

SIMPLIFY IT: THE DELL PATH TO INNOVATION AND GROWTH

BY JOE POLLOCK

ENTERPRISES OF ALL SIZES STRUGGLE WITH THE EVER-INCREASING COMPLEXITY OF IT. BY HELPING SIMPLIFY AND STREAMLINE THE REQUIREMENTS FOR ONGOING OPERATIONS AND SYSTEMS MAINTENANCE, THE DELL IT SIMPLIFICATION APPROACH ENABLES ORGANIZATIONS TO RECLAIM THE TIME, MONEY, AND PERSONNEL NEEDED TO TURN INNOVATION INTO A DAILY BUSINESS PRACTICE.

Every day, enterprises around the world struggle with the complexity of IT—and that complexity is increasing. Today, more than ever before, IT professionals have a wide range of responsibilities: aside from maintaining diverse infrastructures that age further each day, they are under constant pressure to rapidly increase IT capabilities to align system functionality with business objectives.

IT professionals are also facing a digital data explosion, with Internet and enterprise users worldwide generating billions of gigabytes of data each year. YouTube, for example, hosts 100 million video streams a day.¹ To exacerbate the situation, smartphones, PDAs, notebooks, tablets, digital cameras, radio frequency identification (RFID) systems, and other devices are blurring the line between business and personal use, further adding to IT staff responsibilities.

Adding to this burden are compliance regulations—such as the Sarbanes-Oxley Act and Health Insurance Portability and Accountability Act (HIPAA) in the United States and the Data Protection Act in the United Kingdom—resulting in many IT organizations storing data for long periods of time. And on top of all this, IT staff must also work constantly to mitigate risks to their operations, ensuring that processes and systems are in place to recover from disasters and protect key assets from security threats.

When trying to meet these varied challenges, the sheer complexity of IT can quickly become unmanageable, regardless of enterprise size or industry. IT simplification then becomes not a luxury, but a critical element of a successful data center—one that can actually enable innovation and spur business growth.

IT COMPLEXITY INHIBITS GROWTH

The more time administrators spend managing and maintaining their IT environment, the less time they can spend developing and implementing new initiatives. In a Forrester report, a survey of 337 IT executives at North American enterprises showed that on average, these enterprises spend about 70 percent of their IT budget on ongoing operations and maintenance, leaving only 30 percent for new initiatives. In that same report, a survey of 452 decision makers at North American enterprises showed that 52 percent of the respondents felt that “driving innovative new market offerings or business practices” was not well supported in their organizations—in fact, this goal was ranked lowest of those listed in the survey. Finally, in a survey of 825 decision makers at North American enterprises, nearly three-quarters cited “improving IT efficiency” as a critical or high business priority for their IT

¹“YouTube vs. Boob Tube,” by Bob Garfield, in *Wired*, December 2006.

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organization—by far the highest-ranked option among those listed.²

What is the source of IT inefficiency, of these ongoing, day-to-day costs? Time-consuming processes throughout the IT life cycle—from planning to purchase, from installation to implementation, and beyond. A heterogeneous, difficult-to-manage mixture of systems, software, data, interfaces, and applications from a variety of sources, requiring too much manual interaction. Aging, inflexible infrastructures that do not scale well and are too inflexible to meet changing requirements. The constant struggle for IT managers and administrators to keep systems running, patched, and up-to-date; make information accessible when and where it is needed; adhere to complicated licensing and service upgrade requirements with hidden costs; control power and cooling expenses; and keep up with the exponential growth of devices and data.

IT simplification can help reverse this trend. IT managers and administrators should be able to acquire, deploy, manage, and maintain their systems easily, and their IT infrastructures should scale flexibly to meet their needs. As Figure 1 illustrates, reducing ongoing operations and maintenance costs enables enterprises to free up resources, reinvest savings back into the core of the business, build a flexible infrastructure to help meet changing requirements, or reinvent the enterprise altogether.

