



# System Center Virtual Machine Manager 2008

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**iX Cebit Forum 2009**

Software & Systems





# Inhalt

- Microsoft und Virtualisierung
- Hyper-V
- SCVMM 2008 Uebersicht
- Installation
- Administration
- SCVMM Library
- P2V – V2V
- Offline Virtual Machine Servicing Tool

# Microsoft und Virtualisierung

- 2001 – Virtual PC 4.0 von Connectix
- Februar 2003 – Microsoft Virtual Server 2003
- Juli 2006 – Microsoft Virtual PC 2004
- Februar 2007 – Virtual PC 2007
- Nach der Einfuehrung von Windows Server 2008 – Microsoft Hyper-V (Codename Viridian) – in der Beta Phase Hyper-V 2.0
- SCVMM 2007 + 2008

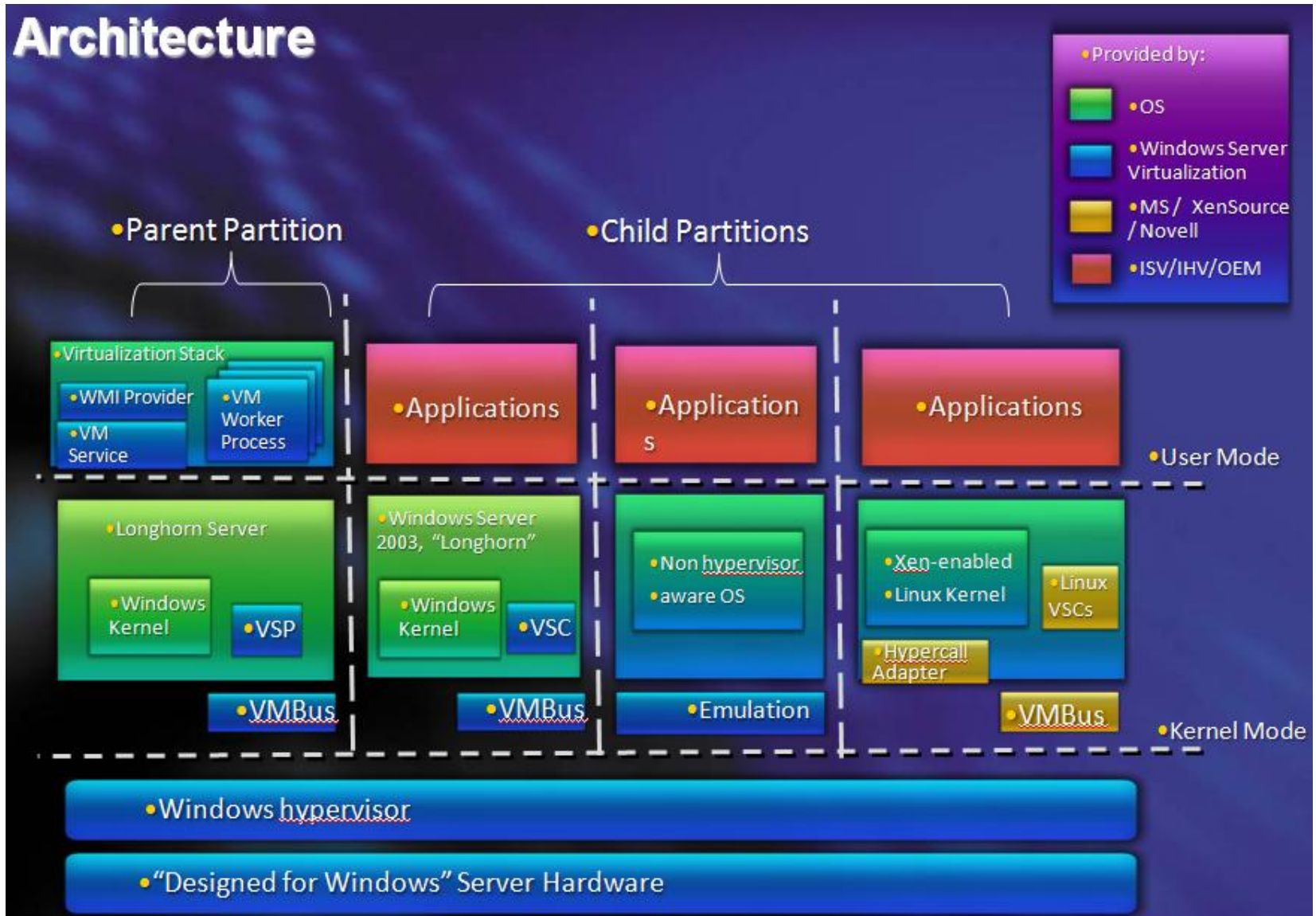
# Virtualisierungsloesungen am Markt

- Xen – Universitaet Cambridge – GPL 
- Virtual Box – Virtualbox.org 
- Parallels Workstation – Firma Parallels Inc.
- Microsoft Virtual PC - Microsoft 
- Microsoft Virtual Server - Microsoft
- VMware Workstation – VMware Inc.
- VMware Server – VMware Inc. 
- VMware ESX Server (VMware Infrastructure 3)

# Viridian und Hyper-V

- Viridian ist der ehemalige Codename des Nachfolgers von Microsoft Virtual Server 2005 R2
- Ausschliesslich auf der Windows Server 2008 Plattform (x64) verfuegbar
