CASE STUDY
Intel® Xeon® processor E5 family
Entertainment/Media
Scaling Your Innovative Cloud Services

iStreamPlanet Drives Video Delivery in the Cloud with Intel® Xeon® Processor E5 Family

Intel® Xeon® processor E5-2600 product family gives the media leader an immediate 20 percent performance hike

iStreamPlanet®

"Out of the gate, we saw a 20 percent improvement in how quickly we can digitize content for distribution. We're talking about thousands and thousands of hours of content, so to digitize it 20 percent faster or with 20 percent less resources translates to significant savings."

– Mio Babic
CEO,
iStreamPlanet

As a leader in multi-platform managed broadcast solutions, iStreamPlanet[1] helps companies turn digital content into sustainable revenue streams. Working with cloud innovator Switch Communications, iStreamPlanet deploys a robust infrastructure-as-a-service (IaaS) cloud that uses Intel technologies as the foundation of its server, network, and storage solutions. iStreamPlanet executives say the Intel® Xeon® processor E5 family will help them give their customers a strategic advantage and deliver more compelling media experiences to more consumers at lower cost.

CHALLENGES

- **Performance.** iStreamPlanet needs balanced high performance from its processor, network, and storage technologies to acquire, encode, and publish broadcast-quality video, live and on demand.
- **Scale.** High-impact events and live linear online broadcasts require complex encoding and publishing of multi-format, multi-device video streams to a growing, connected audience.
- **Agility.** Agile infrastructure helps iStreamPlanet cope with exponential growth and the rapidly evolving digital media ecosystem.

SOLUTIONS

- **Intel® Xeon® processor E5 family.** iStreamPlanet deploys VCE Vblock* 2 platforms with the Intel Xeon processor E5-2600 product family in Cisco Unified Computing System (UCS)* platforms and EMC Symmetrix VMAX* storage systems.
- **Intel® Ethernet 10 Gigabit Server Adapters.** Unified networks based on Intel server adapters maximize throughput as iStreamPlanet moves terabytes of data.
- **Intel® Solid State Drives (Intel® SSDs).** iStreamPlanet speeds I/O by using Intel SSDs as hot cache for the most throughput-sensitive servers.

TECHNOLOGY RESULTS

- **Immediate speedups.** In iStreamPlanet's out-of-the-box tests, the Intel Xeon processor E5-2600 product family accelerated encoding by 20 percent. The company's engineers expect further performance increases as they optimize their applications for the new platform.

BUSINESS VALUE

- **Built to scale.** iStreamPlanet uses the processor's performance and the cloud's elasticity to handle the performance demands of new customers and live events.
- **Great viewing, business growth.** By enabling customers to deliver better online media experiences at an affordable price, iStreamPlanet drives business growth for itself and its customers.

Delivering Digital Media Experiences

Headquartered in Las Vegas, iStreamPlanet has been helping customers unlock the potential of online broadcasting for more than a decade. By teaming up with iStreamPlanet, innovators in the enterprise, broadcast, film, telecom, mobile, and retail market segments can create high-definition (HD) video content once and deliver

iStreamPlanet is optimizing its media platform for the Intel® Xeon® processor E5 family

it live and on demand to screens and devices including PCs, mobile devices, gaming consoles, connected devices, and connected TVs.

As NBC's managed broadcast provider for the 2010 Vancouver Olympics, iStreamPlanet set a new standard for web-based live media when it acquired, managed, and delivered nearly 5,000 hours of HD Olympic coverage to 24 million unique visitors. In addition to online broadcasting of live events and live linear channels, iStreamPlanet works with media and entertainment giants that want to make their content libraries available on demand.

"We might get a new content partner who has 20,000 hours of content they want to digitize over the next 15 days," says iStreamPlanet CEO Mio Babic. "They're asking how quickly we can assemble resources to do that, and every day they don't have that content available online, they're losing money. You can imagine the pressure."

Performance and Flexibility in the Cloud

To meet its requirements for high performance and flexibility, iStreamPlanet standardized on Intel data center technologies, optimized its sophisticated applications for each new generation of processors, and created a customized private cloud at Switch Communications' SuperNAP* data center in Las Vegas.

"We wanted the best computational power, so we went with the Intel Xeon processor 5500 series, and later the Intel Xeon processor 5600 series," Babic says of his cloud architecture. "We wanted the fastest storage, so we went with Intel SSDs. We need the best network performance, so we went with Intel Ethernet 10 Gigabit Server Adapters and EMC storage area networks with Intel Xeon processors in the storage controllers."

The Intel technology–based cloud provides high performance and quick scalability to meet spikes in demand. But demands on the cloud continue to grow as iStreamPlanet increases bit rates and image quality, serves more users, and optimizes the media experience for a broader variety of device types. "In the last two years, we increased storage 30-fold and compute performance 20-fold," says Babic. "But it's still not enough. We are very excited to get our hands on the Intel Xeon processor E5 family."

Scaling Higher with the Intel Xeon Processor E5 Family

"Intel technologies are absolutely critical to us," Babic comments. "We are as thirsty as anyone for more processing power and more capabilities. Whatever Intel develops, we'll find a way to use it and maximize every little bit of compute power. We want to get it as soon as possible, and we put it to the maximum test."

Babic lists the Intel Xeon processor E5 family's reduced latency, increased storage performance, and enhanced graphics as the most significant capabilities for his media workflows, with Intel® Integrated I/O the most noteworthy innovation. "I/O is as precious as gold to us for those high-visibility events where you'll have Content Delivery Network (CDN) servers making billions of requests to our origin servers," he explains. "The ability to read the data as quickly as possible and hand the data out to the CDN servers in sub-10 ms times is absolutely paramount to providing that seamless, high-quality experience on consumer devices. That's an area where the Intel Xeon processor E5 family will really help us."

Babic believes that help will give iStreamPlanet and its business customers a strategic advantage. "With more performance, we can run more sophisticated algorithms to do better encoding and more error corrections," he says. "It translates to a difference in quality that you can easily see. At the end of the day, if 30 providers have the same piece of content, customers are more likely to subscribe to the one that looks better when they watch it."

LESSONS LEARNED

- **Choose experienced innovators.** A leader in its own field, iStreamPlanet collaborates with proven innovators such as Intel, Switch Communications, Cisco, EMC, and VMware.
- **Follow Intel's roadmap.** iStreamPlanet rapidly adopts each generation of Intel processors and optimizes its software to take full advantage of new capabilities.
- **Gain flexibility from the cloud.** iStreamPlanet can add capacity within minutes or hours instead of days—an advantage when dealing with new customers and high-profile events.

Find a solution that is right for your organization. Contact your Intel representative, visit **Business Success Stories for IT Managers**, or explore the **Intel IT Center**.

[1] Intel Capital is among companies providing Series A funding for iStreamPlanet.

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