

Deploy System Center Service Manager 2012 R2 on a Single Machine

A Collaged Document on Resources Required by SCSM 2012 R2
Deployment

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Installing Service Manager on a Single Computer (Minimum Configuration)

If you want to evaluate System Center 2012 – Service Manager and you have a minimal amount of hardware available, install Service Manager on one computer. A sample single-computer Configuration is shown in figure 1. This configuration will not support a production environment, and no scalability or performance estimates are provided. Because you cannot install both the Service Manager Management server and the data warehouse management server on the same Computer, use Hyper-V to create a virtual computer to host the data warehouse management Server. For more information about the hardware requirements for Hyper-V, see [Hyper-V Server 2008 R2 system requirements](#).

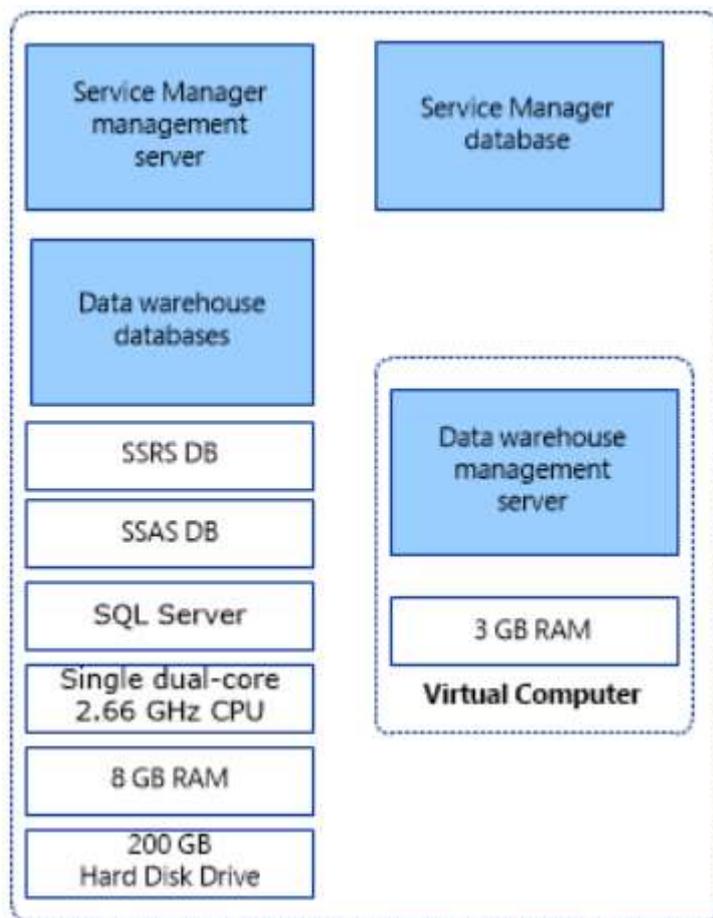


Figure 1: Single Computer Installation

To install Service Manager on a single computer, start with a physical computer that is running Windows Server 2008 and Hyper-V, and make sure that the CPU on the physical computer is compatible with Hyper-V. Of the 8 gigabytes (GB) of RAM on the host

computer, 3 GB is used for the virtual computer that hosts the data warehouse management server. Make sure that at least 200 GB of free space is available on the hard disk drive.

Installing Service Manager on a single computer topics

- [How to Install Service Manager on a Single Computer](#)
Describes how to install Service Manager on a single computer.
- [How to Validate the Single-Computer Installation](#)
Describes how to validate the installation.

Other resources for this component

- TechNet Library main page for [System Center 2012 – Service Manager](#)
- [Operations Guide for System Center 2012 – Service Manager](#)
- [Administrator's Guide for System Center 2012 – Service Manager](#)
- [Planning Guide for System Center 2012 – Service Manager](#)

Planning for Deployment Topics

- [System Center 2012 - Service Manager Parts](#)
Describes the six major parts of a Service Manager installation.
- [SQL Server Requirements for System Center 2012 - Service Manager](#)
Describes the two SQL Server roles that are used by Service Manager, SQL Server Analysis Services (SSAS) and SQL Server Reporting Services (SSRS).
- [System Center 2012 - Service Manager Evaluation, Retail, and Select Editions](#)
Describes the retail and select editions of Service Manager and what effect selecting the 180-day evaluation installation has on these two editions.
- [Supported Configurations for System Center 2012 - Service Manager](#)
Describes the hardware and software requirements for Service Manager. Specific considerations about the software that you need to install to support Service Manager are included.
- [Operations Manager Considerations in System Center 2012 - Service Manager](#)
Describes information that you need to know if you are planning to deploy Service Manager in an environment that hosts Operations Manager 2007.
- [Language Support for System Center 2012 - Service Manager](#)
Describes the languages that are supported in Service Manager.
- [Databases Created by System Center 2012 - Service Manager](#)
Describes the four databases that will be created as a result of deploying Service Manager.
- [Port Assignments for System Center 2012 - Service Manager](#)
Describes the TCP/IP ports that Service Manager uses.

