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Lead

Linux rising



*Virtualization and interoperability are seen as driving the adoption of Linux servers in a big way, writes **Nivedan Prakash***

Linux has established a firm presence in the industry and it is seen a viable platform for supporting the deployment of business-oriented application workloads. This progression has led Linux to a role as a platform for business-critical workloads being deployed on a variety of hardware architectures.

As the fastest-growing operating system when measured on the basis of percentage growth of new unit subscriptions and revenue growth, it is apparent that customers are finding business value associated with Linux solutions.

However, when we talk about the Linux market, it means different things to different people. If you talk to IDC or any of the hardware OEMs, they address this market in terms of the server environment. If you talk to a Linux vendor, the definition would broaden to include different pockets of revenue from the server, desktop, mobile device and thin client segments. Also, a large chunk of revenue for certain companies comes from Linux services and training.

Talking specifically about the Linux server operating environment market, as per industry estimates, while much of the industry in 2008 stagnated or even receded, Linux revenues grew 23.4% to touch \$567 million. The top selling server OSs came from Red Hat and Novell.

In 2008, Novell witnessed a growth of 60%. However, in 2009, the market has slowed down a bit but the company still had a strong growth story. As of now, Novell is growing at around 40-45%.

"As far as the Indian market is concerned," said Sandeep Menon, Country Head of Novell, "I think in terms of server unit shipments, between us and Red Hat, we would have probably shipped around 15,000 to 20,000 servers in India."

Factors fuelling growth



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Head - Pre-sales and GPS, Red Hat



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consume approximately 80% less energy than the current set up and we expect significant savings over five years in energy, software and system support costs"

- Subram Natarajan
Senior Consultant - Systems and Technology Group, IBM India/South Asia

Here we would like to mention that the ongoing worldwide recession and the resultant cost pressure is one of the factors contributing to the growing sales of Linux servers. In today's scenario, Linux is seen as highly compatible with two of the most popular trends in the industry—virtualization and cloud computing.

"The recessionary scenario has made CIOs realize that Linux has matured into a reliable and robust operating system that is good enough to run their mission-critical applications and workloads. In the last couple of years, Linux has seen widespread mainstream adoption with mission-critical applications being run on Linux," pointed out Ravi Ranade, Head - Pre-sales and GPS, Red Hat.

Another factor that has helped the adoption of Linux has been the flexibility that the software provides in terms of being Open Source and also the business model that many vendors follow in the form of subscriptions that present a predictable and simpler cashflow situation for many CFOs and therefore has found favor with many CIOs. CIOs today are increasingly being pressured to show ROI on existing IT infrastructure, extract greater returns on assets deployed and hammer out tougher SLAs with existing vendors. With Linux they are discovering that they are easily able to showcase ROIs.

"Today, we are seeing a marked shift towards SOA and data centers involving cloud computing. We have found that when businesses start moving towards SOA and setting up large data centers to host large lists of clients, they resort to Linux for cost-effective and maintainable data center solutions. There has also been a lot of activity around middleware and the utility stack above the operating system layer," highlighted Menon

Current scenario

The economic downturn led to a reduction in spending, but not necessarily an equal-sized reduction in deployments. In fact, past recessions have helped to accelerate platform shifts that were in progress. During the 2001-2002 recessions, the industry saw a shift away from RISC-based Unix servers and Linux was a beneficiary of that transition, and that downturn set the stage for the sustained growth of Linux server operating system deployments during much of the current decade.

In the current scenario as well, CIOs around the world have migrated from Unix to Linux and to a sound platform which is ready for the future. They have also migrated vital applications such as ERP and CRM onto Linux. We can very well dub this downturn as the phase when Linux has seen mainstream adoption.

The current economic crisis is likely to help nudge that adoption forward once again, given the low-cost nature of Linux and the accompanying availability of low-cost solutions on the platform. It will also have a net positive impact on the use of virtualization software.

“Customers are finding innovative ways and means to rationalize costs in their data centers. Virtualization is one of them. Red Hat Enterprise Linux (RHEL) provides integrated virtualization,” added Ranade.

