

Microsoft System Center 2012 R2

What's New in System Center 2012 – Operations Manager

Microsoft Corporation

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Applies To

System Center 2012 – Operations Manager

System Center 2012 Service Pack 1 (SP1) – Operations Manager

System Center 2012 R2 Operations Manager

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Revision History

Release Date	Changes
October 17, 2013	Original release of this guide.
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What's New in System Center 2012 for Operations Manager

System Center 2012 – Operations Manager, System Center 2012 Service Pack 1 (SP1) – Operations Manager, and System Center 2012 R2 Operations Manager have a number of new capabilities and changes outlined in this document. Each version of Operations Manager has its own section covering what is new.

What's New

- [What's New in System Center 2012 R2 Operations Manager](#)
- [What's New in System Center 2012 SP1 - Operations Manager](#)
- [What's New in System Center 2012 - Operations Manager](#)

What's New in System Center 2012 R2 Operations Manager

System Center 2012 R2 Operations Manager has new capabilities and changes, which are outlined here. For details about known issues, read the [Release Notes for Operations Manager in System Center 2012 R2](#)

Fabric Monitoring

A close integration between System Center 2012 R2 Virtual Machine Manager and System Center 2012 R2 Operations Manager introduces System Center cloud monitoring of virtual layers for private cloud environments. To get this new functionality, use the System Center 2012 Management Pack for System Center 2012 R2 Virtual Machine Manager Dashboard, which is imported automatically when you integrate Operations Manager and Virtual Machine Manager. For information about how to integrate Operations Manager and Virtual Machine Manager, see [Configuring Operations Manager Integration with VMM](#).

Fabric Health Dashboard – Monitoring the Health of Private Clouds

The Fabric Health Dashboard shows a detailed overview of the health of your private clouds and the fabric that services those clouds. The dashboard helps you answer questions like “What is the health of my clouds and the fabric serving those clouds?”

To view the Fabric Health Dashboard, click **Monitoring**, and in **Cloud Health Dashboard**, click **Cloud Health**. Select the cloud you want to investigate, and then, in the **Tasks** pane, click **Fabric Health Dashboard**.

For each cloud, the Fabric Health Dashboard displays these aspects of the fabric:

- **Host State:** monitors the health state of the hosting groups or the computing aspects of the cloud, such as CPU, memory, disks, and network adapters
- **Storage Pools State File Share and LUN State:** monitors the health state of the storage aspect of fabric for issues, such as disk space capacity and allocation
- **Network Node State:** utilizes network monitoring in Operations Manager and displays the health state of network nodes (devices) that are relevant for the cloud you selected. Only physical network devices within one hop from the hosts are shown. To see the physical network devices, you must enable the Network Monitoring feature of Operations Manager and monitor the physical network devices connected to the hosts. Virtual networks are not shown in the dashboard.

The **Active Alerts** and **Number of VMs** fields on this dashboard help indicate which issues are having the greatest impact on your cloud and can help you prioritize your work.

Fabric Monitoring Diagram View – Displays Health States of Cloud and On-Premise Environments

The Diagram view gives you a diagram of the entire infrastructure and shows the health state of each part of the fabric. The Diagram view helps you answer questions, such as “What is the health of my entire fabric?” Improvements to the diagram ensure that health rolls up and that the relevant fabric components are part of the Diagram View.

To Open Diagram View, click **Monitoring**, and in **Microsoft System Center Virtual Machine Manager Views**, click **Diagram View** for the environment you want to see displayed as a diagram.

Microsoft Monitoring Agent

Microsoft Monitoring Agent is a new agent that replaces the Operations Manager Agent and combines .NET Application Performance Monitoring (APM) in System Center with the full functionality of Visual Studio IntelliTrace Collector for gathering full application profiling traces. Microsoft Monitoring Agent can collect traces on demand or can be left running, which monitors applications and collects traces continuously.

Microsoft Monitoring Agent can be used together with Operations Manager or can be used as a standalone tool for monitoring web applications written with Microsoft .NET Framework. In both cases, the operator can direct the agent to save application traces in an IntelliTrace log format that can be opened in Visual Studio Ultimate. The log contains detailed information about application failures and performance issues.

