



# Meeting of the Technical Steering Committee (TSC) Board

Wednesday, July 1<sup>st</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:
  - SC'20 tutorial has been accepted: "Practical OpenHPC: Cluster Management, HPC Applications, Containers and Cloud"
    - "SC20 is developing a backup plan to allow for virtual dissemination of technical program content"
    - expect more info in August
  - PEARC'20 tutorial: Monday July 27 (8am-noon US/Pacific)
    - "Customizing OpenHPC: Integrating Additional Software and Provisioning New Services including Open OnDemand"
    - Registration is now open
- Upcoming deadlines:
  - SC'20
    - BoFs: Due July 31, 2020

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- TSC 2020/2021 Election Results
  - Quarterly access stats
  - PEARC'20 tutorial/cloud working group updates (csim)
  - 2.0RC1- Arm compiler gotcha
  - CentOS8.2

# TSC 2020/2021 - Election Results

- Pleased to announce updated membership for 2020/2021
  - 19 members total
  - 5 new members
- Many thanks to all those who served on TSC last year

Name	Affiliation	Role	For / Against
Reese Baird	SpaceX	maintainer	18 / 0
David Brayford	LRZ	maintainer	17 / 0
Eric Coulter	Indiana University	end user site rep	18 / 0
Chris Downing	Amazon Web Services	maintainer	18 / 0
Craig Gardner	SUSE	maintainer	17 / 1
Stephen Harrell	TACC	maintainer	18 / 0
Paul Isaacs	Linaro	testing coord.	18 / 0
Caetano Melone	Stanford	maintainer	17 / 1
Michael Karo	Altair	component devel. rep	18 / 0
Nam Pho	University of Washington	maintainer	17 / 0
Cyrus Proctor	Spectral Quantum Tech.	maintainer	17 / 0
Adrian Reber	Red Hat	maintainer	18 / 0
Karl Schulz	University of Texas	testing coord.	17 / 0
Jeremy Siadal	Intel	maintainer	17 / 1
Derek Simmel	PSC	end user/ site rep	18 / 0
Chris Simmons	University of Texas at Dallas	end user/ site rep	18 / 0
Raja Subramani	Dell	maintainer	17 / 0
Nirmala Sundararajan	Dell	maintainer	18 / 0
Srinath Vadlamani	Arm	maintainer	18 / 0

# TSC 2020/2021

- Administrative notes for new TSC members:
  - TSC meeting slides get posted on github wiki  
<https://github.com/openhpc/ohpc/wiki/Technical-Steering-Committee-Meetings>
  - you will be added to a TSC email list:  
[tsc-private@openhpc.groups.io](mailto:tsc-private@openhpc.groups.io)
- First item of business: collect nominations for Project Lead
  - nominations (including self-nominations) are welcome from all current (2020/2021) TSC members
  - please submit to Neal Caidin ([ncaidin@linuxfoundation.org](mailto:ncaidin@linuxfoundation.org)) by Friday July 17, 2020
  - complete voting by Tuesday, July 28, 2020

# Updated Usage/Access Statistics (thru Q2 2020)

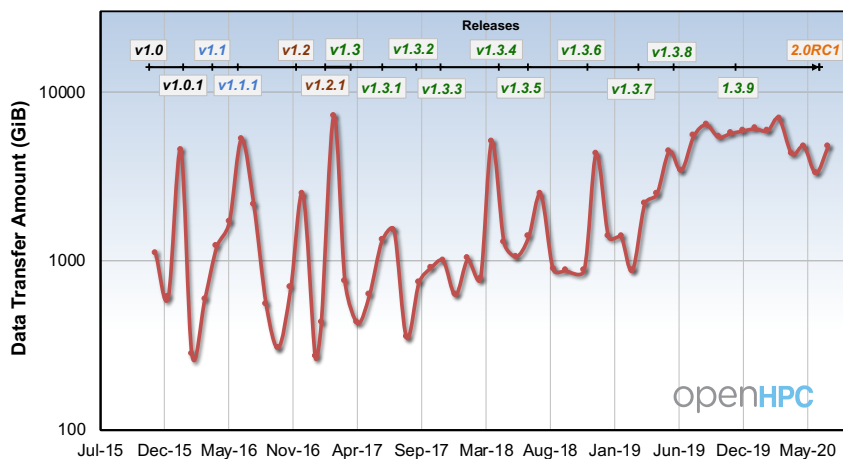
Repo Server(s) Access: Unique Monthly Visitors



