

Microsoft Announces System Center Virtual Machine Manager 2008

Abstract

At Microsoft Management Summit 2008, Microsoft announced the immediate (beta) availability of System Center Virtual Machine Manager 2008. Significant new features include the ability to manage not just Microsoft Virtual Server and Hyper-V, but also VMware ESX and VI3, among many other improvements over the previous release, VMM 2007.

With this release – and the concurrent announcements of UNIX and Linux support in System Center Operations Manager – Microsoft is addressing the physical & virtual heterogeneous management challenge of multiple layers of complexity with an integrated line of solutions, and putting itself in a very competitive position.

Microsoft Announces System Center Virtual Machine Manager 2008

On April 29, 2008, at Microsoft Management Summit 2008 in Las Vegas, Microsoft announced the English-only beta release of System Center Virtual Machine Manager (VMM) 2008. Intended to replace the currently available VMM 2007, the new edition is expected to be released for General Availability during the second half of 2008.

System Center VMM 2008 will be integrated with Microsoft Systems Center products – including Configuration Manager 2007 (ConfigMgr), Data Protection Manager (DPM), and Operations Manager 2007 (OpsMgr). Concurrent with the release of VMM 2008 beta, Microsoft announced that it would:

- Support Linux and UNIX natively in OpsMgr 2007 (due Q2 2009)
- Integrate Microsoft Application Virtualization (formerly named SoftGrid) natively in ConfigMgr 2007 R2 (due late summer 2008)
- Support the configuration of non-Windows systems natively in future versions of Systems Center products

For enterprise customers, VMM 2008 will be licensed as part of the Server Management Suite – Enterprise (SMSE), which includes OpsMgr 2007, ConfigMgr 2007, and System Center DPM 2007. For midsize customers, VMM 2008 Workgroup Edition is available, limited to managing five virtual hosts.

Key Improvements

System Center VMM 2007 was Microsoft's first release of a virtual machine management solution, with management capabilities limited to Microsoft Virtual Server. VMM 2008 is the latest update to Microsoft's virtual machine management capabilities, and provides a virtual management solution for consolidation of physical servers onto virtual machine infrastructure and rapid provisioning of new virtual workloads. Through a single console, VMM facilitates centralized management of both physical and virtual machine infrastructures.

System Center Virtual Machine Manager (VMM) 2008 is expected to be released for General Availability during the second half of 2008.

Among many improvements, most significant is its ability to manage not just Microsoft's own virtualization solutions – including Microsoft Virtual Server 2005 R2 and Microsoft Windows Server 2008 Hyper-V – but also VMware's ESX Server and Virtual Infrastructure 3. This includes the ability to perform live migration of VMware virtual machines via VMotion, through integration with VMware's Virtual Center.

Additional key functionality new to VMM 2008 includes:

- Performance and Resource Optimization (PRO), which reacts to OpsMgr 2007 alerts to dynamically tune virtual infrastructure in response to failure scenarios or poor system or application performance; these alerts can be based on hardware, network, operating system, application – effectively any rich data that can be delivered via OpsMgr and the management pack solution
- Simplified virtual host cluster support to allow for fault-tolerant and cluster aware virtual machines to be created
- Improved security and identity functions, such as a re-engineered administrative permissions engine, updated network permissions policies, and new 'delegated administrator' role
- Enhanced web interface for the self service portal including user access to the PowerShell interface and commandlets
- Improved support for physical-to-virtual (P2V) and virtual-to-virtual (V2V) migrations, including 'Intelligent Placement,' which uses performance data from virtual hosts and both real-time and historical OpsMgr data to identify potential candidate VM host servers

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EMA's Perspective

Microsoft's virtualization offerings – including its hypervisor, Hyper-V, and its virtual machine manager, VMM – do not have a fully competitive feature set, and have some specific and important (for some) gaps in their product offering. No doubt, many of these will be addressed in future releases, typical of a Microsoft 1.0 release. In the meantime, it is already a very competitive starting point, and indeed includes several features (as listed above) that are not offered by its competitors.

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More importantly, Microsoft appears to understand the big picture in a way that certain competitors do not. Firstly, Microsoft understands that the success or failure of virtualization deployments rests substantially on how well you are able to manage them. Secondly, Microsoft understands that this management must be heterogeneous, as virtualization tends overwhelmingly to involve multiple layers of complexity.

Emphasizing these key issues, Q1 2008 EMA research¹, based on a survey of over 600 enterprises, showed that virtualization typically involves multiple platforms (Windows, Linux, UNIX, etc.), multiple technologies (server virtualization, OS virtualization, application virtualization, desktop virtualization, cluster/grid computing, etc.), and multiple vendors (VMware, Microsoft, Citrix, etc.). In fact, it shows that by far the majority of

¹ *Virtualization and Management: Trends, Forecasts, and Recommendations*, http://www.emansa.com/research/ema_product.php?product=5000_1590

enterprises (60%) plan to deploy server virtualization products from multiple vendors, and in general, over 90% of virtualization deployments will involve multiple platforms, technologies, and vendors. Just 2% of enterprises will deploy virtualization with just one platform, one technology, and one vendor. In addition, all of this complexity layers on top of an already complex physical environment. EMA research shows convincingly that physical deployments will continue to be the dominant IT environment through 2010 and beyond.

If enterprises cannot manage this complex heterogeneous environment, and these multiple layers of complexity, they risk human errors, increased downtime, rising costs, internal political problems, skill shortages, and more – all rated in EMA research as key inhibitors to successful virtualization deployments. So integrated virtual and physical systems management across multiple layers of complexity and supported via a single interface is critical for virtualization success. Microsoft is answering this requirement in a way that very few competitors are able to meet.

It is not just System Center VMM that is important in this announcement. Rather, Microsoft is addressing the challenge of multiple layers of complexity with an integrated line of Systems Center solutions, including Virtual Machine Manager, Configuration Manager, Operations Manager, and Microsoft Application Virtualization. This allows Microsoft to provide multiple management disciplines (configuration, provisioning, migration, license management, etc.) for multiple virtualization platforms (Windows, Linux, UNIX), multiple virtualization technologies (server, OS, application, desktop), and multiple virtualization vendors (Microsoft, VMware and soon Citrix/Xen), as well as integrated management of physical server and desktop lifecycles.

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Clearly Microsoft faces an uphill battle in gaining hypervisor market share and its solution is definitely missing some important features such as comprehensive live migration of active workloads. Additionally, Microsoft faces a perception issue with a Linux community that will likely have some reluctance to utilize a Microsoft solution regardless of how well it can support their environments. Nevertheless, Microsoft is putting its competitors – especially VMware – in an increasingly precarious position. In the hypervisor space, VMware risks being squeezed out by commoditization, especially when the massive pent-up demand for Windows Server 2008 rolls out, and Hyper-V becomes available for just \$28, but also as Xen continues to gain ground. In the management space (despite wide partnerships) VMware continues to provide a homogenous solution in a landscape that is increasingly dominated by heterogeneity, whereas Microsoft has accepted and embraced this complexity – and is trying to help enterprises deal with it.

It is still early days, and a complete solution is still a long way off, but Microsoft is positioning itself well with this release. Who would have thought that Microsoft, of all vendors, would look to win the virtualization battle with a heterogeneous solution?