

VKernel Case Study: Tieto



Industry

Hosting and IT Services

Challenge

- Automate resource utilization reporting for both customers and internal management
- Automate resource management operations to eliminate waste and inefficiencies in the virtual infrastructure
- Improve capacity planning to better serve customers and accommodate growth

Solution

VKernel vOperations Suite

Results

- Automated customer report generation and daily resource management operations
- Discovered a significant amount of over-allocated computing resources
- Optimized resource utilization with resource rightsizing and eliminating data waste
- Eliminated the need to hire additional staff

“The VKernel suite does automatically what would otherwise require a full-time staff member doing manually. It also delivers better recommendations for how to optimize our resource allocation than we were able to get with our previous processes.”

– Geoffrey Ekman, *Technical Specialist*, Tieto

Tieto

Tieto (www.tieto.com) is the leading IT services company in northern Europe, providing virtualized hosting and product engineering services. The company’s highly specialized IT solutions and services, complemented by a strong technology platform, creates tangible business benefits for its local and global customers. With some 18,000 experts, the company aims to become a leading service integrator by creating the best service experience in IT. Tieto has invested in new, energy efficient data centers in Finland, Sweden and Russia. In May 2011, Tieto’s Finland data center received the internationally renowned Green Enterprise IT (GEIT) Award from the US Uptime Institute.

The Need: Resource Management and Capacity Planning

Tieto offers its hosted services in two ways: Reserved Capacity and Consumption-based Capacity. The former is a “capacity unit” bundle of CPU, memory and storage; the latter is a resource pool from a cluster, and is normally used for larger applications. With either offering, the resource allocations are constantly being adjusted upwards or downwards on-demand to accommodate each customer’s price/performance objectives.

Tieto had purchased a resource management and capacity planning tool for its VMware environment, but the product did not work as promised and simply could not perform the essential tasks needed. According to Ekman, “Our data centers are large and growing, so we knew we required some fairly sophisticated management capabilities. It was clear we needed a different solution, but upper-level management was justifiably reluctant to purchase anything else without knowing it would definitely meet our needs and deliver a return on the investment.”

Ekman became aware of VKernel’s vOperations Suite during an exhaustive evaluation, and subsequently met with VKernel representatives at VMworld Europe. Ekman determined that vOPS would meet his needs, but wanted help selling the idea to his management. So VKernel produced a customized and detailed financial analysis that proved the expenditure would indeed deliver a satisfactory ROI even under a worst case scenario.

Immediate and Significant Improvements to Productivity

Ekman was able to get vOPS up and running in just half a day: “It worked right out of the box, and after a couple of hours of navigating through the many options, I felt pretty comfortable about how I could use it to meet our management and planning needs.” It quickly became clear to Ekman how the various resources were actually being utilized, and he was surprised to discover that many were over-allocated.

After making some much-needed changes to the resource allocation, Ekman turned his attention to customizing the reports produced for both customers and upper-level management. The new reports, which could now be produced automatically, were well-received by both audiences, who have found the graphical representations of resources to be particularly useful.

“The automatic reporting alone saves me about three days of work each and every week,” Ekman claims. “What I like most is having everything I need in a single system and on a single screen. I just can’t imagine how I was ever able to do my job without it!”

“The automatic reporting alone saves me about three days of work each and every week”

Optimizing Resource Management

Tieto’s VM management team uses vOPS to monitor the entire virtualized infrastructure continuously, and has created some customized alarms to be more proactive in averting performance and capacity problems. The vOPS Wastefinder feature regularly helps find orphaned VMs, enabling the CPU, memory and disk resources to be reclaimed.

The VM management team also uses the Rightsizing feature to improve performance by optimizing the resource allocations, such as eliminating unnecessary vCPUs. Like Ekman, other team members have found they can

trust vOPS’ recommendations, even when those seem counter-intuitive. “We would never have thought of doing some of the things vOPS recommends, but the changes always result in some level of improvement,” Ekman observes.

Improving Capacity Planning

“We now publish daily reports for all of our customers to show their current utilization, and where more or fewer resources may be needed,” says Ekman. “These reports are an integral part of our overall resource management and capacity planning efforts, and without the VKernel suite, we would need to hire full-time employees to generate the reports and make the daily changes in resource allocations to keep pace with our growing customer base.”

The easy-to-understand report shows the customer’s actual CPU and memory utilization, which is essential to ensuring the customer has adequate resources to meet current and future needs. Ekman also checks on storage utilization periodically to find wasted disk space, such as datastores that are no longer being used.

Future Plans

“Although the VKernel solution has already paid for itself many times over, the suite has several other capabilities that we have yet to fully utilize,” Ekman adds. “We’re now studying how we can best use the inventory and chargeback features for customer invoicing.”

Tieto currently utilizes a separate database for invoicing, but this too involves a substantial manual effort to maintain. Early results appear to indicate that vOPS will be able to automate, as well as improve the accuracy of the invoicing system.



Call (866) 370-2733 | www.vkernel.com



VKernel
300 Brickstone Square, Suite 503
Andover, MA 01810 USA
+1 (978) 289-6300 tel
+1 (978) 239-6301 fax

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