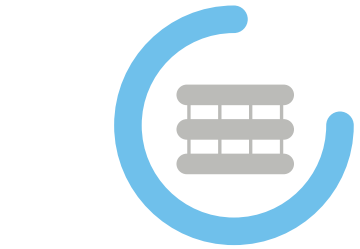

Meeting of the Technical Steering Committee (TSC) Board

Wednesday, January 13th, 2021
11:00am ET

Antitrust Policy Notice

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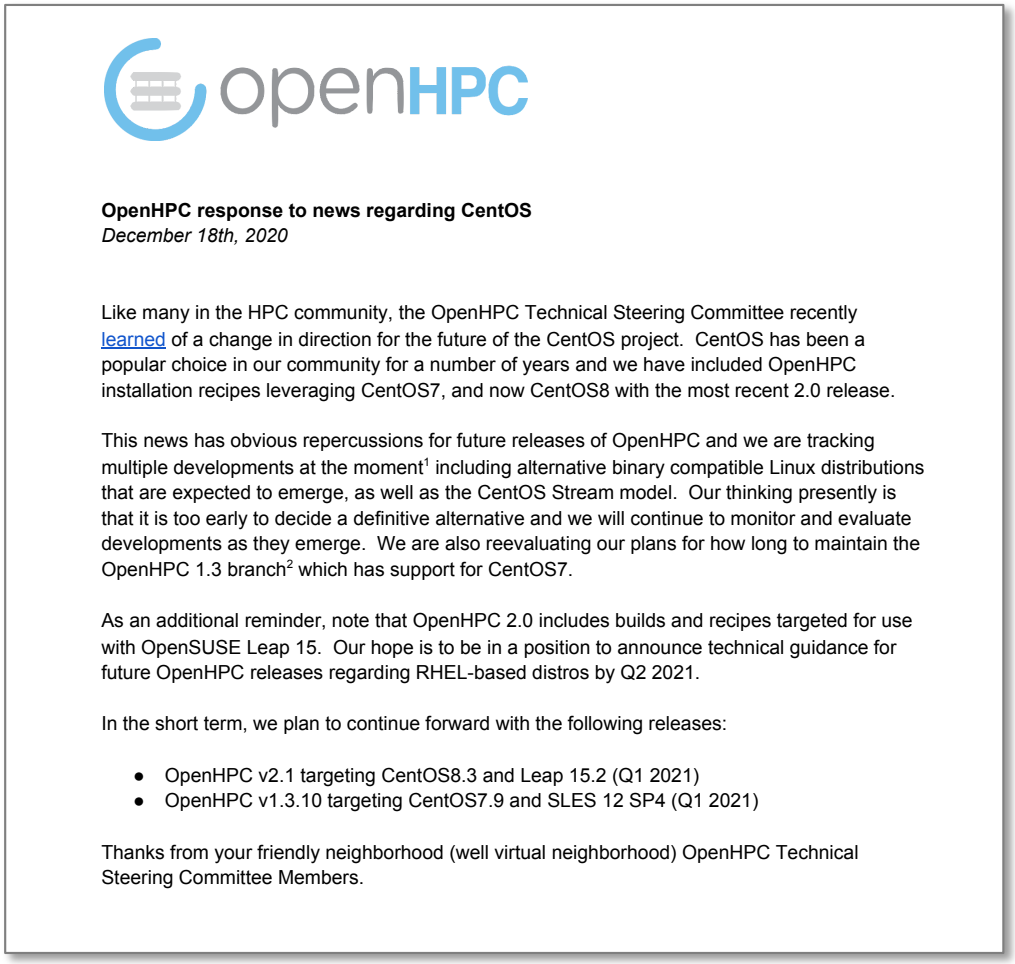
Agenda/Updates

- Announcements, Upcoming talks and deadlines
  - David B. – FOSDEM'21
    - Deploying Containerized Applications on Secure Large Scale HPC Production Systems
    - https://fosdem.org/2021/schedule/event/containerized_hpc/
  - ISC 2021
    - Accepted BoF Sessions of ISC 2020 will be held at ISC 2021!
    - There will be no call for BoFs for ISC 2021.
    - There will be no call for Tutorials for ISC 2021.
  - PEARC'21 – virtual conference
    - tutorial submissions due February 9, 2021

- CentOS official comment
- Year end usage stats
- Co-install gotcha
- Intel compiler update (oneAPI)

CentOS Commentary



OpenHPC response to news regarding CentOS
December 18th, 2020

Like many in the HPC community, the OpenHPC Technical Steering Committee recently learned of a change in direction for the future of the CentOS project. CentOS has been a popular choice in our community for a number of years and we have included OpenHPC installation recipes leveraging CentOS7, and now CentOS8 with the most recent 2.0 release.

