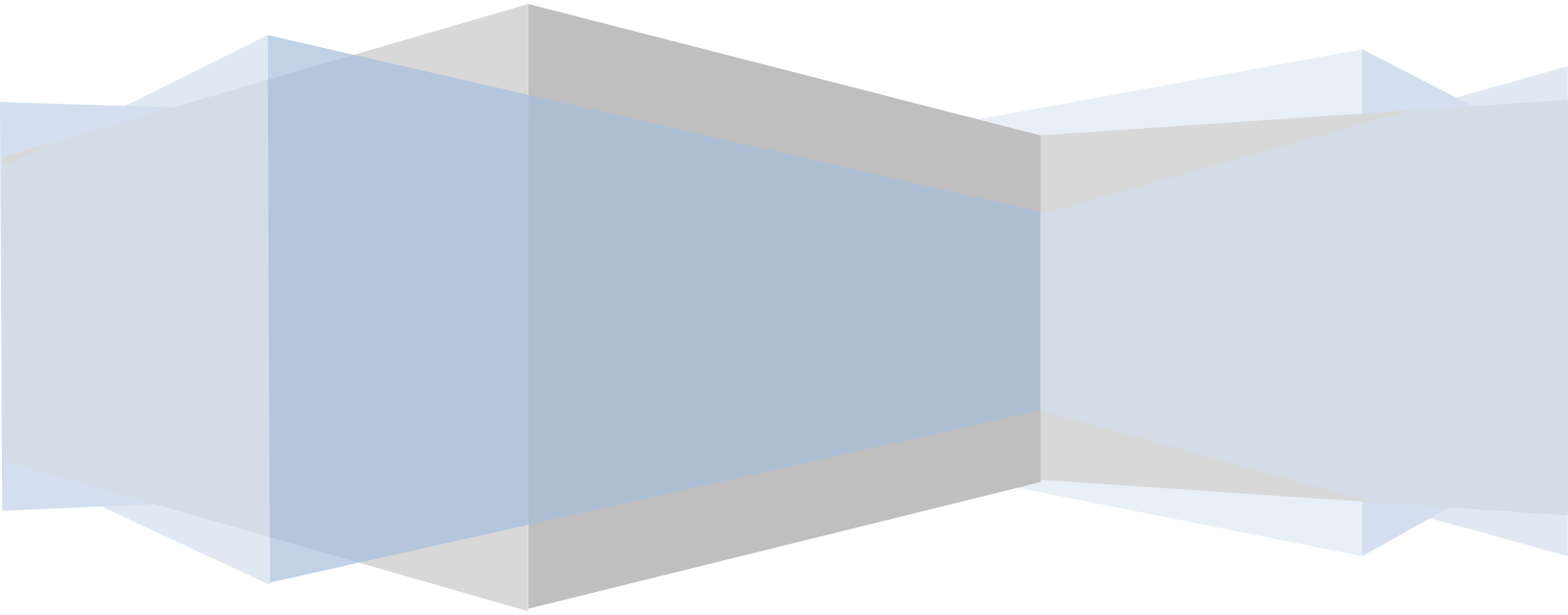
VMM 2008 Essentials

Virtualization Deployment and Management



VMM 2008 Essentials – First Edition

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Chapter 1. About this book

In 2009 Microsoft introduced the highly anticipated Hyper-V virtualization technology. Hyper-V is supplied with the Hyper-V Manager for performing basic administration tasks. For full scale enterprise level virtualization infrastructure management, however, the Virtual Machine Manager (VMM) 2008 is the tool of preference.

VMM 2008 Essentials is an eBook dedicated to providing a detailed overview of the installation and subsequent use of VMM 2008 to perform a wide range of administration tasks on Hyper-V based virtualization environments.

Topics covered include an overview of the VMM 2008 architecture, the installation of the various VMM components, the creation, management and migration of virtual machines, virtual machine template management, configuration of self-service portals, physical to virtual (P2V) conversions, user role management and much more.

Each topic area is accompanied by step-by-step tutorials that bring theory into practice.

