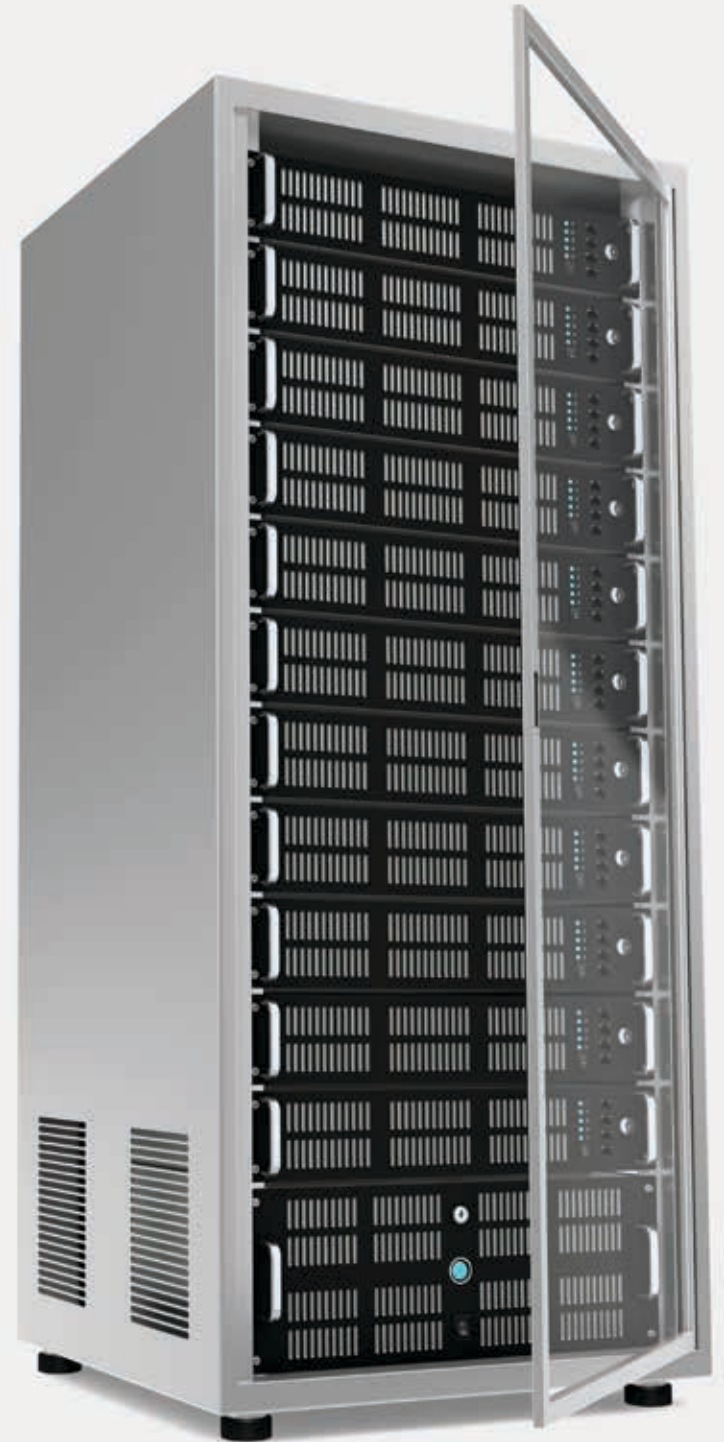


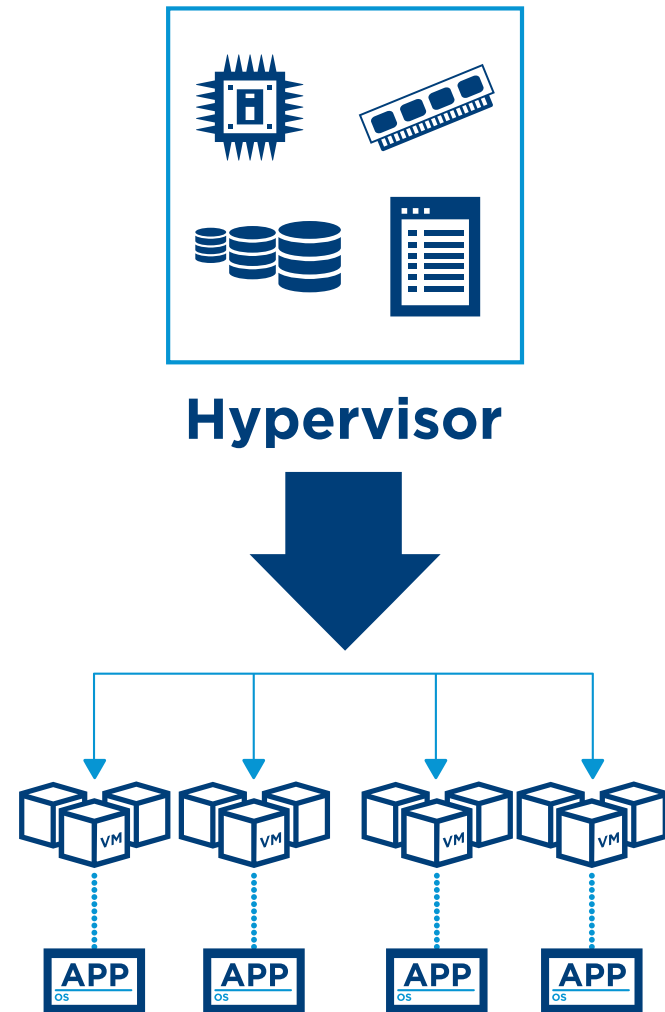
# Beyond Cost Savings: **Four Compelling Reasons to Virtualize Your IT Environment**

Businesses with resource constraints are finding many reasons besides cutting costs for implementing virtualization.



# What Is Virtualization?

Virtualization occurs when virtual versions of computer resources are created. The heart of virtualization is the virtual machine, a tightly isolated software container with an operating system and applications inside. Because each virtual machine is completely separate and independent, many of them can run simultaneously on a single computer. A thin layer of software called a hypervisor decouples the virtual machines from the host and dynamically allocates computing resources to each virtual machine as needed. You can have virtualized desktops, virtualized servers, virtualized storage, virtualized operating systems or virtualized network resources. All of these virtualized resources can be used as effectively as physical resources to run business operations.



# Introduction

You've been hearing about or perhaps have personally experienced the benefits of virtualization. But as a business with resource or budget restraints, you aren't going to start or expand adoption of a technology for the sake of some long-term abstract goal. You are focused – and must stay focused – on the here and now.

According to a recent VMware – sponsored survey, the majority of respondents (70 percent) virtualized when it was time for a major hardware refresh to avoid the cost of buying a large quantity of physical machines. A still significant number (52 percent) virtualized when it was time for a major operating system migration – for example, from Windows XP to Windows 7. In addition, 51 percent virtualized their servers when it was time for a major application license renewal – like Oracle or SAP – and realized they could save significantly by consolidating servers.<sup>1</sup>

