

## nccl test timings

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Performance of all nccl tests with the current patch (alt\_read+patch) of the alternate rendezvous slingshot protocol.  
The libfabric library has been patched to address a scalability issue when alt\_read is enabled.

Colors denote number of nodes. Each node uses 4 GPU, 1 GPU per task.  
Shape denotes the algorithm NCCL was instructed to use, either TREE or RING.

Where only one type of algorithm is present indicates other algorithms were not acceptable for the given collective and the test failed.

Each data point is the average over 10 samples. Some runs with a fixed algorithm are missing data due to machine availability.

\*\* Y-Axes are not the same to highlight individual features \*\*

System Configuration:

NCCL\_VERSION v2.26.2-1  
AWS\_OFI\_NCCL\_VERSION v1.14.1  
LIBFABRIC\_VERSION v2.2.0  
NVIDIA-SMI version : 550.54.15  
NVML version : 550.54  
DRIVER version : 550.54.15  
CUDA version : 12.4  
NVCC\_GENCODE -gencode=arch=compute\_90,code=sm\_90  
nvcc: NVIDIA (R) Cuda compiler driver  
Copyright (c) 2005-2024 NVIDIA Corporation  
Built on Thu\_Sep\_12\_02:27:38\_PDT\_2024  
Cuda compilation tools, release 12.6, V12.6.77  
Build cuda\_12.6.712.6/compiler.34841621\_0  
gcc (Spack GCC) 13.3.0  
/usr/bin/nvidia-smi  
/user-environment/linux-sles15-neoverse\_v2/gcc-13.3.0/cuda-12.6.2-csv6j03czkfdk46ep7pmm6ip03yilbj/bin/nvcc  
/user-environment/linux-sles15-neoverse\_v2/gcc-13.3.0/cray-mpich-8.1.30-wb5peugenmg2ebx7p5p2ic2abmg35rgz/bin/mpicc  
CUDA\_HOME /user-environment/linux-sles15-neoverse\_v2/gcc-13.3.0/cuda-12.6.2-csv6j03czkfdk46ep7pmm6ip03yilbj  
LIBFABRIC\_HOME /users/pcoles/nccl-stack-constellation-benchmarks/rA0/install  
Linux daint-in001 5.14.21-150500.55.65\_13.0.74-cray\_shasta\_c\_64k #1 SMP Mon Sep 9 09:48:48 UTC 2024 (ba86e71) aarch64 aarch64 aarch64 GNU/Linux

