

System Center Virtual Machine Manager 2008 R2 Self-Service Portal 2.0 SP1
Management Pack Guide

Microsoft Corporation

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System Center Virtual Machine Manager 2008 R2 Self-Service Portal 2.0 SP1
Management Pack Guide

The Microsoft® System Center Virtual Machine Manager 2008 R2 Self-Service Portal 2.0 SP1 (VMMSSP) Management Pack helps you manage your self-service portal deployment by monitoring the health of the self-service portal components. For the self-service portal to function correctly, the components must function correctly. The VMMSSP Management Pack alerts you about problems with these components so that you can troubleshoot and repair any problems that occur.

Using the VMMSSP Management Pack helps centralize the overall monitoring in the organization to one location, the Operations console. The management pack also provides instructions to end users about how to repair some problems that might be detected while monitoring. This simplifies maintenance and could help reduce the number of support calls.

Document Version

This guide was written based on the original release of the VMMSSP Management Pack.

Revision History

| Release Date | Changes |
| --- | --- |
| June 2011 | Original release of this guide |

Introduction to the VMMSSP Management Pack

The VMMSSP Management Pack provides the classes, rules, and monitors necessary to monitor the health of the VMMSSP deployment. This management pack discovers the three components of VMMSSP (VMMSSP database component, VMMSSP server component, and VMMSSP website component) as well as the Virtual Machine Manager server that supports VMMSSP. The management pack monitors the health state of the Virtual Machine Manager server and of the two services that comprise the VMMSSP server component (Virtual Machine Manager Self-Service Portal 2.0 service and Virtual Machine Manager Self-Service Portal 2.0 Helper service). The management pack rules capture the most important events that the VMMSSP server component generates, and generate alerts based on that information.

Getting the Latest Management Pack and Documentation

You can find the VMMSSP Management Pack in the [System Center Operations Manager 2007 Catalog](http://go.microsoft.com/fwlink/?LinkId=82105) (http://go.microsoft.com/fwlink/?LinkId=82105).

What's New

The following features are new in this release of the VMMSSP Management Pack:

* Capturing critical events from the self-service portal and creating corresponding alerts in System Center Operations Manager 2007 R2.

 Monitoring the health of the self-service portal components and providing users with a real-time health status.

 Providing Operations Manager–integrated knowledge for events.

 Ensuring that the management pack provides clear health information, and that it is extensible, allowing users to add objects such as monitors, overrides, tasks, and knowledge.

Supported Configurations

The VMMSSP Management Pack supports all configurations that are supported by the self-service portal.

The following table describes the supported configurations for the VMMSSP Management Pack:

|  |  |
| --- | --- |
| Configuration | Support |
| All self-service portal components installed on a single computer | Yes |
| Each self-service portal component installed on a separate computer | Yes |
| Agentless monitoring | Yes |
| Virtual environment | Yes |

Getting Started

This section describes the prerequisites for the VMMSSP Management Pack, the contents of the management pack package file, information about importing the management pack, and information about customizations. The VMMSSP Management Pack does not require any additional configuration after you import it.

Before You Import the Management Pack

There are no special hardware or system requirements, other than what is required for Operations Manager 2007 R2.

To use the VMMSSP Management Pack, you must have a working deployment of Operations Manager 2007 R2.

Before you import the VMMSSP Management Pack, make sure you have imported the following management packs:

* Microsoft.SQLServer.2008.Discovery Version(6.0.6794.0) or later
* Microsoft.SQLServer.2008.Monitoring Version(6.1.314.36) or later
* Microsoft.SQLServer.Library Version(6.1.314.36) or later
* Microsoft.Windows.InternetInformationServices.2008 Version(6.0.7600.0) or later
* Microsoft.Windows.InternetInformationServices.CommonLibrary Version(6.0.6658.0) or later
* Microsoft.Windows.Server.2008.Discovery Version(6.0.6794.0) or later

Important   In addition to importing the management packs listed previously, we recommend that you import the Message Queueing Management Pack (Microsoft.MSMQ.2008R2) and use it to monitor the message queues on the servers that run the VMMSSP components.

