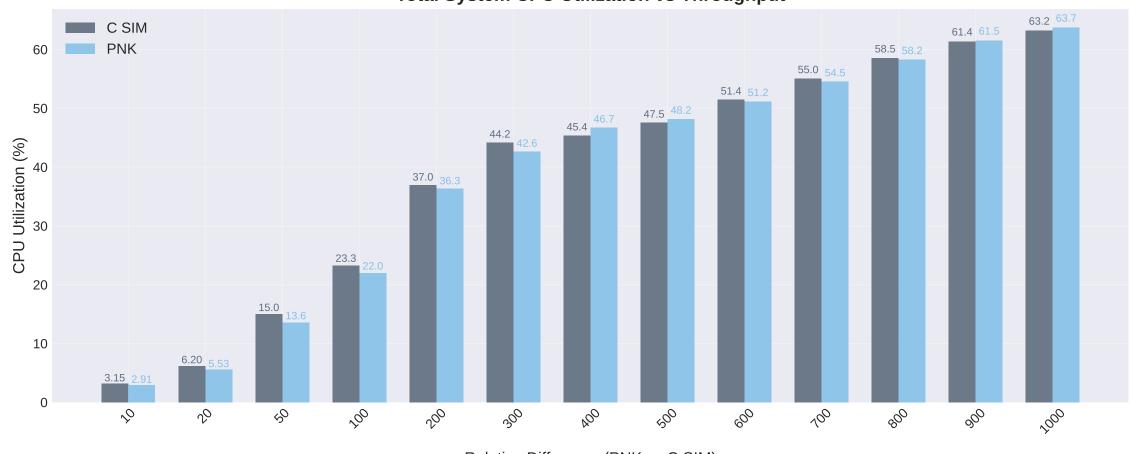
Instructions per Second vs Throughput 0.7 0.68 0.67 0.66 0.66 C SIM PNK 0.6 0.56 0.56 Instructions per Second (Billions) 0.52 0.51 0.51 0.51 0.51 0.51 0.50 0.51 0.50 0.51 0.49 0.49 0.40 0.36 0.35 0.1 0.0 200 200 300 400 400 600 100 800 900 2000 20 20 B Relative Difference (PNK vs C SIM) 43.4% 40 30 28.4% Relative Difference (%) -0.2% -1.3% -1.8% -2.0% -2.2% -7.9% -20 -30 -32.4% 200 200 300 400 100 900 \$ 20 SO NO 600

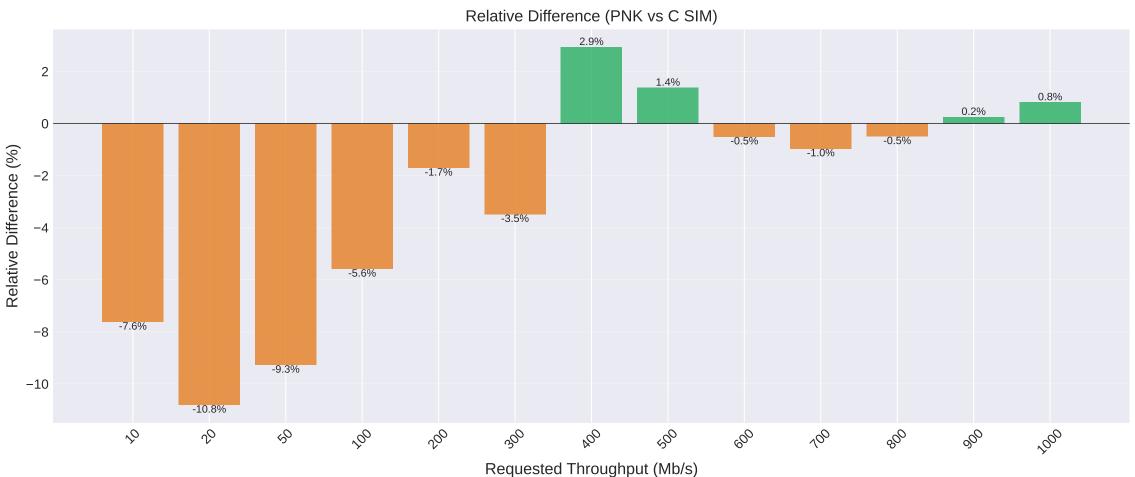
Requested Throughput (Mb/s)

Received Throughput vs Requested with CPU Utilization Overlay 1000 C SIM Recv Throughput 956.8957.0 100 PNK Recv Throughput C SIM CPU Util 900.0900.0 PNK CPU Util 800.0800.0 800 80 700.0700.0 Received Throughput (Mb/s) 63.7% 61.5% 600.0600.0 600 CPU Utilization (%) 58.5% 54:9% 51.2% 500.0500.0 400.0400.0 400 300.0300.0 200.0200.0 200 20 100.0100.0 50.0 50.0 20.0 20 0 900 NOO 400 700 200 300 600 100 900 2000 20 20 50

Requested Throughput (Mb/s)

