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Title: ECP STPR17-129 Highlight Quadchart

Author(s): Pritchard, Howard Porter Jr.

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Preliminary design for Intel Level Zero (L0) component for Open MPI Accelerator framework

ECP WBS 2.3.1.17 /OMPI-X

Epic/Story STPR17-129

PI David Bernholdt, ORNL

Milestone Lead Howard Pritchard, LANL

Members ORNL, LANL, LLNL, SNL, UTK

Scope and objectives

- ECP OMPI-X develops a production grade MPI library
- Availability of Open MPI on ALCF Aurora and associated testbed systems
- Performant MPI implementation on ALCF Aurora – including support for GPU direct for Intel Ponte Vecchio accelerators

Effective solution for Community and ECP

- Alternative MPI implementation for ECP applications that supports MPI/Ponte Vecchio interoperability
- Robust support for Spack-based builds using both GNU and Intel OneAPI compilers

Impact

- **Alternative MPI implementation:** Aurora users will have an alternative to the MPICH implementation
- Alternative launch mechanism (PMIx runtime launcher) for non-MPI applications

Project accomplishment

- Preliminary design for a L0 accelerator framework component – https://github.com/hppritchard/ompi/tree/ze_devel_sandbox
- Identification and testing of available MPI/L0 tests using the MPICH install on the ANL Sunspot system - <https://github.com/intel/mpi-benchmarks>

Deliverables Progress report for milestone STPR17-129. Relevant commits and issues in GitHub repos



