Contents

[Copyright 3](#_Toc368750234)

[Guide for System Center Management Pack for System Center 2016 Orchestrator – Service Provider Foundation 3](#_Toc368750235)

[Guide History 4](#_Toc368750236)

[Supported Configurations 4](#_Toc368750237)

[Management Pack Scope 4](#_Toc368750238)

[Prerequisites 4](#_Toc368750239)

[Mandatory Configuration 5](#_Toc368750240)

[Files in this Management Pack 5](#_Toc368750241)

[Management Pack Purpose 5](#_Toc368750242)

[Monitoring Scenarios 5](#_Toc368750243)

[Configuring the Management Pack for System Center 2016 Orchestrator – Service Provider Foundation 7](#_Toc368750245)

[Best Practice: Create a Management Pack for Customizations 7](#_Toc368750246)

[Security Configuration 8](#_Toc368750247)

[Links 9](#_Toc368750248)

[System Center 2012 - Operations Manager 9](#_Toc368750249)

[Operations Manager 2007 R2 9](#_Toc368750250)

Microsoft System Center 2016

Guide for Microsoft System Center 2016 Management Pack for System Center 2016 Orchestrator – Service Provider Foundation

Microsoft Corporation

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Send feedback or suggestions about this document to mpgfeed@microsoft.com. Please include the management pack guide name with your feedback.

The Operations Manager team encourages you to provide feedback on the management pack by providing a review on the management pack’s page in the [Management Pack Catalog](http://go.microsoft.com/fwlink/?LinkID=82105) (http://go.microsoft.com/fwlink/?LinkID=82105).

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# Guide for System Center Management Pack for System Center 2016 Orchestrator – Service Provider Foundation

The Microsoft System Center 2016 Management Pack for System Center 2016 Orchestrator – Service Provider Foundation (SPF) helps you manage your SPF installation instances by monitoring the health of the SPF servers.

For SPF to function correctly, the correlated and dependent System Center 2016 component must be properly configured with SPF, and it must be in a healthy operational state. Namely, System Center 2016 Virtual Machine Manager is a required component, and it is highly recommended that the component is monitored with its respective management packs.

This management pack for SPF alerts you about problems with SPF instances and connectivity with dependent servers so that you can troubleshoot and repair any issues that may occur.

This guide is based on version 7.3.81.0 of the Microsoft System Center 2016 Management Pack for System Center 2016 Orchestrator – Service Provider Foundation.

### Guide History

|  |  |
| --- | --- |
| Release Date | Changes |
| October 2016 | Original release of this guide |

### Supported Configurations

To monitor parts in System Center 2016 – Service Provider Foundation, use this management pack with System Center 2016 Operations Manager or later version. This management pack does not require a dedicated Operations Manager management group.

SPF supports Microsoft SQL Server clustering for the databases and Network Load Balancing (NLB) for the SPF servers. In these topologies, the individual parts are monitored individually, regardless of the existence of NLB.

The following table provides details about the supported configurations for the management pack for Service Provider Foundation.

|  |  |
| --- | --- |
| Configuration | Support |
| Service Provider Foundation (SPF) | Version 3 |
| Network load balanced servers | Yes |
| Clustered servers | Yes |
| Agentless monitoring | No |
| Virtual environment | Yes |

### Management Pack Scope

This management pack supports up to as many SPF instances as may be needed as long as each instance is installed in different servers.

### Prerequisites

The following requirements must be met to run this management pack:

 To monitor Service Provider Foundation (SPF) you need to ensure all dependent System Center 2016 components are correctly installed and properly configured with SPF. To install and run SPF, see [How to Install Service Provider Foundation 2016](https://go.microsoft.com/fwlink/?linkid=829791).

### Mandatory Configuration

1. Install System Center Operations Manager.

2. Download SPF Management Pack.

3. Use Operations Manager to import the SPF management pack.

### Files in this Management Pack

The Management Pack for System Center 2016 Orchestrator – Service Provider Foundation includes the following files:

 Microsoft.SystemCenter.ServiceProviderFoundation.mp

# Management Pack Purpose

The purpose of using the Service Provider Foundation Management Pack is to help centralize the overall monitoring of SPF instances to one location, the Operations Manager console. This management pack provides administrators with monitoring of service availability and key configuration states. Monitors are triggered within configured time intervals to validate connectivity to dependent components ensuring availability. The management pack also provides instructions to end users about how to repair problems that may be detected during monitoring. This helps to simplify maintenance and reduce the number of support calls to Microsoft.

In this section:

 [Monitoring Scenarios](#z8abff889adbc452da009dedcaad5f11a)

For details on the discoveries, rules, monitors, views, and reports contained in this management pack, see Appendix: Management Pack Contents.

