

# RELIABLE SERVICE

Dell and Microsoft solutions help ServiceU deliver reliable system performance and create a virtualized environment that reduces power consumption by 50 percent



Successful event planning can involve an enormous amount of behind-the-scenes work and organization. ServiceU Corporation is a Memphis-based software-as-a-service (SaaS) provider that enables organizations to run successful events by helping manage a wide range of event-related logistics, including facilities management, box office management, reserved seat ticketing, registrations, payments or donations, food, transportation, and childcare.

## SOLUTIONS

- CONSOLIDATION
- VIRTUALIZATION



SERVICEU™

## CUSTOMER PROFILE

**COUNTRY:** United States

**INDUSTRY:** Technology

**FOUNDED:** 1997

**WEB ADDRESS:** [www.serviceu.com](http://www.serviceu.com)

## CHALLENGE

Deploy reliable hardware to support the company's Microsoft® SQL Server® 2008 environment and virtualize other applications to enhance business flexibility.

## SOLUTION

ServiceU deployed Dell™ PowerEdge™ servers and Dell/EMC storage area networks (SANs) to support the company's SQL Server environment and serve as the foundation for a distinct virtualized environment based on Microsoft Windows Server® 2008 Hyper-V™ technology.

## BENEFITS

### Get IT Faster

- Deployed new virtualization environment in just three weeks

### Run IT Better

- Reduced new application server deployment time from four days to four hours in the virtualized environment, freeing IT personnel to work on new projects
- Consolidated IT infrastructure by eliminating 43 percent of servers, while increasing the total number of operating system installations

### Grow IT Smarter

- Cut power consumption by approximately 50 percent by adopting energy-efficient servers
- Planning to launch new offerings with Dell that include customized server configurations and direct fulfillment





## HOW IT WORKS

### HARDWARE

- Dell™ PowerEdge™ R805 servers with AMD Opteron™ processors
- Dell/EMC CX series storage area networks (SANs)

### SOFTWARE

- Microsoft® SQL Server® 2008 Enterprise Edition
- Microsoft Windows Server® 2008 Hyper-V
- Microsoft Internet Information Services 7.0
- Microsoft Windows Server 2008
- Microsoft Visual Studio® 2008
- Microsoft Hyper-V™ Manager
- Dell OpenManage™

**“WITH THE POWER EFFICIENCIES OF THE AMD OPTERON PROCESSORS, THE DELL POWEREDGE R805 SERVERS USE APPROXIMATELY 50 PERCENT LESS POWER COMPARED WITH THE PREVIOUS EQUIPMENT.”**

David P. Smith, chief technology officer, ServiceU

To serve its customer base, ServiceU must have reliable computer hardware that can also provide a foundation for new, innovative offerings. “The biggest challenge we face is figuring out how to provide the best service to customers while building the company at the fastest possible pace,” says Tim Whitehorn, founder and chief executive officer of ServiceU.

As a SaaS provider, ServiceU requires hardware that can help deliver exceptional availability. “Our customers rely on our software to run their business,” says David P. Smith, chief technology officer at ServiceU. “If our infrastructure fails, we have no business.”

Though rock-solid reliability is a top priority, the IT group is also eager to adopt cutting-edge technologies to help move the business forward. For example, the IT group worked closely

with Microsoft during the development of Microsoft SQL Server 2008 and upgraded as soon as the software was available. “Microsoft SQL Server 2008 is at the heart of the services we offer,” says Smith. “Whether an individual is buying a ticket to an event from one of our customers, or the customer is managing other aspects of the event, it’s all done through a Web browser that is connected to SQL Server. We started using Microsoft SQL Server 2008 as soon as possible so we could take advantage of several new capabilities, including data compression, security enhancements, and performance improvements.”

To support that SQL environment, ServiceU needed servers and storage that could deliver outstanding performance and throughput. “During peak periods, we have approximately 15,000 to 20,000 end users connected to our system. They

perform 15,000 to 17,000 SQL transactions per second, and all of the transactions are mirrored to our remote disaster recovery facility,” says Smith. “We need hardware that can handle that load without compromising performance.”

### DELL SERVERS PROVIDE THE FOUNDATION FOR SQL SERVER 2008

The company’s IT group uses Dell PowerEdge R805 servers to help support the Microsoft SQL Server 2008 environment. With features such as hot-pluggable redundant power and cooling components, PowerEdge R805 servers can deliver the reliability and high uptime that the company requires. “We have used Dell hardware for more than 10 years, and we have been extremely happy with both product reliability and Dell support,” says Smith. “Our database servers are critical to our business, so we use Dell hardware exclusively for SQL Server.

# “IN THE PAST, IT TOOK UP TO FOUR DAYS TO CONFIGURE AND DEPLOY A NEW PHYSICAL SERVER INTO PRODUCTION. WITH THE NEW MICROSOFT HYPER-V ENVIRONMENT RUNNING ON DELL SERVERS, WE CAN CONFIGURE AND DEPLOY A VIRTUAL SERVER IN ABOUT FOUR HOURS.”

**David P. Smith**, chief technology officer, ServiceU

“When the company began, we had hardware from multiple vendors, but it was too time-consuming to maintain,” explains Whitehorn. “The more time our IT staff spends on maintenance, the less time they have for innovative, revenue-producing projects. We standardized on Dell hardware several years ago, and now we spend much less time performing maintenance. The Dell PowerEdge R805 servers provide the Dell reliability that we have come to count on.”

Dell management components help to simplify management. “Dell OpenManage provides a straightforward way to manage the servers while the Dell Remote Access Cards enable us to conduct that management remotely,” says Smith.

