WHITE PAPER

VMware Hosting

An Analysis of the Power and Cost-Savings Benefits of VMware

Virtualization is one of the hottest commodities in the world of IT. Virtualization is a technology that enables organizations to lower operating expenses and power consumption by optimizing resources and improving the overall use of underlying hardware.

A number of players have emerged in this burgeoning field, but not all are able to deliver the cost savings of VMware, the pioneer and uncontested leader of virtualization. In this white paper, you will discover how VMware is playing its part in the hosting industry by delivering cost-benefits to organizations throughout the IT sector.

The Craze Behind Virtualization

In its most common application, virtualization acts as a technology that makes it possible to run multiple virtual servers within a single physical machine. The process it relies on enables entire IT environments to be consolidated, resulting in a better overall utilization of hardware resources, as well as lower energy consumption. Below are more details on the distinct benefits virtualization has to offer:

Reduced Power Consumption - A direct result of virtualization is lower power consumption and cooling requirements. This is a factor that lessens the need for costly, specialized power circuits, as smaller inexpensive units are capable of keeping the equipment thriving. Virtualization's ability to lower power consumption can help organizations enjoy significant cost savings over the long run.

Lower Carbon Footprint - Experts in the IT field are proudly touting virtualization as a green technology and rightfully so. The fact that it cuts down on the number of physical computers required means a smaller footprint in the data center, server room, or wherever server hardware is stored. As a result, the manpower needed to physically maintain and support that hardware is typically reduced, which results in the added benefit of cost savings.

Optimal Hardware Utilization - Aside from cost savings and energy efficiency, one of the most notable benefits of virtualization relates to hardware utilization. It allows for multiple operating systems and configurations on a single server, making it possible to run a copy of Windows right beside Linux or another supported platform. Without this process, an organization would need a separate server to host each individual operating system or perform tedious configurations in order to efficiently run the necessary applications. This aspect alone is one that attracts many organizations to virtualization.

The Hidden Costs of Virtualization

On the surface, virtualization is a technology that appears to be all upside with little to no drawbacks. Companies that provide this technology often leverage its cost effectiveness as a marketing ploy to attract organizations looking to save money on their infrastructure.

While there are certainly savings to be obtained, they are not necessarily guaranteed. In fact, virtualization can actually turn out to be a very costly endeavor, particularly for those that are not aware of the hidden expenses the service providers do not typically expose.

Perhaps the most common misconception about virtualization is that because it reduces the need for physical servers, the overall costs associated with hardware maintenance and support is automatically reduced as well. Unfortunately, this is not always the case. True, the technology does facilitate optimal consolidation by enabling a single piece of hardware to play host to five virtual machines. However, each operating system instance, application, and database associated with those newly created logical partitions must be administered, a factor that introduces a greater level of complexity and could potentially call for additional manpower.

Organizations must also keep in mind that a virtualized environment means changes will need to be made to a variety of internal processes. In addition, running your mission-critical applications on fewer servers means planning for capacity becomes far more important, and a host of different factors must now be considered. These variables include configuration, regulatory demands, and management procedures among others. Although analysis of existing operations can be performed to help prepare for these adjustments, virtualization doesn't automatically reduce the overall staff and resources required to support an IT infrastructure like some vendors would lead you to believe.

One of the many reasons organizations deploy virtualized environments is to save money on expensive software licenses. As we mentioned before, savings are up for grabs, but there is much that needs to be taken into account in order for them to be realized.

For starters, it is critical to know that the software game has changed drastically over the years. Many of today's vendors are imposing strict licensing models priced on a per server or per processor basis, a move that enables them to remain profitable in spite of the increasing prevalence of the virtualized infrastructure.

Here is an example to give you a better idea of how software licenses impact the cost of virtualization. Let's say you have three physical servers equipped with single core processors. Each server is running a licensed copy of a leading customer relationship management program. Now if you were to migrate that application to a more robust server with say, dual processors by way of virtualization, it is very possible that the price for that license could shift from a single processor to a multi-processor model, amounting in additional fees your organization may not be able to afford.

