Case Study

INDUSTRY

Education

LOCATION

Schaumburg, Illinois

SOLUTION

Cloud-enabled FlexPod™ reference architecture, which includes VMware® virtualization software, Cisco® servers and networking, and NetApp® storage

DATALINK SERVICES

- Analysis
- Design
- Project management
- Implementation
- Support

BENEFITS

- Reduced time to roll out new environments from six weeks to six hours or less
- Helped CEC save millions per year via centralized IT services from a private cloud environment versus outsourced services
- Converted passive, secondary disaster recovery environment to an active, virtual enabler for new education application development, testing, and portfolio expansion
- Helped CEC consolidate and transform its IT services into a self-funded, versatile private cloud that delivers the right resources at the right time

Career Education Corporation drastically reduced time to roll out new environments — from six weeks to six hours or less — with Datalink.

THE CUSTOMER: CAREER EDUCATION CORPORATION

Career Education Corporation (CEC) is a globally recognized education industry leader that offers high-quality education to its diverse, 75,000+ student population. Comprised of more than 90 campuses throughout the U.S., France, the United Kingdom, and Monaco, CEC offers everything from doctoral and master's programs to bachelor's and associate degrees, diplomas, and certificate programs through a variety of well-known colleges, schools, universities, and institutions. Its educational offerings vary from online (which now accounts for 40-percent of student involvement) to on-ground and hybrid learning programs. Offering technical to design and culinary courses, CEC remains committed to providing quality outcomes and career opportunities for its diverse population.

THE CHALLENGE: LIMITATIONS IN PHYSICAL IT ENVIRONMENT PREVENTED FAST RESPONSE TO CHALLENGES AND OPPORTUNITIES

Senior Vice President of Information Technology Dave Czeszewski knew CEC was going to continue to forge new ground in both its bricks-and-mortar classroom environments and its growing online, adaptive learning curriculums.

"Due to an online growth strategy, our business evolved from two separate divisions – on the ground and online. Now that we're the same company, we needed to merge our IT environments to better address the needs of our diverse data centers," he said.

Digital workloads would rise dramatically as each student quarter began or neared completion. Data needs also included the rapid-fire development in the organization's adaptive, online learning-oriented CEC labs. As budgets shifted, it became less viable to have local IT campus staff at every campus, let alone a separate IT campus architecture. Yet CEC student and staff data still needed to be effectively managed, protected, and restored in case of disaster.

Czeszewski and CEC's CIO knew that IT consolidation, server virtualization, and a move to centralize IT operations would be the best option. CEC had even begun to virtualize small pockets of its IT operations at the remote schools using VMware or Microsoft® Hyper-V®.

The organization's ultimate goal was to build its own private "CEC Cloud," one with the elasticity to shrink or grow IT resources on-the-fly in order to meet the varied, cyclical needs of its student and staff populations. Czeszewski and his team knew they would need some outside help to get them from where they were to where they wanted to be.

"We wanted to innovate and self-fund our transformation to bring better technology, better flexibility, and better speed to the environment at a lower cost. Datalink helped us do that."

THE SOLUTION: CENTRALIZED BACKUP, DISASTER RECOVERY, AND AN AGILE VIRTUAL FOUNDATION FOR THE CLOUD

Having previously worked with Datalink on backup and virtualization projects, CEC asked them to determine which IT options to consider, specifically in the areas of data protection, disaster recovery, and virtualization.

For backup and recovery, Datalink helped architect routine backup and recovery for 90 of CEC's schools to a central NetApp storage area network (SAN). With the help of Datalink, CEC was able to use highly efficient NetApp data protection software to help simplify and speed its backup operations. This included the use of NetApp Snapshot®, SnapVault®, and Open Systems SnapVault and NetApp SnapMirror®.

Datalink also helped CEC consolidate its virtual servers onto NetApp shared storage. Datalink was able to answer CEC's questions and explain the unique management efficiencies and virtual machine space savings that could be obtained by pairing the NetApp storage operating system and features like NetApp deduplication with the NFS protocol.

