

# Performance Report

The tests were run for the WIBeth data format for 8, 16, 24, 32, 40, and 48 streams. The Figures 1 and 2 show the results of the tests ran (Table1) using the different metrics.

\* L2-hits is the fraction of requests that make it to L2 at all. Similar for L3.

\* L2-misses is the fraction of requests that make it to L2 at all and then miss in L2. Similar for L3.

Test	Readout SRV	dunedaq	OS	NODE	Elog message
stream scaling	np02srv004	v4_1_1	Alma9	0	Before new kernel params
stream scaling	np02srv004	v4_2_1	Alma9	0	After new kernel params

Table 1. Summary of the tests ran.

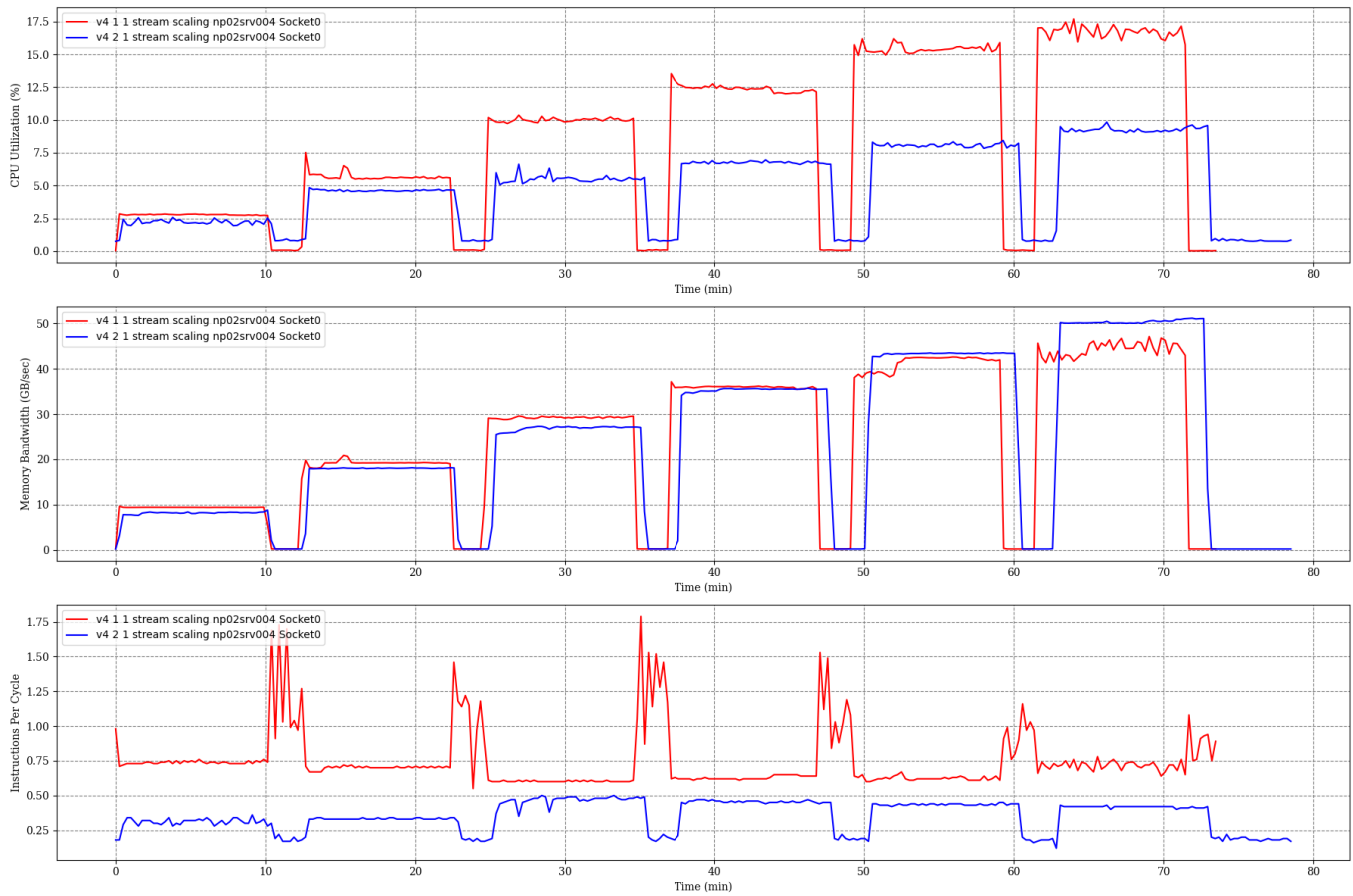


Figure 1. Socket0 results of the tests ran using the metrics CPU Utilization (%), Memory Bandwidth (GB/sec), Instructions Per Cycle.