IT SIMPLIFICATION ENABLES INNOVATION

Over a decade ago, Michael Dell envisioned a data center that ran on standardized systems,

and while others touted lofty architectures built on a closed infrastructure, Dell stood alone. The Dell model revolutionized the IT industry, and today, countless enterprises run simple, manageable, scalable IT infrastructures based on x86 standards. This approach is still relevant today.

In fact, Dell itself is built on IT simplification. In 2006 alone, Dell custom-integrated 5.5 million units in its global factories, and it maintains more than 50,000 prepackaged applications as part of the Dell Custom Factory Integration service. The Dell infrastructure includes approximately 130,000 systems worldwide, including 20,000 servers. Despite the global scale of its operations, the company has consolidated 30 data centers down to just 2, and has standardized on only four corporate images: three server images (based on the Microsoft® Windows®,

Linux®, and Novell® NetWare® platforms) and one client image. To control this large an infrastructure, Dell manages its servers as aggressively as its desktops—patching and rebooting all Windows-based servers every month, with a success rate of over 95 percent within the first 72 hours for all 130,000 systems. And it relies on only about a dozen people performing these systems management tasks, an assignment that might ordinarily require five times that many.

The efficiency and flexibility of the Dell global infrastructure makes it well suited to help other enterprises simplify their own IT infrastructures. A common set of principles guides Dell in this goal:

- IT should not be as complex as it is today.
- Enterprises should be able to spend less on maintaining IT and more on enabling innovation than they do today. True innovation should become a daily business practice, rather than an ill-defined goal.
- Not every IT project should require an army of consultants. Technology vendors should share knowledge and tools with their customers to enable them to control their own IT.
- IT should have minimal environmental impact.

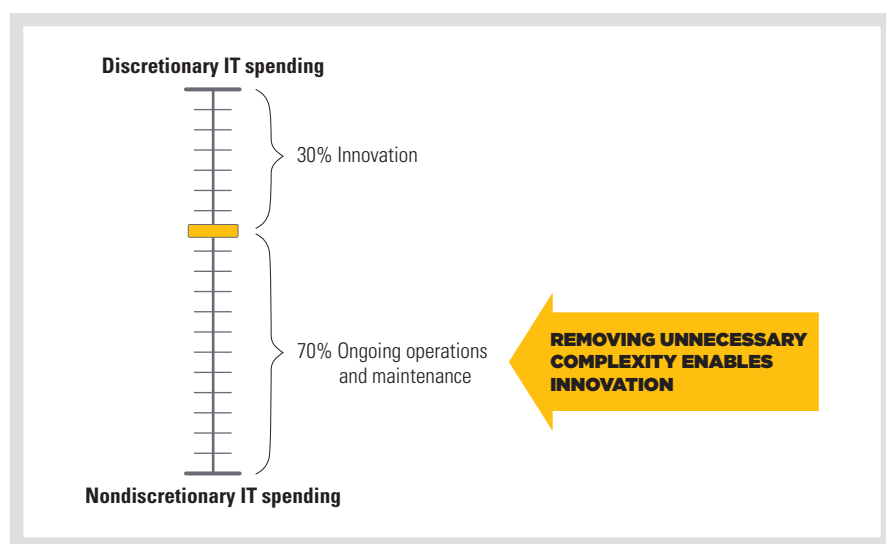


Figure 1. IT complexity inhibits growth

² "2007 Enterprise IT Budget Outlook: North America," by Forrester, February 8, 2007.

- Enterprises should have superior knowledge about their IT environment, their business, and their needs, enabling them to simplify IT across every aspect of their operations.

Enterprises looking to simplify their own IT should be aware that the high margins, lock-in, and excessive maintenance and support costs that were commonplace decades ago, in the world of RISC-based processors and proprietary UNIX® technology, can still be hidden behind a veil of standards-based offerings from other technology companies. Dell does not lock in customers with proprietary technology and outsourcing contracts, nor does Dell prevent enterprises from unbundling software as they see fit, send out armies of consultants, and ultimately own much of the IT infrastructure.