- Stats for build/repo servers (tracking # of unique visitors per month and amount of data downloaded):

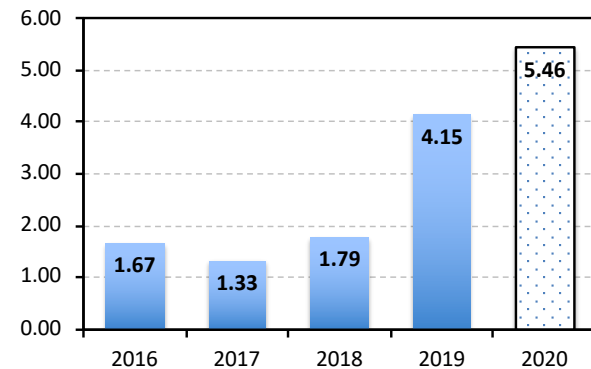
<http://build.openhpc.community>  
<http://repos.openhpc.community>

Repo Server(s) Access: Monthly Data Downloaded



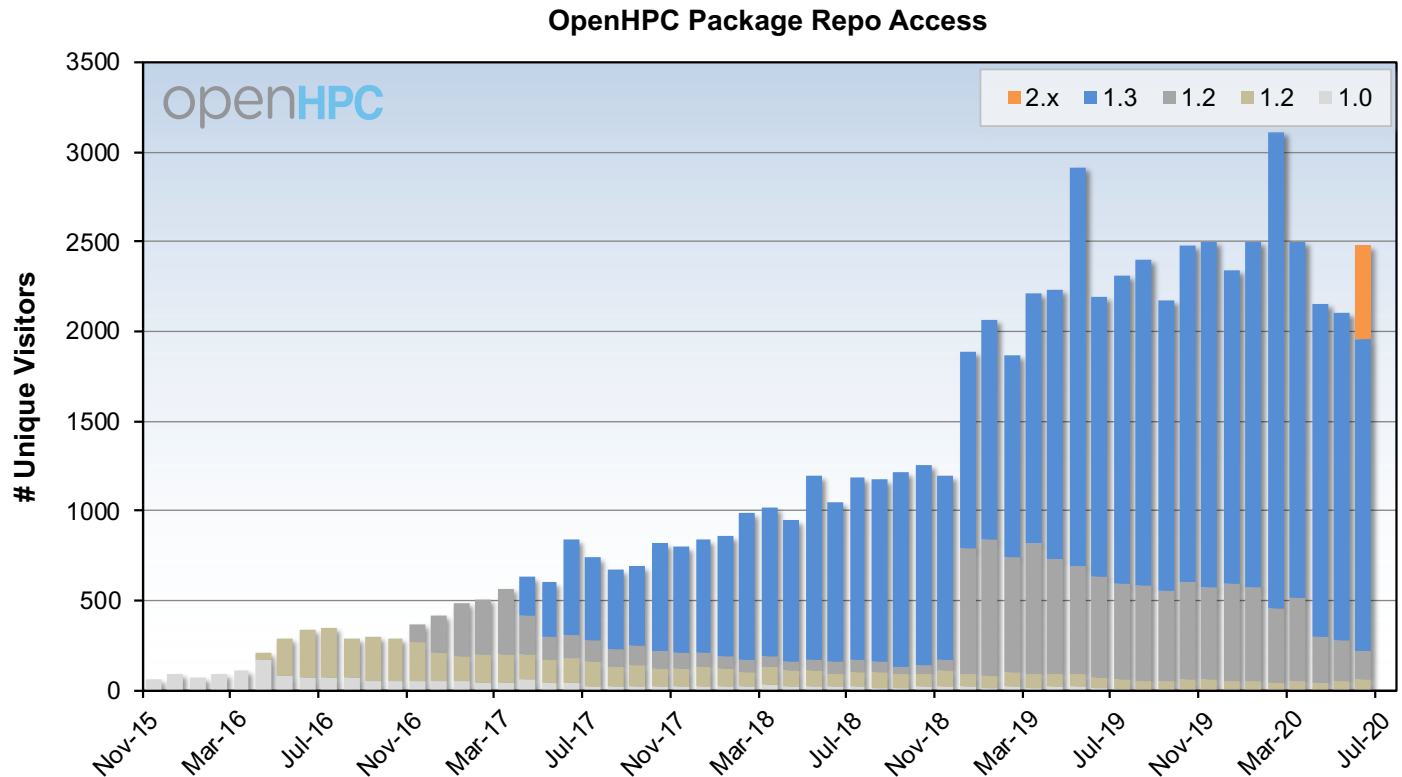
- Averaging ~5.5 TB/month download in 2020

