



# STAC Update: Fast Data

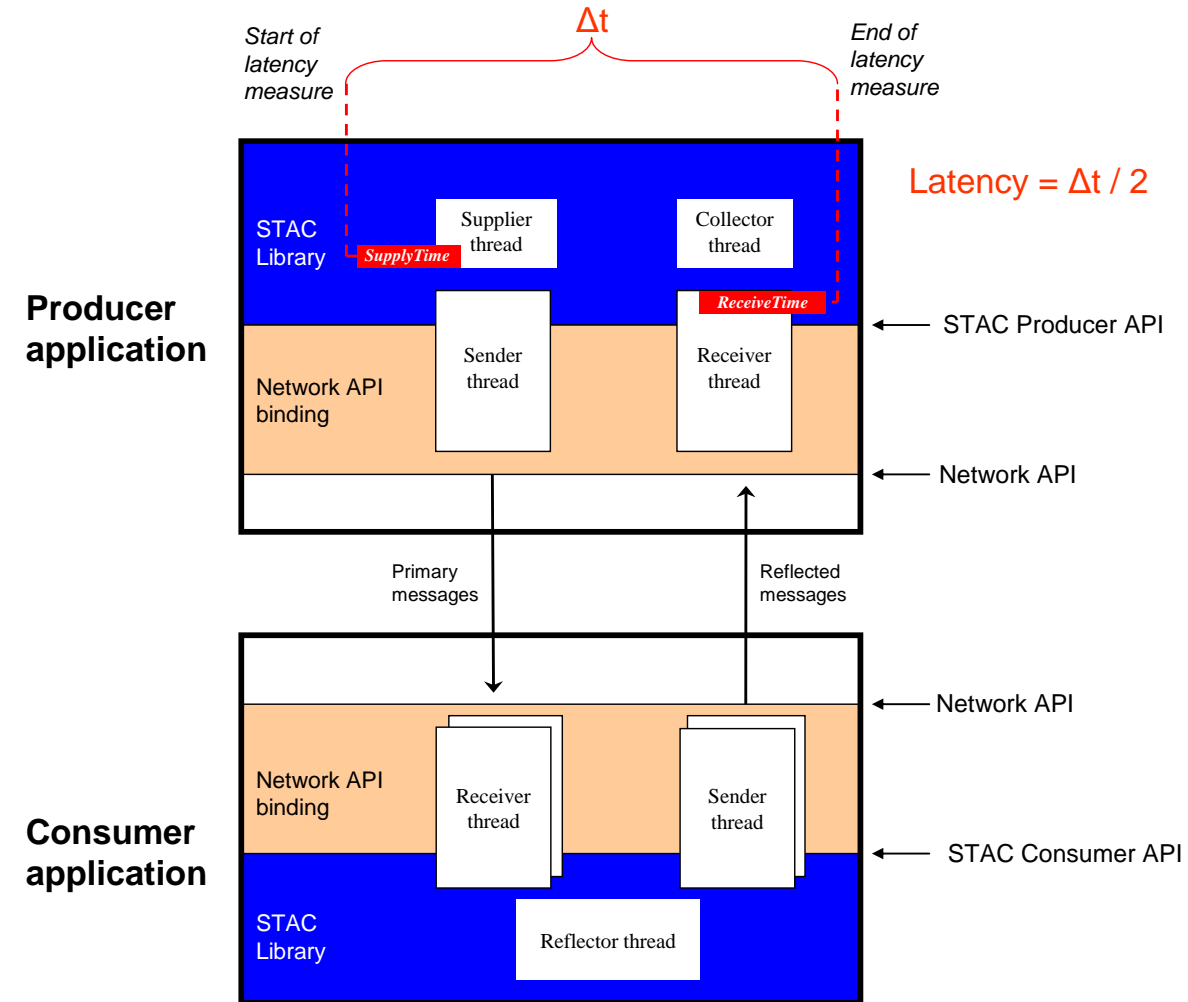
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# STAC-N1

