



NetApp®

## Success Story

# Princeton Insurance Increases Flexibility, Strengthens Competitive Edge with Private Cloud

### Princeton Insurance

PARTNERSHIP. PREVENTION. PROTECTION.

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solution delivered by:



#### KEY HIGHLIGHTS

**Industry**  
Insurance

**The Challenge**  
Increase business agility by delivering IT as a service and empower small IT team with efficient management tools.

**The Solution**  
Created private cloud using NetApp® storage and Cisco Unified Computing System™ (Cisco UCS®) with VMware vSphere® 4.

#### Benefits

- Accelerated resource provisioning from weeks to minutes
- Accomplished data-in-place upgrade
- Prepared for transition to IT as a service
- Protected investment with unified support for FC, FCoE, and iSCSI

#### Customer Profile

Princeton Insurance is the leading medical professional liability insurer in New Jersey. The company insures approximately 16,000 New Jersey policy holders, including physicians, other healthcare professionals, and healthcare facilities. Since 1976, Princeton Insurance has processed more than 54,000 medical malpractice cases. The company attributes its longevity and success to outstanding customer service, business intelligence from 30 years of malpractice claims, and a highly efficient staff. A team of just 5 IT professionals supports the entire infrastructure for a 150-person workforce that serves 16,000 customers.

#### The Challenge

Princeton Insurance has a track record of harnessing information technology for customer service and operational efficiency. "To stay lean and still be effective, we have to embrace innovation," says Darby O'Neill, vice president of Technology for Princeton Insurance.

Information is the lifeblood of the insurance industry, and Princeton Insurance depends on its storage platform for key business activities ranging from customer service to product development

and risk management. Previously, the company used two different storage platforms. A NetApp FAS3020 system stored digital images of all policy and claims files. This enabled the company to differentiate the customer experience because employees could answer customer questions right away instead of calling back after they retrieved the paper file.

Princeton Insurance used another storage system for major business applications, including business intelligence. The company continues to create new data warehouse subsets (cubes), mining them for correlations, patterns, and anomalies that factor into everything from new product development to financial-reserve management.

When the business intelligence platform reached capacity, the IT team reevaluated the overall storage strategy. The timing was good, because Princeton Insurance had decided to counter "server sprawl" by virtualizing applications and housing them on the Cisco Unified Computing System platform, which combines server, networking, storage access, and virtualization in a cohesive system managed as a single entity. Adopting Cisco UCS would be

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**Darby O’Neill**

Vice President of IT, Princeton Insurance

the first step in the company’s transition to delivering IT as a service. “Our vision was to create a secure private cloud with shared resources that could be quickly provisioned, increasing business agility while also reducing IT overhead,” says O’Neill.

The company needed a storage platform that could house multiple applications and data warehouses, applying different access policies to each. The platform had to be easy to manage for the small IT team. It needed to interoperate with the existing Microsoft® Exchange and Microsoft SQL Server® application environments, VMware® ESX®, and the legacy Brocade Fibre Channel switch infrastructure. And it had to support Fibre Channel over Ethernet (FCoE) to connect directly to the converged network adapter in Cisco UCS, providing the high bandwidth to support VMware ESX while eliminating the high costs of Fibre Channel switches and cabling.

## **The Solution**

After evaluating both of its existing storage vendors, Princeton Insurance selected the NetApp FAS3140A system as the converged storage platform for the private cloud. H.A. Storage Systems, Inc., a value-added reseller of data storage products and services and a participant in the NetApp Partner Program, provided design, deployment, and support services. “We could confi-

dently recommend NetApp storage for Cisco UCS because Cisco created validated designs for private clouds using Cisco UCS, NetApp, and VMware,” says Martin Klein, enterprise account manager for H.A. Storage Systems.

NetApp technology complements Cisco UCS, according to Klein. First, NetApp MultiStore® software enables Princeton Insurance to logically partition the array to securely house different applications on the shared platform. Second, multi-protocol NetApp storage supports FCoE, providing the high bandwidth needed to support VMware ESX on Cisco UCS. Finally, Princeton Insurance could use the NetApp Virtual Storage Console (VSC) plug-in for VMware vCenter™, a free download, to minimize the number of management points.