This news has obvious repercussions for future releases of OpenHPC and we are tracking multiple developments at the moment[1] including alternative binary compatible Linux distributions that are expected to emerge, as well as the CentOS Stream model. Our thinking presently is that it is too early to decide a definitive alternative and we will continue to monitor and evaluate developments as they emerge. We are also reevaluating our plans for how long to maintain the OpenHPC 1.3 branch[2] which has support for CentOS7.

As an additional reminder, note that OpenHPC 2.0 includes builds and recipes targeted for use with OpenSUSE Leap 15. Our hope is to be in a position to announce technical guidance for future OpenHPC releases regarding RHEL-based distros by Q2 2021.

In the short term, we plan to continue forward with the following releases:

- OpenHPC v2.1 targeting CentOS8.3 and Leap 15.2 (Q1 2021)
- OpenHPC v1.3.10 targeting CentOS7.9 and SLES 12 SP4 (Q1 2021)

Thanks from your friendly neighborhood (well virtual neighborhood) OpenHPC Technical Steering Committee Members.

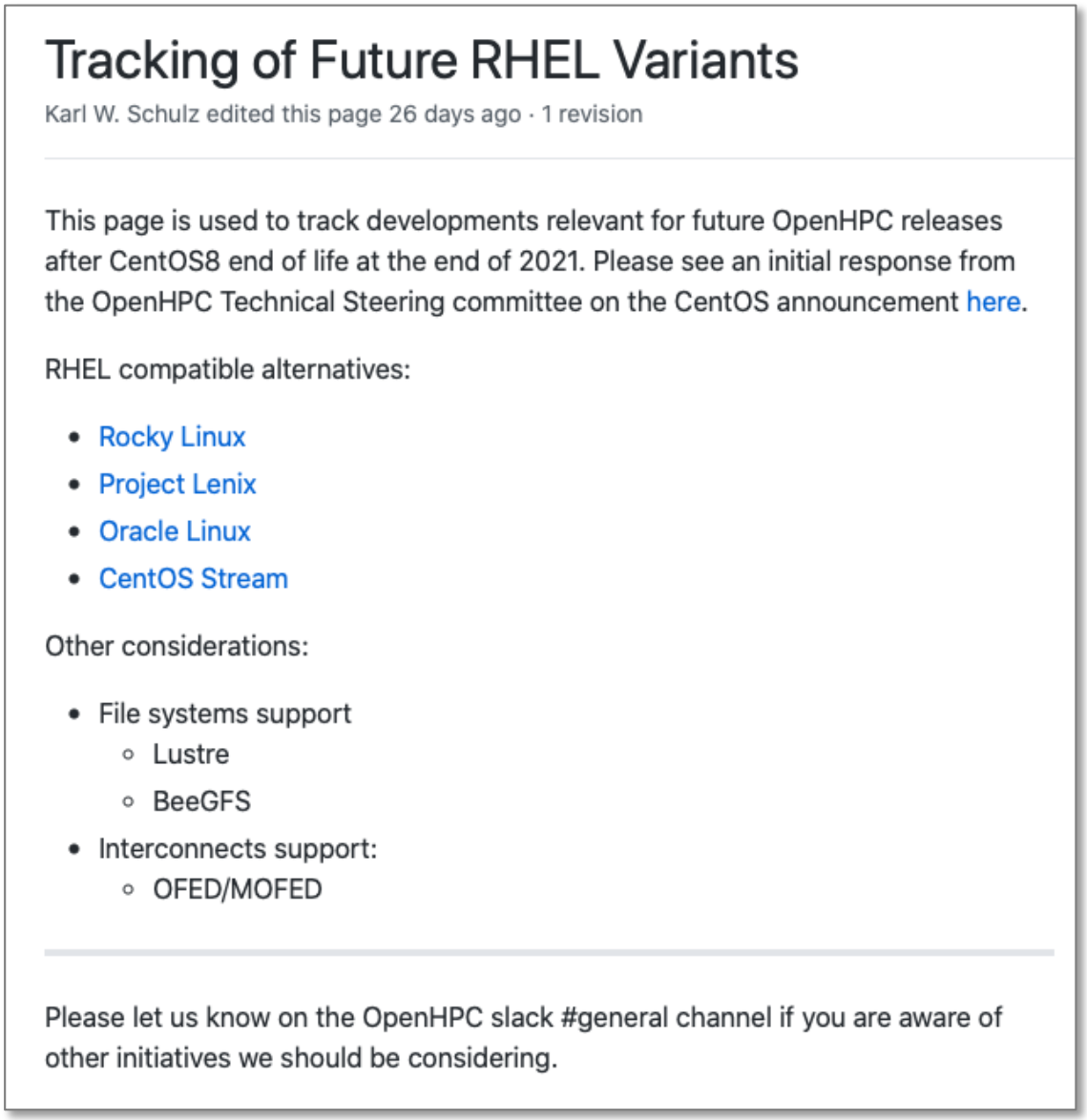
- Per discussion from last time, a formal response was posted on our Wiki)on 12/18/20):

