opentext™

Success story

Pennsylvania State University

Industry
• Research, Education

Solution
• OpenText™ Exceed onDemand™

Results

🖥 **Efficient remote access** allows Penn State researchers and engineers to produce a higher quality of research

🔗 Facilitating a **large-scale, highly decentralized user base**

⚙ **Easy maintenance** lowers administrative costs for Penn State

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PENNSTATE®
1855

Penn State University researchers discover reliable, manageable remote access with OpenText™ Exceed onDemand™

The quest for knowledge calls for more efficient access at prestigious university

"Exceed onDemand has enabled our researchers in engineering and other data intensive sciences to become much more productive when using and manipulating three-dimensional representations of large data sets."

Michael Fenn
Systems Administrator
Pennsylvania State University

Founded in 1855, Pennsylvania State University has a long and distinguished history of pursuing its tripartite mission of teaching, research, and service in the finest way possible. During the Great Depression, Penn State spread campuses across Pennsylvania, determined to provide education to the people even in times of great economic hardship. Today, Penn State continues this tradition with 24 locations and more than 95,000 students worldwide.

Of this number, close to 3,000 active users are conducting research requiring the use of graphical programs, according to Michael Fenn, a systems administrator for Penn State's Research Computing and Cyber-infrastructure (RCC) group, a unit of Information Technology Services (ITS). The RCC is in charge of promoting and supporting research computing at the university. Fenn explains that researchers, some of whom conduct revolutionary field research across the globe, want to be able to visually interact with their research data—be it through modeling applications or visualization tools. They would prefer to use these visualization tools on Penn State's system, especially since some of the research data could be several terabytes or more in size, making copying it to their workstation virtually impossible.

"We had some solutions in place before for people to use graphical applications on our systems remotely. But they had limitations," Fenn explained. Researchers often spend long hours on their research, familiar with sleepless nights and constant pressure. Technical issues while rendering their 3D simulations only compound these trials. Penn State needed to find a solution that could make remotely accessing high-end analysis and visualization tools a far easier process, enabling their researchers to produce more material. The more work those researchers accomplish, the better it will be for the university's image and influence.

Seeking the best remote access solution

"We wanted a solution that performed better than our existing solutions in terms of rendering either two-dimensional or three-dimensional user interfaces," said Fenn, describing how previous solutions had difficulties with rendering accuracy and fluidity. Researchers and engineers at the university are using such graphical applications as MATLAB®, ANSYS®, and COMSOL® to analyze complex information. These applications help Penn State develop the highest forms of research, in turn attracting more students.

Other priorities included the need for users to be able to easily resume their sessions even if their connection was interrupted and for the solution to be easy to manage for the systems administrators. Because of the nature of Penn State's system, which dedicates 24 Linux™-based servers to advanced interactive computation and visualization, the solution also needed to be server-based.

Fenn began his search by installing and configuring various managed application access solutions to gauge their effectiveness from the point of view of a normal user. Then, the team at Penn State began rigorously testing the products through a variety of networks. *"We did some analysis to figure out how sensitive to the various network situations different products were. These tests took place on our LAN over a wide area network from a multitude of locales, including different residential ISPs with and without a VPN. Overall, the testing phase lasted around four weeks and, in the end, OpenText Exceed onDemand was the highest ranked one that we tested,"* said Fenn.

"It's nice to have one single point of management instead of having to go and look at 20 different systems to see who's doing what. I can just log into the console and say, 'Oh, well here's everything.'"

Michael Fenn
Systems Administrator
Pennsylvania State University

Scholars love Exceed onDemand

Within 24 hours of deploying Exceed onDemand, users were calling Fenn to tell him how great it was. *"Essentially, the performance and ease of use was better from their perspective,"* said Fenn. Penn State faculty and students were rapidly discovering how much easier Exceed onDemand could make their lives.

With previous solutions, users were frustrated because they would often forget to save their sessions and lose them when the connection terminated. *"People might have their laptop out and they close the lid,"* Fenn explained. *"What that does is put their laptop to sleep and terminates their wireless connection. You don't necessarily think about that when you close the lid on your laptop."* Before Exceed onDemand was deployed, Fenn would receive an email every week from a panicked researcher who could not recover a session. He would then have to manually find the session and guide the researcher through the process of retrieving it, which could take hours. Meanwhile, the user would be anxiously waiting to get the work back, often while advisors or deadlines loomed over them.

