

# WhiteBlox is broadcasting the future with the help of HP ProLiant servers

WhiteBlox



“One of the biggest advantages that we noticed when we moved to the HP ProLiant DL145 G2 Server series was the integrated monitoring and management of the server itself. Now we have a much greater capacity to monitor the performance of the server than we had before which allows us to guarantee the best quality video delivery that we can.”

– CIO Serge Stein, WhiteBlox

## Executive summary:

WhiteBlox is an industry-leading broadcast-network solutions provider that delivers dynamic, powerfully simple building blocks to help companies launch their own private-label broadband networks, or Internet Protocol Television (IPTV). WhiteBlox clients are able to broadcast live, live-from-tape and VOD content through a global distribution system, which includes five or more simultaneous streams, automatic encoding and storage, and digital rights management. WhiteBlox has helped companies and organizations broadcast events and programs for viewers in the tens of thousands up to the hundreds of thousands. To further enhance the viewing experience, WhiteBlox also adds tremendous interactive functionality to each video broadcast—including such things as chat, forums, polls and surveys, or interactive advertisement and commerce. While the company managed to develop its business model using a custom-built server solution for each client, WhiteBlox realized they still needed to increase efficiency and performance if they were to stay on top of the exponentially increasing broadcasting and viewing demands.

## The challenge:

### bigger performance in a smaller package

Since its inception in 2002, Continental Vista Broadcasting Group has become the leading provider of turnkey Internet broadcasting systems for an extensive range of industries. In early 2006, the company launched WhiteBlox, an Application Service Provider (ASP) company dedicated to building and running end-to-end broadcast solutions for clients wishing to interactively deliver live events and on-demand content over the Internet. The WhiteBlox solution delivers interactive video, audio and images for sporting events, concerts, seminars and classes, radio shows, TV shows, movies, music videos and more. In addition, the WhiteBlox platform lets customers generate revenue through such methods as highly targeted advertising, sponsorships, e-commerce, auctions, donations, subscription and season pass sales, and pay-per-view. A core piece of the WhiteBlox solution offering that makes all of this possible is the custom-configured encoding server that the company delivers to each client that desires to become an IPTV broadcaster. Over the years, however, the rising demands placed on these encoding servers by the company’s expanding service offerings and growing customer base forced WhiteBlox to look for new ways to maximize its IT performance.

As WhiteBlox CIO Serge Stein explains:

- **“We started the company by building our own 2U dual-processor encoding servers to deliver to our customers. But over time, the advancements in technology, the new and more powerful processors, the opportunities to get dual processors in a 1U enclosure, and some changes in our own software solution eliminated our need for as many slots as were available on a 2U, which gave us an opportunity to move to a 1U unit. We tried out a variety of units, and what we found is that we got the best performance in video encoding on the HP ProLiant servers with AMD processors.”**

WhiteBlox leads the industry because of the simplicity and reliability of its broadcasting solution and the new functionalities constantly being developed by the company to enhance both the IPTV provider’s and viewer’s experience. In order to maintain these two advantages, however, it is vital for the company to stay ahead of the technology curve. After conducting its own tests on a number of different server solution offerings, WhiteBlox concluded that the HP ProLiant DL145 G2 Server with the AMD Opteron 200 series processor would best meet the company’s current and future needs.

- **“We found the HP solution to be more cost-effective than other solutions. It provided us with almost as many slots in the 1U as we had available to us in the 2U, which was a surprise. We could also retain the same power that we had by using the AMD Opteron processors, which were available from HP. Considering the AMD Opteron processors were actually outperforming other processors based on our needs, the decision to switch to the HP ProLiant DL145 made sense financially, performance-wise and size-wise.”** The HP ProLiant DL145 now serves as the workhorse of the WhiteBlox broadcasting solution. Once installed in a particular customer’s production room, the HP server is in constant communication with WhiteBlox’s back-end system and it is remotely managed from the WhiteBlox headquarters. This approach frees the customer from having to worry about any of the technical and hardware demands of their broadcast and lets customers set the parameters and features of their Internet broadcast in a simple, hassle-free manner. By deploying the HP ProLiant DL145 servers in its IT solution, WhiteBlox was not only able to benefit from the many cost savings associated with using a smaller 1U server, but the company actually saw a performance increase due to the combination of HP technology and AMD Opteron processing power.

### The solution and success:

#### HP and AMD provide the best of both worlds

As WhiteBlox's list of clients, services and features grew, the company's need for a high-performance and low cost server solution pointed it toward the HP ProLiant servers. The low cost 1U HP ProLiant DL145 G2 server with two AMD Opteron 200 series processors seemed an ideal match. WhiteBlox contacted HP reseller David Royston, from Royston IT, in mid-2005 and began implementing the new servers shortly thereafter.