Shyamala Jayaraman, Vice President – R&D at Ramco opined that virtualization would drive the adoption of Linux as it helps drive down the cost of maintenance and reduces application provisioning time, capital investment and software maintenance, besides having

Who’s boosting Linux?

As mentioned above, this market is seeing some significant growth. Let’s find out how far these companies have helped to push the Linux market upwards.

Today, many of Red Hat’s customers with valid subscriptions are enjoying the benefits of newer versions or upgrades of RHEL which has integrated virtualization, high availability and failover solutions, storage enhancements, greater manageability and more. Red Hat is also the leading named (organized) contributor to the Linux Kernel accounting for 13.2% of these.

Novell is seeing a shift in the virtualization business and the company’s contribution here is that it has introduced a concept where Linux and Microsoft Windows can co-exist. The company has introduced the ‘virtual driver pack’ that allows Windows and Linux to run side-by-side in the same virtual environment. It is also offering a management tool to those companies who have started rolling out large data centers in a virtualized environment, as they need the same in order to manage a mixed environment.

"As a software vendor, Ramco has the ability to deliver their products on the Linux server. One of our largest deployments is an e-governance solution that has been designed to run on Linux server," said Jayaraman.

Server consolidation from IBM eServer zSeries and Linux helps organizations respond rapidly to business demand. This is resulting in the amount of floor space needed to house infrastructure being slashed to a fraction of what was earlier needed along with the resources needed to maintain the same. It also allows IT resources to focus on business instead of the technology that drives organizations. Linux on zSeries servers help provide an on demand operating environment and businesses need to be more responsive, open and resilient to market changes, customer demands and external pressures.

Subram Natarajan, Senior Consultant – Systems and Technology Group, IBM India/South Asia, asserted, "In one of the most significant transformations of its worldwide data centers in a generation, IBM announced in 2007 that it would consolidate about 3,900 servers onto about 30 System z mainframes running the Linux operating system. The company anticipates that the new server environment will consume approximately 80% less energy than the current set up and expects significant savings over five years in energy, software and system support costs."

Lastly, even Microsoft has been active in this area for over five years now. The company has released 20,000 lines of device driver code to the Linux Community. The drivers will be available to the Linux Community and customers alike, and will enhance the performance of the Linux operating system when virtualized on Windows Server 2008 Hyper-V or Windows Server 2008 R2 Hyper-V.

The distribution model

The dynamics surrounding Linux continue to be interesting, with the server operating environment market still rationalizing the right mix between paid and free distributions. In terms of Linux operating system deployments, a surprising finding is that there are almost an equal number of paid Linux server deployments, which include Red Hat Enterprise Linux and Novell's SUSE Linux Enterprise Server, as there are those of free Linux distributions such as Debian and Fedora.

However, if we go by IDC's observations, we will find that many free Linux deployments also derive from Red Hat and Novell, and continue to grow despite no revenue. Moreover, the role of non-paid Linux continues to be significant in terms of both unit volume and cultivating a larger customer base. This portion of the Linux server operating environment market continues to expand.

Free Linux server operating system deployments are predicted to grow faster than new subscriptions, thereby leading to a net increase of free Linux server operating systems deployed. However, free adoption could end up hurting Linux vendors in the long run. Meanwhile, an organization that wants to deploy mission-critical applications on Linux servers should plan for commercially supported (Paid) Linux.

Costs associated with business disruption due to system downtime completely outweigh the cost of commercial support for that Linux system.

The road ahead

According to IDC, the worldwide Linux operating systems revenue will cross \$1 billion for the first time in 2012, growing to \$1.2 billion by 2013. However, as per a recent report from IDC, the expected growth rate in Linux server operating system subscriptions and non-paid deployments is expected to slow and will hover around 1.1% over the next five years.

The contraction in server sales in 2009 due to the economic downturn is largely to be blamed for the declining CAGR of Linux servers. However, this low growth rate of new deployments is misleading, since virtualized deployments will be mushrooming on existing servers. The share of business-oriented and mission-critical deployments is also increasing, as Linux is seen as gaining in maturity.

Meanwhile, the impact of virtualization on Linux server operating environment paid subscriptions and free deployments, as well as the pre-installation of Linux client operating environments on PCs, can be considered as early indicators for future market shifts.