Fortunately, Exceed onDemand remedies this problem by automating the process of restoring a session. Users are able to suspend their session and return to it later exactly where they left off. This means that if a user is in their office at five in the evening, they can suspend their session and go home. If they decide later that evening that they want to continue working on their project, they can just log in from home and resume their session exactly where they left off. This continuity of experience is something Fenn finds very useful, given how important it is for academics to get their ideas on paper.
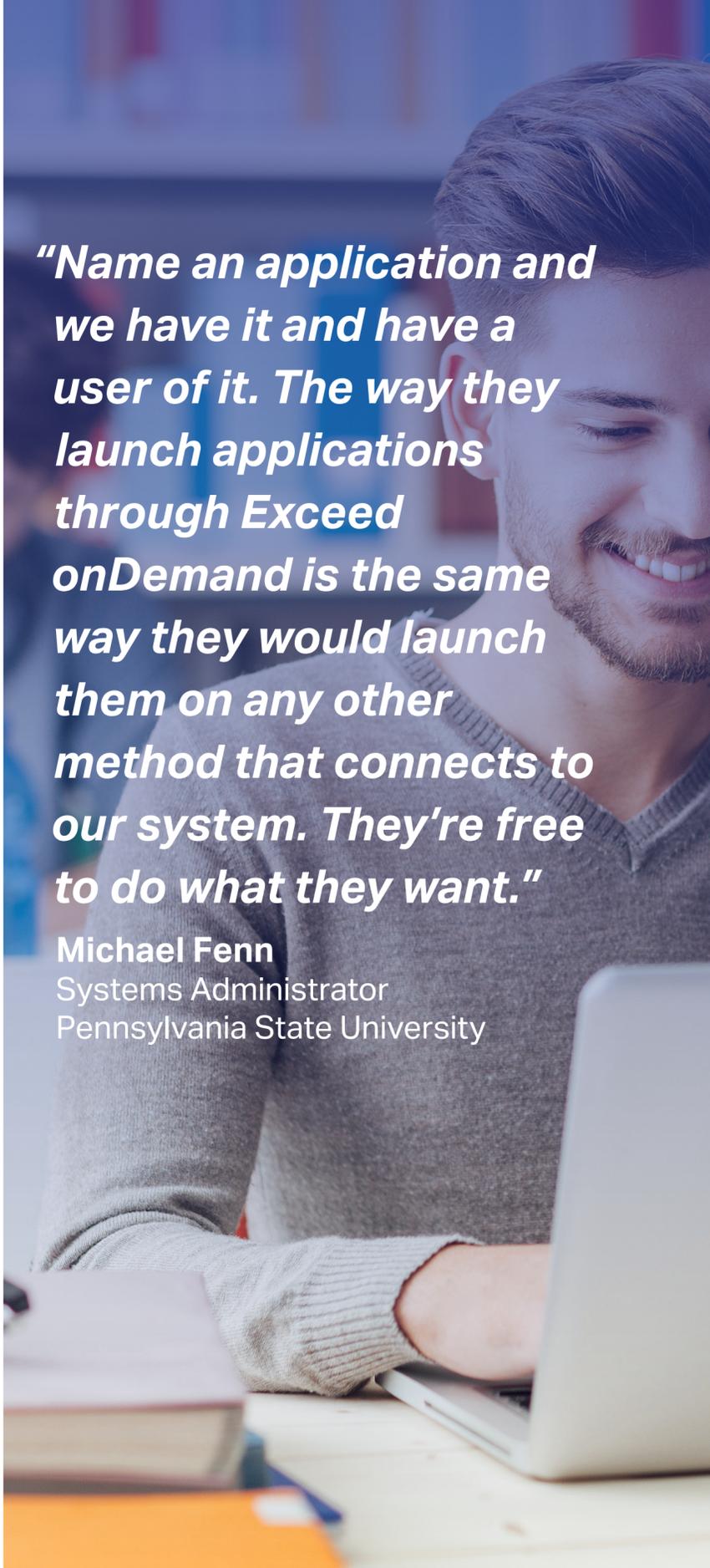
Researchers require a deep level of concentration. Producing quality intellectual material takes a lot of focus, which cannot afford to be directed at difficult install processes. Luckily, starting Exceed onDemand for the first time is not a time-consuming process. Anybody with an account on Penn State's system automatically gains the ability to use Exceed onDemand, and it takes no more than five minutes to set up and begin using the system. New users simply go to Penn State's website, where they can follow some easy instructions to get up and running. With a setup as quick and easy as this, there is no reason not to give it a try.

Penn State researchers are using many different applications, according to Fenn. *"Name an application and we have it and have a user of it,"* Fenn said. Not all of these applications are readily available when a user wants to continue their research from home. Exceed onDemand offers vast freedom for these users, allowing them to leave the lab or office and relieve external stress.

With Exceed onDemand, researchers can now produce a higher quantity of high quality papers. And the more scholarly output researchers provide, the higher Penn State's stature is as the preeminent research institution.

Streamlining the administrative process and saving on maintenance

From an administrative point of view, Fenn's job is made vastly more efficient. *"It's nice to have one single point of management instead of having to go and look at 20 different systems to see who's doing what,"* he said. *"I can just log into the console and say, 'Oh, well here's everything.'"*

"Name an application and we have it and have a user of it. The way they launch applications through Exceed onDemand is the same way they would launch them on any other method that connects to our system. They're free to do what they want."

Michael Fenn
Systems Administrator
Pennsylvania State University

Since administrating Exceed onDemand is so efficient, Fenn and his team are able to devote more time to making sure Penn State's 24 advanced interactive computation and visualization servers are running smoothly. This shift of focus benefits all students and staff at the university.

OpenText customer support was a big hit with Fenn as well. *"Support personnel at OpenText are well-trained, experienced, and extremely knowledgeable,"* Fenn said. When Fenn contacts a customer support representative, he is speaking to someone with a thorough understanding of the product. *"That definitely shows through in the level of service that we get,"* he said.

Achieving academic excellence

Fenn is confident that researchers will continue to discover the value of the product as time goes on. *"A lot of users can benefit from Exceed onDemand,"* he said. *"Once people realize how good it is, they will want to keep using it again and again."*

Fenn is thrilled with the exceptional performance, ease of use, and manageability as the key aspects of the product, all of which are vital in a federated organization such as Pennsylvania State University. *"I would say that Exceed onDemand has enabled our researchers in engineering and other data intensive sciences to become much more productive when using and manipulating three-dimensional representations of large data sets,"* he said.

Fenn expects Exceed onDemand to stir up a revolution in the way staff and students approach their research. *"It all boils down to faster, easier, more intuitive software like Exceed onDemand,"* he said. *"I'm very pleased with the outcome so far."*

About OpenText

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