



# Virtual Machine Manager 2007

The comprehensive management solution  
for the virtualized data center

System Center Virtual Machine Manager 2007 provides a comprehensive management solution for the virtualized data center that enables increased physical server utilization and centralized management of virtual machine infrastructure.

Virtual Machine Manager delivers the following key features:

- End-to-end support for consolidating physical servers onto a virtual infrastructure.
- Fast and reliable Physical-to-Virtual (P2V) and Virtual-to-Virtual (V2V) machine conversions.
- Intelligent Placement of virtual workloads on the best suited physical host servers.
- Rapid deployment and migration of virtual machines.
- A complete library to centrally manage all the building blocks of the virtual data center.

## Maximize IT Resources

Virtual Machine Manager delivers straightforward and complete support for consolidating multiple physical servers within a virtual infrastructure, thus increasing overall utilization of physical servers.

## Fast, Reliable Conversions

Converting a physical machine to a virtual machine can be unnecessarily slow and error prone.

Virtual Machine Manager helps improve the P2V experience by integrating the P2V conversion process and by using the Volume Shadow Copy Service (VSS) of Windows Server® 2003 to create a virtual machine faster and without having to interrupt the source physical server.

Virtual Machine Manager also can easily convert existing VMware virtual machines to deployable Microsoft virtual machines.

## Intelligent Placement

Selecting the appropriate virtual machine host for a given workload is the key to maximizing the utilization of physical assets, whether the organization's goal is to balance loads among existing hosts or to maximize resource usage on each host. In Virtual Machine Manager, the process of selecting the best host for a given virtual machine is called "Intelligent Placement."

When a virtual machine is deployed, Virtual Machine Manager analyzes performance data and resource requirements for both the workload and the host. This allows an IT administrator to fine-tune placement algorithms to get tailored-made deployment recommendations.

First, performance data is used to understand actual resource requirements of the workload. Next, minimum CPU, disk, RAM, and network capacity requirements in the virtual machine's configuration are checked. After determining the virtual machine's requirements, performance data is gathered for candidate virtual machine hosts. Finally, pre-selected business rules are factored in to optimize placement recommendations either for resource maximization or for load balancing, and to weight the importance of different resource types for the workload.

## Centralized Resource Optimization

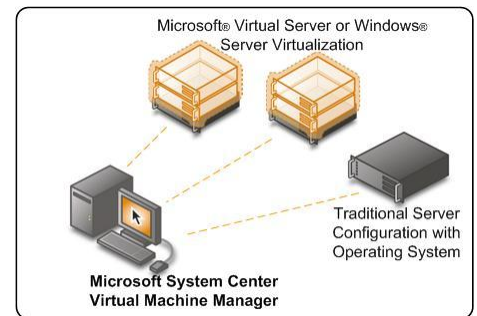
The Virtual Machine Manager Administrator Console provides a central work area for performing resource tuning. Resource settings can be changed on

virtual machines without interrupting workloads and virtual machines can be migrated from one host to another to optimize physical resources.

## Achieve Agility

Virtual Machine Manager provides rapid provisioning of virtual machines by administrators and authorized users.

## Rapid Virtual Machine Provisioning



Virtual Machine Manager enables quick provisioning of new virtual machines. Using a wizard-based user interface, IT administrators can rapidly deploy virtual machines across the entirety of the enterprise. Virtual Machine Manager also allows management and migration of existing virtual machines amongst multiple physical hosts, giving IT administrators a complete and holistic view of their virtual infrastructure.

## Centralized Library

The virtualized data center relies on the ability to find and maintain very large image files for virtual machines (known as "virtual hard drives"). Unlike a physical



server, these virtual hard drives can be unintentionally lost or duplicated.

The library in Virtual Machine Manager centrally manages all the building blocks of the virtual data center such as virtual hard disks, cd/dvd media images, post deployment customization scripts, hardware configurations as well as templates and ISO images.

### **Rapid Deployment of Virtual Machine Templates**

The library in Virtual Machine Manager adds an important tool to the administrator's toolkit: virtual machine templates. Templates contain both the guest operating system configuration and the hardware configuration, to ensure consistency in the data center. Templates bring all the standardization and ease of management of "SysPrep'ed" images to virtual machines.

### **Centralized Monitoring**

Once workloads are consolidated onto a virtual infrastructure, Virtual Machine Manager provides IT administrators with reports and monitoring data. These capabilities can be extended with integration with Operations Manager 2007.

### **Leverage and Extend Existing Storage Infrastructure to Provision Quickly**

Virtual machine images are large and can be difficult to move. The provisioning service of Virtual Machine Manager auto-detects SAN infrastructure and enables copying of virtual machine images over fiber at fast speeds, thus leveraging SAN investments.

The Virtual Machine Manager library provides centralized management of distributed resources for creating virtual

machines. This enables the efficient distribution of offline virtual machines, templates, ISO images, scripts, and other library resources to the edges of the organization, enabling rapid creation and deployment of virtual machines in branch offices.

### **Leverage Datacenter Skills**

The Virtual Machine Manager Administrator Console is built on the familiar Operations Manager 2007 user interface thus helping administrators quickly and easily become proficient in managing their virtual machines. Comprehensive health monitoring of hosts, virtual machines, library servers, and Virtual Machine Manager components is provided through the Virtualization Management Pack in Operations Manager 2007.

Under the covers, Virtual Machine Manager also is integrated with familiar tools and technologies. For example, Virtual Machine Manager uses a SQL Server database to store performance and configuration data, and reporting in Virtual Machine Manager leverages the familiar SQL Reporting Services provided through Operations Manager.

### **Leverage knowledge in Active Directory Domain Services to Management of Virtual Machines**

The System Center virtual machine management solution leverages the knowledge stored in Active Directory Domain Services (AD DS) to provide a secure environment for managing access to virtual machines and hosts that integrates seamlessly with the physical environment. Virtual Machine Manager also supports managing a virtual machine host on a perimeter network (also known as a DMZ).

### **Fully Scriptable Using PowerShell**

Virtual Machine Manager and Data Protection Manager fully implement Windows PowerShell, a new administrator-focused command shell and scripting language with more than 130 standard command-line tools and consistent syntax and utilities. Easy to adopt, learn and use, PowerShell's architecture enables the quick construction of ad hoc integration solutions, enabling administrators to integrate System Center with established tools and procedures in the data center. Because PowerShell is integrated in the Windows Server platform, PowerShell works with existing IT infrastructure and preserves existing script investments.

**For more information about System Center: Virtual Machine Manager, visit: [www.microsoft.com/scvmm](http://www.microsoft.com/scvmm)**

**For more information about Microsoft Virtualization, visit: [www.microsoft.com/virtualization](http://www.microsoft.com/virtualization)**