Compliance Technology Company Moves to Private Cloud

Walz Group built scalable, centrally managed cloud infrastructure with integrated Cisco, NetApp, and VMware solutions.

EXECUTIVE SUMMARY

Walz Group

- Critical Communications
- Temecula, California
- 120+ Employees

Challenge:

- Support rapid growth while maintaining high information-security standards
- Centralize IT infrastructure management
- Enhance business continuity and resilience

Solution:

- Cisco Unified Computing System with over 40 blade servers, configured as VMware ESX hosts for web interface, proprietary applications, and Microsoft SQL Server
- NetApp unified storage systems, accessed through Cisco MDS Multilayer Fabric Switch

Results:

- Moved production applications between different blade chassis without interrupting the customer experience
- Increased overall capacity and performance
- Reduced ongoing operational expense

Challenge

Established in 1985, the Walz Group is a leading provider of critical communications and compliance solutions. The company's customers have stringent requirements for compliance-oriented document generation, imaging, fulfillment, and archival. They include some of the largest financial institutions, government agencies, law firms, healthcare providers, insurance firms, and auto finance companies in the United States. Walz technology generates and manages millions of critical documents each month, enabling nine percent of all U.S. Postal Service Certified Mail™. The Walz Group's innovation and growth has led to recognition in the Inc. 500 List of fastest-growing private firms in the U.S. (2008 through 2010), the Deloitte North America Technology Fast 500 (2009 and 2010), and the Software 500 (2009 and 2010).

"Our technology infrastructure is the foundation of our success," says Bart Falzarano, Chief Information Security Officer for the Walz Group. The company delivers production services from two mirrored operational centers in Southern California and uses two collocation facilities for backup. As the business grew, the IT infrastructure became unwieldy. Different types of rack-optimized servers were needed for web interfaces, proprietary applications, and databases, leading to less than optimal utilization and high management overhead. Distributed storage was also difficult to scale, manage, and back up, affecting application performance.

"With our previous architecture, our IT team had to focus on infrastructure support instead of improving products and services," says Falzarano. "To sustain growth, we worked with our vendors to define a new architecture designed for security, scalability, centralized management, and high performance."

Solution

After comparing several compute platforms and storage platforms, Walz Group selected the Cisco Unified Computing System™ (UCS) and NetApp FAS series storage systems. The Cisco® UCS combines compute, networking, storage access, and VMware virtualization in a cohesive system. Both the Cisco UCS and NetApp storage met the company's requirements for security, scalability, manageability, and performance. "Another very important factor in our decision was the partnership between Cisco and NetApp, and their mutual commitment to support," says Falzarano. "Whenever a Cisco UCS firmware update becomes available, NetApp already knows whether we need to also upgrade our Data ONTAP 7G operating system. The free flow of information between Cisco and NetApp is advantageous, because it saves us the time to research compatibility issues for upgrades."

The Cisco UCS consists of five chassis populated with 40 Cisco UCS B200 M1 Blade Servers, each with 48 GB RAM. Servers are configured as VMware ESX hosts to support customer-facing web interfaces, proprietary document-management applications offered as software as a service (SaaS), and Microsoft SQL Server databases.

For disaster recovery planning, the Walz Group deployed three Cisco UCS chassis in the main collocation facility and two others in other locations. The IT team manages all blade servers in all locations from a single interface, the Cisco UCS Manager, and also centrally manages all NetApp storage, which currently houses 80 terabytes of data. NetApp SnapMirror and SnapVault software enable efficient replication and more frequent backups, decreasing storage needs by copying only the data blocks that changed since the last replication or backup.

The new server and storage architecture also simplifies cabling, which accelerates provisioning and troubleshooting. All servers in a given location connect to the data network and to NetApp storage through a pair of Cisco 6120 Fabric Interconnects. The fabric interconnects attach to a Cisco MDS Multilayer Fabric Switch over Fibre Channel over Ethernet (FCoE). The fabric switch, in turn, connects to the NetApp FAS series unified storage systems over four 4 GB Fibre Channel links.