Files in This Management Pack

The VMMSSPManagementPack.msi package file contains the VMMSSP Management Pack. It includes the following files:

 Microsoft.SystemCenter.VMMSSP.mp

 MP-VMMSSP-EULA.rtf

How to Import the VMMSSP Management Pack

For instructions about importing a management pack, see [How to Import a Management Pack in Operations Manager 2007](http://go.microsoft.com/fwlink/?LinkId=142351) (http://go.microsoft.com/fwlink/?LinkId=142351).

After the VMMSSP Management Pack is imported, create a new management pack in which you store overrides and other customizations.

Create a New Management Pack for Customizations

Most vendor management packs are sealed so that you cannot change any of the original settings in the management pack file. However, you can create customizations, such as overrides or new monitoring objects, and save them to a different management pack. By default, Operations Manager 2007 saves all customizations to the Default Management Pack. As a best practice, you should instead create a separate management pack for each sealed management pack you want to customize.

Creating a new management pack for storing overrides has the following advantages:

 It simplifies the process of exporting customizations that were created in your test and pre-production environments to your production environment. For example, instead of exporting the Default Management Pack that contains customizations from multiple management packs, you can export just the management pack that contains customizations of a single management pack.

 You can delete the original management pack without first needing to delete the Default Management Pack. A management pack that contains customizations is dependent on the original management pack. This dependency requires you to delete the management pack with customizations before you can delete the original management pack. If all of your customizations are saved to the Default Management Pack, you must delete the Default Management Pack before you can delete an original management pack.

 It is easier to track and update customizations to individual management packs.

For more information about sealed and unsealed management packs, see [Management Pack Formats](http://go.microsoft.com/fwlink/?LinkId=108355) (http://go.microsoft.com/fwlink/?LinkId=108355). For more information about management pack customizations and the Default Management Pack, see [About Management Packs in Operations Manager 2007](http://go.microsoft.com/fwlink/?LinkId=108356) (http://go.microsoft.com/fwlink/?LinkId=108356).

Security Considerations

The VMMSSP Management Pack does not require any special security considerations.

**Run As Profiles**

When it requires a Run as profile, the VMMSSP Management Pack uses the System Center Virtual Machine Manager Self-Service Portal Database Query Account. This Run as profile should have sufficient permissions to read the registries of the computers that run the VMMSSP components, and to read the DITSC database.

Understanding Management Pack Operations

The VMMSSP Management Pack monitors the health of the VMMSSP components. This section provides information that describes how this management pack works.

Objects the Management Pack Discovers

The VMMSSP Management Pack discovers the object types described in the following table. By default, discovery occurs every four hours.

Table 1. Discovery Processes used by the VMMSSP Management Pack

| Discovery | Search | Populate Objects of Type |
| --- | --- | --- |
| Microsoft.SystemCenter.VMMSSP.ProvisioningService.Discovery | Search the registries of the known Windows®-based computers.If the registry subkey **Software\Microsoft\DITSC\** exists and the value of the subkey’s entry **DITSC\_Service** is **1**, retrieve the values of the entries under the subkey. | Microsoft.SystemCenter.VMMSSP.ProvisioningService |
| Microsoft.SystemCenter.VMMSSP.HelperService.Discovery | Search the registries of the known Windows-based computers.If the registry subkey **Software\Microsoft\DITSC\** exists and the value of the subkey’s entry **DITSC\_Service** is **1**, retrieve the values of the entries under the subkey. | Microsoft.SystemCenter.VMMSSP.HelperService |
| Microsoft.SystemCenter.VMMSSP.Database.Discovery | Search the registries of computers that have Microsoft.SystemCenter.VMMSSP.ProvisioningService objects.If the registry subkey **Software\Microsoft\DITSC\** exists and the value of the subkey’s entry **DITSC\_Service** is **1**, retrieve the values of the entries under the subkey. | Microsoft.SystemCenter.VMMSSP.Database |
| Microsoft.SystemCenter.VMMSSP.WebPortal.Discovery | Search the registries of the known Windows-based computers.If the registry subkey **Software\Microsoft\DITSC\** exists and the value of the subkey’s entry **DITSC\_Web** is **1**, retrieve the values of the entries under the subkey.Search the known Internet Information Services (IIS) websites for the website identified in the registry (the website name is **VMMSSP**) | Microsoft.SystemCenter.VMMSSP.WebPortal |
| Microsoft.SystemCenter.VMMSSP.VMMServerComponent.Discovery | Retrieve the database information from the Microsoft.SystemCenter.VMMSSP.Database object, and connect to the database.In the DITSC database, search the Server Role table for the VMM server name.Important   This process uses a Run as profile to connect to the DITSC database. By default, the process uses the System Center Virtual Machine Manager Self-Service Portal Database Query Account. If you change the Run as profile, be sure to use a profile that has at least Read permission on the database. | Microsoft.SystemCenter.VMMSSP.VMMServerComponent |
| Microsoft.SystemCenter.VMMSSP.InstanceGroup.DiscoveryRule | Collect the populated objects of type Microsoft.SystemCenter.VMMSSP.ProvisioningService, Microsoft.SystemCenter.VMMSSP.HelperService, and Microsoft.SystemCenter.VMMSSP.VMMServerComponent. | Microsoft.SystemCenter.VMMSSP.InstanceGroup |