  https://github.com/openhpc/ohpc/wiki/files/OpenHPC-CentOS-Response.pdf

CentOS Commentary

- Also tracking future RHEL variants and relevant considerations with new wiki page:

  https://github.com/openhpc/ohpc/wiki/Tracking-of-Future-RHEL-Variants



Tracking of Future RHEL Variants

Karl W. Schulz edited this page 26 days ago · 1 revision

This page is used to track developments relevant for future OpenHPC releases after CentOS8 end of life at the end of 2021. Please see an initial response from the OpenHPC Technical Steering committee on the CentOS announcement here.

RHEL compatible alternatives:

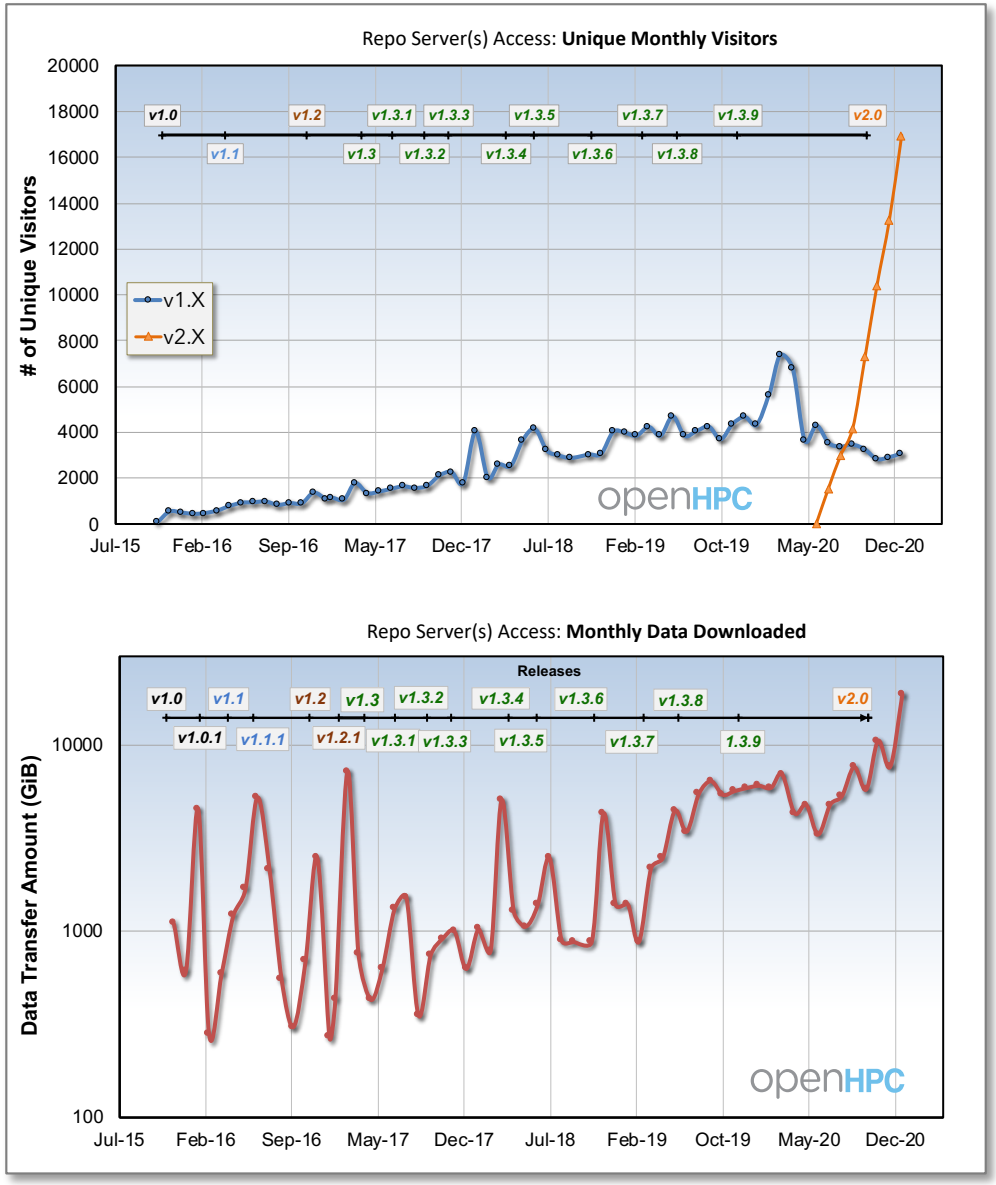
- Rocky Linux
- Project Lenix
- Oracle Linux
- CentOS Stream

