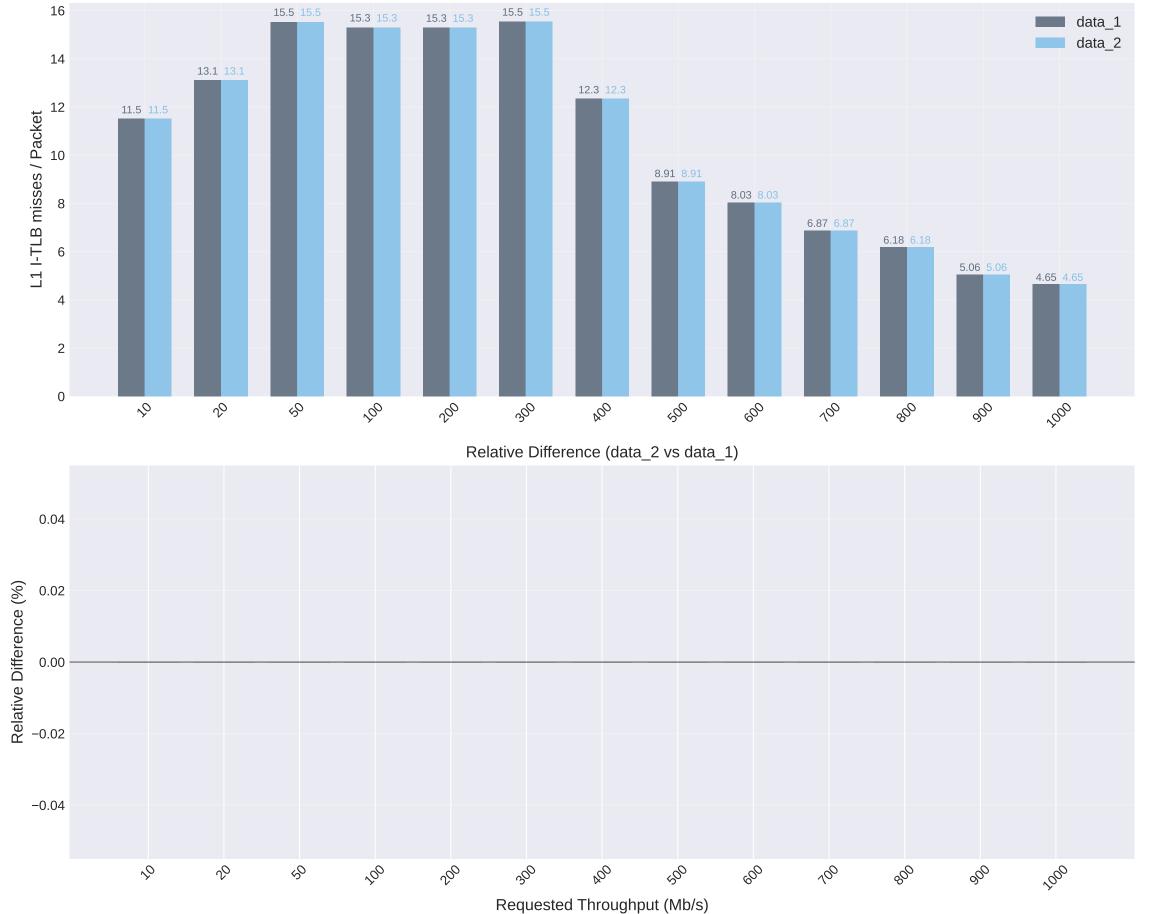
L1 I-cache Misses per Packet vs Throughput