Other Resources for This Component

- TechNet Library main page for [System Center 2012 – Service Manager](#)
- [Planning Guide for System Center 2012 – Service Manager](#)
- [Deployment Guide for System Center 2012 – Service Manager](#)
- [Administrator's Guide for System Center 2012 – Service Manager](#)
- [Operations Guide for System Center 2012 – Service Manager](#)

System Center 2012 - Service Manager Parts

There are six major parts of a System Center 2012 – Service Manager installation, as described in the following table.

Service Manager part	Description
Service Manager management server	Contains the main software part of a Service Manager installation. You can use the Service Manager management server to manage incidents, changes, users, and tasks.
Service Manager database	The database that contains Service Manager configuration items (CI) from the IT Enterprise; work items, such as incidents, change requests, and the configuration for the product itself. This is the Service Manager implementation of a Configuration Management Database (CMDB).
Data warehouse management server	The computer that hosts the server piece of the data warehouse.
Data warehouse databases	Databases that provide long-term storage of the business data that Service Manager generates. These databases are also used for reporting.
Service Manager console	The user interface (UI) piece that is used by both the help desk analyst and the help desk administrator to perform Service Manager functions, such as incidents, changes, and tasks. This part is installed automatically when you deploy a Service Manager management server. In addition, you can manually install the Service Manager console as a stand-alone part on a computer.
Self-Service Portal	A web-based interface into Service Manager.

Important

All computers that host any part of Service Manager must be domain joined.

Supported Configurations for System Center 2012 - Service Manager

This section includes information about the hardware and software requirements for System Center 2012 – Service Manager. Service Manager has been tested up to the workload described in this topic, based on the recommended hardware requirements in this guide. This environment contains one Service Manager management server supporting 80 to 100 concurrent Service Manager consoles. High-performance storage using 15,000-RPM SCSI drives is used on the database servers.

The hardware and software requirements described in this section are based on the following system environment and conditions:

- Up to 20,000 users, with up to 40 to 50 IT analysts providing concurrent support. Up to 50,000 users and up to 80 to 100 IT analysts can be supported if 32 gigabytes (GB) of memory is installed on the servers running Microsoft SQL Server.
- Up to 20,000 supported computers, assuming up to 10 to 12 configuration items (installed software, software updates, and hardware components) per computer. Up to 50,000 computers can be supported if 32 GB of memory is installed on the servers running SQL Server.
- 5,000 incidents per week with three months of retention, for a total of 60,000 incidents in the Service Manager database for the 20,000-computer configuration, and 2.5 times that for the 50,000-computer configuration.
- 1,000 change requests a week with three months of retention, for a total of 12,000 change requests in the Service Manager database for the 20,000-computer configuration, and 2.5 times that for the 50,000-computer configuration.

Using a slow storage subsystem or insufficient memory can reduce Service Manager Performance significantly.

Supported Configuration Topics

- [Hardware Requirements for System Center 2012 - Service Manager](#)
Describes the hardware requirements for Service Manager.
- [Software Requirements for System Center 2012 - Service Manager](#)
Describes the software requirements for Service Manager.

Other Resources for This Component

- TechNet Library main page for [System Center 2012 – Service Manager](#)
- [Planning Guide for System Center 2012 – Service Manager](#)
- [Deployment Guide for System Center 2012 – Service Manager](#)
- [Administrator's Guide for System Center 2012 – Service Manager](#)
- [Operations Guide for System Center 2012 – Service Manager](#)

Hardware Requirements for System Center 2012 - Service Manager

This topic describes the hardware requirements for System Center 2012 – Service Manager.

Hardware Requirements

The following table lists the recommended hardware requirements for the individual parts of Service Manager. These computers can be physical servers or virtual servers.

For System Center 2012 SP1 only: The hardware requirements for Service Manager in System Center 2012 Service Pack 1 (SP1) are unchanged from its initial release.

Hardware requirements table

Service Manager database	8-core 2.66 gigahertz (GHz) CPU 8 gigabytes (GB) of RAM for 20,000 users, 32 GB of RAM for 50,000 users 80 GB of available disk space RAID Level 1 or Level 10 drive*
Service Manager management server	4-Core 2.66 GHz CPU 8 GB of RAM 10 GB of available disk space
Service Manager console	2-core 2.0 GHz CPU 4 GB of RAM 10 GB of available disk space
Data warehouse management server	4-Core 2.66 GHz CPU 8 GB of RAM When a data warehouse management group and SQL Server Analysis Services are hosted on a single server, it should contain at least 16 GB RAM. 10 GB of available disk space
Data warehouse databases	8-core 2.66 GHz CPU 8 GB of RAM for 20,000 users, 32 GB of RAM for 50,000 400 GB of available disk space RAID Level 1 or Level (1+0) drive
Self-Service Portal: Web Content Server with SharePoint Web Parts	8-Core 2.66 GHz CPU 8-core, 64-bit CPU for medium deployments 16 GB of RAM for 20,000 users, 32 GB of RAM for 50,000 users 80 GB of available hard disk space

* For more information, see [RAID levels and Microsoft SQL Server](#).

