



# Meeting of the Technical Steering Committee (TSC) Board

Wednesday, June 3<sup>rd</sup>, 2020  
11:00am ET

# Meeting Logistics

- <https://zoom.us/j/556149142>
- United States : +1 (646) 558-8656
  - Meeting ID: 556 149 142

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# Agenda/Updates

- Announcements:
    - Reminder: TSC call for nominations has been published
      - nominations due by Friday, June 12  
[tsc-nominations@OpenHPC.groups.io](mailto:tsc-nominations@OpenHPC.groups.io)
  - Upcoming deadlines:
    - SC'20
      - BoFs: Due July 31, 2020
- 
- PEARC'20 tutorial/cloud working group updates (csim)
  - Updated MPICH configuration
  - RC1 status

# OHPC Cloud Working Group Updates

- Contacted again and asked if willing to present on Friday
- Discussed which workloads to run for our R and GPU examples for CLI and Open OnDemand
  - Rstudio in browser
  - Jupyter Notebook on full desktop in browser
- Web-based tutorial / self-paced education
  - Hugo static site generator + github pages
  - Learn theme - <https://themes.gohugo.io/hugo-theme-learn/>
  - Example site - <https://www.hpcworkshops.com/>

# mpich: ucx/libfabric (continued discussion)

- From last time, we discussed desire to have co-installable variants of MPICH based on UCX and libfabric (ofi) transport layers
- Based on that, updated our build configuration to include a (ofi|ucx) designation
- Resulting RPMs can be installed simultaneously and satisfy dependencies for other downstream packages needing an MPICH variant

```
sms001:~ # rpm -qa | egrep 'mpich-(ucx|ofi)-gnu9-ohpc'  
mpich-ucx-gnu9-ohpc-3.3.2-14.1.ohpc.2.0.x86_64  
mpich-ofi-gnu9-ohpc-3.3.2-12.1.ohpc.2.0.x86_64
```

- Choice of transport variant exposed in modulefile version string:

```
ohpc-test@sms001:~> module avail mpich
```

```
----- /opt/ohpc/pub/moduledeps/gnu9 -----  
mpich/3.3.2-ofi      mpich/3.3.2-ucx (D)
```

Where:

D: Default Module

# mpich: ucx/libfabric (continued discussion)

- Similar to our other MPI stacks, we will provide an lmod-default package variant to make it easy to choose a default env for users:
  - note: logic had to change in these new mpich lmod-default variants
  - normally we just set the default compiler/mpi stack via installation of different "ohpc" module files which is loaded with our lmod build
  - in this case, we have to also use rpm post-installation script to set a specific variant as default

```
sms001:~ # zypper install lmod-defaults-gnu9-mpich-ofi-ohpc
```

```
ohpc-test@sms001:~> module avail mpich
```

```
----- /opt/ohpc/pub/moduledeps/gnu9 -----  
mpich/3.3.2-ofi (D)    mpich/3.3.2-ucx
```

Where:

D: Default Module

# mpich: ucx/libfabric (continued discussion)

- Resulting updated table in our docs:

Table 1: Available MPI variants

	Ethernet (TCP)	InfiniBand	Intel® Omni-Path
MPICH (ofi)	✓	✓	✓
MPICH (ucx)	✓	✓	✓
MVAPICH2		✓	
MVAPICH2 (psm2)			✓
OpenMPI (ofi/ucx)	✓	✓	✓

```
[sms]# yum -y install openmpi4-gnu9-ohpc mpich-ofi-gnu9-ohpc
```

Note that OpenHPC 2.x introduces the use of two related transport layers for the MPICH and OpenMPI builds that support a variety of underlying fabrics: **UCX** (Unified Communication X) and **OFI** (OpenFabrics interfaces). In the case of OpenMPI, a monolithic build is provided which supports both transports and end-users can customize their runtime preferences with environment variables. For MPICH, two separate builds are provided and the example above highlighted installing the ofi variant. However, the packaging is designed such that both versions can be installed simultaneously and users can switch between the two via normal module command semantics. Alternatively, a site can choose to install the ucx variant instead as a drop-in MPICH replacement:

