

Spring 2021
 Newsletter



Good To Know!

The TI-20 systems will use SLURM as the job scheduler. A translation guide for PBS to SLURM commands is available by contacting ARL DSRC User Services.
dsrchelp@arl.army.mil

The SCOUT LSF Scheduler Guide is now available at:
<https://www.arl.hpc.mil/docs/scoutLsfGuide.html>

Users are reminded to update their current and future HPC requirements in the HPCMP pIE database. Questions? Contact:
outreach@arl.hpc.mil



New Capability

Persistent Services Framework

The Persistent Services Framework (PSF) provides functionality to bridge the gap of support that exists for DoD users that are interested in leveraging HPC resources but require access to persistent services as a component of their end-to-end workflow. In this context, a persistent service is defined as a continually running application that provides extended functionality in support of HPC user workloads.

Such services can include applications that facilitate the persistent storage and retrieval of data in user-owned and operated databases. Along with enabling persistent storage capabilities, the PSF enables users to access persistent interactive visualization capabilities to interface with their workloads including applications as simple as front-end web interfaces to more complex interfaces distributed visualization applications.

The initial deployment of the PSF capability will support a limited subset of current users on emergent HPCMP platforms acquired with this service in mind. The PSF capability is targeted for those users interested in incorporating data science, for example, into their existing simulations, and new users interested in leveraging the compute power offered by HPC machines to perform large-scale analysis and machine learning on their already existing databases.

The PSF provides the capability to host applications that extend services to the wider HPCMP user base including a container building service and a container image library. These services increase the usability of HPC machines by enabling the seamless portability of both software and M&S applications across HPCMP computing platforms.

Both ARL DSRC TI-20 systems, Jean and Kay, will be equipped with dedicated resources (20 compute nodes [96 cores per node] and 4 storage nodes) for the new PSF capability.

PSF will be available as a limited access capability on the Jean and Kay systems and access and resources will be allocated to those HPC projects/applications having bona fide PSF requirements. In the near future, the ARL DSRC team will be sending an online survey to the HPC user community which will include an 'Application to Use PSF' form.

Questions regarding PSF may be directed to outreach@arl.hpc.mil



“Jean” and “Kay” Status Updates

The ARL DSRC team is busy installing, configuring and testing the two new HPC platforms, Jean and Kay. Both systems, from Liquid Inc., are scheduled to be in the HPCMP production environment later this summer.





Training and Support Resources



HPC Training:

To see latest schedule and enroll, look under "Live Events" section of the HPC Training System:

training.hpc.mil

On-Demand:

- Galaxy Scientific Workflow System training.hpc.mil/course/view.php?id=459

Webinars:

Upcoming events. (Webcast Enrollment Required)

- HPCMP New Account Orientation
May 12 2:00 - 3:30 PM ET
- HPCMP Storage Optimization
May 18 2:00 - 3:30 PM ET
- HPC in the Cloud Brown Bag Seminar
May 27 2:00 - 3:30 PM ET

The ARL DSRC's SCOUT system has now been in the HPCMP production system environment for over 8 months and is being leveraged by several HPC users who are developing Artificial Intelligence/Machine Learning (AI/ML) applications for their research programs.

The ARL DSRC team is proactively developing SCOUT documentation, user's guides, and training opportunities. Please reference the \$PET_HOME directory on SCOUT for additional information on using SCOUT.

To see examples for how to use SCOUT, the HPCMP PET program has developed training modules at: <https://training.hpc.mil/course/view.php?id=468>

A new addition to the ARL DSRC SCOUT support team is Dr. Simon Su, who as a SCOUT user, brings a wealth of technical experience towards assisting new and prospective users. Simon will serve as the ARL DSRC support team's technical liaison and as his first order of business, recommends installing Anaconda in the user's space with package source from IBM added to your installation source where most Power9 packages can be found.

IBM maintained Conda packages can be found at: <https://public.dhe.ibm.com/ibmdl/export/pub/software/server/ibm-ai/conda/>.

The ARL DSRC SCOUT support team can be reached by contacting:
Robert Sheroke (robert.m.sheroke.civ@mail.mil)
Simon Su (simon.m.su.civ@mail.mil).

EXCALIBUR

ARL DSRC workhorse retires

EXCALIBUR LIFETIME STATISTICS:

Total Jobs:	10,053,227
Total CPU Hours:	4,167,413,434
Total Users:	6,376
Largest Job (Cores):	99,702
Largest Job (CPU Hours):	5,503,000
Largest Job (Runtime):	1,054 hours

FOCUS: - Army HPC Resource Management

HPC allocations and general HPC resource management is a flexible and dynamic environment. The goal is to ensure that every HPC user has the resources to meet their computational workload. Please keep in mind that each HPC project's initial HPC allocations are 'seed' hours and can be augmented with additional hours as needed. The Army HPC Resource management team works closely with the Service/Account Approval Authorities (S/AAAs) and the HPCMP Resource Management team to manage HPC resources to include a pool of 'reserve hours' on all HPCMP systems.

Reserve hours managed by the S/AAAs and are available on first come first serve basis. The Army HPC resource management team leverages

opportunities to trade or re-allocate HPC resources throughout the DOD HPC Program to find additional hours to meet your requirements. At this time in FY21, we have a surplus of reserve hours on the Betty, Centennial, Mustang and Narwhal systems.

Please note that the ARL DSRC Centennial system is scheduled to be decommissioned in mid-July and the ARL DSRC Hellfire system has been extended for a few months and will be decommissioned on 30 September.

Please contact Robert Sheroke (robert.m.sheroke.civ@mail.mil) or Eldred Lopez (eldred.i.lopez.ctr@mail.mil) for questions or requests for hours.



Contact us for more information:

www.arl.hpc.mil

email:

outreach@arl.hpc.mil