** Hardware requirements are based on SharePoint specifications. For more information, see [Hardware and Software Requirements \(SharePoint Server 2010\)](#).

Software Requirements for System Center 2012 - Service Manager

This topic describes the software requirements for Service Manager in System Center 2012, System Center 2012 Service Pack 1 (SP1), and System Center 2012 R2 Service Manager. Where applicable to a specific Service Manager version, items are noted accordingly.

Software Requirements

All software requirements for System Center 2012 R2 Service Manager are listed at [System Requirements for System Center 2012 R2](#).

All software requirements for System Center 2012 Service Pack 1 (SP1) are listed at [System Requirements for System Center 2012 SP1](#).

The software requirements for System Center 2012 – Service Manager with no service pack are the same as System Center 2012 R2 Service Manager, except that System Center 2012 – Service Manager is not supported on Windows Server 2012 or where noted. Additional requirements and related information is shown in the following table and sections.



Note

The Service Manager management server and data warehouse management server must be installed on the 64-bit edition of the Windows operating system. The Service Manager console can be installed on both the 32-bit and 64-bit editions of Windows.

Service Manager 2012 with no service pack is supported on SQL Server 2008 R2 without a service pack, however it is not supported with SQL Server 2012. Service Manager 2012 SP1 and System Center 2012 R2 Service Manager require SQL Server 2008 R2 SP1 or later.

Software requirements table

Service Manager management server	In addition to the System Requirements for System Center 2012 R2 , the Service Manager management server requires: <ul style="list-style-type: none">• ADO.NET Data Services Update for .NET Framework 3.5 SP1 for Windows Server 2008 R2• SQL Server 2008 R2 Native Client or SQL Server 2012 Native client• Microsoft Report Viewer Redistributable, which is available with the Service Manager media. For more information, see How to Install the Microsoft Report Viewer Redistributable Security Update in the Deployment Guide for System Center 2012 – Service Manager.
Data warehouse management server	In addition to the System Requirements for System Center 2012 R2 , the data warehouse management server requires: <ul style="list-style-type: none">• SQL Server 2008 R2 Native Client or SQL Server 2012 Native client
Service Manager or data warehouse databases	In addition to the System Requirements for System Center 2012 R2 , the Service Manager or data warehouse databases require: <ul style="list-style-type: none">• SQL Server Reporting Services (SSRS)

	<ul style="list-style-type: none"> • The SQL Server and Analysis Services collation settings must be the same for the computers hosting the Service Manager database, data warehouse database, analysis services database, and Reporting Services database. • For Service Manager in System Center 2012 SP1 and System Center 2012 R2 Service Manager: SQL Server 2012 Analysis Management Objects, which are part of the SQL Server 2012 Feature Pack, are required regardless of the SQL Server version that you use • For System Center 2012 only: SQL Server 2008 R2 Analysis Management Objects
Service Manager console	<p>In addition to the System Requirements for System Center 2012 R2, the Service Manager console requires:</p> <ul style="list-style-type: none"> • Microsoft Report Viewer Redistributable, which is available with the System Center 2012 – Service Manager media. For more information, see How to Install the Microsoft Report Viewer Redistributable Security Update in the Deployment Guide for System Center 2012 – Service Manager. • You must have Microsoft Excel 2007 or later installed in order view OLAP data cubes on the computer running the Service Manager console. • ADO.NET Data Services Update for .NET Framework 3.5 SP1 for Windows Server 2008 R2. * • For Service Manager in System Center 2012 SP1 and System Center 2012 R2 Service Manager: SQL Server 2012 Analysis Management Objects are required regardless of the SQL Server version that you use • For System Center 2012 only: SQL Server 2008 R2 Analysis Management Objects
Self-Service Portal: Web Content Server	<p>In addition to the System Requirements for System Center 2012 R2, the Self-Service Portal Web Content Server requires:</p> <ul style="list-style-type: none"> • Microsoft Internet Information Services (IIS) 7 with IIS 6 metabase compatibility installed. • A Secure Sockets Layer (SSL) certificate can be used on the IIS server that hosts the Self-Service Portal. • For Service Manager in System Center 2012 SP1 and System Center 2012 R2 Service Manager: SQL Server 2012 Analysis Management Objects are required regardless of the SQL Server version that you use