Total System CPU Utilization vs Throughput

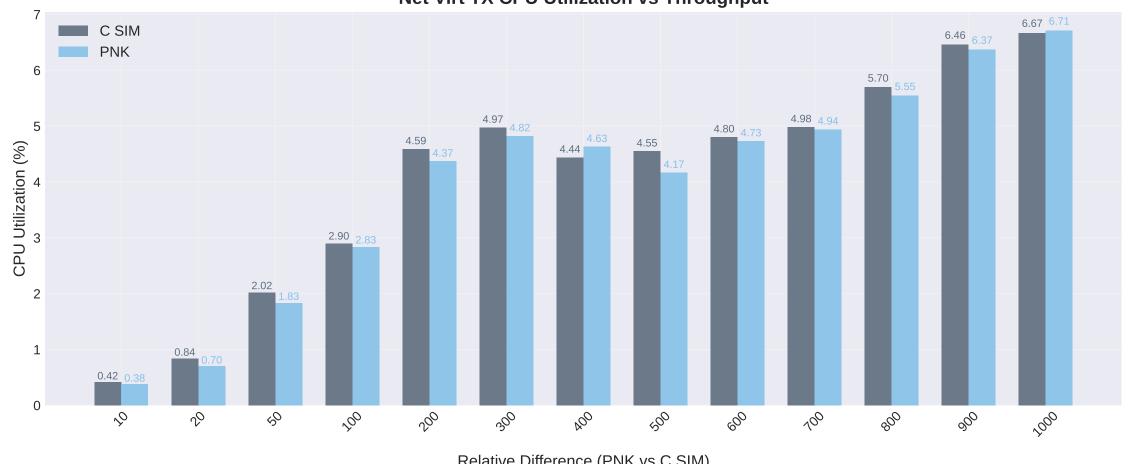


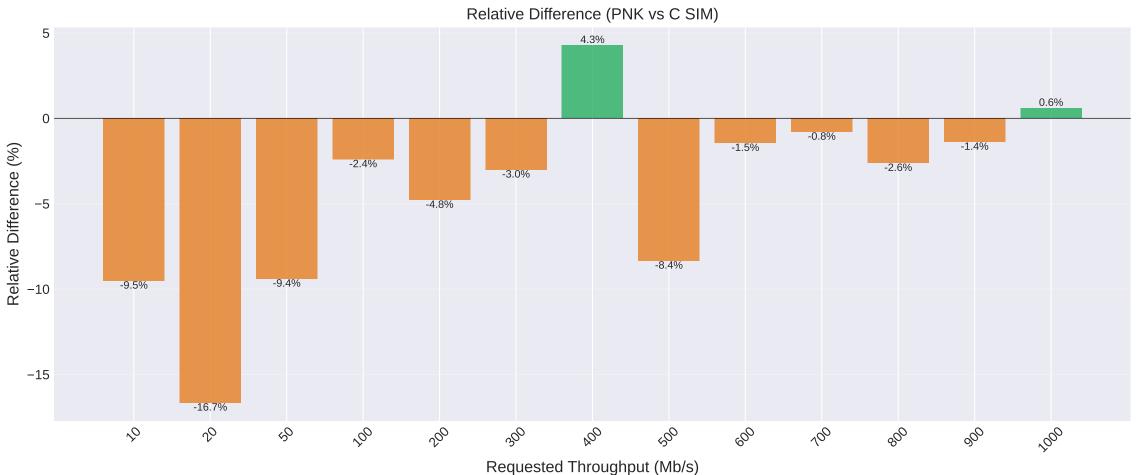


Ethernet Driver CPU Utilization vs Throughput

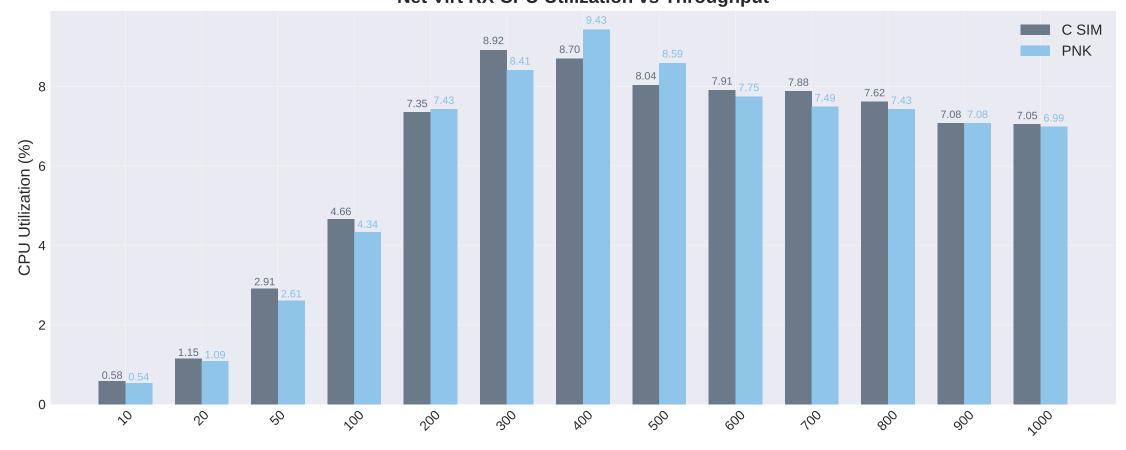


Net Virt TX CPU Utilization vs Throughput



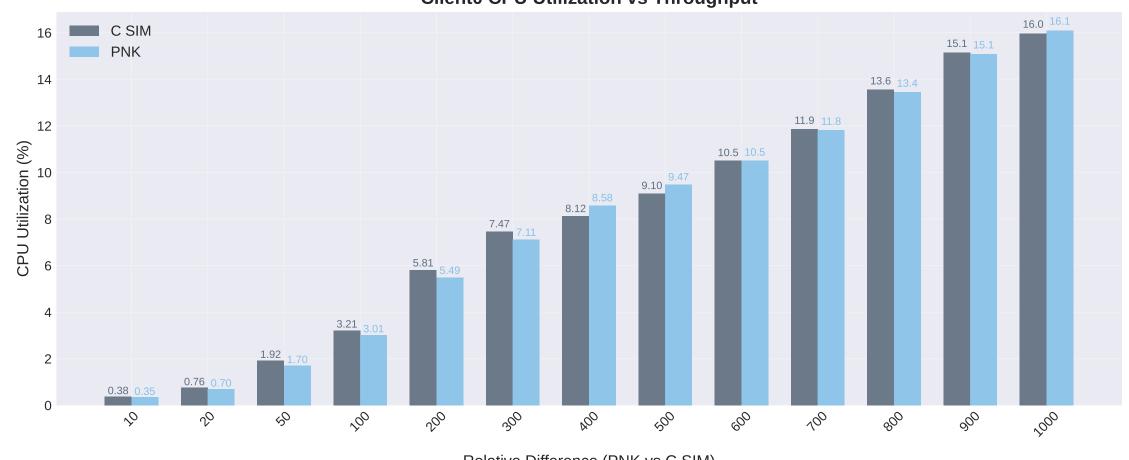


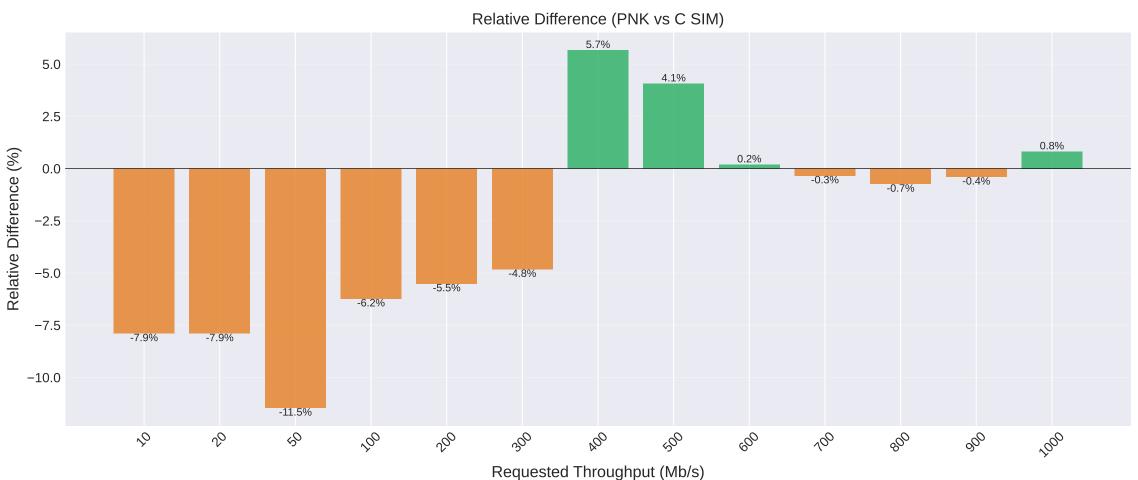
Net Virt RX CPU Utilization vs Throughput