Average download/month (TB)



# Updated Usage/Access Stats (thru Q2 2020)

- These stats monitor access specifically to package repository metadata (typically expected to be via yum/zypper)
- Repo access binned by minor version





# Updated Usage/Access Stats (thru Q2 2020)

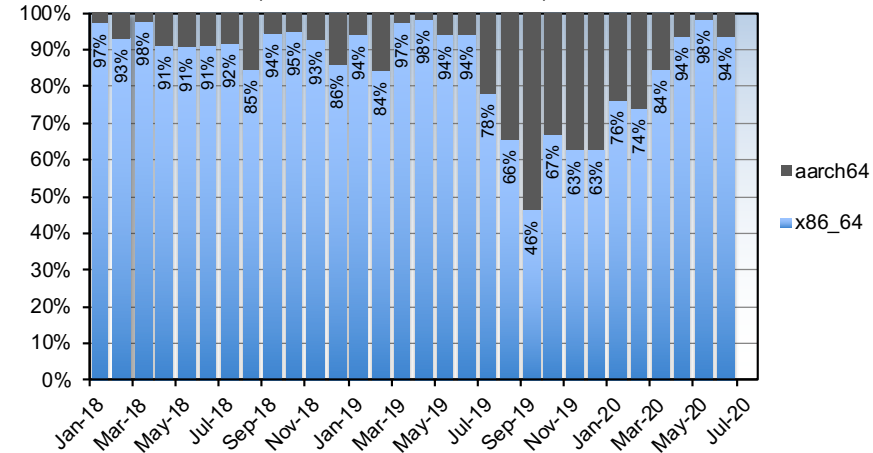
## Architecture specific metrics:

- To provide some characterization, we scrape the access logs to analyze two architecture specific file types:

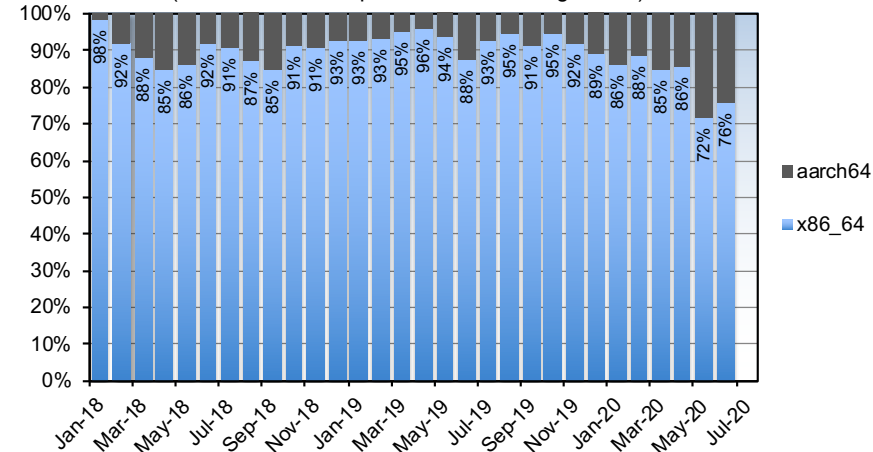
`(aarch64 | x86_64) .rpm`  
`(aarch64 | x86_64) .tar`

- Plots compare percentages for the amount of data xfer'ed and the # of unique visitors accessing the (aarch64|x86\_64) files
  - includes 2.X repo as of June 2020

