Increasing Accessibility

Supporting UC and expanding HPC usage

■ ENGINEERING AND TECHNOLOGY

Even as supercomputing becomes increasingly common in the research landscape, it can still be intimidating for new users. Jane Combs, associate director of research computing services at the University of Cincinnati, made it her goal to demystify and expand supercomputing at the university and educate faculty, staff and students on campus about how those resources can be used in a variety of areas with the Ohio Supercomputer Center's (OSC) help.

When Combs met Brian Guilfoos, OSC's high performance computing (HPC) client services manager, OSC quickly began offering instructional workshops on campus to bring together University of Cincinnati (UC) researchers who utilized OSC services. After implementing consistent workshops and training, Combs saw a large increase in OSC usage and a movement for additional HPC capacity on campus.

"We were funded to have our own computing cluster," Combs said. "We designed our cluster to be architecturally the same as the Ohio Supercomputer Center's so that we could easily transition our users to these new resources."

In 2018, Combs worked with the OSC team and began using Open OnDemand, an NSF-funded open-source HPC portal developed by OSC. Running entirely in a web browser, the user-friendly portal allows researchers to remain focused on their field of expertise rather than the practice of supercomputing. As a result, use of the cluster has expanded to include faculty from fields as diverse as computational fluid dynamics and music.

"I'm sure we have people that wouldn't otherwise be using the cluster that now are because they're just using the basics of Open OnDemand," said Kurt Roberts, information technology manager at UC. "It's different because it's in a web browser. It lowers the barrier of entry for some people. That's where I see one of the biggest benefits of Open OnDemand."

The benefits extend beyond faculty. According to Combs, the platform has been integrated into multiple classes at UC, where students gain exposure to high performance computing without the need to install software on their personal computers.

"With the broad community that uses Open OnDemand, it's nice for us to train students to have tools that are used across the country, because when they graduate, they may be able to find a job because of their experience with Open OnDemand," Combs said. "I think Open OnDemand makes a really nice entry for students learning what HPC is about." •

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