IT outsourcer establishes a solid foundation with HP blade servers

CenterBeam, Inc.

"HP ProLiant BL servers meet our exacting standards for performance, reliability, scalability, and affordability. We plan to purchase more of these resilient computers in the future."

– Dr. Glenn Ricart, chief technology officer, CenterBeam, Inc.

Corporate computer networks are becoming more and more complex, making it difficult to keep user workstations running smoothly. Some companies employ on-site support personnel to upgrade software and troubleshoot problems. Other companies find it more effective to outsource these tasks to companies like CenterBeam, a Santa Clara, Calif.-based IT consulting firm.

CenterBeam uses custom-developed systems and business processes to help PC users fend off problems before they occur. By leveraging proven technology expertise, solid partnerships with industry leaders – including HP – and strong financial support, CenterBeam's clients gain access to a depth of knowledge and level of service that's difficult to develop in house.

"Our charter is to deliver world-class IT service at a reasonable price," explains CenterBeam Chief Technology Officer Dr. Glenn Ricart. "We aid our clients in lowering the cost and improving the delivery of end-user IT services by remotely managing all aspects of desktop and server computing, network and system administration, and help-desk operations. HP helps us fulfill our charter and meet client goals."

HP delivers innovative, reliable, Adaptive Enterprise infrastructure

CenterBeam is very familiar with HP hardware and software technology, having built its server infrastructure on HP solutions. "Most of our 200 servers are from HP, including domain controllers and Web servers, database, and Microsoft Exchange servers," Ricart says. "We get exceptional results with our HP ProLiant servers, which is one of the reasons we continue to look to HP as the leader in innovative server solutions."

For example, when CenterBeam needed a cost-effective server platform to work as domain controllers for its small and mid-size clients, the search led to ProLiant blade technology. "HP ProLiant server blades are an ideal solution for us," says Ricart. "We use them as secondary domain controllers, so if anything happens to the main domain controller at a customer site, all of its authentication procedures fail over to our data center. We

need separate servers for each customer, which necessitates low-cost servers with a high packing density."

CenterBeam initially deployed 14 ProLiant BL10e server blades as secondary domain controllers. Since then, CenterBeam has implemented the equipment for other important uses, including backing up files remotely from application servers.

> We needed a centralized and highly scalable storage platform to manage the load. HP had what we required."
> — Bill Boddy, team leader and UNIX system administrator

"HP ProLiant BL servers meet our exacting standards for performance, reliability, and scalability," says Ricart. "They surpassed our expectations, and we plan to purchase more of them in the future. The blades are comparatively inexpensive to purchase and maintain, which allows us to extend enterprise-class domain services to small and mid-size firms."

Extending the technology blueprint with ProLiant blade architecture

CenterBeam serves dozens of clients throughout North America, most of which have stringent requirements for system availability. To meet their rigorous standards, the company must deliver top-notch service levels at the lowest possible cost. ProLiant BL10e blades fit the bill perfectly. Up to 20 individual ProLiant BL10e blades share a common enclosure, which provides network, power, and external storage connections; essential system hardware – like the CPU, memory, and disk drives – resides on the individual blades.

"HP ProLiant BL10e blades are smaller and more efficient than traditional servers," Ricart says. "Their unique design and integrated management capability reduces cost and complexity in our data centers, while preserving precious floor space."

According to CenterBeam Systems Engineer Steve Klise, HP ProLiant servers also provide a cost-effective way to remove single points of failure from their customers' networks. "If something goes wrong with a server at a customer site, their operations will fail over to a redundant system in one of our data centers," he says. "The entire process is transparent to users."

Ricart recalls an incident when one of CenterBeam's prominent financial services clients experienced flooding at its headquarters. Employees arrived at work to find their offices filled with water. All power was out and the

on-site servers were cold. "Obviously, the financial markets were not going to wait for them to get back online," he says. "Because they had secondary HP ProLiant servers in our data center, employees were able to log into our network remotely and resume work without missing a beat."

The lights went out, but the IT services beamed brightly

In August 2003, when the largest power outage in U.S. history crippled much of southeastern Canada and the northeastern United States, CenterBeam's clients enjoyed uninterrupted service for Microsoft Exchange and other critical IT processes. "Thanks to the unwavering reliability of our ProLiant BL10e blades, our customers'e-mail services failed over to our servers here in San Jose," explains Klise. "Long before their local servers were back online, CenterBeam customers could send and receive e-mail messages and access basic IT services."

Ricart believes the unexpected incident is another proof point supporting CenterBeam's value and its wisdom in using HP technology. "The lights may have gone out for our East Coast customers, but their IT services continued uninterrupted," Ricart says.

Remodeling the data center with automated-management tools

A critical aspect of providing consistent, problem-free service for PC users involves managing the supporting servers. HP ProLiant blades integrate powerful management tools that make deploying and managing servers as effortless as pointing and clicking. These tools enable CenterBeam to anticipate and respond to opportunities and demands.