What Dell did to simplify how PCs were acquired, maintained, and upgraded, it is now applying to all levels of IT—taking the same focus on efficiency that helped Dell build one of the world's most streamlined business models and bringing it to bear on the goal of radically simplifying the practice of IT. The goal is to make IT predictable, reliable, and repeatable, enabling it to run as efficiently as a factory. By combining standardized reference architectures with pre-validated solution stacks, best practices, and specialized services, Dell is working to simplify IT from the desktop to the data center.

CUSTOMIZED ROAD MAPS HELP ENTERPRISES MEET THEIR GOALS

The path to a simplified IT infrastructure must take into account how an organization sees IT. Some view it primarily as an operating cost, using it only for their most essential operations and managing it manually. Some view it as a business enabler, automating it to align with the ever-changing dynamics of their market. And finally, some consider it to *be* their business—a strategic asset that defines their competitive advantage and differentiates them in their market.

Of course, most enterprises think of IT in some combination of these roles, and even people within the same organization might view

IT differently depending on their responsibilities. This view frames the meaning of IT simplification. Those who view it as an operating cost might want to acquire as much IT as possible for as little money as possible. Those who view it as a business enabler might want simple tools that can enhance their ability to serve their customers. And those who view it as a strategic asset might seek the latest available technology with the fastest deployment speed.

The Dell approach to IT simplification helps make innovation a daily practice based on an enterprise's needs and how it views IT, with the goal of creating measurable business value. Based on a disciplined, pragmatic approach, IT simplification can streamline deployment, enhance management and maintenance, and provide a foundation that scales easily and cost-effectively to help meet future needs.

The goal of simplicity informs the Dell approach throughout, from products and services to integrated solutions—first by making these elements easy to use; then by making them easy to buy, manage, control, and scale; and finally by basing them on standardized components and platforms to help ensure they can continue to work in the future. Dell looks at the entire technology stack holistically to create an integrated environment that is easy to deploy and manage, and even includes many premium hardware management features at no additional cost. And Dell makes it a goal to share everything it learns with those relying on its products and services, to give those enterprises control over their own technology. Through this approach, Dell enables enterprises to acquire IT quickly, use IT effectively, and scale IT efficiently.

To help understand how IT fits into the needs of the enterprise, and where to focus time and resources, the Dell approach starts with the Dell

Simplification Index. This index is designed to objectively measure three key aspects of IT infrastructure:

- **Efficiency:** Efficiency at every stage of the IT life cycle helps enterprises streamline acquisition, deployment, management, maintenance, and growth.
- **Manageability:** The manageability of each layer of the IT stack contributes to IT staff productivity.
- **Flexibility:** IT flexibility helps determine how responsive the environment is to changing needs.

In addition, Dell is currently developing and testing an IT Simplification Assessment Service with enterprises across multiple industries. This service is designed to outline a customized plan with specific steps to help simplify IT over time, asking key questions to identify where an organization's IT stands today, where its IT should be, what the roadblocks are to reaching that goal, and where IT and the enterprise can gain the greatest advantage. For enterprises that view IT merely as an operating cost, the end result might be a plan to strip out cost and complexity to help reduce overall expenses. For those that view IT as a business enabler, it might be to increase efficiency to help the enterprise move forward quickly. For those that view IT as a strategic asset, it might be to significantly reduce the amount of overall spending required for ongoing operations and maintenance, helping increase the resources available for innovation.

After using its IT Simplification Index and IT Simplification Assessment Service to evaluate the infrastructure, identify the areas of greatest

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complexity, and determine a short, cost-effective path to increase efficiency, Dell creates an IT Simplification Plan that is tailored for each customer and includes a set of milestones. These milestones are based on established and agreed-upon goals and take into account both budget and time constraints. This plan is designed to provide benchmarks for success, help organizations make sound decisions, and help them grow in their own way to achieve a high return on investment.