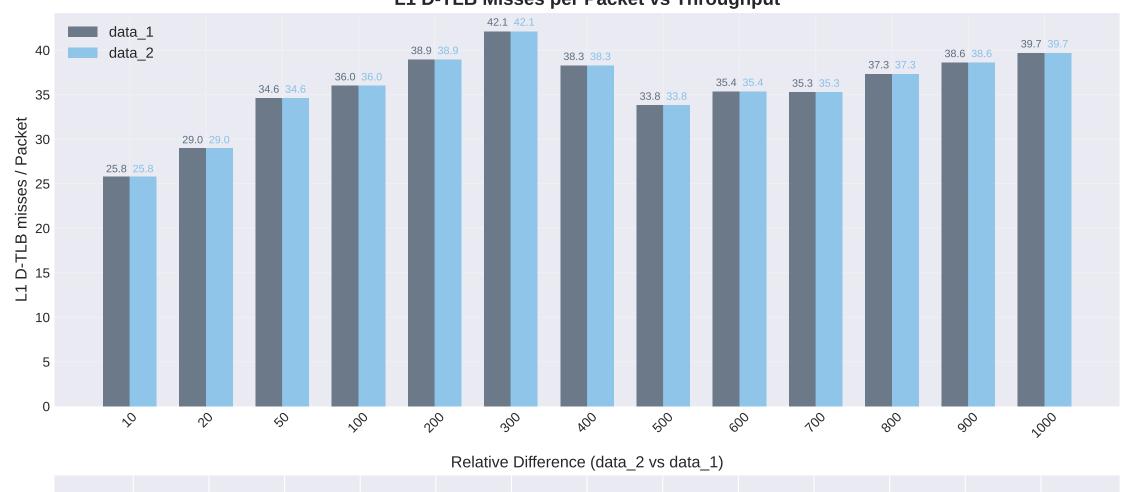
L1 D-cache Misses per Packet vs Throughput