- Im Laufe der Entwicklungsphase wurde aus dem Codenamen Viridian der Name Hyper-V gepraeagt
- Hyper-V Verfuegbarkeit kurz nach Windows Server 2008 RTM
- Hyper-V 2.0 in Beta (Windows Server 2008 R2)

# Architecture



Quelle:

<http://www.microsoft.com/germany/windowsserver2008/virtualisierung.msp>

# Demo

**Hyper-V MMC**

# System Center Virtual Machine Manager 2008

- P2V-Funktionen (Physical to Virtual)
- V2V-Funktionen (Virtual to Virtual), inklusive Vmware
- Zentrale Verwaltungskonsole fuer alle Microsoft Hyper-V + Virtual Server 2005 Systeme
- Self Service Portal fuer das Provisioning virtueller Maschinen durch Nicht Administratoren
- Zentrale Library fuer die Ablage virtueller Maschinen und Templates





# Was ist neu?

- Unterstuetzung fuer VMs unter Windows Server 2008
  - Failover Unterstuetzung
  - Live Migration mit Hyper-V 2.0
  - Powershell Integration
- Performance und Ressource Optimierung (PRO)
  - Monitoring mit PRO Management Pack
  - Integration mit SCOM 2007
  - Powershell Integration
- Weitere Aenderungen
  - Verbesserte Administrations Delegierung
  - Self Service Portal Redesign
  - Erweiterte Powershell Befehle
  - Geliftete Oberflaeche

