Beyond Cost Savings:

Four Compelling Reasons to Expand Virtualization of Your IT Environment

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

Introduction

Perhaps by now you have experienced many of the benefits of virtualization. But as a business with resource or budget restraints, you can't afford to expand adoption of a technology for its own sake. You are focused – and must stay focused – on actions that deliver real value to you.

Because of this, it usually takes a 'compelling event' before you will consider expanding virtualization in your IT environment. For example, after a severe power outage, you may realize you need to further protect your business from systems interruptions or security risks. You may also have reached the end-of-life of your hardware or are at the 'buy' point in a hardware refresh cycle and now want to improve server utilization. Or, maybe you're facing a major operating systems or application upgrade. Whatever the case, you have a need to further extend the benefits of virtualization to your other systems.
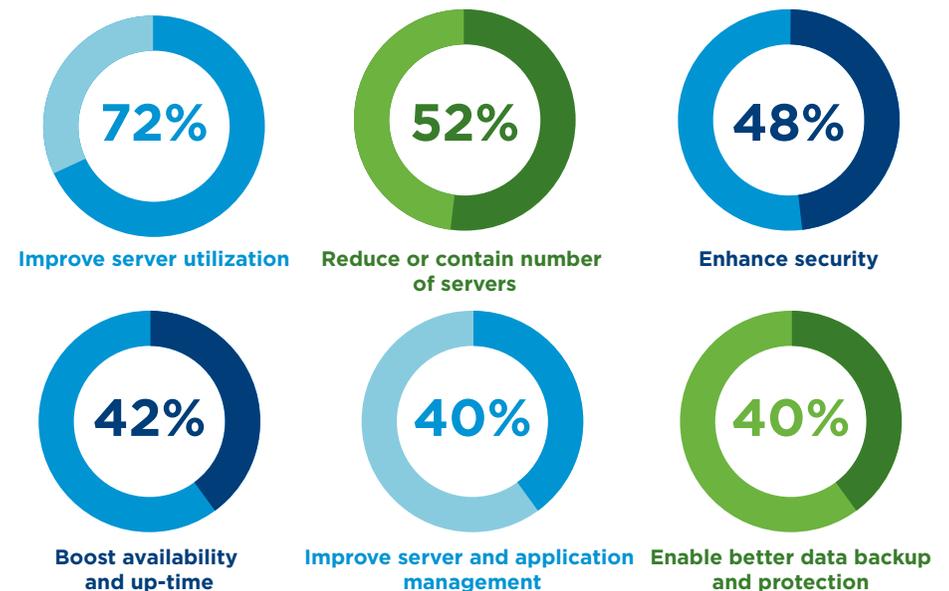
A recent VMware-sponsored Forrester study of virtualization customers backs this up. The majority of respondents (70 percent) virtualized when it was time for a major hardware refresh to avoid the cost of buying a large quantity of physical machines. A still significant number (52 percent) virtualized 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.[1]

Unplanned system outage is another trigger for existing customers to expand their virtualization plans. 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.[2]

[1] Internal VMware-Forrester study. November 2012.
[2] 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.

Traditional Benefits of Virtualization*

72%
Improve server utilization

52%
Reduce or contain number of servers

48%
Enhance security

42%
Boost availability and up-time

40%
Improve server and application management

40%
Enable better data backup and protection

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

Introduction (continued)

Expanding your virtualization deployment gives you the flexibility to quickly add and allocate IT resources as needed. With an expanded portfolio of virtualization tools and technologies, you can roll out and scale applications and services much more easily and quickly.

Finally, demands on IT are changing. Users want Bring-Your-Own-Device (BYOD) policies; call centers often require additional desktops to scale with business needs. Desktop virtualization addresses these issues and more.

According to a majority of our customers, cost saving is a leading benefit of virtualization. In addition, customers have found that improved server utilization and application management can reduce the personnel time required for IT management. Even when it's time to refresh physical hardware, we've seen customers amplify the return on investment by expanding virtualization. In fact, more than half of resource-constrained businesses cite server virtualization as a hardware-infrastructure priority because of manageability, lower costs and efficiency.[3]

Resource– or budget-constrained companies will reduce CapEx by consolidating servers and OpEx by minimizing maintenance, power and cooling requirements. In contrast, the overall cost savings are not as dramatic for larger enterprises for the simple reason of scale. Smaller businesses with less IT resources and assets might eliminate the need for dozens of servers – a different economic formula compared to enterprise-size IT environments.