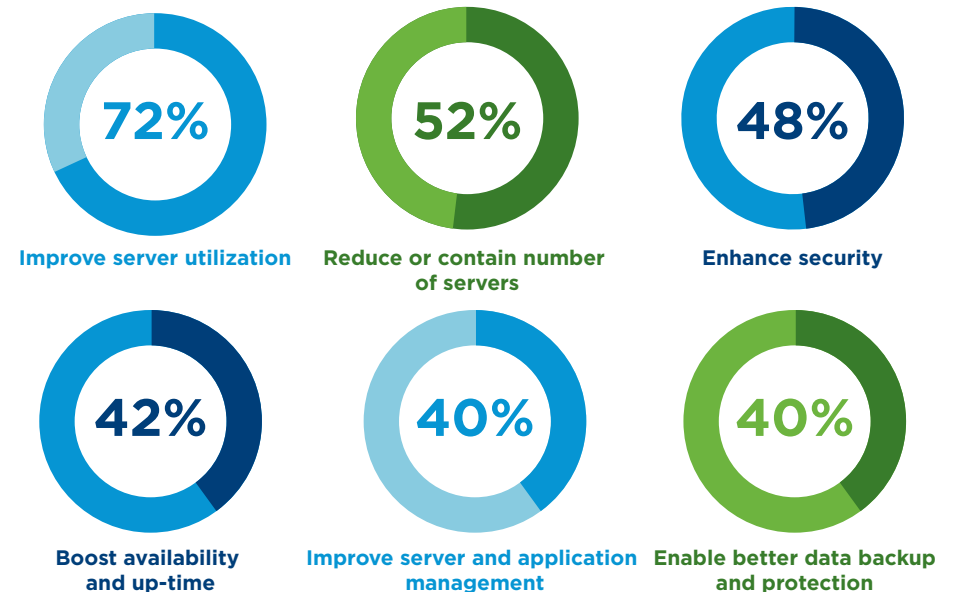
Unplanned system outage is another trigger. CA Technologies performed an in-depth study of businesses in North America and Europe, and estimated that \$26.5 billion in revenues was being lost due to unplanned outages and downtime.

Behind it all is cost.

For that reason, it might take a 'compelling event' before you will consider starting or expanding virtualization in your IT environment. For example, after a severe power outage you might realize you need to protect your business from systems interruptions or security risks. Or your hardware has reached end of life – or you are at the 'buy' point in a hardware refresh cycle – and you want to improve server utilization. Or, maybe you're facing a major systems or application upgrade.

<sup>1</sup>The Benefits of Virtualization for Small and Medium Businesses: Survey Results. VMware. <http://www.vmware.com/>

## Traditional Benefits of Virtualization\*



\*Based on a VMware-sponsored study of business employing fewer than 1000 employees.

# Introduction (continued)

According to many VMware customers, cost savings are one of the advantages of virtualization. Reading between the lines of the top goals identified by the survey, we can see that the desire to reduce cost is behind many of them. After all, improving server utilization means you need fewer physical servers. Given that hardware eats up 40 percent of the average IT budget for businesses with fewer than 1,000 employees,<sup>2</sup> virtualizing can save money there. Improving server and application management can also reduce the personnel time required for IT management, which also reduces cost. And when it's time to refresh physical hardware, you typically will get better return on your investment by virtualizing. More than half of resource-constrained businesses cite server virtualization as a hardware-infrastructure priority because of manageability, lower costs and efficiency.<sup>3</sup>

Seventy-nine percent of businesses that have already virtualized are seeing 'significant' benefits.<sup>4</sup> Over the next two years, they plan to invest 23 percent of their IT budgets in virtualization and convert another 32 percent of servers to virtual hosts.<sup>5</sup>

Resource - or budget-constrained companies will reduce CapEx by consolidating servers - and OpEx by minimizing maintenance, power and cooling requirements. But the overall cost savings are not as dramatic as for larger enterprises, for the simple reason of scale.

In addition to considering cost savings as a leading benefit of virtualizing and resolving your immediate 'compelling event,' think about the 'softer' or indirect benefits that you'll reap as a result of virtualization.

You are likely to achieve one or more of four key benefits when virtualizing your IT environment:

- 1. Improved business continuity**
- 2. Simplified IT management**
- 3. The ability to reallocate IT resources to more strategic ends**
- 4. Enhanced business responsiveness**

<sup>2</sup>'IT Downtime Costs \$26 Billion in Lost Revenue,' by Chandler Harris. InformationWeek. May 24, 2011. <http://www.informationweek.com/storage/disaster-recovery/it-downtime-costs-265-billion-in-lost-re/229625441.files/pdf/VMware-SMB-Survey.pdf>

<sup>3</sup>'State of SMB IT,' Spiceworks, January 2012.

