

The race towards Instant-On: Imagine Communications grows fivefold building on the HP BladeSystem

Company's video platform on HP OEM infrastructure delivers more channels at higher resolution with faster innovation because of technology advantage



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— Mark Davis, Vice President, Engineering and Support, Imagine Communications

Objective

Expand the ability to cost-effectively increase the quality and quantity of digital video services over virtually any video distribution system, including digital cable, satellite, Internet, and wireless

Approach

Evaluate which blade server solution offers the most brand equity, configuration flexibility, and resilience as a foundation in order to meet video streaming provider industry requirements

IT improvements

- Additional sales secured by HP BladeSystem benefits:
 - Dual AC and DC power support
 - Network Equipment Building System (NEBS)-certification
 - Unique competitive edge supported by PCI Expansion Blade capability
- 50 percent reduction in solution administration time, reclaiming staff resources

Business benefits

- Fivefold more streams supported since offering HP BladeSystem solution, generating more revenue
- More than 50 percent of U.S. digital cable households supported because of scalability, enabling market leadership
- Up to tenfold faster time to value for new services



Stay on top or lose big

"More for less" is a driving principle in the economy. It's what every customer wants, and most businesses are in a race to provide it. When engineers in those businesses design new products and services, they need to accomplish more with less to give customers what they want.

Imagine Communications knows this challenge well. It offers a digital video platform that cable companies, broadcasters, and other video service providers use to deliver digital cable, satellite, Internet, and wireless video. The tagline of the platform is "Imagine having it all. Most streams. Best quality. Choose both." In other words, despite bandwidth limitations in broadcast or terrestrial network, viewers get the most channels at the highest resolution and quality.

HP customer case study:

Instant-On Enterprise
HP BladeSystem

Industry: media services
and entertainment



Customer solution at a glance

Hardware

- HP ProLiant BL280 G7 Servers
- HP BladeSystem c7000 Enclosures
- HP PCI Expansion Blades
- Cisco Catalyst Blade Switches 3120G and 3120X

Software

- HP Integrated Lights-Out 3
- Imagine ICE Broadcast System
- Imagine ICE Streaming System

Operating system

- Linux (Custom Imagine Communications distribution)

Network protocol

- 10 Gigabit Ethernet
- Gigabit Ethernet

HP services

- HP ProLiant Server Services

Richard Stanfield, CEO of Imagine, explains it this way: “Service providers are under continuous pressure to add more services at higher quality and bring more choice to their subscriber base.”

The stakes are huge. In the U.S. alone, broadcast and cable revenues in 2009 totaled \$127 billion.¹ Fall from leadership, and viewers quickly turn away. Revenues can plummet.

In this competitive environment, Imagine’s Interchangeable Compressed Elements (ICE) Video Platform is used by service providers to reach more than 50 percent of U.S. digital cable households. It’s the leader in its field—but can it stay that way? How will it strengthen its edge? That challenge falls to its engineers.

The search for an edge

About three years ago, Imagine’s first-generation platform ran on 1U Dell rack-mounted servers. “We felt a need in the market to get better leverage out of blade architecture for our type of video processing and did a survey of available blade technology,” recalls Chris Gordon, vice president of product marketing at Imagine.

HP stood out as having a superior platform in this area, he adds. “So we transitioned to HP and have deployed 95 percent of our services since then on the HP BladeSystem.” The solution is built using HP ProLiant BL280 Servers in HP BladeSystem c7000 Enclosures.

Brand equity and partnerships pay off

There are several reasons why Imagine chose HP, Gordon explains. “The HP BladeSystem had an extensive track record,” he says. “It provides brand equity with our customers. The Dell blade system was brand new at that point, and didn’t have the same kind of cachet.”

Also, HP has extensive relationships with service providers. “We work closely with HP account teams,” says David Sykes, vice president of sales at Imagine. “Like us, the HP go-to-market team has been working, thinking, and meeting with our customer base about strategic initiatives. We are able to work together with the HP account teams to push through some complicated and expensive testing of the HP BladeSystem platform in order to qualify the product for video deployment at service providers. And we are able to partner on other initiatives that HP is leading with our joint customers.”

“People want Imagine Communications because we have leading video quality and bandwidth efficiency. And we combine that with the platform resiliency and efficiency of the HP BladeSystem to create a strong value proposition to our customers.”

Richard Stanfield, CEO, Imagine Communications

Unique AC/DC flexibility

A second important benefit for Imagine is the ability to configure the HP BladeSystem flexibly to meet different customer requirements. Explains Gordon: “the BladeSystem c7000 Enclosure can come with both AC and DC power in the same form factor, using a different power supply. That’s a unique option that neither IBM, Dell, nor Sun was able to provide. The flexibility to choose either AC or DC power is key for our customers and for us.”

This flexibility is an important differentiator for customers because many signal acquisition facilities have been repurposed for modern broadcast standards from legacy operations built on DC power.

¹ Reuters.com, *Research and Markets: United States: Media Industry Guide 2011*, April 8, 2011. Accessed June 3, 2011.

Company profile

About Imagine Communications

Imagine Communications offers the ICE Video Platform, enabling system operators to cost-effectively increase both the quality and quantity of digital video services over virtually any video distribution system, including digital cable, satellite, Internet, and wireless. The ICE Video Platform serves over 50 percent of U.S. digital cable households.