Rather than hoping for additional cost savings by virtualizing, you should – in addition to resolving your immediate 'compelling event' – think about the 'softer' or indirect benefits that you'll experience as a result of expanding your virtualization deployment.

You are likely to see an enhancement of one or more of these four key benefits when extending virtualization in 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**

[3] Demand Insights: The SMB Hardware Infrastructure Market, Forrester, April 20, 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.[4]

According to a VMware survey, business continuity is a leading driver for companies to move to a virtualized IT environment. Once companies implemented virtualization, 66 percent of those respondents said that they saw improved business continuity in the form of high availability, data security, and reduced downtime, among other benefits.[4]

As you have likely experienced, virtualization creates a highly available environment by ensuring that all your applications are accessible all the time. Should one of your nodes or servers ever fail, all its virtual machines (VMs) are automatically restarted on another machine, with no downtime or data loss. Security is also an issue in business recovery where virtualization can help. Due to the isolated nature of virtual servers, websites and applications are more protected with virtual security that is adaptive and protects the virtual machines from malware and attacks as they migrate from host to host.

Along with reduced downtimes and increased security, virtualization provides the foundation for disaster recovery planning and preparedness in case of an unexpected event such as a flood, fire, or other disaster. In a virtual environment, the entire system – including the operating system, the applications, and data – are encapsulated as a set of virtual machine files. By replicating those files to the failover site, the entire system can be recovered in a fast, single-step process, accelerating typical recovery times from an average of 40 hours down to an hour or less.

[4] 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 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 even if they can't work onsite.

Today, the business can fail over to backup servers within hours instead of days and increase reliability of the servers. The elimination of server sprawl – consolidating 72 HP BladeSystem production servers down to eight HP Blades – saved $200,000 in payroll costs and $150,000 in maintenance costs annually. The business was also able to eliminate a disaster-recovery service that cost $400,000 a year.

Although the cost savings in both the Acorda Therapeutics and Myron F. Steves company use cases were substantial, it was an additional benefit of the main goal: to ensure business continuity. Virtualization proved the most effective way to achieve this.