**Download Comparison by Architecture**  
(based on data downloaded)



**Download Comparison by Architecture**  
(based on # of unique visitors accessing RPMs)

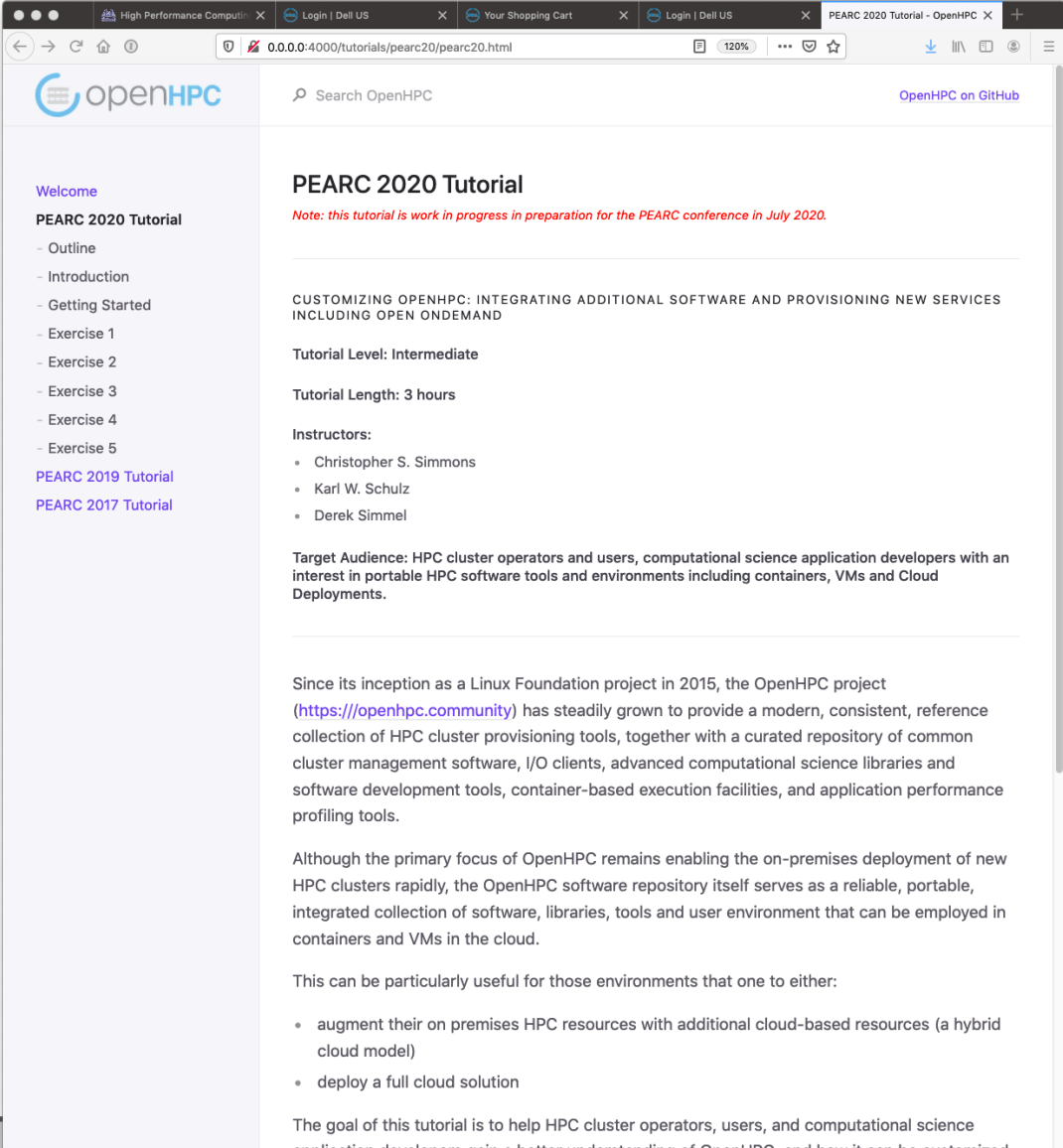


# OHPC Cloud Working Group Updates

- New OpenHPC Github Pages “Project Page”
  - Jekyll + git + Markdown
  - Similar “edu” focused theme
  - <https://openhpc.github.io/cloudwg/> (private repo for now)
- CentOS 8 AMIs finally published with 8.2
  - No initial problems in testing going from 8.1 -> 8.2
  - Looking for volunteers to help “test” in ~2 weeks

# OHPC Cloud Working Group Updates

- Screenshot of Jekyll-based docs
- Thought is that this could be a future home for all of our ohpc-oriented tutorials



