



**BLACKHAWK TECHNOLOGY CONSULTING LLC**

*Helping your business realize its virtual tomorrow, today.*

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## **Blackhawk Technology Consulting LLC**

### **Blackhawk Services and Solutions**

#### ***Blackhawk Virtualization Charge Back Service***

Blackhawk Technology Consulting LLC's services offerings are designed to help your IT organization at any IT life-cycle or stage; from gathering business and technical requirements and specifications, to custom development, all the way through the integration cycle with existing business systems and processes. The Blackhawk Virtualization Chargeback Service is outlined below.

#### **Overview:**

Virtualizing your servers within your data center is a hot topic in today's IT world and it will only get hotter. IDC and Gartner have documented that as of September 2006, almost 70% of companies had already implemented or are planning to implement virtualization within a year. In fact, only 5% of the companies polled claimed to be unaware of virtualization. If your company is among the 70% , you certainly understand that virtualization may help take back control of your infrastructure as it enables you to see and manage your computing resources in ways that offer more reliability and flexibility, which is unrestricted by implementation, location or even physical packaging. With this virtualized environment, you have a logical representation of your servers resources rather than a physical representation of your servers resources. By gaining greater control of your infrastructure, you can improve your overall cost management.

While cost savings is a primary driver for an initial virtualization initiative, the full value of virtualization lies in its awesome ability to:

- **Improve Your Total Cost of Ownership (TCO):** By decreasing your management costs and increasing your asset utilization, you will be able to experience a reliable and rapid Return on Investment (ROI) with virtualization. By virtualizing your resources and making them easier to

migrate or fail over to another physical server or other locations, you will be able to reliably enhance system availability and help lower the associated cost and complexity of DR/BC solutions.

- **Increase Your IT Flexibility:** By enabling a wide vendor choice, virtualization supports the "pulling" of resources which can be centrally managed through a single console to better support dynamically changing business requirements.
- **Enable Access From a Shared Infrastructure:** Virtualization provides an extremely robust and resilient foundation and shared infrastructure which enables for better access to infrastructure and information in support of business applications and processes.

With the above benefits of virtualization, how come more businesses aren't making the rush towards virtualization? Even with all of the benefits of virtualization, there are some barriers to virtualization, with the most significant being the capability to quantify value, organizational barriers to fairly allocate virtualized server costs and when appropriate, charge back the appropriate department or organizational unit.

Until recently, the inherent drawback to implementing a virtualization initiative was the capability to equitably allocate the cost associated with that environment. The complexity that comes along with virtualization and the belief that there is no proven methodology today to allocate cost to departments and organizational units has many IT managers fearing that it will become a never ending "Black Hole".

## **Implementing a Successful Chargeback Strategy:**

For businesses and IT organizations that which allocate costs to business departments or wish to influence their users behavior or even gain some perspective into requirements based on use, designing and implementing a chargeback strategy is a significant component in the adoption of a virtualized infrastructure. Now, how do you measure consumption of resources when you no longer have a dedicated departmental physical server? How do you map out utilization by Virtual Machine (VM) when features like VMware's VMotion allows for the movement from one physical server to another?

This concept of chargeback is not new. In fact it was first implemented over 40 years ago in the old mainframe days when IT departments were spending millions of dollars on a mainframe that was being shared by different departments. Implementing a successful chargeback strategy for mainframe users was relatively simple and could be executed in a matter of weeks. In the mid to late 90's, as servers were being rolled to the X86 models, each business department or organizational unit had their own dedicated physical server and as a result, the old chargeback model worked. Now, with the advent of virtualization, implementing a successful chargeback strategy can be a nightmare.

Even if your business does not have a chargeback process in place, it will be necessary and vital to show your users what it costs them. Without this type of cost visibility, it will be virtually impossible to put in place the necessary financial controls to contain the "Virtual Sprawl" so evident in today's virtual environments.

The majority of businesses and IT organizations recognize the importance of charge backs and how it can give them visibility into which departments are using which resources, but don't know how to go about implementing it. Armed with the best practices, methodology, services and tools from Blackhawk Technology Consulting LLC and Vkernel, Blackhawk Technology Consulting LLC can help your IT organization implement a successful chargeback strategy, a strategy which can scale with your ever-changing business needs.

### **The Blackhawk and Vkernel Difference:**

Blackhawk Technology Consulting LLC helps small to medium sized businesses, health care, financial, government (local, state and federal), legal, k-12 and higher education, entertainment, manufacturing, utilities and large enterprises thrive by providing IT solutions based on virtualization technologies and best practices. Blackhawk Technology Consulting LLC provides assessments, planning, design, implementation, deployment and support for virtualization technologies and techniques. Virtualization categories include: server virtualization, storage virtualization, application virtualization, application streaming, Virtual Desktop Infrastructure, thin client computing and access infrastructure. Such technologies are folded into the IT mix to provide for robust "On-demand" capabilities. With proven success in government, health care, manufacturing, legal, higher education and entertainment, Blackhawk Technology Consulting LLC consultants deliver superior customer satisfaction and a total Return on Investment (ROI), making them a wise and cost-effective for IT organizations.