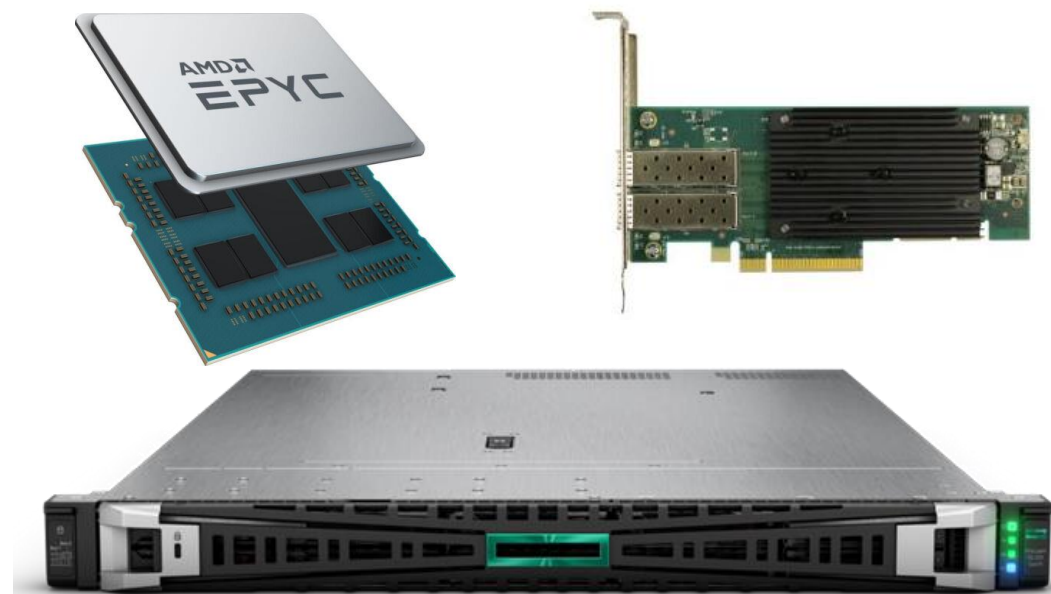
- Measures the performance of a host network stack (server, OS, drivers, host adapter)
- Round-trip software timestamping
- Market data style workload
- Network API to network API
  - No middleware, feed handlers, etc.

[www.STACresearch.com/n1](http://www.STACresearch.com/n1)



# STAC-N1 / UDP / AMD / HPE / XtremeScale / OpenOnload

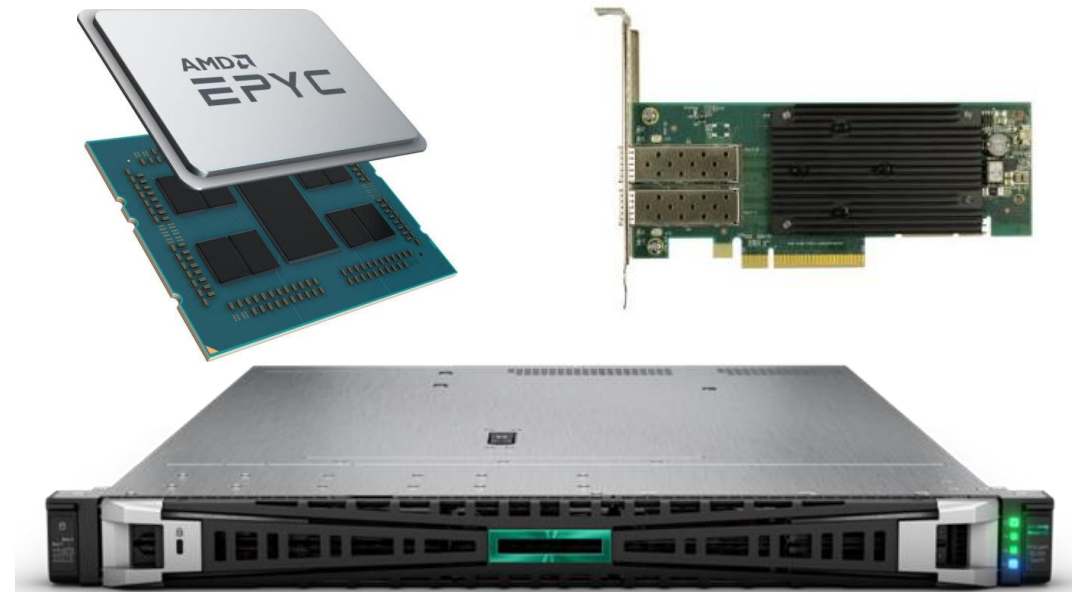
- Looks at impact of generational updates, including AMD EPYC™ Genoa
- Stack
  - STAC-N1 UDP-TCP binding
  - 2 x HPE ProLiant DL325 Gen11 servers
    - 1 x 32-core AMD EPYC™ 9374F @ 3.85Ghz (4.3 GHz Boost)
    - AMD Xilinx XtremeScale™ X2522-25G-PLUS Adapter
    - Red Hat Enterprise Linux 8.6
  - 25Gb (via cross-over cable, FEC off)