	<ul style="list-style-type: none"> For System Center 2012 only: SQL Server 2008 R2 Analysis Management Objects
Self-Service Portal: SharePoint Web Parts	<p>One of the following versions of Microsoft SharePoint:</p> <ul style="list-style-type: none"> Microsoft SharePoint Foundation 2010 Microsoft SharePoint Server 2010 Microsoft SharePoint 2010 for Internet Sites Enterprise If your Service Manager database uses SQL Server 2012, then you must have Service Pack 1 applied to your SharePoint 2010 installation. <p>Software requirements for SharePoint Web Parts for the Self-Service Portal are based on Microsoft SharePoint Server 2010 specifications. For more information, see Hardware and Software Requirements (SharePoint Server 2010).</p> <p>You must install the English language pack in non-English SharePoint installations so that the Self-Service Portal installs correctly.</p> <p> Note Windows Server 2012 is not supported on the server hosting the SharePoint Web Parts. SharePoint 2013 is not supported on the server hosting the SharePoint Web Parts.</p>
Excel Services in SharePoint Server 2010	<p>Excel Services in SharePoint Server 2010 is required for hosting dashboards for advanced analytical reports. For more information about installing and configuring Excel Services, see Configure Excel Services for a BI test environment.</p>
Computers accessing the Self-Service Portal	<p>All Self-Service Portal web console requirements are listed at Self-Service Web Console Support</p>
SQL Server Reporting Services	<p>In a deployment topology where the computer hosting SSRS is not on the same computer that hosts the data warehouse management server, you have to add Microsoft.EnterpriseManagement.Reporting.Code to the global assembly cache. For more information, see Manual Steps to Configure the Remote SQL Server Reporting Services in the Service Manager for System Center 2012 Deployment Guide.</p>

Databases Created by System Center 2012 - Service Manager

Before starting the installation of System Center 2012 – Service Manager, you may want to meet with your SQL Server administration team and discuss the impact that Service Manager will have on your computers running SQL Server—specifically, the databases that will be created. The databases that are created by a deployment of Service Manager are listed in the following table.

Service Manager parts	Database name	Contents
Service Manager database	Service Manager	Configuration Items, Work Items, Incidents
Service Manager data warehouse	DWStagingAndConfig DWRepository DWDataMart DWASDataBase OMDWDDataMart CMDWDDataMart	<p>These first three databases make up the data warehouse. The extract process populates the DWStagingAndConfig database, which is transformed into a proper format in the DWRepository database, which, through the load process, becomes the content for the DWDataMart database.</p> <p>The DWASDatabase is used by SQL Server Analysis Services (SSAS) and stores Microsoft Online Analytical Processing (OLAP) cubes.</p> <p>The OMDWDDataMart and CMDWDDataMart databases are for collecting data from Operations Manager and Configuration Manager, respectively.</p>

Important

For this release, Service Manager does not support case-sensitive instance names. Setup will display a warning if you attempt to install Service Manager on a case-sensitive instance of Microsoft SQL Server.

Port Assignments for System Center 2012 - Service Manager

As part of your security infrastructure, you may want to keep track of port numbers that are used throughout your System Center 2012 – Service Manager environment. And while, in this release, these port numbers are not configurable, you can review the following table that lists port numbers that are used between the parts of Service Manager. You will want to ensure that these firewall ports are opened on computers that host Service Manager.

Port Assignments

Service Manager piece A	Port number and direction	Service Manager piece B
Service Manager console	5724 --->	Service Manager management server*
Service Manager console	5724 --->	Data warehouse management server
Service Manager management server	1433 --->	Remote Service Manager database
Service Manager management server	5724 --->	Data warehouse server
Service Manager management server	5724 --->	Operations Manager 2007 Alert and CI connectors
Service Manager management server	389 --->	Active Directory Connector
Service Manager management server	1433 --->	Configuration Manager Connector
Data warehouse management server	1433 --->	Remote data warehouse database server
Data warehouse management server	1433 --->	Remote Service Manager database server
Data warehouse management server	2383 --->	SQL Server Analysis Services**
SQL reporting service server	1433 --->	Remote data warehouse database server
Web browser	80 --->	SQL Server Reporting Services (SSRS)
Web browser	[setup***] --->	SharePoint Web Parts server
Web browser	[setup***] --->	Web content server
Web content server	1433 --->	Service Manager database

* Includes initial Service Manager Management server and subsequent Service Manager Management servers

** Port 2383 is the default port for SQL Server Analysis Services (SSAS). However, the port number can be changed. For more information, see [Configure Windows Firewall for Analysis Services Access](#).

*** The port number that is used between the browser and the SharePoint Web Parts server and the web content server is configured during installation of the Self-Service Portal.

Service Manager Sizing Helper Tool

The Service Manager Sizing Helper tool can help you size the hardware and software pieces that you will deploy using the details in this guide. The tool is included in the [Service Manager job aids](#) documentation set (SM_job_aids.zip).

Specifically, the sizing tool:

1. Helps to give you an idea of the type of hardware, such as individual computers, CPUs, free and used hard drive space, and RAID level, that is needed for different usage and deployment scenarios. Usage is indicated by the number of configuration items in the Service Manager database, work items per month, and days of data in the data warehouse.
2. Provides topology diagrams for each scenario. The diagrams map the hardware to scenarios such as single-physical-server, two-server, four-server, and more-than-four-server scenarios.
3. Helps you calculate free and used hard drive space that is necessary for a scenario, based on your input. The calculation is an estimate, not a fixed value that you must meet.

