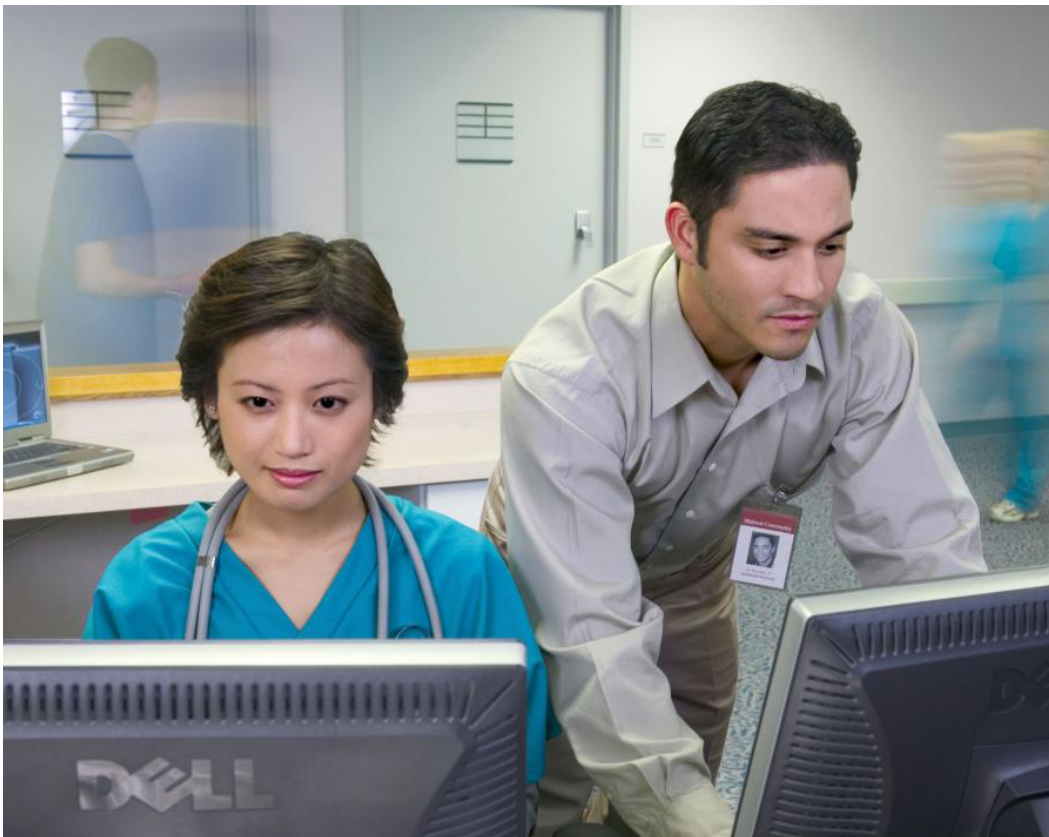


# A HEALTHY APPROACH TO SERVER SPRAWL

Dell helps BlueCross BlueShield of Western New York harness blades to shrink its data center footprint by 75 percent and improve efficiency by more than 50 percent



Ideally, the business side of health care should be a secondary concern. Health care insurance provider BlueCross BlueShield of Western New York (BCBS) works hard to help both doctors and patients focus on wellness instead of where to send the bill. BCBS supports more than 800,000 members with simple, straightforward health coverage, easy-to-understand plans, and hassle-free access to information. Through innovative products, services, and technologies, BCBS aims to improve the availability, quality, and cost of health care.

## SOLUTIONS

- CONSOLIDATION
- VIRTUALIZATION



## CUSTOMER PROFILE

**COUNTRY:** United States

**INDUSTRY:** Healthcare

**FOUNDED:** 1936

**NUMBER OF EMPLOYEES:** 2,100

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

## CHALLENGE

Health care insurer BlueCross BlueShield of Western New York sought to consolidate its disparate claims processing server environment to reduce administrative complexity and speed the deployment of new applications and services.