<sup>4</sup>'Demand Insights: The SMB Hardware Infrastructure Market,' Forrester. April 20, 2011

<sup>5</sup>'Small Business Virtualization Roadmap,' CDW. August 8, 2011.

# Ensure Continuity for Your Business

## Reason 1: Business Continuity

Resource-constrained businesses like yours can't afford to close their doors, even temporarily, because a systems outage has occurred or key data has been lost or stolen. In fact, 49 percent of businesses that suffer a disaster never reopen their doors.

According to a VMware survey, business continuity is a leading concern for companies that move to a virtualized IT environment. Sixty-six percent of the companies responding to the survey said that they saw improved business continuity after implementing virtualization.<sup>6</sup>

Virtualization creates a highly-available environment by ensuring that all your applications are accessible all the time. If one of your nodes or servers fails, all its virtual machines can be automatically restarted on another machine, with no downtime or data loss. Because of the isolated nature of virtual servers, websites and applications are more protected with virtual security that is adaptive and shields the virtual machines from malware and attacks as they migrate from host to host.

Another aspect of business continuity is disaster recovery. Along with reduced downtimes and increased security, virtualization provides the foundation for disaster-recovery planning and preparedness. In a virtual environment, the entire system – including the operating system, applications and data – is encapsulated as a set of virtual-machine files. Replication of those files to the failover site enables the entire system to be recovered in a fast, single-step process – reducing typical recovery times from an average of 40 hours, to an hour or less.

<sup>6</sup>The Benefits of Virtualization for Small and Medium Businesses: Survey Results. VMware. <http://www.vmware.com/files/pdf/VMware-SMB-Survey.pdf>

# How They Did It: Customer Snapshots

## Acorda Therapeutics

### Company Improves Disaster Recovery with Virtualization

Acorda Therapeutics, a rapidly growing biotech company with nearly 400 employees, recently implemented a new disaster-recovery strategy. Instead of restoring data from physical backup tapes – which took upwards of 24 hours – Acorda now uses VMware vCenter™ Site Recovery Manager™ to achieve the same recovery results in about 4 hours. The company's IT staff used to spend entire weekends testing disaster-recovery plans to meet U.S. Food and Drug Administration (FDA) guidelines. But with vCenter Site Recovery Manager, the staff can complete disaster-recovery drills from their own homes within a couple of hours.

*"We no longer have to go to a cold site and recover everything from tape and spend literally our entire weekends doing the disaster recovery to meet the FDA's guidelines. Now with SRM we can do it from our own homes and just create a test right then and there, within hours it's up and running. We've proven that we can recover in disaster."*

Josh Bauer, Senior Manager Network Operations,  
Acorda Therapeutics

## Myron F. Steves

### Business Continuity Is Essential

Myron F. Steves and Co., a 200-employee Certified Managing General Agency based in Houston, Texas, invested considerable thought before implementing its own disaster-preparedness strategy. As an insurance wholesaler serving some 3,000 independent agencies, Myron F. Steves not only insures properties that are themselves particularly vulnerable – including most of the beach houses on the Texas Gulf Coast – but it is also vulnerable itself in Houston.

Most critical was the company's voice-over-IP (VoIP) phone system, which would go down if its data center ever did. The insurer virtualized its server infrastructure using VMware vSphere® and implemented vCenter Site Recovery Manager to fail over its product systems to a backup location. A VMware Horizon View™ virtual desktop environment ensures that employees can work from anywhere, even if they are evacuated.

Today, the business can fail over to backup servers within hours instead of days.

The elimination of server sprawl – consolidating 72 physical servers down to 8 – saved \$200,000 in payroll costs and \$150,000 in maintenance costs annually. And the business was able to eliminate a third-party disaster-recovery service costing \$400,000 a year.