DELL EFFICIENCY BRINGS BOTTOM-LINE ADVANTAGES

Independent research commissioned by Dell has demonstrated the bottom-line advantages of the Dell simplification philosophy. For example, an IDC survey of 200 large enterprises found that deployment activities cost US\$527 per PC on average, while costing US\$700 per PC or more in specific instances. Companies that optimized their deployments by following the best practices at the core of the Dell PC Deployment Optimization Model, in contrast, saved as much 62 percent (more than US\$400) per PC.³


Dell™ PowerEdge™ servers can offer similar advantages, not only in deployment time but also in operating efficiency and cost-effectiveness. Studies by Principled Technologies that compared the Dell PowerEdge 1955 blade server system with the HP BladeSystem c-Class blade

server system in key categories found that while the Dell system arrived in 2 boxes and took about an hour to deploy, the HP system arrived in 78 boxes and took over three and a half hours to deploy⁴—a significant difference, particularly when scaled to the enterprise level. In a separate evaluation, the Dell PowerEdge 1955 also achieved higher performance per watt than the HP BladeSystem c-Class in every configuration tested.⁵ In addition, Dell tests comparing virtualization performance on two-socket Dell PowerEdge 2950 servers and four-socket HP ProLiant DL585 G2 servers found that three Dell PowerEdge 2950 servers provided an average of 44 percent higher performance, 58 percent higher performance per watt, and 95 percent better price/performance than two HP ProLiant DL585 G2 servers.⁶

Enterprises in many different industries have taken advantage of standards-based Dell hardware and services to help simplify the way they acquire, use, and scale their IT infrastructures. For example, using Dell OpenManage™ software, a VMware® virtualization platform, and Dell Services, Welch’s was able to migrate to an Oracle® enterprise resource planning solution in less than a week, and reduce provisioning time from three weeks to just 15 minutes using a centralized management console.⁷ And companies as varied as Google, Mazda North American Operations, and Unilever have used Dell hardware and services to help

simplify and streamline operations while increasing performance and productivity.⁸

DELL IT SIMPLIFICATION HELPS RESHAPE ENTERPRISE IT

The complexity of IT and the sheer volume of data has become a significant challenge, draining resources that could be spent on new initiatives into mundane operations and maintenance tasks. By applying the same focus on efficiency and standards that its own business is built on, Dell can help enterprises of all sizes simplify the acquisition, deployment, management, and maintenance of their IT infrastructures. And once they have reduced the time, money, and personnel required just to keep their systems running, these enterprises are free to reclaim those resources to help increase innovation and core business value. 

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³ IDC white paper sponsored by Dell, “Dell PC Deployment Optimization Model,” Doc #205282, January 2007.

⁴ “Out-of-Box Comparison Between Dell and HP Blade Servers,” by Principled Technologies, June 2007, DELL.COM/downloads/global/products/pedge/en/DellHPBladeServerOOB.pdf.

⁵ “SPECjbb2005 Performance and Power Consumption on Dell and HP Blade Servers,” by Principled Technologies, June 2007, DELL.COM/downloads/global/products/pedge/en/DellHPBladeServerPerfPwr_report.pdf.

⁶ “Comparing Virtualization Performance: Dell PowerEdge and HP ProLiant Servers,” by Todd Muirhead; Dave Jaffe, Ph.D.; and Terry Schroeder, in *Dell Power Solutions*, May 2007, DELL.COM/downloads/global/power/ps2q07-20070339-Muirhead.pdf.

⁷ “Welch’s Juices Up Its IT Infrastructure,” by Dell Inc., January 2006, DELL.COM/downloads/global/casestudies/461_2005_Welchs.pdf. Results not typical.

⁸ For more information, see “In Search Mode,” by Dell Inc., June 2007, DELL.COM/downloads/global/casestudies/508_2007_google_v11.pdf; “Zoom-Zooming Ahead,” by Dell Inc., September 2007, DELL.COM/downloads/global/casestudies/2007_Mazda_79990886_v3.pdf; and “Taking Stock,” by Dell Inc., September 2007, DELL.COM/downloads/global/casestudies/2007_Unilever_79982804_v3.pdf.