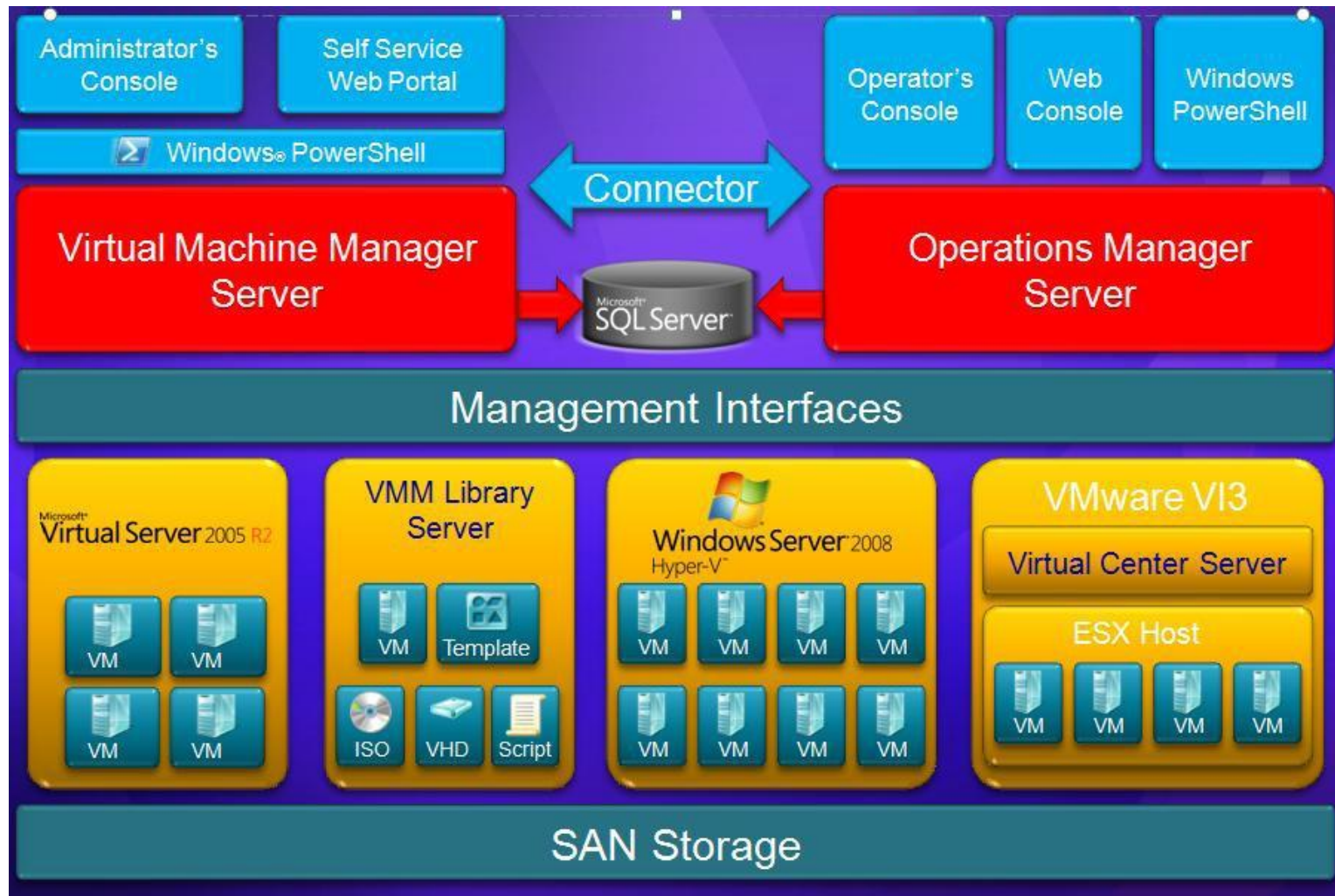
# SCVMM 2008 Komponenten

- Administrator Console
- Powershell
- Self Provisioning Web Portal
- VMM Library
- Microsoft SQL Server Datenbank
- Optional: Offline Virtual Machine Servicing Tool 2.0

