Microsoft® System Center Virtual Machine Manager 2008

Performance and Resource Optimization Solution Brief

nworks PRO Pack for VMware
for System Center Virtual Machine Manager

Protect your investment in Microsoft System Center and streamline the monitoring and management of VMware systems.

With the nworks PRO Pack for VMware from Veeam Software, organizations can extend the benefits of their investment in Microsoft® System Center data center solutions by integrating VMware management. The solution enables intelligent, proactive, and automated management and monitoring of VMware vSphere from within the Microsoft System Center framework.

Situation
As virtualization becomes more business-critical, comprehensive monitoring and management tools are essential to realizing the agility and cost savings provided by virtualization. The technical and business challenge for organizations that invest in virtualization solutions is to achieve quality IT operations and deliver the required service, while keeping costs down and maximizing use of existing investments.

The monitoring and management of virtualization must be integrated into a centralized and consistent framework. Multiple single-focus standalone solutions add costs in terms of training and support, dedicated infrastructure, and licensing, and each requires its own customized integration into the IT business and support processes.

Key requirements for a centralized management framework include:
- Support of multiple diverse platforms, applications, and services.
- Detailed "Health Models" for heterogeneous systems, supplying proactive and relevant alerting.
- Automated recovery action and response options across these environments.

Microsoft® System Center Operations Manager with System Center Virtual Machine Manager provides best-in-class management of Hyper-V™ technology in the Windows Server® 2008 operating system, as well as VMware virtualization.

Solution
System Center Virtual Machine Manager 2008 provides virtualization administration features, such as virtual machine creation, deployment, and migration. Virtual Machine Manager supports both Hyper-V and VMware environments. Performance and Resource Optimization (PRO), a feature of Virtual Machine Manager, allows monitoring data to automate administrative and remedial responses in the virtual environment, using "PRO Packs."

Solution

The Veeam nworks PRO Pack for VMware enables efficient, proactive, and automated VMware management in Microsoft® System Center Virtual Machine Manager 2008.

Technologies Used

- Microsoft System Center Virtual Machine Manager 2008
- Microsoft System Center Operations Manager 2007
- Veeam nworks Management Pack for VMware
- Veeam nworks PRO Pack for VMware

For More Information
www.veeam.com
PRO Partners:
www.microsoft.com/systemcenter/virtualmachinemanager/en/us/pro-partners.aspx

Protect your investment in Microsoft System Center data center solutions and streamline the monitoring and management of VMware systems.

The nworks Management Pack for VMware is already ideal for operational monitoring of VMware infrastructure in System Center Operations Manager—now users can extend that capability with the nworks PRO Pack for VMware for System Center Virtual Machine Manager. The nworks PRO Pack uses the detailed monitoring capabilities of the nworks Management Pack for VMware to drive Virtual Machine Manager PRO Tips for the VMware environment.
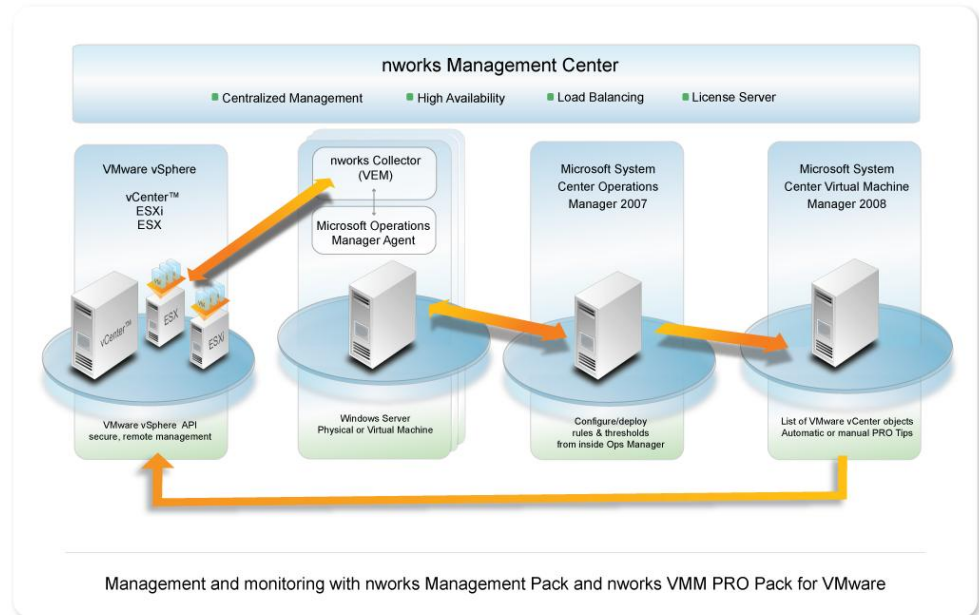
Thanks to its agentless technology, the nworks Management Pack supports every virtualized operating system, including Linux or any Virtual Appliance. For every virtual machine, regardless of the operating system, the nworks Management Pack uses the VMware vCenter application programming interface (API) to deliver comprehensive monitoring data into System Center Operations Manager 2007.

