

## INTERVIEW

# Linux Technology Center & Government Solutions Center: IBM's enterprise strategy for Linux

**LINUX PRO: What was IBM's Unix history before Linux?**

**DAVID VALENTINE:** IBM began shipping its Unix products in 1990 when it launched the RS/6000 product range, running the AIX operating system. During the 1990s, this server technology rapidly gained market share becoming one of the premiere Unix offerings in the marketplace. In 1999 the product was integrated into a single IBM server brand, and is now designated the IBM eServer pSeries, where 'p' stands for 'performance'. These servers are running in thousands of customer sites around the world, often running mission critical applications for customers, and the IBM-designed POWER microprocessors they run have become a standard for 64-bit computing in the computer industry, with similar processors appearing in games modules, and engine management systems.

**LXP: What motivated IBM's interest in Linux?**

**DV:** In the mid 1990s, we made a commitment to deliver open standards based products and solutions. Linux, coming from the Open Source community, and supporting open standards was a natural choice. In discussions with our customers, we found that many large organisations, such as banks, were starting to use Linux as a cost-effective, reliable alternative to proprietary Unix platforms for web serving, file and print, email, and other infrastructure applications.

The customers were attracted to the potential cost savings and performance of deploying Linux for some apps, but wanted the high levels of reliability support they had come to expect from IBM. As customers began to demand open standards for software integration, Linux became a logical choice for the implementation of more sophisticated solutions, and IBM uniquely could offer real choice, able to offer the very best platform for the specific type of work, running on mainframe servers, or Unix servers, or Intel or AMD based servers, running either 32- or 64-bit microprocessors.

**LXP: How many people does IBM have working on Open Source projects?**

**DV:** IBM has had a large team of developers working on Linux and related Open Source projects for many years now. We call this the IBM Linux Technology Center (LTC) and today it numbers over 250 people in various locations around the world including the UK. They work on a long list of projects that are typically aimed at making Linux suitable for enterprise deployment. Recent areas of development

**Linux Pro spoke to DAVID VALENTINE, the Linux Sales Manager for EMEA, about IBM's Unix history, how it has been applying that to Linux, and where IBM thinks Open Source software is going...**

include high availability and symmetrical multi processing scalability. IBM engineers are leading many open source projects, with the large number of IBM sourced research papers submitted each year for the Ottawa Symposium, a clear demonstration of the contribution IBM is continuing to make to the Open Source community.

**LXP: How does Linux fit into IBM's server strategy?**

**DV:** IBM is committed to delivering the very best technology and solutions for our customers, and as we pioneer breakthroughs in server capabilities, price performance and server design, we enable new workloads for customers, that were not economically viable before, or just not technically possible before. Many of these new applications are Linux-based, exploiting the eServer technology advantage for competitive gain.

In the field of supercomputing, industries and organisations such as government, academia, life sciences, automotive, oil exploration, aerospace, digital media creation, and business intelligence have benefited from breakthroughs in AMD and Intel microprocessor design, with IBM developing complete Linux-based cluster solutions to radically transform customer computing.

Cars and aeroplanes can now be designed in cyberspace, automotive crash tests can now be simulated to dramatically speed up development and reduce costs, and the latest movie releases can economically have thousands of computer-generated scenes in them.

Another area where we are seeing breakthrough technology is in the area of virtualisation, where it is now

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possible, using our high end IBM eServer zSeries mainframe, running the z/OS operating system, to host hundreds of instances of z/Linux virtual servers on a single computer, overcoming the existing scalability issues associated with Linux, with additional servers able to be provisioned in less than 30 minutes, and able to be reclaimed when not required almost instantaneously, so capacity can be adapted to changing business needs.

IBM foresees Linux spreading throughout the business world at an unprecedented rate, in all industries, including telecoms, petroleum, geophysical sciences, financial services, government, automotive, computer aided engineering and design, as the economics of Linux are becoming more and more attractive for some of our customers.

