

Server Consolidation and Containment with VMware Infrastructure and nworks

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.

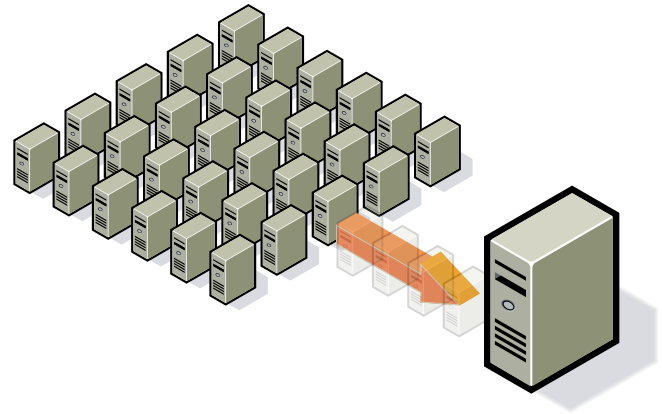
In short, the need to provide new and upgraded services has brought organizations face-to-face with the limitations of their current data center infrastructure.

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.

Drive Utilization Higher with VMware Resource Pools and DRS

The VMware Infrastructure product suite allows many varied x86 physical servers to be combined into a single resource pool that aggregates processor, memory, disk and networking capacity. VMware DRS (Distributed Resource Scheduling) continuously balances virtual machine workloads across resource pools based on rules that can be adjusted as conditions change. When load increases, VMware DRS automatically allocates additional resources and uses VMware VMotion to transparently migrate virtual machines between hosts in the resource pool to ensure that service level agreements are met.



Benefits of Server Consolidation and Containment with VMware Virtual Infrastructure

The benefits of using VMware 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.



Key Highlights

VMware ESX Server Monitoring, VMware VirtualCenter Monitoring, HP OpenView Operations integration, Microsoft Service Center Operations Integration

ISV Overview

With over 10 years experience working with industry leading EMS platforms, nworks' primary focus is VMware Virtual Infrastructure monitoring.

Key Business Needs

Enterprises face a deluge of disparate information regarding the health of their IT ecosystem some of which is monitored outside their centralized Enterprise Management Solution significantly increasing workload and decreasing ROI. The cost of developing and maintaining these EMS integrations is too high. Today's limited IT staff must remain focused on new solutions and new technology that drive revenue.

Key Business Benefits

nworks' products provide value through total integration of ESX Server performance, event, state, and configuration information into Microsoft Service Center Operations Manager and HP OpenView Operations.

Business Results

Costs are reduced through the quick time to value. Productivity is enhanced by providing standardized responses to common problems. Service levels are maximized by detecting problems before they result in service level violations.

VMware and nworks

nworks combines best in breed management solutions with best in breed virtualization to provide unprecedented manageability of the IT ecosystem.

Products

VMware ESX Server
VMware Virtual Center

Partner Products

- nworks Smart Plug-in for VMware for HP OpenView Operations
- nworks VMware Management Pack for Microsoft Service Center Operations Manager

ESX Server Monitoring from HP OpenView Operations and MOM 2005

Enterprise management software integration for your ESX Server based VMware Infrastructure

Industry Overview

nworks targets VMware Infrastructure customers who are using HP OpenView Operations or Microsoft Service Center Operations as their Enterprise Management Solution (EMS). nworks provides EMS integrations with the VMware Management Pack for Microsoft Service Center Operations Manager and the Smart Plug-in for VMware for HP OpenView Operations.

Customers include enterprise level customers implementing IT service management to maximize IT reliability, availability, supportability, and manageability; and small and medium businesses implementing centralized monitoring and management solutions to gain IT control and cut operational costs.

Targeted customers are COO, CIO, and, in SMB, MIS managers including anyone responsible for providing IT services. These customers are looking to gain visibility into their IT infrastructure to insure that the computing ecosystem is predictable, requires minimal maintenance, and continuously available. In order to focus their attention on the IT services needed to survive in today's competitive landscape, they are looking for automated IT infrastructure monitoring. They require visibility into how their computing ecosystem is functioning and quickly identify problems, stress points, or underutilized resources.

By automating the repetitive monitoring tasks throughout IT, valuable IT staff is freed to work on higher value and more fulfilling projects.

Solution Overview

nworks provides two VMware Infrastructure/EMS integration products: the VMware Management Pack for Microsoft Service Center Operations Manager and the SPI for VMware for HP OpenView Operations. Out of the box, nworks products provide integration of ESX Server performance,

event, state, and configuration data into Enterprise Management Systems providing tremendous leverage of a company's IT management investment.

nworks ensures VMware Infrastructure reliability by collecting data without putting any software on the ESX Server. Data is collected and converted for use by System Center Operations Manager and HP OpenView Operations as well as into WMI and XML. These integrations free IT operations staff to focus their talents on IT process improvements and development of new solutions.

Solution Benefits

nworks products enhance customer's business by providing a quick time to value. Installation is simple and, once installed, operations personnel use native EMS tools. There is nothing new to learn in order to gain full advantage of nworks products. This deep integration allows them to fit right into current operations processes and procedures.

nworks products do not require any software to be loaded into the ESX Server console insuring ESX Server integrity. A web-based configurator provides simple and secure enterprise scalability.

nworks and VMware

Working together to provide Virtual Infrastructure management solutions

The nworks Smart Plug-in for VMware provides integration of VMware ESX Servers into HP OpenView Operations; a leading Enterprise System Management solution.

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