# Simplify Management of IT

## Reason 2: Simplified IT Management

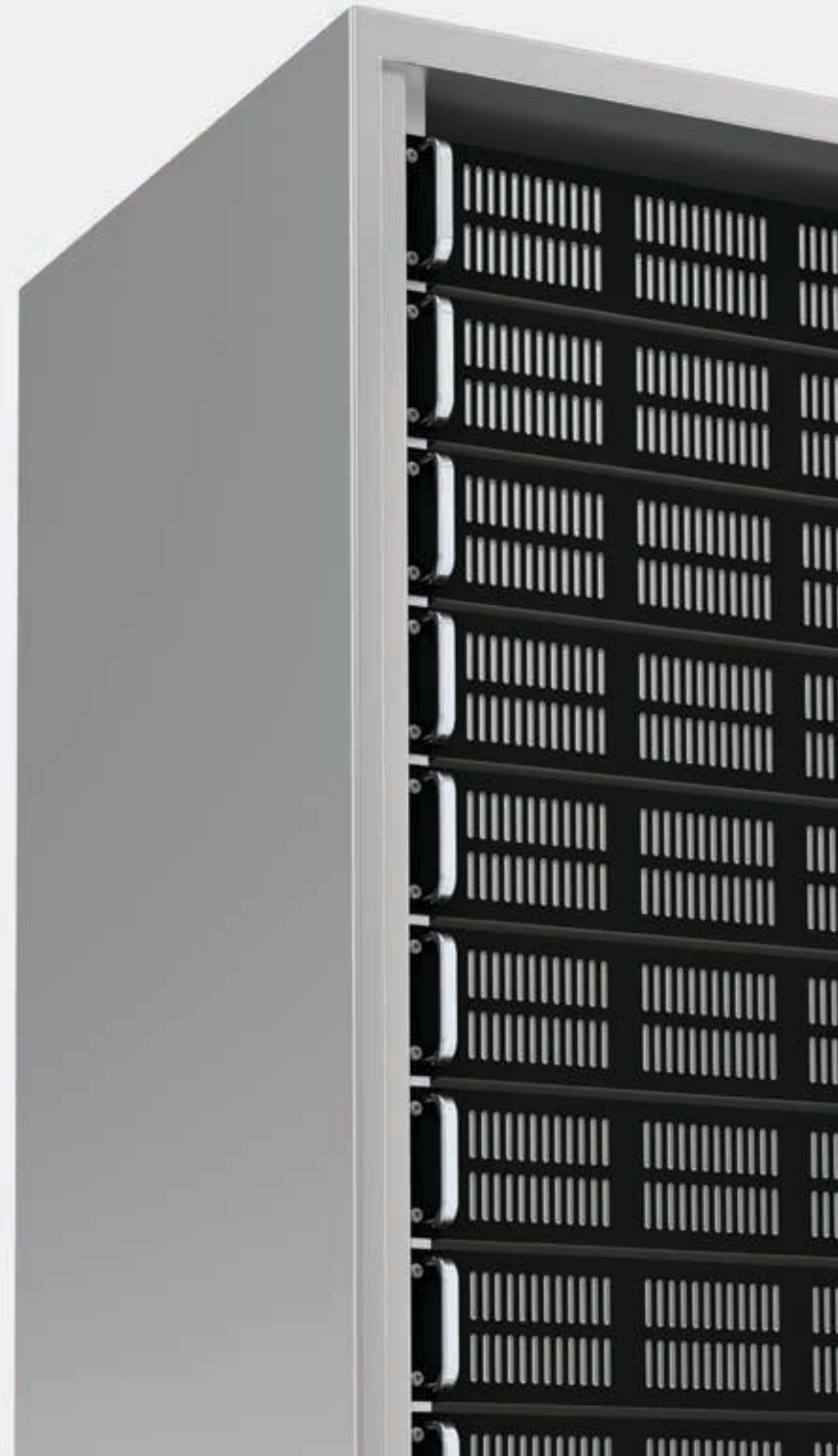
Maintaining servers in a physical IT environment is time-consuming. Nine out of ten IT departments spend at least half of their time doing routine administrative tasks such as adding and managing new server workloads, adding new employees, or developing and launching new applications.<sup>7</sup>

Virtualization management tools from leading vendors include intelligent automation capabilities. These tools eliminate the need for IT workers to manually perform routine maintenance and troubleshooting on multiple physical machines. These tools can also proactively detect and resolve these issues without intervention.