The nworks PRO Pack will add new ESX hypervisor metrics to Virtual Machine Manager—critical metrics such as host swap file input/output (I/O) rate, and virtual machine CPU ready time. These detailed and granular metrics will enable Virtual Machine Manager for proactive and intelligent management of all VMware virtual machines and hosts.

An example of this automated management feedback cycle would be:
- The nworks Management Pack for VMware in Operations Manager detects high resource usage for a virtual machine, for example high host swap file I/O rate.
- This monitoring data is fed in real time from Operations Manager to Virtual Machine Manager via the nworks PRO Pack, generating a PRO Tip.
- The PRO Tip response pinpoints the particular virtual machine with memory demands that is forcing the host to use its swap file and passes that information to Virtual Machine Manager.
- Virtual Machine Manager actions the PRO Tip response and migrates the virtual machine to another less-utilized ESX host via VMotion and the Intelligent Placement feature in Virtual Machine Manager.
- With the resource demand automatically redistributed and balanced, the resourcing bottleneck issue is resolved.

Enhance the capabilities and integration of the nworks Management Pack for VMware with the nworks PRO Pack for VMware.

Management and monitoring with nworks Management Pack and nworks VMM PRO Pack for VMware

The VMM PRO Tip responses can be implemented automatically by Virtual Machine Manager or logged as a recommendation in Virtual Machine Manager for IT operations staff to execute. An extensive library of responses is supported using the Windows PowerShell™ command-line interface.

Benefits
The nworks PRO Pack for VMware, in tandem with the nworks Management Pack for VMware, will help:

- Ensure consistent monitoring, management, and administrative processes using System Center for both VMware and Hyper-V environments.
- Save on training costs by focusing operations staff on the System Center suite.
- Save on back-end infrastructure and support costs by integrating VMware management into System Center.
- Improve service levels by elevating front-line operational staff using the built-in VMware knowledge in nworks solutions.
- Increase productivity of VMware administrators by off-loading them of routine monitoring and "fire-fighting" recovery actions.
- Reduce downtime and increase availability in VMware environments with the automated recovery capabilities of VMM PRO Tips.

The nworks Management Pack for VMware already supplies a detailed integration of VMware monitoring into Operations Manager 2007; now "close the loop" by leveraging the management features of Virtual Machine Manager 2008 for VMware systems using the nworks PRO Pack for VMware.

About Microsoft Virtualization Management Solutions

Microsoft System Center Virtual Machine Manager 2008 is a comprehensive multivendor virtualization management solution that enables easy and fast consolidation of physical servers and rapid provisioning of new virtual workloads. Another feature of System Center Virtual Machine Manager is performance and resource optimization (PRO) which helps ensure that physical resources within a virtualization environment are being managed efficiently and that virtualized workloads are meeting service level agreements. PRO also provides an open and extensible framework, enabling partners to utilize this new technology for the creation of management packs for virtualized applications or associated hardware. In building these management packs enabled for PRO, partners can create a customized solution combining their offerings with the comprehensive monitoring and issue-resolution capabilities of PRO.