The screenshot shows a web browser window displaying the OpenHPC website. The page title is "PEARC 2020 Tutorial". The URL is "0.0.0.0:4000/tutorials/pearc20/pearc20.html". The page content includes a search bar, a navigation menu on the left, and the main content area. The main content area features a "PEARC 2020 Tutorial" section with a note that the tutorial is in progress for the PEARC conference in July 2020. Below this, there is a section titled "CUSTOMIZING OPENHPC: INTEGRATING ADDITIONAL SOFTWARE AND PROVISIONING NEW SERVICES INCLUDING OPEN ONDEMAND". This section includes details about the tutorial level (Intermediate), length (3 hours), and instructors (Christopher S. Simmons, Karl W. Schulz, and Derek Simmel). It also mentions the target audience: HPC cluster operators and users, computational science application developers with an interest in portable HPC software tools and environments including containers, VMs and Cloud Deployments. The page concludes with a paragraph about the OpenHPC project's history and goals, and a list of use cases for the tutorial.

openHPC

Search OpenHPC

OpenHPC on GitHub

Welcome

PEARC 2020 Tutorial

- Outline
- Introduction
- Getting Started
- Exercise 1
- Exercise 2
- Exercise 3
- Exercise 4
- Exercise 5

[PEARC 2019 Tutorial](#)

[PEARC 2017 Tutorial](#)

## PEARC 2020 Tutorial

*Note: this tutorial is work in progress in preparation for the PEARC conference in July 2020.*

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CUSTOMIZING OPENHPC: INTEGRATING ADDITIONAL SOFTWARE AND PROVISIONING NEW SERVICES INCLUDING OPEN ONDEMAND

**Tutorial Level: Intermediate**

**Tutorial Length: 3 hours**

**Instructors:**

- Christopher S. Simmons
- Karl W. Schulz
- Derek Simmel

**Target Audience:** HPC cluster operators and users, computational science application developers with an interest in portable HPC software tools and environments including containers, VMs and Cloud Deployments.

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Since its inception as a Linux Foundation project in 2015, the OpenHPC project (<https://openhpc.community>) has steadily grown to provide a modern, consistent, reference collection of HPC cluster provisioning tools, together with a curated repository of common cluster management software, I/O clients, advanced computational science libraries and software development tools, container-based execution facilities, and application performance profiling tools.

Although the primary focus of OpenHPC remains enabling the on-premises deployment of new HPC clusters rapidly, the OpenHPC software repository itself serves as a reliable, portable, integrated collection of software, libraries, tools and user environment that can be employed in containers and VMs in the cloud.

This can be particularly useful for those environments that one to either:

- augment their on premises HPC resources with additional cloud-based resources (a hybrid cloud model)
- deploy a full cloud solution

The goal of this tutorial is to help HPC cluster operators, users, and computational science application developers gain a better understanding of OpenHPC, and how it can be customized

## 2.0RC1 – Arm compiler gotcha

- Recall that we have introduced initial support for 3rd party package builds with the Arm vendor compiler 2.x
- Unfortunately, the version of the compiler we built and tested with is not yet available on the Arm developer web site:
  - the version that is there is an older version that is not compatible with current openhpc package builds
  - hope to see an updated version on the developer site soon so users can successfully “arm1” package variants from ohpc

*from ohpc recipe docs*

These packages provide a similar hierarchical user environment experience as other compiler families present in OpenHPC. To take advantage of the available builds, the OpenHPC variant of the Arm Compiler for Linux (and any required licenses) must be downloaded and installed separately. See the following for more information on obtaining this toolchain:

<https://developer.arm.com/tools-and-software/server-and-hpc/downloads/arm-allinea-studio/openhpc>

# 2.0RC1 – CentOS8.2

- CentOS8.2 is publicly available
  - have ingested the 8.2 image into our CI system for x86\_64
  - no issues observed with basic install and test
  - folks using 2.0RC1 should be fine and will pick up 8.2 by default when creating new Warewulf images
    - only expected issue is with kernel modules which are not available in the RC – will include builds against 8.2 kernel for final 2.0 release

The screenshot shows the Jenkins interface for a build named "(2.0) - (centos8.2,x86\_64) (warewulf+slurm) (fabric=eth) - UEFI #14". The page displays the test results for the build, which passed with 0 failures. The test results are summarized in a table below.

Package	Duration	Fail (diff)	Skip (diff)	Pass (diff)	Total (diff)
InstallTests	0.54 sec	0	0	7	7
RootLevelTests	28 sec	0	0	34	34
UserLevelTests	1 min 45 sec	0	0	158	158