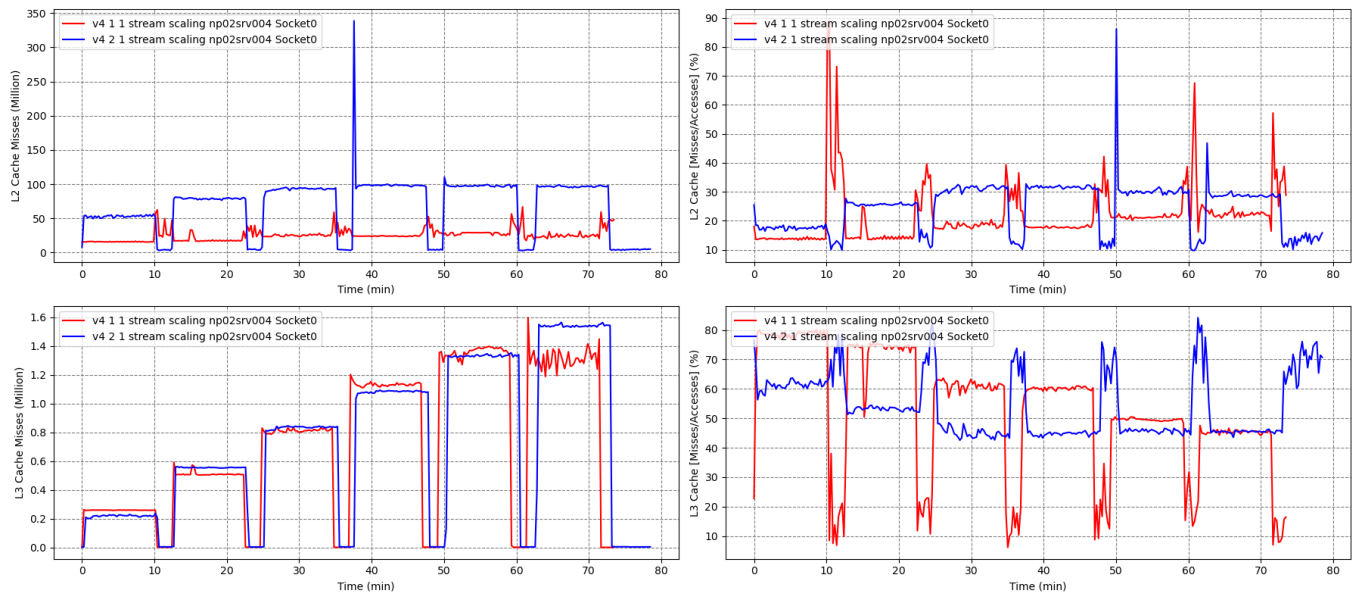


Figure 2. Socket0 results of the tests ran using the metrics L2 Cache Misses (Million), L2 Cache [Misses/Hits] (%), L3 Cache Misses (Million), and L3 Cache [Misses/Hits] (%).

Configurations:

daqconf file: daqconf-eth-stream\_scaling-np02srv004-0

- \* use\_connectivity\_service: True
- \* random\_trigger\_rate\_hz: 0.1
- \* enable\_raw\_recording: False
- \* raw\_recording\_output\_dir: /mnt/nvm\_raid0/
- \* latency\_buffer\_size: 139008
- \* generate\_periodic\_adc\_pattern: True
- \* use\_fake\_cards: True
- \* enable\_tpg: False
- \* tpg\_threshold: 1000
- \* tpg\_algorithm: SimpleThreshold
- \* thread\_pinning\_file: ../cpupins/cpupin-eth-basic-np02srv004-0.json

Pinning	CPU cores	CPU use ave (%)
parent	1, 2, 129, 130	0.0
fakeprod-1..	3,4,5,6,131,132,133,134	0.0
consumer-1..	7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149	0.0

Table 2. CPU core pins information for the "stream\_scaling" test using dune\_daq v4\_1\_1.

daqconf file: daqconf-eth-stream\_scaling-np02srv004-0

- \* use\_connectivity\_service: True
- \* random\_trigger\_rate\_hz: 0.1
- \* enable\_raw\_recording: False
- \* raw\_recording\_output\_dir: /mnt/nvm\_raid0/
- \* latency\_buffer\_size: 139008
- \* generate\_periodic\_adc\_pattern: True
- \* use\_fake\_cards: True
- \* enable\_tpg: False
- \* tpg\_threshold: 1000
- \* tpg\_algorithm: SimpleThreshold
- \* thread\_pinning\_file: ../cpupins/cpupin-eth-basic-np02srv004-0.json

Pinning	CPU cores	CPU use ave (%)
parent	1, 2, 129, 130	14.4
fakeprod-1..	3,4,5,6,131,132,133,134	10.8
consumer-1..	7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149	10.8

Table 3. CPU core pins information for the "stream\_scaling" test using dune\_daq v4\_2\_1.

The End, made on 2024-03-04 13:27:40