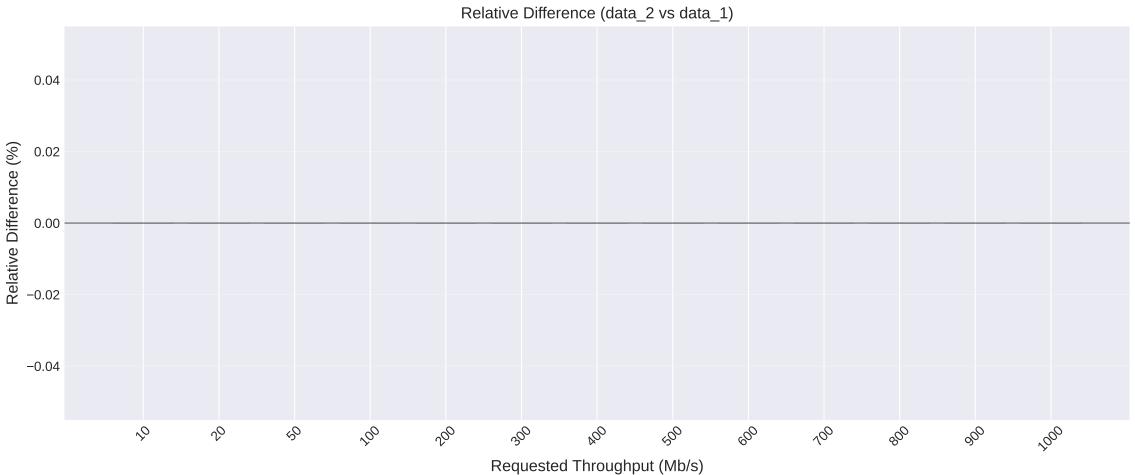


L1 I-TLB Misses per Packet vs Throughput



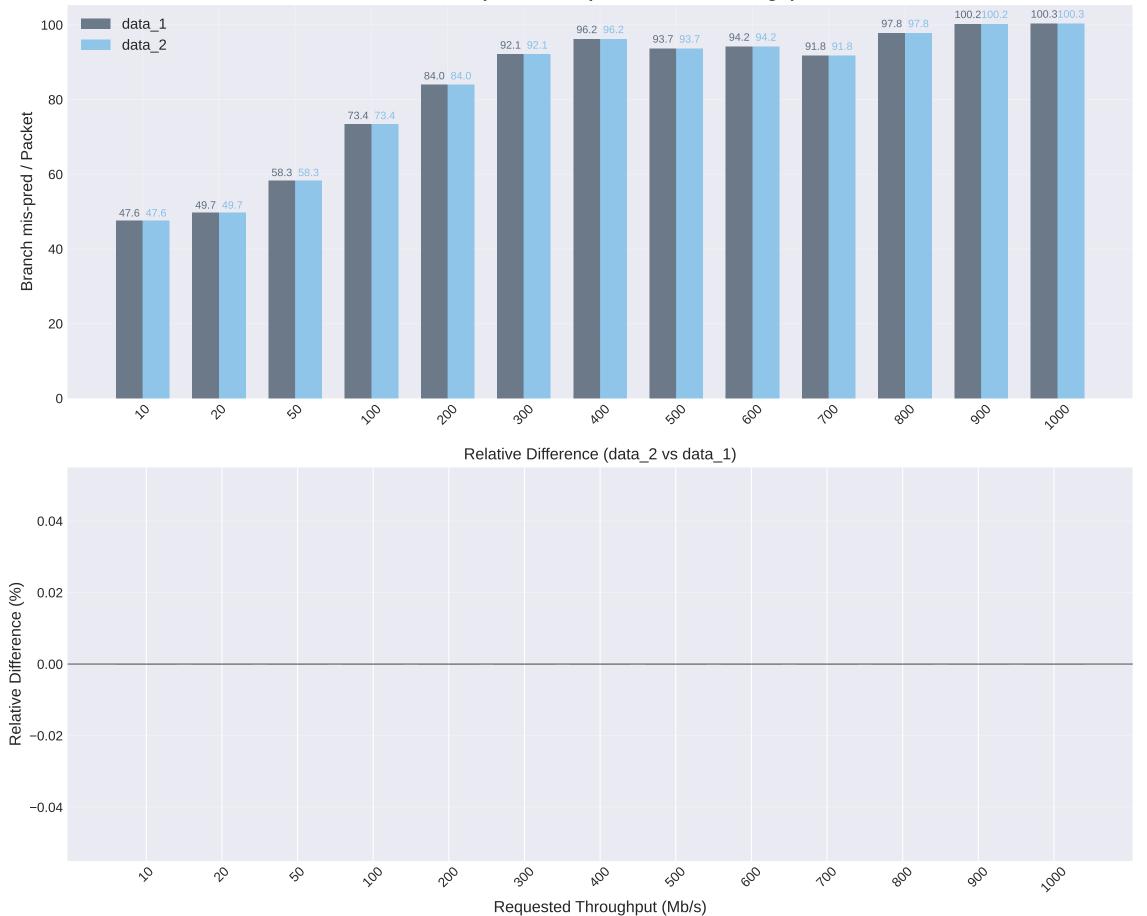
L1 D-TLB Misses per Packet vs Throughput

