



BlueLock Launches Unique Virtual Cloud Computing Platform Using VMware Virtualization and F5 BIG-IP LTM

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Pat O’Day
Chief Technical Officer



Industry

IT hosting and recovery services

Challenges

- Maintain high performance, security, and availability in a virtualized environment
- Optimize the efficiencies of the virtual server infrastructure
- Gather accurate utilization data for virtual server provisioning

Solution

- F5 BIG-IP® Local Traffic Manager™

Benefits

- Seamless traffic delivery during very rapid provisioning of virtual servers
- Detailed network data for accurate provisioning
- Highly competitive service offerings

Overview

BlueLock is a managed technology services company and one of the first providers of virtual cloud computing offered through an infrastructure-as-a-service (IaaS) model. With BlueLock’s IaaS model, clients pay a monthly fee for the IT infrastructure they use, plus a retainer for reserve capacity. When a client’s utilization increases, BlueLock adds additional capacity and the client is charged accordingly. As needs decrease, the client’s capacity and expense are reduced. This enables clients to focus resources on business growth rather than managing and maintaining IT hardware.

BlueLock’s virtual cloud computing platform is an almost entirely virtualized environment built using the VMware infrastructure products ESX and VirtualCenter as well as F5 BIG-IP Local Traffic Manager (LTM). With BIG-IP LTM, BlueLock is able to intelligently deliver and optimize traffic as its VMware virtual machines come online and go offline, all while maintaining the highest levels of performance, scalability, and reliability. BIG-IP LTM helps BlueLock provision new virtual machines very quickly and seamlessly—meeting clients’ business needs through virtual cloud computing.

Challenges

In establishing its unique virtual cloud computing platform in 2007, BlueLock’s vision was to provide

hosting and recovery services that would enable clients to take a modular and scalable approach to their IT infrastructure and its related costs. In typical IT environments, companies generally assess the highest potential load they might reach at any time, purchase the entire infrastructure required to handle that demand, and then pay ongoing operating costs to maintain the full infrastructure regardless of the level of utilization.

“We wanted to remove the capital expense and procurement headaches of the IT infrastructure for our clients,” says John Qualls, President and CEO of BlueLock. He gives the example of an e-commerce site that may use four times more of its infrastructure during the holiday season than during the rest of the year. “We wanted to be able to turn that on for them on demand and then turn it back down along with their costs.”

To achieve this, BlueLock focused on creating an almost entirely virtualized architecture that would be capable of very rapid provisioning while maintaining performance and business continuity for its clients.

Solution

BlueLock built its architecture around a “virtual cloud” running from two data centers in Indianapolis and Salt Lake City. Virtual servers are



created using the VMware ESX hypervisor, and F5 BIG-IP LTM provides load balancing and SSL offload for the virtual servers.

VMware enables BlueLock to provision as many virtual servers as needed for a client's reserve capacity. Configured virtual servers are added to the BIG-IP LTM pool and are automatically activated when the load on the primary pool of servers reaches a specified level. As new virtual servers use up the hardware they're on, the servers are automatically moved onto additional dedicated hardware.

"We can just keep expanding the environment horizontally on demand to handle whatever level of traffic the client is experiencing," says Pat O'Day, Chief Technology Officer at BlueLock.

Having worked with F5 for about eight years, BlueLock's founders chose BIG-IP LTM for its long-term reliability, scalability, and performance. "Very simply, we knew it would work. When you start a new business, you need to build it on a solid foundation," says Qualls. "From a cloud computing standpoint, we knew our F5 investment would last and that we'd be able to put a lot of clients on the same architecture."

BIG-IP LTM maintains high performance and availability as it seamlessly delivers traffic to virtual servers and users—all vital factors in the success of BlueLock's platform. BIG-IP LTM also provides essential network-based data that gives BlueLock clients current, detailed information about their utilization and capacity.

Benefits

BlueLock's virtualized environment enables the company to provide cost-effective IT infrastructure services while ensuring that clients' infrastructures always meet their business needs. BIG-IP LTM helps BlueLock take full advantage of the efficiencies and opportunities its virtualized environment offers.

Optimizing the virtualized environment

Using VMware to create virtual machines that use hardware resources very efficiently is an important step in BlueLock's virtual cloud computing platform. BIG-IP LTM provides: intelligent traffic management that efficiently distributes traffic across virtual machines to optimize server utilization. By offloading SSL processing from the virtual servers, BIG-IP LTM also frees up server capacity to handle other processes.

"BIG-IP LTM helps us maximize the efficiency of our virtual environment so we can pass those efficiencies along to our clients, all while ensuring the high performance and availability that our clients require," says O'Day.

Very rapid provisioning

Another essential feature of BlueLock's business is the ability to scale capacity very quickly as clients' business needs change.

O'Day offers the example of client that runs an unclaimed funds website for the state of Indiana. The site was featured on a major television news program one evening, and traffic shot up fast as people went online to see if they had any money owed to them. Even though the national broadcast was

unexpected, the site's BlueLock infrastructure scaled up seamlessly to meet the demand.

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Network awareness

BIG-IP LTM offers detailed network data that gives BlueLock a clear look at the health of the virtualized environment. By applying this data and data from VMware VirtualCenter to its provisioning algorithms, BlueLock has a unique and highly accurate means to ensure the high performance and continuity of its clients' services.

This data is also incorporated into each client's Vital Signs GUI. "At any time, a client can log into their portal and see exactly what their load is and really the Nth degree of detail about what's going on in their environment," says Qualls.

Selling and upselling

Qualls points out that BIG-IP LTM and the F5 name are important selling points for BlueLock. "We do have to sell our service to every new client, and having the best of breed in the marketplace certainly helps," he explains. In addition, load balancing and SSL offloading present BlueLock with the opportunity to increase monthly recurring revenue by up to 15 percent. O'Day adds, "It not only helps us win opportunities, but it increases the size of those opportunities because we're able to offer services our competitors don't have."

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