Furthermore, while the licensing fees for the actual software itself may not change, the cost of the middleware applications needed for your systems to function to full capacity just might. This is an often overlooked aspect of virtualization that results in organizations spending more money than initially intended.

Saving money on software licenses and manpower is very possible to achieve with virtualization. However, this luxury is one that is usually enjoyed by the organization that standardizes their environment and minimizes the complexity of the deployment, both of which can be achieved by doing things such as reducing the number of operating system versions and getting rid of unnecessary software tools.

When it comes to virtualization, a successful deployment is generally based on management's ability to standardize and plan for increased administrative complexity that will impact their infrastructure beforehand. Because these are tasks some organizations find difficult, many of them seek out third-party services for the answer, often finding the solution in virtual hosting.

VMware Cost-Benefits in Action

Proof of VMware's cost benefits can be seen in its application by the city of Portland, Oregon. In 2004, Portland found itself with a huge IT dilemma on its hands. The city's Bureau of Technology Services had the need to create an Active Directory laboratory complete with the performance, security and capacity to make the project a success. Instead of purchasing 16 servers, which the city estimates would have cost it approximately $80,000 in hardware investment, Portland improvised and created a virtual lab by utilizing GSX Server, VMware's very first server virtualization product.

In the end, the city of Portland was able to accomplish its goal with just two physical servers and reported to not only saving money on hardware, but also on the rack space required to house that equipment, another factor that drives costs.

Approximating the Costs of Your Virtualization Needs

One of the most important factors organizations need to take into account before deploying any new technology is the costs associated with implementing it, as well as keeping it up and running.

As a way of providing guidance for those considering optimizing their infrastructure with virtualization, market leader VMware created the Cost-Per-Application Calculator, an online tool that provides a roundabout figure on how much money this technology will allow them to save. Leveraging the basic metric of cost per application, the system has been designed with the input of industry analysts and customers who actually saved money by deploying virtual infrastructures.

VMware has consistently outperformed other vendors in terms of delivering cost savings, and its Cost-Per-Application calculator helps organizations visualize the approximate cost of deploying a virtual infrastructure based on the following criteria:

- Number of virtualization applications required (10 to 1000 virtual machines)
- Types of server hardware to be virtualized

- Network storage type (Fiber channel SAN, ISCSI SAN, or NAS)
- Competing vendors (Microsoft, Citrix).
- VMware product (VMware vSphere 4 Edition Essential Plus, Standard, Advanced, Enterprise, Enterprise Plus).
- Management of virtualization deployment (physical or virtual)
- Cost of electricity (low, average, high)
- Cost of data center space (low, average, high)

The VMware Cost-Per-Application Calculator may not be the definitive solution to performing cost analysis for a virtualization deployment, but it does help organizations get on the right foot by not only enabling them to visualize the cost of implementing VMware platforms, but virtualization technology in general. Overall, it is a viable tool for determining whether or not this technology truly fits in the budget set aside for your business.

The Cost-Benefits of VMware Hosting

If you have decided that virtual hosting is the right move for your organization, VMware is arguably the best platform for the job, especially if saving money is one of the goals you have identified. Below are just some of the qualities that make it a highly effective cost saving solution:

Efficient System Consolidation - A hosted VMware solution enables organizations to save tremendously on the expensive licensing fees attached to software. It can also help lower costs associated with personnel by virtually eliminating the amount of manpower that is required to maintain physical hardware and software. Moreover, the centralization and automation of virtual systems allow for more strategic execution of management tasks. All this is made possible by VMware's ability to efficiently consolidate and optimize system resources.

Simplified Management - VMware hosting is generally affordable due to the mere structure of the managed hosting segment. As a customer, there is no need for you to purchase any additional hardware or software, as the physical server, operating system, and all the components needed to get up and running are provided. With VMware hosting, you simply pay a minimal fixed fee and leverage the provider's existing infrastructure, allowing you to save tremendously in terms of management expenses.

