Subject: Monsoon: Testing the Next Operating System, RHEL 10
Date: Tuesday, May 19, 2026 at 3:17:37 PM Mountain Standard Time
From: NAU High Performance Computing on behalf of Christopher Benjamin Coffey
To: NAUHPC@LISTS.NAU.EDU

Hello!

Please read carefully! Monsoon will be upgraded from our current operating system, Red Hat Enterprise Linux 8 (RHEL 8), to the new modern operating system RHEL 10 during the next summer maintenance window in August. To prepare for this significant change, please start allocating time to test RHEL 10 with your software and workloads ahead of time so you aren't caught off guard with incompatible software in a time crunch! While a significant change on the backend, our goal is to make this transition as easy and transparent as possible for you.

Another important item, the current Monsoon system is now "frozen," and we won't be making any changes to it while we finish the upgrade to RHEL 10. This means that any new packages you request will only be installed on the RHEL 10-specific side of Monsoon, as maintaining parallel changes going forward would double our workload. Please let us know if you need clarification on this!

One more important item: as we approach August, we will gradually be moving more compute nodes to RHEL 10. This means fewer nodes will be available on the RHEL 8 side of Monsoon as summer progresses. So start making the move to RHEL 10 sooner rather than later!

Rough timeline of nodes converted to RHEL 10:

Today: 5%
June 15: 25%
July 1: 35%
July 15: 50%
Aug 1: 75%
Aug 20: 100%

How to get started? By utilizing our RHEL 10-specific systems and services, of course!

Login node:

- ssh snow.hpc.nau.edu
- The snow login node is running the RHEL 10 operating system

- While logged into this login node, you can compile packages, and submit jobs compatible with RHEL 10
- Testing RHEL 10 on wind or rain isn't a viable option

Ondemand:

- We have a RHEL 10 version of ondemand ready to test too!
- Our RHEL 10 instance of ondemand can be accessed here: https://ondemand10.hpc.nau.edu
- In theory it should be roughly the same experience as the current one. If not, please let us know!

Submitting jobs to Slurm:

- To access the RHEL 10 compute nodes you'll want to specify them by: #SBATCH --partition=rhel10, or #SBATCH -p rhel10
- Interactive "srun" jobs can be started like: srun -p rhel10 <your command>
- Allocations can be started again like: salloc -p rhel10 -c 2 --mem=2G

Packages / modules:

On the topic of packages, we have the core functionality of the existing module/package area today in the RHEL 10 side of Monsoon. You may notice some packages missing and if that's the case, please put a request in to have it installed here: https://in.nau.edu/arc/request-software/ . We've tried to install the most-used packages, but it's not feasible for us to install all current packages.

For existing conda environments, they should "just work" in RHEL 10, except for python virtual environments. This may not hold true in all cases, so if you find otherwise, please let us know!

For existing R packages, you'll need to reinstall them. The main reason is that we have a newer version of R built for RHEL 10 right now: 4.5.3. When testing R-related packages in RHEL 10, simply install as normal. The packages will go into a 4.5.3-prefixed folder in your home directory and will not conflict with the RHEL 8, R packages you already have installed on Monsoon.

If you have any questions or concerns, please reach out to us at ask-arc@nau.edu. When contacting us about RHEL 10 issues, please prepend "RHEL10" to the subject line so we can more easily identify related tickets. Please don't hesitate to share any observations or suggestions as you test the new system! Thank you!

Best,

Chris

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