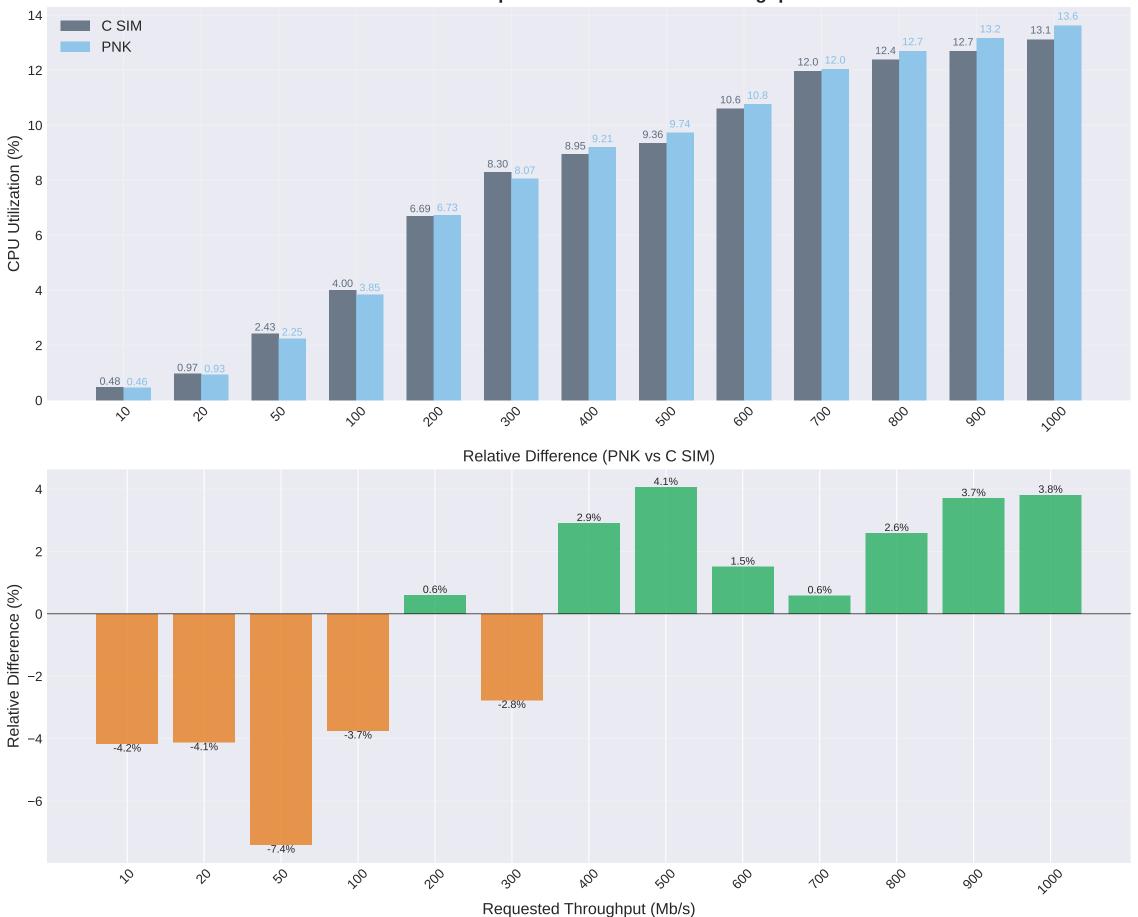


Client0 CPU Utilization vs Throughput

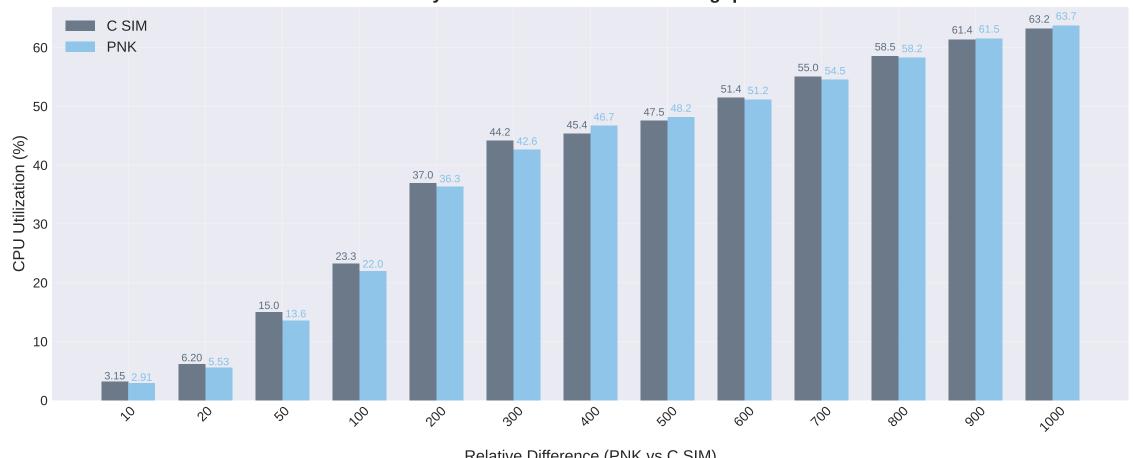


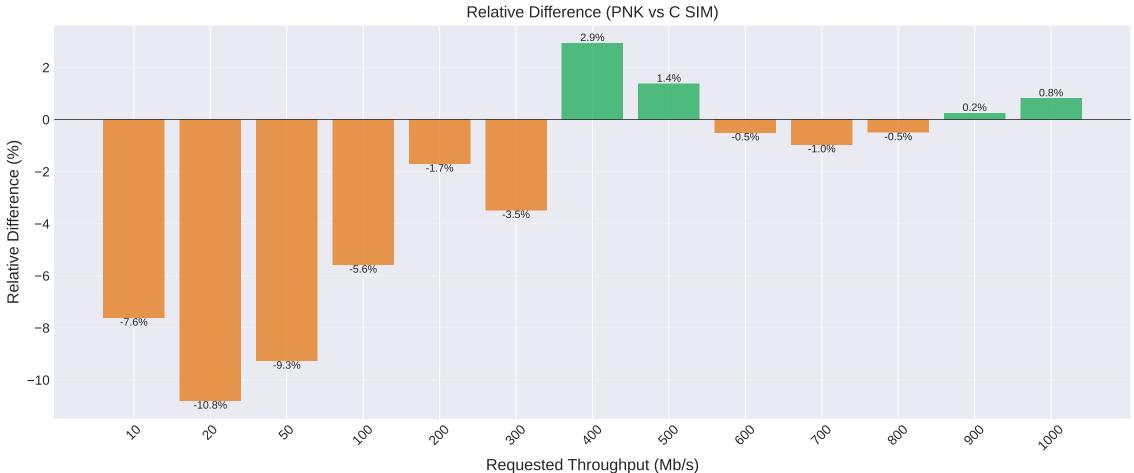


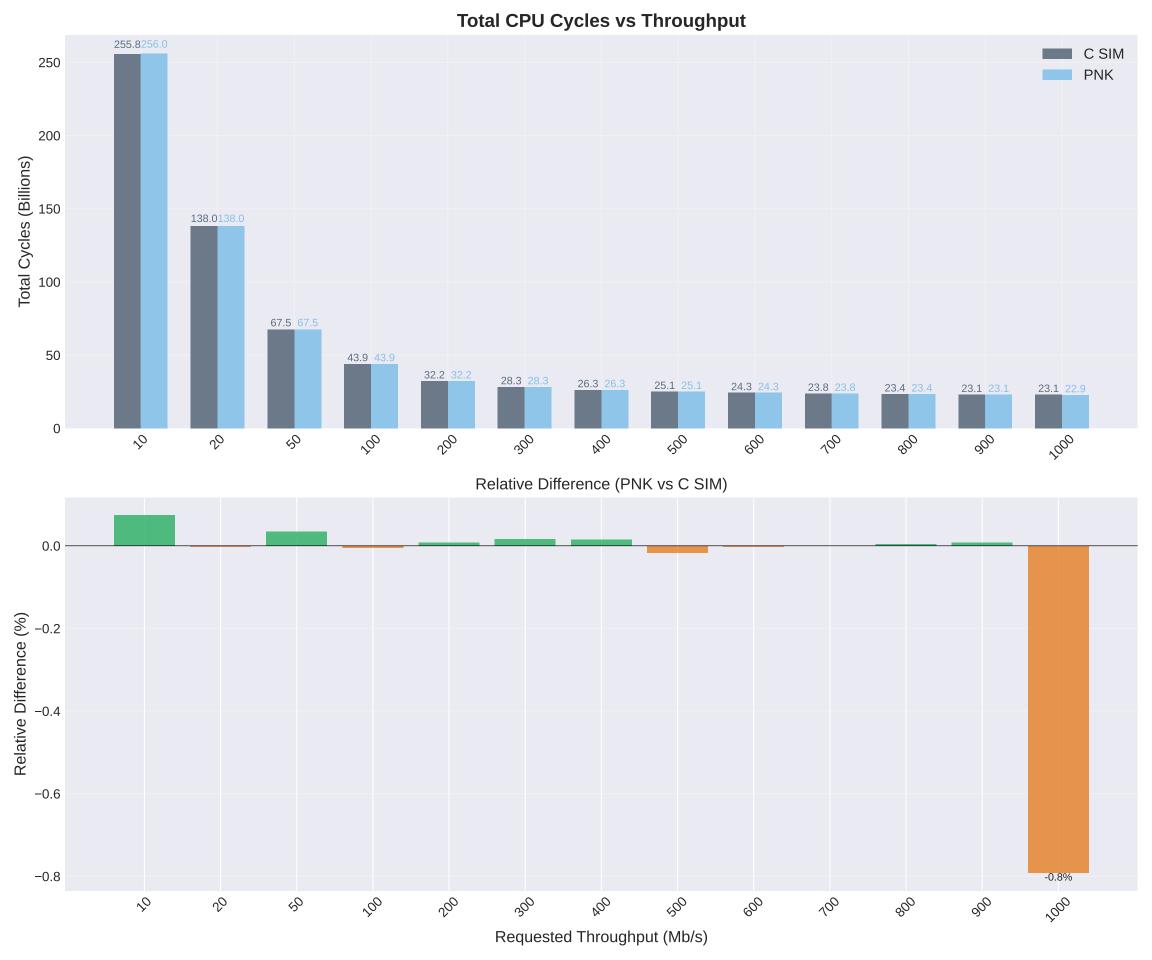
Client0 Net Copier CPU Utilization vs Throughput



System CPU Utilization vs Throughput







Kernel CPU Cycles vs Throughput 3.5 C SIM 3.24 3.17 3.19 PNK 3.02 2.93 2.94 2.96 3.0 2.59 2.53 Kernel Cycles (Billions) 2.34 2.30 2.13 1.96 1.86 1.65 1.69 1.44 1.15 1.09 1.09 1.0 0.5 0.0 300 200 200 NOO 400 600 700 900 900 2000 30 20 60 Relative Difference (PNK vs C SIM) 15.0 14.4% 12.5 9.8% 10.0 Relative Difference (%) 7.5 5.7% 5.4% 5.3% 5.0 4.1% 2.5 2.3% 0.9% 0.3% 0.0 -1.8% -2.5 -4.5% -5.0 -5.7%

Requested Throughput (Mb/s)

NOO

500

600

100

900

30

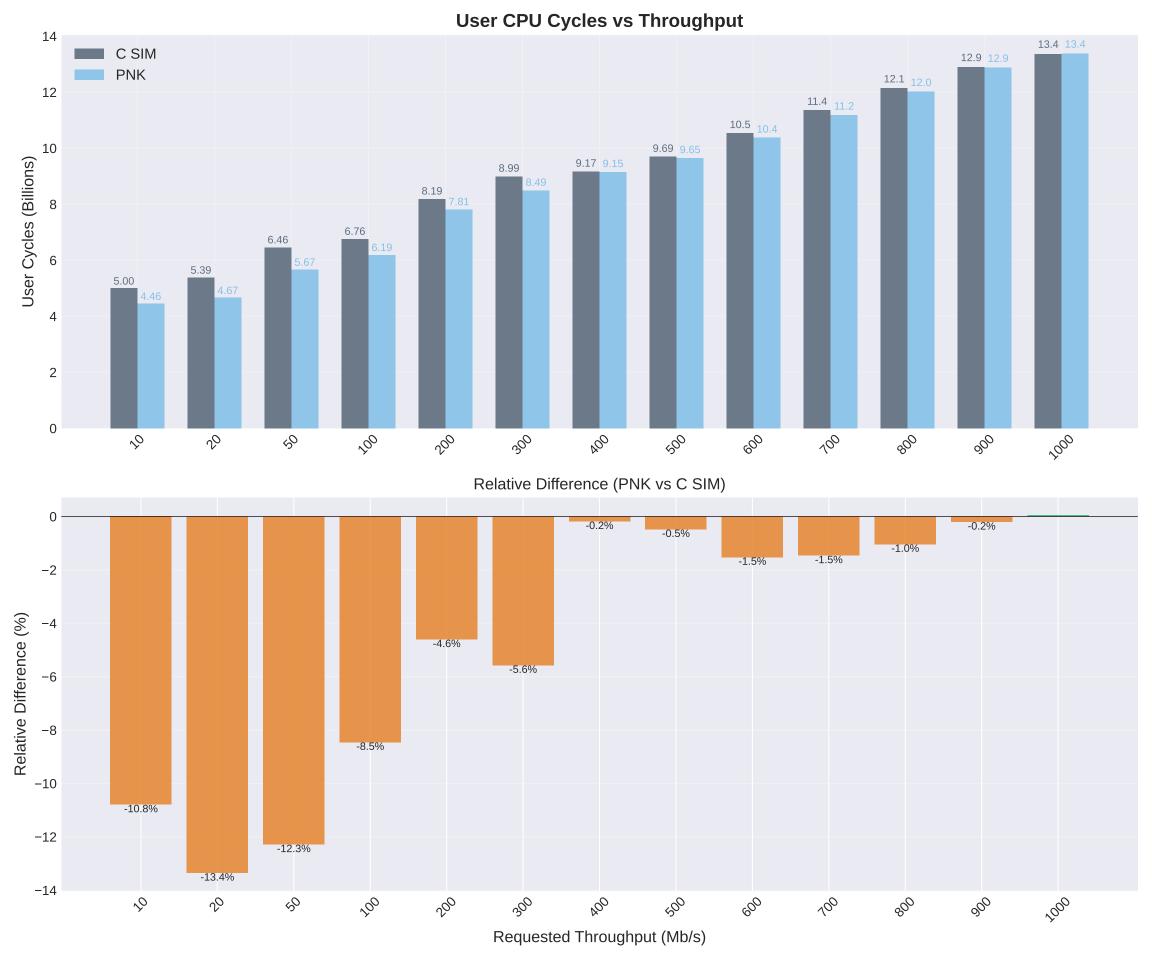
20

SO

200

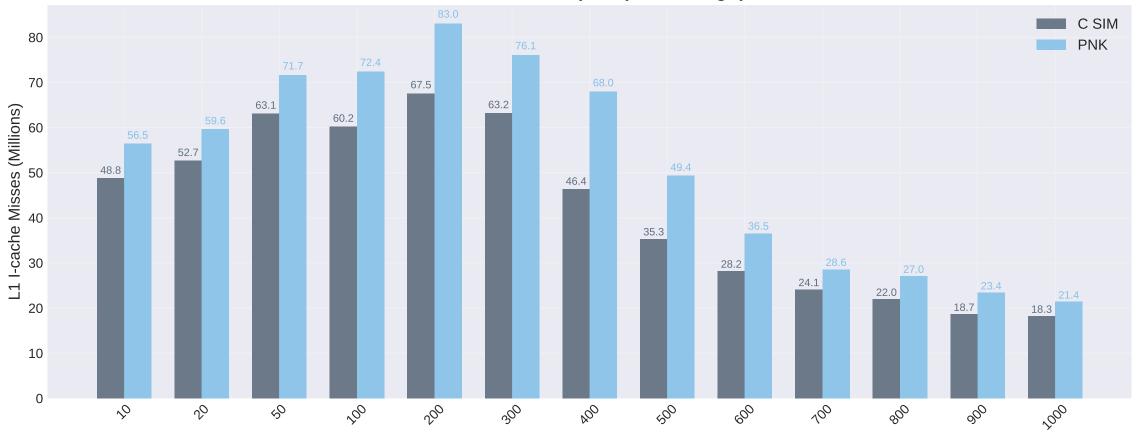
200

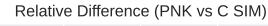
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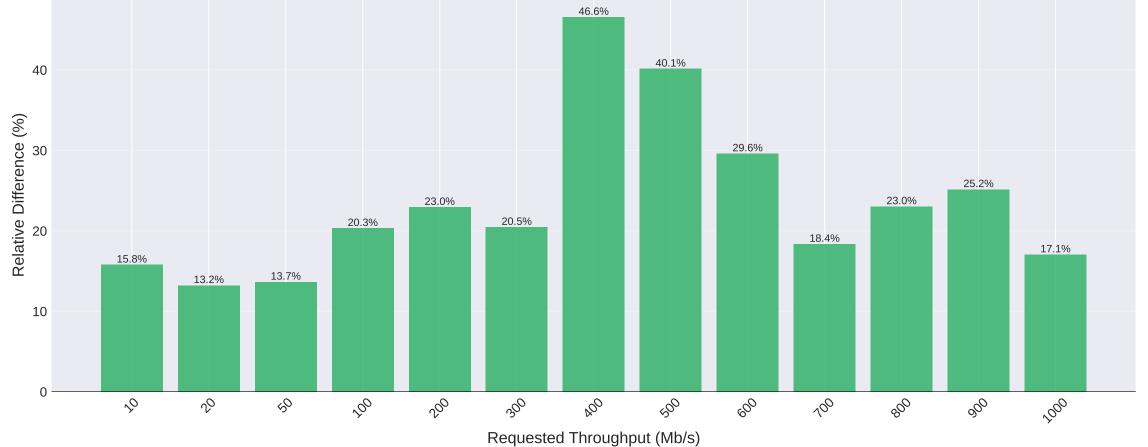