# SCVMM Systemanforderungen

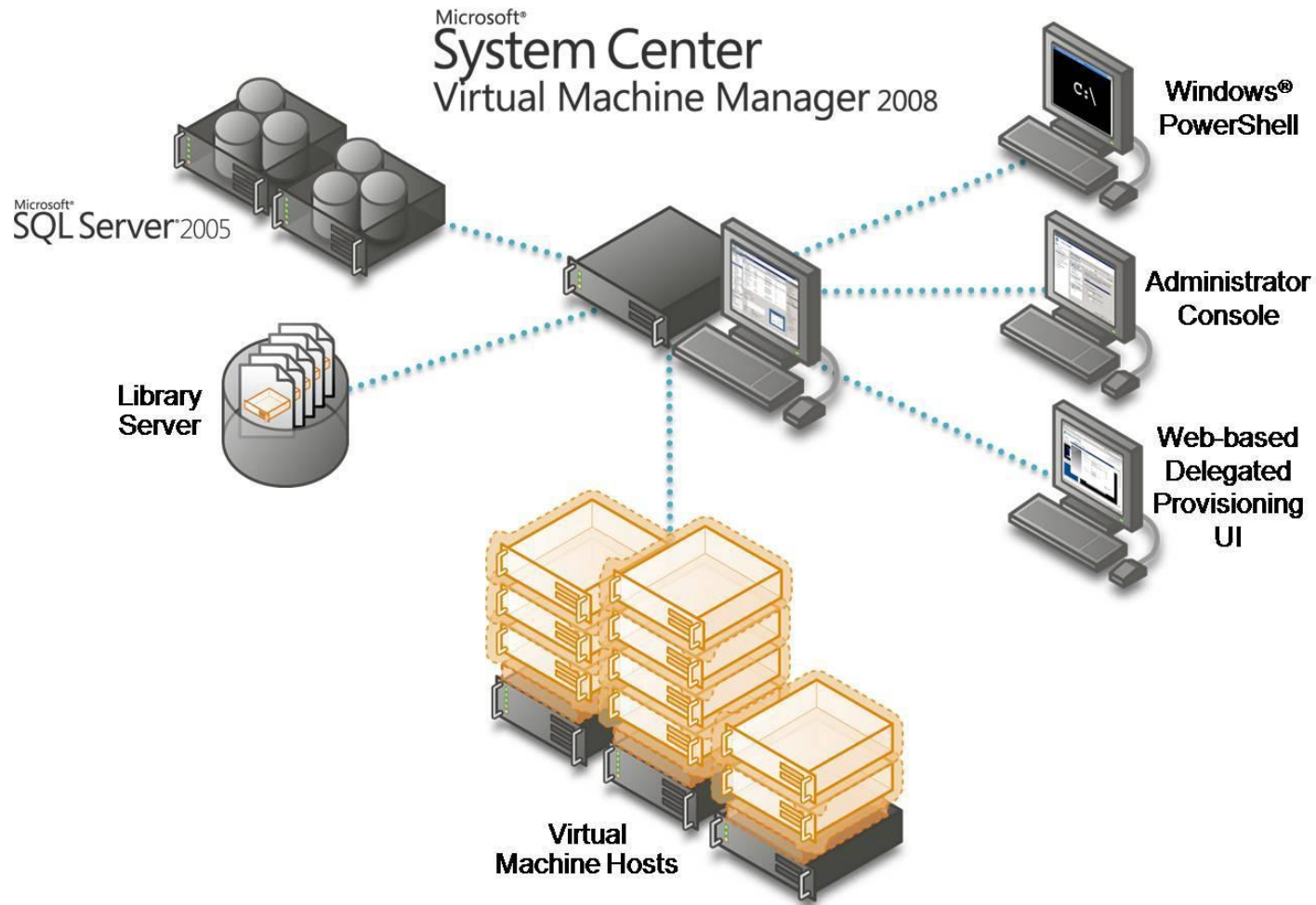
SCVMM server	
<b>Operating system</b>	Windows Server 2008 x64 with Hyper-V
<b>Database</b>	<p>If not already installed, the SCVMM installation process will install the Microsoft SQL Server™ 2005 Express Edition SP1 on the local computer from the Setup Wizard. This also installs the SQL Server 2005 Express Edition Toolkit and creates a SQL Server instance named MICROSOFT\$VMM\$ on the local computer.</p> <p>Alternately, you can use an existing local or remote instance of the following versions of Microsoft SQL Server 2005 or Microsoft SQL Server 2008:</p> <ul style="list-style-type: none"><li>• Microsoft SQL Server 2005 Express Edition SP1</li><li>• Microsoft SQL Server 2005 Standard Edition SP1 or SP2</li><li>• Microsoft SQL Server 2005 Enterprise Edition SP1 or SP2</li><li>• Microsoft SQL Server 2008</li><li>• Microsoft SQL Server 2008 Standard Edition</li><li>• Microsoft SQL Server 2008 Enterprise Edition</li><li>• </li></ul> <p>For more information about SQL Server options, see SQL Server Options for Virtual Machine Manager in the System Center Virtual Machine Manager Setup Help.</p>
<b>Other software</b>	<p>Microsoft .NET Framework 2.0<sup>1</sup> Microsoft .NET Framework 3.0<sup>2</sup> Windows® Remote Management (WinRM) Microsoft Core XML Services (MSXML) 6.0<sup>3</sup></p>

