

# Server Consolidation and Containment with VMware Virtual Infrastructure



## Computing Challenges Today

Organizations rely on their computing infrastructure to provide a broad array of services. To meet demand to deploy, maintain, and grow these services, IT organizations must continue to add computing capacity. However, as a consequence of purchasing more and more servers, organizations face a growing server sprawl that presents challenges that include:

- **Rising costs.** In addition to spending a growing amount of money purchasing a growing number of new and updated servers, organizations face growing costs for power, cooling, network infrastructure, storage infrastructure, server administration, data center upgrades and new data centers.
- **Decreasing manageability.** Managing servers becomes increasingly difficult as the number of servers grows. Adding to that challenge is the heterogeneous mix of hardware models, vendors, operating systems and configurations that IT departments need to support.
- **Decreasing efficiency.** As server sprawl increases, IT organizations are forced to spend an increasing amount of time on reactive tasks such as server provisioning, configuration, monitoring and maintenance.

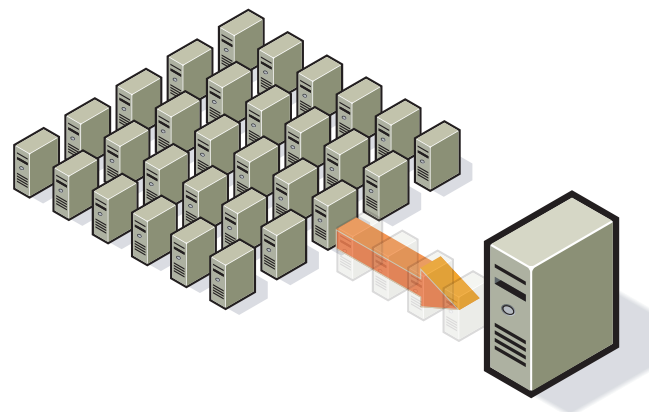
In short, the need to provide new and upgraded services has brought organizations face-to-face with the limitations of their current data center infrastructure.

## Consolidating and Containing Servers with VMware Virtual Infrastructure

VMware virtualization technology makes it possible to package a complete x86 server—hardware, operating system, applications, and configurations—into a portable virtual machine package. Multiple virtual machines can then run simultaneously and independently on a single x86 server.

VMware software uses this technology to provide a simple, proven solution for consolidating existing servers. Each workload that previously required a dedicated physical server can be placed in a virtual machine, and then multiple virtual machines can be consolidated onto each physical server.

Requests for new servers can be fulfilled by provisioning virtual machines to existing physical servers with unutilized capacity rather than by purchasing new servers.



## Benefits of Server Consolidation and Containment with VMware Virtual Infrastructure

The benefits of using VMware virtual infrastructure include the following:

- **Dramatically lower costs.** Significantly reduce server hardware expenses and spend significantly less for power, cooling, data center infrastructure and servers. VMware customers report cost savings of 30-70% from implementing a VMware server consolidation solution.
- **Significantly improved manageability.** Simplify and centralize the monitoring and management of large virtual infrastructure environments.
- **Increased IT efficiency.** Streamline and eliminate common administrative tasks such as server provisioning and configuration, enabling IT to manage a growing server environment with existing resources.
- **Greater responsiveness.** Respond more rapidly to requests for new or expanded services, new servers and new configurations.
- **Improved ability to handle future growth.** Pool server resources and dynamically provide workloads, for managing and planning for future capacity growth.

## Learn More

To learn more about how your organization can benefit from a VMware server consolidation and containment solution, visit the VMware Web site at <http://www.vmware.com> or contact VMware at 1-877-4VMWARE.



## Akorri BalancePoint™ Manages, Optimizes, and Plans ESX Server I/O Performance

Guarantee VM I/O Performance when Consolidating to VMware Infrastructure

### Industry Overview

#### The IT Performance Management Challenge

With increasingly complex infrastructure and exploding data growth, IT organizations are challenged to keep business applications running in a cost-effective manner. Application owners demand top-notch performance while budgets and space require consolidation. VMware provides the best answer for optimizing server resources.