**Many companies that have implemented virtualization have reported IT productivity gains, with 73 percent seeing significant reductions in time spent on routine administrative tasks.<sup>8</sup>**

<sup>7</sup> The Benefits of Virtualization for Small and Medium Businesses: Survey Results, VMware.  
<http://www.vmware.com/files/pdf/VMware-SMB-Survey.pdf>

<sup>8</sup> Ibid.



# How They Did It: Customer Snapshots

## The TUI Group

### Virtualization Made Easy with Management

The TUI Group is a travel and tourism company based in Hanover, Germany.

With the help of VMware, its IT organization has found ways to manage highly virtualized IT operations better, especially in mixed environments such as hybrid clouds. Previously, the business had a number of management tools from different vendors, so it lacked a comprehensive view of the infrastructure.

With VMware vCenter™ Operations Management Suite™, the TUI Group now gets a complete overview of its IT operations, enabling it to troubleshoot problems faster. The TUI Group was able to reduce the time needed to identify the causes of problems by 50 percent.

*"Now we have vCenter Operations on a single pane of glass that can roll down to the storage network and also the infrastructure CPU memory resources to have a clear overview of what could be the root cause of a performance issue."*

Christian Rudolph, Infrastructure Architect at TUI InfoTec

## Seven Corners

### Simplifying IT Is a Priority

Seven Corners is a travel insurance company based in Carmel, Indiana, that started out in 1993 offering specialty travel and trip cancellation insurance to travelers. It then began providing third-party administrator, general insurance and emergency-assistance services to travelers around the globe. It currently has about 800 programs in five major product lines to span hundreds of thousands of members, and it employs 175 people. The company has been enjoying double-digit growth annually, but when George Reed was hired as CIO, he was dismayed to see the company being run on 140 desktop machines 'buffed up' to act as servers. The systems were so old that the staff couldn't even get parts from eBay – a maintenance nightmare.

Reed told the company owners that they were losing \$100,000 in revenue a month because of the IT infrastructure. He also told them that virtualizing would reduce IT labor costs by enough to pay for the initiative in six months.

Reed transformed the server room into a virtual environment and cut the time required to set up a new server from four to five days to four to five minutes. This resulted in tremendous IT personnel productivity improvements and reductions in IT labor costs.

The TUI Group and Seven Corners use cases show that virtualization can dramatically ease management of IT resources – resulting in significant personnel productivity improvements and cost savings.



# Reallocate IT Resources

## Reason 3: The Ability to Reallocate IT Resources to More Strategic Ends

Virtualization – because it enables automation of many tasks that previously needed to be done manually–frees IT workers' time for more important tasks. Worker productivity is the primary driver of ROI in virtualized environments. In a recent survey, 66 percent of IT managers found operational improvements with virtualization in the form of greater efficiencies in support and management.<sup>9</sup>

<sup>9</sup>'Desktop Virtualization Earns Its Stripes: Intel's IT Manager Survey on Virtualization.' September 2011. <http://www.intel.com/content/dam/www/public/us/en/documents/reports/virtualization-desktop-it-benchmarking-survey-report.pdf>.



# How They Did It: Customer Snapshots

## **BancVue**

### Virtualization Helps Company Maximize Resources

BancVue is a financial services company that helps community financial institutions better serve their consumers. They are able to attract new consumers with offerings, such as online banking and marketing tools, that rival those of a megabank.

Switching its virtualization platform to vSphere (from Hyper-V) has enabled BancVue to reduce the number of physical servers, leading to cost reductions and efficiency gains across the business. In the past 18 months alone, BancVue has moved 150 servers to vSphere and now runs on 8 physical servers. Before virtualization, BancVue would have required four times as many physical resources for the same amount of performance - dramatically limiting its flexibility with its IT budget.