"Datalink did a nice job designing and helping implement the solution. They were hands-on and knew the technology extremely well. They went deep with us and even showed us exactly what you could do with NetApp and VMware using NFS," Czeszewski noted. "Even after the deployment, we were still able to leverage Datalink's resources."

Datalink also conducted a larger assessment of CEC's existing servers, SAN switches, storage, and backup operations. The subsequent recommendation was an aggressive expansion of CEC's virtualization footprint. This would make CEC's IT operations more responsive to workload demands and address the need to quickly roll out new application environments. The recommendation involved transforming the organization's more passive disaster recovery environment into a more active virtual infrastructure for use in application rollout, development, and testing.

Datalink designed and deployed a FlexPod reference architecture for CEC. FlexPod provided flexible, pre-integrated building blocks of compute, network, and storage resources. The solution paired VMware with Cisco Unified Computing System™ (UCS) servers, switches, and interconnects, as well as NetApp V-Series storage controllers at both its primary and secondary data centers.

THE BENEFITS: AN AGILE INFRASTRUCTURE THAT RESPONDS QUICKLY

Czeszewski and his team are very happy with the results they've obtained from their FlexPod architecture. Hundreds of physical servers have been converted to virtual machines, with significant savings attained on decommissioned server hardware, as well as power and cooling costs.

New Environments Now Deploy in Hours, Not Weeks

Matt Lattanzio, CEC infrastructure solutions architect, recalls how long it used to take to roll out a new environment for CEC's development team or another department. It often took up to six weeks and involved negotiation with as many as five different groups. Today, with FlexPod and the Cisco UCS infrastructure, the same new environment request is completed in six hours or less, with no other teams required.

"The biggest plus of this architecture is its speed of deployment. The flexibility of the design and ease of maintenance on a virtualized platform is exceptional," said Lattanzio. "We're able to right-size the environment to not waste resources." In the event CEC data growth outstrips current capacity, Lattanzio and Czeszewski also know the current system design allows for fast modular additions without the need for a forklift upgrade.

Making the CEC Cloud a Reality

CEC's experience with Datalink culminated in the rollout of a fully virtualized data center and the emergence of its early CEC Cloud environment, built on FlexPod. "Whether we can do things now in six hours or six minutes, the true value of the cloud is the new flexibility and ability to right-size our resources to exactly what we need, where we need it," said Czeszewski. "Since deploying FlexPod, we have mandated all non-database servers to be 100-percent virtualized. Once I can move that workload, it becomes portable and allows me to have the resources wherever I want them. It also makes our vision of an active/active data center more realistic."

For sheer flexibility and adaptability, Czeszewski says the technology path they've followed with Datalink can't be beat. "If you're not using this technology, either FlexPod or others like it, you have to ask yourself why. There's just no reason not to do it," he said.

THE OVERALL EXPERIENCE: DATALINK SUPPORT AND EXPERTISE DELIVERED

As Czeszewski recalls, Datalink worked hard throughout the multi-year experience to earn both CEC's trust and its ongoing business. Both he and Lattanzio give the firm high marks for its professionalism, expertise, and dedication to learning exactly what CEC needed and how best to help get them there.

From early assessments and projects to widespread FlexPod deployment and implementation, Datalink offered timely, consistent response to CEC's changing needs. "We had long, drawn-out discussions when we were considering VMware and NetApp. I asked a million questions. As fast as I could ask the questions, they would answer knowledgeably and come up with reasons why I might or might not want to do something. They had the experience and the background to come up with optimal designs. "It contributed to one of the smoothest implementations we've ever done," recalled Lattanzio.

Czeszewski now counts Datalink as one of its inner circle of trusted providers. "We try to surround ourselves with providers who demonstrate a high level of expertise, commitment, and ethics. Datalink matches those requirements very well," he said. "We wanted to innovate and self-fund our transformation to bring better technology, better flexibility, and better speed to the environment at a lower cost. Datalink helped us do that."

Making IT happen

A complete data center solutions and services provider, Datalink helps Fortune 500 and mid-tier enterprises get the most from every IT investment – with storage, server, and network expertise across the infrastructure. We deliver greater business results throughout, designing what we sell, deploying what we design, and supporting what we deliver.

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