# SCVMM Architektur



Quelle: <http://www.microsoft.com/systemcenter/virtualmachinemanager/en/us/white-papers.aspx>

# SCVMM 2008 Topologie



# SCVMM Konsole

The screenshot displays the SCVMM Konsole interface, which is used for managing virtual machines. The interface is divided into several panes:

- Virtual Machines:** A pane on the left showing a hierarchy of hosts and virtual machines. It includes a search bar and a list of virtual machines with their status and host information.
- Virtual Server:** A pane on the left showing a list of hosts and their status.
- VMware Cluster:** A pane on the left showing a list of hosts and their status.
- Hyper-V Cluster:** A pane on the left showing a list of hosts and their status.
- Filters:** A pane on the left showing a list of filters to apply to the virtual machines.
- Management Selection:** A pane on the left showing a list of management actions to perform on the virtual machines.
- All Hosts:** A central pane showing a table of all hosts and their virtual machines. The table includes columns for Name, Status, Job Status, Host, Owner, and CPU Average.
- Operating System:** A pane on the right showing the operating system details for the selected virtual machine.
- Actions:** A pane on the right showing a list of actions that can be performed on the selected virtual machine.
- Virtual Machine:** A pane on the right showing the virtual machine's status and details.
- Live Thumbnail:** A pane on the right showing a live thumbnail of the virtual machine's display.
- VM Information:** A pane on the right showing the virtual machine's configuration and settings.

Annotations in red speech bubbles point to specific features:

- Virtual Server** points to the 'Virtual Machines' pane.
- VMware Cluster** points to the 'Virtual Machines' pane.
- Hyper-V Cluster** points to the 'Virtual Machines' pane.
- Filters** points to the 'Filters' pane.
- Management Selection** points to the 'Management Selection' pane.
- Virtual Machines** points to the 'All Hosts' table.
- Context Sensitive Actions** points to the 'Actions' pane.
- Live Thumbnail** points to the 'Virtual Machine' pane.
- VM Information** points to the 'Virtual Machine' pane.

Quelle: [http://download.microsoft.com/download/4/d/b/4db1a6b2-292b-4fd9-8d0c-ed21afa9d368/SCVMM2008\\_Reviewer's\\_Guide\\_082808.pdf](http://download.microsoft.com/download/4/d/b/4db1a6b2-292b-4fd9-8d0c-ed21afa9d368/SCVMM2008_Reviewer's_Guide_082808.pdf)

