



## Rethink virtualization in business terms.

Virtualization from HP

After achieving initial success with targeted virtualization implementations, data center managers are looking to gain a wider range of benefits from virtualization. Today the focus is shifting to the bigger question: How can we apply virtualization strategies more broadly across our environment to achieve better business outcomes?

### Is your business realizing the full potential of virtualization?

If you're in a data center environment, your organization probably has experience with virtualization and its many benefits. Virtualization allows you to pool and share technology resources to enable supply to readily meet business demand. It is a key enabler of an adaptive infrastructure, which helps you move from a complex patchwork of interconnected systems to a next-generation data center.

Today, virtualization is increasingly recognized as one of the keys to achieving better business outcomes. Virtualization can help you deliver applications and business services more quickly, put unused data center capacity to work on business priorities, and enhance your availability, continuity and security strategies.

But are you making the most of your virtualization opportunities? For many businesses, the answer is no. IT organizations typically deploy virtualization technologies to address specific projects, applications or business services in an isolated fashion. While this IT-focused approach is a step in the right direction, patchwork virtualization deployments bring limited business value—and can create new problems for your IT organization.

This is the case if a virtualization project leads to inconsistent governance and management practices for physical and virtual environments. Islands of virtualization can also add layers of management complexity, compounded by virtual server sprawl and the use of different tools and processes to manage physical servers and virtual machines.

How do you move beyond the challenges of project-based approaches so you realize the full potential of virtualization? Rethink virtualization in business terms.

## National Foods

An HP virtualization solution is helping Australia-based National Foods cut costs, reduce power consumption, save data center floor space and achieve other business-driven benefits. The solution, based on HP Integrity servers and the HP Virtual Server Environment, was implemented as part of a major technology initiative that created a single, consolidated SAP system and data warehouse infrastructure for use across the National Foods enterprise. Among other gains, virtualization has helped the company achieve significant savings in hardware costs, cut disaster recovery times in half and accelerate the deployment of new applications.

## Taking a business-focused approach to virtualization

To realize the full potential of virtualization, and gain better business outcomes, forward-looking companies are taking a broader, more comprehensive approach to virtualization. This approach strives to gain more value from virtualization projects by first considering the implications of any virtualization project on the business services provided by the entire IT environment, from the data center to the desktop.

Consider this thought: Your applications and business services don't care where your resources are located, how they're connected and how they're managed—and neither should you. What really matters is the end result—the quality, performance and availability of the applications and services that keep your business moving forward.

The key is to approach virtualization in business terms. To do that, you need a comprehensive virtualization strategy, implemented through an infrastructure optimized for virtual and physical environments. You need to link business services to the physical and virtual resources delivering those services through business service management and automation capabilities that provide greater insight and control. And you need to leverage virtualization to achieve greater reliability and security, as well as improved manageability of your end-user computing environment.

How do you reach this comprehensive state of virtualization? Begin by taking a step back, looking across your entire technology infrastructure and rethinking virtualization in business terms. In particular, rethink infrastructure barriers, rethink applications and IT operations management, and rethink client architectures. In all of these areas, HP is ideally positioned to help you gain greater returns on your virtualization investments.

## Rethink infrastructure barriers.

### Gain greater business advantages from virtualization.

Virtualization brings newfound freedom and flexibility to your infrastructure. Where it was once rare for several applications to run on one server, it's now commonplace. Workloads are no longer inextricably tied to the infrastructure where they are first deployed. Your infrastructure needs to be designed to let you capitalize on these new possibilities.

Ultimately, you need an infrastructure that lets you free the untapped potential of your data center—one that is built, managed and organized to take full advantage of virtualization. Built-in virtualization lets you capitalize on virtualization quickly. A modular infrastructure helps you flexibly use resources as business needs change. And advanced infrastructure management lets you create a self-optimizing infrastructure that helps you continuously put unused capacity and resources to work, where and when they are needed, to meet business requirements.

### How HP helps

HP provides servers, blades, storage, infrastructure management software and virtualization services—all optimized for a virtualized environment. These elements come together in our end-to-end virtualization solutions that help you simplify the management and automation of your infrastructure.

HP Integrity servers with the HP Virtual Server Environment and HP-UX 11i deliver mission-critical virtualization integrated with high availability right out of the box. HP ProLiant servers and HP BladeSystem are designed for virtualization, providing consistent, reliable performance and ease of management.

The HP infrastructure management portfolio encompasses the core server management capabilities of HP Systems Insight Manager and the HP Insight Control Environment for deploying, monitoring and controlling ProLiant servers. Building on top of these is HP Insight Dynamics – VSE, the world's first integrated solution that lets you continuously analyze and optimize your physical and virtual resources in exactly the same way. It provides a single toolkit that delivers the freedom and flexibility of virtualization across your infrastructure.

Meanwhile, the HP BladeSystem and its Virtual Connect architecture virtualizes the connection between blade servers and the storage and network resources they are connected to, so you can make server changes in real time, independent of storage and network connections. With Virtual Connect, you can wire everything once, and then add, replace or recover servers in minutes.

## City & County Credit Union

City & County Credit Union is a full-service, not-for-profit institution providing financial services to individuals and businesses in southeastern Minnesota. The credit union recently standardized on HP BladeSystem with ProLiant blade servers and StorageWorks blade storage and VMware virtualization software. The institution consolidated 50 physical servers onto ten blade servers hosting 65 virtual machines, and achieved immediate power savings. It also projects \$60,000 to \$100,000 future savings in replacement costs and additional savings of \$5,000 per month in reduced support costs.

