

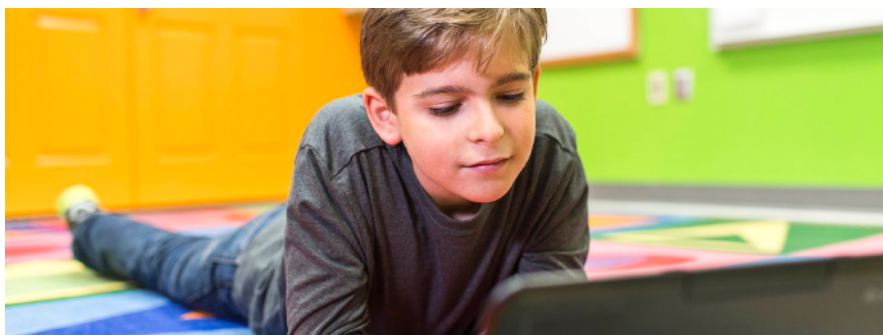


Success Story

Seminole County Public Schools: Transforming Education with Technology



Another NetApp
solution delivered by:



KEY HIGHLIGHTS

Industry
Education

The Challenge

Require more powerful, flexible, and efficient storage infrastructure to drive sustainable operations and scholastic excellence.

The Solution

Improve responsiveness, accessibility, and savings with NetApp® FAS8040HA hybrid array, clustered Data ONTAP® OS, and AltaVault™ backup to cloud with Microsoft Azure.

Benefits

- Support new applications and objectives
- Efficiently meet all workload needs with hybrid storage array
- Improve user experience with application response in seconds
- Eliminate tape and cut backup windows by 80%
- Speed recovery and save on data protection

Preparing Students for Career Success

Seminole County Public Schools (SCPS) is revolutionizing the way educators teach and students learn. Recognized at state and national levels—and even by the White House—for its leadership role in transforming education through technology, this central Florida school district is giving its K–12 students greater choice in what, how, and where they learn. By integrating digital learning into curriculums that support students' interests, grades, test scores, and graduation rates are all soaring, and more students are going on to college.

The Challenge

Keeping the momentum going

With 66,000 students attending 67 schools, SCPS ranks among the largest public education systems in the United States; and it's still growing, adding up to 1,000 students a year. The district is also well known for fostering a highly educated workforce, from introducing kindergartners to computer coding through play to working with local businesses to provide high schoolers with meaningful internships.

An IT infrastructure that delivers the performance and capacity needed by physical and virtual environments to drive SCPS's collaboration, innovation, and growth is critical, but with an aging inflexible SAN, this situation became a challenge. For example, district and school websites were often slow, frustrating users and triggering support calls. "We had nearly exhausted our resources and even transitioned e-mail to the cloud to give us some breathing room, but it wasn't enough," says Tom Condo, supervisor of IS Operations at SCPS.

The IS team was also challenged by complex, expensive, and slow tape-based backup and recovery. Full backups of SCPS's critical administrative file server could take up to 32 hours, and local restoration required a day to clone from tape. Recovery tests for off-site tapes were equally time-consuming, requiring a plane ride to the contracted provider and many hours to find and restore a single file.

Plans were made for a technology refresh, and NetApp partner Greyson Technologies became the favorite among competing vendors. "Learning what Greyson's expertise

“The minute production systems were up, we realized the NetApp platform was light-years ahead of what we had before.”

Tom Condo
Supervisor of IS Operations, Seminole County Public Schools

and NetApp technology could do for us really impressed our team,” says Condo. “We also liked that NetApp solutions could easily integrate into our virtual, backup, and cloud environments and seamlessly scale.”

The Solution

Delivering a better experience

Without service disruption, Greyson Technologies helped implement an 84TB NetApp FAS8040HA hybrid array, which quickly proved its worth. “The minute production systems were up, we realized the NetApp platform was light-years ahead of what we had before,” says Condo. “Parents and students funding lunch accounts on our Food Services website immediately felt the difference when response times went from over a minute to seconds.”

The storage platform runs the NetApp clustered Data ONTAP OS, which facilitates agile operations and seamless growth. “The uniformity of NetApp’s management tools across models and nondisruptive maintenance and upgrades are big pluses in supporting our dynamic learning environment,” explains Condo.

Equipped with both SSD and HDD drives, the NetApp hybrid array helps SCPS leverage both performance and value. For instance, slower, less costly HDDs may be

used for less demanding clerical applications, while SSDs can be used to support a faster and more interactive virtual learning environment for the Seminole County Virtual School, an important conduit for teaching and reaching more students.