Other considerations:

- File systems support
  - Lustre
  - BeeGFS
- Interconnects support:
  - OFED/MOFED

Please let us know on the OpenHPC slack #general channel if you are aware of other initiatives we should be considering.

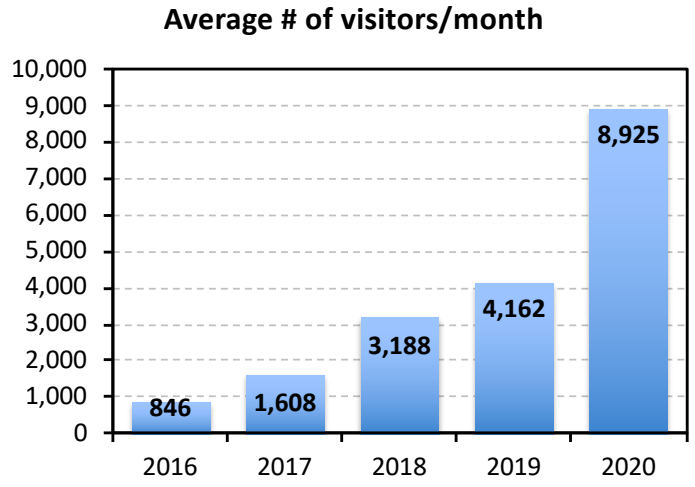
Updated Usage/Access Statistics (thru 2020)



