

Microsoft®

# System Center Virtual Machine Manager 2008

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Product Technology Specialist

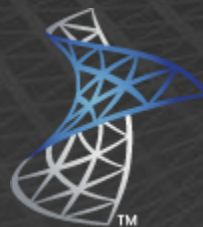
Management Solutions

Enterprise & Partner Group, Microsoft Danmark



# Agenda

- System Center
- Virtual Machine Manager
  - Overblik
  - Demo
- Roadmap



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System Center

# System Center



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# Industry Trends

## *Macro Trends*

## *Current Indicators*

### Virtualization acceleration

- #1 CIO priority in 2008 (up from #17)
- Companies virtualizing servers will double next year
- Hyper-V will accelerate virtualization adoption

### Large Datacenter build outs

- 74% of enterprises mandate all servers reside in the DC
- Projected to consume 5% of US power in 2009

### BSM/Service Management

- SLM/BSM shows highest growth of any IT management segment – 23% from 2006–2007

### Anywhere Access

- Laptops sales outnumber desktops for first time
- Converged mobile phones growing 2x faster than mobile PCs

### SaaS gaining mindshare

- Systems Management-Related SaaS grows to \$4B market in next 3 years
- Major player market entry: Dell; Symantec



# Dynamic IT

*Enabling IT Pros and Development Teams Across the IT Lifecycle*

Manage Complexity,  
Achieve Agility

Protect Information,  
Control Access

Advance the Business  
with IT Solutions

Amplify the Impact  
of Your People



**Unified &  
Virtualized**



**Process-Led,  
Model-Driven**



**Service-  
Enabled**



**User-  
Focused**

**Secure & Interoperable Platform**

***Core Innovation Areas***

## Enterprise Suite



Microsoft®  
**System Center**  
Operations Manager



Microsoft®  
**System Center**  
Configuration Manager



Microsoft®  
**System Center**  
Data Protection Manager



Microsoft®  
**System Center**  
Virtual Machine Manager



Microsoft®  
**System Center**  
Essentials



Microsoft®  
**System Center**  
Remote Operations Manager



Microsoft®  
**System Center**  
Mobile Device Manager 2008



Microsoft®  
**System Center**  
Online



Microsoft®  
**System Center**  
Service Manager



Microsoft®  
**System Center**  
Capacity Planner 2007

Licensed Individually



Microsoft®  
**Asset Inventory**  
Service

Microsoft®

**Desktop Optimization Pack**  
For Software Assurance



Microsoft®  
**Diagnostics and**  
Recovery Toolset



Microsoft®  
**Advanced Group**  
Policy Management



Microsoft®  
**Application**  
Virtualization



Microsoft®  
**System Center Desktop**  
Error Monitoring

 **kidaro**

# System Center Virtual Machine Manager



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System Center  
Virtual Machine Manager 2008



