Open MPI and Open Fabrics Software

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OpenFabrics
Software
User Group
Workshop

#OFSUserGroup

Outline

- Release timeline

- Github

- Upcoming Features

- Status of Open MPI and Open Fabrics software

- What's trending

Release Timeline

1.9/2.0 branch

3/13   4/14   **master**

5/15 (tentative)

1.7.0...5

Feature release

1.8.0...4   **1.8.5**

next stable release 3/15

Stable release
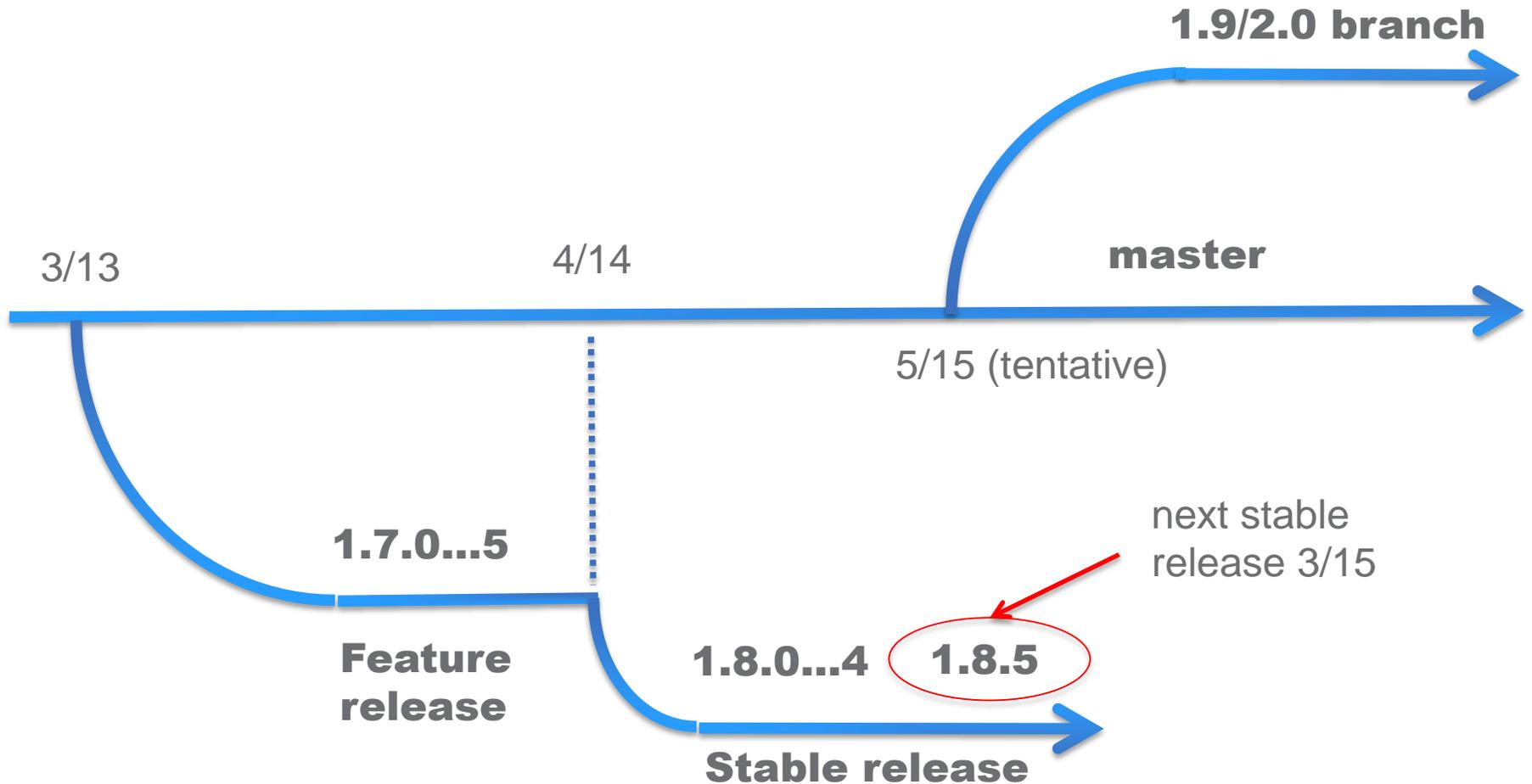
https://github.com/open-mpi/ompi

Github move

- Special thanks to David Goodell and Jeff Squyres for extra effort to make this happen
- Open git issue if you wish to report a bug
- Better yet, do a fork, fix the problem, then issue a pull request - @jsquyres or @hppritcha
  - Note a major feature may require signing project's collaborator agreement
- Check the [git wiki page](#) for info on working with Open MPI on github, etc.

Upcoming Featues – 1.9/2.0 release stream

- MPI 3.0 errata and MPI 3.1 compliant (assuming 3.1 is passed at June '15 forum meeting)
  - Possible exception of ticket #273
- MPI_THREAD_MULTIPLE support for important BTLs
- Job startup improvements and reduced memory footprint connection management info
- Libfabric adoption (usNIC, OFI MTL)
- Mellanox specific improvements
- Streamlined build process for Cray systems
- Improved asynchronous progress for some BTLs
- ScoreP support
- One or more MPI-4 features (as MPIX_*)

Deprecated Features in 1.9/2.0

- Cray XT systems
  - May terminate support for Cray XE CLE 4.X
- MX BTL
- SCIF BTL (?)
- Coll ML component (?)