You can use Windows PowerShell commands to start and stop monitoring and collect IntelliTrace logs from web applications that are running on Internet Information Services (IIS). To open IntelliTrace logs generated from APM exceptions and APM performance events, you can use Visual Studio. For more information, see [Monitoring with Microsoft Monitoring Agent](#).

Integrating Operations Manager with Development Processes (DevOps)

Here are two important changes to the DevOps functionality in System Center 2012 R2 Operations Manager:

New Alert Fields of TFS Work Item ID and TFS Work Item Owner

In System Center 2012 R2 Operations Manager, you can synchronize Operations Manager alerts and Team Foundation Server (TFS) work items. When synchronization is enabled, IT operations can then assign alerts to the engineering team. Assigning an alert to engineering creates a new work item in TFS. The workflow will track and synchronize any changes that are made to TFS work items and any associated Operations Manager alerts.

Integration between System Center 2012 Service Pack 1 (SP1) and TFS used the Ticket ID and Owner fields of the Operations Manager alert to store and display which work item is associated with an alert and who it is assigned to. Beginning in System Center 2012 R2 Operations Manager, two new alert fields, TFS Work Item ID and TFS Work Item Owner, hold these values. These fields are read-only in the Operations Manager console to prevent accidental changes of the values that are controlled in TFS.

If you previously personalized any standard alert views or created your own alert views in System Center 2012 SP1 using Ticket ID and Owner fields to display TFS information, you must replace those fields with the TFS Work Item ID and TFS Work Item Owner fields to continue displaying the same information. The previous Ticket ID and Owner fields are still used for synchronization of alerts with incidents in Service Manager Alert Connector.



Note

You can now use Operations Manager integration with TFS in the same environment with the Service Manager Alert Connector.

Conversion of Application Performance Monitoring (APM) Performance Events to IntelliTrace format

This monitoring capability now allows the opening of APM performance events from Visual Studio IDE as if the performance event was captured during the IntelliTrace historical debugging session. Tightly integrated with TFS Work Item Synchronization Management Pack, this capability instantaneously brings generated IntelliTrace logs to TFS work items assigned to engineering. This can result in streamlining communications between IT Operations and Development and enriching the development experience with analysis of root causes of the application failure, reducing the mean time to recovery (MTTR) for the problems detected by APM.

Support for IPv6

In System Center 2012 R2 Operations Manager the Operations console can take IPv6 addresses as input for Network Discovery and display IPv6 addresses in the network-related views.

Java Application Performance Monitoring

The System Center 2012 Management Pack for Java Application Performance Monitoring lets you monitor Java application performance and exception events by using Operations Manager Application Advisor. You can set method and resource timing for performance events, stack traces for exception events, and set Java specific counters (such as Average Request Time and Requests Per Second) for events. Additionally, you get Operations Manager level alerting on Java application server counters. You can download the management pack from the [Microsoft Download Center](#).

System Center Advisor

System Center Advisor is an online service that analyzes installations of Microsoft server software. With the latest preview version of Advisor, you can now view Advisor alerts in the Operations Manager Operations console.

Advisor collects data from your installations, analyzes it, and generates alerts that identify potential issues (such as missing security patches) or deviations from identified best practices with regard to configuration and usage. Advisor also provides both current and historical views of the configuration of servers in your environment. Ultimately, Advisor recommendations help you proactively avoid configuration problems, reduce downtime, improve performance, and resolve issues faster. For more information about Advisor, see [Viewing System Center Advisor Alerts](#) and [Advisor online help](#)

UNIX and Linux Monitoring

UNIX and Linux agents for Operations Manager are now based on the Open Management Infrastructure (OMI) open-source CIM Object Manager.

Debian GNU/Linux 7 is now supported by the Universal Linux agents and Management Packs.

What's New in System Center 2012 SP1 - Operations Manager

System Center 2012 Service Pack 1 (SP1), Operations Manager has a number of new capabilities and changes outlined in this document. We urge you to read the **Release Notes: System Center 2012 SP1 - Operations Manager** for details about known issues.