# Microsoft Virtualization

From the datacenter to the desktop



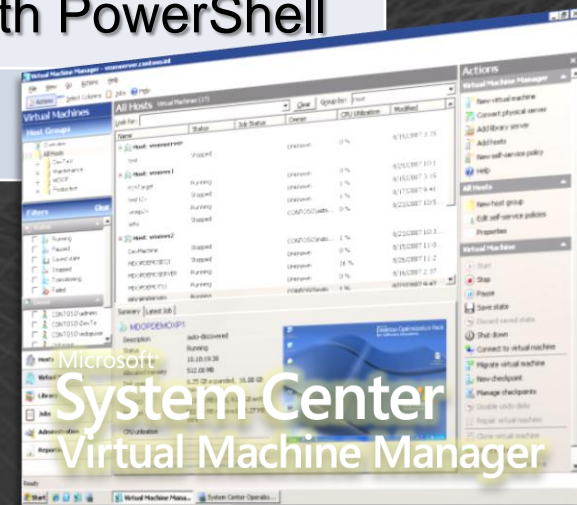


# Virtual Machine Manager 2008

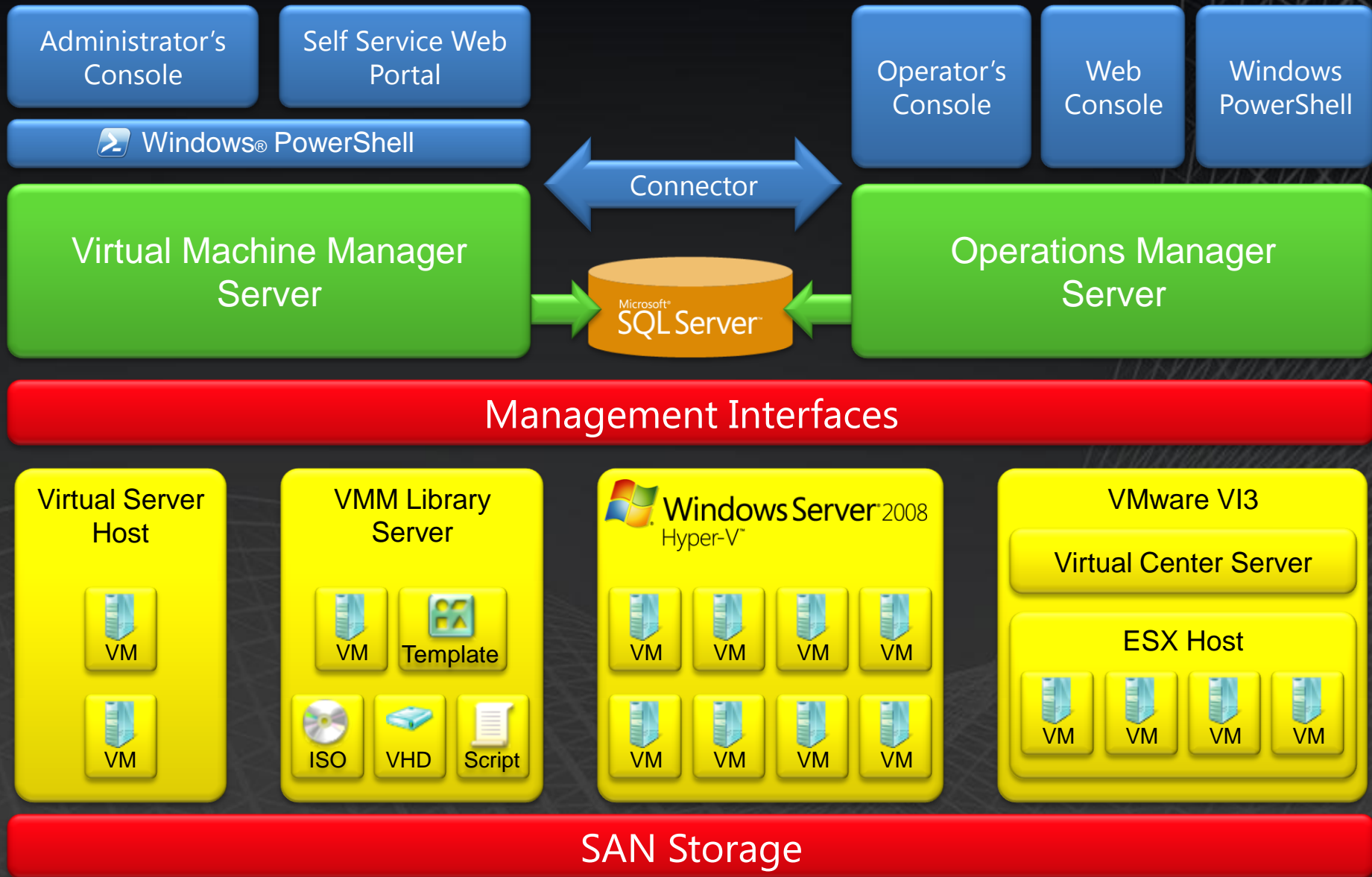
*Centralized, heterogenic management solution for the virtual datacenter*

