Ohio Supercomputer Center releases open-source HPC access portal

Open OnDemand project aims to eliminate a barrier to supercomputer use

Columbus, Ohio (Sep 5, 2017) — An innovative web-based portal for accessing high performance computing services has matured beyond the beta phase and now is available to HPC centers worldwide.

The Ohio Supercomputer Center (OSC) has launched Open OnDemand 1.0, an open-source version of OSC OnDemand, the Center's online, single-point-of-entry application for HPC services.

Open OnDemand is an NSF-funded project to develop a widely shareable web portal that provides HPC centers with advanced web and graphical interface capabilities. Through OnDemand, HPC clients can upload and download files, create, edit, submit and monitor jobs, run GUI applications and connect via SSH, all via a web browser, with no client software to install and configure.

"Up until this point, clients had to install software, use a cryptic file editor and learn batch system commands," said David Hudak, interim executive director of OSC. "Our objective with the Open OnDemand project has been to build a portal that will allow them to use HPC without a big learning curve. It's about lowering the barrier of entry to the world of supercomputing."

To date, about a half-dozen HPC centers have installed and deployed the package, and another half-dozen have installed the portal for testing and evaluation, according to Basil Gohar, manager of OSC's Web and Interface Applications Group.

"In my mind, the biggest benefit of Open OnDemand for us is the ability for our users to run graphical applications like Matlab, Ansys, etc., on HPC resources without having to log into these resources directly," said Martin Cuma, a scientific consultant at the Center for High Performance Computing at the University of Utah, where staff already have deployed Open OnDemand. "Learning the basics of the HPC resource use (basic Linux terminal operation, queue manager, etc.) can be a hurdle which Open OnDemand should at least partially reduce."

"We're excited to be offering Open OnDemand for the NSF-funded PSC Bridges system," said Jason Sommerfield, coordinator of systems and operations at the Pittsburgh Supercomputing Center, which also has deployed Open OnDemand. "Beyond providing an approachable onramp for new users, Open OnDemand's recent addition of support for applications, such as the Jupyter Notebooks collaboration tool, further simplifies important, common HPC workflows."

The 1.0 version of Open OnDemand includes the ability to launch interactive HPC desktop sessions with the new dashboard "batch connect" plugin, support for Portable Batch System Professional's (PBS Pro) workload manager and job scheduler software and partial support for IBM's Load Sharing Facility (LSF) 9.1 workload management platform.

"With 1.0, we feel that Open OnDemand now enables our peer HPC centers to provide to their clients with simple, easy access to powerful computing services," said Gohar. "All they need is a web browser, their username and password."

Going forward, OSC is interested in adding support for additional popular apps, such as Jupyter, RStudio, COMSOL Server, MATLAB, Paraview, ANSYS and Abaqus.

OSC will present a free webinar about Open OnDemand on Sept. 6. The webinar will be hosted via WebEx available at: https://ohtech.webex.com/ohtech/onstage/g.php?MTID=ea3a9d3b6e05b903e424e06fd251f2f95.

For future updates about Open OnDemand, join the project mailing list.

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