New capabilities include improvements to .NET Application Performance Monitoring (APM), Audit Collection Service (ACS), and UNIX and Linux monitoring.

New Monitoring Capabilities

Monitoring Windows Services Built on the .NET Framework

One of the most commonly requested features that was present in AVIcode, but not yet re-implemented in System Center 2012 – Operations Manager was the ability to monitor Windows

Services, not just IIS-hosted applications. This is now possible again, and integrated into the APM template.

Automatic Discovery of ASP.NET MVC3 and MVC4 Applications

If the application contains “System.Web.Mvc.dll” in the /bin subfolder, it is now automatically discovered as an ASP.NET Web Application without the need to use the overrides that were documented in the APM.WEB.IIS7.mp Guide. For more information, see [Configuring the Management Pack for Operations Manager APM Web IIS 7](#).

New Transaction Types: MVC Pages and WCF Methods

New transaction types have been introduced for MVC pages and for MVC methods. This augments the capability to specify more detailed settings for a given feature of your application. How to use this feature is documented in the APM template documentation.

Comparing Transaction Monitoring

Here is a comparison of the transactions you can monitor using System Center 2012 – Operations Manager and those you can monitor using the Operations Manager Beta version of System Center 2012 Service Pack 1 (SP1).

Component type	Transactions you can monitor using System Center 2012 – Operations Manager	Transactions you can monitor using The Operations Manager Beta version of System Center 2012 Service Pack 1 (SP1)
ASP.NET web application	<ul style="list-style-type: none">• ASP.NET webpage• ASP.NET web service• Function	<ul style="list-style-type: none">• ASP.NET webpage• ASP.NET MVC page• ASP.NET web service• WCF method• Function
ASP.NET web service	<ul style="list-style-type: none">• ASP.NET webpage• ASP.NET web service• Function	<ul style="list-style-type: none">• ASP.NET webpage• ASP.NET MVC page• ASP.NET web service• WCF method• Function
WCF service	No transactions allowed	<ul style="list-style-type: none">• ASP.NET webpage• ASP.NET MVC page• ASP.NET web service• WCF method• Function

Component type	Transactions you can monitor using System Center 2012 – Operations Manager	Transactions you can monitor using The Operations Manager Beta version of System Center 2012 Service Pack 1 (SP1)
Windows Service	Component type did not exist	<ul style="list-style-type: none"> • WCF method • Function

Enabled APM of SharePoint 2010

Operations Manager lets you monitor SharePoint web front-end components. You can monitor standard and custom SharePoint webpages for performance degradation and server-side exceptions. You can set up monitoring for SharePoint applications in much the same way you enable monitoring for other .NET web applications. Use the .NET Application Performance Monitoring template to configure SharePoint application monitoring. When monitoring SharePoint applications for exceptions, the exception call stack contains the relevant SharePoint specific parameters for troubleshooting.

Integration with Team Foundation Server 2010 and Team Foundation Server 2012

To speed interactions between operations and development, it is essential to quickly detect and fix problems that might need assistance from the engineering team. System Center 2012 Service Pack 1 (SP1), Operations Manager can integrate with development tools, such as Team Foundation Server (TFS) and Visual Studio, enabling deep troubleshooting and streamlining communications between developers and IT operations. You can synchronize Operations Manager alerts and Team Foundation Server (TFS) work items. Operations Manager integration with TFS introduces a new work item type definition, Operational Issue, which can be embedded into any of your organization's engineering processes. After enabling synchronization, IT operations can manually assign alerts to the engineering team. Assigning an alert to engineering creates a new work item in Team Foundation Server. The workflow tracks and synchronizes changes made to TFS work items and changes made to associated alerts in Operations Manager.

