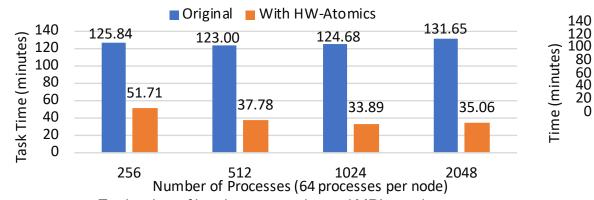
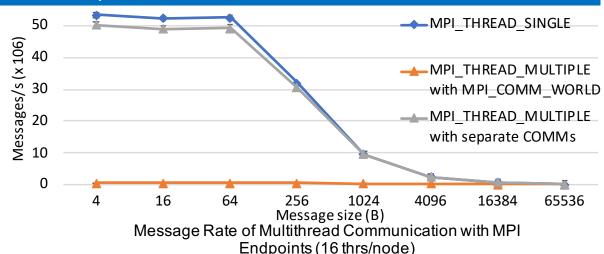
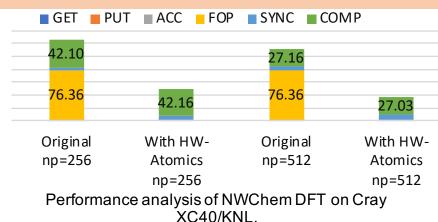
Evaluation of Improvements to MPI RMA



Evaluation of hardware-accelerated MPI atomics in NWChem DFT for Carbon 180 with 631G* basis set on Cray XC40/KNL.

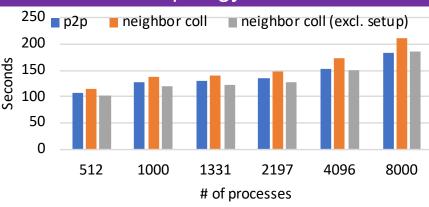
MPI Endpoint and Evaluation





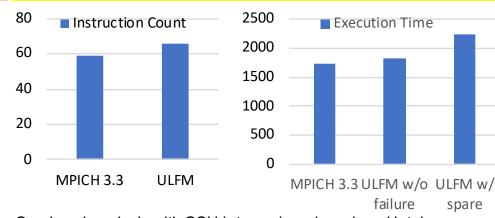
The atomics overhead (FOP) is significantly reduced by using HW MPI atomics.

Evaluation of Topology-aware Collectives



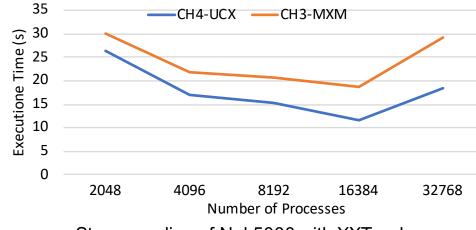
PETSc KSPSolve time in 3D stencil using point-to-point communication and topology-aware neighborhood collectives

Evaluation of ULFM Prototype



Overhead analysis with OSU latency benchmark and Intel process Software Develop Emulator (SDE) on JLSE Skylake cluster.

Comprehensive Evaluation



Strong scaling of Nek5000 with XXT solver on Summit