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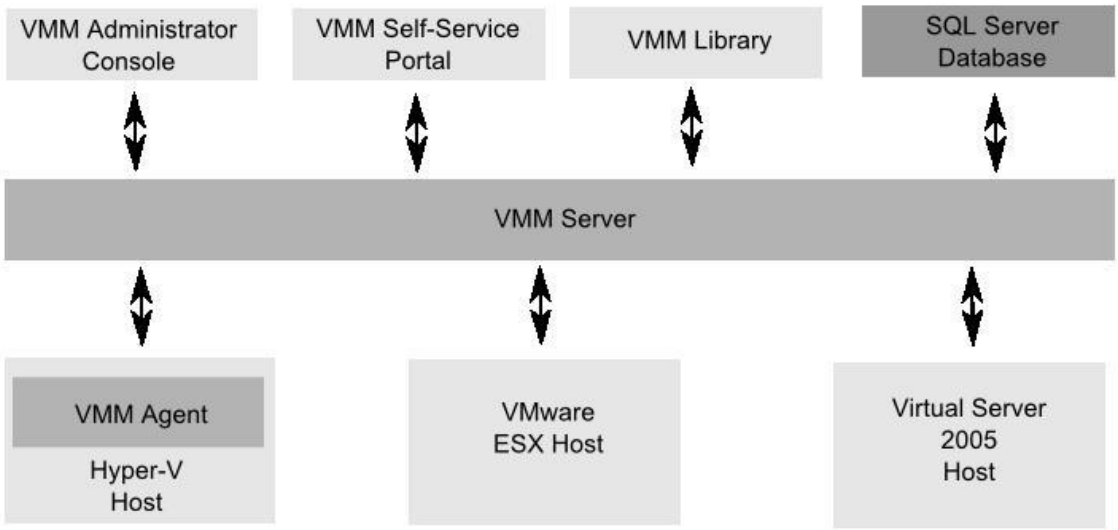
Chapter 2. VMM 2008 Components

Microsoft Virtual Machine Manager 2008 (VMM 2008) is comprised of a number of different modules, each of which serves a specific purpose. VMM 2008 also uses a distributed architecture such that the various components may either be installed on a single server, or spread over multiple server systems. When managing smaller numbers of hosts and virtual machines, installation of all the components on a single server is acceptable. For larger scale virtualization deployments, spreading the components over a number of server systems may be necessary to improve overall performance.

The objective of this chapter is to provide a high level overview of each of the components that comprise the entire VMM 2008 package.

2.1 An Overview of the VMM Component Architecture

Before going into a detailed description of each of the components that make up VMM 2008, the first step is to gain an understanding of how the components fit together. This is perhaps best achieved visually. The following figure, therefore, provides an abstract overview of how the VMM 2008 components fit together.



With a basic understanding of how the component model fits together, the remainder of this chapter will focus on providing additional detail on each module.

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2.2 Virtual Machine Manager Server

The Virtual Machine Manager Server is the central component of the VMM architecture. All the other VMM components communicate with each other through the VMM Server. In addition, the VMM Server acts as the default VMM Library Server and provides an interface to the SQL Server database where configuration information about the virtualization infrastructure is stored.

2.3 Virtual Machine Administration Console

The VMM Administration Console is a Machine Management Console (MMC) snap-in which provides the administrative interface to the VMM 2008 system. Tasks available through the console include the following:

- Configuring the VMM environment
- Managing virtual machine life-cycles (creating, deleting, starting, stopping etc)
- Converting physical machines to virtual machines (P2V)
- Converting virtual machines from one vendor format to another
- Monitoring virtual machines

The VMM Administration Console may be installed on the same host as the VMM Server or on remote systems with network access to the VMM Server system. The console also includes a set of VMM specific Windows PowerShell cmdlets allowing a wide range of administrative tasks to be performed from within the interactive PowerShell environment, or within PowerShell scripts.

2.4 Virtual Machine Manager Library Server

The Virtual Machine Library is a repository in the form of an NTFS share where virtual machine resources such as profiles (both hardware and guest operating system), templates, virtual disks and CD/DVD ISO images may be stored. The job of the VMM Library Server, as the name suggests, is to manage and provide access to this library of resources to the VMM infrastructure.

2.5 Virtual Machine Manager Agent

Virtual Machine Manager Agents run on Windows Server 2008 Hyper-V hosts and provide the ability for the VMM 2008 to monitor and manage the virtual machines running on those

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systems. VMM Agents may be installed on remote hosts from within the VMM Administrator Console, or installed locally from the VMM 2008 installation media.

2.6 Virtual Machine Manager Self-Service Portal

The VMM Self-Service Portal allows a web-based interface to be provided for users to provision virtual machines stored in the VMM Library. The Self-Service Portal provides a number of controls which can be implemented by an administrator to limit which users can create virtual machines and the specific tasks which can be performed on those virtual machines. The VMM Self-Service Portal requires that Internet Information Services (IIS) be installed on the server.

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End of Preview

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