Idle CPU Cycles vs Throughput 247.7248.5 250 C SIM PNK 200 Idle Cycles (Billions) 129.5130.4 57.4 58.4 50 33.7 34.3 20.3 20.5 15.8 16.2 14.4 14.0 13.2 13.0 10.7 10.8 11.8 11.9 9.70 9.77 8.49 8.30 8.91 8.87 0 \$0 200 200 300 NOO 400 600 100 800 900 2000 20 50 Relative Difference (PNK vs C SIM) 3 2.8% 2 1.7% 1.7% Relative Difference (%) 1.2% 1.0% 0.7% 0.7% 0.5% 0.3% -0.4% -1.3% -2 -2.2% -2.4% NOO 30 20 SO 100 200 300 400 600 100 900 Requested Throughput (Mb/s)

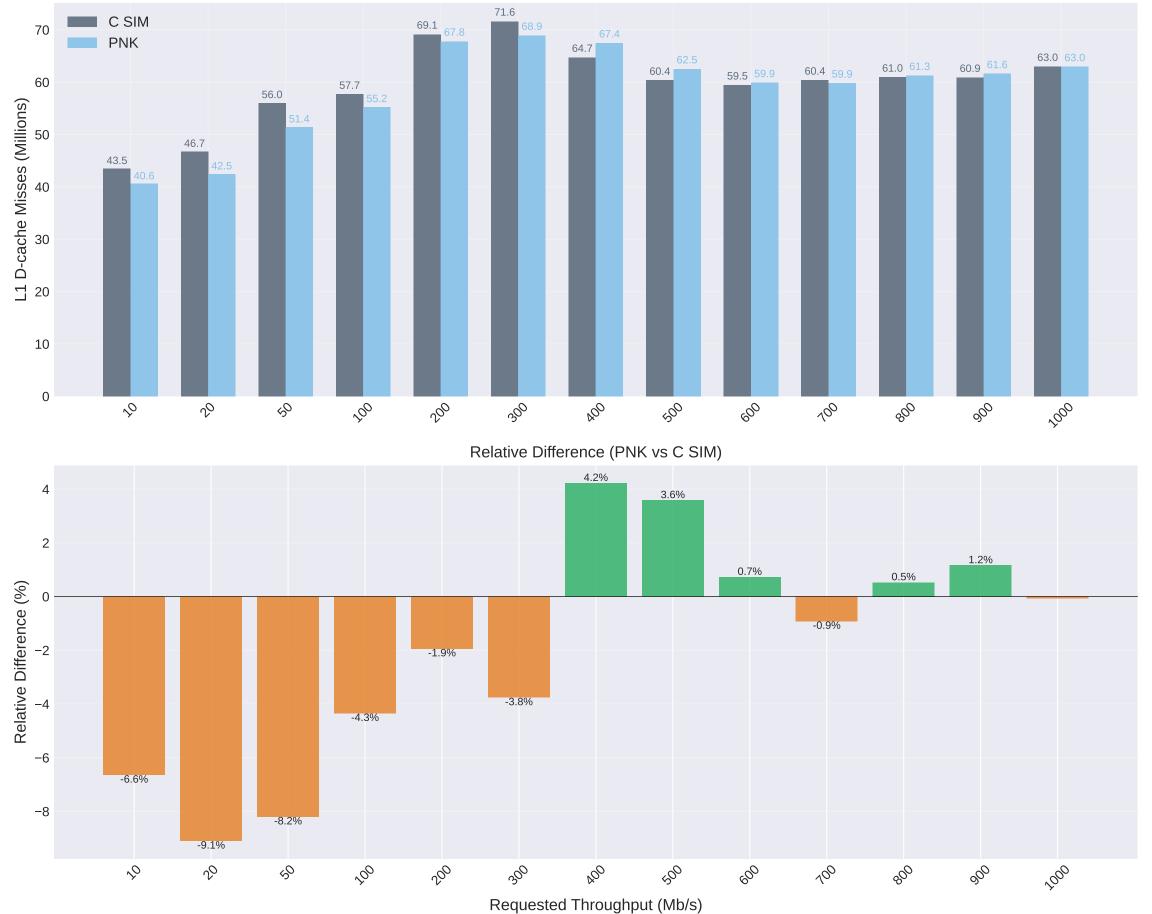
