



Making the Business Case for Virtualization

A guide for business leadership on
how to reduce costs, improve business
continuity and increase IT efficiency

WHITE PAPER

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Making the Business Case for Virtualization

Small to midsize businesses are increasingly using virtualization to reduce capital expenses, improve business continuity and make their operations more responsive.

In this difficult economic environment, the IT budgets of small to midsize businesses remain under pressure. The target for payback on IT investments seems to get higher and higher. However, some IT investments offer substantial opportunities for cost reduction, productivity improvements and enhanced business continuity. This can especially be the case with virtualization. And it's not simply a question of reduced expenses and resource requirements; virtualization can make your company more robust, agile and responsive to changing economic conditions and business opportunities.

By utilizing technology properly, businesses can work to stay ahead of the competition and respond to the needs of their customers and partners. At the same time, the IT department can become more responsive to business needs and begin to be seen as an innovator and driving new business initiatives instead of simply assisting the existing operations.

Why Virtualize?

Virtualization does away with the inefficiency of the old “one server, one application” model, in which most servers are vastly underutilized. Virtualization enables one single server to function as multiple “virtual machines,” with each virtual machine able to operate in different environments, such as Windows, Linux or Apache. As a result, companies that have adopted virtualization have been able to consolidate multiple servers onto fewer physical devices, which helps reduce space, power and administrative requirements.

However, virtualization also provides other benefits. It can help with business continuity and complete data protection so companies can achieve continuous application availability and automated disaster recovery across physical sites. With virtualization, businesses are able to simplify backup and recovery of data and systems and increase responsiveness through improved efficiency and flexibility. These benefits allow IT to become a department that helps drive innovation. Virtualization also helps with disaster recovery by letting businesses repurpose existing servers for disaster recovery rather than needing to buy duplicate servers for rapid recovery.

Most larger enterprises have already embraced virtualization, and smaller businesses – those with fewer than 100 servers – are rapidly following suit. Analysts predict the adoption of virtualization among small and midsize businesses will double in the next 24 months;¹ 34 percent have allocated budget and plan to deploy virtualization within a year, and another 17 percent plan to deploy virtualization but don't have budget, according to a fall 2009 VMware survey of 309 senior business and IT managers at small and midsize companies.²

For businesses that have already virtualized, continued expansion is a priority, according to a 2009 Forrester® Research survey of enterprise organizations and small and midsize businesses in North America and Europe.³ Fifty-three percent of enterprises and 33 percent of smaller businesses are looking to expand or upgrade their implementation of x86 server virtualization.

It's easy to see why interest in virtualization is high. By consolidating operations onto fewer servers, businesses can:

- Dramatically lower hardware costs and the associated cooling and space costs.
- Improve productivity across your organization and free up valuable IT time by simplifying your IT infrastructure, which leaves additional time to focus on more strategic initiatives.
- Reduce costly downtime and streamline business contingency planning so you know your data is secure in the event of a natural disaster or other calamity.

Here's how your business can use virtualization to reduce costs and improve efficiencies:

Reduce Costs

Managing IT can be quite costly for some organizations, in time and resources. By virtualizing your server infrastructure, you can help lessen your hardware and maintenance costs and lower your company's energy bill.

1. **Reduce expenses.** The biggest benefit of virtualization is lower server infrastructure costs. With virtualization, you can consolidate excess server and desktop hardware, increasing utilization rates for x86 servers from 5 percent to 15 percent up to 60 percent to 80 percent.⁴ With energy costs and global warming concerns rising, power consumption is another issue for many businesses. Virtualization can help lower energy costs and lessen a company's CO₂ emissions.
2. **Consolidate hardware.** If your business currently uses one server per application, you can save on expensive floor space and help eliminate server sprawl by bringing together multiple applications onto a single server. This can reduce hardware and maintenance costs by as much as 50 percent.⁵

Increase Efficiency and Business Continuity

In addition to cost savings, virtualization has other benefits, including improving staff productivity, business continuity and disaster recovery. It also enables your IT team to focus on more strategic projects that can help speed time to market for critical products or services your business is developing to remain competitive.

1. **Improve productivity.** Because IT employees won't have to order and set up a new server for every new application, you will be able to get applications up and runner sooner. With fewer technical issues to manage, they can focus on strategic projects, such as improving customer service or developing new offerings. 73 percent of small to midsize businesses that have implemented virtualization reported seeing significant improvements on time spent on routine administrative tasks.⁶
2. **Protect your business from downtime and disaster.** Traditional business continuity solutions are expensive and complex to deploy, putting them out of reach for many smaller organizations. Virtualization helps companies achieve faster and easier backup and recovery of key application workloads and data. It also enables you to more cost-effectively switch to a secondary IT site and restore critical business operations.
3. **Improve business responsiveness.** Managing a virtual infrastructure allows IT professionals to quickly connect and manage resources to meet ever-changing business needs, providing them with more flexibility in systems and

applications and having more time to look at strategic initiatives. Instead of being viewed as a cost line item, IT is able to improve response time and help develop and drive new business initiatives.

4. **Secure company assets.** Rather than securing hardware, businesses are securing data, no matter where it resides on the network. Virtualization can enhance a company's ability to increase security because the IT staff is able to apply security patches and move applications between virtual machines to avoid downtime. Since virtual machines reduce your server count, it also leaves your business less vulnerable to security attacks.