## Available Features

- |                               |                              |
|-------------------------------|------------------------------|
| ■ Host Configuration          | ■ Intelligent Placement      |
| ■ Library Management          | ■ Deployment and Storage     |
| ■ Virtual Machine Creation    | ■ Monitoring and Reporting   |
| ■ Conversions: P2V and V2V    | ■ Automation with PowerShell |
| ■ Delegation and Self Service |                              |



# VMM 2008 Architecture



# Virtual Machine Manager 2008

## VMware Support

- One management console for both:
  - Physical and Virtual
  - Hyper-V and VMware
- Full virtual machine management
  - vMotion, Resource Pools, osv.
  - VI3 support: PRO, Intelligent Placement, Library, Convert and PowerShell
- Customers today have coexistence of virtual platforms



Rating	Host Name	Cluster	Type
★★★★★	Host 01	Cluster01	Network Transfer
★★★★☆	ESXHost 01	None	Live Transfer
★★★☆☆	Host 03	Cluster03	Cluster Transfer
☆☆☆☆☆	Host 04	Cluster04	SAN Transfer

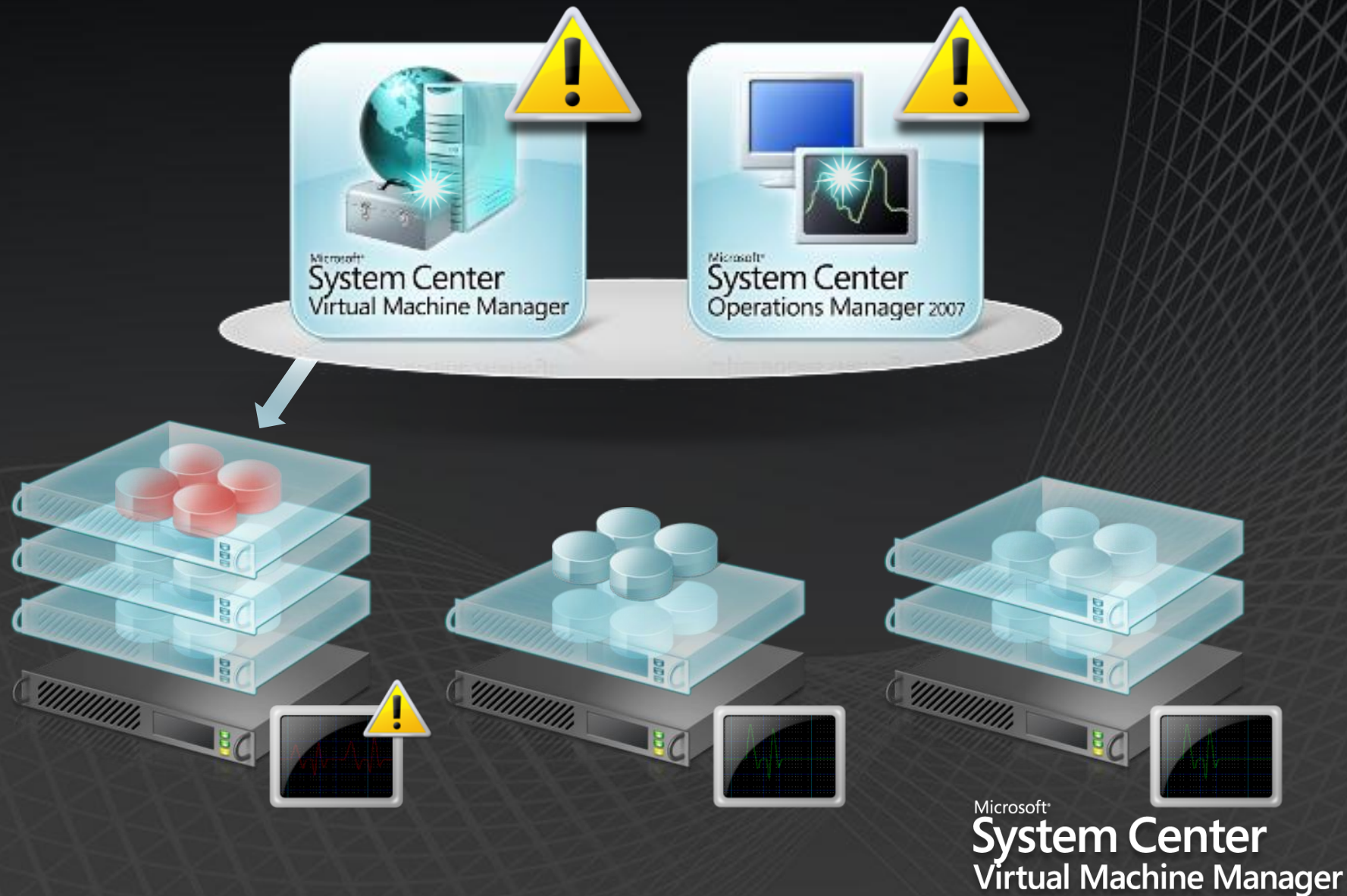
# Performance and Resource Optimization (PRO)

