



FIVE STRATEGIES FOR IT AGILITY WITH RED HAT, DELL, AND INTEL

IT departments are constantly under pressure to reduce costs while still delivering optimal performance, innovative technology, and quality service. Finding ways to dramatically cut costs while meeting these demands is critical for IT success. By taking advantage of technology from Red Hat®, Dell™, and Intel®, you can create IT infrastructure that adapts more easily to changing economic conditions. Enterprise-class open software, combined with high-performance, standardized platforms and services, delivers the agility and efficiency you need at a price you can afford. The result: freedom from proprietary vendor lock-in and the ability to capitalize on the flexibility and scalability of industry standards and open technologies.

So where do you start? In this quick guide, you'll find proven strategies for reducing costs with Red Hat, Dell, and Intel while achieving greater flexibility, increased operational efficiency, and improved return on investment (ROI).

STRATEGY #1: STANDARDIZE ON A PLATFORM

Maintaining the status quo by sticking with expensive, proprietary software running on closed systems might seem like a safe move, but this tactic limits your ability to adapt as your business changes. As soon as you invest in high-value, standardized, scalable, and low-cost infrastructure from vendors you can depend on, you can be ready to successfully navigate changes in your business climate.

Running the open source Red Hat Enterprise Linux® solution on Dell™ PowerEdge™ servers delivers essential functionality and performance at a lower cost. Powered by the top-of-the-line Intel® Xeon® processor E7 family, these servers offer speed and scalability. In addition, Red Hat Enterprise Linux is designed to take advantage of Intel processor and Dell server innovations, resulting in a platform that delivers excellent performance for even the largest workloads. For example, business-critical enterprise applications can access more processing power to perform and

meet user demand. Scalability features provide the flexibility to support data- and memory-intensive datacenter workloads, such as databases and high-performance computing (HPC) applications.

While using a full free open source project might seem like a cost-effective approach, a recent IDC¹ study found that enterprises actually reduce overall costs by standardizing on enterprise-class products like Red Hat Enterprise Linux. Cost savings include reducing the number of administrators, increasing efficiencies, and significantly lowering annual downtime cost.

As computing evolves to virtual and cloud environments, it is vital to consider a standardized platform that can support these approaches and adapt as your datacenter needs grow. A Red Hat, Dell, and Intel solution can span all of your environments to run your most important workloads, while providing a solid foundation for future datacenter needs.

STRATEGY #2: VIRTUALIZE FOR FLEXIBILITY

Keeping pace with swiftly changing demands requires an extremely agile IT infrastructure. Virtualization offers unprecedented flexibility, better resource utilization, and simplified administration that delivers greater efficiency at less cost. The Intel Xeon processor E7 family of CPUs used in Dell PowerEdge servers are optimized for virtualization and deliver maximum physical consolidation, yielding up to 29 times more performance than four-socket, single-core servers. As a result, you can consolidate up to 29 servers onto one Dell PowerEdge server, lower operating costs by up to 95 percent, and achieve a ROI in as little as eight months^{2,3}.

Virtualization features in Red Hat Enterprise Linux are designed to leverage the hardware virtualization capabilities provided by Dell PowerEdge servers and Intel Xeon processors. Red Hat Enterprise Virtualization includes a server virtualization management system with advanced support for high availability, live migration, storage management, a system scheduler, and more. A compact, built-in hypervisor helps to quickly and easily deploy virtualized guests. These powerful features supply the cost-effective flexibility to quickly handle change.

STRATEGY #3: SAVE WITH OPEN SOFTWARE

Legacy, proprietary enterprise software typically has sizable, hidden costs in licensing and upgrade fees. While Red Hat software can help you reap significant savings on licensing costs, you also need the security of enterprise-class support. A Red Hat solution combines an innovative subscription model and outstanding support. Unlike traditional software licenses that incur an initial cost and lose value over time, your subscription value is returned in the form of access to all shipping versions of the products (including new releases), a steady stream of enhancements, proactive security updates, and support for additional hardware and software. Subscriptions can be transferred to upgraded hardware without penalty, helping you stay up-to-date without prohibitive licensing fees. The result is lower upfront and ongoing costs, and the ability to invest over time and scale deployments based on evolving needs and budgets.

Red Hat subscriptions include access to a 24-hour global network of experienced, knowledgeable support engineers that can virtually extend your in-house expertise and enable you to deploy with confidence. In fact, Red Hat is the only company ranked in the top two of most valuable software vendors for the seventh consecutive year in the 2010 CIO Insight Vendor Value study⁴.

