HP Virtual Connect helps Premera grow faster and cut costs

With consolidation and better control, the HP BladeSystem enables a leading health plan to improve services, reduce costs, and avoid a build-out.

"With HP Virtual Connect and Virtual Connect Enterprise Manager, adding a server is a simple matter of plugging a blade in, putting an image on it, and then assigning it to an already pre built network. It takes minutes."
— Ron Fisher, Systems Engineer, Premera Blue Cross

PREMERA BLUE CROSS

HP customer case study: HP Virtual Connect, Adaptive Infrastructure

Industry: healthcare

Objective

Accommodate growth despite data center space and connectivity limits

Approach

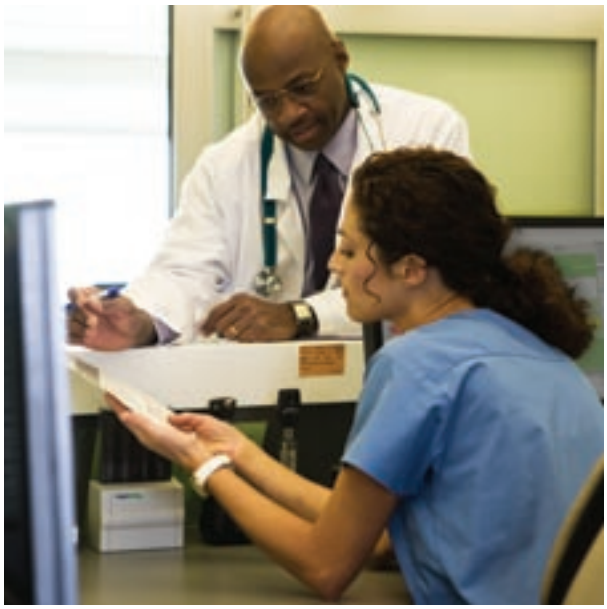
Standardize on the HP BladeSystem, HP Insight Control Environment, and HP Virtual Connect

Business benefits

- Avoided approximately $250,000 in cost to build a new rack row for rack-mounted server infrastructure
- New services/servers deployed in minutes instead of hours
- Up to five- and six-figure storage savings possible with internal storage blades
- Up to 10% reduction in unplanned downtime from simplified connections

IT improvements

- 75% more data space recovered through use of 200 server blades vs. rack-mounted servers
- 30-minute management tasks reduced to 30 seconds
- Three-hour server deployment tasks reduced to 30 minutes



Boosting service while improving efficiency

The cost of U.S. healthcare is growing faster than GDP, putting enormous pressures on healthcare IT departments to add new services faster, enhance reliability, and minimize costs.

These three drivers guide Ron Fisher and his IT colleagues as they take care of 1,700 servers at Premera Blue Cross (Premera). These servers in turn provide services to 1.7 million Blue Cross plan members in the states of Washington and Alaska.

About Premera Blue Cross

Premera Blue Cross serves more than 1.7 million people, from individuals to Fortune 100 companies, with health, life, vision, dental, long-term care coverage, and other related services. The company has 3,200 employees, and serves a network of over 38,000 physicians and other healthcare providers and 191 hospitals. Consolidated 2007 revenues were US $3.3 billion.

To learn more, visit:
www.premera.com

Premera is expanding its Web-based services for consumers and providers to enhance the quality of care and keep costs in check. Yet data center space to stage these and other services—in both the company's main data center near Seattle and its disaster recovery (DR) data center near Spokane—is extremely tight.

"We were at 90 percent of capacity," says Fisher, systems engineer at Premera Blue Cross. "That's why we switched to the HP BladeSystem. We can fit a lot of horsepower in a small location."

Now the company has 200 HP ProLiant server blades (and the number is quickly growing) in 18 HP BladeSystem c7000 Enclosures spread among both centers. These 200 servers fit in 75 percent less space than 200 comparable rack-mounted servers would.[1] "It costs us about $250,000 to provision a server rack row, so avoiding the need to build out is important," Fisher says.

"Our SAN storage costs $35 to $70 a gigabyte, compared to just a few dollars a gigabyte on an HP storage blade."
— Ron Fisher, Systems Engineer, Premera Blue Cross

Simplifying connections to save time and money
There was a major challenge to solve before the HP BladeSystem could be brought in: how would it be connected?

"Our network team already had too many edge switches to manage, and they didn't want to add more," Fisher explains. "An alternative to connecting the servers with edge switches would be pass-thru connections—but they add too many cables and too much complexity. What enabled us to get the approval to add a technology such as the HP BladeSystem is HP Virtual Connect."

HP Virtual Connect is a technology in the HP BladeSystem c7000 Enclosure that simplifies how customers connect their servers to LANs and SANs. Without it, adding, moving, or swapping out a server requires a LAN administrator and a SAN administrator to reprogram switches, as well as a storage administrator to modify the storage LUN presentation.