Classes

The following diagram shows the classes defined in this management pack. Shaded boxes indicate classes that are defined in other management packs; the management pack that defines a class is listed in parentheses.



Figure 1. Classes defined in this management pack

How Health Rolls Up

This management pack uses three monitors and five rules to provide health information. The health states of the different components do not interact.

The VMMSSP Management Pack does not provide custom functionality to monitor the health status of VMMSSP.WebPortal and VMMSSP.Database objects. This functionality is provided by the IIS Server 2008 and SQL Server 2008 management packs, respectively.

Table 2. Health State Changes That Generate Alerts

|  |  |  |
| --- | --- | --- |
| Object Type | State | Alert |
| Microsoft.SystemCenter.VMMSSP.ProvisioningService | Running | None |
| Not running | Virtual Machine Manager Self-Service Portal 2.0 service has stopped. |
| Microsoft.SystemCenter.VMMSSP.HelperService | Running | None |
| Not running | Virtual Machine Manager Self-Service Portal 2.0 Helper service has stopped. |
| Microsoft.SystemCenter.VMMSSP.VMMServerComponent | Running | None |
| Not running | Virtual Machine Manager service has stopped. |

Table 3. Events That Generate Alerts

|  |  |  |
| --- | --- | --- |
| Component | Event ID | Alert |
| Microsoft.SystemCenter.VMMSSP.ProvisioningService | 10071008101110121013 | Event {0}: The requesting user is not authorized to complete the operation. |
| 1423 | Event 1423: Cannot connect to the requested VMM server. |
| 1425 | Event 1425: Error reading the credentials from registry. |
| 1603 | Event 1603: Cannot assign the Connect permission to the user who is trying to connect to the requested virtual machine. |
| Microsoft.SystemCenter.VMMSSP.HelperService | 6011 | Event 6011: Error reading the credentials from registry. |

Key Monitoring Scenarios

The VMMSSP Management Pack provides seven pre-defined views of VMMSSP health and status information. These views support the following monitoring scenarios:

* [Monitoring active and closed alerts for all VMMSSP components](#AllAlerts).
* [Monitoring the server functions (services underlying the VMMSSP server component and Virtual Machine Manager)](#ServerAlerts).
* [Monitoring the VMMSSP database component](#DBAlerts).
* [Monitoring the VMMSSP website component](#WebAlerts).