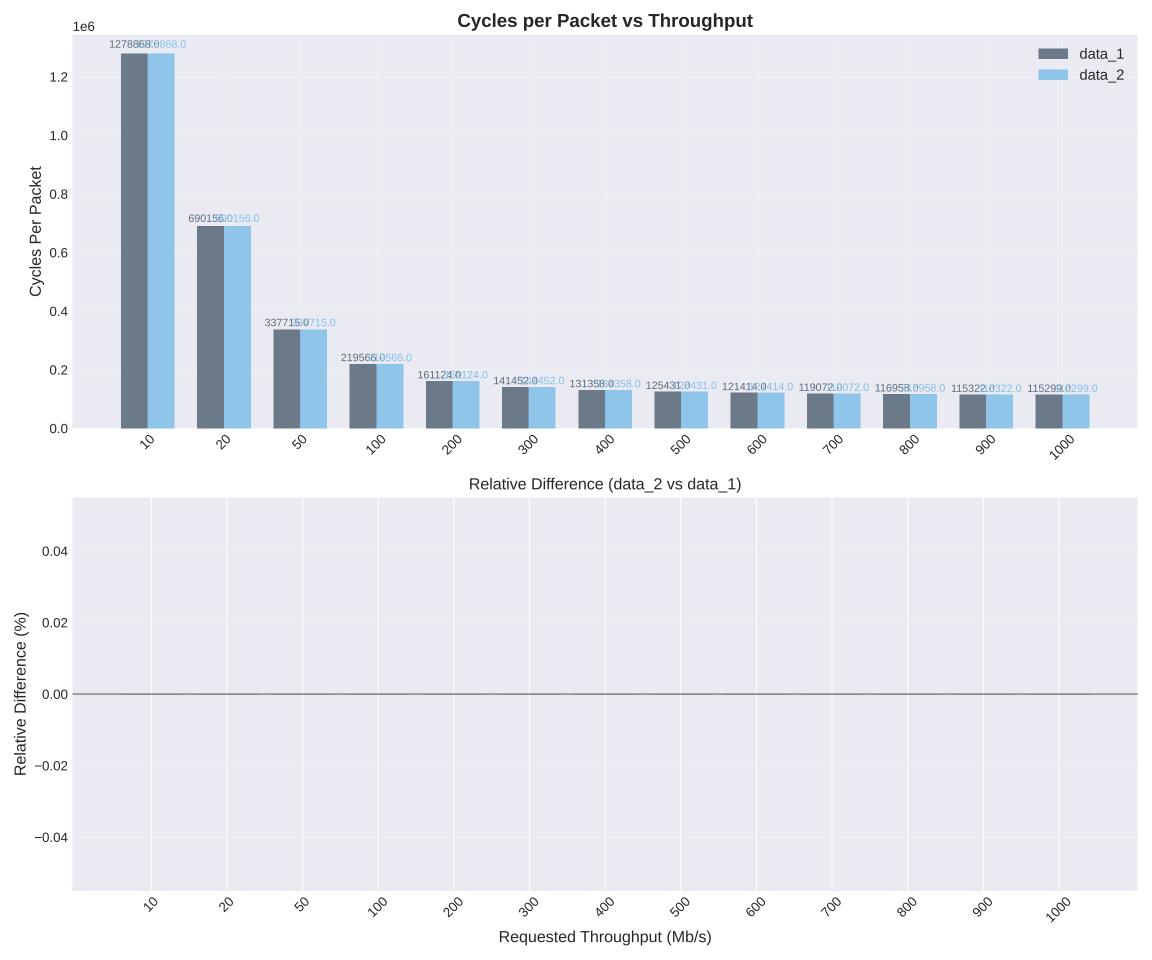




Instructions per Packet vs Throughput 915010.0010.0 data_1 data_2 800000 instructions / Packet 600000 47112370123.0 400000 19410790107.0 200000 108859.0859.0 6390760907.0 6076160761.0 5948460484.0 5790160901.0 5691460914.0 5676760767.0 4920210202.0 4413140131.0 0 800 goo 200 200 300 400 400 600 100 2000 \$ 20 SO Relative Difference (data_2 vs data_1) 0.04 Relative Difference (%) 0.02 0.00 -0.02 -0.0430 20 200 200 NO 400 600 50 100 Requested Throughput (Mb/s)

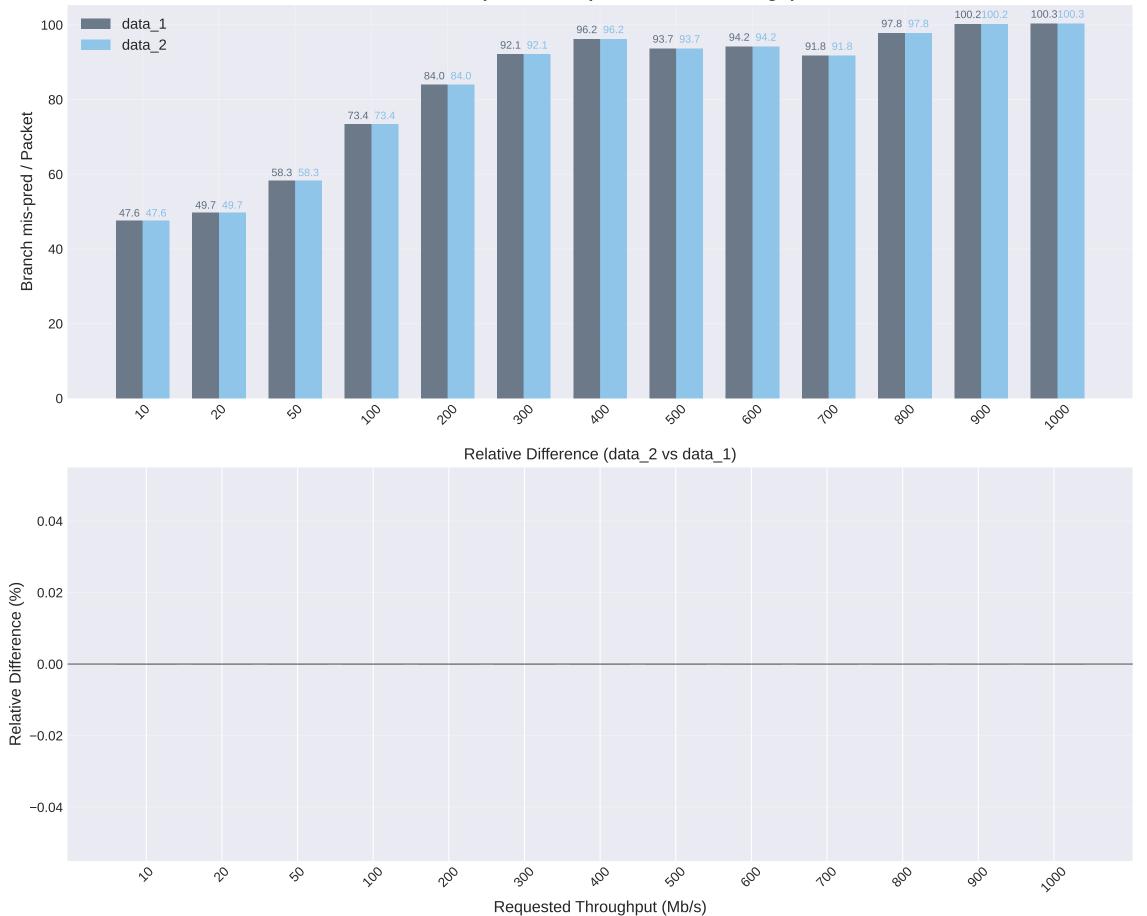
Branch Mispredictions per Packet vs Throughput

