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Title: ECP STPR17-129 Highlight Quadchart

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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/hppritch/aomp/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
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