As IT organizations take advantage of the broad benefits of consolidation and virtualization of infrastructure resources, there is a new opportunity to take a fresh look at managing and optimizing I/O performance across virtual servers and storage. With the new management models for virtualized environments, application service level assurance is no longer subject to the traditional obstacles to visibility, management, and cooperation across IT element domains. This enables much simpler and more effective application performance assurance.

### Solution Overview

#### VMware Service Level Management

Akorri™ BalancePoint™ assures VMware application service levels in the production data center. By applying patented performance and capacity analytics across both VMware ESX host servers and data center high-end storage, BalancePoint enables management of the “service capability” of the whole IT infrastructure to guarantee critical application service levels.

Akorri BalancePoint™ provides end-to-end I/O performance visibility for ESX Server and VM guest applications through to RAID sets and disks on attached SANs. BalancePoint is Vmotion Aware, enhancing Virtual Center management and control of total application service.

#### BalancePoint Modules Deliver IT Cross-domain Visibility and Analysis:

**ScanPoint™** agent-less discovery and data collection deploys quickly across all IT domains including ESX servers, VMs, and enterprise storage arrays, with minimal overhead, centralizing key performance data from across the enterprise.

**ViewPoint™** constructs one cohesive “big picture” service delivery view of both VMware servers and data center storage, powered by the Akorri Application Fingerprint™. ViewPoint correlation topologies directly model the impact of every element on an application’s end-to-end performance.

**GuidePoint™** first focuses IT staff on what’s immediately important with dynamic performance alerts. Then patented Akorri Cross-Domain Analytics™ enables proactive service management with intelligent actionable recommendations for remediation, provisioning, and planning.

### Solution Benefits

Guarantee application service levels when deploying VMware ESX with data center storage. Rapidly accelerate I/O performance problem identification and resolution, avoid application performance brownouts due to I/O contention, and optimize storage provisioning.

Akorri BalancePoint’s advanced intelligence enables IT organizations to manage, optimize, and plan performance for VMware deployments in production data centers with enterprise-class storage. BalancePoint’s increased visibility into the underlying storage infrastructure’s impact on application performance not only improves IT organization collaboration, but supports effective IT performance and capacity management processes under ITIL and BSM.

### Akorri and VMware

Akorri BalancePoint™ for VMware manages, optimizes, and plans I/O performance in ESX Server environments with enterprise-class storage.

### Learn More

Visit the Akorri web site at [www.akorri.com](http://www.akorri.com) or contact Akorri at 1-978-431-1200.

*“Akorri ensures the success of server virtualization projects with end-to-end application performance optimization in the virtualized data center.”*

Arun Taneja  
Taneja Group

#### Key Highlights

VMware to data center storage visibility and I/O performance optimization. Manage, Optimize, and Plan virtualized server and storage resources.

#### ISV Overview

Akorri focuses on solutions for managing, optimizing, and planning application service levels across applications, servers, and storage in virtualized data centers.

#### Key Business Needs

IT organizations gain major benefits from the production deployment of VMware and often want to accelerate these benefits in data centers where they can also leverage high-end “virtualized” storage. Troubleshooting application brownouts and pinpointing the root causes of performance problems can be challenging as the resource sharing that occurs in the storage layer creates hard-to-find points of contention.

#### Key Business Benefits

Akorri BalancePoint™ provides end-to-end I/O performance visibility for ESX Server and VM guest applications through to RAID sets and disks on attached SANs. BalancePoint is Vmotion aware, enhancing Virtual Center management and control of total application service.

#### Business Results

Guarantee application service levels when deploying VMware ESX with data center storage. Rapidly accelerate I/O performance problem identification and resolution, avoid application performance brownouts due to I/O contention, and optimize storage provisioning.

#### VMware and Akorri

With patented Cross-Domain Analysis™ and the Akorri Application Fingerprint™, Akorri brings data center I/O performance management to VMware virtualized environments.

#### VMware Products

VMware ESX Server  
VMware Virtual Center

#### Akorri Products

Akorri BalancePoint™ for VMware