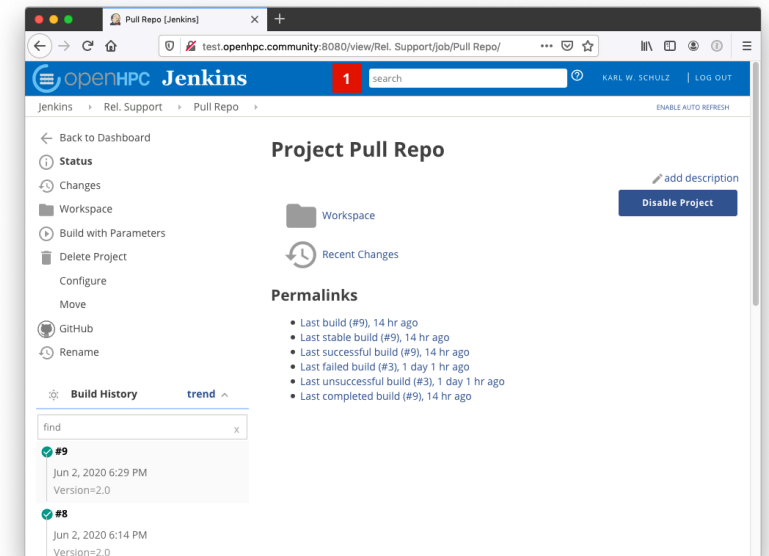
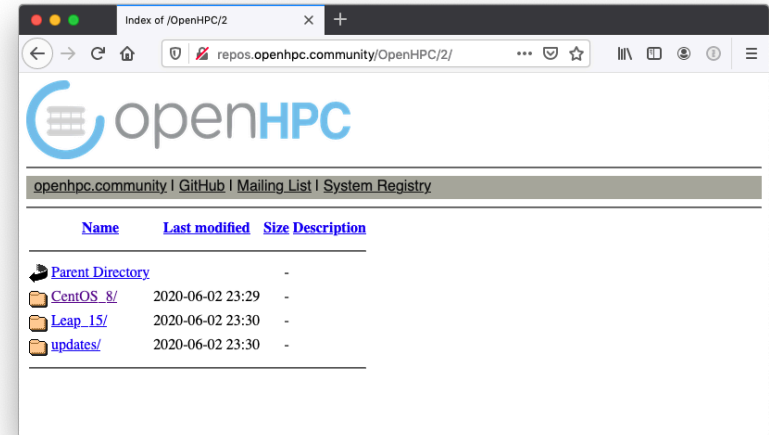
```
[sms]# yum -y install mpich-ucx-gnu9-ohpc
```



# Current 2.0RC1

















- Current 2.0 RC1 packages are now live on new repository location!
- An additional support job has been created in our Jenkins instance to pull packages over from OBS:
  - regenerates repodata locally to give us a little more flexibility as opposed to relying on OBS generated metadata
- CI jobs have been switched over to use repos.openhpc.community for final testing

<http://repos.openhpc.community/OpenHPC/2/>



# 2.0RC1 (cont.) – CI updates

 add description

2.0RC1		All	+			
S	Categorized - Job	Last Success	Last Failure	Last Duration	Test Result	
 	.. » [aarch64]	7 hr 22 min - #74	11 hr - #72	1 hr 34 min	N/A	
	(2.0) - (centos8.1,aarch64) (warewulf+slurm) (fabric=eth)	7 hr 22 min - #74	11 hr - #72	1 hr 34 min	0 of 1,102 failed (±0)	
	(2.0) - (leap15.1,aarch64) (warewulf+pbspro) (fabric=eth)	N/A	14 days - #6	2 hr 0 min	5 of 1,080 failed (+1)	
	(2.0) - (leap15.1,aarch64) (warewulf+slurm) (fabric=eth)	2 mo 0 days - #3	6 days 3 hr - #25	7 min 57 sec	4 of 1,088 failed (-111)	
 	.. » [x86_64] - CentOS 8	4 hr 1 min - #582	13 hr - #137	1 hr 2 min	N/A	
	(2.0) - (centos8.1,x86_64) (warewulf+slurm) (fabric=eth) - UEFI	4 hr 1 min - #582	1 day 19 hr - #568	1 hr 2 min	0 of 1,173 failed (±0)	
	(2.0) - (centos8.1,x86_64) (warewulf+slurm) (fabric=ib) + psxe	11 hr - #138	13 hr - #137	1 hr 47 min	0 of 2,407 failed (±0)	
	(2.0) - (centos8.1,x86_64) (warewulf+slurm) (fabric=opa) + psxe	4 hr 24 min - #62	1 day 20 hr - #52	36 min	0 of 443 failed (±0)	
 	.. » [x86_64] - Leap15	1 hr 46 min - #56	4 hr 45 min - #46	39 min	N/A	
	(2.0) - (leap15.1,x86_64) (warewulf+pbspro) (fabric=eth)	3 hr 4 min - #161	15 hr - #157	57 min	0 of 1,151 failed (±0)	
	(2.0) - (leap15.1,x86_64) (warewulf+pbspro) (fabric=opa) + psxe	1 hr 46 min - #56	1 day 9 hr - #48	39 min	0 of 435 failed (±0)	
	(2.0) - (leap15.1,x86_64) (warewulf+slurm) (fabric=eth)	4 hr 11 min - #519	1 day 19 hr - #509	1 hr 6 min	0 of 1,159 failed (±0)	
	(2.0) - (leap15.1,x86_64) (warewulf+slurm) (fabric=ib)	1 hr 49 min - #48	4 hr 45 min - #46	1 hr 48 min	0 of 2,407 failed (±0)	

Icon: S M L

Legend  Atom feed for all  Atom feed for failures  Atom feed for just latest builds

[ Enabled Omni-Path tests since last time ]

# 2.0RC1 (cont.) – Remaining issues

Labels Milestones Edit milestone New issue

## 2.0RC1

No due date 91% complete

4 Open ✓ 43 Closed

- introduce arm-hpc compiler family builds**  
#685 opened on Mar 10, 2018 by koomie
- move future dist tarballs to new repo location** **infrastructure**  
#1086 opened on Nov 12, 2019 by koomie
- update appendix to mention OHPC\_CFLAG options for relevant package rebuild**  
**documentation**  
#1214 opened 15 days ago by koomie
- 2.0 RC1 Checklist**  
#1219 opened yesterday by koomie 3 of 39

*aarch64 docs have been updated to mention 3<sup>rd</sup> party builds; just need to configure arm1 metapackages*



*we normally have CI jobs to verify installation from dist tarball; need to assemble*

Tip! You can use `shift + j` or `shift + k` to move items with your keyboard.