



Winter 2020/21  
Newsletter

bits

**Heads Up!**

The ARL DSRC TI-20 systems, Jean and Kay, will use the SLURM queueing system.

A helpful translation guide from PBS to SLURM is attached with this newsletter and available by contacting ARL DSRC User Services.

[dsrhelp@arl.army.mil](mailto:dsrhelp@arl.army.mil)



# JEAN ARRIVES!



*On December 22nd, the first of ARL's newest supercomputers, the 57K core 'Jean' system was delivered to the Center. ARL DSRC and Liquid Computing engineering teams will be assembling and configuring the system over the next few weeks.*

*Stay tuned for additional information about the system's status and projected availability in the coming months.*

## Upgrades and Training for ARL DSRC SCOUT

ARL's SCOUT operating system was successfully updated to RHEL 8.2 (from RHEL 7.6-alt); Cuda, Spectrum MPI, NVIDIA drivers, and OpenFabrics Enterprise Distribution (OFED). SCOUT's InfiniBand drivers were also updated.

To assist users in transitioning to RHEL 8.2, a small subset of the system is still running RHEL 7.6-alt (accessible via the scout01 login node) until 01 February 2021.

An advanced SCOUT training course is scheduled for 13-14 January 2021 and a refresher course on 12 January. All seats are full but sessions will be recorded and made available at a later date.

The training topics include (but are not limited to) LSF, AI/ML/DL environments, containers, Kubernetes, and debugging strategies.

## Seeking Candidates for HPC Review

The ARL DSRC is seeking additional candidates to be considered for inclusion in the FY20-21 edition of the Center's bi-annual HPC Review publication.

If you would like additional information regarding how to participate in the next edition or to self-nominate your project for consideration to be included, please contact: [outreach@arl.hpc.mil](mailto:outreach@arl.hpc.mil).

Please visit the following link to view the most recent version of the HPC Review publication for the FY18-19 timeframe. Please visit the following link to view the most recent version of the HPC Review publication for the FY18-19 timeframe.

[https://www.arl.army.mil/wp-content/uploads/2020/09/ARL-HPCReview18\\_19-Section-508.pdf](https://www.arl.army.mil/wp-content/uploads/2020/09/ARL-HPCReview18_19-Section-508.pdf)



# Directors Message:

## Matt Goss



I think we can all agree that the year 2020 has forced us to get comfortable adapting to change in nearly all parts of our personal and professional lives. As an optimist, I enjoy change and view it as an opportunity to excel!

The HPCMP has announced some significant shifts in its mission scope over the last two years, such as artificial intelligence, machine learning, and data analytics. As these strategic endeavors take shape, the staff at the DSRC is responsible for making them a reality.

Through the Technology Insertion (TI)-20 investment process, the ARL DSRC will soon receive two computers having vastly different architecture than those we currently have on the floor. Liquid's Composable Infrastructure coupled with the latest NVIDIA A100 GPUs will provide our users with a much more flexible and powerful architecture to solve data intensive and compute intensive problems!

These TI-20 machines represent the first step in transforming the HPCMP from a program focused on High Performance Computing (HPC) to one focused on High End Computing (HEC). HEC adds data analytic capabilities to our already existing HPC infrastructure which will

allow users to push their workflows beyond the traditional compute intensive job and embrace massive amounts of data to further their science.

Also, DoD's push toward Digital Engineering, the DEVSECOPs based acquisition model and delivering capabilities to the field faster than ever before requires us to integrate tightly with the "cloud." Depending on who you talk to, the word cloud can mean very different things. For us however, cloud is much more than commercially owned CPU cycles. We must align our user interfaces, middleware and back end operations to what a user expects from a cloud experience.

Over the next few months, the DSRC staff will be working on a number of demonstrations, proofs of concept and pilots necessary to enable this type of experience.

The opportunities that all of this change could bring is exciting to me and hopefully it is exciting to you as well.

To see latest schedule and enroll, look under "Live Events" section of the HPC Training System: [training.hpc.mil](http://training.hpc.mil)

- HPCMP New Account Orientation  
Jan 13 3:00 - 4:30 PM ET
- Physics-Informed Machine Learning with NVIDIA SimNet  
Jan 19 2:00 - 3:30 PM ET
- Building Singularity Containers on DoD HPC Resources  
Jan 21 2:00 - 3:30 PM ET
- MPI4Py: Parallel Programming in Python  
Jan 26 2:00 - 3:30 PM ET
- Intermediate Pandas Data Analysis for Python  
Jan 28 2:00 - 3:30 PM ET

## FOCUS: - Systems Decommissioning

After millions of service hours, Excalibur, Centennial, and Hellfire are scheduled to be decommissioned in 2021. Watch your e-mail for additional information from the DSRC Customer Service team for guidance to migrate your data and computational workflows onto other HPC platforms.



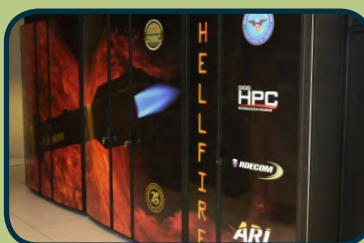
Contact us for more information:  
[www.arl.hpc.mil](http://www.arl.hpc.mil)

email:  
[outreach@arl.hpc.mil](mailto:outreach@arl.hpc.mil)



Excalibur will be decommissioned on February 6, 2021

Hellfire will be decommissioned on September 30, 2021



Centennial will be decommissioned on July 19, 2021