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x64 Server Trends: To Heart Of The Data Center

By John Fowler, Executive Vice President, Sun Microsystems

I spend quite a bit of time talking to enterprise customers, and over the past few years I've noticed a shift in the conversation about their IT priorities. A couple of years ago it was bulldoze cost, do something to help me get costs down. While that pain point is still high on many customers' lists, I'm also hearing more and more customers talk about using IT to deploy more services, get online faster, and beat the competition. In other words, now more than ever before, organizations are striving to align IT services with business goals and gain competitive advantage.

This is why so many enterprises today are looking at deploying x64 servers (64-bit, x86), like those based on the AMD Opteron processor, in the data center. Because they are built on the industry-standard x86 architecture, x64 platforms deliver excellent value. At the same time, x64 servers are truly a new class of systems that offer the enterprise-class performance, efficiency, manageability, scalability and longevity that customers need to better align IT with their business strategy.

Let's look a bit deeper at what makes this new class of x64 systems different than their x86 server predecessors – and ultimately what makes them more suitable to the enterprise data center.

Performance. While x64 servers can be incredibly fast (the new Sun Fire X4600 with AMD Opteron processors, for example, performs twice as fast as older x86 server models), performance isn't just about speeds and feeds. It's about using higher performing servers to generate greater transaction volume per dollar. It's about how faster response times can translate to increased productivity and improved business results. It's about using fewer systems more efficiently to cut IT operating costs.

Efficiency. Right now, power efficiency is a very hot topic and at Sun, we have extraordinary things to say about power efficiency – we have one customer who replaced 20+ older x86 servers with a single Sun x64 server and dropped the temperature in their data center by 17 degrees! But efficiency is everywhere – efficiency of personnel, of data center real estate, and so on. Just to show how seriously we take efficiency at Sun, the new Sun Blade 8000 system with AMD Opteron processors offers 80 processors of compute power in a single rack; up to 50 percent more space efficient and 39 percent less power required than today's x86 rackmount servers.

Manageability. To Sun, manageability isn't just about adding some glue-on software at the end. Manageability is also about designing systems to actually go into a data center and be simple to integrate with all of the applications and infrastructure you have today. It's also about making the day-to-day management of your server environment easier. That's why the entire Sun x64 line features a single Integrated Lights Out Manager (ILOM) Service Processor that handles management, monitoring and control functions of the servers. Combine ILOM with Sun N1 Systems Manager and N1 Service Provisioning Systems, and you get an IT environment that is less complex for your IT group to manage.

Scalability and Longevity. If you're looking at extending x64 further into your data center, scalability is key. Sun x64 rackmount servers scale seamlessly up to 16 cores within a single chassis to achieve mid-range system performance levels with the same consistent architecture. Another highly scalable alternative is our new Sun Blade 8000 system, which is based on a modular architecture design that can scale 10x without service disruption. On top of scalability, we've designed our systems to be easily upgradeable to the latest technologies, and to be easily repurposed for other uses and to provide investment protection and greater return. We are even offering a [new service for our Sun Blade 8000 system](#) where we'll upgrade the server modules you buy today to the latest CPU and/or memory technology once they're available.

We are truly entering a new era of industry standard computing, where new x64 server designs can deliver the edge you need to get ahead and stay ahead of data center needs. If you liked x86 computing when you first brought it into your infrastructure, you're going to love the strides we've made with x64 computing.

Source: Sun Microsystems

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