Vkernel is dedicated to developing best-of-breed virtual appliances that enhance performance, lower costs, and simplify management of virtual environments of all sizes. The Vkernel suite of Virtual Appliances for Systems Management is a set of "plug-and-play" virtual appliances that quickly solve real world systems management challenges as organizations migrate to VMware virtual environments. Certified by VMware, Vkernel Virtual Appliances enable IT groups to immediately solve today's critical pain points (cost visibility, chargeback, and capacity bottlenecks) by providing visibility into the capacity and resource consumption of each virtual machine.

Combined with the services and solutions from Blackhawk Technology Consulting LLC and the services and solutions from Vkernel, with their VMware Charge Back and Bottleneck Analyzer solutions, Blackhawk Technology Consulting LLC is primed to offer its existing and potential customers a complete

virtual data center charge back and bottleneck solution. A solution, which will round out our Server Consolidation and Virtualization Solution. Armed with the Vkernel solutions listed below and the services and solutions offered by Blackhawk Technology Consulting LLC, businesses can now realize the benefits and awesome power that virtualization can bring to their IT data center.

## **The Blackhawk Chargeback Service Methodology: Using the resource consumption model**

The proposed methodology from Blackhawk Technology Consulting LLC is based on the “Resource Consumption Model” and is the only model that makes sense for applying charge backs to business departments and business units. This methodology, which makes use of the resource consumption model, enables IT organizations to recover their data center costs by allocating costs to business departments and units based on their use of resources, CPU, memory, storage and networking. This process is analogous to how a public utility company supplies electricity to its customers. Utility customers are charged for the resources they actually use. When the utility company calculates the rates that they need to charge to customers to recover their costs and make a profit. In much the same way, IT organizations must come up with rates for CPU, memory, storage and network resources which will recover the costs of buying hardware, software and operating the data center. If the ultimate goal is to make a profit, then it will need to be figured into the rates as well.

Based on the resource consumption model from Blackhawk Technology Consulting LLC and Vkernel, IT organizations will be able to assign a dollar value to the following hardware resources from your VMware VI3 infrastructure:

- CPU
- Memory
- Network
- Storage

All of the above listed hardware resources can have an associated cost per unit of measure and can be reflected in a customized report. Keep in mind that these numbers will require some fine-tuning to determine the applicable number for the actual costs. It also greatly depends on what you want to determine with the chargeback report and how you should use it. For example, you could be looking for a running trend over a period of months or even a quick snapshot from a particular day when use was a good example of average requirements. These reports on the resource consumption model can help you determine the cost of the slice of the Virtual Machine (VM) environment for a single VM, a single VM host or a collection of both or either.

With Vkernel Chargeback Appliance, resources costs are assigned in a concept, which is called a Business Service. This basically allows you to assign VMs to that particular Business Service and then costs which you determine. For example, a business might have a CRM project from the sales department within the organization and they have a single VM for their CRM application. I have made a Business Service called *Sales CRM* for the project. That single VM is in that group the costs are assigned resource consumption model above.

The Vkernel Chargeback Appliance can assign costs for this particular VM. This VM has a daily chargeback report cost of \$14.75 for that VM based on numbers determined by the IT department and the usage that it endured for that day. Should that VM use more resources, then its costs will be reflected in the report.

Based on the resource consumption model, it is easy to see the awesome power of the Blackhawk Technology Consulting LLC Virtualization Chargeback Service and the tools from Vkernel. Let Blackhawk Technology Consulting LLC help you recover your data center and virtualization costs today with our Blackhawk Virtualization Chargeback Service.

## **The Blackhawk Virtualization Chargeback Service: The choice among IT departments**

The team at Blackhawk Technology Consulting LLC helps IT organizations realize the full benefits of an effective virtualization chargeback solution. With an easy-to-use tool for providing access to comprehensive chargeback information as CPU, memory, networking and storage information, you will be able to easily track and allocate the resources that you provide to business departments and units.

By centralizing your chargeback activities, you can control costs, reduce administrative overhead, simplify customer interactions and operate a more accurate, more efficient IT organization.

### **Considerations:**

- What if you implemented a chargeback system that would allow you to easily track and allocate the specific resources being used by each business unit?
- What if you could implement one chargeback system that would function across all servers and platforms?
- What if you could use the same chargeback system to allocate costs from your virtual environments?

Now you can with the Blackhawk Virtualization Chargeback Service.