## SOLUTION

Dell helped BlueCross BlueShield of Western New York migrate more than 100 physical servers to Dell™ PowerEdge™ blades without disrupting the business or end users.

## BENEFITS

### Get IT Faster

- Dell Advanced Systems Group (ASG) Tiger Team helped install the blade environment, saving two days in installation time

### Run IT Better

- Dell PowerEdge shared resources and remote management capabilities improve IT efficiency by an estimated 60 percent
- Standardized Dell PowerEdge blade environment cuts imaging time by 50 percent and reduces time to provision new servers from as much as a day-and-a-half to only hours

### Grow IT Smarter

- Dell PowerEdge enclosure and blades save an estimated 20 percent in hardware costs over 1U and 2U server architecture
  - Dell PowerEdge blade server consolidates racks by 75 percent, helping cut power costs by US\$6,000 per year initially and as much as US\$40,000 per year

The Dell logo, consisting of the word "DELL" in a stylized font with a diagonal slash through the "E", enclosed in a circular border.

# “WITH THE DELL POWEREDGE M1000E BLADE ENCLOSURES AND THE POWEREDGE M600 BLADE SERVERS, WE SEE A 60 PERCENT INCREASE IN EFFICIENCY, WHICH LOWERS THE COST OF DOING BUSINESS.”

**Charles Kibby**, technical purchasing coordinator, BlueCross BlueShield of Western New York

BCBS relies on a deep IT infrastructure for everything from claims processing to provider payments and internal operations. For example, as Western upstate New York's leading provider, hundreds of thousands of claims go through BCBS's systems on a monthly basis. Consistent uptime is critical to keeping up with the company's large workload. "We need to run 7/24/365," says Tim Frank, special projects/IT infrastructure for BCBS.

However, keeping the BCBS environment running effectively and efficiently had become increasingly expensive and time-consuming. "The biggest challenge we face is our administrative costs as we manage our growing services," explains Charles Kibby, technical purchasing coordinator for BCBS. "We're always in need of growing our IT environment, but we're constantly looking for ways to do it better, faster, and more cost-effectively."

With hundreds of servers running an array of applications on a variety of hardware and operating systems, the BCBS IT team realized that the company had reached an inflection point. Lengthy processes to set up new servers hindered the ability of the BCBS team to quickly address requests from business units across the company. The complexity of the server environment also meant that the IT team was spending increasing amounts of time on basic maintenance and administration tasks. Finally, BCBS found hardware costs rising as it replaced its 1U and 2U servers every three years in order to ensure processing performance scaled alongside workload demands.

Frank and his team began by consolidating BCBS's IT environment through server virtualization, reducing the company's server footprint to just over 100 physical servers running individual applications plus 20 virtual hosts running multiple virtual servers and applications. Frank and Kibby knew that more had to be done to lower costs and ease the management burden on the IT staff. "We virtualized every server application that we could, but several of our business applications still require dedicated servers," says

Frank. "We had reached 230 physical servers and 270 virtual servers to bring our total to over 500, and we expected the business to continue growing. We needed a platform solution that would consolidate, address manageability, and reduce the time to provision both virtual hosts and dedicated servers."

## BCBS LOOKS TO BLADES TO CONSOLIDATE TRADITIONAL SERVER ARCHITECTURE

Frank and his team calculated that moving from rack servers to blade servers would simultaneously address several challenges. The blade server infrastructure would streamline administration and maintenance while preserving the ability to provide dedicated servers when necessary. BCBS also planned to reduce energy costs and promote green technologies by using blade server technology.

When the team compared solutions from several blade vendors, Dell PowerEdge blade solutions stood out as the clear winner. "The Dell PowerEdge blades and enclosures gave us the best combination of price, performance, and configuration capacity," explains Kibby. With the Dell PowerEdge M1000e blade enclosure, the BCBS team could pack 16 blades into a chassis compared to an 8-blades-per-chassis limit from other vendors. Also, the performance of the PowerEdge blades would enable the team to run its virtual server farm more efficiently. Each PowerEdge blade could handle as many as 20 virtual servers.