If HP Virtual Connect is present, LAN and SAN information is tied to the server bay instead of the server. That allows the server team to add, remove, or change servers with minimal involvement from the LAN or SAN teams.

Solution at a glance

Hardware
- HP ProLiant BL685c G5 server blades
- HP ProLiant BL465c G5 server blades
- HP StorageWorks SB40c and SB600c storage blades
- HP BladeSystem c7000 Enclosures
- HP Virtual Connect Ethernet and Fibre Channel modules

Software
- HP Insight Control Environment
- VMware Infrastructure 3

Operating systems
- Microsoft® Windows® Server 2003
- VMware ESX Server 3.5

Network protocol
- Gigabit Ethernet

HP Services
- HP Proactive Blade Services

1. Rack size of 18 enclosures at 10 EIA units per enclosure = 180 units. 200 rack-mounted HP DL585 servers at 4 units each = 800 units. 800 units - 180 units = 620 units saved, or 75 percent of 800 units.

"It takes me 30 seconds to connect and manage every aspect of an HP server blade through HP Insight Control Environment, vs. the 30 minutes it might take me to walk to the data center or drive in from home to power cycle a server."
—Ron Fisher, Systems Engineer, Premera Blue Cross

The Premera network team was skeptical of this notion as a proof of concept began. "They were actively involved in making sure the claims being made about Virtual Connect were true," Fisher says. "They wanted to make sure that Virtual Connect doesn't participate in spanning tree, which can be a big deal when you bring your switches online, triggering looping issues and network outages."

HP Virtual Connect passed the test and is now the standard at Premera for the HP BladeSystem. HP Virtual Connect Ethernet and Fibre Channel modules are in use. "Everyone is fully on board," Fisher says. "We demonstrated that the Virtual Connect modules are not switches, they're sort of a port aggregator on the network. The network and storage teams don't have to manage them like they would with a traditional Ethernet or Fibre Channel switch in an enclosure. And HP Virtual Connect will pass through all the MAC addresses and worldwide names directly to their fabric or network."

There are several important benefits:

Deploying four times faster with HP Virtual Connect
Deploying eight rack-mounted servers requires 16 ports to be set up, taking a half-hour each, Fisher observes. But deploying eight HP server blades in an enclosure with HP Virtual Connect requires only four ports to be set up once, when the enclosure is initially set up. "That reduces eight hours to two—deployment is four times faster," he says.

Better yet, "Because there's very little involvement of network and storage teams, it's simpler for everyone," reports Fisher. "You don't have to throw a complex request over the wall to other teams and wait for them for each server."

And once the enclosure is set up, there is new flexibility. "With HP Virtual Connect, adding a server is a simple matter of plugging a blade in, putting an image on it, and then assigning it to an already pre-built network. It takes minutes," reports Fisher.

Up to five- and six-figure storage savings
The server team has new options. "We can set up internal, private networks for whatever purpose we need that don't go outside of the Virtual Connect module," Fisher adds. "We can use the module to connect to a storage blade over iSCSI. And that's traffic that just stays within the Virtual Connect module."

There are strong business benefits. "We're using local storage in the enclosure—HP StorageWorks SB40c storage blades—as an alternative to using expensive SAN storage," says Fisher. "There's no impact to network or storage systems from a traffic standpoint. And our SAN storage costs $35 to $70 a gigabyte, compared to just a few dollars a gigabyte on an HP storage blade." That can quickly add up to five- and six-figure storage savings.

Dropping unplanned downtime by 10 percent
Another benefit of HP Virtual Connect is increased uptime. "The less we need to modify and configure when deploying a server, the fewer opportunities there are for errors," says Fisher. "Simplified, consistent connections can reduce unplanned downtime by perhaps 10 percent."

Cutting 30-minute management tasks to 30 seconds
Another key benefit of the HP BladeSystem is improved remote management. "Because of the HP Insight Control Environment, we're able to have all of our servers easily accessible remotely, so we have most of our IT staff here in our main data center and need only a small staff in our DR data center," says Fisher.

Management is streamlined. "With the HP ProLiant Essentials Rapid Deployment Pack, a part of the HP Insight Control Environment, we can accomplish in 30 minutes what would otherwise take us three hours in deploying a server," Fisher notes. "From start to finish, our standard in server deployment is eight hours—that extra time has to do with processes we have that are beyond the Rapid Deployment Pack component."

Time spent in the data center is also reduced. "It takes me 30 seconds to connect and manage every aspect of an HP server blade through HP Insight Control Environment, vs. the 30 minutes it might take me to walk to the data center and hook something directly to that server. That's helping us achieve an important objective: minimize or eliminate most employee access to the data center."

Better service levels for less money
The most important benefit of the HP BladeSystem and HP Virtual Connect at Premera is that they help the IT team increase services while minimizing space and costs. "We've evaluated blade offerings from other vendors," Fisher sums up. "But for us, HP comes through with very good hardware and software. Especially with HP Virtual Connect—they give us the tools that we need to get the job done."

Technology for better business outcomes

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