Test Scenario

In this scenario, we recommend the following Service Manager roles and hardware as described.

Service Manager roles:

- One computer with a Service Manager management server, a Service Manager database, SharePoint server/site and web content server (WCS), and Service Manager console.
- One data warehouse server. The Self-Service Portal should be placed on a computer other than the one hosting the data warehouse.

Hardware configuration:

- 8-core 2.66 GHz CPU
- 16 GB RAM (5 GB for each virtual computer and 1 GB for the host computer)
- 100 GB of available disk space

This configuration was tested with the following load.

Description	Value
Number of Supported End Users	Up to 500
Number of Computers in the Service Manager database	500
Number of New Incidents per Month for each computer	2
Number of New Change Requests per Month	20
Number of Concurrent Consoles	2
Is the Self-Service Portal Installed?	Yes
Is the Active Directory Connector Enabled?	Yes
Is the Configuration Manager Connector Enabled?	Yes
Is the Operations Manager Connector Enabled?	Yes

Small Scenario

In this scenario, we recommend the following hardware, configured for roles and hardware as described.

Service Manager roles:

- One computer with a management server, Service Manager database, and Service Manager console.
- One data warehouse server. The Self-Service Portal should be placed on a physical host or on a virtual computer other than the computer hosting the data warehouse.

Hardware configuration:

- 8-core 2.66 GHz CPU
- 16 GB RAM (5 GB for each virtual computer and 1 GB for the host computer)
- 100 GB of available disk space, which does not include the .vhd file disk space requirements on the host computer

This configuration was tested with the following load.

Description	Value
Number of Supported End Users	501 to 2,000
Number of Computers in the Service Manager database	2,000
Number of New Incidents per Month for each computer	2
Number of New Change Requests per Month	100
Number of Concurrent Consoles	10
Is the Self-Service Portal Installed?	Yes
Is the Active Directory Connector Enabled?	Yes
Is the Configuration Manager Connector Enabled?	Yes
Is the Operations Manager Connector Enabled?	Yes

Medium Scenario

The medium deployment scenario contains two servers and supports 2,001 to 5,000 computers. In this configuration, two physical computers host the Service Manager Management server and Service Manager Data warehouse management server.

We recommend the following hardware, configured for roles and hardware as described.

Hardware configuration for the Service Manager Management server:

- 4-core 2.66 GHz CPU
- 8 GB RAM
- 2 disk RAID 1

Hardware configuration for the Service Manager Data warehouse management server:

- 4-core 2.66 GHz CPU

- 8 GB RAM
- 2 disk RAID 1

Hardware configuration for the Self-Service Portal with web content server with SharePoint Web Parts:

- 8-core, 64-bit CPU
- 16 - 32 GB RAM, depending on the size of the expected database
- 80 GB of available hard disk space

This configuration was tested with the following load.

Description	Value
Number of Supported End Users	2,001 to 5,000
Number of Computers in the Service Manager database	3,000
Number of New Incidents per Month for each computer	2
Number of New Change Requests per Month	150
Number of Concurrent Consoles	15 to 30
Is the Self-Service Portal Installed?	Yes
Is the Active Directory Connector Enabled?	Yes
Is the Configuration Manager Connector Enabled?	Yes
Is the Operations Manager Connector Enabled?	Yes

Large Deployment Scenario

The large deployment scenario contains four servers and supports 5,001 to 20,000 computers. In this large configuration, four physical computers host server roles.

In this scenario, we recommend the following hardware, configured for roles and hardware as described.

Hardware configuration for the Service Manager Management server:

- 4-core 2.66 GHz CPU
- 8 GB RAM
- 2 disk RAID 1
- 10 GB of available hard disk space

Hardware configuration for the Service Manager Data warehouse management server:

- 4-core 2.66 GHz CPU
- 8 GB RAM
- 2 disk RAID 1
- 10 GB of available hard disk space

Hardware configuration for the Service Manager Database server:

- 8-core 2.66 GHz CPU

- 8 - 32 GB RAM, depending on the size of the expected database
- 4 RAID 1+0 disk drives for data
- 2 RAID 1 disk drives for logs

Hardware configuration for the Service Manager Data warehouse database server:

- 8-core 2.66 GHz CPU
- 8 GB RAM
- 4 RAID 1+0 disk drives for data
- 2 RAID 1 disk drives for logs
- 80 GB of available hard disk space

Hardware configuration for the Self-Service Portal with web content server:

- 4-core 2.66 GHz CPU
- 8 - 16 GB RAM, depending on the size of the expected database
- 1 GB of available hard disk space

Hardware configuration for the Self-Service Portal with SharePoint web parts:

- 4-Core 2.66 GHz CPU
- 8 GB RAM
- 80 GB of available hard disk space

This configuration was tested with the following load.

