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**Title:** ECP STPR17-122 highlights slide

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# Deployment of Open MPI on ALCF Sunspot

**ECP WBS** 2.3.1.17 /OMPI-X

**Epic/Story** STPR17-122

**PI** David Bernholdt, ORNL

**Milestone Lead** Howard Pritchard, LANL

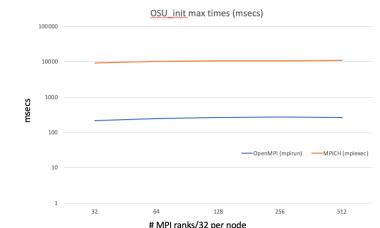
**Members** ORNL, LANL, LLNL, SNL, UTK

## Scope and objectives

- ECP OMPI-X develops a production grade MPI library
- Availability on ALCF Aurora and associated testbed systems
- Performant MPI implementation on ALCF Aurora by using the vendor CXI libfabric provider

## Launch time comparison on sunspot

- Order of magnitude faster MPI\_Init than MPICH
- High launch overhead due to MPICH not PALS
- Question opened with ALCF consultants



## Impact

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

## Project accomplishment

- Implemented new PRRTe PALS process launcher manager (PLM) and environment setup system (ESS) for Aurora
- Allows for use of vendor libfabric provider (CXI) even with VNI enforcement enabled

**Deliverables** Progress report for milestone [STPR17-122](#). Relevant commits and issues in Github repos

<sup>1</sup> LA-UR 23-XXXXX