Storage is a key part of the equation. You'll want to implement a storage architecture that pools and shares your storage resources, designed for virtualization, with network storage or a shared storage solution. For example, the HP StorageWorks Enterprise Virtual Array (EVA) aggregates and automates array management tasks to manage more storage capacity with fewer resources and the HP StorageWorks XP Disk Array lets you virtualize nearly 250 petabytes on many storage systems behind it—whether from HP, or from third parties—and operate them as one pool of storage.

Want to do more to break down infrastructure barriers? Look to HP Data Center Virtualization Services. These offerings, which encompass strategy, design, transition, support and education, help you leverage virtualization to enable a successful data center transformation.

### Rethink applications and IT operations management.

#### **Leverage virtualization to improve business services.**

Better business outcomes are driven by better business services. The key is to dynamically link business services to the physical and virtual resources that deliver those services, and then manage the services in real time leveraging best practices for business service management, business service automation and IT service management.

With the right processes, tools and virtualization technologies, and a proactive approach to management, you can improve the quality of business services and keep your infrastructure closely aligned with business goals and priorities.

#### **How HP helps**

HP provides business service management and automation capabilities to give you greater insight into your virtual and physical environment and help you gain

greater control from a business services perspective. We facilitate this by looking first at applications and business services. We then work virtualization into a strategic framework established with best practices for business service automation and IT Service Management.

Along the way, we help you weave virtualization into IT governance, your existing policies and procedures, enabling consistency of and control over operations for virtual and physical resources alike, for all applications and business services. We do this in practical terms, with infrastructure and business service management tools that are optimized for both virtual and physical environments.

In these efforts, we make use of our extensive portfolio of management software and service management services. HP Server Automation software, for example, provides a single solution for managing and automating configuration activities across heterogeneous physical and virtual servers. HP Operations Manager software, meanwhile, helps your IT staff improve its efficiency by aggregating server, storage and network performance data from physical and virtual infrastructures to detect and isolate service problems before they affect the business.

In addition, we help you apply business service management and business service automation to drive better business outcomes. This enables you to see your data center from a business services perspective, align actions and decisions to governance and policies, and provide line of sight from business services down through the physical and virtual infrastructure used to provide those services.

### Rethink client architectures.

#### **Enhance reliability, security and management with virtualization.**

The potential benefits of virtualization don't stop at the doors of your data centers. Client virtualization has emerged as a key way to achieve greater return on your overall client investment by improving the reliability, security, manageability and flexibility of your computing infrastructure. This occurs by replacing traditional, dispersed personal computers with centralized computing resources in your data center. End users access these resources through highly reliable thin clients with enhanced security features.

#### **How HP helps**

HP provides client virtualization solutions that help you enhance the reliability and security of your end-user environment while simplifying management. We know that the computing needs of your employee base vary greatly by position, by department, and even by location, project or time of year. That's why HP offers the industry's broadest range of client virtualization offerings.

## Steelcase

Steelcase Inc. is using an HP virtualization solution to gain more powerful, flexible and economical performance for its SAP environment. The solution, based on HP Integrity Superdome servers and the HP Virtual Server Environment, has helped the Michigan-based company reduce support, maintenance, administrative and software costs; protect investments in older legacy applications; and respond faster to business demands. In addition, Steelcase took advantage of HP Pay per use (PPU) leasing to save \$900,000 over three years compared to a straight lease.

These offerings include server-based computing solutions, HP Virtual Desktop Infrastructure (VDI) solutions, and HP Blade PCs and workstations—with all resources dynamically allocated and managed by a common set of centralized management tools and connection protocols for increased simplicity. HP also delivers End-User Workplace Solutions and desktop virtualization services, along with an industry-leading thin client portfolio. HP thin clients can reduce energy consumption by as much as 60 percent over a conventional PC, require little to no maintenance and keep your critical business data safe in the data center.

We complement these offerings with innovative software tools that help extend the user experience. For example, HP Remote Graphics Software (RGS) is an advanced utility that can seamlessly deliver rich graphics, video streaming capabilities, multi-display support, bi-directional audio support and universal serial bus (USB) device connectivity to remote users across all virtualization platforms.

HP is the only vendor to provide a full range of comprehensive virtualization solutions. This end-to-end portfolio makes it easy for your business to realize the full potential of a virtualized IT environment. We provide common infrastructure, management and allocation tools, and connection protocols across your entire client and data center environment.

## Take virtualization to the next level—with HP.

HP is a leader in virtualization with a comprehensive portfolio of technologies and services that encompasses client systems, infrastructure and management tools. HP is a leading partner of key virtual machine software providers—Citrix, Microsoft®, and VMware. We work closely with these vendors to enable their products to integrate well with HP offerings, reducing implementation risks.

What's more, we understand the big picture. We are rethinking infrastructure barriers, applications and IT operations management, and client architectures—and designing products and services that help companies large and small rethink virtualization in business terms.

To help you bring your solution together, we offer an extensive portfolio of lifecycle services for virtualization. Through these service offerings, we take a practical approach to helping you architect, build, deploy and support virtualization solutions that drive better business outcomes.

Regardless of your experience with virtualization, you can look to HP for the technology and expertise to help your organization realize the full potential of virtualization—from the desktop to the data center. Ultimately, we understand what it takes to implement virtualization with the business in mind.

## Ready to learn more?

To learn more about HP virtualization offerings, contact your HP sales representative or authorized HP reseller, or visit us at [www.hp.com/go/virtualization](http://www.hp.com/go/virtualization).

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Technology for better business outcomes