The company's prior relationship with Dell also made the decision easy. "We've found that working with Dell allows us to get localized attention when we need it, from the initial planning and configuration all the way through the installation process," says Frank.

## DELL POWEREDGE OFFERS PERFORMANCE AND SCALABILITY

The BCBS IT team migrated its existing Dell server environment to 64 Dell PowerEdge M600 blades housed in four Dell PowerEdge M1000e enclosures. The M600 blades use the quad-core Intel® Xeon®

## HOW IT WORKS

### HARDWARE

- Dell™ PowerEdge™ M1000E enclosures
- Dell PowerEdge M600 blades with the quad-core Intel® Xeon® processor E5430 series at 2.66 GHz, 2x6 MB cache, and 1,333 MHz frontside bus
- Brocade Fibre Channel gateway
- Cisco switches
- Liebert cooling rack

### SOFTWARE

- IBM® Lotus Notes®
- IBM WebSphere®
- Microsoft® SQL Server®
- Red Hat® Enterprise Linux®
- VMware® Virtual Data Infrastructure

### SERVICES

- Dell Advanced Systems Group (ASG) Tiger Team
- Dell Global Infrastructure Consulting Services

# “DELL HAS HELPED US INCREASE OUR EFFICIENCIES ACROSS THE BOARD, WHICH ACCELERATES CLAIMS PROCESSING AS WELL AS PAYMENT TO THE HEALTH PROVIDERS WE WORK WITH. BETTER YET, THE COST SAVINGS CAN BE PASSED ON TO OUR END CUSTOMERS.”

**Tim Frank**, special projects/IT infrastructure, BlueCross BlueShield of Western New York

processor E5430 series at 2.66 GHz, 2x6 MB cache and 1,333 MHz frontside bus, and Gigabit Ethernet network interface cards, giving BCBS the fast throughput necessary to meet its claims-processing workload demands. “Moving from single- and dual-core processors to M600 blades with quad-core Intel Xeon processors and as much as 64 GB of memory gave us confidence that our hardware investment would continue to perform,” says Frank.

BCBS allocated three enclosures to application servers, additional virtual hosts, and a lab manager environment designed to increase efficiencies in the software development life cycle. The remaining enclosure was dedicated to the next phase in the company’s virtualization strategy: VMware® Virtual Desktop Infrastructure (VDI) software. “VDI running on Dell PowerEdge blades offers us substantial cost savings by replacing standard desktops with remote terminals, with 45 virtual desktops hosted on a single blade,” explains Brian Chapman, manager of network systems for BCBS. “All the processing, storage, and most memory resides on a blade instead of the local desktop, extending the average life of the client system from three years to five years or longer. Plus, absolutely no data can be stored on the local terminals, so we’re better securing patient data for our customers.”

The company’s IT team has worked side by side with Dell engineers throughout the entire process. With two months of planning and instruction as well as help with the installation and initial hardware training, Dell Global Infrastructure Consulting Services enabled BCBS staff to integrate the blade project into their normal workload. “Business doesn’t stop just because we’re upgrading our environment,” says Chapman. “The Dell Advanced Systems Group (ASG) Tiger Team helped us migrate without disrupting our

business or end users. Plus, Dell shared technical knowledge, expertise, and best practices during the project, and my staff are now better technicians as a result.”

## **DELL POWEREDGE BLADE SERVERS HELP REDUCE HARDWARE COSTS BY 20 PERCENT**

Moving to the Dell PowerEdge M1000e enclosure and PowerEdge M600 blades led to immediate hardware cost savings for BCBS due to a standardized platform, increased capacity, and reduced networking and Fibre Channel port costs. “With the performance and scalability of the Dell chassis and blades, we can replace our servers every five years instead of every three years, which we expect to cut our hardware expenditures by 20 percent,” says Kibby. “With the ever-changing economy, we’re looking at cost avoidance and trying to avoid any unnecessary new costs, so those savings mean we can expand services to end users with a smaller impact on the bottom line.”

