

## Server Consolidation and Containment with Virtual Infrastructure and Apani

### Computing Challenges Today

To meet the constant demand to deploy, maintain and grow a broad array of services and applications, IT organizations must continually add new servers. However, as a consequence of purchasing more and more servers, organizations face a growing server sprawl presenting challenges that include:

- **Rising Costs.** In addition to the expense of adding new hardware, organizations pay more for power, cooling, network infrastructure, storage infrastructure, server administration, data center upgrades and new data centers.
- **Poor return on investment.** The common practice of dedicating a single server to each x86 application and sizing it for peak loads has led to severe underutilization of server assets in most data centers.
- **Decreasing manageability.** Managing servers becomes increasingly difficult as the number of servers grows and the number of applications continue to multiply.
- **Reduced efficiency.** As server sprawl increases, IT organizations are forced to spend more time on reactive tasks such as server provisioning, configuration, monitoring and maintenance.

### Consolidating and Containing Servers

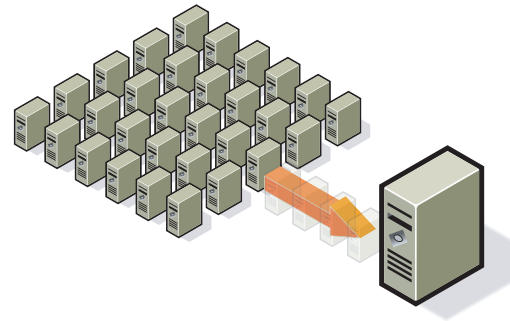
VMware® Infrastructure meets the challenges of server sprawl and underutilization by reducing hardware and operating costs by as much as 50%. A virtual infrastructure also simplifies server deployment and automates resource management to optimize capacity and infrastructure management.

VMware virtualization technology makes it possible to package a complete x86 server into a portable virtual machine package. Multiple virtual machines can then run simultaneously and independently on a single x86 server with consolidation ratios often exceeding five virtual machines per host processor.

### Benefits of Server Consolidation and Containment

Over 20,000 VMware corporate customers are realizing numerous benefits on a daily basis from implementing a VMware server consolidation solution, including:

- **Dramatically lower costs.** IT organizations can reduce hardware and operating costs by as much as 50% from implementing a VMware server consolidation solution.



Fewer servers also means lower costs for administration, power, cooling and data center infrastructure.

- **Boosted utilization and availability.** VMware Infrastructure aggregates x86 server resources into pools that can reliably support CPU utilization exceeding 80% with the continuous load balancing provided by VMware DRS. If a physical server goes down, all the virtual machines on that hardware will migrate automatically and restart upon another physical server within the resource pool, via VMware High Availability (HA).
- **Improved manageability and reliability.** VMware Infrastructure reduces data center complexity by reducing the number of servers that IT organizations need to manage. Meanwhile, the VMware hypervisor sets the standard for reliability. Instances of VMware ESX have been running in production customer environments for more than three years without a second of downtime.
- **Simplified server provisioning.** IT departments can reduce the time it takes to provision new servers by 50-70%. Virtual machines are as easy to copy as software files and are hardware independent, so deploying new workloads takes minutes instead of days.
- **Increased IT efficiency.** A VMware solution streamlines and eliminates common administrative tasks enabling IT organizations to manage a growing server environment with existing resources.
- **Improved ability to handle future growth.** Because a VMware solution eliminates the need to dedicate a physical server to each workload (or server application), organizations can more effectively monitor growth in relation to utilized capacity.

### Learn More

To learn more about VMware solutions and products, visit <http://www.vmware.com> or call 1-877-4VMWARE.

## Apani

Apani  
www.apani.com

### ISV Overview

Apani provides security software to isolate and protect both virtual and physical machines from within a single management point.

### Key Business Needs

Large organizations rely on legacy, contemporary and virtualized servers. Vendors have historically offered a silo approach to protecting them—each with their own management paradigm. Ideally, organizations would protect mixed data centers, maintain persistence of policy and reduce the number of security solutions under management.

### Key Business Benefits

Apani EpiForce VM provides a single solution that secures both virtual and physical machines. Logical security zones isolate machines without reconfiguring the network, while policy-based encryption selectively encrypts data in motion. EpiForce VM fully supports VMware VMotion™ (hot) and cold migration and offers protection against VM sprawl.

### Business Results

By providing robust data center security, Apani EpiForce VM enables organizations to better realize the benefits of server virtualization, including support for multiple platforms, automated migration, reduced unplanned downtime, lower operating expense tied to security policy changes and more flexible management.

### VMware and Apani

Apani EpiForce VM provides a single solution that secures both virtual and physical machines running VMware ESX.

### Products

Apani EpiForce VM has been tested with VMware ESX, VirtualCenter 2.5 and VMware VMotion™. EpiForce VM supports a broad variety of guest operating systems.

## Accelerate Server Consolidation with Apani® EpiForce® VM Cross-Platform Virtual Security

Enforce security policy during and after server consolidation with VMware ESX

### Industry Overview

#### Is the poor fit of physical security solutions hindering you from fully realizing the benefits of server consolidation using VMware ESX?

Large organizations rely on hardware-based security solutions like firewalls and VLANs to secure physical server environments. The static nature of these solutions limits many of the dynamic operational benefits provided by VMware ESX during server consolidation. Because of this, organizations may be forced to choose between realizing the full benefits of virtualization using VMware ESX and enforcing strong security policies.

After server consolidation, organizations can get the best of both worlds—realize all the benefits of virtualization with VMware ESX and enforce all needed security policies without any compromise.

### Solution Overview

#### Apani EpiForce VM provides robust virtual security so organizations can fully realize the benefits of server consolidation using VMware ESX.

EpiForce VM secures both virtual machines and physical data centers through a single product. EpiForce VM enables security administrators to fully realize the benefits of server consolidation using VMware ESX. EpiForce VM enforces security at the endpoint and is fully compatible with VMotion hot migration and cold migration using VirtualCenter. Policy is persistent and stays with each machine or VM regardless of their progress in the server consolidation process.

With its centralized management, EpiForce VM speeds security deployment and enables policy updates en masse with only a few mouse clicks. Logical security zones isolate and protect both physical servers and VMs without reconfiguring the network. Sensitive communications are encrypted

based on user-defined policy, providing the optimal mix of protection and performance.

EpiForce VM operates at the network layer and is transparent to infrastructure, applications and users, ensuring seamless deployment within days instead of months.

### Solution Benefits

- Accelerate realization of server consolidation benefits by deploying consistent strong security across VMs and physical machines
- Protect virtual machines, physical servers and endpoints with a single solution
- Manage all EpiForce VM-protected machines through a single management console, regardless of platform or physical location and without the need to reconfigure the network
- Migrate virtual machines using VMotion or VirtualCenter without compromising security policy
- Protect virtual machines from vulnerabilities introduced through VM sprawl
- Cross-platform support secures complex, heterogeneous environments
- On-demand policy distribution deploys policy to tens or hundred of thousands of machines without impacting network performance
- Distributed architecture eliminates bottlenecks and single points of failure

### Apani and VMware

Apani EpiForce VM enables organizations to secure both physical machines and VMware ESX environments with a single, centrally managed solution that supports both VMotion and cold migration.