

# Summit Update

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ORNL is managed by UT-Battelle LLC for the US Department of Energy

# Summit Software



## Current

RHEL 8.2  
IBM Spectrum MPI 10.4.0.3  
IBM ESSL 6.3.0  
IBM XL C/C++ 16.1.1.10  
IBM XL Fortran 16.1.1.10  
Mellanox MOFED 4.9-2.4.4.1  
CUDA Toolkit 11.0.3-1  
NVIDIA Driver 450.80.02



## CY 2024

RHEL 8.6  
IBM Spectrum MPI 10.4.0.6  
IBM ESSL 6.3.0-2  
IBM XL C/C++ 16.1.1.13  
IBM XL Fortran 16.1.1.13  
Mellanox MOFED 4.9-6.0.6.1  
CUDA Toolkit 11.7.1-1  
NVIDIA Driver 515.65.01  
• On October 9: 535.104.05



# Summit Filesystem



## Current

Alpine (GPFS-based)  
250PB usable - ~32k 10TB HDD  
2TB/s



## CY 2024

Alpine II (GPFS-based)  
50PB usable - ~3200 20TB HDD  
Flash-based metadata  
Optimized for small files  
320GB/s

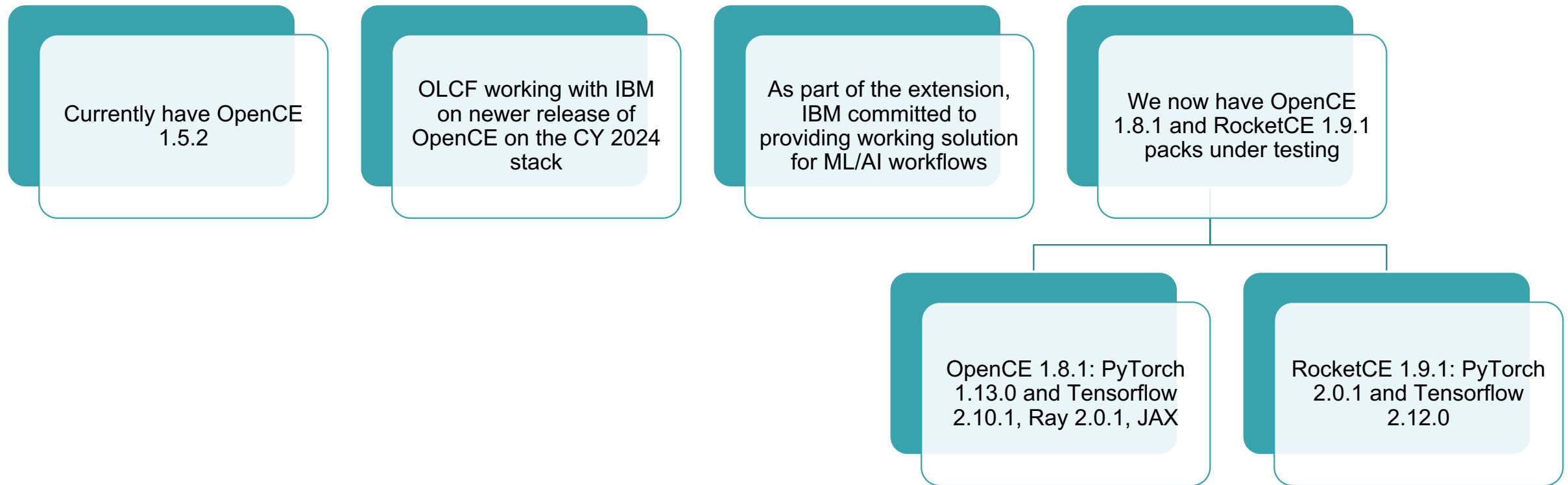


# Important Dates

[https://docs.olcf.ornl.gov/systems/2023\\_olcf\\_system\\_changes.html](https://docs.olcf.ornl.gov/systems/2023_olcf_system_changes.html)

Date	Event
<a href="#">Sep 19</a>	<del>SummitPLUS applications open.</del>
<a href="#">Dec 18</a>	Last day to execute batch jobs on Summit.
	Last day to use Alpine from Andes.
<a href="#">Dec 19</a>	Alpine becomes read-only and available only from DTNs. <b>Please do not wait, begin transferring your Lustre data now.</b>
<a href="#">Jan 1</a>	Alpine decommissioned. <b>ALL REMAINING DATA WILL BE PERMANENTLY DELETED</b>
<a href="#">Early 2024</a>	Summit available for projects with 2024 allocation.
	Alpine II filesystem available.

# ML/AI stack on Summit



# Migrating Data

## Orion availability to projects

- The DTNs mount Orion and all projects with access to Alpine received access to the Orion filesystem.

## Globus is the suggested tool to move data (particularly large amounts of data)

- rsync and scp can also be used through the DTNs, but may be slower and require more manual intervention than Globus.
- Copying data directly from Alpine (GPFS) to Orion (Lustre).
- hsi and htar utilities can be used to to transfer data to/from Alpine (or to/from Orion).

## Please do not use the HPSS as a method to migrate data

- Due to limited available space on the HPSS archive system, we strongly recommend against using the HPSS to transfer data between Alpine and Orion.
- Using Globus to transfer directly between Alpine and Orion is preferred.

An aerial photograph of the Oak Ridge National Laboratory (ORNL) campus. The image shows several large, modern buildings with red brick and white accents, interconnected by a central corridor. A large, green, diamond-shaped lawn is in the center, surrounded by paved walkways and smaller green spaces. Numerous parking lots with cars are visible around the perimeter. The campus is surrounded by trees and greenery. The word "Questions?" is overlaid in white text at the top center.

# Questions?

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