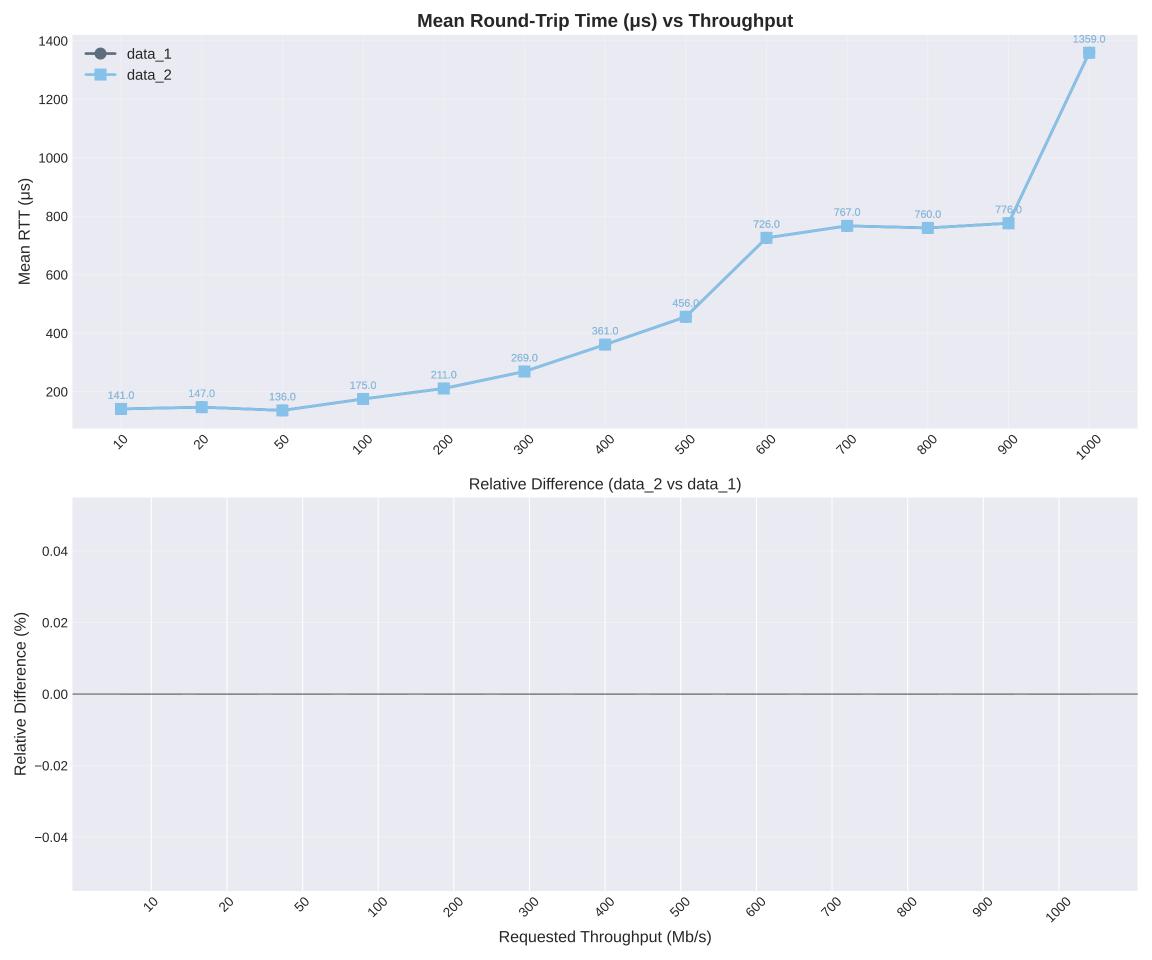




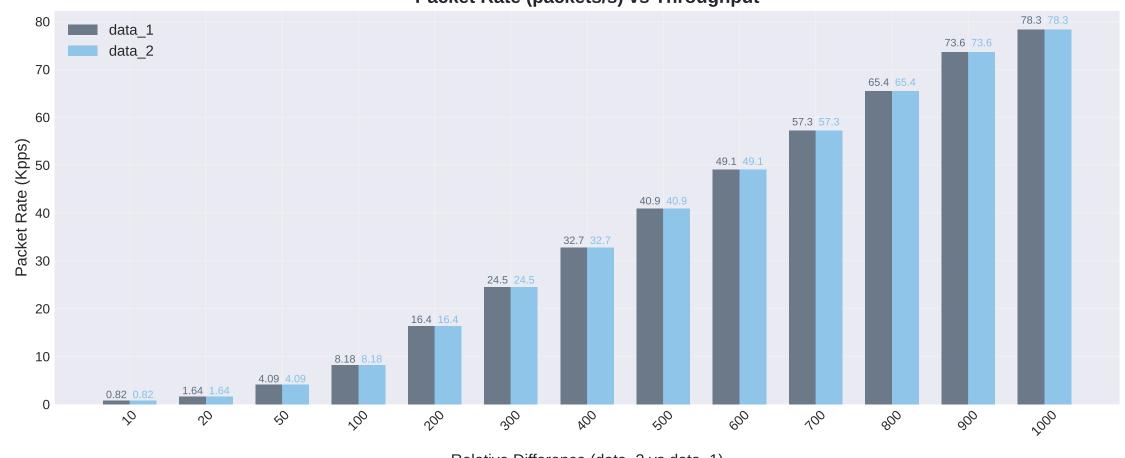
Instructions per Packet vs Throughput 915010.0010.0 data_1 data_2 800000 instructions / Packet 600000 47112370123.0 400000 19410790107.0 200000 108859.0859.0 6390760907.0 6076160761.0 5948460484.0 5790160901.0 5691460914.0 5676760767.0 