Omni-Path Express Transport and DAOS Support Update

Cornelis Networks

14 Nov 2022

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Agenda

- Cornelis Network, Inc.
- Omni-Path Express Transport Update
- Omni-Path Express DAOS Support Update
- Omni-Path Express Availability

Cornelis Networks, Inc.

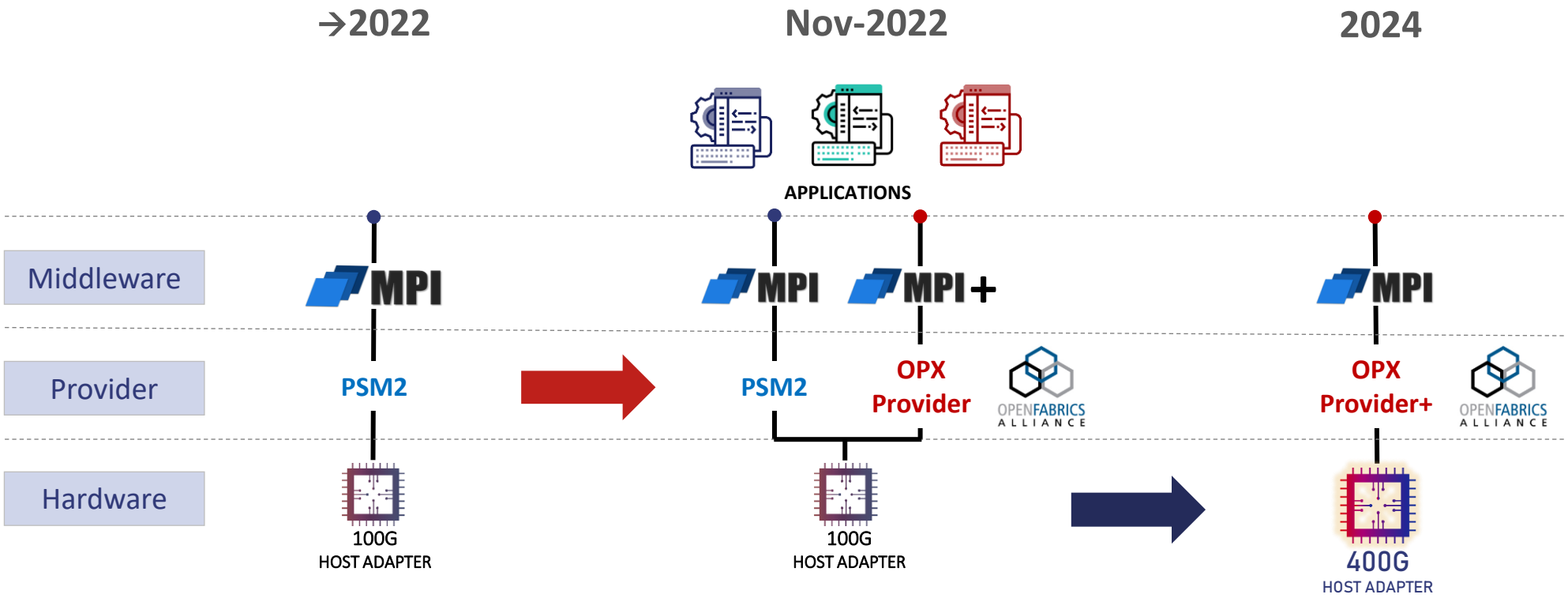
Come see us in Booth #745

- Highlights:
  - Omni-Path 100G fabric solution is available now
  - New Omni-Path Express (OPX) Suite software release with OPX native libfabric provider
  - The Omni-Path CN5000 400G platform development is in progress

Omni-Path Express Transport Update

- Omni-Path Express native libfabric provider
  - Omni-Path Express Suite (OPXS) software release 10.12.0.x adds the new OPX provider
    - Support for libfabric v1.16.1
    - Support for Red Hat Enterprise Linux (RHEL) 7.9, 8.5 and 8.6
    - Support for Rocky Linux 8.5 and 8.6
    - Both OPX and PSM2 are available
    - OPX support for SLES 15.3 and 15.4
      - OPXS 10.12.1.x – Dec 2022
  - Refer to the Omni-Path Fabric Software 10.12.0 release notes for additional details
- OPX provider support for DAOS is in testing
- Open-source development, OFI architecture, standards based
  - Seamless transition to future Omni-Path platforms

Omni-Path Evolution



New Software

Significant functionality and performance enhancements via

Libfabric over Omni-Path Express

New Hardware

Optimized performance via

Premier OFI Adapter

DAOS Support: Environment

- Local DAOS Cluster
  - 4 DAOS server nodes:
    - Intel R2208WFTZSR 2U Xeon CLX-SP Server 8x2.5in 1.6TB Config
  - 32 Xeons compute nodes

- Packages in use for current OPX provider testing
  - OPX in libfabric v1.16.1
    - Patches pending submission
  - DAOS 2.103-tb
    - Patches pending submission
  - Mercury v2.2.0rc6
    - Added support for OPX provider
    - Additional patches pending submission

- Align with DAOS 2.4 release
  - Rebase and re-test at 2.3.x
  - Plan to rebase after first pass of DAOS regressions

DAOS Support: Test & Regression

- Mercury & Basic CART tests are complete
- CART selftest
  - Single server tests (Bulk Transfer, IOV, and Empty Message) are clean
  - Multiple DAOS server engine instances on a single server with multiple interfaces – in progress
  - Multiple server tests – in progress
- DAOS regression testing
  - Latest challenges
    - Local env build – transitioning to support the DAOS regression test suite
  - Environment adjustments are necessary to enable test initiation, dependency checks
    - Focused on building our repos to align with DAOS regression dependencies
    - Needed to account or newer version of Mercury than expected by DAOS 2.103-tb, for instance

OPX and DAOS Support Availability

- OPX Provider with DAOS support release target – Dec 2022
  - Mercury patches
  - OPX with DAOS support patches

- DAOS Roadmap Timeline
  - OPX as Tech Preview in DAOS 2.4
    - Regression and scale testing for full support in 2.4 - possible

Questions?

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