Equipped with either two Dual- or Quad-Core AMD Opteron™ processors and AMD non-uniform memory access (NUMA) technology to optimize memory usage, the PowerEdge R805 servers also help deliver the performance necessary to handle the high volumes of transactions. “We are always interested in adopting technologies that can improve the end user’s experience,” says Smith. “NUMA technology allows SQL Server to use memory effectively and to significantly improve application performance.”

## **SERVICEU BUILDS A VIRTUALIZED ENVIRONMENT ON DELL SERVERS**

With the Dell PowerEdge R805 server, the ServiceU IT group also saw an opportunity to easily create a virtualized environment for other applications. By virtualizing servers, the IT group could simplify server management and reduce ongoing costs. “The Dell PowerEdge R805 servers were clearly designed for virtualization,” says Smith. “The processing performance, memory capacity, and high-throughput network cards

work together to provide the performance required for hosting multiple virtual machines on a single physical server. And with an integrated hypervisor, the PowerEdge R805 can simplify deployment of the virtualized environment.”

After evaluating other virtualization solutions, the IT group decided to use the Microsoft Hyper-V solution that is integrated into Microsoft Windows Server 2008. So far, ServiceU has virtualized Web servers, e-mail servers, domain controllers, DNS servers, and development/production builds. “Hyper-V is an exceptional technology that delivers the performance, reliability, and throughput we need to meet our clients’ expectations,” says Smith. “At the same time, the Microsoft Hyper-V Manager is easy to use and enterprise-capable. By choosing Hyper-V, we also can work with a single software vendor that we know and trust. If there’s a problem, we can resolve it quickly.”

The strong relationship between Dell and Microsoft made the decision to adopt Dell servers easy. “The relationship between Dell and Microsoft simplifies hardware purchases. We have confidence that Hyper-V will work as it should on the Dell platform,” says Whitehorn. “The Dell-Microsoft relationship also helps simplify support. There’s none of the finger-pointing that can happen between vendors. The two companies truly collaborate, and that simplifies our jobs.”

## **DELL/EMC SANS HELP DELIVER RELIABLE DISASTER RECOVERY**

The ServiceU IT group selected Dell/EMC CX series SANs to support the virtualized environment. The company uses SANs both at its primary data center and its disaster recovery data center. “We

evaluated products from other storage vendors, but we found that the Dell/EMC solution could offer us great reliability and performance,” says Smith. “Our production servers use the Dell/EMC CX series SANs exclusively.”

The Dell/EMC SANs help the company to comply with strict disaster recovery standards set by the payment card industry (PCI). “To maintain our compliance with PCI standards, we are required to test our disaster recovery facility yearly,” says Smith. “When we conduct that test with the Dell/EMC SANs, we notice no real difference in performance. With Dell hardware, we know that the business can continue to operate even in the event of a disaster.”

## **NEW DELL SERVERS CONSUME 50 PERCENT LESS POWER THAN OTHER EQUIPMENT**

The move to AMD-based Dell PowerEdge servers will help dramatically reduce power consumption. “We have seen tremendous power savings just by changing out some of our servers,” says Smith. “With the power efficiencies of the AMD Opteron processors, the Dell PowerEdge R805 servers use approximately 50 percent less power compared with the previous equipment.”

Virtualization should also help keep power and cooling costs down. “With a virtualized infrastructure, we can place several applications on the same physical server and eliminate unnecessary overhead,” says Whitehorn. “We have already eliminated 43 percent of our servers and we have avoided buying several new ones. We anticipate saving tens of thousands of dollars every year in hardware acquisition, maintenance, real estate, power, and cooling costs. We can invest the money we save in new service offerings.”

## **SERVICEU ACCELERATES APPLICATION DEPLOYMENT TIME FROM FOUR DAYS TO FOUR HOURS**

Creating a virtualized environment is also helping to improve the flexibility of the business. The IT group can deploy new virtual servers in just a fraction of the time that it takes to buy, configure, and install new physical servers. "In the past, it took up to four days to configure and deploy a new physical server into production," says Smith. "With the new Microsoft Hyper-V environment running on Dell servers, we can configure and deploy a virtual server in about four hours. If we upgrade hardware, we can take a physical server offline and migrate its virtual servers to a new physical server in about 15 minutes."

## **THE NEW INFRASTRUCTURE HELPS SIMPLIFY IT MANAGEMENT**

Virtualization has helped the IT staff greatly reduce the time to maintain physical servers. "If our IT staff spends all of their time doing maintenance or upgrades, we can miss out on new opportunities," says Whitehorn. "With a virtualized environment, our staff does not need to spend nearly as much time upgrading servers since the core functionality is contained within portable virtual server files. They can spend more time on deploying new services."

The latest edition of SQL Server is also helping to free up staff for new projects. "The tools that SQL Server 2008 provides for optimizing databases and mirroring data are excellent," says Whitehorn. "All of these features help our IT staff reduce the time spent managing systems."

## **SERVICEU AND DELL COLLABORATE ON A NEW OFFERING**

Based on the positive experiences ServiceU has had using Dell hardware internally, the company's management has decided to work with Dell on a new service offering that will provide customized Dell hardware to ServiceU customers. "EventU Green integrates a PC-based version of our hosted scheduling system with our clients' heating and air conditioning systems to automate those systems and reduce costs," says Whitehorn. "This will be the first time that we will run software locally at the client location. Dell will help us create custom hardware configurations and ship the hardware directly to clients' sites, saving us the trouble of managing that fulfillment process. This new service is just another example of how Dell manages the details so that we can help our customers produce reliable, smooth-running events."

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