4920210202.0 4413140131.0 0 800 goo 200 200 300 400 400 600 100 2000 \$ 20 SO Relative Difference (data_2 vs data_1) 0.04 Relative Difference (%) 0.02 0.00 -0.02 -0.0430 20 200 200 NO 400 600 50 100 Requested Throughput (Mb/s)

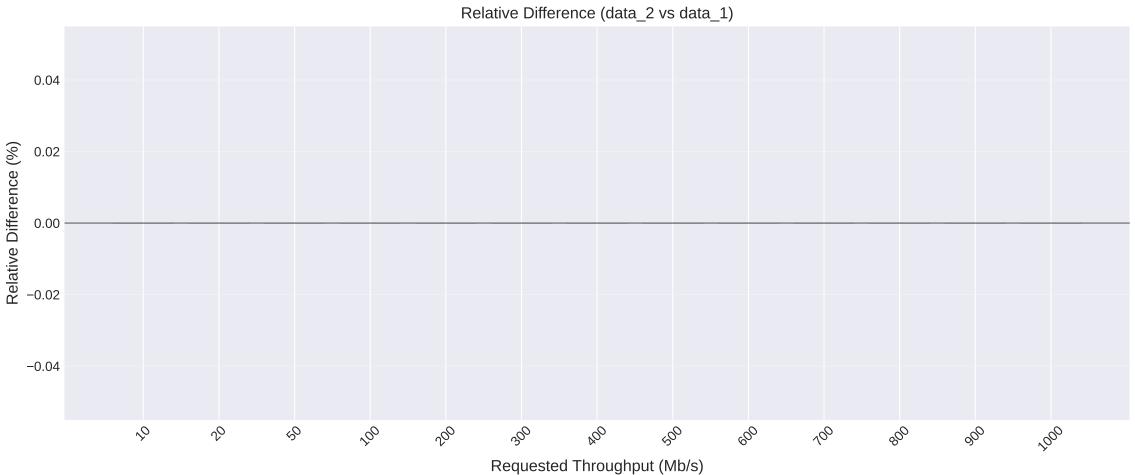
Branch Mispredictions per Packet vs Throughput

