DELL Technologies

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The power of partnership

Dell Technologies partner X-ISS helps IT leaders at the University of Texas at Dallas gain control over a diverse academic computing environment.

UT DALLAS
The University of Texas at Dallas

IT Services | United States

Business needs

The University of Texas at Dallas needed expert assistance to document, assess and protect the diverse IT assets of the university's School of Natural Sciences and Mathematics.

Solutions at a glance

- X-ISS consulting, infrastructure assessment, system management
- Dell EMC PowerEdge servers with Intel® Xeon® Scalable processors
- Dell EMC Isilon Scale-out NAS

Business results

- Documented a diverse environment
- Identified issues and gaps
- Strengthened data protection
- Helped set priorities for upgrades

The IT leaders at UT Dallas think of Dell Technologies as a **True partner**

X-ISS has helped clients of all sizes implement HPC solutions

Since 1993

The IT challenge

When IT organizations work with Dell Technologies, they may work with multiple companies, thanks to Dell Technologies' extensive partner network. This was the case when the IT leaders at the University of Texas at Dallas needed to assume management of the diverse IT assets of the university's School of Natural Sciences and Mathematics (NSM).

This need arose following the departure of a key IT administrator who managed the NSM environment. At that point, it made sense to bring the school's IT assets under the management umbrella of the UT Dallas Cyber Infrastructure for Research Department (UTD CI). This department, which was established in 2015, supports research and teaching on campus by offering a suite of cyber-infrastructure services to faculty, staff and students.

While the objective was clear, the path forward was clouded by a lot of unknowns about the resources in the NSM environment. The school had everything from Linux® and Windows® desktop systems to servers and small high performance computing (HPC) clusters. No one had a clear view of the age or condition of all of the systems, how they were maintained and how they were backed up. All of this information needed to be captured and documented, and a management plan needed to be put into place.

For Dr. Jerry Perez, the UT Dallas director for cyber infrastructure operations, this was a task with requirements that went beyond the resources of his small department. With that understanding, the university's top IT officer, Frank Feagans, vice president for information technology and chief information officer, reached out to Dell Technologies, which had provided the HPC systems in use in the UT Dallas research environment.

To meet the university's needs, Dell Technologies called in a trusted HPC consulting partner, Houston-based X-ISS.

X-ISS: Management and analytics solutions for clusters

X-ISS is an HPC software and services provider focused on four core practices:

- ManagedHPC for worry-free outsourced cluster management
- DecisionHPC for reporting and analytics for HPC and big data clusters
- CloudHPC for assessment, design, deployment and management of HPC cloud clusters
- ProjectHPC for assessment, design and deployment of HPC and big data clusters.

When an organization's current HPC resources are strained or even non-existent, X-ISS steps in to relieve the pressure and provide excellent HPC assistance. And UT Dallas reached out when the IT leaders needed to gain control of the NSM environment.

"There was a lot of mystery as to what was there," Dr. Perez notes. "What kind of cyber infrastructure was there? How old was it? What kind of problems did that infrastructure have? What was its operational state?"

Dr. Perez and his small staff — he had fewer than two full time equivalent team members — took on the rather daunting tasks of inventorying all the equipment in the NSM environment, and then passed that information on to the IT professionals at X-ISS. To complicate the challenge, the holidays were fast approaching, and people were disappearing. The consultants from X-ISS were unfazed. They pushed on and worked through the holidays.

"When X-ISS got involved, they were able to help us do a lot of the sleuth work — to go into the machines to look at the situation, to test the storage, to look at the user profiles, to check everything," Dr. Perez says. "They went through everything with a fine-tooth comb."

By the end of the holiday break, Dr. Perez and his colleagues had a full report documenting the state of the NSM environment — something that could have taken six weeks or more with internal staff. From that foundation, they were able to begin setting priorities for the cyber infrastructure that needed to be better protected, upgraded or replaced.

"And so, we had a starting point to then provide internal services to the School of Natural Sciences and Mathematics," he says. "As a result of our X-ISS collaboration, we knew specifically where we are lacking in cyber infrastructure and where we most need help. And so this is all about reaching out to our partners, such as X-ISS and Dell, to improve our cyber infrastructure."

A partnering relationship

For the IT leaders at UT Dallas, working with Dell Technologies is a partnership. As a Dell Technologies case study notes, when the university put itself on the path to establishing local HPC systems. The university partnered with Dell Technologies for many reasons, one of which was that Dell Technologies had built a successful supercomputer in operation at the Texas Advanced Computing Center (TACC).

"We went with Dell from the beginning," says Feagans, the CIO. "While we looked at other options, we liked the fact that the Stampede computer at TACC was running on Dell servers, and running very, very well. Also, Dell provided, at their cost, very senior, very intelligent technicians who really understand the HPC space. They helped us craft a design that didn't optimize the amount of dollars that Dell EMC was going to get — it optimized the science that we were going to deliver."

Feagans notes that Dell Technologies personnel didn't disappear after the first cluster came online. In fact, Dell technicians and engineers are always just a phone call away.

"In industry, partnering is absolutely critical," he says. "That is one of the reasons why we are so connected with Dell — because they are there for us. I have not had any issues with Dell. Whenever I call about anything, they will pick up the phone, they will show up, they will help solve the problem, they will help come up with ideas and considerations for the future."

The bottom line? "Dell EMC is truly our partner," Feagans says. "It is so refreshing. Commitments are honored. Follow-through happens. It is just not a game. It really feels like a true partnership. And we need more of those."