- Alleviate the effects of host-level failure
- Ensure efficient use of resources in the virtualized environment
- Allow VMM Admins to react and manage resources independently
- Do it with knowledge and vendor support



# Virtual Machine Manager 2008

## Performance and Resource Optimization



# PRO Tips User Interface

The screenshot displays the Virtual Machine Manager (VMM) application with a 'PRO Tips' dialog box open. The background VMM window shows a list of hosts and virtual machines. The 'PRO Tips' window contains a table of tips and a detailed view for a specific tip.

**PRO Tips Table**

Source	Tip	State	Created
myhost01.extralongname.com	Migrate a vm to free host memory	Active	04/24/08 10:07 PM
MyVM02	Add another IIS server to the Order Tracker...	Active	04/24/08 11:20 AM

**Detail view for MyVM02 (Age: 10 minutes)**

**Add another IIS server to the Order Tracker web farm**

The web traffic for Order Tracker is exceeding expected levels. Adding another IIS server will increase the capacity available to Order Tracker site.

▶ Cause

**Virtual Machine Summary**

- CPU: 1-processor 1.00 GHz
- Memory: 1.00 GB
- Storage: 127.00 GB


☐ Show this window when new PRO Tips are created


**Implement** **Dismiss**

The background VMM interface includes a menu bar (File, View, Go, Actions, Help), a toolbar (Actions, Columns, Jobs, PRO Tips (0), Networking, PowerShell, Help), and a sidebar with sections like Hosts, Host Groups, Filters, and Virtual Machines.

# PRO Enabled Management Pack

## PRO Enabled MP

Dagnostic  
Tasks 

Recovery  
Tasks 



Monitors



Knowledge

Target

## PRO Library MP



Hyper-V Host  
PRO Target



VMware Host  
PRO Target



Virtual Machine  
PRO Target



Custom  
PRO Target



Hyper-V Host



VMware Host



Virtual Machine



Hardware/Software  
Component

# Reporting

- Identify Virtualization Candidates
- Virtual Machine Allocation
- Virtual Machine Utilization
- Host Utilization
- Host Utilization Growth

## Virtualization Candidates

Server Name	Processor				Memory			Disk		Network
	Processor Speed	Number of Processors	Avg CPU Usage	Maximum CPU Usage	Total RAM	Avg Memory Available	Avg Memory Usage	% Free Disk Space	Avg Bytes Total/Sec	Avg Bytes Total/Sec
server01.corp.contoso.com	3600 MHz	4	1.39 %	23.10 %	4095 MB	1997 MB	51.24 %	93.06 %	53 KB	62 KB
server02.corp.contoso.com	2327 MHz	1	1.49 %	38.27 %	1023 MB	153 MB	85.01 %	71.93 %	29 KB	1 KB



# Offline Virtual Machine Servicing Solution Accelerator



- Locate Offline Machine in VMM Library
- Move it to Hyper-V “patch” server
- Start the Machine
- Identify, download & apply patches
- Shutdown Machine
- Move it back to VMM Library
- Continue...