Certified resilience makes adoption easier

Another reason for choosing the HP BladeSystem for Imagine's OEM solution is that it has Network Equipment Building System (NEBS) certification. "NEBS is a telecommunications standard that ensures that all equipment components and the total solution deliver a high degree of reliability, and it will work under extreme conditions," explains Mark Davis, vice president of engineering and support at Imagine. "This is a necessity because telco operators have to support five 9s (99.999 percent) reliability for life-line telephone service. Experienced operators have learned that customers in today's highly competitive video services market also demand the same reliability as traditional life-line voice services. Because the HP BladeSystem is NEBS-certified, it ensures a high degree of reliability for operators and Imagine."

A unique competitive edge

Imagine's ICE solution brings a key competitive edge to customers, and it's built on another BladeSystem feature: HP PCI Expansion Blades, which provide PCI card access to adjacent c-Class blade servers.

Notes Gordon, "We have custom hardware that we've built on a PCI blade that enables us to do some things that you just can't do in software. So we provide purpose-built ASIC chips that enable customers to meet the density, cost, and performance targets, especially with advanced codecs like MPEG-4, sometimes called H.264."

Imagine's video platform architecture combines the advantages of hardware and software, Gordon explains. "Hardware enables our customers to deliver better cost, density, and performance. Software enables them to have a faster development time and a faster time to market for emerging applications."

Some of Imagine's competitors have a purely hardware-based approach, Gordon adds. "They typically offer good quality and good density," he says. "But they're slow to react to market changes."

Other Imagine competitors have a purely software-based approach. "They are very fast to adapt to new market opportunities, but aren't able to achieve the density, cost, and quality that the hardware-based solutions can," Gordon explains. "We're unique in that we provide the best of both worlds: the speed to stay up with the market and the density and quality of a hardware-based solution."

"Before integrating the HP BladeSystem, Imagine Communications supported 400 streams. Since we incorporated HP BladeSystem, we've added fivefold more streams, or about 2,000, for a total of over 2,400."

Chris Gordon, Vice President, Product Marketing, Imagine Communications

Speeding the journey to Instant-On

It's important to seize new opportunities fast, because the first-to-market company tends to win the biggest share of market and profit. One new opportunity is the fact that viewers want to watch streaming video on tablet PCs and smartphones as well as on TVs. Imagine can offer service providers an edge in launching these services fast.

"Because our solution is based on the HP BladeSystem, service providers can deploy our multi-device transcoder on the same exact platform that they've come to trust for their mainline HD and SD broadcast video distribution," Gordon explains. "They have a smooth migration path to more advanced services, on a platform they've already come to know. They don't have to start over. They can add software first, maybe some hardware later—it's just adding capacity to their current deployment footprint."

This is good news to service providers because today's consumers want new services in an instant, Gordon adds. "And with the ICE Video Platform, service providers can deploy a new service such as TV Anywhere (video to smartphones, PCs, and tablets) quickly and with minimal impact to operations," Gordon explains. By increasing the ability of service providers to be responsive, Imagine Communications and HP OEM are helping those providers become Instant-On Enterprises.

50 percent reduction in administrative costs

Another feature that increases service levels, Davis says, is HP Integrated Lights-Out (iLO) 3. "We use iLO 3 to do remote diagnostics to check on system capacity," Davis reports. "We can check on CPU utilization, tune the system, troubleshoot, manage, and maintain it—just about everything that we could do standing in front of the server."

In addition, the remote functionality of iLO 3 helps the team deploy servers faster and manage systems' health proactively while saving staff time. "iLO 3 helps our IT staff reduce administrative hours and costs by about 50 percent," Davis relates.

The team also saved time and resources by incorporating Cisco Catalyst Blade Switches 3120G and 3120X into the HP BladeSystem c7000 Enclosure. "The c7000 enclosure interfaces directly with Cisco blade switches, allowing us to simplify network connections," Gordon says. "We were able to save about 97 percent on switches and cabling."

Tenfold faster time to value

Individual benefits add up to more than the sum of their parts. "Because of the tools and capabilities of the HP OEM program, our field engineering team can go on a service provider's site and configure a hundred channels in just a couple hours—and that used to take us days," Davis says. This means a tenfold faster time to value for Imagine Communications, its service provider customers, and the viewers they serve.

"The fundamental point that I want to highlight," concludes CEO Stanfield, "is that people choose Imagine Communications because we have leading video quality and bandwidth efficiency. And we combine that with the platform resiliency and efficiency of the HP BladeSystem to create a strong value proposition to our customers."

The team's relationship with HP also means that Imagine doesn't need to keep operations staff in-house. "Outsourcing operations to HP OEM and Avnet (an HP OEM distribution partner) allows us to devote our time, money, and staff to research and engineering," Gordon says.

Fivfold more streams supported

The marketplace agrees. "Before integrating the HP BladeSystem, Imagine Communications supported 400 streams," Gordon says. "Since we incorporated HP BladeSystem, we've added fivefold more streams, or about 2,000, for a total of over 2,400."

Five-diamond future

Imagine's leadership is summed up by a 2010 *Broadband Gear Report* Diamond Technology Review. The ICE Video Platform is the one video solution in the industry to receive a five-diamond rating, given only, in the words of the judging panel, when "a superb product sets new standards for performance and provides groundbreaking and new technical milestones."

The result for Imagine is that it has a foundation for innovation. "It's a great honor to receive a perfect five-diamond score," Gordon says. "We look forward to building on the quality and reputation of the ICE Broadcast System to expand Imagine's vision of PersonalizedTV."

Viewers will get new kinds of choices and enjoyment, delivered within the same bandwidth to minimize costs. In other words, more for less is coming. Keep your remote handy, and stay tuned.

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