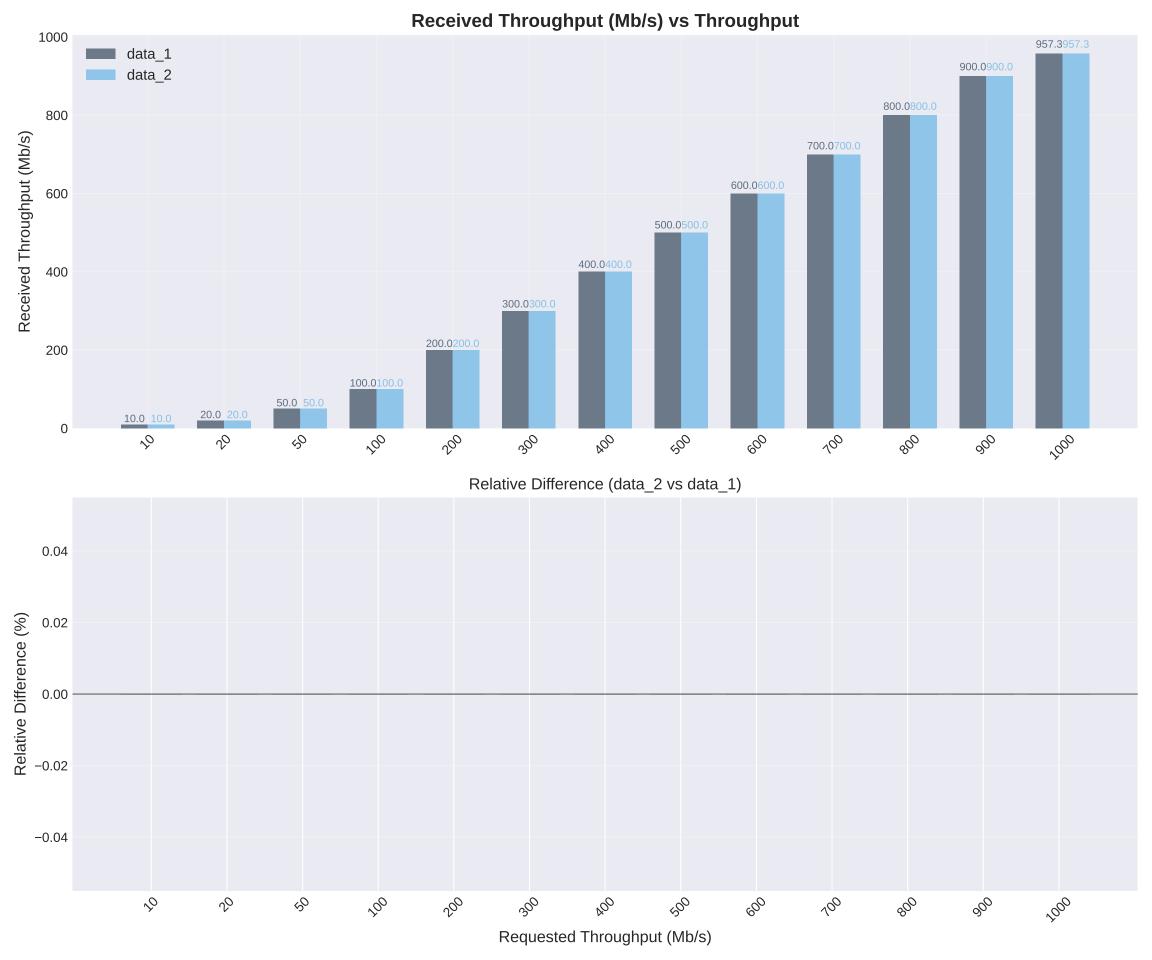




Packet Rate (packets/s) vs Throughput







Sent Throughput (Mb/s) vs Throughput 1000.0000.0 data_1 1000 data_2 900.0900.0 800.0800.0 800 Sent Throughput (Mb/s) 700.0700.0 600.0600.0 600 500.0500.0 400.0400.0 400 300.0300.0 200.0200.0 200 100.0100.0 50.0 50.0 20.0 20.0 10.0 10.0 0 NOO 100 200 300 400 600 100 900 900 2000 \$ 20 80 Relative Difference (data_2 vs data_1) 0.04 Relative Difference (%) 0.02 0.00 -0.02 -0.0420 200 200 300 NOO 900 30 50 500 100 Requested Throughput (Mb/s)