- **"Because of the HP ProLiant DL145 servers' performance, their integrated architecture, their small size and the way they communicate internally, the HP ProLiant DL145 servers are much more efficient for our purposes. Also, because of the improved encoding performance we get with the AMD processor, we have found that we can do more simultaneous video-transcodes than we were able to do with an industry equivalent or earlier machine. What this means for our customers is that they can provide either a greater variety of simultaneous videos or a larger variety of encoding formats for their customers. So, for example, if you're broadcasting a basketball tournament and you want to provide video from three basketball courts at exactly the same time, you can now do so with one encoder instead of three encoders. Or conversely, as we do with a typical broadcast, you can now show four simultaneous encodings of the same video at different bit-rates which allows the customer to receive the one that is most appropriate for their system thus providing them with the best quality. Since we are now using these more powerful HP ProLiant servers to encode, we can provide additional bit-rate opportunities, as well as opportunities to record additional delivery formats, such as HD, Flash, Quicktime and RealVideo."** WhiteBlox powered Internet

broadcasts include everything from U.S. Olympic Committee events and the NCAA Final Four to reality shows and radio programs. More recently, WhiteBlox broadcasted the 2006 Indy 500 LIVE using a special broadband viewer with the ability to switch back and forth between 7 live video streams, six of which were in-car cameras. This event was viewed by people in all 50 states and in 88 different countries, and the enhanced performance and efficiency of the HP ProLiant DL145 G2 server helped drive this one-of-a-kind broadcast and many others like it. Furthermore, using HP Systems Insight Manager (SIM) has allowed WhiteBlox to "dig deeper into the box and report everything from fan speeds to temperatures and so on," thus improving system manageability even more.

- **"Not only are we able to get the HP ProLiant servers faster than our old, custom-built servers, but because they arrive in a standard format, we can configure and deploy them to our customers much more quickly. The support for the HP ProLiant is really great—anytime we ever have any questions about the servers, we're able to get them answered very quickly. But probably one of the best things for us about the HP ProLiant servers is that they support all of the different operating systems that we put on them; pretty much every operating system that we've put on the HP servers has worked flawlessly."** Because WhiteBlox's policy is to ship new servers to clients rather than repair problems onsite, the ability of the company to receive and configure new servers is of paramount importance. Coupled with the use of SIM, WhiteBlox is now able to identify problems proactively and ship new encoding servers to customers before problems actually occur—yet another way the company helps to ensure its high system availability.

## Customer solution at a glance

### Hardware

- HP ProLiant DL145 G2 server series with AMD Opteron 200 processors

### Software

- HP Systems Insight Manager (SIM) for server management
- Microsoft Windows Server 2003

### HP Services

- Consulting and solution design
- Ongoing service and support

HP technology has made a big impression on WhiteBlox and the company has gone on to replace many of the servers in its data center—including high-volume storage servers, database servers and web servers—with HP servers. The HP ProLiant DL145 G2 server with the AMD Opteron 200 series processor has easily exceeded the company's present broadcasting needs while leaving untapped potential for the company to capitalize on in the future. WhiteBlox plans to deploy the HP ProLiant DL145 servers for all its future clients and HP technology will continue to help WhiteBlox maintain its competitive edge.

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*"The use of HP Systems Insight Manager and the HP ProLiant DL145 G2 servers have helped us provide our customers greater assurance that their machine will continue to perform up to their expectations. The tools give us a lot more information so that we can be proactive if we should ever discover a machine about to fail. We can let our customers know that we're sending them a machine to replace the one that they're using right now so they stay up and broadcasting and ultimately making money."*

– CIO Serge Stein, WhiteBlox

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#### **About WhiteBlox:**

WhiteBlox, a leading broadband network solutions company, delivers robust technology and application services in a comprehensive production and delivery suite that allows companies to become their own IPTV broadcasters. WhiteBlox gives customers the flexibility, control and tools to leverage video assets and content into dynamic, engaging and profitable networks through use of its integrated broadband solutions. For more information, please call 281.210.5000 or visit <http://www.whiteblox.com>.

WhiteBlox has approximately 45 employees and is a company of Continental Vista Broadcasting Group, Inc., based in The Woodlands, TX, with offices in New York, Orlando, Minneapolis, Milwaukee, Mexico City and soon London and Los Angeles.

## Results

### **Simplicity**

- Successfully transitioned from a 2U encoding server to a 1U encoding server

### **Agility**

- Faster configuration and deployment of encoding servers to new clients
- Increased performance supports more simultaneous encoding and a larger variety of encoding formats

### **Value**

- Savings in space, heat and power consumption
- Greater reliability and performance of video encoding
- Better manageability and proactive troubleshooting capabilities

*\* This customer's results depend upon its unique business and IT environment, the way it used HP products and services and other factors. These results may not be typical; your results may vary.*

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AMD

