

BlueLock builds low-cost, infrastructure-as-a-service solutions with HP LeftHand SANs, VMware combination



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– Pat O’Day, Chief Technology Officer, BlueLock

Industry: Technology service provider

Solution: HP LeftHand SANs running in VMware Infrastructure 3 environment

Objective:

Flexible, high-performance architecture to meet constantly changing client needs

Approach:

HP LeftHand SANs working with VMware to create a scalable, cost-efficient, 100 percent virtual platform

Business technology improvements:

- Highly available and flexible technology environment
- Improved recovery time – from hours to minutes
- Disk failover without interruption
- Decreased storage-management work cycles

Business outcomes:

- Performance on demand meets changing client infrastructure requirements
- Ability to offer clients aggressive service level agreements (SLAs)
- Reduced hardware footprint and energy and cooling consumption
- Support for innovative product development



BlueLock delivers infrastructure-as-a-service

One of the country’s leading providers of infrastructure-as-a-service, BlueLock gives clients precisely the amount of computing capacity, storage, bandwidth and disaster recovery capability that they need at any given time, with the flexibility to scale those needs on demand.

For BlueLock’s clients, the infrastructure-as-a-service model means they can focus on their core business with the confidence that they will have the infrastructure they need, when they need it. BlueLock customers don’t have to worry about the

“When we chose HP LeftHand SAN technology, a critical factor was that we wanted an iSCSI solution because of the features, economy and scalability of iSCSI. We looked at HP LeftHand and EqualLogic, and chose HP LeftHand because it offered superior performance and features. For example, the remote site-replication capability is important for our disaster recovery customers – which makes that feature important to us.”

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nitty-gritty details because BlueLock relies on its robust technology foundation to meet the clients’ high expectations.

Says Pat O’Day, chief technology officer at BlueLock, “Whether we’re building a dedicated hosting environment to run an online application – or creating a disaster recovery target for an environment running somewhere else – we need a flexible, high-performance architecture to support us,” BlueLock data centers in Indianapolis and Salt Lake City support disaster recovery and online applications for customers worldwide – including customers in Australia, the U.S. and Canada. BlueLock’s storage infrastructure includes 320 TB (terabytes) capacity on HP ProLiant Storage Servers with HP SAN/iQ Software.

Storage to match virtualized environment

VMware technology is an essential part of its technology platform, so BlueLock needed to find a storage technology that could work successfully with a virtual environment. “Since our servers are 100 percent virtualized through VMware technology,” says O’Day, “we needed to have a virtual storage solution. The HP LeftHand SAN Solution is one of the only truly virtualized storage area networks (SANs) out there today. The two solutions work together to provide performance on demand, so we can readily adjust to our clients’ infrastructure needs. We were able to combine HP LeftHand SANs with our VMware solutions to create a 100 percent virtual platform that scales easily and cost-efficiently.

“When we chose HP LeftHand SANs,” explains O’Day, “the economy and scalability of an iSCSI solution were critical factors. We compared HP and EqualLogic, and chose HP LeftHand SANs because they offered superior performance and features. For example, the remote site-replication capability is important for our disaster recovery customers, so that feature is important to us, too.”

Scalability is essential

With HP LeftHand SANs as part of its technological backbone, BlueLock readily adjusts to clients’ infrastructure needs. “Adding capacity or performance to keep up with our clients’ growing storage requirements is as simple as adding one or more storage nodes to the HP LeftHand SANs cluster,” says O’Day. “That allows us to provide additional capacity and performance on demand, with no downtime for our clients.

BlueLock has easily grown the HP LeftHand SANs, adding HP ProLiant Storage Servers in groups of eight. Says O’Day, “HP LeftHand SANs allow us to continuously scale. We’ve gone from 2 TB to more than 300 TB without incident. We just keep adding HP ProLiant DL320s Storage Servers as our business requires.”

Meeting aggressive disaster recovery SLAs – while realizing a smaller, greener footprint

Additionally, HP LeftHand SANs enhance BlueLock’s ability to meet aggressive disaster recovery and uptime service level agreements (SLAs). “HP LeftHand

“There is absolutely a green efficiency that would be impossible to achieve without the HP LeftHand SAN in concert with virtualization. We have 500 virtual servers running in a footprint of one or two cabinets that would otherwise take 10 cabinets and much more power and cooling capacity.”