H.A. Storage Systems configured the NetApp FAS3140A system with two 450GB disk shelves. One SATA shelf was repurposed from the existing NetApp FAS3020 system and remains dedicated to the document imaging application. The application accesses the disk by way of the 4GB Fibre Channel Cisco® MDS 9124 switch. The other disk provides storage resources to the applications housed on Cisco UCS as well as 25 standalone servers. All of the virtual servers boot from storage.

The Cisco UCS platform currently contains 3 blade servers hosting 35 virtual

servers, including file shares and web servers. The Cisco UCS 6100 Fabric Interconnect connects to the NetApp FAS3140A storage array by way of a Cisco MDS Multilayer Director 9000 Series. The fabric interconnect also connects all server blades to a Cisco Catalyst® 6509 switch over 10 Gigabit Ethernet. When the company has finished moving all applications to the Cisco UCS platform, the IT team will connect the NetApp FAS3140A system directly to Cisco UCS using FCoE, eliminating the costs of Fibre Channel switch ports and cabling. “We cabled the Cisco UCS platform for data and storage connectivity just once and won’t have to do it again no matter how many blade servers we add,” says Nicole Gadbois, director of Network Operations for Princeton Insurance.

O’Neill adds, “We’re an insurance company, not a technology company. Working with three industry leaders, NetApp, Cisco, and VMware, is a wise choice for us because they have stable, innovative, and cost-effective technology.”

## **Business Benefits**

### **Increased Flexibility for a Competitive Advantage**

Princeton Insurance has amassed 30 years of data, providing a wealth of hidden business intelligence for new-product development and risk management. In the past, adding

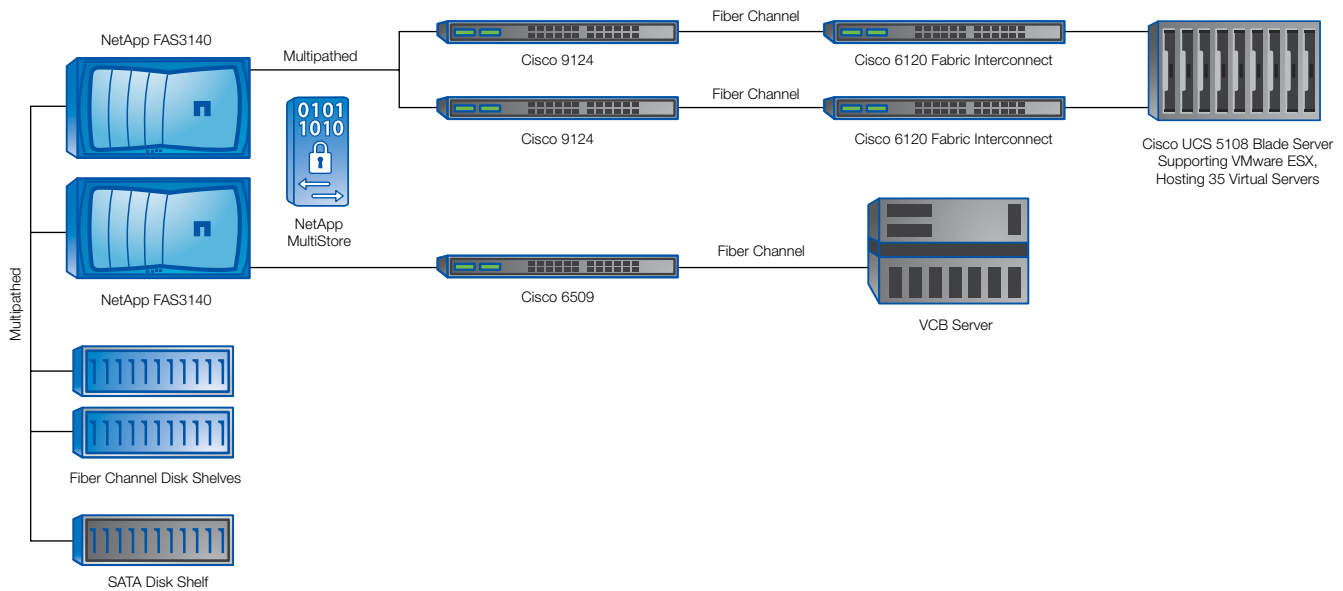


Figure 1) Princeton Insurance storage infrastructure.

cubes to the data warehouse for new types of analysis took weeks while the IT team scrambled to procure, configure, and test servers and storage. “With NetApp storage and the Cisco UCS platform, we can provision resources in minutes,” says Gadbois. “Our private cloud gives us the flexibility to respond to business opportunities by quickly building new data warehouses, supporting customer portals, and developing data exchanges with insurers or insured.”