The Walz Group has also created a separate partition on the Cisco UCS and on NetApp storage to offer Infrastructure as a Service (IaaS) capabilities to customers. The service appeals to customers because the platform has received multiple security certifications, including SAS 70 Type II and CyberTrust. What's more, customers can receive infrastructure the very next day instead of waiting several weeks to procure and configure their own servers. To keep each customer's information separate and secure throughout the system, Walz Group creates separate VLANs and VSANs.

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>
> **— Bart Falzarano, Chief Information Security Officer, Walz Group**

Foundation to Offer Mission-Critical Cloud Service

Walz Group's enterprise private cloud provides the scalability and high availability needed to deliver a high-performance, revenue-generating cloud service. With the previous IT architecture, the company had to schedule outage windows to upgrade servers and storage, which was a challenge because some customers use Walz Group services 24 hours a day. Now the IT team can use VMware vMotion to move virtual machines to another blade server on a local chassis, make the needed changes, and then move the virtual machines back. The Cisco Nexus®

1000V Switch, a software switch, makes sure that each virtual machine's network and security policies remain consistent as the virtual machine moves between servers.

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Simplified Management and Operations

Cisco UCS Manager provides a unified interface to manage all aspects of the infrastructure, replacing a half dozen or more tools required to manage the previous server platform. With Cisco UCS Manager, configuring a new server blade to support a web portal or application takes approximately 15 minutes, compared to four hours with the old architecture. "We can apply the appropriate service profile for a web server or application server with a few clicks," Falzarano says.

Management is further simplified because of the integration between Cisco UCS and NetApp storage. "The NetApp boot-from-SAN process is easy to interface with the Cisco UCS," Falzarano says. "It's easy to understand mappings for worldwide port names, for example, and how storage initiators are assigned."

Infrastructure Consolidation and Increased Utilization

Not only does the private cloud architecture simplify infrastructure management, it also lowered capital costs by reducing server, switch port, and cable count. The company has so far consolidated about 40 servers onto six VMware ESX hosts. "The high memory capacity of the Cisco UCS blade servers supports a much higher server consolidation ratio than our previous server platform," Falzarano says. "And the Cisco UCS 6120 Fabric Interconnects reduced the number of switch ports by a ratio of eight to one."

Excellent Customer Experience

Customers have commented favorably on faster response times when they visit the company's web portal to track the status of critical documents and notices, up to several million images at a time. The company anticipates even greater improvements after it finishes moving all databases to the Cisco UCS and NetApp architecture.

> "With Cisco, NetApp, and VMware, we've made our applications survivable, and untied them from a particular server. We can turn on additional compute and storage whenever we need it, increasing utilization and supporting continued business growth."
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> **— Bart Falzarano, Chief Information Security Officer, Walz Group**

Next Steps

The Walz Group is beginning the first phase of upgrading its disaster recovery strategy. The goal is that even if a data center is lost, the company will be able to continue operating with data up to 90 days old. As part of the plan, Walz will use VMware Site Recovery Manager and NetApp SnapMirror to move virtual machines over the WAN to Cisco UCS blade servers in the operational facilities.

Falzarano concludes, "The Cisco UCS hardware virtualization technology is much more advanced than what is available from any other vendor. By combining Cisco unified computing technology with VMware and NetApp, we've made our applications survivable, scalable, secure and centrally manageable. We can turn on compute and storage whenever we need it, increasing utilization and supporting continued business growth."

PRODUCT LIST

Data Center

- Cisco Unified Computing System
  - Cisco UCS B200 M1 Blade Servers
  - Cisco UCS 6120 Fabric Interconnects
- Cisco MDS Multilayer Fabric Switch
- NetApp FAS series
- NetApp SnapVault Software

Networking Systems

- Cisco Catalyst® 6500 Switches with Virtual Switching System (VSS) in Data Center
- Cisco Catalyst 3750 Switches for Inter-Campus Connectivity
- Cisco Nexus 1000V Virtual Network Switch

For More Information

To find out more about Cisco Unified Computing System, visit: http://www.cisco.com/go/ucs.

To find out more about Cisco Data Center Business Advantage solutions, visit: http://www.cisco.com/go/dc.

To find out more about NetApp storage solutions, visit: http://www.netapp.com.

To find out more about Walz, visit: http://www.walzgroup.com

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