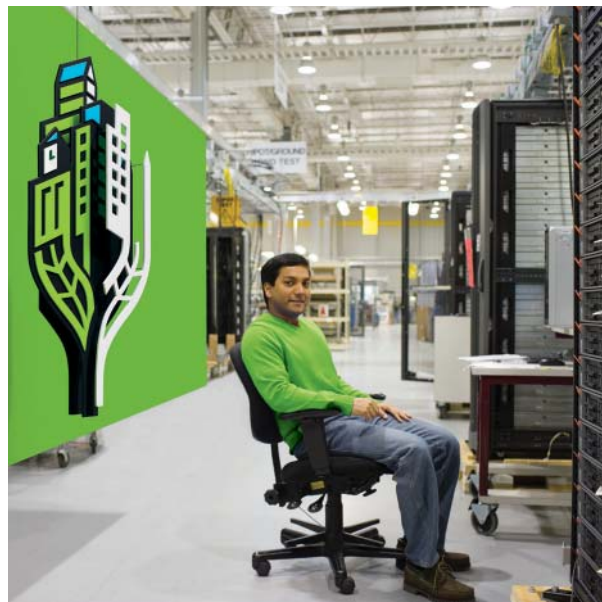
SANs provide full fault tolerance and redundancy on all our disk volumes,” said O’Day. “If we lose one disk system, it switches over instantaneously, without interruption, so there is zero downtime. The increased reliability enables us to offer a very aggressive recovery time objective to our clients.”

BlueLock has also seen a strong “green technology” benefit in terms of reduced power and cooling consumption and space requirements. “There is absolutely a green efficiency that would be impossible to achieve without HP LeftHand SANs in concert with virtualization,” O’Day notes. “We have 500 virtual servers running in a footprint of one or two cabinets that would otherwise take 10 cabinets and much more power and cooling capacity.”

HP BladeSystem and virtualization make it possible

The technology that makes it possible for BlueLock to offer high levels of service and support for a monthly fee is an “infrastructure in a box” – the HP BladeSystem. Inside HP BladeSystem c7000 enclosures are HP ProLiant BL460c server blades running VMware ESX Enterprise 3.02 and 3.5 to enable virtualization.

“HP BladeSystem provides us with a flexible, easy-to-manage server infrastructure so we can respond to clients’ needs with extraordinary speed,” says O’Day. “When a client requests another server be added to their environment, we use VMware to make an identical copy of one of their existing servers or to deploy a preconfigured template they have approved. In either case, their expanded environment is available with a few mouse clicks – rather than in



several days, which is normal turnaround time in a traditional server environment.”

Support for future products

As BlueLock develops additional offerings to meet its customers’ needs, HP LeftHand SANs are poised to continue playing an important supporting role. For example, the BlueLock Box is an alternative to BlueLock’s hosted offering that allows clients to deploy the BlueLock solution at remote sites and branch offices.

“The BlueLock Box uses virtual SANs created with HP LeftHand SANs technology and an HP BladeSystem enclosure to provide cost-effective storage and replication functionality,” says O’Day. “Our clients can replicate data back from their corporate data center to the BlueLock vCloud without adding additional hardware or file replication software. We’re very excited at how HP LeftHand SANs support this innovative new offering.”

About BlueLock

BlueLock (www.bluelock.com) is a national provider of managed cloud computing solutions. The company’s infrastructure-as-a-service model is powered by the VMware vCloud and includes physical technology infrastructure (servers, routers, firewalls, switches and storage devices), 24/7/365 full-service management, monitoring and support – as well as an integrated disaster recovery system. Each BlueLock environment is specifically designed to serve as the primary building block for software applications and the businesses that build and use them.

Customer solution at a glance

HP LeftHand SANs and VMware with HP ProLiant server blades

Primary applications

- Infrastructure-as-a-service (IaaS)
- Disaster recovery

Primary hardware

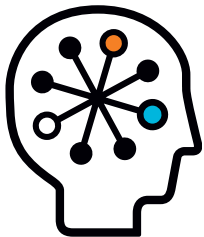
- HP BladeSystem c3000 and c7000 enclosures
- HP ProLiant 460c server blades
- HP LeftHand SANs on HP ProLiant DL320s and DL185 G5 Storage Servers

Primary software

- HP SAN/iQ Software
- HP Integrated Lights-Out 2 (iLO2) Advanced Pack
- HP Systems Insight Manager
- Microsoft® Windows® Server 2000 and 2003
- VMware ESX Enterprise 3.02 and 3.5
- Red Hat® Enterprise Linux 4 and 5

Why HP?

- Economy of iSCSI-based solution
- Superior performance and features of HP LeftHand SANs
- Scalability of HP LeftHand SANs
- End-to-end IT infrastructure solutions
- BlueLock is a long-time user of HP technology and services



Technology for better business outcomes

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