# Monitoring Scenarios

The following table describes the monitoring scenarios that are included in this Service Provider Foundation Management Pack.

|  |  |  |
| --- | --- | --- |
| Monitoring scenario | Description | Associated rules and monitors |
| Service Provider Foundation Data Store | Monitors connectivity from each of the discovered SPF web server instance to the SPF database. | The following monitor is used for this monitoring scenario:****Microsoft.SystemCenter.SPF.Monitor.SpfDatabaseScriptMonitorIndicates whether the central SPF database can be reached by each of the discovered SPF web server instances. |
| System Center Virtual Machine Manager | Monitors connectivity from each of the discovered SPF web server instance to every VMM management server registered with SPF. | The following monitor is used for this monitoring scenario:**** Microsoft.SystemCenter.SPF.Monitor.VMMServerConnectionIndicates whether a registered VMM management server is reachable from each of the discovered SPF web server instances. |
| Service Provider Foundation VMM Web Endpoint | Monitors availability of the SPF web endpoint providing VMM functionality. | The following monitor is used for this monitoring scenario:**** Microsoft.SystemCenter.SPF.Monitor.VMMEndpointGetIndicates whether the VMM REST API can be reached and operated on successfully. |
| Client Certificate | Monitoring rules to detect client certificate stored in SPF database which are about to or has expired. | The following monitor rules are used for this monitoring scenario:**** Microsoft.SystemCenter.SPF.Rule.CertificateAboutToExpire**** Microsoft.SystemCenter.SPF.Rule.CertificateExpiredIndicates whether a registered client certificate in SPF is about to or has expired based on client access to SPF web endpoints using the said certificate to authenticate. |

# Configuring the Management Pack for System Center 2016 Orchestrator – Service Provider Foundation

Configuration steps:

1. Install System Center 2016 Operations Manager. For more information, see [Deploying System Center 2016 - Operations Manager](https://technet.microsoft.com/en-us/system-center-docs/om/deploy/deploying-system-center-2016-operations-manager).

2. Download the Microsoft System Center 2016 Management Pack for System Center 2016 Orchestrator – Service Provider Foundation from the Microsoft Download Center.

3. Use Operations Manager to import the SPF management pack file. For details, see [How to Import Management Packs for System Center Operations Manager Configuration Item Connectors](https://technet.microsoft.com/en-us/system-center-docs/om/manage/how-to-import-remove-export-management-packs).

4. Once you import the management pack file, click the Monitoring Tab on the left panel find the folder named Service Provider Foundation.

5. Click the folder to expand its content, and then click Dashboard.

6. The content pane will display the SPF Dashboard.

This section provides guidance on configuring and tuning this management pack.

 [Best Practice: Create a Management Pack for Customizations](#z2)

 [Security Configuration](#z3)

## Best Practice: Create a Management Pack for Customizations

By default, Operations Manager saves all customizations such as overrides 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.

When you create a management pack for the purpose of storing customized settings for a sealed management pack, it is helpful to base the name of the new management pack on the name of the management pack that it is customizing.

Creating a new management pack for storing customizations of each sealed management pack makes it easier to export the customizations from a test environment to a production environment. It also makes it easier to delete a management pack, because you must delete any dependencies before you can delete a management pack. If customizations for all management packs are saved in the Default Management Pack and you need to delete a single management pack, you must first delete the Default Management Pack, which also deletes customizations to other management packs.

## Security Configuration

System Center 2016 Management Pack for System Center 2016 Orchestrator – Service Provider Foundation utilizes two Run As profiles, one to access the SPF database and to establish connectivity to registered VMM management servers, and the second to access the VMM web endpoint provided by SPF.

Before you import the management pack, you must add Run As accounts to the Service Provider Foundation account profile, and then add the Run As accounts to the Service Provider Foundation database server as described in the following sections.

Perform the following procedure in the Operations Manager console. For more information about the detailed steps of these procedures, see [Managing Run As Accounts and Profiles](https://technet.microsoft.com/en-us/system-center-docs/om/manage/managing-run-as-accounts-and-profiles) on Microsoft TechNet.

To add a Run As accounts to the Service Provider Foundation account profiles

|  |
| --- |
| 1. Open the Operations Manager console.2. Create a new Run As account in the Create Run As Account Wizard. On the General Properties page, in the Run As Account type box, click Windows.Note The Run As account that you create must be configured to have logon permissions to the Service Provider Foundation web servers and database server that are being monitored by the Operations Manager agent. 3. Locate and then right-click each of the Service Provider Foundation account profiles, to start the Run As Profile Wizard. On the Run As Accounts page, add the new Run As account. |

|  |  |  |
| --- | --- | --- |
| Run As Profile Name | Associated Rules and Monitors | Notes |
| Service Provider Foundation Database Account | **** Microsoft.SystemCenter.SPF.Monitor.VMMServerConnection****Microsoft.SystemCenter.SPF.Monitor.SpfDatabaseScriptMonitor | Run As account to access the SPF database and registered VMM management servers |
| Service Provider Foundation VMM Web Endpoint Accoun | **** Microsoft.SystemCenter.SPF.Monitor.VMMEndpointGet | Run As account to successfully reach and operate VMM web API as provided by the SPF VMM web endpoint |

# Links

The following links connect you to information about common tasks that are associated with System Center management packs:

## System Center 2016 - Operations Manager

 [Management Pack Life Cycle](https://technet.microsoft.com/en-us/system-center-docs/om/manage/management-pack-lifecycle)

 [How to Import/Export/Remove a Management Pack](https://technet.microsoft.com/en-us/system-center-docs/om/manage/how-to-import-remove-export-management-packs)

 [Tuning Monitoring by Using Targeting and Overrides](https://technet.microsoft.com/en-us/system-center-docs/om/manage/how-to-override-a-rule-or-monitor)

 [How to Create a Run As Account](https://technet.microsoft.com/en-us/system-center-docs/om/manage/how-to-create-a-run-as-account-and-associate-to-a-profile)

For questions about Operations Manager and management packs, see the [System Center Operations Manager community forum](http://go.microsoft.com/fwlink/?LinkID=179635).

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