The key is to ensure that the virtualization software meets your corporate security policies and ensures regulatory compliance. For example, VMware's **vShield Zones** enables you to run your applications efficiently within a shared computer resource pool while still securely partitioning users and sensitive data.

Why Choose VMware

Perhaps the most important factor to consider in your virtualization purchase decision is the vendor you select. More small to midsize businesses have chosen VMware because of its reliability, ease of implementation and management, ability to deliver high-performance for applications, market leadership and lower operating costs.

In a 2009 Management Insight Technologies study⁷ of 416 small and midsize businesses in North America, Europe and the Middle East, VMware significantly led the market in:

1. **Reliability.** When your IT team deploys an infrastructure platform like virtualization, they count on that technology to be stable and dependable 24/7. According to the Management Insight study, 92 percent of businesses believe VMware to be a reliable virtualization vendor, compared to 59 percent for the next closest competitor.
2. **Ease of implementation and management.** If your IT staff can't deploy and manage technology easily, it doesn't bring value. The Management Insight study found that 85 percent of businesses rate VMware highly on this attribute, compared to only 64 percent for the next competitor.
3. **Performance.** Eighty-eight percent of businesses cited VMware as delivering high performance solutions, compared to 55 percent for the next competitor. This insight is crucial because while virtualization improves capacity utilization on servers, it also has performance implications. VMware has developed technologies to maintain and enhance performance, as well as tools that can help your IT team benchmark and troubleshoot servers to ensure the best ongoing performance.
4. **Market leadership.** VMware pioneered virtualization for x86-based systems in 1998 and continues to lead in innovation. Among businesses in the Management Insight

study, 91 percent cited VMware for its leadership in innovation, compared to only 30 percent for the next leading competitor. Gartner® research supports this belief. In a May 2010 research paper on x86 server virtualization, Gartner wrote, "While challengers are emerging, VMware has a tremendous head start in this market. It is clearly ahead in understanding the market, and is ahead in product strategy, business model, technology innovation, product capabilities and sales execution."⁸

5. **Affordability.** It's up to 29 percent less expensive to run applications on VMware vSphere than with equivalent Microsoft installations, according to research by The Taneja Group.⁹ vSphere is less expensive primarily because it can run up to twice as many virtual machines per physical host than other solutions, lowering the cost of hardware and related infrastructure costs. To calculate your potential cost savings, use VMware's [Cost-Per-Application calculator](#).

When compared to a similar Management Insight study from 2007, VMware actually increased in customer satisfaction and preference relative to the next leading vendor.

[Note: Brand attribute ratings are based on top-two box (i.e., 4 or 5) ratings for the following question: "Please rate X brand on a set of attributes using a scale of 1 to 5, where 1 means 'The statement does not apply to the brand at all,' and 5 means 'The statement totally applies to the brand.'"]

Conclusion: Virtualization Offers Strong Business Benefits

In a challenging economic environment the case for virtualization is even more compelling than ever, given the potentially dramatic cost savings and productivity and operational benefits. By managing a virtual infrastructure, IT professionals can gain flexibility in systems and applications and have more time to help develop and drive key strategic initiatives for the business. VMware, the clear leader in virtualization solutions for businesses of all sizes, offers proven solutions to improve your company's profitability, robustness and responsiveness.

Sources

- ¹ VMware Virtualization for Small & Medium Businesses fact page
- ² The Benefits of Virtualization for Small and Medium Businesses, VMware survey of 309 senior business and IT managers at small and medium businesses in the United States and Canada, fall 2009
- ³ Forrester Enterprise and SMB Hardware Survey, North America and Europe, Q3 2009
- ⁴ VMware Virtualization for Small & Medium Businesses fact page
- ⁵ VMware Server Consolidation data page
- ⁶ The Benefits of Virtualization for Small and Medium Businesses
- ⁷ Blind market virtualization study of 416 IT professionals in North America and Europe conducted by research firm Management Insight Technologies
- ⁸ Magic Quadrant for x86 Server Virtualization Infrastructure, Gartner RAS Core Research Note, May 26, 2010
- ⁹ Evaluating the ESX 4 Hypervisor and VM Density Advantage, The Taneja Group, September 2009

Virtualize Servers with VMware

Cut capital and operating costs and increase IT service delivery without being locked into limited choices of operating systems, applications and hardware with VMware vSphere. VMware vSphere™ is the industry's most complete and robust virtualization platform.

Whether you're looking for affordable enterprise-class virtualization or looking to achieve high availability with zero planned downtime for mission-critical applications, it's possible with VMware.

VMware vSphere Editions

vSphere is available for midsize and large businesses in four main offerings targeted for various deployment scenarios. Each edition is licensed based on the number of processors on the physical server hosts that you want to virtualize and scales easily by adding more licenses to your environment.

- **VMware vSphere™ Standard** provides an entry solution for basic consolidation of applications to slash hardware costs while accelerating application deployment.
- **VMware vSphere™ Advanced** provides a strategic consolidation solution that protects all applications against planned and unplanned downtime to provide superior application availability and data protection.
- **VMware vSphere Enterprise** provides a strategic platform for minimizing downtime, protecting applications and data, and automating resource management.
- **VMware vSphere™ Enterprise Plus** includes the full range of vSphere™ features for transforming datacenters into dramatically simplified cloud computing environments that can provide the next generation of flexible, reliable IT services to their businesses.

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