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

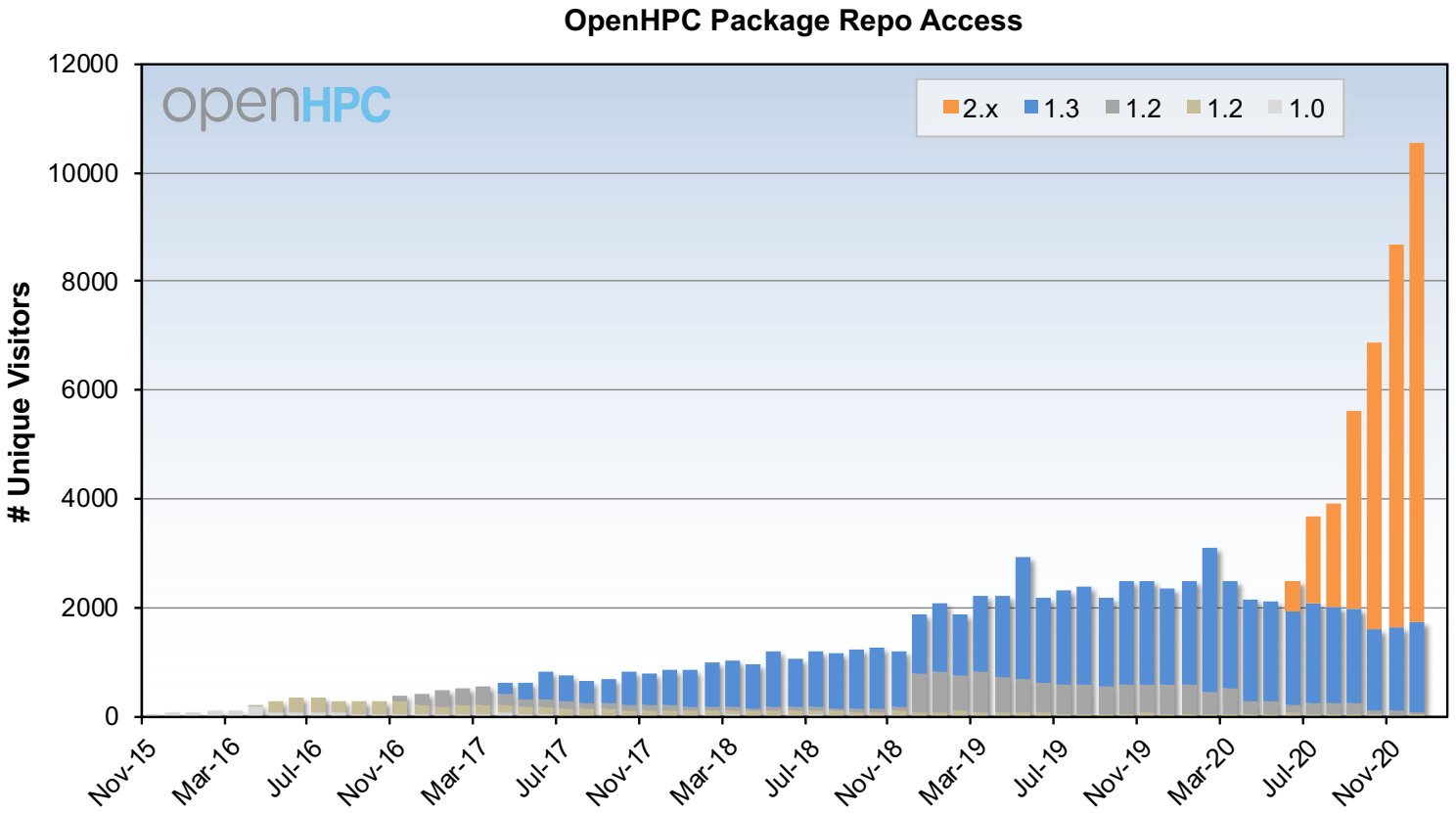
  http://build.openhpc.community and http://repos.openhpc.community

- **86.0 TB downloaded in 2020** (vs 49.8 TB in 2019)



Updated Usage/Access Stats (thru 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 2020)

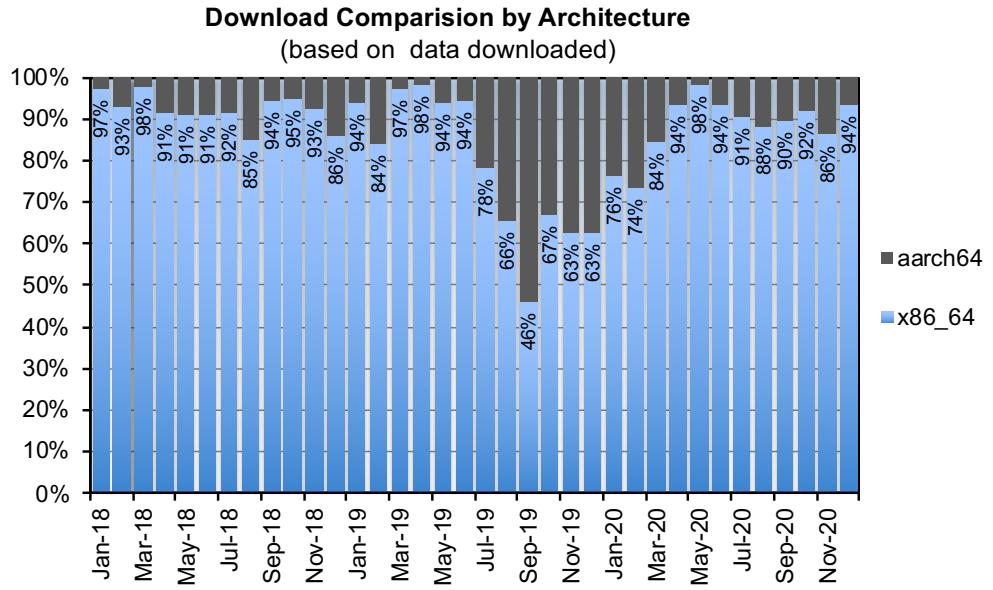
Architecture specific metrics:

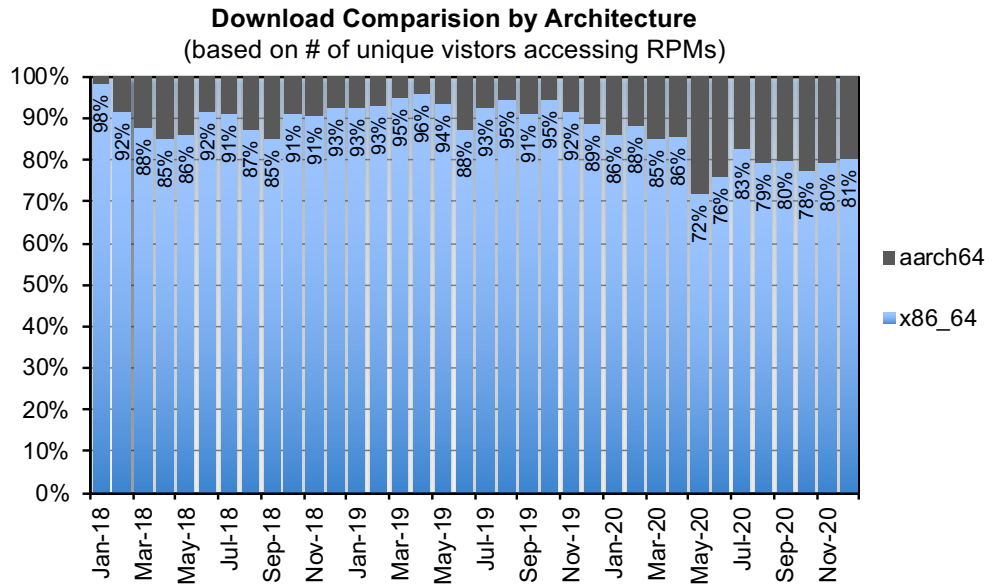
- To provide some characterization, we scrape the access logs to analyze two architecture specific file types:

  `(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 v1.x and v2.x data





Package co-install Gotcha

- original goal for ohpc packaging was to allow for co-installation of multiple (developer) oriented versions of packages
  - this is why install paths are all versioned
  - end sites could then choose default variant with Lmod settings
  - not supported with high-level package managers (yum/zipper) but can install directly with **rpm**
- unfortunately, I have recently discovered this functionality has been broken along the way (see it while working on 2.1)

```
# rpm -q mfem-gnu9-openmpi4-ohpc
mfem-gnu9-openmpi4-ohpc-4.1-8.1.ohpc.2.0.x86_64

# rpm -ivh mfem-gnu9-openmpi4-ohpc-4.2-1.3.ohpc.2.1.x86_64.rpm
Verifying...                          ################################# [100%]
Preparing...                          ################################# [100%]
file /opt/ohpc/pub/doc/contrib/mfem-gnu9-openmpi4-ohpc/INSTALL from install of mfem-
gnu9-openmpi4-ohpc-4.2-1.3.ohpc.2.1.x86_64 conflicts with file from package mfem-gnu9-
openmpi4-ohpc-4.1-8.1.ohpc.2.0.x86_64
file /opt/ohpc/pub/doc/contrib/mfem-gnu9-openmpi4-ohpc/README from install of mfem-
gnu9-openmpi4-ohpc-4.2-1.3.ohpc.2.1.x86_64 conflicts with file from package mfem-gnu9-
openmpi4-ohpc-4.1-8.1.ohpc.2.0.x86_64
```

- issue with %doc files install; need to resolve (presumably version docs dir as well) and add some test collateral to protect against future changes

Intel Compiler Updates (Jeremy)

OneAPI changes impacting intel-compilers-devel-ohpc

- Transition to LLVM-based compiler tools
  - Plan transition later in 2021 when ifx is GA
- Full installation available through online repos (free to use)
  - Can also be installed by tarball and installer stub without using RPMs
  - Meta-RPMs provide simple package installation and upgrades
  - Move installation detection from rpm to find
- Runtimes are a true subset of the full installation
- Environment modules (Tcl) are provided for all tools
  - Create central directory for oneAPI Toolkit modules links under Lmod control
  - Lmod doesn’t support one of the Tcl functions. Add simple patch to work around

Design decisions for the compiler package update

Parallel Studio installation support options

1. Create an optional intel-compiler-devel-compat subpackage
2. Drop support for previous Parallel Studio versions
3. Mix module generation methods into a single RPM

Enabling Intel environment modules options

1. Add oneAPI Toolkit modules to the Lmod search path by default
2. Add a new module that enables the oneAPI Toolkit module path

My recommendation is to implement option 1 in both cases.