All this has helped BancVue reallocate IT resources to more-strategic projects.

After implementing vSphere, BancVue was able to free up 12 developers to produce better software, faster. Testing and quality assurance have also been streamlined, enabling BancVue to bring products to market faster. Furthermore, the company was able to channel the cost savings into hiring seven new systems administrators, who now support 50 to 60 developers a day.

*"When we are able to give developers more ample environments, they can concentrate on development. We can get products out the door more quickly."*

Sunny Nair, Vice President of IT and Systems Operations, BancVue

## **Hong Kong Institute of Vocational Technology**

### Redeploying IT Resources Means More Students Are Served

The Hong Kong Institute of Vocational Education's (Tsing Yi) Department of Information and Communications Technology is equipped with more than 450 PCs and a wealth of enterprise applications and other software for providing hands-on lab training to students. Software installed in the labs needs to be changed frequently to meet the dynamic requirements for conducting multiple lab classes.

As the Institute grew, this became untenable for IT administration in terms of resource planning. Furthermore, incompatibilities among application operating environments prohibited the sharing of server resources, resulting in server-sprawl problems and silos of IT resources with low utilization.

By virtualizing both servers and desktops with VMware technology, the Institute solved all these challenges. But the biggest advantage was the Institute's ability to redeploy its IT professionals to more strategic tasks.

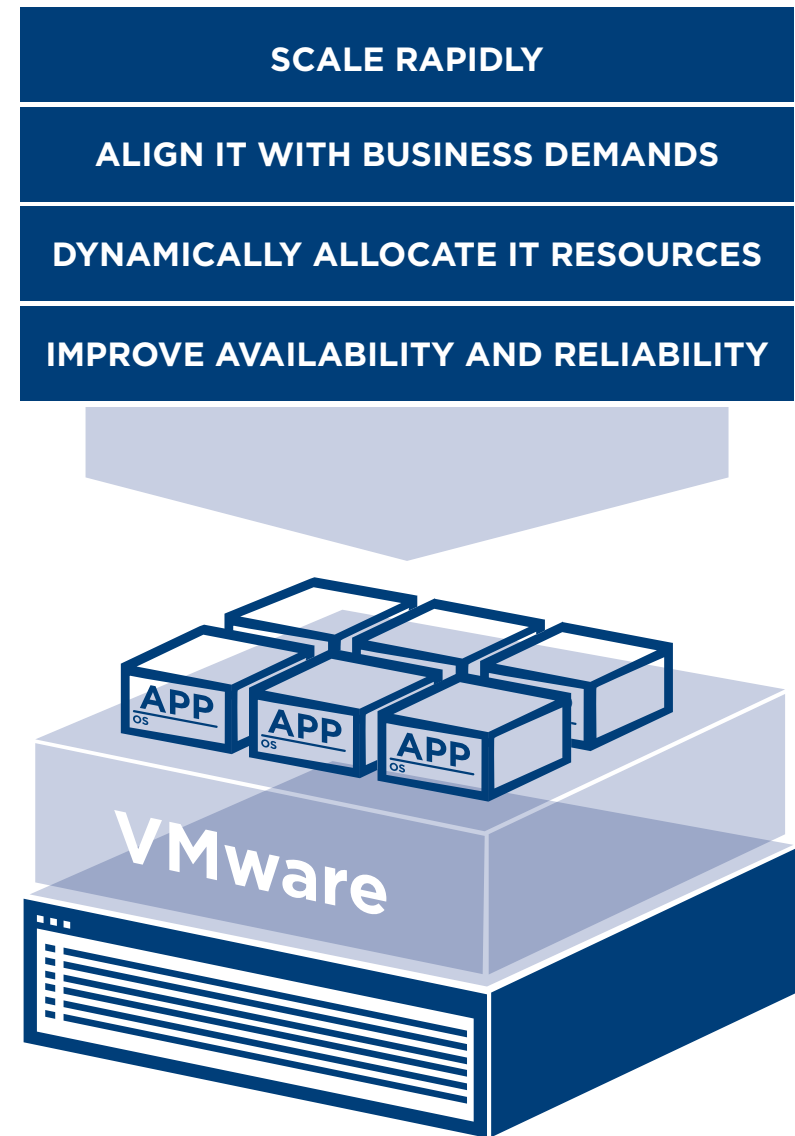
Today, central management of the entire infrastructure and desktops is now much easier. Time spent on lab administration was reduced by more than 50 percent, and the IT staff can focus on more meaningful tasks, such as the preparation of new training classes. Desktop virtualization, in particular, was essential in freeing up IT resources.

