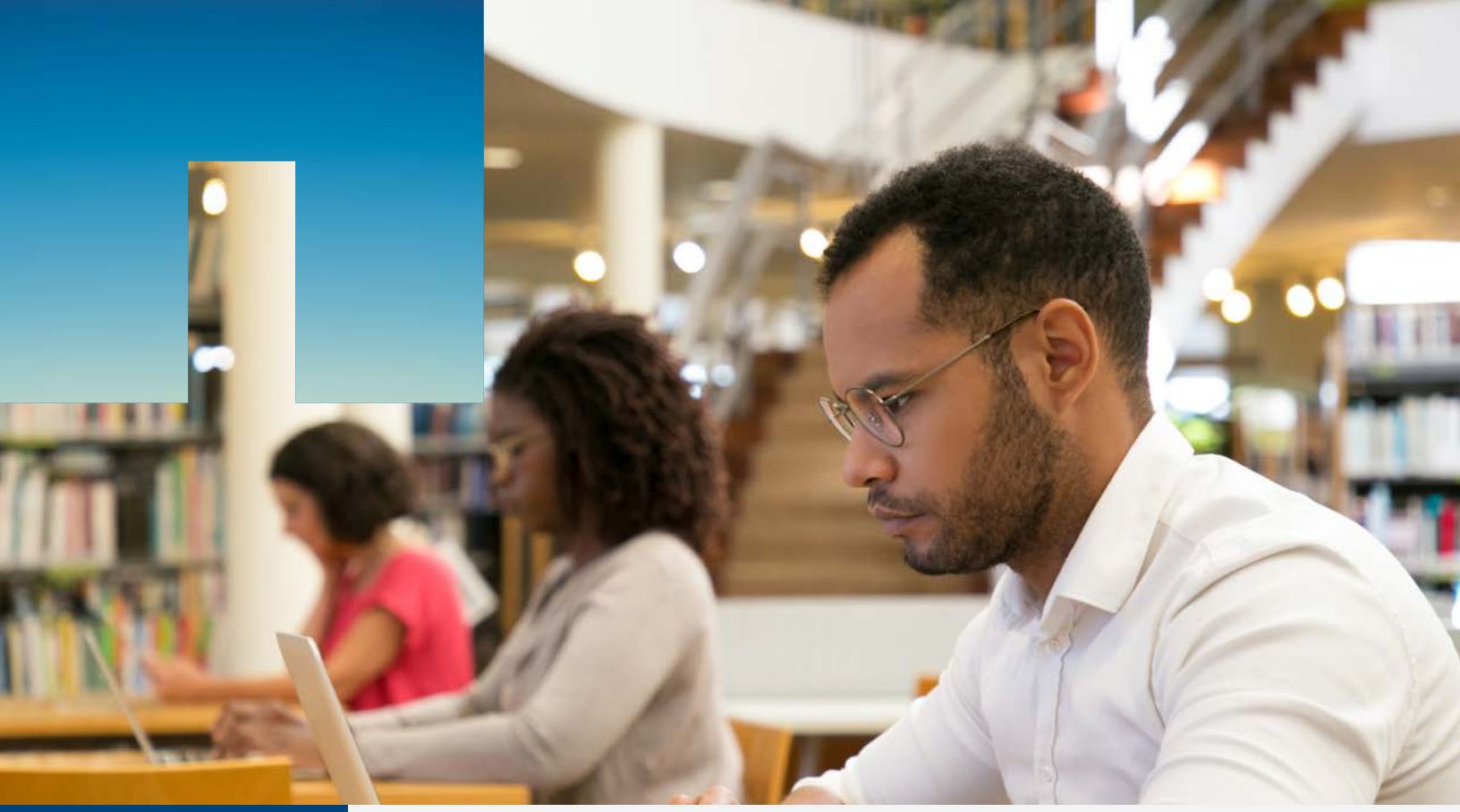

CUSTOMER STORY

Higher Education & Research

PRESTIGIOUS UNIVERSITY | OPPORTUNITY

Overcoming the challenges of trust and cost, the university's central IT department is now trusted with hundreds of petabytes of vital research and university data from students and faculty.

Prestigious University Accelerates Data-Driven Research with a Data Fabric

This prestigious research university is dedicated to expanding and sharing knowledge, to inspiring innovation, and to preserving cultural and scientific information for future generations. It is truly a comprehensive engine of scientific capital.

University scientists devise therapies that are necessary for cellular regeneration, develop tools that are foundational to the digital revolution, and advise on the character of modern economies.

95%
of the university's central IT storage uses NetApp® technology.

Capacity increased by
35%
going from eight racks to two.

More than
1PB
of space has been saved.

NETAPP.COM/CONTACT

NetApp®

"The relationship with NetApp in developing our data fabric has evolved with the StorageGRID storage. This evolution and our ability to utilize data on campus, to get that data to a different location entirely, to utilize it there, and to get it back to campus have been revolutionary for our researchers."