Open Fabrics and Open MPI

OFED Software use in Open MPI (master)

- Open IB BTL
- MXM, PSM, and libfabric MTLs
- Mellanox FCA collective accelerator package
- Out of band control network (used by mpirun)
  - Uses UD

Open MPI Project Code Structure
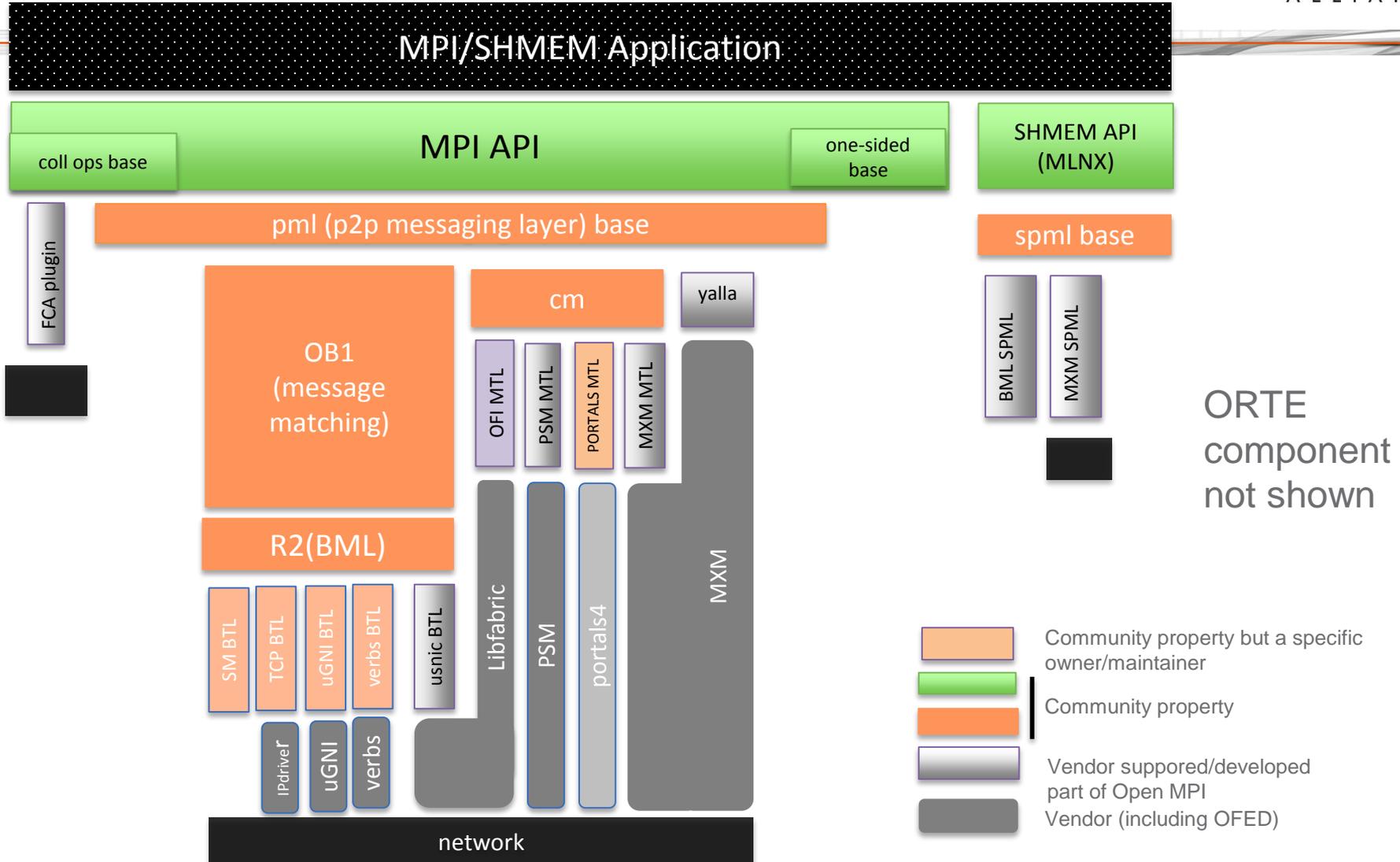
What's in/what's not

- For Mellanox HCA's use MXM/FCA
  - Well supported by the vendor
  - Actively being developed/enhanced
  - export MXM_TLS=rc,shm,self for best performance, for scalability ud,shm,self, latest HCA/firmware, dc,shm,self
- For Intel Infinipath HCA's use PSM
  - OFI libfabric MTL is available for a check-out
- The openib BTL in Open MPI will be maintained, but no development is planned
- May implement a slimmed down openib BTL specifically for iWarp
- The openib BTL may be deprecated in next release stream (2.1/2.2)

Questions?

Thank You

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