As an example of how the NetApp, Cisco, and VMware solution increases business agility, the IT team was recently asked to build a quality-assurance system with an application staging area. “Using NetApp storage and Cisco UCS, we were able to deploy the QA system in a matter of hours, helping our developers get to work faster,” says Gadbois.

Another way the NetApp appliance and Cisco UCS provide flexibility is through unified support for Fibre Channel, FCoE, and iSCSI. Unified support provides investment protection because the company can adapt its private cloud architecture as needs change.

### IT Efficiency for Cost Savings and Work-Life Balance

Not only does the NetApp and Cisco UCS combination increase business agility, it also helps the IT team work more efficiently. That’s especially important in a small company, according to O’Neill: “In

a small company, everyone has a lot of responsibility, and we’re conscious of avoiding burnout,” she says. “The new architecture helps because we don’t have to perform maintenance after normal work hours.” Instead, the team simply moves virtual machines from the blade server that requires maintenance to another available server, which takes just minutes. The virtual machines continue to access the NetApp storage from the new server, with no additional action from IT.

Standardizing on NetApp storage will also help the IT team manage a higher volume of data with existing headcount, because all NetApp products use a common interface, the Data ONTAP® operating system. “We’re using the same skills for the NetApp FAS3140A that we used for the FAS3020, and we’ll continue to leverage those skills if we deploy new NetApp products in the future,” says Gadbois. “In a small company, the fewer technologies we need to manage and the more commonality between them, the better.”

### A Nondisruptive Transition

Migrating from the old storage to the NetApp FAS3140A took only about 12 hours, after business hours. H.A. Storage performed a data-in-place upgrade, moving the existing storage tray into the new dual-controller system, which features a faster Fibre Channel interface to support VMware

ESX. To accomplish the cutover, the partner presented duplicate LUNs and then used software-based mirroring within Microsoft Windows® to create an exact copy. Lastly, H.A. Storage separated the software mirroring to begin using the copy on the NetApp system instead of the copy on the previous storage system. Users immediately noticed faster application performance.

In all, Gadbois regards the private cloud as a competitive advantage, a way for IT to enable industry-leading customer service and business intelligence. “Years ago, our company started out with a midrange system and shared storage, later migrating to individual servers with direct-attached storage,” she says. “The NetApp, Cisco, and VMware architecture combines the best of our previous approaches to managing storage to give us the most flexibility yet.”

“With NetApp storage and the Cisco UCS platform, we can provision resources in minutes. We now have the flexibility to respond to business opportunities by quickly building new data warehouses, supporting customer portals, and developing data exchanges with insurers or insured.”

**Nicole Gadbois**

Director of Network Operations, Princeton Insurance

#### SOLUTION COMPONENTS

##### FlexPod Components

NetApp FAS3140A storage systems

Cisco UCS with B200 M1 blade servers

Cisco UCS 6100 Series Fabric Interconnects

Cisco Nexus® 1000V switches

##### Virtualization Components

VMware vSphere 4

VMware ESX

##### NetApp Software

NetApp Data ONTAP 7G

NetApp MultiStore

NetApp FlexShare®

##### Third-Party Products

Microsoft Windows XP, 2003 and 2008

Microsoft Exchange 2003

Microsoft SQL Server 2000, 2005, 2008

Cisco Catalyst 6509 switch

Cisco MDS 9124

##### Protocols

FC SAN: FCP, iSCSI, CIFS, NFS, FCoE

##### Partner

H.A. Storage Systems, Inc.  
[www.hastorage.com](http://www.hastorage.com)

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