Description	Value
Number of Supported End Users	5,001 to 20,000
Number of Computers in the Service Manager database	20,000
Number of New Incidents per Month for each computer	2
Number of New Change Requests per Month	2,000
Number of Concurrent Consoles	40 to 60
Is the Self-Service Portal Installed?	Yes
Is the Active Directory Connector Enabled?	Yes
Is the Configuration Manager Connector Enabled?	Yes
Is the Operations Manager Connector Enabled?	Yes

Advanced Deployment Scenario

The advanced deployment scenario contains more than four servers and supports more than 20,000 computers. Each additional management server can host up to 60 Service Manager Consoles.

In this scenario, we recommend the following hardware, configured for roles and hardware as described.

Hardware configuration for the Service Manager Management server:

- 4-core 2.66 GHz CPU

- 8 GB RAM
- 2 disk RAID 1
- 10 GB of available hard disk space

Hardware configuration for each additional Service Manager Management server:

- 4-core 2.66 GHz CPU
- 8 GB RAM
- 2 RAID 1 disk drives

Hardware configuration for the Service Manager Data warehouse management server:

- 4-core 2.66 GHz CPU
- 8 GB RAM
- 2 RAID 1 disk drives
- 10 GB of available hard disk space

Hardware configuration for the Service Manager Database server:

- 8-core 2.66 GHz CPU
- 8 GB RAM to 32 GB RAM, depending on the expected size of the database
- 4 RAID 1+0 disk drives for data
- 2 RAID 1 disk drives for logs

Hardware configuration for the Service Manager Data warehouse database server:

- 8-core 2.66 GHz CPU
- 8 - 16 GB RAM, depending on the size of the expected database
- 4 RAID 1+0 disk drives for data
- 2 RAID 1 disk drives for logs

Hardware configuration for the Self-Service Portal with web content server:

- 4-core 2.66 GHz CPU
- 8 - 16 GB RAM, depending on the size of the expected database
- 1 GB of available hard disk space

Hardware configuration for the Self-Service Portal with SharePoint web parts:

- 4-core 2.66 GHz CPU
- 8 GB RAM
- 80 GB of available hard disk space

Hardware configuration for each Service Manager console:

- 2-core 2.0 GHz CPU
- 4 GB RAM
- 10 GB of available hard disk space

This configuration was tested with the following load.

Description	Value
Number of Supported End Users	More than 20,000
Number of Computers in the Service Manager database	20,000 to 50,000 or more

Description	Value
Number of New Incidents per Month for each computer	2
Number of New Change Requests per Month	2,000 or more
Number of Concurrent Consoles	60 to 100
Is the Self-Service Portal Installed?	Yes
Is the Active Directory Connector Enabled?	Yes
Is the Configuration Manager Connector Enabled?	Yes
Is the Operations Manager Connector Enabled?	Yes