# Improve Business Responsiveness

## Reason 4:

### Enhanced Business Responsiveness

Business responsiveness is a critical capability for companies of all sizes. Virtualization creates a dynamic infrastructure that helps businesses react more quickly to changes in highly competitive environments. For example, distributed resource scheduling dynamically allocates resources to applications. Your IT resources can be allocated in this way on a seasonal or even daily basis, depending on your business needs. Virtualization also helps ensure that your applications remain available and high-performing no matter what demands are placed on them.



# How They Did It: Customer Snapshots

## **CharterCARE Health Partners**

### Using Virtualization To Respond Faster to Healthcare Needs

CharterCARE Health Partners is a Providence, Rhode Island-based healthcare provider that employs more than 500 doctors and has nearly 600 licensed beds.

There were several external drivers prompting the move to more electronic systems. Expanding the virtualization deployment, from server virtualization using VMware vSphere® to desktop virtualization using VMware View™, has paid off by making the hospital more responsive to the needs of doctors, nurses and patients alike.

*"We're able to provision desktops quickly and provide them for our most critical business applications such as our electronic medical records."*

Mike Marseglia, Network Engineer, CharterCARE Health Partners

## **Nexica**

### Serving Customers Better Through Virtualization

Nexica, a managed service provider based in Barcelona, Spain, specializes in the storage and management of infrastructure and critical-business applications. It currently runs two data centers – one in Barcelona and the other in Madrid, both based on a cloud-computing model – capable of hosting value added services, such as e-commerce portals, corporate mail and business management applications, for its clients.

Nexica needed a way to accelerate the provisioning of new cloud services for clients – services that enable maximum customization while retaining simplified management and improved availability. Other goals were to improve the management of changes such as rollback, concept tests and test environments; reduce the TCO of the services through more efficient use of hardware; and reduce the data center space per customer.

By virtualizing its data centers, Nexica became much more responsive. It gained the capacity to provision services in hours rather than weeks, opening up the possibility of offering pay-per-use and on-demand cloud services.

# Conclusion

It's clear that virtualization is fast becoming the standard way to manage an efficient IT environment. A 2013 Virtualization Management survey found that organizations are virtualizing every layer of the traditional infrastructure: the server, storage, network and the desktop. This is reflected in the results of the 2012 InformationWeek Global CIO Survey, which revealed that 92 percent of IT executives plan to increase their virtualization initiatives and ranked virtualization as number 1 of 14 possible initiatives to be funded in 2012 and beyond.

Although cutting costs will remain a key driver of virtualization, companies with a competitive edge have seized the opportunity to use virtualization to ensure business continuity, simplify IT management, reallocate IT resources to higher-priority tasks and improve business responsiveness. Managed virtualization is the foundation for the next generation of IT. Any business that fails to realize this will risk falling behind in today's competitive landscape.

For details on how to get started with VMware managed virtualization solutions, go to [vmware.com/virtualization/virtualization-basics/getting-started.html](http://vmware.com/virtualization/virtualization-basics/getting-started.html)

For access to free introductory training videos on products mentioned in this eBook, go to [vmwarelearning.com/](http://vmwarelearning.com/)