L1 I-cache Misses (Total) vs Throughput



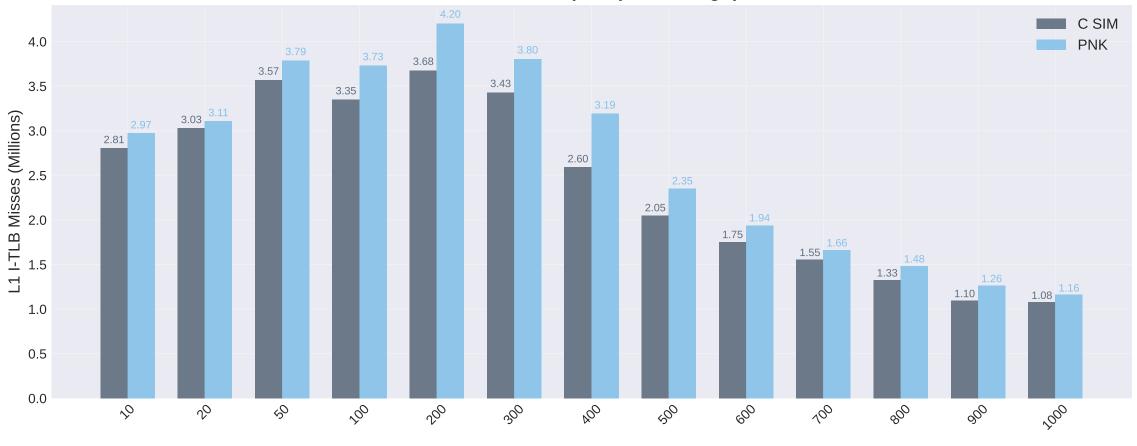




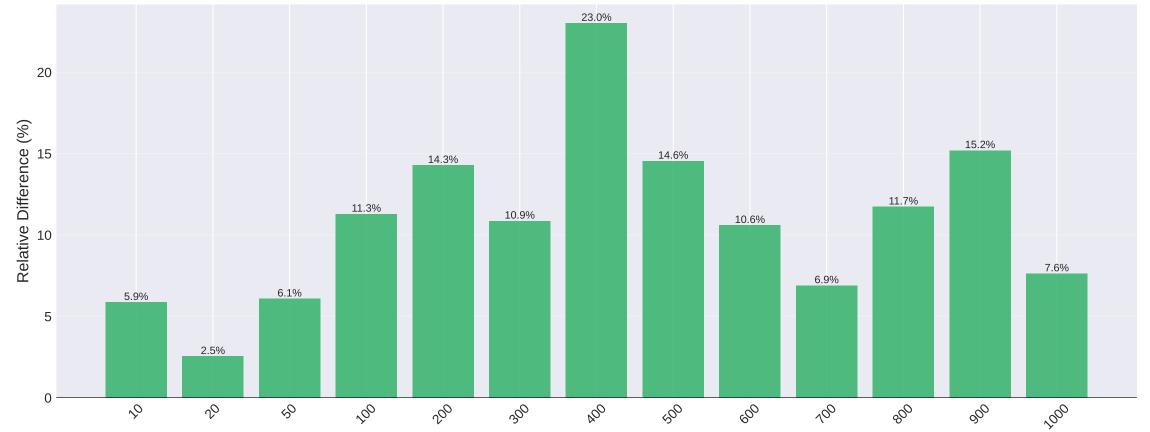
L1 D-cache Misses (Total) vs Throughput



L1 I-TLB Misses (Total) vs Throughput

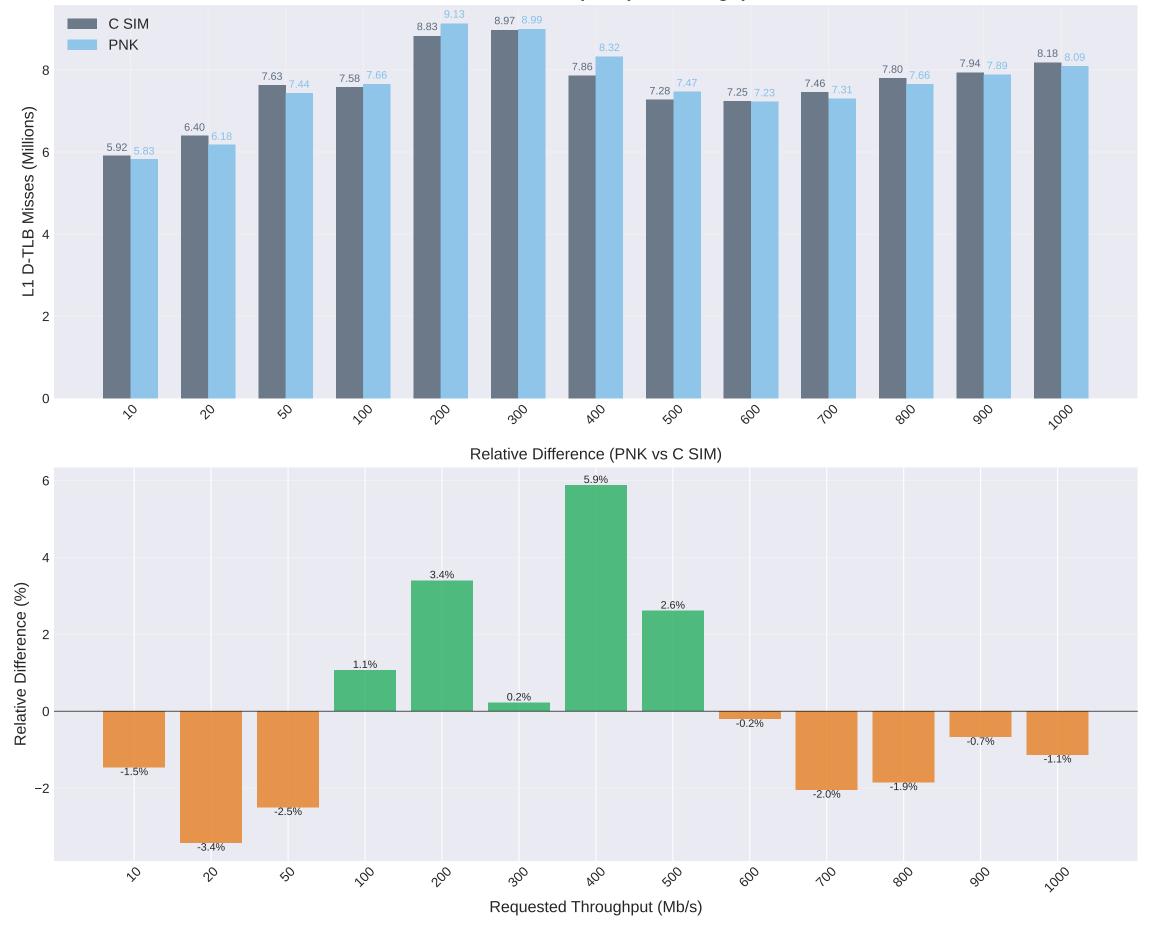




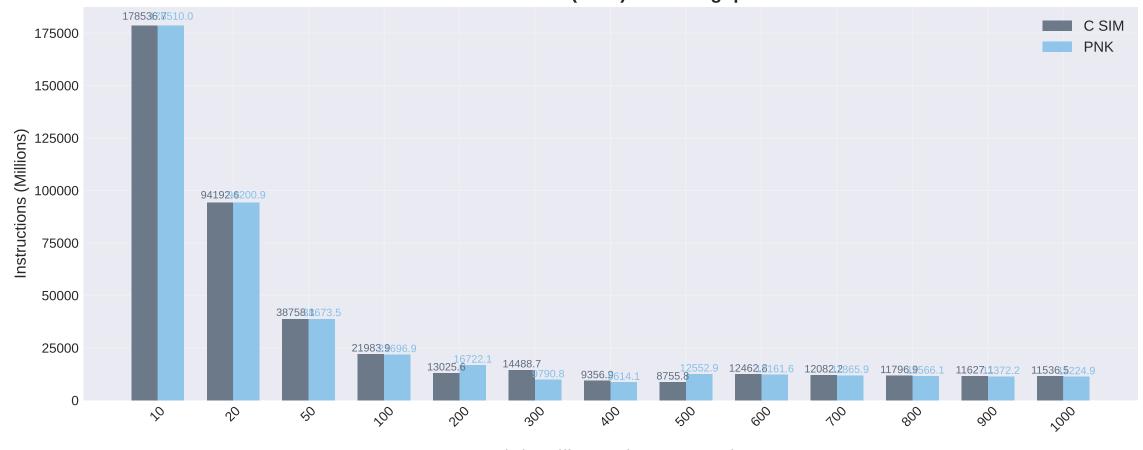


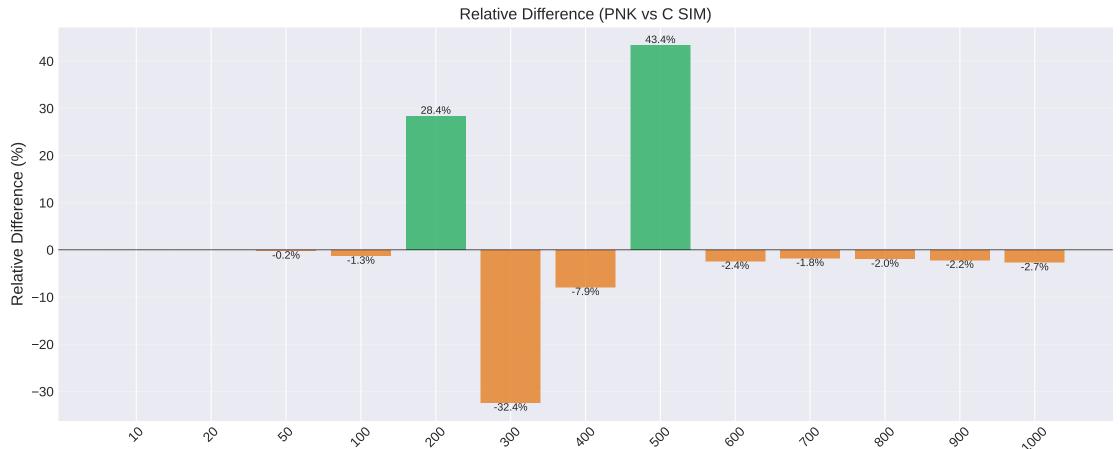
Requested Throughput (Mb/s)

L1 D-TLB Misses (Total) vs Throughput



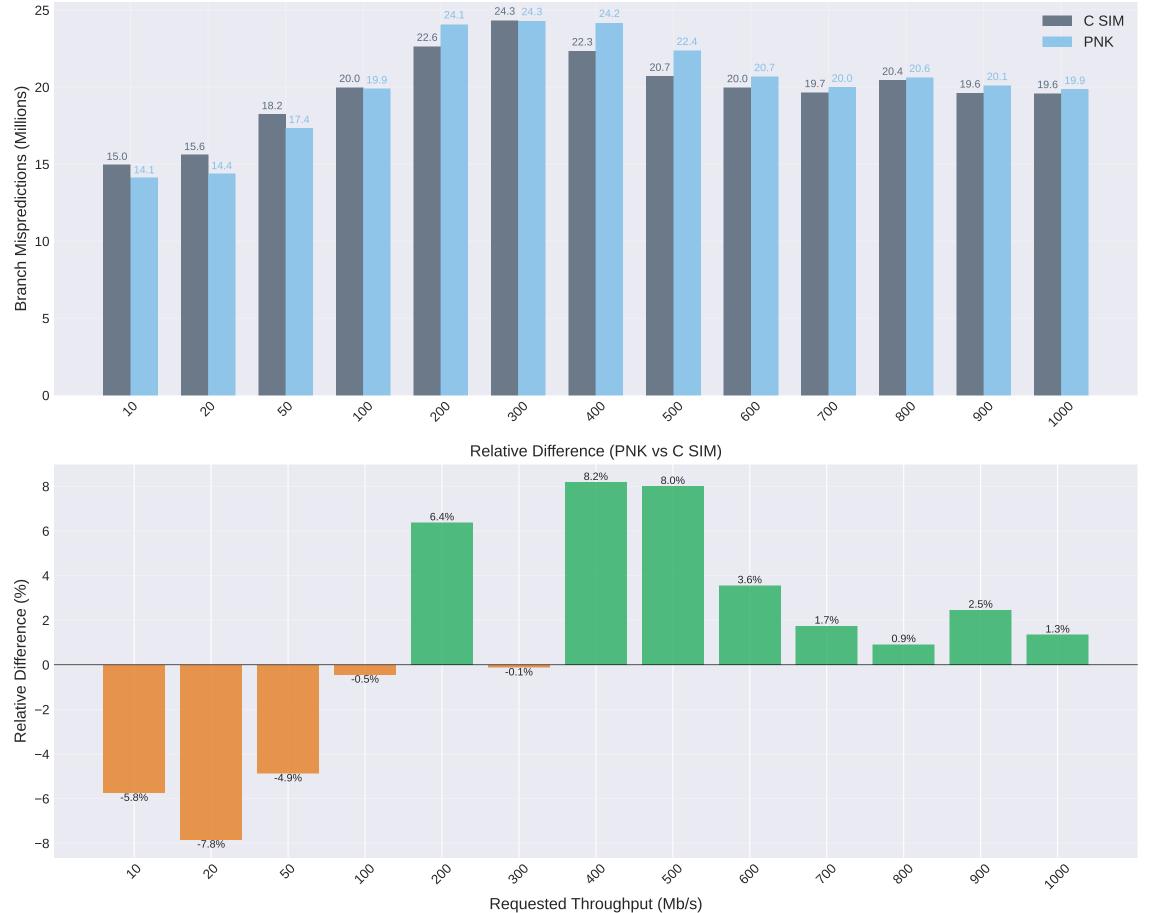




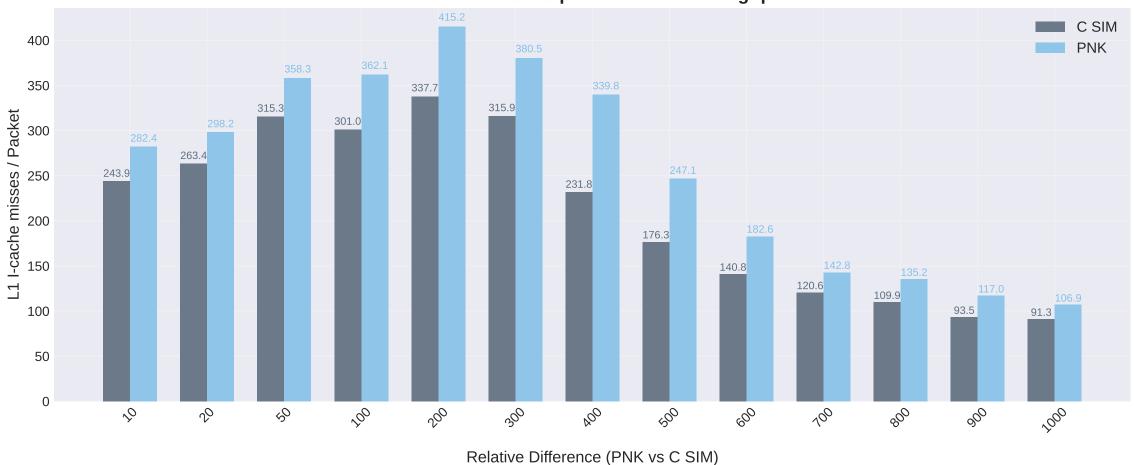


Requested Throughput (Mb/s)

