

Recognizing a Decade of Innovation

How Migrating from Proprietary OSs Uncovers the Value, Performance, Security and Reliability of Red Hat Enterprise Linux

As Red Hat® Enterprise Linux® celebrates its tenth anniversary, the industry's leading open source operating system has gained a large and growing number of supporters, especially in the public sector where operating system's value, performance, security, Common Criteria certification and reliability stand out.

In a currently tight budgetary climate, government organizations are working to function as cost-effectively as possible. Agencies also face regulatory mandates for energy efficiency and data center consolidation that are driving them to consolidate data centers, servers, applications and services, to reduce costs. Many IT managers are moving to commodity x86-based servers to replace legacy RISC servers. To help ensure reliable, efficient IT operations, an increasing number of government organizations are migrating to Red Hat Enterprise Linux as well.

In the enterprise computing arena, of the server operating systems that were prevalent a decade ago, only two are likely to dominate by 2015 -- Linux and Microsoft Windows, according to research from IDC.

Increasingly, the decision to move to x86 and Red Hat Enterprise Linux has been proven a sound choice, evidenced by a growing momentum of migrations, as well as benefits reported by public sector organizations that have completed migrations. Market share numbers also point to the increased adoption of Linux — server operating system use is trending toward Linux and Red Hat Enterprise Linux as the dominant market share leader in enterprise server operating systems.

As a leading open source server OS platform, IDC reports Linux will exceed four million shipments by 2015 (including worldwide server OS shipments, subscriptions and deployments). IDC has also reported that the growth rate worldwide for application software running on Linux is expected to hover at 25% per year through then. That

healthy level of anticipated growth has been echoed by other analysts, including Gartner, Inc., which has reported that by 2013, "open source technology will be included in 85% of all modern commercial software solutions."

As the use of Linux continues to rise, Unix is fading as server shipments decrease, after years of deployment as the low cost alternative to traditional mainframe environments. Standardizing on Red Hat Enterprise Linux has enabled customers to leave the OS in place, as everything else changed. Customers found they weren't bound to any single supplier's version of Unix and corresponding proprietary hardware. Instead, they could purchase the best hardware for the lowest possible price from aggressively competitive hardware vendors. These

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products all shared a common theme: they were certified to run Red Hat Enterprise Linux out of the box.

At the same time, as government organizations strive to deploy solutions that are less costly and yet still technically acceptable, an increasing number realize that commoditizing servers as much as possible -- while leveraging Linux -- allows them to pick more cost effective

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solutions without sacrificing features, performance, scalability, security and supportability.

Government organizations have discovered that Linux is not only better, faster and less costly than traditional Unix offerings, but it can also be a more secure operating system as well. Due to government’s strong security requirements, SELinux, started by the National Security Agency (NSA), was born. SELinux is considered a rigorously secure and trusted operating platform. Red Hat, along with other companies, worked with the NSA on the development of SELinux, which is built into Red Hat Enterprise Linux, and implements mandatory access controls, and enforces security policy at the kernel level. Leveraging Red Hat’s disciplined approach to developing secure software, Red Hat Enterprise Linux is a trusted OS ‘out of the box’ – a platform that enforces security policy as soon as it’s installed. Red Hat has gone through the largest number of [government security certifications](#), and is considered the most evaluated operating system available.

A Proven Migration Approach

With budgets shrinking, agencies increasingly find they can deploy Windows or Red Hat Enterprise Linux on commodity servers to maintain secure, reliable performance while keeping a watchful eye on costs. Red Hat has developed a proven methodology to assist organizations through the migration process, using a step-by-step approach that is well documented and tested to ensure deployment success.