University Representative

INSIDE AN ENGINE OF SCIENTIFIC CAPITAL

Data is the digital fuel that empowers the university to be a research institution, which means that volumes of data across the university continue to grow at exponential levels. The storage of all that data across various media, in different locations around campus for different purposes, requires an effective, efficient approach.

At the university, 20,000 students and faculty are spread among several schools and require various tiers based on ingest and storage rates and their requirements to share their data outside the university. According to the university, managing these diverse needs "would be impossible without centralized storage on NetApp."

NetApp is the university's primary storage provider, representing 95% of the university's central storage infrastructure. The foundation of the NetApp ecosystem is the FAS environment. The university now uses all the NetApp products that come with that foundation: NetApp SnapMirror®, SnapVault®, SnapManager® for Oracle, and SnapManager for Microsoft SQL Server, and NetApp SnapCenter® software protects the university's virtual machines.

"With SnapCenter, it does everything we need it to do," said a school representative. "From our data protection to disaster recovery, it's all handled through that, all sitting on the NetApp FAS environment."

The use of NetApp Snapshot™ technology provides extensive benefits. With Snapshot copies now available to end users, the university has been able to significantly reduce calls to the help desk, to the server teams, and to central IT for file recovery. "The data protection capabilities that come with NetApp Snap technology provide peace of mind and let him sleep at night," a university representative said.

The university has four NetApp AFF A300 systems, which are where its VMware environment, Oracle, SQL Server, and web services run—all on all-flash. The university is moving away from spinning disks and toward the all-flash StorageGRID and FabricPool environment. The university is "buying into flash 100%" as it consolidates from six racks of an older spinning-disk environment to one rack of all-flash systems and benefits from a 35% increase in capacity.

FabricPool is an ONTAP feature that enables automated data tiering. FabricPool is supported when ONTAP runs on AFF hardware. StorageGRID is the FabricPool tiering target. Data that is accessed frequently is considered to be warm, and to be accessed quickly, it must sit on flash. After 7 days, that data is cool and uses up expensive space on the flash storage. At that point, FabricPool automatically tiers the cool data to StorageGRID storage, which is less costly.

The university is pleased with the results from its deployment of all-flash and StorageGRID with FabricPool. StorageGRID does double duty as the FabricPool target and as a separate service offering for on-premises object storage. For its operations, the university reports using 4.3PB in the active storage tier right now and is saving 1.07PB from NetApp deduplication and compression. Expressing the university's satisfaction, a representative said, "The ability to save a petabyte of capacity is phenomenal.

"With StorageGRID, we have the ability to serve up object, which the university didn't even know it needed. Now they know they need it, and they love it." The university further acknowledges the importance of the data protection for faculty and students that StorageGRID provides. As a university representative said, "When you're done with your data and you need it for your Nobel Prize, we park it on StorageGRID and you have met all your needs."

NetApp®

TRANSFORMING RESEARCH BETWEEN CAMPUSES AND ACROSS CONTINENTS

The number one need for advanced research is collaboration between the world's top research institutions, which presents the challenge of how to securely share large amounts data outside the university. Before StorageGRID, researchers would literally fly overseas with their files. With StorageGRID, the university can offer Amazon Simple Storage Service (Amazon S3) on premises and can do it at a third of the cost of the regular cloud providers.

"It's as simple as handing API keys to another university, then that university can copy data from us or put data there from their research with no egress charges," said a university representative. "And it's just our storage that they happen to be using." This transformation in cross-campus and intercontinental research saves the university in costs and in time while providing the utmost in data security for researchers.

"The relationship with NetApp in developing our data fabric has evolved with the StorageGRID storage," said a university representative. "This evolution and our ability to utilize data on campus, to get that data to a different location entirely, to utilize it there, and to get it back to campus have been revolutionary for our researchers."

MANAGING THE UNIVERSITY DATA FABRIC COST-EFFECTIVELY

The economies of using FabricPool have been proven to the university, with a representative stating, "We can build the storage space cheaper within our data centers." Central IT uses FabricPool to move data to StorageGRID instead of moving storage out into the cloud.

"The cost benefit for utilizing the FabricPool and StorageGRID is the performance gain that we see, the capacity gain that we see, and the no additional cost to my clients," said a university representative. "FabricPool will have saved us in data center space. We went from eight racks of spinning disk and controllers down to two racks, essentially two and a half racks."

Centralizing university data on a NetApp ecosystem means that the fast and furious data that's generated by today's students and faculty will be reliably available and cost-effectively managed. These benefits are critical for the achievements of current students and faculty and for generations to follow.

SOLUTION COMPONENTS

NETAPP PRODUCTS

- NetApp StorageGRID® object-based storage
- NetApp ONTAP® data management software with FabricPool
- NetApp FAS hybrid flash systems
- NetApp AFF all-flash storage systems

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NetApp is the leader in cloud data services, empowering global organizations to change their world with data. Together with our partners, we are the only ones who can help you build your unique data fabric. Simplify hybrid multicloud and securely deliver the right data, services and applications to the right people at the right time. Learn more at **www.netapp.com**.