Branch Mispredictions (Total) vs Throughput



L1 I-cache Misses per Packet vs Throughput

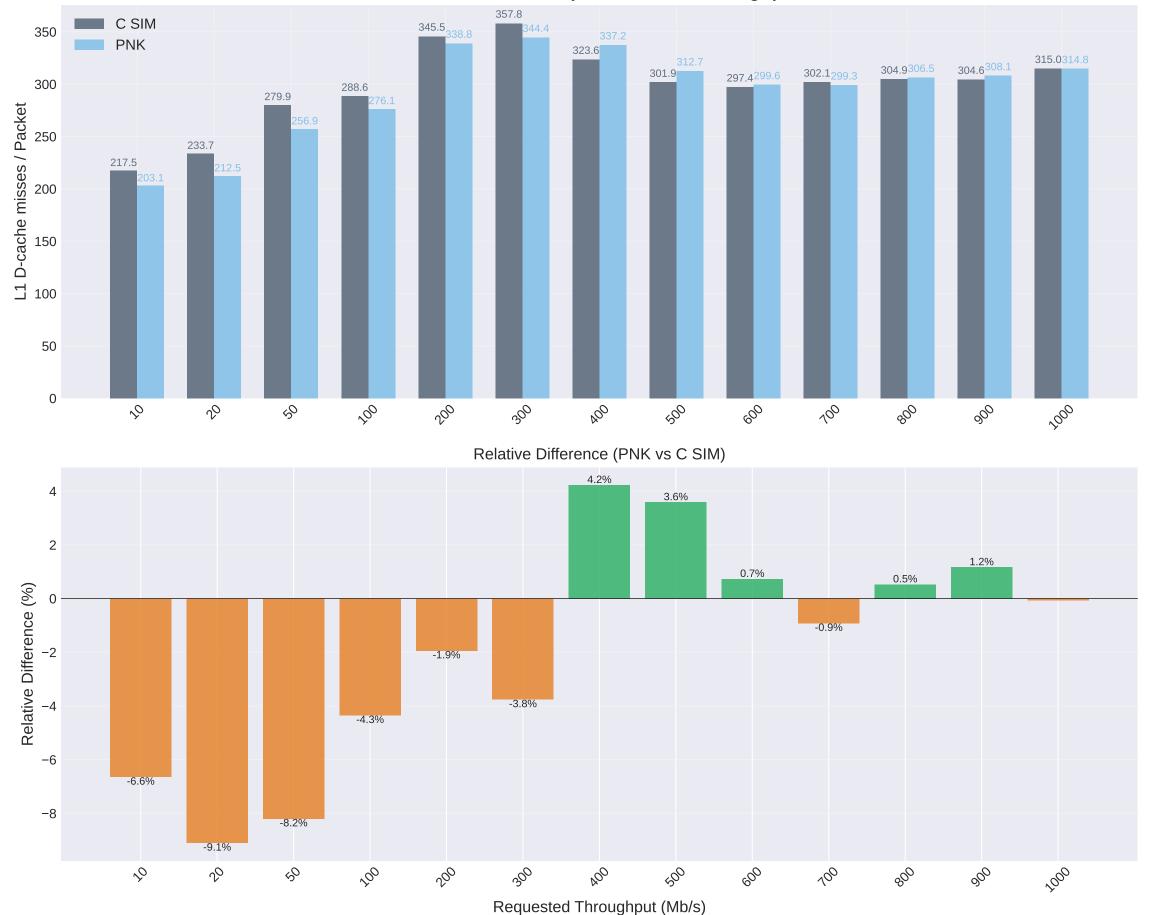




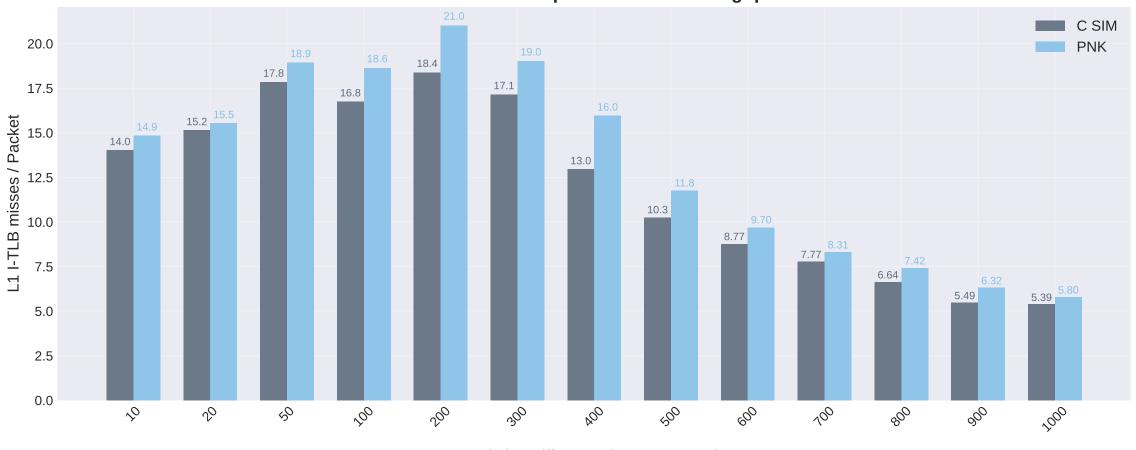
Requested Throughput (Mb/s)

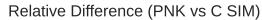
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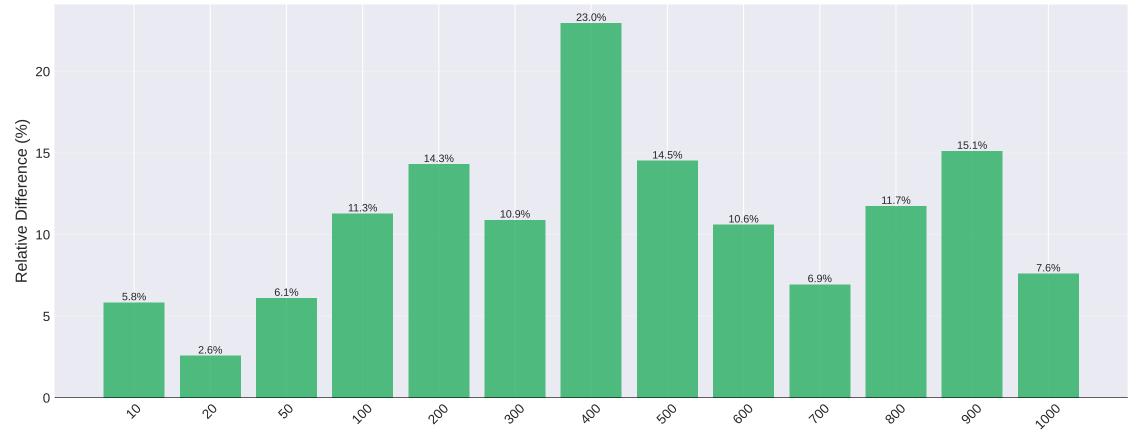
L1 D-cache Misses per Packet vs Throughput



