

Hardware Virtualization Scenario Set to Play Out Soon

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In a panel discussion titled "Linux on the Leading Edge," moderator Scott Handy, vice president of worldwide marketing and strategy for the System p at IBM, said virtualization was currently leading the innovation pack, both on the proprietary and open-source fronts.

IBM supports the mixed-source model, where users have both proprietary and open-source technologies, as this facilitates the acceleration of open standards.

"This model will sustain itself for pure economic reasons alongside proprietary and open plays. You are not even competitive if you are not leveraging the open side of this model; you can put a little in and get a lot out. There are a lot of benefits to this model," Handy said.

Handy used the panel to announce the open beta version of System p AVE (Application Virtual Environment), a virtual Linux environment that lets x86 Linux applications run without modification on IBM's Power processor-based System p servers.

"With nearly 2,800 applications already running natively on Linux on

System p servers, System p AVE will allow most x86 Linux binaries to run unmodified. Initial testing shows that it should be easy for clients to install and run a wide range of x86 Linux applications on System p and BladeCenter JS20 and JS21 servers that are using a Linux operating system," Handy said.

"These applications should run, without any change to the application and without having to predefine that application to the Linux on Power operating system with p AVE installed," Handy said.

Bob Wiederhold, chairman, president and CEO of Transitive, said that while server virtualization was getting the most attention, there were other scenarios that would play out over the next few years.

Hardware virtualization was one of those scenarios and allowed technology compiled for one processor and operating system to run on another processor/operating system without any source code or binary changes, Wiederhold said.

This eliminated the porting requirements for both ISV and internally developed software, allowing an immediate expansion of the software ecosystem while dramatically lowering the barriers to server migration.

"It also extends the benefits of server consolidation and portioning. The applications just work, there is full functionality - and - high performance, and it is completely transparent and highly reliable," Wiederhold said.

There were already 6 million users of this technology, not in the enterprise space but rather on the PC. Benefits of hardware virtualization for the enterprise included the fact that users would now be able to run Sun Microsystems' Solaris/SPARC applications on Linux and x86, he said, referring to a European telephone company customer

who had moved 150 of his Solaris/SPARC applications across and intended to do the same for the remaining 1,350.

Robert Woeckener, the System z Linux and Unix systems engineering and administration manager at Nationwide, said the company had been running out of data center space, using too much power and experiencing a staff and skills shortage, which was one of the reasons why it started looking at virtualization.

"We wanted to best optimize what we had as quickly as possible. We wanted it to support high availability and disaster recovery, and so we went with a virtualization solution that included IBM System z9 running SUSE Linux 9," Woeckener said.

While Nationwide expected to save \$15 million in the first three years, "I can tell you we are already ahead of that," Woeckener said. These savings came from a 50 percent reduction in monthly Web hosting costs; an 80 percent reduction in data center floor space; a 50 percent reduction in hardware and operating system support efforts; a 70 percent average CPU utilization; and significant savings on its middleware costs, WebSphere, UDB and Oracle.

"The move has also resulted in a significantly faster server provisioning speed, the dynamic allocation of computer power, simple and robust high availability, and disaster recovery," Woeckener said.

But Woeckener also shared some of the lessons Nationwide had learned from the move and encouraged those considering doing this to have clear goals and directions as well as support from senior management for this.

"It is also necessary to do a complete TCO to realize the full benefits. Significant adoption requires good economic incentives for the application teams, with good enforcement and technology enforcement,"

Woeckener said.

While skills were also easily transferable from distributed environments, the billing model needed to be refined to include fixed and consumption-based costs. "Also, do not underestimate the mental shift needed by the applications teams," Woeckener said.

Ken Simon, the vice president of sales for Enterico, a division of Continental Resources, said that it had migrated a significant number of old applications onto Linux as well as written new ones for the platform.

"To us, virtualization is optimizing resources and allowing us to effectively and efficiently migrate legacy applications. Linux is a platform that offers reliability and growth, while facilitating legacy application migration and new application development," Simon said.

Michael Kane of Sybase said the company had grown up on Wall Street, providing mission-critical database technology. Wall Street trading volumes had increased by up to 3,000 percent over the past three years, with computers now making and executing these trades.

As such, Sybase had developed a risk analytic platform that was designed to improve profitability and reduce risk.

"With data virtualization, we are able to consolidate this data - and - eliminate fragmented data and information lag. Core to this was Sybase IQ, a highly optimized analytics server designed to deliver ultra-high-speed reporting and intelligence data," Kane said.

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