Outline

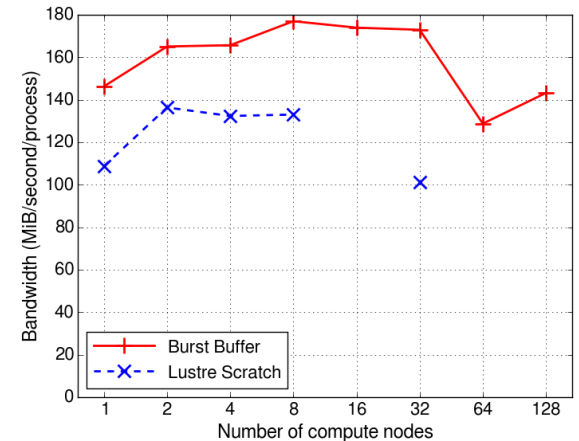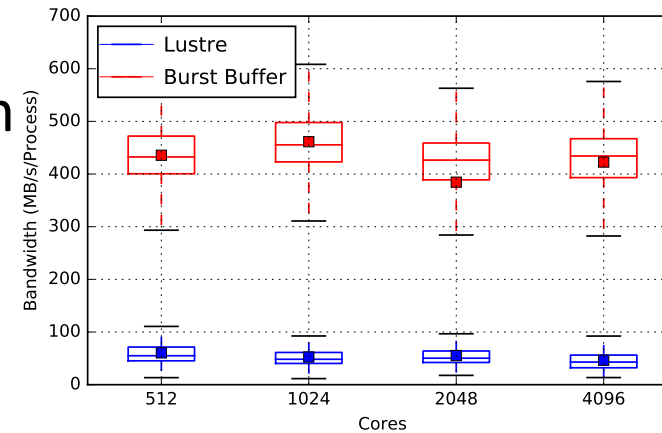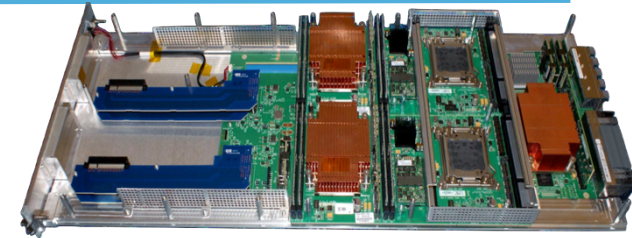- **NERSC 'Burst Buffer'**

  – Hardware: 1.8 PB of high performance SSDs on Cray high-speed network

  – Software: On-demand POSIX filesystem striped across dynamic allocation

- **HEP Use Cases**

  – ALICE

  – ATLAS

  – Tractor (DESI)

  – H5Boss

Conclusions

- NERSC/Cray Burst Buffer offers new approach to dynamically allocate filesystems striped across high-performance SSDs – now in production

- Demonstrated here for experimental HEP Workflows
  - Substantially improves I/O over comparable Lustre filesystem
  - Variety of use-cases from NP, HEP, Cosmology

- I/O is not (now) a significant barrier to these projects
  - Can run their most I/O intensive workflows on Cori

- Further improvements to performance and useability of NERSC Burst Buffer coming soon…