

# Meeting of the Technical Steering Committee (TSC) Board

Wednesday, February 26<sup>th</sup>, 2020 11:00am FT

### Meeting Logistics

https://zoom.us/j/556149142

- United States: +1 (646) 558-8656
  - -Meeting ID: 556 149 142

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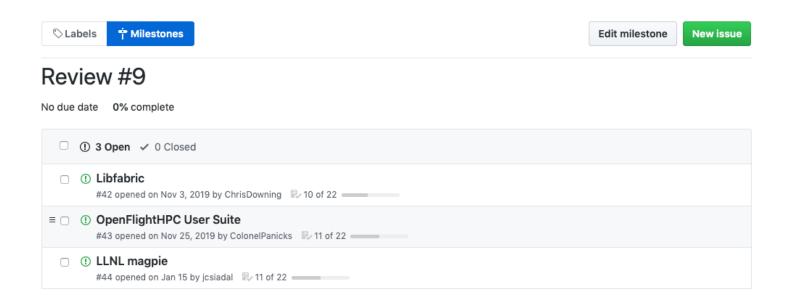
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# Agenda/Updates

- 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
    - <u>Tutorials?</u>: 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



- 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 <u>reminder</u> 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)

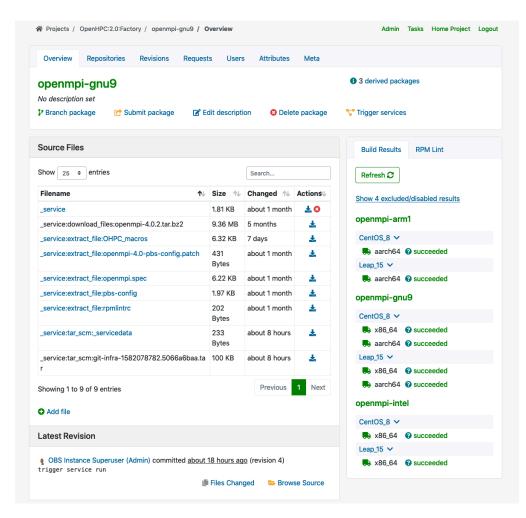
https://github.com/openSUSE/obs-build/commit/eacff5dd98446f5dde64f581a8e19186307aa8f7

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 RHFI 8 and SI F15
  - 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"



### 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	<b>√</b>	
docs	✓	
examples	✓	
ganglia		
genders	✓	
Imod-defaults		
losf	✓	
mrsh	X	compile error
nagios		
nagios-plugins		
ndoutils		
nhc		
nrpe		
pdsh	✓	
prun	✓	
test-suite	✓	

#### **Compiler Families**

Package	Built?	Notes
gcc9	<b>√</b>	
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	X	need tweaks for arm1/intel blas
superlu	X	unsupported option for arm1

### 2.0 Build Status (cont.)

#### **Parallel Libraries**

Package	Built?	Notes
boost	Χ	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

#### **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

#### **Resource Management**

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

#### **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