**LXP: Do you think Linux deserves more of a place on the desktop, or is it just a server OS?**

**DV:** IBM's Linux effort is focused on Linux & OSS solutions that bring business benefits to our customers. Recently Linux has been receiving a lot of consideration as a desktop OS, especially within some governments, such as in Germany. There is also a trend towards Linux for specific function desktop systems, such as engineering workstations, or for bank tellers. IBM will continue to work with our customers in all areas where Linux & OSS could be of benefit.

**LXP: How important is kernel 2.6 to IBM's plans?**

**DV:** The 2.6 kernel will be a breakthrough not just for IBM but for the entire Linux community, with new levels of functionality expected to further enhance Linux adoption for many of our customers.

**LXP: How committed are IBM to the future of Linux?**

**DV:** IBM is fully committed to the future of Linux. More than 5,000 IBM employees work on Linux in research, services, development, porting centres and sales & marketing. Our entire eServer range, all five of our middleware brands (Lotus, DB2, Tivoli, Websphere, Rational) support Linux today. We continue to release more products with Linux, and contribute to the Open Source community.

There are now more than 6,300 IBM Linux customer engagements worldwide, allowing customers to reduce their computing costs with solutions ranging from web serving to some of the largest supercomputers doing seismic processing, financial calculations and genomic research. Worldwide, more than 75 IBM government customers – including agencies in France, Spain, UK, Australia, Mexico, the United States and Japan – have embraced Linux to save costs, consolidate workloads, increase efficiency and enact e-government transformation.

Over 80 solutions have been announced by Solution Providers for Linux on iSeries. There are now more than 50,000 Windows and Intel developers actively creating Linux-based apps that run on IBM software, including WebSphere, DB2, Lotus and Tivoli, to build applications that run on Linux. These developers have created more than 6,500 Linux-based apps for IBM software. Some 4,700 Business Partners support Linux-enabled IBM software. Two-thirds of these new Linux-based apps are being created by corporate developers, signalling that more and

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David Valentine, IBM Linux Sales



more businesses are making the move to Linux. One third are being created by ISVs. IBM is shipping over 65 software products on Linux across its IBM DB2, WebSphere, Lotus and Tivoli software families.

IBM is committed to using Linux inside IBM with more than 3,500 servers running Linux. Mission-critical apps that run Linux include the IBM website, support of IBM's new \$2.5Billion 300mm chip manufacturing facility, and apps supporting more than 300,000 IBM employees worldwide. In addition, IBM hosts websites for many of its customers on Linux, including Wimbledon, the US Open, the French Open and many other sporting events. IBM has opened a variety of Linux-based centres around the world that are dedicated to helping customers, Business Partners and developers move to an open, standards-based approach to computing. From IBM's Linux Center of Competence on Wall Street to the Government Solutions Center in Washington DC, IBM gives developers a place to test new Linux-based solutions.

**LXP: To what extent do your servers take advantage of new hardware, such as Opteron?**

**DV:** IBM's server strategy for Linux has always been to offer customers choice through responding to their demands. The IBM eServer 325 which incorporates the AMD Opteron processor can either be bought outright by the customer or they have the option to access them through IBM's deep computing on demand facility in Poughkeepsie, NY, paying for processing power based on the required capacity and duration of use.

Designed to run either Linux or Windows, the IBM eServer 325 provides high performance computing customers with increased performance and seamless migration from 32-to 64-bit server technology. The IBM eServer 325 is also part of IBM's Cluster 1350, providing a complete cluster solution including a broad portfolio of clustering software in common with our cluster offerings on POWER and AIX/Æ.

Technologies such as the IBM eServer 325 powered by the Opteron processor offers strong performance and extended memory addressability while ensuring backward compatibility that preserves customers existing 32-bit software investments. IBM is the first major IT vendor to take advantage of this latest technology and deliver it to our customers. ■