For example, CenterBeam's administrators use HP OpenView and Insight Manager software to automate routine administrative tasks and control servers from

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Challenge

- Cost-effective, high-density servers to act as domain controllers

- System for managing systems and backing up files remotely

- Exacting standards for performance, reliability, and scalability

Solution

Hardware

- 14 HP ProLiant BL10e server blades

- 100+ HP ProLiant servers, including models DL360, DL380, ML350, and ML370

Software:

- Insight Manager

- HP ProLiant BL e-Class Integrated Administrator

- HP Remote Insight Lights-Out Edition, versions I and II

- HP ProLiant Essentials Rapid Deployment Pack

- SmartStart provisioning software

- Microsoft Windows 2000 Server and Advanced Server

HP Services:

- Day One Services contract

Results

- The HP ProLiant BL e-Class blade server design allows CenterBeam to extend enterprise-class domain services to small and mid-size firms.

- Efficient ProLiant BL e-Class architecture delivers power-efficient servers with ultra-dense packaging, which maximizes space and resources in the data center.

- Advanced and remote HP system-management utilities enable rapid responses to changing business situations; high-level, low-cost customer service; and the management of ProLiant servers from any location.

- HP ProLiant Essentials Rapid Deployment Pack multiserver provisioning tools automate set-up procedures, allowing administrators to deploy and configure new servers in 15 minutes or less.

remote Web consoles. These advanced system-management utilities make it easy to add, monitor, or reassign servers from any location. "Fast, reliable processors are important, but it is the system-management software that distinguishes HP ProLiant servers," says Ricart. "HP OpenView, Insight Manager, and ProLiant Essentials software are critical tools in our management strategy. Combined with the flexibility of ProLiant server blades, we scale capacity without scaling complexity."

A primary advantage of ProLiant BL server blades is the ease and time saved when adding, replacing, or re-provisioning individual servers. "We like the way we can easily scale HP ProLiant blades to different computing workloads by adding or taking them out of the enclosures," says Klise. "We can deploy and configure HP ProLiant blades in 15 minutes or less to meet our customer's demands."

Once online, administrators use HP manageability tools such as the ProLiant BL e-Class Integrated Administrator to control the blades remotely, displaying the status of each blade based on its location in the rack, enclosure, and bay. Dragging and dropping a graphical icon on the screen automatically installs pre-defined configurations on any blade.

"Ultimately, we would like to automate the set up and configuration of each new system," says Ricart. "With other vendors, this is difficult to achieve due to variations in the manufacturing process. HP ships consistent machines. When you slide in a ProLiant server blade, it is exactly the same as the previous models. This level of consistency and quality contributes to the success of our automated building processes."

ProLiant blades are simple to service, even by non-IT personnel at remote locations. For instance, a CenterBeam administrator simply activates a blue "Unit ID" light on the blade, indicating that the unit needs to be replaced. A person at the remote location finds the blue Unit ID light, plugs in the new server blade, and the intelligent blade architecture automatically installs and configures the software. This reduces downtime and minimizes the need to send support personnel to the site.

Raising the roof on customer satisfaction

CenterBeam depends on other HP equipment to manage its client systems remotely, such as HP Remote Insight Lights-Out Edition (RILOE) boards. "HP RILOE boards are lifesavers," says Klise. "You might say they make our business model possible because we can easily monitor equipment from any location. In short, we can provide a higher level of customer service at lower costs, since we can minimize on-site activity. That's a win-win situation for everybody."

Ricart concurs: "Our goal is for the customer to experience zero downtime. HP ProLiant server blades provide us with a cost-effective way to approach that goal. As an outsourcer, our ability to provide better service for a lower cost is what attracts customers and keeps them satisfied. HP hardware, software, and services help us achieve success."
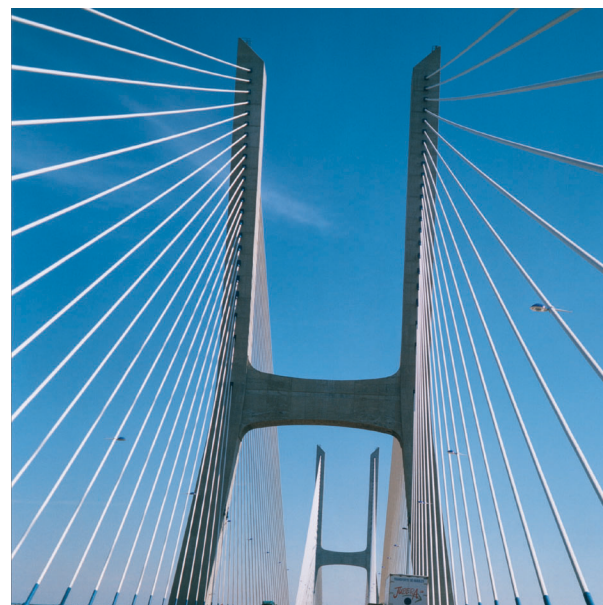
Company Profile:
CenterBeam, Inc., a Santa Clara, Calif.-based IT consulting firm, helps organizations remotely manage and support their PCs, servers, networks, systems, and help-desk operations. The company (www.centerbeam.com) helps its clients lower the cost and improve the delivery of end-user IT services. With CenterBeam, they gain access to a depth of knowledge and level of service that's difficult to develop in house.

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