Southeast Technical Institute's VDI Vision

FLASHARRAY DELIVERS THE COST AND PERFORMANCE TO MAKE IT A REALITY

The Challenge: 2000 Laptops with Proprietary Software

Southeast Technical Institute is South Dakota's largest post-secondary technical institute. They specialize in educating students in 50 different career fields, so they can join the workforce confident in their chosen profession. Many of their programs require practical training with expensive, curriculum-specific software.

To support their programs, the IT department issues as many as 2000 laptops pre-loaded with the needed applications. At the end of a semester, the IT department would have to secure all the laptops from the students, then re-image them or upgrade to newer versions of the software. An additional challenge was the online student community, who could only get access to the software by paying expensive licensing fees.

> " Pure Storage gave us the performance we needed to make VDI a reality.
>
> **Erik VanLaecken**
> *CIO, STI*

The IT department at STI saw what desktop virtualization could do to improve their operational efficiency and agility, but they also recognized that their existing storage infrastructure was too slow to handle the large and random workload that so many virtual machines would produce. To solve their performance problem, STI still needed to stay within their fixed IT budget.

"We looked at many mainstream storage solutions, including the traditional mechanical disk arrays as well as hybrids, but none of them could match Pure Storage for overall performance, space and consistency. Pure Storage gave us the performance we needed to make our vision for a VDI-enabled student community possible. Now, we are more responsive to our clients, can upgrade software packages in the middle of a semester, and will enable the campus to begin moving towards a BYOD environment," said Erik VanLaecken, CIO at STI.

The Answer:

Southeast Technical Institute chose Pure Storage because of its ability to handle the random and unpredictable I/O stream. With hundreds of thousands of IOPS and the need to meet the "instantaneous" response times expected by students, STI discovered the performance of the FlashArray by executing a series of benchmarks against the array.

The FlashArray showed that it could handle an IOPS load as much as 6X higher than the traditional disk array. While the previous disk array delivered 20ms latencies for 50 desktops, the FlashArray delivered sub-millisecond latencies across 100+ virtual desktops running on VMware View's recent 5.1 release. When combined with a 8-to-1 deduplication ratio, the FlashArray delivered the performance at a cost the institute could afford. This outcome enabled the IT department to bring the first departments online with their VDI vision for Southeast Technical Institute.

The Results:

The FlashArray is now being deployed in the new school year, where it will be used in the initial pilot deployments of virtual machines for a small set of programs. As they see success with the program, they plan to expand the program across multiple program areas on campus, which could be thousands of virtual desktops.

▶ SOLUTION

- Migrated 2TB virtual desktops on VMware View 5.1 to the Pure Storage FlashArray FA-320

▶ PERFORMANCE IMPROVEMENT

- Achieved 8-to-1 data reduction with hundreds of persistent virtual desktops

- Consistent <1ms read and write latency with sustained workload

- Planning to move as many as 2,000 virtual desktops to the FlashArray

▶ DATA REDUCTION

2.1TB   8-to-1

248 GB

BEFORE   AFTER

PURESTORAGE