## **How Blackhawk Can Help You Implement a Virtualization Chargeback Initiative:**

Blackhawk Technology Consulting LLC, through its comprehensive Blackhawk Virtualization Chargeback Service, can help your IT organization:

- Track and allocate all hardware resources (CPU, memory, networking and storage) which are provided to business departments and units
- Capture activities pertaining to specific customers, departments, applications or groups without a significant time or resource commitment on your part. Blackhawk Technology Consulting LLC's and Vkernel's comprehensive and detailed chargeback tracking capabilities can generate detailed billing statements for each business department and unit, helping them to better understand charges, monitor their utilization and improve the scheduling of resource intensive activities.
- Generate chargeback data across virtualized environments
- Establish a single point solution to collect chargeback data even when several different workloads are hosted on the same physical server - without the need for multiple tools. With one Blackhawk Virtualization Chargeback Service functioning across your virtualization environment, you will be able to control costs, centralize chargeback activities and reduce the time and resources, which are required for administration.
- Collect and manage chargeback data from your VMware VI3 Infrastructure. Using Blackhawk Technology Consulting LLC's and Vkernel's consolidated usage reports as input, you can create a single invoice reflecting business departments and units consumption resources in the VMware infrastructure.

Please contact Blackhawk Technology Consulting LLC today to learn how we can help you implement an effective and reliable virtualization chargeback solution for your virtualization initiative.

## **The Blackhawk Virtualization Chargeback Service Engagement:**

This consulting and service engagement from Blackhawk Technology Consulting LLC is designed to provide an effective and flexible chargeback solution for your VMware VI3 Infrastructure. During this engagement, you will also receive:

- Presentation on of industry best practices
- Special considerations which are relevant to your VMware VI3 Infrastructure

- Presentation of a set of tools provided by Vkernel to gather chargeback information and calculate resource costs for your VMware infrastructure
- Installation and configuration of those tools
- Comprehensive and detailed chargeback reports and how to customize those reports to suite your business needs

## **Benefits:**

Some of the benefits that you receive from this service are as follows:

- Speed up the design and deployment of your chargeback processes and solution for your VMware VI3 Infrastructure
- Gain financial flexibility and value from a virtual environment
- Validate feasibility of chargeback in a VMware VI3 Infrastructure with a chargeback solution in your own environment

## **The Blackhawk Virtualization Chargeback Program:**

### ***Pre-program Teleconference Call***

- Introduce the key participants of the Blackhawk Virtualization Chargeback Service (Blackhawk Technology Consulting LLC Professional Services Group, businesses management team and technical team and other associated parties)
- Verify the hardware and software in the environment
- Verify the VMware VI3 Infrastructure (including CPU count, memory, networking and storage)
- Review the logistics of the project

### ***Day 1: Onsite***

- Overview of the Blackhawk Virtualization Chargeback Service (methodology, requirements and deliverables)
- Overview of the Vkernel Chargeback Appliance (installation, configuration, deployment, usage and reporting capabilities)
- Overview and use of the Vkernel Chargeback Calculator
- Provide real-world deployments from the Blackhawk Technology Consulting LLC lab environment and real-world chargeback reports
- Review best practices for an effective chargeback solution

## ***Day 2: Onsite***

- Prepare to install and configure the Vkernel Chargeback Appliance
- Configure the Vkernel Chargeback Appliance with Business Services
- Configure the Vkernel Chargeback Appliance to gather resource information (for a two to three week time frame)

## ***Day 3 (Week 3): Onsite***

- Gather resource and chargeback information
- Present the information to the IT department and other associated business units
- Customize and configure the reporting capabilities to suite the businesses requirements
- Train IT staff and other associated business units how to run and generate chargeback reports
- Configure a centralized storage unit for the chargeback reports
- Install and configure our customized Chargeback Reports Management console for easy generation of reports

## ***Follow-up Phase***

- Questions and answers on the Blackhawk Virtualization Chargeback Service
- Survey on the service
- 1-year support plan for the service

## **The Blackhawk Difference:**

Blackhawk Technology Consulting LLC is unique in that its technology professionals have proven expertise and capabilities in data center consolidation and virtualization chargeback solutions, from planning, designing, deploying, and supporting organizations using data center consolidation and virtualization chargeback technologies so that businesses can remain productive and profitable.

For more information or to receive a free quote for the Blackhawk Virtualization Chargeback Services offering, please call (541) 505-7229 or e-mail our sales team at [sales@blackhawk-tech.net](mailto:sales@blackhawk-tech.net).

## **Key Benefits:**

- Speed up the design and deployment of your chargeback processes and solution for your VMware VI3 Infrastructure
- Gain financial flexibility and value from a virtual environment
- Validate feasibility of chargeback in a VMware VI3 Infrastructure with a chargeback solution in your own environment

## **Blackhawk Technology Consulting LLC Roles and Responsibilities**

- Blackhawk Technology Consulting LLC Senior Consultant: The Senior Consultant and the Blackhawk Professional Services Group will conduct the Blackhawk Virtualization Chargeback Service and writes the final documentation and conducts the training of the Blackhawk Virtualization Chargeback Service
- Blackhawk Technology Consulting LLC Project Manager: The project manager plans and coordinates all project functions and is the single point of contact for the project

## **Businesses Roles and Responsibilities**

- System Administrator: The system administrator is responsible for all hardware, software and networking prerequisites

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