One of the key factors driving government organizations to evaluate alternative operating systems is licensing and support costs. With Red Hat Enterprise Linux, public sector organizations pay only for subscriptions, not software licenses. Traditional software licenses are costly. With a subscription model, agencies pay a annual subscription instead. This returns value over the lifetime of the subscription as government organizations may access and use all shipping versions of Red Hat Enterprise Linux, gaining all feature enhancements, security updates and hardware and software support. They can also work at their own pace without worrying about vendor-directed forced upgrades. In addition, the subscription model helps

reduce financial risks by delivering predictable costs, as well as access to the expertise of leaders in Linux platform support and development. In fact, public and private sector organizations have found by migrating to Red Hat Enterprise Linux on commodity servers, they can typically cut costs by more than half, according to market research from Alinean, Inc., compared to upgrading to newer versions of Unix on RISC servers. Not only are Red Hat solutions less expensive than alternative upgrade options, but Alinean has reported the migration to Red Hat Enterprise Linux on commodity servers has proven to cut operational costs by more than half, with upgrades providing a return on investment in less than six months.

One technical support leader for a large federal organization described the organization’s use of Red Hat Enterprise Linux and other Red Hat solutions including Satellite, Red Hat Enterprise Virtualization, Red Hat Cluster Suite and Red Hat’s Technical Account Manager service, over the last six years. The technical support leader said Red Hat technology has been used to migrate from Solaris, and “is a better fit for back office applications and information security services such as logging and event monitoring.”

Looking Ahead

Government organizations have come to understand that Red Hat has completed similar migrations for a decade, and offers a mature migration methodology that will provide the best possible roadmap for Unix to Linux migration. Red Hat can help organizations accelerate the adoption of open source technology, while helping them to standardize on commodity hardware and a software

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stack that is easily manageable, delivering lower OPEX and CAPEX.

Meanwhile, Red Hat Enterprise Linux has proven performance on systems with hundreds of cores and terabytes of memory, making it suitable for the largest

enterprise application workloads. The scalability of Linux is proven -- over 91 percent of the Top 500 supercomputer environments run Linux, while Unix is down to 3.8 percent. The reliability of the operating system is evident in the number of organizations that rely on Red Hat Enterprise Linux to run their mission-critical applications, including SalesForce.com, NYSE Euronext, and the U.S. Department of Defense. Well over half of the world's equity trades are executed on trading platforms standardized on Red Hat Enterprise Linux.

With the current influx of mobile devices, and trends such as social media, big data and cloud computing, the number and variety of end-points has grown, as has demand on agency servers. To stay 'mission-ready' agencies must quickly adapt. And the only operating system and development community poised to support agencies in those ongoing transformation efforts is Linux. Linux is at the forefront of cloud deployments, as the basis of Google Android and the operating system supporting Google's cloud offering. Red Hat is also at the forefront of the cloud movement, working with Amazon EC2, IBM, Fujitsu, and others to provide cost-effective, reliable cloud services.

With a Red Hat subscription, agencies gain a robust, scalable and flexible IT application platform designed to meet performance, security and budgetary requirements. They also gain access to award winning expertise and collaboration that will support the infrastructure's entire life cycle. No matter the size or complexity of an organization's IT requirements, Red Hat's dedication to delivering value through the Red Hat subscription means each agency gains the technology, expertise, and value needed to succeed now and in the future.

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From the 25-point Plan for IT reform to the Cloud First policy, the US Government has demanded choice, collaboration, transparency, and cost savings, which is exactly what Red Hat, the world's leading provider of open source solutions, offers. The flagship Red Hat Enterprise Linux is the de facto standard Linux in governments around the world. And Red Hat's cloud, virtualization, management, storage, and service-oriented architecture (SOA) solutions, including Red Hat Enterprise Virtualization and JBoss Enterprise Middleware, bring freedom to federal programs. Together with Red Hat's solutions, Red Hat's worldwide support, training, and consulting services provide everything you need to bring the power of open source into your agency. As Red Hat's Largest Government Reseller, DLT Solutions helps government agencies overcome real-world challenges through its best-in-class information technology products and superior services. Learn more at www.dlt.com/redhat

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