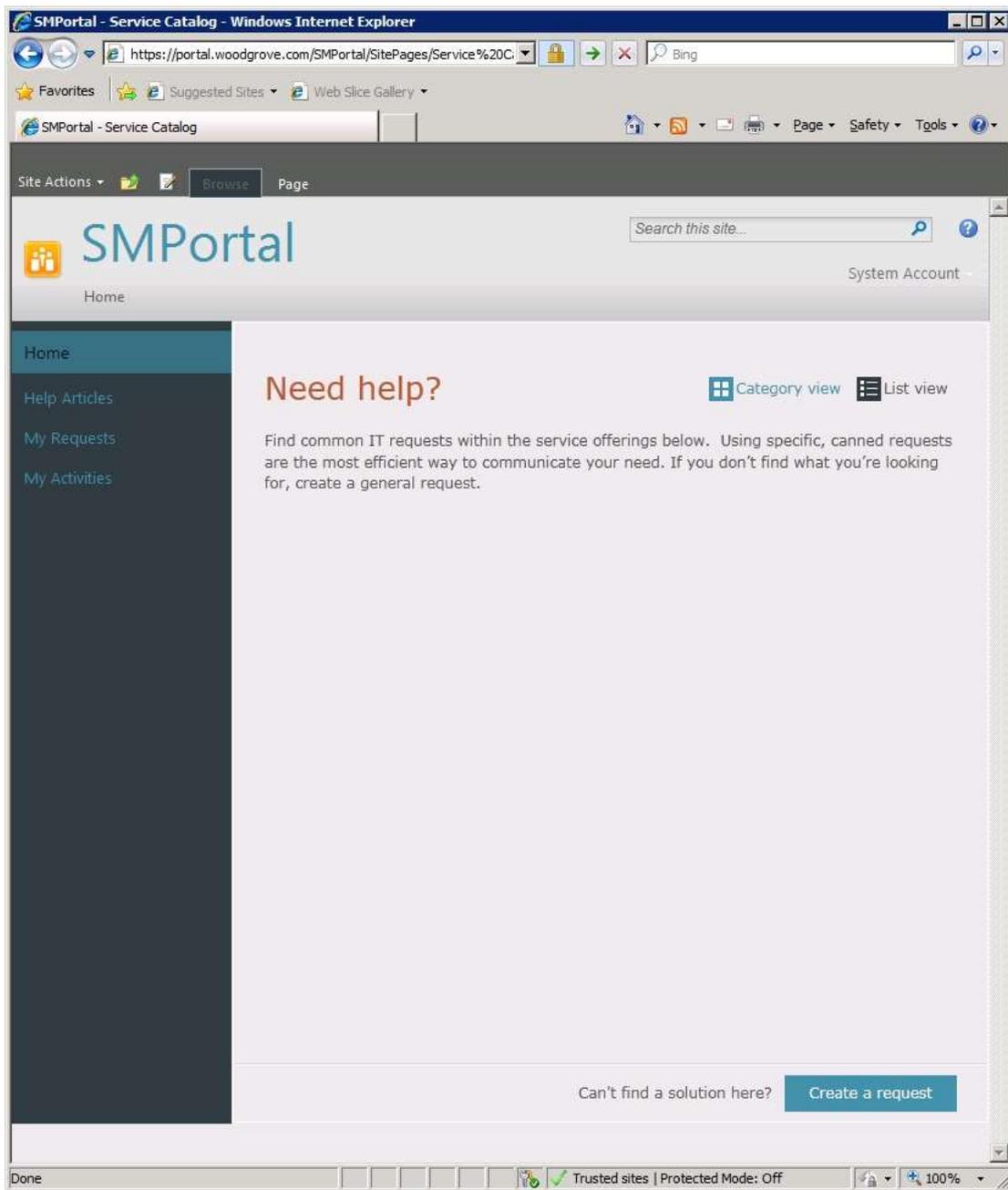


Figure 2: SCSM Self Service Portal Screenshot

Network design (High-Level)