Simplify Management of IT

Reason 2: Simplified IT Management

Managing 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.[5]
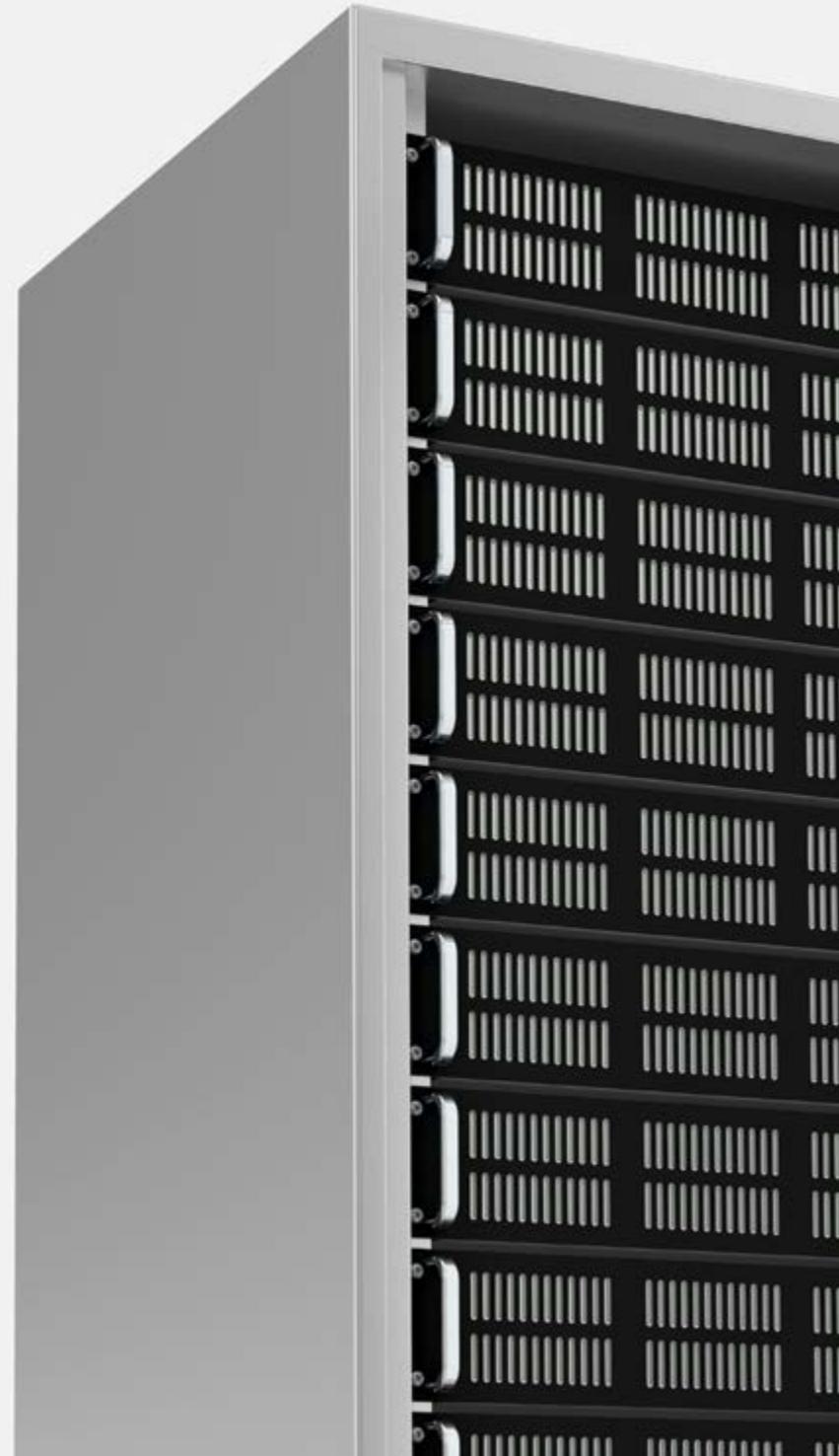
Today's virtualization management tools including HP Insight Control and VMware vCenter, typically include intelligent automation capabilities. These tools eliminate the need for IT workers to manually perform routine maintenance and troubleshooting on multiple physical machines. In fact, these tools not only make it easy to pinpoint IT issues, but they can also proactively detect and resolve these issues without intervention.

What this means is that your IT staff will no longer have to work evenings and weekends to do maintenance, patch systems, or other tasks that formerly required planned downtime and resources.

Many companies that have implemented virtualization have reported IT productivity gains, with 73 percent seeing significant reductions in time spent on routine administrative tasks.[6]

[5] The Benefits of Virtualization for Small and Medium Businesses: Survey Results.
  VMware. http://www.vmware.com/files/pdf/VMware-SMB-Survey.pdf.
[6] 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 like hybrid clouds. Previously, the business had a number of management tools from different vendors, so there was no comprehensive view of the infrastructure.

With VMware vCenter™ Operations Management Suite™, 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, 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 services 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 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.[7]

[7] 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 Snapshot

Hong Kong Institute of Vocational Technology
Redeploying IT Resources Means More
Students Are Served

The Hong Kong Institute of Vocational Education (Tsing Yi) trains and educates students to become an effective and valuable workforce for Hong Kong. Its Department of Information and Communications Technology [Department of ICT], is equipped with more than 450 PCs and a wealth of different software and enterprise applications to provide hands-on lab training to students. To meet the dynamic training requirements, software installed in the labs needs to be changed frequently to conduct the different lab classes.

As the Institute grew, this turned into a nightmare for IT administration in terms of resource planning. Furthermore, incompatibilities of different 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, all these challenges were solved. But the biggest advantage was the ability of the Institute 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 now focus on more meaningful tasks, such as the preparation of new training classes. VMware desktop virtualization, in particular, was essential in freeing up IT resources.