NetApp OnCommand® Performance Manager, an integrated component of OnCommand Unified Manager, has also proved especially helpful in further optimizing application performance. “Using NetApp OnCommand Performance Manager to trend performance over time helps us proactively gauge behavior and adjust, such as optimizing a database configuration tied to a student application,” says Ken Richmond, Microsoft Windows administrator for SCPS.

Boosting business continuity

To address SCPS’s tape backup and recovery challenges, Greyson recommended an AltaVault AVA400 cloud-integrated storage appliance with 32TB of local usable cache and the ability to support up to 160TB of data in the cloud. Deployed by SCPS’s IS staff in a matter of hours, the AltaVault appliance easily integrates with existing backup software, enabling the use of familiar tools for fast ramp-up.

The AltaVault solution securely sends data to Microsoft Azure BLOB storage, which

aligns with SCPS’s Microsoft Azure-based public cloud strategy. This strategy currently includes the district’s Microsoft Office 365 business platform and Canvas Learning Management System. With AltaVault, nightly backups of critical data are automatically synchronized to Azure, all while keeping data encrypted in flight and at rest.

“Backups are now more than 80% faster than with tape,” says Tom Garrett, network specialist for IS Operations at SCPS. “And recovery times for whole datasets to single files have gone from days and hours to minutes and seconds, whether retrieved from the AltaVault cache or cloud.”

“Eliminating tape backups has also led to improved recovery time and recovery point objectives and a reduced risk profile,” adds Condo. “I sleep better now. With AltaVault, our risk factors have gone down between two- and tenfold.”

Making resources last longer

Adding to the benefits, AltaVault deduplication has enabled SCPS to achieve a 15-to-1 data reduction ratio in its backup-to-cloud environment. This degree of resource conservation enables SCPS to stretch storage resources even further and reduce monthly cloud storage costs as all environments continue to grow.

“Using NetApp OnCommand Performance Manager to trend performance over time helps us proactively gauge behavior and adjust, such as optimizing a database configuration tied to a student application.”

Ken Richmond

Microsoft Windows Administrator, Seminole County Public Schools

Business Benefits

An agile, future-ready platform

Becoming a premier educational system and a national model of excellence takes both dedication and technology. NetApp FAS8040HA storage and AltaVault backup-to-cloud solutions are doing their part, providing nonstop data access and fast application response to keep over 40 departments, from Digital Learning and Dining Services to Payroll and Security, productive.

NetApp solutions and the savings they generate are also paving the way for more IT enhancements expected to help take SCPS's progressive academic strategy even further. For example, the district is currently integrating its virtual and NetApp environments with Cisco UCS servers and switches to form a converged,

centrally managed, and easily scaled FlexPod® infrastructure. With the ability to configure and deliver compute and storage resources with even more speed and agility, the IS team can better respond to opportunities such as those that may be granted through the \$50 million Laurene Powell Jobs' XQ Super School project. With financing awarded to the top five winners, the project challenges teachers and students to come up with ideas for high schools designed to help students better prepare for 21st-century careers.

“SCPS's mission is to help students realize their full potential,” explains Condo. “Our job in IS is to assist over 10,000 employees and educators across departments, programs, applications, and websites in achieving that goal; Greyson Technologies and NetApp are our enablers.”

SOLUTION COMPONENTS

NetApp Products

NetApp FAS8040HA running clustered Data ONTAP

NetApp Flash Pool™ intelligent caching

AltaVault AVA400 physical appliance

OnCommand Performance Manager (integrated component of OnCommand Unified Manager)

Third-Party Solutions

Canvas Learning Management System

PeopleSoft HR and financial applications

Microsoft Exchange, SQL Server, Hyper-V, and Azure BLOB storage
VMware vSphere

Partner

Greyson Technologies, Inc.
www.greyson.com



Leading organizations worldwide count on NetApp for software, systems and services to manage and store their data. Customers value our teamwork, expertise and passion for helping them succeed now and into the future.

www.netapp.com

© 2016 NetApp, Inc. All rights reserved. No portions of this document may be reproduced without prior written consent of NetApp, Inc. Specifications are subject to change without notice. NetApp, the NetApp logo, AltaVault, Data ONTAP, Flash Pool, FlexPod, and OnCommand are trademarks or registered trademarks of NetApp Inc., in the United States and/or other countries. All other brands or products are trademarks or registered trademarks of their respective holders and should be treated as such. A current list of NetApp trademarks is available on the web at www.netapp.com/us/legal/netapptmlist.aspx. CSS-6902-0416

Follow us on:

