



Meeting of the Technical Steering Committee (TSC) Board

Wednesday, February 26th, 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:
 - PEARC'20 Tutorial Accepted (July 26-30, Portland, OR):
 - C. Simmons: *"Customizing OpenHPC: Integrating Additional Software and Provisioning New Services including Open OnDemand"*
- Upcoming deadlines:
 - SC'20
 - Tutorials?: Due April 16, 2020 - *Q: do we want to consider this?*
 - BoFs: Due July 31, 2020
- Review #9 status
- More OBS updates
- ARM HPC compiler updates
- 2.0 build Status
- PEARC'20 tutorial discussion (csim)

Review Cycle #9

Labels Milestones Edit milestone New issue

Review #9

No due date 0% complete

3 Open ✓ 0 Closed

- Libfabric**
#42 opened on Nov 3, 2019 by ChrisDowning 10 of 22
- OpenFlightHPC User Suite**
#43 opened on Nov 25, 2019 by ColonelPanicks 11 of 22
- LLNL magpie**
#44 opened on Jan 15 by jcsiadal 11 of 22

- *Many thanks to Aaron, Chris, and Cyrus for submitting their reviews*
 - We don't yet have the required minimum to make a determination on these requests
 - Gentle reminder to ask Reese, Derek, Eric, and Nirmala to submit your assessments

OBS Updates

- Our OBS infrastructure has been updated again to use several patches that have been landed upstream:
 - replaces standalone dependency analysis patches we have been maintaining and rely on to scan %include files for package dependencies
 - if you want to replicate, here are the patches needed for the time being (use these against v2.11 alpha)

<https://github.com/openSUSE/obs-build/commit/eacff5dd98446f5dde64f581a8e19186307aa8f7>

<https://github.com/openSUSE/open-build-service/pull/9054/commits/39708015d1acc212baa7b0d693520fe86ee654c3>

<https://github.com/openSUSE/obs-build/commit/41d53cdf4af58d08ad5266a5fde5d7c8d451e724>

ARM HPC compiler updates

- Since last time, received another drop of ARM HPC compiler packaging
 - post install python scriptlets have been fixed
 - package targets exist for RHEL8 and SLE15
 - gcc packaging renamed to avoid conflict with distro provided version
- This version is now ingested into our OBS build system and have started to enable builds
 - compiler variant is "arm1"

The screenshot displays the OBS web interface for the 'openmpi-gnu9' project. The top navigation bar includes 'Projects / OpenHPC:2.0:Factory / openmpi-gnu9 / Overview' and user links like 'Admin', 'Tasks', 'Home Project', and 'Logout'. The main content area is divided into several sections:

- Overview:** Shows the project name 'openmpi-gnu9', a note 'No description set', and 3 derived packages. Action buttons include 'Branch package', 'Submit package', 'Edit description', 'Delete package', and 'Trigger services'.
- Source Files:** A table listing source files with columns for filename, size, and change date. Files include service-related files like '_service', '_service:download_files:openmpi-4.0.2.tar.bz2', and '_service:extract_file:openmpi-4.0-pbs-config.patch'. A 'Latest Revision' section shows a commit by 'OBS Instance Superuser (Admin)' from 18 hours ago.
- Build Results:** A sidebar showing build status for 'openmpi-arm1', 'openmpi-gnu9', and 'openmpi-intel' across different OS versions (CentOS_8, Leap_15) and architectures (aarch64, x86_64). All builds are marked as 'succeeded'.

2.0 Build Status

- Have enabled a good number of packages in 2.0 Factory
 - introduction of arm1 compiler variant means 10 compiler/MPI permutations for MPI-based builds
 - Over 600 RPMs in repo presently

Administrative Tools

Package	Built?	Notes
conman	✓	
docs	✓	
examples	✓	
ganglia		
genders	✓	
lmod-defaults		
lofs	✓	
mrsh	✗	compile error
nagios		
nagios-plugins		
ndoutils		
nhc		
nrpe		
pdsh	✓	
prun	✓	
test-suite	✓	

Compiler Families

Package	Built?	Notes
gcc9	✓	
intel-compatibility	✓	
arm-compatibility	✓	
llvm		

Development Tools

Package	Built?	Notes
easybuild	✓	
autoconf	✓	
automake	✓	
cmake	✓	
hwloc	✓	
libtool	✓	
python-mpi4py		Adrian built subset ok
python-numpy		Adrian built subset ok
python-scipy		Adrian built subset ok
spack	✓	[still targets root usage though]
valgrind	✓	

MPI Families

Package	Built?	Notes
impi-compatibility	✓	no longer requires install of intel compat. package
mpich	✓	
mvapich2	✓	
openmpi4	✓	

Serial Libs

Package	Built?	Notes
R	✓	
GSL	✓	
metis	✓	
openblas	✓	
plasma	✗	need tweaks for arm1/intel blas
superlu	✗	unsupported option for arm1

2.0 Build Status (cont.)

Parallel Libraries

Package	Built?	Notes
boost	X	intel error
fftw	X	arm 1 error
hypre	X	intel/arm1 blas issue
mfem	X	needs deps
mumps	X	arm1/impi issue
opencoarrays		suse failures
petsc	X	intel/arm1 issue
scotch	X	arm1 issue
scalapack	X	arm1 issue
slepc		Adrian built subset ok
superlu_dist		Adrian built subset ok
trilinos		Adrian built subset ok

Resource Management

Package	Built?	Notes
PBS Pro	X	need libical-devel on aarch/centos
pmix	✓	
slurm	✓	

Performance Tools

Package	Built?	Notes
dimemas	X	need some boost builds, suse failures
extrae	X	arm1 failures
geopm		Adrian built subset ok
imb		
likwid		
msr-safe		
omb	X	arm1 failures
papi	✓	
paraver		Adrian built ok
pdtoolkit		Adrian built subset ok
scalasca		Adrian built subset ok
scorep		Adrian built subset ok
tau		Adrian built subset ok

Runtimes

Package	Built?	Notes
charliecloud		
ocr		
singularity		

2.0 (cont)

- Next big ticket item is provisioning:
 - updated WW build
 - spin up CI with new images to see what other gotchas crop up with the builds

PEARC'20 Tutorial Discussion (csim)

- will make use of ec2
- intent is to show how to stand up instances in ec2
- amazon donated \$500

Chris D.

- Packer used in PEARC'19
- Chris D. uses parallel cluster
 - more black box (easy, but not as configurable)
 - could be used to embed user-facing ohpc dev packages
 - don't necessarily need packer, can just install packages onto headnode