Table 4. Monitoring Active and Closed Alerts

| View | Description | Monitored Objects | Rules and Monitors That Provide Data for This View |
| --- | --- | --- | --- |
| Active Alerts(Microsoft.SystemCenter.VMMSSP.ActiveAlert) | Lists unresolved alerts associated with objects that are members of the Microsoft.SystemCenter.VMMSSP.InstanceGroup object. | Microsoft.SystemCenter.VMMSSP.ProvisioningServiceMicrosoft.SystemCenter.VMMSSP.HelperServiceMicrosoft.SystemCenter.VMMSSP.VMMServerComponent | Microsoft.SystemCenter.VMMSSP.Event.1011Microsoft.SystemCenter.VMMSSP.Event.1423Microsoft.SystemCenter.VMMSSP.Event.1425Microsoft.SystemCenter.VMMSSP.Event.1603Microsoft.SystemCenter.VMMSSP.Event.6011Microsoft.SystemCenter.VMMSSP.ProvisioningService.MonitorMicrosoft.SystemCenter.VMMSSP.HelperService.MonitorMicrosoft.SystemCenter.VMMSSP.VMMServer.Service.Monitor |
| Closed Alerts(Microsoft.SystemCenter.VMMSSP.ClosedAlerts) | Lists resolved alerts associated with objects that are members of the Microsoft.SystemCenter.VMMSSP.InstanceGroup object. | Microsoft.SystemCenter.VMMSSP.ProvisioningServiceMicrosoft.SystemCenter.VMMSSP.HelperServiceMicrosoft.SystemCenter.VMMSSP.VMMServerComponent | Microsoft.SystemCenter.VMMSSP.Event.1011Microsoft.SystemCenter.VMMSSP.Event.1423Microsoft.SystemCenter.VMMSSP.Event.1425Microsoft.SystemCenter.VMMSSP.Event.1603Microsoft.SystemCenter.VMMSSP.Event.6011Microsoft.SystemCenter.VMMSSP.ProvisioningService.MonitorMicrosoft.SystemCenter.VMMSSP.HelperService.MonitorMicrosoft.SystemCenter.VMMSSP.VMMServer.Service.Monitor |

Table 5. Monitoring Server Functions (VMMSSP Server Component and VMM Server)

| View | Description | Monitored Objects | Rules and Monitors That Provide Data for This View |
| --- | --- | --- | --- |
| VMMSSP Service State(Microsoft.SystemCenter.VMMSSP.ProvisioningServiceView) | Lists all alerts (resolved or unresolved) associated with the Virtual Machine Manager Self-Service Portal 2.0 service, and lists the health state of the service. | Microsoft.SystemCenter.VMMSSP.ProvisioningService | Microsoft.SystemCenter.VMMSSP.Event.1011Microsoft.SystemCenter.VMMSSP.Event.1423Microsoft.SystemCenter.VMMSSP.Event.1425Microsoft.SystemCenter.VMMSSP.Event.1603Microsoft.SystemCenter.VMMSSP.ProvisioningService.Monitor |
| VMMSSP Helper Service State(Microsoft.SystemCenter.VMMSSP.HelperServiceView) | Lists all alerts (resolved or unresolved) associated with the Virtual Machine Manager Self-Service Portal 2.0 Helper service, and lists the health state of the service. | Microsoft.SystemCenter.VMMSSP.HelperService | Microsoft.SystemCenter.VMMSSP.Event.6011Microsoft.SystemCenter.VMMSSP.HelperService.Monitor |
| Virtual Machine Manager State(Microsoft.SystemCenter.VMMSSP.VMMServersView) | Lists the health state of the Virtual Machine Manager service. | Microsoft.SystemCenter.VMMSSP.VMMServerComponent | Microsoft.SystemCenter.VMMSSP.VMMServer.Service.Monitor |

Table 6. Monitoring the VMMSSP Database Component

| View | Description | Monitored Objects | Rules and Monitors That Provide Data for This View |
| --- | --- | --- | --- |
| VMMSSP Database Component State(Microsoft.SystemCenter.VMMSSP.Database.State.View) | Lists the health state of the DITSC database (the SQL Server® database used by VMMSSP). | Microsoft.SystemCenter.VMMSSP.Database | Monitors for the parent class of this object are defined in the SQL Server 2008 management packs.\* |

\* For a list of the SQL Server 2008 management packs that this management pack uses, see the “Before You Import the Management Pack” section earlier in this guide.

Table 7. Monitoring the VMMSSP Website Component

| View | Description | Monitored Objects | Rules and Monitors That Provide Data for This View |
| --- | --- | --- | --- |
| VMMSSP Website Component State(Microsoft.SystemCenter.VMMSSP.WebSiteComponent.StateView) | Lists the health state of the VMMSSP website. | Microsoft.SystemCenter.VMMSSP.WebPortal | Monitors for the parent class of this object are defined in the IIS Server 2008 management packs.\*\* |

\*\* For a list of the IIS Server 2008 management packs that this management pack uses, see the “Before You Import the Management Pack” section earlier in this guide.

Important   If the VMMSSP website or its application pool are deleted from IIS, the VMMSSP Website Component State view still shows the WebPortal object to be healthy. The available rules and monitors cannot detect these deletions.