Again, as in other cases, virtualization saved this company money. But the real benefit that virtualization brought was the ability to redeploy those savings into more-strategic initiatives for the business.
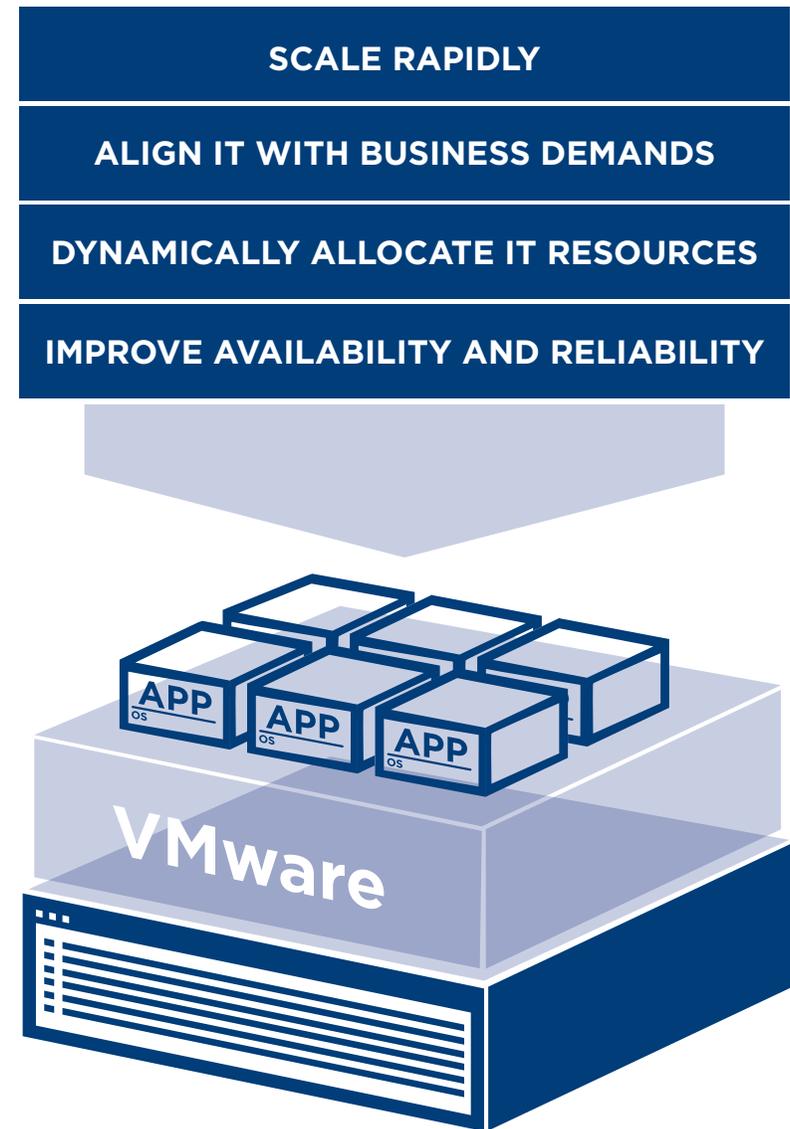
Improve Business Responsiveness

Reason 4:
Enhanced Business Responsiveness

Business responsiveness is critical today for companies of all sizes. Virtualization creates a dynamic infrastructure that helps businesses react more quickly to changes in highly competitive environments. Now is the time to continue to expand your use of virtualization to foster even more responsiveness to customers and the market.

For example, now that you've virtualized, you can use distributed resource scheduling to dynamically allocate 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 Horizon 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

Today, many companies are expanding their virtualization deployments to continue reaping these benefits and more. In fact, InformationWeek's 2013 Virtualization Management survey found that many organizations have already virtualized every layer of the traditional hardware and network infrastructure: including desktops, servers, storage and networks. This is also 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 indeed ranked virtualization as No. 1 of 14 possible initiatives to be funded in 2012 and beyond.

Although cutting costs will remain a key driver of virtualization, companies that have already implemented virtualization are seeing beyond the reduced costs to other benefits, such as ensuring business continuity, simplifying IT management, reallocating IT resources to higher priority tasks, and improving business responsiveness. Virtualization is the foundation for the next generation of IT. Companies that embrace it can look forward to easier deployment and management of even more advanced technologies, such as cloud computing, for greater business value in the future.

For details on how to extend the benefits of VMware managed virtualization solutions, go to **vmware.com/virtualization/virtualization-basics/getting-started.html**

For access to free training videos on products mentioned in this eBook, go to **vmwarelearning.com**