Red Hat, Dell, and Intel offer easy-to-use management platforms that can help you manage your environment remotely, securely, and reliably—and at a far lower total cost. Management features support grouping systems together to provision, update, and manage multiple servers as easily as a single server. Manual tasks can be automated for easier administration, making it possible to boost the server-to-staff ratio (in some cases, to several hundred systems per administrator) and improve productivity. Using a centralized tool over a secure connection, administrators can manage systems with greater efficiency, consistency, and confidence. The outcome is a streamlined infrastructure that frees your staff to focus on more strategic projects.

Finally, there are more installed units of Red Hat Enterprise Linux than any UNIX platform today, which means there are more skilled administrators available from the start. With a larger pool of talent to draw from, you can save on salaries⁵ and other staffing costs with a Red Hat solution.

STRATEGY #4: IMPROVE PRODUCTIVITY WITH WORLD-CLASS TRAINING

Employees are your most valuable asset. By investing in IT staff expertise, you can ensure optimal system performance, enhance productivity, and mitigate risk. Comprehensive, hands-on training from Red Hat gives your employees the tools they need to optimize your environment. Red Hat training and certification has been widely recognized as a cost-effective, high-impact way to improve operations and drive down costs. In fact, the Red Hat Certified Engineer® (RHCE®) certification was voted the hottest certification in all of IT by Certcities.com.

STRATEGY #5: MAXIMIZE YOUR TECHNOLOGY INVESTMENT WITH A CONSULTING ASSESSMENT

Competition is fierce, and few organizations can survive missteps. Careful planning can save valuable time and effort, particularly when migrating mission-critical systems. Red Hat Consulting teams can work with you to help reduce costs safely and proactively while preparing for future growth. With years of experience solving a broad set of problems across multiple industries, Red Hat experts can help you identify areas where you can cut costs without compromising performance, security, or reliability. With our proven best practices and expertise, you can migrate your environment quickly with minimal impact to operations. Visit redhat.com/promo/corebuild and calculate the ROI of utilizing Red Hat Consulting to assist your migration.

THE POWER OF RED HAT, DELL, AND INTEL

Red Hat, Dell, and Intel are technology leaders in the areas of software, hardware, and processors. Together, they provide the cost-effective innovation, performance, flexibility, scalability, robustness, and enterprise-class support required to help you meet your IT challenges. To find out how Red Hat can help you carve out costs and innovate for the future, visit redhat.com/carveoutcosts today.

FOR MORE INFORMATION

Contact your local sales office or visit redhat.com, intel.com, or poweredge.com for more information.



1. IDC White Paper #227903: Understanding Linux Deployment Strategies: The Business Case for Standardizing on Red Hat Enterprise Linux, Al Gillen, Randy Perry, April 2011.
2. Up to 29:1 server consolidation performance with as low as eight months payback claim estimated based on comparison between 4S MP Intel® Xeon® processor 3.33GHz (single-core with Intel® HyperThreading Technology, 8M cache, 800MHz FSB, formerly code named Potomac) and 4S Intel Xeon processor E7-4870 (30M cache, 2.40GHz, 6.4GT/s Intel® QPI, code named Westmere-EX) based servers. Calculation includes analysis based on performance, power, cooling, electricity rates, operating system annual license costs and estimated server costs. This assumes 42U racks, \$0.10 per kWh, cooling costs are 2x the server power consumption costs, operating system license cost of \$900/year per server, per server cost of \$36,000 based on estimated list prices, and estimated server utilization rates. All dollar figures are approximate. SPECint*_rate_base2006 performance and power results are measured for Intel Xeon processor E7-4870 and Intel Xeon processor 3.33GHz based servers. Platform power was measured during the steady state window of the benchmark run and at idle. Performance gain compared to baseline was 29x (truncated). - Baseline platform (measured score of 33.8): Intel server with four Intel® Xeon® MP CPU 3.3Ghz (single core w/HT, 1MB L2, 8MB L3) processors, 16GB memory (8x2GB DDR2-400), 1 hard drive, 1 power supply, Microsoft Windows Server* 2008 Enterprise x64 Edition R2 operating system, Intel Compiler 11builtSPECcpu* 2006 November 2009 binaries. - New platform (measured score of 1,010): Intel internal reference server with four Intel Xeon processor E7-4870 (30M cache, 2.40GHz, 6.40GT/s Intel® QPI), 128GB memory (64x 2GB QR DDR3-1333), 1 hard drive, 3 power supplies, using SUSE* Linux Enterprise Server 11 operating system, Intel Compiler XE2011 built SPECcpu* 2006 January 2011 binaries.
3. Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations, and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.
4. See internet.ziffdavisenterprise.com/CIOI_Downloads/CIOI-10-Q3-Research.pdf for more information.
5. Median expected salary for UNIX administrators is \$90,538 and \$85,708 for Linux. See www1.salary.com/Linux-Administrator-Salary.html for more information.

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