L1 I-TLB Misses per Packet vs Throughput

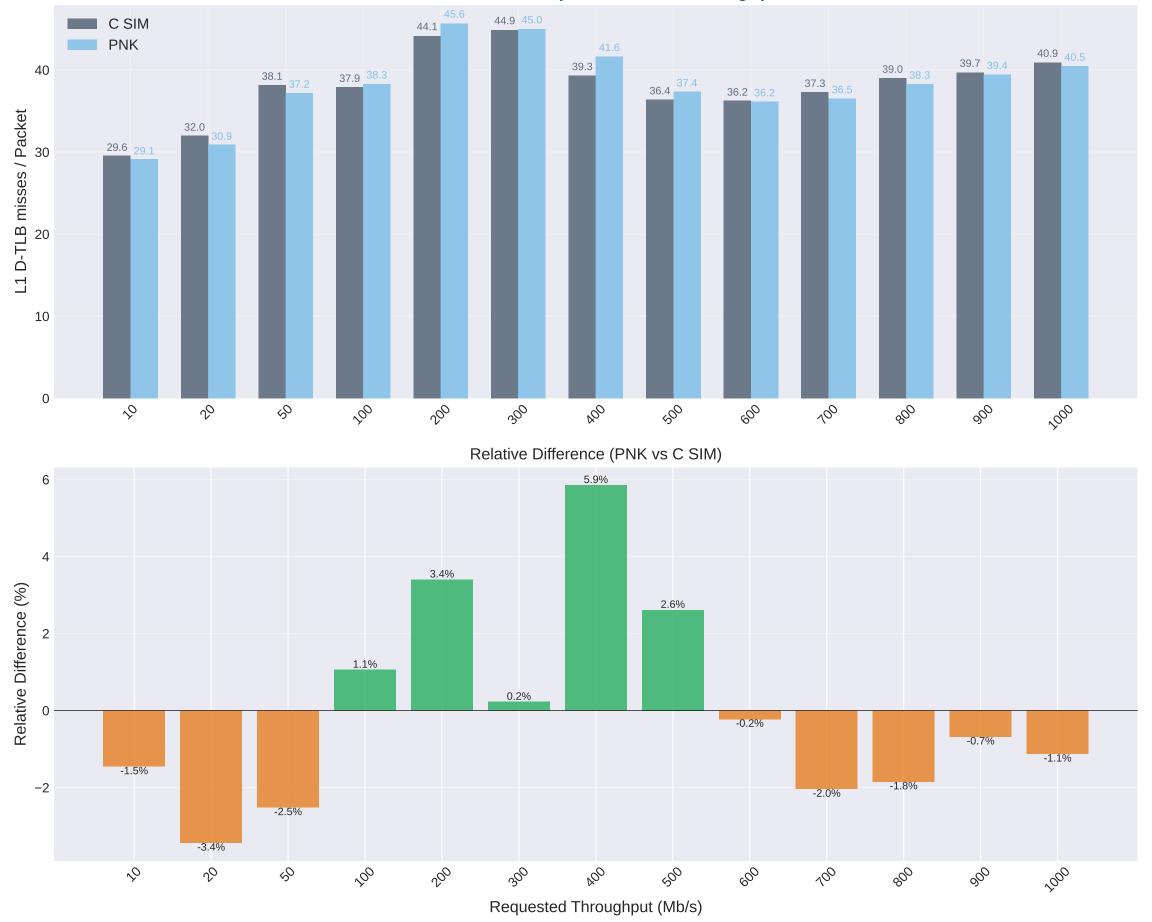




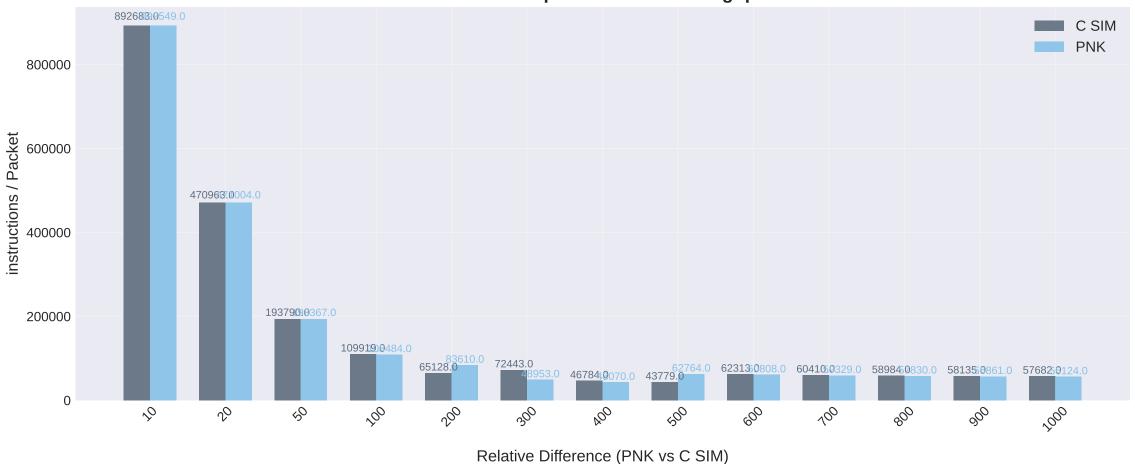


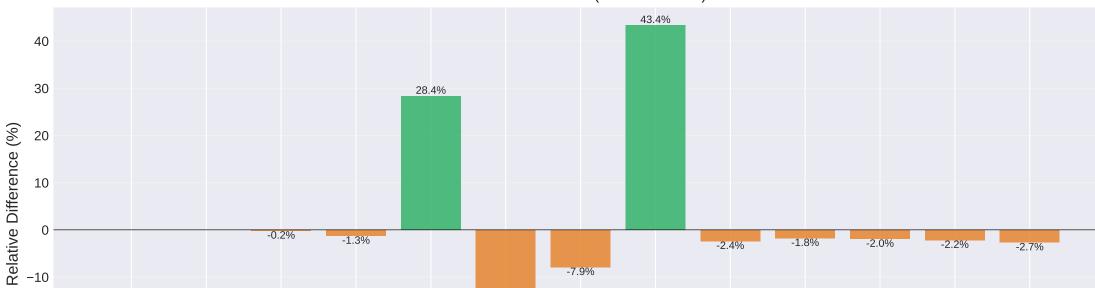
Requested Throughput (Mb/s)

L1 D-TLB Misses per Packet vs Throughput









-1.3%

200

-20

-30

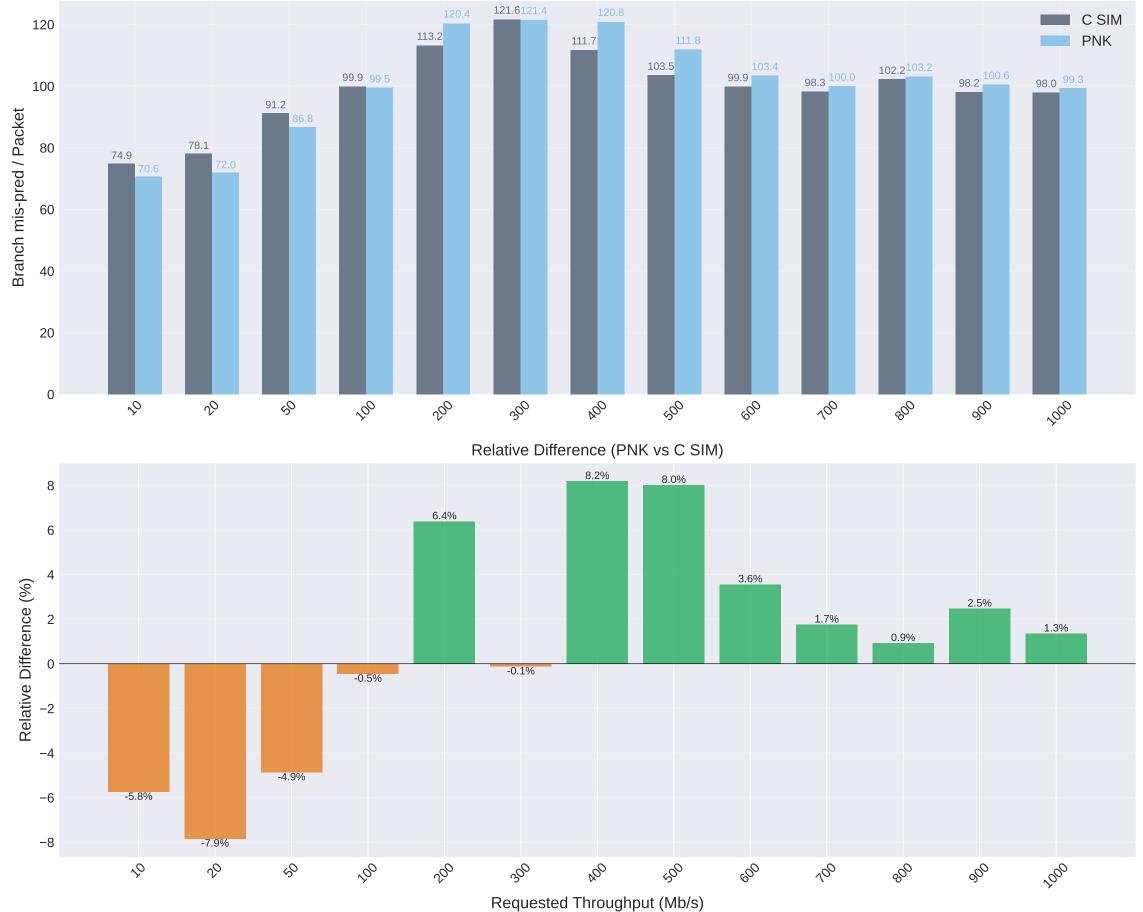
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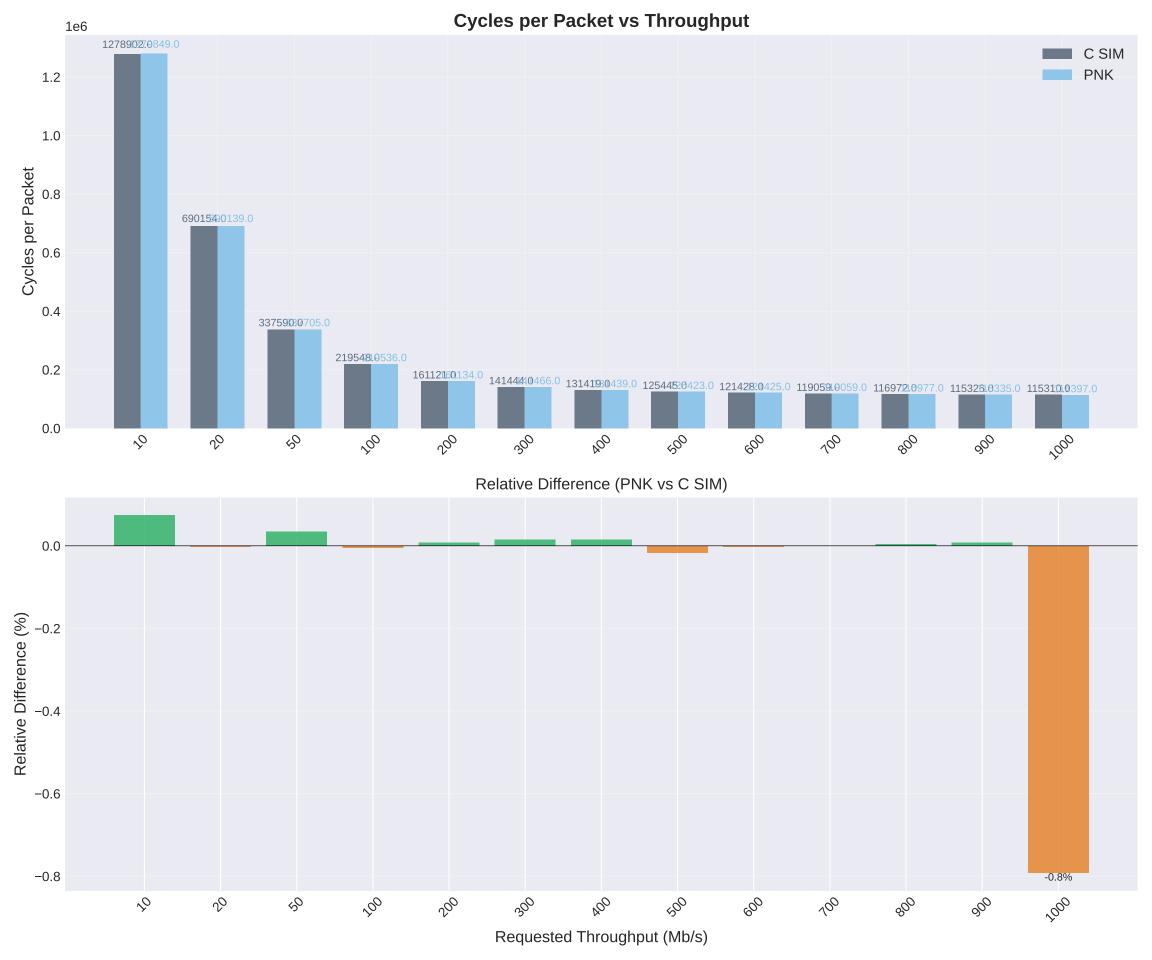
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50