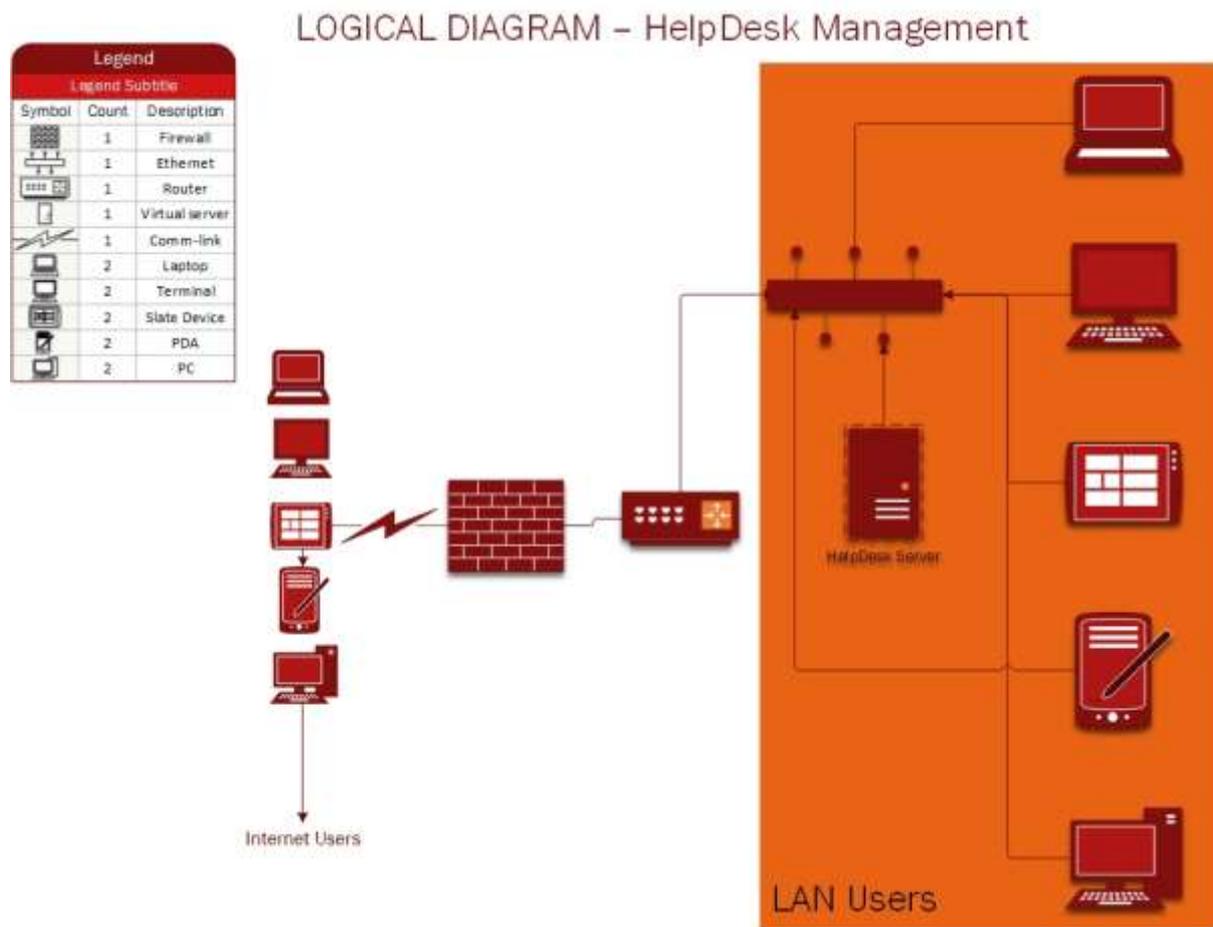


Figure 3: Logical Diagram for SCSM Single Computer Deployment

Functional BOM

Product Name	Quantity	Remarks
Windows Server CAL	50	Server Access Licenses
Windows Server 2012 R2 Datacenter Edition	1	BASE VM Server, will house all 7 VM's
SharePoint Server 2013 Standard Edition	1	Self Service & other Portal Services – NOT MANDATORY
SQL Server 2012 Enterprise Edition Core License	2	SQL Requires Purchase of Min 2 Licenses
System Center 2012 R2 Datacenter Edition	1	Full System Center Suite Console
System Center 2012 R2 Virtual Machine Manager License	50	SCVMM Licenses for monitoring all VM's
System Center 2012 R2 Client Management Suite License	50	SCSM, SCOM, SCDPM, SCO Combined Licenses
TOTAL	155	

NOTE:

- 1 HA haven't been reflected in the design or BOM, ZERO HA addressed.
- 2 WYSIWYG, No liabilities whatsoever.
- 3 Please acquire price from the designated partner. Also engage partner to fulfil your desired configuration.
- 4 All trademarks are of their respective registered companies trademarks.

Recommended Hardware

SL	Server Hardware	Quantity	RAM	Processor	Storage	Principal Link
1	DELL PowerEdge R320 rack server	1	64GB	10 Core	1TB*4, 15K SAS	http://www.dell.com/us/business/p/poweredge-r320/pd
2	Rackmount KMM Console (USB)	1	n/a	n/a	n/a	http://accessories.us.dell.com/sna/productdetail.aspx?c=us&l=en&cs=04&sku=A7546778&baynote_bnrnk=0&baynote_irrnk=0&~ck=baynoteSearch
3	APC 1.5KV Long Backup UPS (3whr)	1	n/a	n/a	n/a	
4	Back to Back Power Strip	1	n/a	n/a	n/a	

Hardware Sizing

User Licenses Description		Software Licenses		SKU	Lic Unit	Lic Reqd
Server Access License		Windows Server CAL			User	50
Security Zone	Server Role	Server Spec	Server Count-VM	Software Installed	Lic Unit	Lic Reqd
DMZ	Domain Controller	1 Core 2 GB RAM x64	1	Windows Server 2012 R2, x64 Datacenter Edition Active Directory, Primary Domain Controller	OS VM	0 1
	System Center Service Manager 2012 R2	1 Core 8 GB RAM x64	1	Windows Server 2012 R2, x64 Datacenter Edition System Center 2012 R2 Datacenter Edition System Center 2012 R2 CML Suite	OS VM Device	0 1 50
	VM Server	1 CPU (Octa-Core) 64 GB RAM x64	1	Windows Server 2012 R2, x64 Datacenter Edition	Base-OS	1
	SharePoint Server	1 Core 8 GB RAM x64	1	Windows Server 2012 R2, x64 Datacenter Edition SharePoint Server 2013 Standard Edition	OS VM	0 1
	Integration Services (SSIS)	2 Core 16 GB RAM x64	2	Windows Server 2012 R2, x64 Datacenter Edition SQL Server 2012, Enterprise Edition	OS VM	0 2
	Analysis Services (SSAS)		0	Windows Server 2012 R2, x64 Datacenter Edition SQL Server 2012, Enterprise Edition		
	Reporting Services (SSRS)		0	Windows Server 2012 R2, x64 Datacenter Edition SQL Server 2012, Enterprise Edition		
	Monitoring and Administration	1 Core 8 GB RAM x64	1	Windows Server 2012 R2, x64 Datacenter Edition System Centre Operations Mgr 2012 R2	Server Server	0 0
	TOTAL		7			56

NOTE:

1. HA haven't been reflected in the design or BOM, ZERO HA addressed.
2. Price Quoted here is budgetary (ERP) and non-inclusive of applicable VAT/TAX or landing cost, and undiscounted.
3. Please acquire price from the designated partner.
4. Zero Liabilities address for the quoted price.



- Blog Site: <http://mobs-bd.org>
- About Me: http://mobs-bd.org/?page_id=109
- Profile @ Microsoft:
<https://www.mcpvirtualbusinesscard.com/VBCServer/shuvromcse/profile>
- YouTube Training Channel:
<http://www.youtube.com/user/shuvromcse>