



Microsoft®

System Center Virtual Machine Manager 2008

Performance and Resource Optimization Solution Brief



Veeam 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.



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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 R2
- 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

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 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."

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.

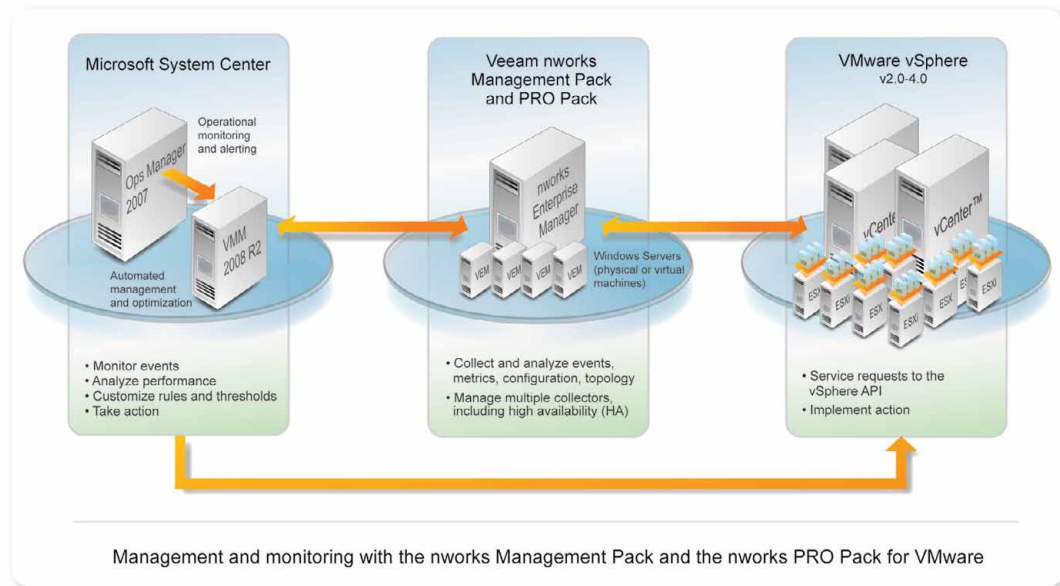
Thanks to its agentless technology, the nworks Management Pack supports every virtualized operating system, including Linux or any Virtual Appliance. For every virtual machine, regardless of the operating system, the nworks Management Pack uses the VMware vSphere application programming interface (API) to deliver comprehensive monitoring data into System Center Operations Manager 2007.

The nworks PRO Pack adds awareness of ESX hypervisor metrics to Virtual Machine Manager—critical metrics such as host swap file input/output (I/O) rate, memory over-commitment, and disk I/O. These detailed and granular metrics enable Virtual Machine Manager for proactive and intelligent management of all VMware virtual machines and hosts.

Here is an example of this automated management feedback cycle:

- The nworks Management Pack for VMware in Operations Manager detects high resource usage for an ESX host—for example, high swap file I/O rate. This monitoring data is fed from Operations Manager to Virtual Machine Manager via the nworks PRO Pack, generating a PRO Tip.
- Virtual Machine Manager actions the PRO Tip response, which:
 - uses nworks detailed metric data to pinpoint the particular virtual machine with memory demands that is forcing the host to use its swap file, and
 - migrates that virtual machine to another less-utilized ESX host, using VMware VMotion and the Intelligent Placement feature in Virtual Machine Manager 2008 R2.
- 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.



VMM PRO Tip responses can be taken automatically by Virtual Machine Manager or logged as a recommendation in Virtual Machine Manager for IT operations staff to action. 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, helps:

- 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 VMware management features of Virtual Machine Manager 2008 R2 using the nworks PRO Pack for VMware.

About Microsoft Virtualization Management Solutions

Microsoft System Center Virtual Machine Manager 2008 R2 is a comprehensive multi-vendor 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.