## **EASE OF MANAGEMENT IMPROVES IT EFFICIENCY BY 60 PERCENT**

Kibby also credits the Dell PowerEdge enclosure’s shared resources and remote management capabilities with easing the administrative complexity of BCBS’s environment to help staff recapture time previously spent on administration. The IT team realizes new levels of efficiency by managing and monitoring all 64 blades from a single interface, building servers faster, and eliminating involvement from other departments as it connects new servers. “With the Dell PowerEdge M1000e blade enclosures and the PowerEdge M600 blade servers, we see a 60 percent increase in efficiency, which lowers the cost of doing business,” he explains. “Our IT staff doesn’t have to constantly set up or move around cables inside our data center,

worry about power management for individual boxes, or other day-to-day functions that you need with a standard 2U or 4U architecture. Instead, they can remotely conduct much of the day-to-day maintenance without having to leave their desks.”

## **STREAMLINED CONFIGURATION SPEEDS DEPLOYMENT FROM THREE DAYS TO FOUR HOURS**

By replacing its diverse 1U and 2U server environment with a standardized blade environment, BCBS has drastically accelerated the deployment of new physical servers. “All the blades are nearly identical, so imaging a new server takes about half the time,” says Chapman.

By shortening the time to production, IT is helping end users quickly realize the benefits of new applications and services. “Previously, providing a server took a day and a half just to get ready for an application to be loaded—unboxing, racking, cabling, loading the operating system, getting the patches ready, and more,” explains Frank. “With the PowerEdge M600 blades, it will be as little as four hours versus as much as three days to prepare a new server.”

## **DELL POWEREDGE BLADES HELP SHRINK DATA CENTER FOOTPRINT BY 75 PERCENT**

By deploying the Dell PowerEdge blade servers and enclosure, the BCBS IT team took a major step toward realizing a greener data center. Because the Dell PowerEdge M1000e enclosures take up less space and emit less heat, the company is spending less to power its new equipment. “Our data center footprint was reduced from four racks of 1U and 2U servers to the equivalent of one fully configured rack,” explains Kibby. “Using the Dell PowerEdge M1000E enclosure and the PowerEdge M600 blades,

# “DELL SHARED TECHNICAL KNOWLEDGE, EXPERTISE, AND BEST PRACTICES DURING THE PROJECT, AND MY STAFF ARE NOW BETTER TECHNICIANS AS A RESULT.”

**Brian Chapman**, manager of network systems, BlueCross BlueShield of Western New York

we expect to see an energy savings of US\$6,000 per year initially and as much as US\$40,000 per year as expiring physical servers are converted to blades. We'll also reduce our space requirements, which will tie in with our LEED Silver Certification.”

## DELL POWEREDGE FLEXIBILITY SUPPORTS DEVELOPMENT AGILITY

The Dell PowerEdge blades offer increased processing power and flexible support for server virtualization, allowing the BCBS IT team to power a self-contained development and test environment. As business demands change, the IT team can build out new applications and services quickly and easily to deliver the efficiencies that keep claims moving through the system. “Dell has helped us give a new level of control to our development community,” says Chapman. “They can create, delete, and reconfigure servers without wasting hours provisioning server after server. The PowerEdge blades give them the ability to spend their time more efficiently.”

## DELL BENEFITS EXTEND TO DOCTORS AND PATIENTS

Ultimately, the BCBS IT team feels that the benefits of migrating to Dell PowerEdge blade servers reach far beyond the data center. “Dell has helped us increase our efficiencies across the board, which accelerates claims processing as well as payment to the health providers we work with,” says Frank. “Better yet, the cost savings can be passed on to our end customers.” Kibby agrees: “The importance of our Dell enclosure and blades is that they allow us to provide seamless claims processing when supporting patients around the country. That means our customers can be confident we're supporting them as they focus on their health and that of their families.”

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