# Demo

**Installation**

**Admin Console**

# Demo

**Administration**



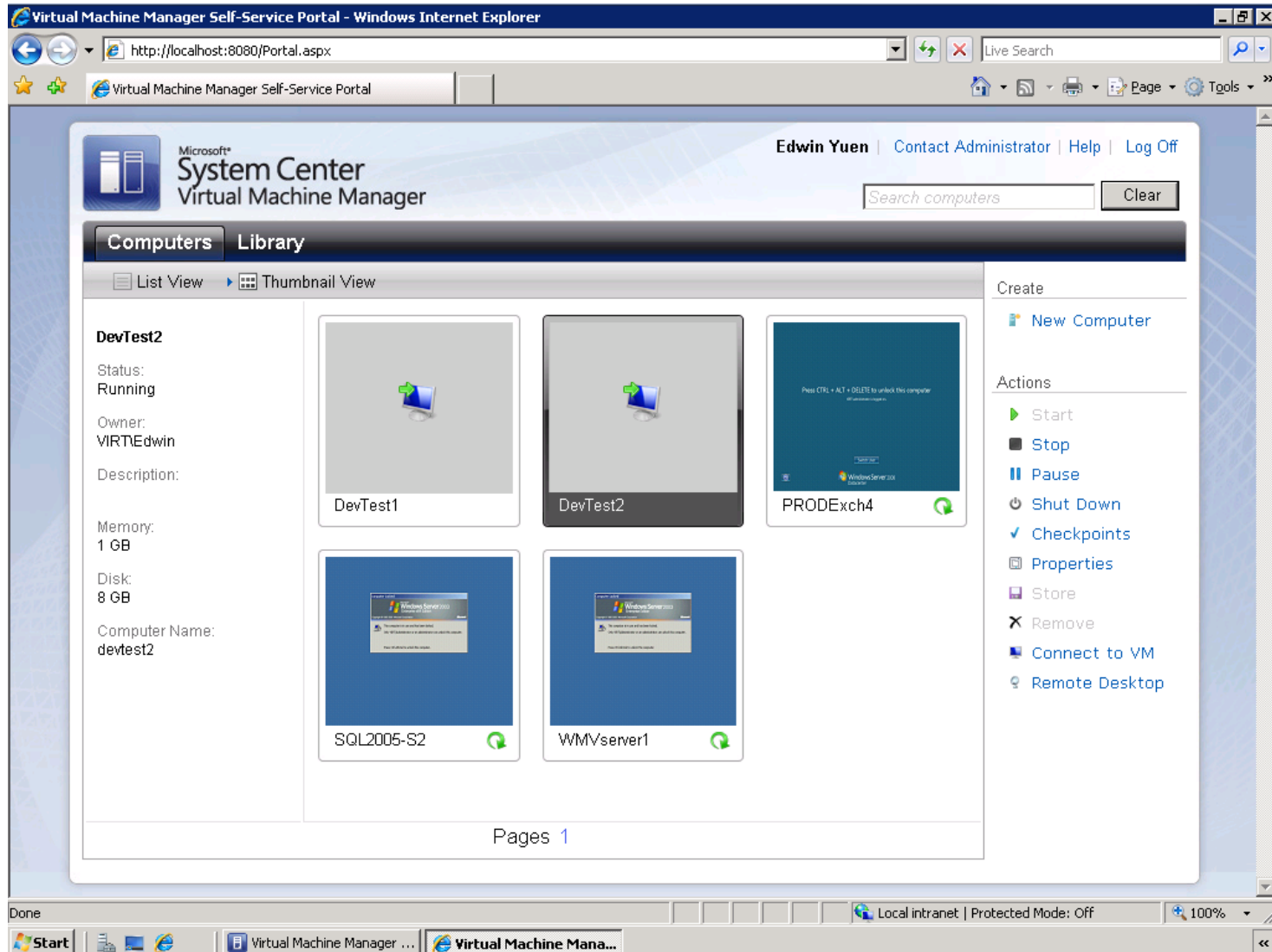
# SCVMM Library

- Gespeicherte virtuelle Maschinen
- Virtuelle Festplatten
- CD/DVD Software Images
- Betriebssystem Profile
- Post-Deployment Skripts
- Sysprep Antwort Dateien
- Hardware Konfigurationen
- Vorlagen