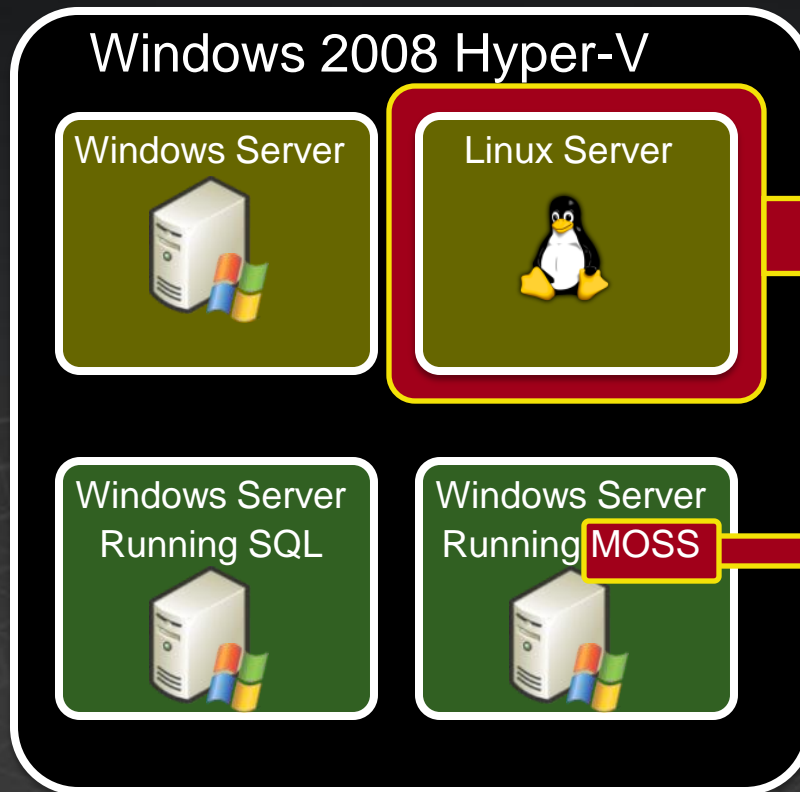
Hyper-V Server



Virtual Machine Manager Library

# **System Center Roadmap**

# Protecting a server Virtual vs. Physical



Protecting the Virtual OS  
using Snapshots  
DPM Unaware of OS type



**DPM 2007**  
*with integrated Disk & Tape*

Protecting the Applications  
within the Virtual OS.  
Treat like a Physical Server  
DPM Aware of OS and Appl.



# Managing the Server Lifecycle

Microsoft®  
System Center  
Data Protection Manager



Microsoft®  
System Center  
Configuration Manager



Backup

Hardware  
Provisioning

**Server Management Suite  
Enterprise**

Performance  
and Health  
Monitoring

OS / Software  
Deploy,  
Patching and  
State Mgmt



Microsoft®  
System Center  
Operations Manager



Microsoft®  
System Center  
Virtual Machine Manager



# System Center Roadmap

	2007	2008	2009	2010
Microsoft® System Center Virtual Machine Manager	2007	2008		V3
Microsoft® System Center Data Protection Manager	2007	Rollup/SP1		V3
Microsoft® System Center Configuration Manager	2007	SP1/R2		V5
Microsoft® System Center Operations Manager	2007	SP1	R2	V4
Microsoft® System Center Service Manager				V1
Microsoft® Desktop Optimization Pack for Software Assurance	2007	2008	2009	2010
Microsoft® System Center Mobile Device Manager		2008	SP1	Included in SCCM
Microsoft® System Center Essentials	2007	SP1	SP2	V2
Microsoft® System Center Online				V1

The background is a dark gray with a subtle, glowing wireframe grid pattern that curves around the central text. The Microsoft logo is prominently displayed in the center.

# **Microsoft<sup>®</sup>**

*Your potential. Our passion.<sup>™</sup>*

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