Compared to the [Microsoft Visual Studio Team Foundation Server 2010 Work Item Synchronization management pack](#), SP1 features include:

- Shipped as part of Operations Manager, included in the SP1 Media
- Improved security – synchronization account no longer requires TFS administrative rights
- Improved design of the Operational Issue WITD
- Improved design of the configuration Wizard
- Introduced support for TFS Area Path
- Support for default Team Projects

- Synchronization for new APM alert types from IIS8 web applications, WCF, Windows Services, and also for non-APM alerts
- Localization of Wizard UI and MP elements, and compatibility with localized versions of TFS
- Synchronize file attachments that can reside on a network file share or appended to TFS work items.
- Automatically route and close alerts to TFS
- IT operations can open TFS work items directly from the Operations Manager console using built-in integration with TFS web UI.

Conversion of Application Performance Monitoring events to IntelliTrace format

This new monitoring capability allows for opening of APM exception events from Visual Studio IDE as if the exception was captured during the IntelliTrace historical debugging session. Developers can stay within their familiar environment to examine complete exception call stack, for example: method parameters captured at the time of exception, and can navigate between the source code modules that participated in the exception call chain. Tightly integrated with TFS Work Item Synchronization Management Pack, this capability instantaneously brings generated IntelliTrace logs to TFS work items assigned to engineering. This can result in streamlining communications between IT Operations and Development and enriching the development experience with analysis of root causes of the application failure, reducing the mean time to recovery (MTTR) for the problems detected by APM.

Features include:

- APM exception events can be saved in IntelliTrace file format directly from Application Diagnostics
- Debug Symbols can be late-bound in Visual Studio 2012 allowing developers to navigate through source code, even when the production environment has no symbols loaded
- Developers can see one level of parameters that are converted and visible in the Visual Studio 2012 Ultimate **Locals** window, and displayed in the context of the selected call stack frame
- Developers can see additional method specific information (i.e. a connection string for ExecuteReader() method) in the Visual Studio 2012 **Locals** window in the context of the selected call stack frame
- Traces are automatically attached to APM exception events and can be automatically added to TFS work items or stored on a network file share. Developers can open traces using Visual Studio 2012 Ultimate and troubleshoot application problems while staying in their development environment.

Collecting Historical Traces Using IntelliTrace Profiling Management Pack

System Center 2012 SP1 – Operations Manager includes IntelliTrace Profiling Management Pack. This management pack lets you capturing historical traces directly from the Operations

Manager console. These traces can help developers investigate problems by giving them visibility to application execution history without the developers needing access to the servers where the applications ran. Developers can use Visual Studio 2012 Ultimate to open collected traces.

IntelliTrace Profiling Management Pack automatically deploys the necessary infrastructure, IntelliTrace Collector, to the designated servers. When traces are collected, they are uploaded to a network file share and attached to Operations Manager alerts. Traces are uploaded to the management server using the same secure Operations Manager channel that agents use to communicate with the management servers. By configuring Team Foundation Server (TFS) synchronization, traces can be automatically added or linked to TFS work items.

New Management Packs and Support for Windows Server 2012 and IIS 8

To use APM with Windows Server 2012, you must import the following management packs:

- Microsoft.Windows.Server.Library version 6.0.6989.0 or newer
- Microsoft.Windows.Server.2012.Discovery version 6.0.6989.0 or newer
- Microsoft.Windows.InternetInformationServices.CommonLibrary version 7.0.8862.0 or newer
- Microsoft.Windows.InternetInformationServices.2012 version 7.0.8862.0 or newer

Important

If you had previously imported the Microsoft.Windows.InternetInformationServices.6.2 management pack, which was part of the Windows 8 Beta management pack release, it should be removed first.

Also, from the /ManagementPacks folder of the System Center 2012 – Operations Manager media, you should import Microsoft.SystemCenter.Apm.Web.IIS8. This is the equivalent of the Microsoft.SystemCenter.Apm.Web.IIS7 management pack, which was previously (and still is) used for IIS7.

These management pack versions to be used are specific to System Center 2012 Service Pack 1 (SP1) - Operations Manager. Other than these specific prerequisites, how to use this feature is documented in the APM template documentation and the experience is identical to configuring APM for an IIS7-hosted application.