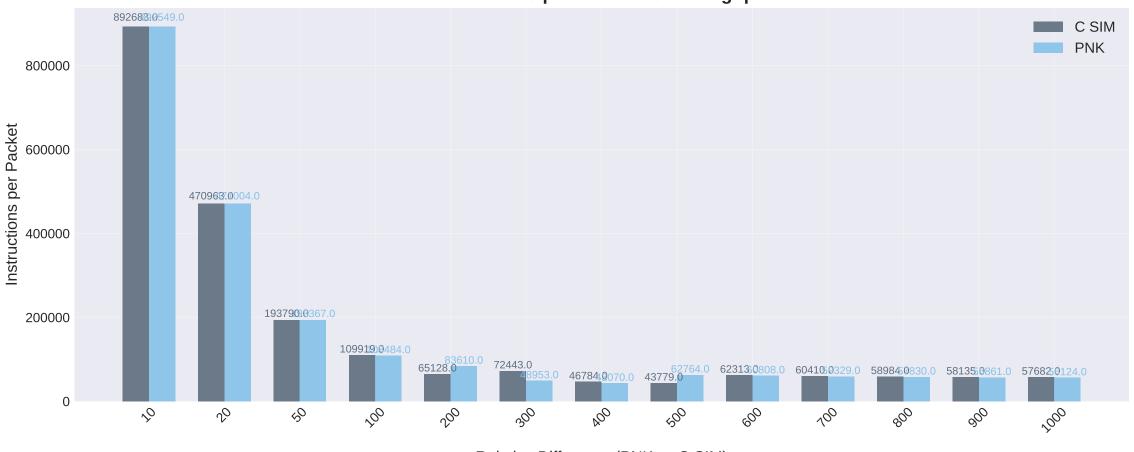


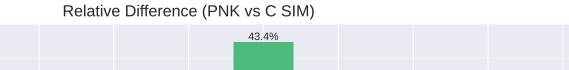
Branch Mispredictions per Packet vs Throughput

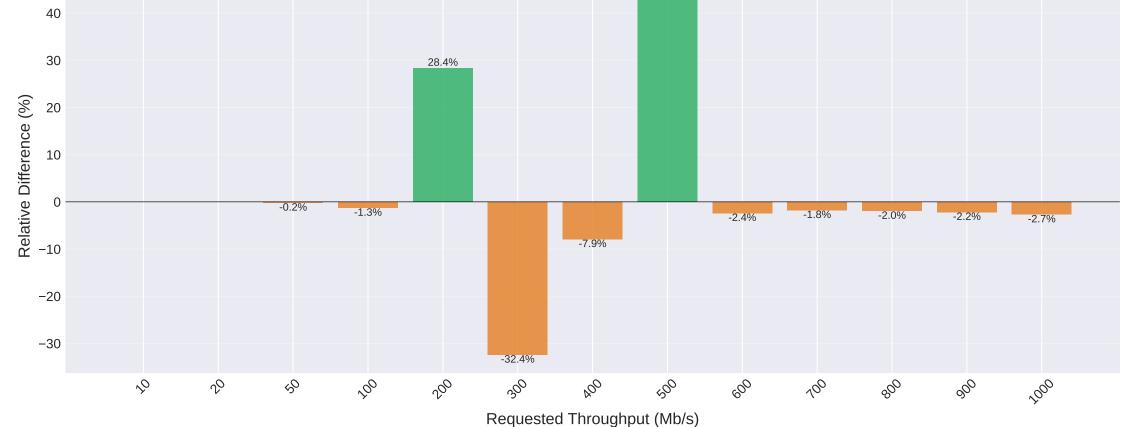












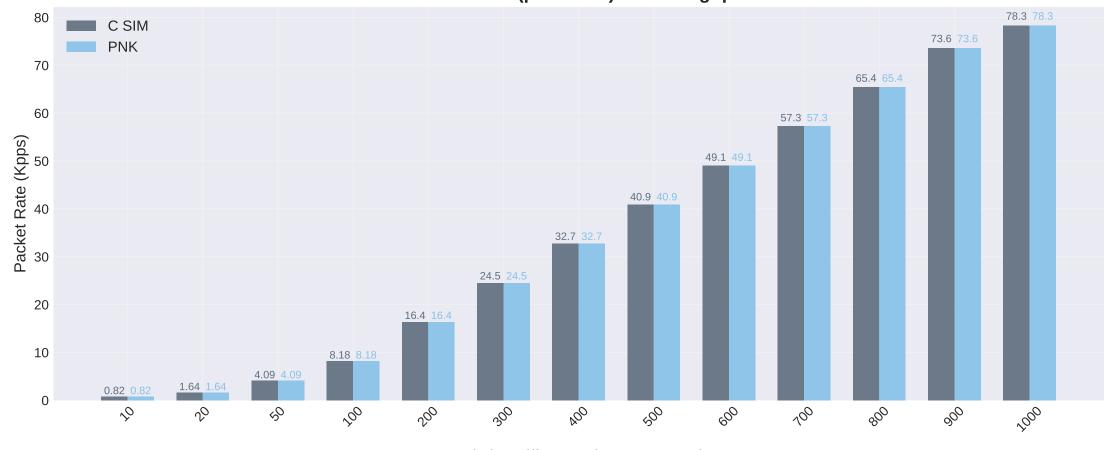
Branch Mispredictions per Packet vs Throughput

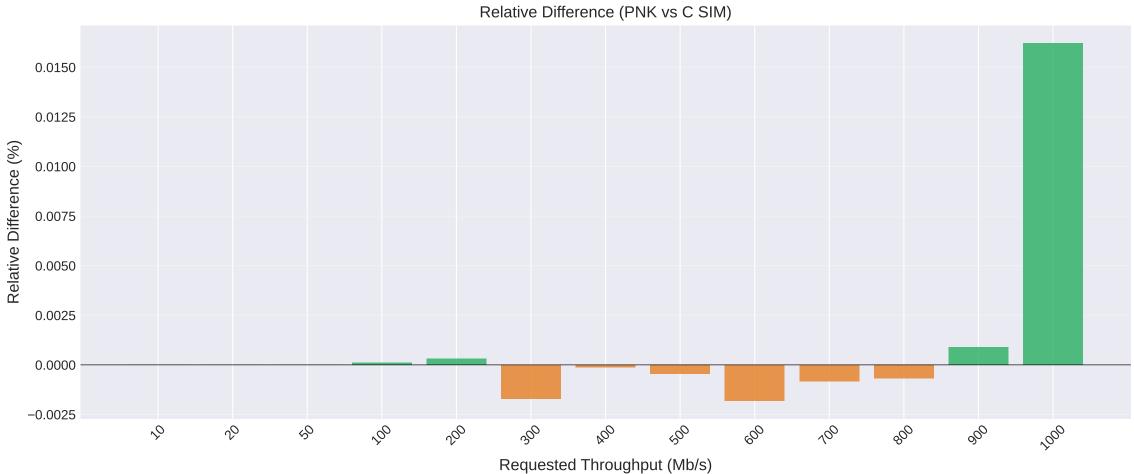


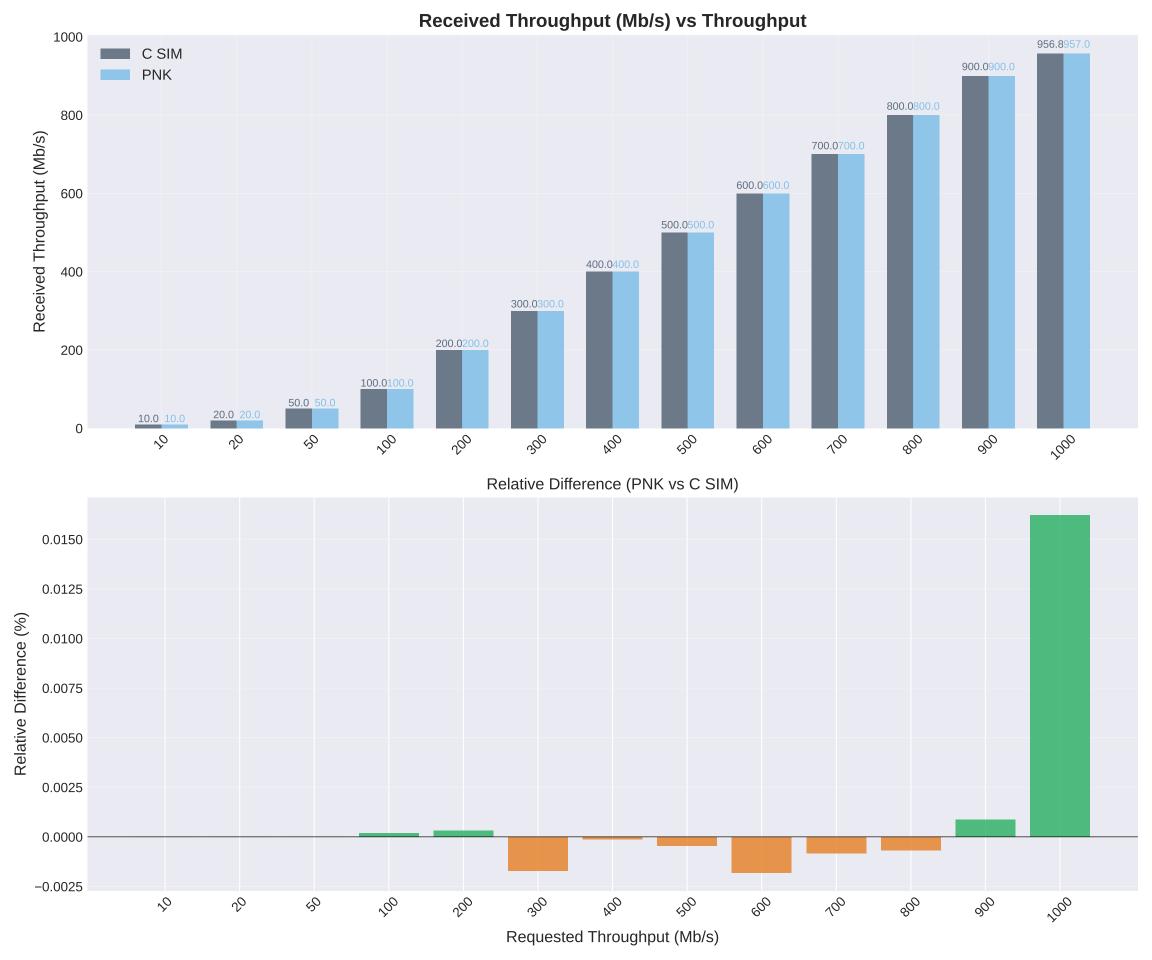
Requested Throughput (Mb/s)



Packet Rate (packets/s) vs Throughput







Sent Throughput (Mb/s) vs Throughput