Data Security and Reliability - Excessive downtime can be an absolute nightmare for any business. After all, if your systems are not available, then they cannot be accessed by your customers, which usually mean that no monetary transactions can be made. By enlisting the services of a reliable VMware hosting provider, you can rest assured that your systems will be up and running when mission-critical tasks need to be performed. Combine this aspect with the data protection and security features of the VMware platform itself, and you have a solution that offers the peace of mind you need to rest easy.

Affordable, Reliable Hosting VMware Hosting With Xaccel Networks

In web hosting, the service provider you choose can either make or break your business initiatives. Although it is an entirely different animal in comparison to popular services like shared hosting, virtual hosting is no exception.

The underlying point of this paper is to stress how important it is to know that having access to capable software and decent hardware doesn't necessary make a firm the best choice for virtualization. It takes a company that understands this technology and has the infrastructure to support it – a company with the foundation and reputation for helping clients successfully meet their goals.

Xaccel Networks is a specialist in the area of virtual server and managed IT hosting solutions. Offering a vast selection of products, our portfolio is equipped to service customers with a wide range of requirements and specifications. From public clouds to hybrid solutions, we deliver rock-solid VMware platforms that enable you to enjoy the enhanced performance, security, cost savings, and every other benefit virtual hosting has to offer.

With data centers in Philadelphia, Pennsylvania and Houston, Texas, the Xaccel Networks infrastructure was built from the ground up to provide the highest level of reliability and availability. Both facilities are SAS-70 HIPPA complaint and complete with state of the art features that enable the infrastructure and our customers to thrive.

Xaccel customers obtain peace of mind thanks to end-to-end redundancy that sees data stored on top of the line Sun Microsystems server hardware and every piece of data replicated in real-time between both data centers. UPS systems and backup generators are in place to ensure availability in the midst of outages and disruptions, while advanced security systems and on-site personnel ensure that your investment is protected.

Whether you are considering it for development needs or business purposes, virtual hosting makes an excellent choice for providing a platform of stability, security and exceptional performance. As veterans with diverse backgrounds and years of experience in the IT field, Xaccel Networks has the expertise needed to help you make the most of virtual server hosting and take your initiatives to the next level of efficiency. Reliability, affordable pricing, and dedicated customer support are the qualities we stand by to ensure that our customers receive the best possible service day in and day out.

Conclusion

Virtualization is far more than just another IT fad. It is a very useful technology, and one that continuously proves that it is here for the long term. What is even more noteworthy is how quickly virtualization is growing and being deployed in such a great variety of ways.

According to a 2009 survey, VMware customers are increasingly deploying more virtual machines for their infrastructure and finding success with different applications of the technology. The survey highlighted how companies are going beyond servers to virtualize popular enterprise applications such as Microsoft Exchange, SharePoint and SQL Server. Considering the acceptance and widespread adoption, it may be safe to assume that we have only received a small sample of what virtualization is truly capable of.

As the global leader of the market, VMware will undoubtedly evolve with the technology and provide new products to support the ever changing demands of its customers. Organizations across the world rely on its expertise in virtualization to boost productivity, improve accessibility and availability, lower power consumption, and more importantly, cut costs. This is something that is unlikely to change, no matter how competitive the market becomes. The good thing about virtual hosting is that it caters to SMBs that lack the infrastructure and resources needed to harness the power of the VMware platform, enabling smaller organizations and even individuals to operate at the efficiency of a well-oiled enterprise.

The number of options on the market is growing, but VMware is the logical choice for virtual server hosting. However, not even its diverse selection of products can absolutely guarantee that you will get a bang for your buck. For this reason, it is vital to do your research before signing up with a provider. This process requires thorough evaluation, as you need a partner that can be relied on to deliver a quality service and consistently meet your needs. It can be hard work in the beginning, but with the cost-benefits and unique advantages of VMware hosting, you will be glad you put in the work once those efforts come to fruition.

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Xaccel Networks LLC
380 US Highway 46 Suite 500
Totowa, NJ 07512

Phone: 201.806.2602
Fax: 201.806.2604