

# TEACH FOR AMERICA

## EMC supports expanded reach of educational initiatives



### ESSENTIALS

#### Industry

Education

#### Company Size

2,000 employees

#### Business Challenges

- Exponential growth of backup data
- Backup challenges inhibiting virtualization
- Legacy storage had reached maximum utility and did not support virtualization requirements

#### Solutions

- EMC VNX unified storage
- EMC FAST Suite
- EMC Data Domain
- EMC Data Domain Boost
- EMC Avamar
- EMC NetWorker
- Oracle, IBM DB2, Informix, Microsoft Exchange, Microsoft SQL Server

### OVERVIEW

Teach For America works in partnership with communities to expand educational opportunities for children in poverty. Founded in 1990, the not-for-profit organization recruits and develops outstanding individuals to teach in 46 urban and rural regions across the U.S. In the coming school year, more than 10,000 corps members will teach 750,000 students.

### BUSINESS CHALLENGES

Teach For America's IT organization supports more than 2,000 users across 40 offices—up from 600 users and 20 sites five years ago. With this dramatic growth, the non-profit organization's backup data volumes were increasing 30 to 50 percent annually, and its previous tape backup infrastructure wasn't able to scale or fully support virtualization. In addition, full backups were running into regular business hours, disrupting productivity—a big hurdle for a non-profit needing to continually innovate to do more with less.

Previously, Teach for America had been using a costly cloud provider to back up remote office data; however, this solution couldn't support the organization's rapid expansion. In addition, Engineering found IT to be an impediment to efficiently deploying new projects and began looking at virtualization to achieve flexibility and agility. An aggressive virtualization strategy required a storage solution that supported both a growing footprint and rapid deployment of virtual machines.

Teach for America also needed a platform that could take advantage of the latest storage caching and tiering technologies for improved performance and TCO. In short, TFA needed to transform IT into a service that managed costs, growth, and performance.

### SOLUTIONS

Teach For America replaced all of its aging hardware with EMC® VNX® unified storage, including the EMC FAST™ Suite. The organization also standardized on EMC for its entire backup environment with EMC Data Domain® deduplication storage systems, EMC Data Domain Boost (DD Boost) software, EMC Avamar® deduplication backup software and system, and EMC NetWorker® unified backup and recovery.

VNX with the FAST Suite (which includes FAST VP and FAST Cache) and Flash drives handles all of Teach for America's enterprise storage needs. This FLASH 1<sup>st</sup> strategy has enabled Teach for America to achieve new levels of performance and to reduce CapEx and OpEx. FLASH 1<sup>st</sup> ensures that hot or active data is automatically stored on Flash for optimal performance, while less active data is tiered to high capacity drives for the lowest overall cost per gigabyte.

CUSTOMER PROFILE

EMC<sup>2</sup>

## Results

- Achieved immediate CAPEX savings of \$365,000 in IT expenses, ongoing OpEx savings of \$120,000
- Enabled the placement of approximately 14 additional teachers through cost savings—teachers will touch the lives of over 400 students
- Decreased storage costs via deduplication rates of up to 12:1
- Extended data retention on disk from one week to one month
- Reduced full backup times from days to hours
- Enabled recovery in a few minutes instead of a full day
- Achieved daily full backups for virtual servers and remote offices

Data Domain systems, DD Boost, and NetWorker protect the company's critical databases and enterprise applications, including Oracle, IBM DB2, Informix, Microsoft SQL Server, and Exchange. The company also plans to leverage DD Boost for backing up Oracle RMAN directly to Data Domain.

Teach For America chose Avamar, equipped with integrated global, client-side data deduplication technology, to provide fast, daily full backups of its remote offices and virtualized infrastructure, including 180 virtual machines. Avamar protects the company's VMware® environment with full image-level backup and leverages VMware Changed Block Tracking to accelerate both backup and recovery.

The organization uses NetWorker for centralized management and reporting for backup operations. Both Data Domain and Avamar are replicated between Teach For America's New York City production data center and co-location recovery site 10 miles away.

## TAMING BACKUP DATA GROWTH

Since implementing a comprehensive EMC backup and recovery solution, Teach For America has tamed its growing volume of backup data thanks to Data Domain deduplication. The organization is achieving data reduction rates of 11:1 and 12:1 for Exchange and SQL Server respectively, and 6.5:1 for Oracle.

"Data Domain was a real game changer," says Licciardello. "By dramatically reducing backup volumes, we extended our retention of backups on disk from one week to one month. During teacher recruitment season, we get inundated with requests to locate older files recruiters need for running selection models to help them choose the best candidates. Now, with longer retention periods, it's much easier to recover those files."

**"The ability to gain efficiencies with this technology and save money allows us to have a greater impact towards our mission; the more money we save equates to more teachers we can place and that in turn helps us reach a greater number of students."**

Thomas Licciardello  
Vice President for Technology Operations at Teach for America

With Data Domain, full backups no longer stretch over long weekends into Monday mornings, but instead complete in 17 hours. This has not only eliminated productivity disruptions, but also has enabled important operational transformation.

"We eliminated about 45 tapes per month, which provides an added financial benefit," Licciardello notes. "And restoring from Data Domain takes a few minutes instead of a full business day with tape. The efficiency and integrity of Data Domain has been like night and day compared to our old system."

## ACCELERATING VIRTUALIZATION

With Avamar, Teach For America expects to accelerate backups for its VMware environment and remote offices significantly. In the proof-of-concept, Avamar achieved a deduplication ratio of 6:1, three times greater than the competing products, and completed daily full backups three times faster than competing solutions. Avamar enabled daily full backups to be completed in less than half the time of the other solutions.

Avamar also enables Teach for America to address issues such as long backup times, lack of scalability, and associated backup costs for four TB of unstructured file data at its remote branch offices.

“Avamar client-side deduplication is a great fit for our remote offices,” says Amish Chudasama, Senior Managing Director, Production Systems, Teach for America. “It provides excellent performance and better scalability, and is more flexible and easier to manage. We expect a payback in six to eight months.”

With Avamar covering remote backups and deduplication, Data Domain protecting the company’s mission-critical applications and databases, and VNX centralizing disparate data, Teach for America is now moving forward aggressively with virtualization. The organization has reached 60 to 70 percent virtualization with VMware.

## **SUPPORTING AN EDUCATIONAL MISSION**

Teach For America continues to evolve its infrastructure to help drive its rapid expansion and philanthropic mission. As a result of the efficiencies achieved by the technology refresh and consolidation—including centralizing remote office data, bringing backup operations in house, and reducing administrative tasks—Teach for America has been able to recapture \$365,000 in IT expenses as well as ongoing OpEx savings of \$120,000. Just the initial savings enabled Teach for America to place approximately 14 additional teachers who will touch the lives of more than 400 students.

“EMC has such a broad, well integrated portfolio of unified storage and backup and recovery solutions that we’re confident they’ll continue to enable our organization to grow so we can reach more children well into the future,” says Licciardello.

## **CONTACT US**

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, [contact](#) your local representative or authorized reseller—or visit us at [www.EMC.com](http://www.EMC.com).

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