[www.STACresearch.com/AMD230414](http://www.STACresearch.com/AMD230414)

# Vs. all public results for UDP on non-overclocked servers

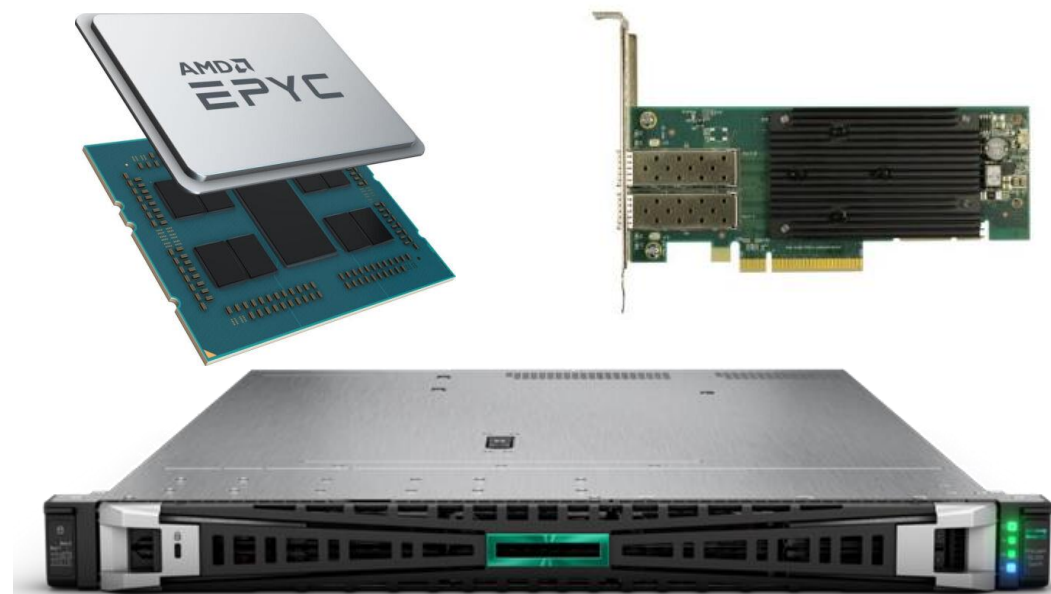
- The lowest mean and 99p latency for the base rate of 100k messages per second
  - [STAC.N1.β1.PINGPONG.LAT1](#)
- The highest maximum throughput tested of 1.5 million messages per second
  - [STAC.N1.β1.PINGPONG.TPUT1](#)
- The lowest 99p and maximum latency at the highest rate tested for SupplyToReceive latency
  - [STAC.N1.β1.PINGPONG.LAT2](#)



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# Vs. prev. generation server, CPU, OS, and OpenOnload driver\*

- A maximum throughput tested that was 300,000 messages per second higher
  - (STAC.N1.β1.PINGPONG.TPUT1)
- A lower mean and maximum latency at the highest rate tested
  - (STAC.N1.β1.PINGPONG.LAT2)



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\*SUT ID: AMD221001