VKernel Case Study: ABNB Federal Credit Union

"We immediately got significant value from our deployment of VKernel's Capacity Analyzer by learning that we were running at 60-70 percent of our CPU and memory capacity. This allowed us to better allocate and optimize our VMware environment – reducing utilization to 10-20 percent and enabling us to plan the expansion of our infrastructure without having to make additional server purchases."

Hersey Cartwright, Network Operations Manager, ABNB

Industry: Banking and Finance

Challenge

When transitioning physical servers to virtual, the physical server allocations were replicated in the virtual environment, resulting in heavy CPU and memory utilization and high CPU wait and ready times. ABNB needed better visibility into its resource utilization to optimize its VMware infrastructure.

Solution

Using the VKernel Capacity Analyzer ABNB gained immediate visibility into its resource utilization and reduced CPU and memory consumption from 60-70 percent down to 10-20 percent.

VKernel at Work

Capacity Analyzer proactively and continuously monitors shared resource capacity utilization trends in VMware ESX environments across hosts, clusters, and resource pools to properly plan for growth, ensure optimal performance, and lower the costs per virtual machines.

Deployment Environment

- VKernel Capacity Analyzer Virtual Appliance
- VMware ESX Server 3.5 on HP ProLiant DL380 Dual Quad-Core servers
- Guest operating systems: Windows Server 2003 and 200, Windows XP, Linux, and virtual appliances
- Applications: Exchange, SQL, VMware Virtual Desktop Infrastructure (VDI), Active Directory, Domain Controllers, and other applications

ABNB Federal Credit Union

For over forty years ABNB has maintained a commitment to providing quality products and services along with professional and personal service to its members. As a not for profit financial institution, its clients are more than just members – they are owners. Currently, ABNB is serving over 49,000 members and is one of the largest home-based financial institutions in the area of Hampton Roads, Virginia. For more information, visit www.abnbfcu.org.

Earlier this year when it came time to refresh its physical servers, ABNB decided to completely virtualize its data center, including many critical applications. To ensure high performance levels, Hersey Cartwright, network operations manager for ABNB, was transitioning physical servers to the new VMware infrastructure with their exact physical resource allocations. "We did this because we thought it was important to the performance of our virtual servers," stated Hersey. "What we did not realize was that we would start running into performance issues, such as high CPU wait and ready rates because virtual machines (VMs) were contending for the same allocated shared resources."

While VMware's VirtualCenter provides a lot of important data, Hersey still needed a complementary, third-party solution that could expand on what VirtualCenter was providing without spending countless hours writing custom scripts. He needed to see how resources were being utilized and also get visibility into what is going to happen down the road to be more proactive.

"Upon immediately deploying the VKernel Capacity Analyzer, I saw right away that we were having CPU and memory bottlenecks," said Hersey. "Even though our virtual servers were over-allocated, we were seeing 60-70 percent utilization, which was very high. Capacity Analyzer provided the information we needed to better allocate resources and that resulted in CPU and memory utilization dropping down to 10-20 percent." The significant reduction in resource utilization that VKernel provided is now allowing ABNB to maximize its existing VMware server investment. "We will not have to invest in additional processing power or memory to more than double the amount of VMS we can now add to our current servers – affording us a considerable cost savings," added Hersey.

Hersey continues to use Capacity Analyzer on a day-to-day basis to constantly monitor resource utilization. He has set alerts on CPU and memory usage to proactively ensure optimal performance levels of critical application servers that are essential to ABNB's business, such as Exchange, SQL, and Active Directory. If there is a VM giving Hersey trouble, Capacity Analyzer will proactively alert him to the problem so that the proper corrective measures can be exercised.

Additionally, Hersey is using VKernel's free search utility, SearchMyVM, to quickly find information and items throughout his environment. "I came to find out about VKernel by downloading and using SearchMyVM," Hersey said. "I was so impressed with its capabilities and the amount of time it was saving me in trying to find things like expired snapshots and how many servers are running Windows 2003. It was this first impression of VKernel that was my inspiration for looking into how Capacity Analyzer could help me."

Results

- Gained immediate visibility into resource utilization trends throughout its VMware environment to significantly reduce CPU and memory utilization from 60-70 percent down to 10-20 percent utilization
- Making better decisions and constantly improving the performance of its VMware ESX Server environment by having actual resource (CPU, memory, network, and storage) utilization data
- Maximizing ABNB's investment in its virtualized servers by knowing that the company will not need to make additional and expensive server purchases to meet its planned virtualization growth

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