# Demo

**Library**

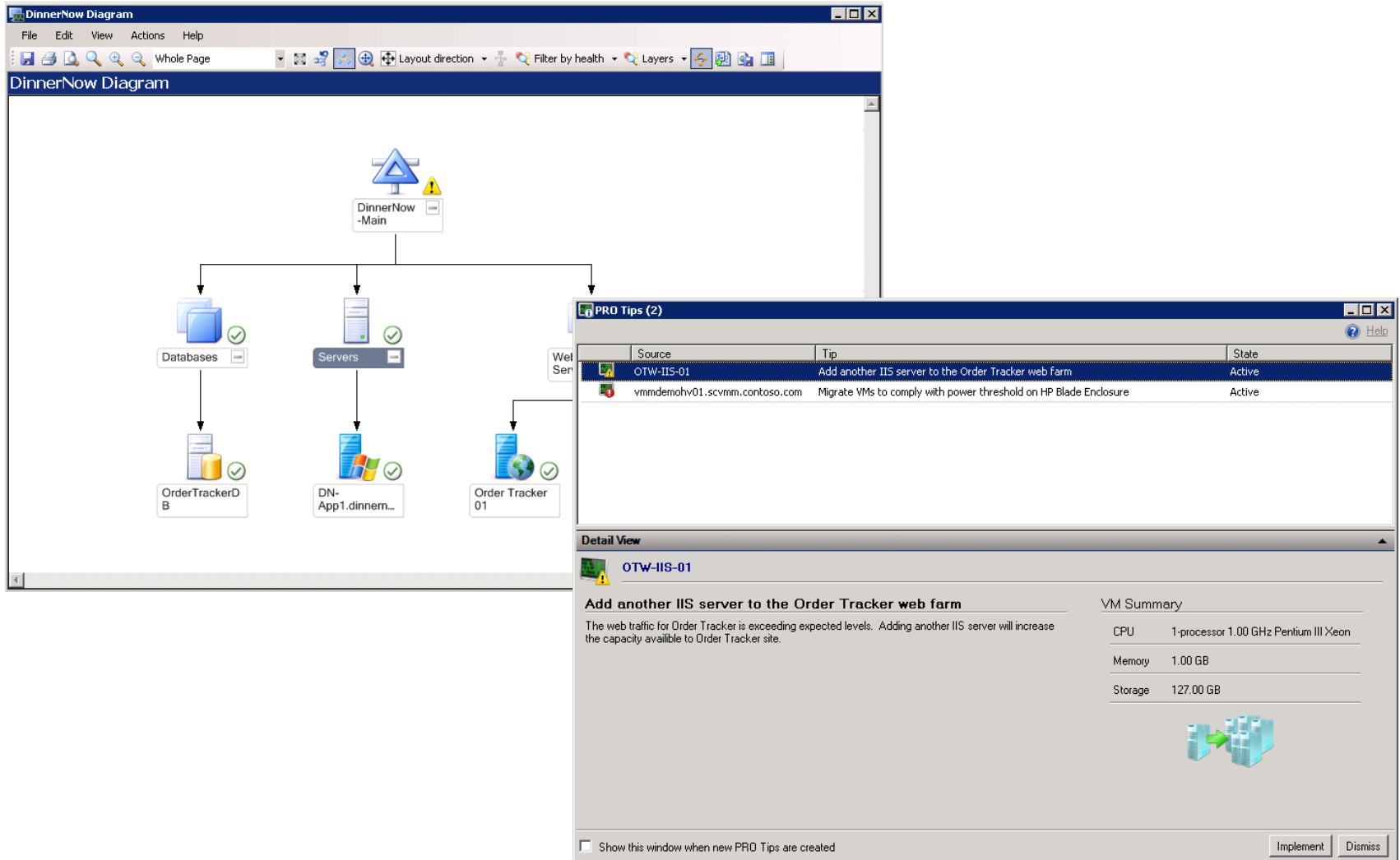
# SCVMM Self Service Portal



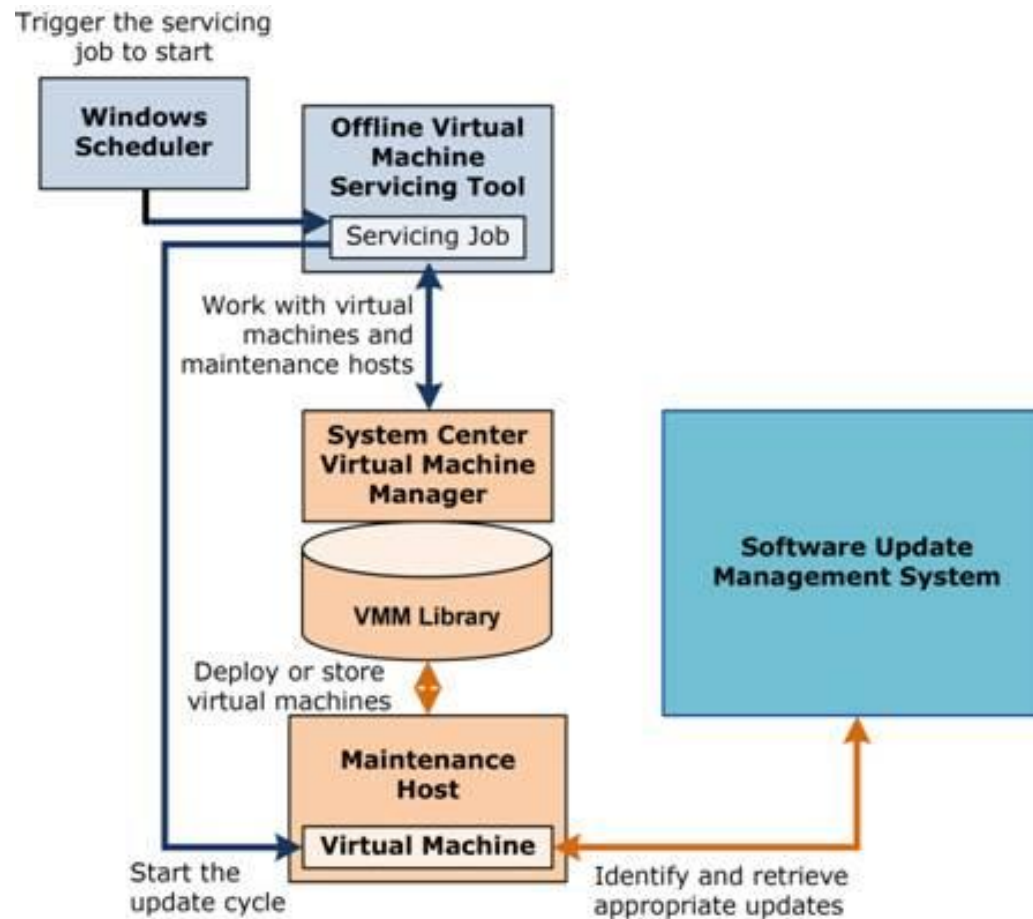
# Demo

**Erweiterte Funktionen**

# PRO Integration



# Offline Virtual Machine Servicing Tool



# Links

- SCVMM 2008  
<http://www.microsoft.com/systemcenter/virtualmachinemanager/en/us/default.aspx>
- Offline Virtual Machine Servicing Tool  
<http://technet.microsoft.com/en-us/library/cc501231.aspx>
- Hyper-V FAQ  
<http://www.microsoft.com/windowsserver2008/virtualization/faq.mspx>
- Virtual PC Guy's Weblog  
[http://blogs.msdn.com/virtual\\_pc\\_guy/](http://blogs.msdn.com/virtual_pc_guy/)
- Hyper-V Functional Specification  
<http://www.microsoft.com/downloads/details.aspx?FamilyId=91E2E518-C62C-4FF2-8E50-3A37EA4100F5&displaylang=en>



# Vielen Dank fuer Ihre Aufmerksamkeit

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**Fragen?**

A large, stylized blue question mark graphic is positioned to the right of the word 'Fragen?'. The question mark is composed of two overlapping shapes: a lighter blue one in front and a darker blue one behind it, creating a 3D effect. It has a thick, blocky design with a small square at the base of the stem.