360 .NET Application Monitoring Dashboards

System Center 2012 Service Pack 1 (SP1) - Operations Manager can show you different perspectives of application health in one place—360 .NET Application Monitoring Dashboards. The 360 .NET Application Monitoring Dashboards display information from Global Service Monitor, .NET Application Performance Monitoring, and Web Application Availability Monitoring to provide a summary of health and key metrics for 3-tier applications in a single view. The 360 .NET Application Monitoring Dashboards show where an application is unhealthy and provide a launch point for detail dashboards that highlight component-level issues.

The 360 .NET Application Monitoring Dashboards display data from powerful monitoring tools. .NET Application Performance Monitoring looks deep into the application to get details that can

help you pinpoint solutions from server-side and client-side perspectives. Web Application Availability monitoring in Operations Manager monitors internal synthetic transactions. Global Service Monitor monitors the availability of applications from an outside location, measuring availability from where the user is.

The 360 .NET Application Monitoring Dashboards show the following:

Key application metric or action	Type of monitoring used
Availability	Web Application Availability Monitoring and Global Service Monitor
Reliability	.NET Application Performance Monitoring
Performance	.NET Application Performance Monitoring and Global Service Monitor
Diagnostics	.NET Application Performance Monitoring
Resolution	The Team Foundation Server (TFS) Connector management pack takes an alert, assigns it to development in TFS with all appropriate detail.

ACS support for Dynamic Access Control

Windows Server 2012 enables business data owners to easily classify and label data allowing access policies to be defined for data classes that are critical to business. Compliance management in Windows Server 2012 becomes more efficient and flexible because access and audit policies can be based not only on user and group information but a richer set of user, resource and environmental claims, and properties from Active Directory and other sources. User claims such as roles, projects, organization, resource properties such as secrecy, and device claims such as health can be used in defining access and audit policies.

Windows Server 2012 enhances the existing Windows ACL model to support Dynamic Access Control where customers can define an expression based authorization access policy that includes conditions using user and machine claims, as well as resource (for example, file) properties. The following illustration is descriptive, and not an actual representation of an expression:

- Allow Read and Write access if User.Clearance >= Resource.Secretcy and Device. Healthy
- Allow Read and Write access if User.Project any_of Resource.Project

System Center 2012 Service Pack 1 (SP1) contributes to the fulfilling these scenarios by providing enterprise-wide visibility into the use of the Dynamic Access Control, leveraging Operations Manager's Audit Collection Services to collect events from the relevant machines (file servers, domain controllers) and providing reporting to enable auditors and compliance officers to report on the use of Dynamic Access Control – for example, audit changes in policies, object

access (success and failure), and “what-if” assessment of what would happen if a certain policy were applied.

Additional UNIX and Linux Monitoring Capabilities

Support for CentOS, Debian, Oracle, and Ubuntu Linux

System Center 2012 Service Pack 1 (SP1) - Operations Manager has added support for monitoring of the following Linux operating systems:

- CentOS 5 (x86/x64)
- CentOS 6 (x86/x64)
- Debian GNU/Linux 5 (x86/x64)
- Debian GNU/Linux 6 (x86/x64)
- Oracle Linux 5 (x86/x64)
- Oracle Linux 6 (x86/x64)
- Ubuntu Server 10.04 (x86/x64)
- Ubuntu Server 12.04 (x86/x64)

Support for these operating systems is implemented with the “Universal Linux” monitoring packs. Import the following MP files to enable monitoring of the new Linux operating systems:

- Microsoft.Linux.Universal.Library.mp
- Microsoft.Linux.Universal.Monitoring.mp
- Microsoft.Linux.UniversalD.1.mpb (to support Debian and Ubuntu Linux agents)
- Microsoft.Linux.UniversalR.1.mpb (to support CentOS Linux agents)

Improved Heartbeat Monitoring

Heartbeat monitors for Operations Manager UNIX and Linux agents now support configurable “MissedHeartbeats” – allowing for a defined number of failed heartbeats to occur before generating an alert. Failed heartbeats will now cause Operations Manager to unload rules and monitors for UNIX and Linux agents until the heartbeat is restored. This makes it very easy to identify UNIX and Linux computers with failed heartbeats in the Operations Manager console.

See Also

.NET Application Performance Monitoring Template

Before You Begin Monitoring .NET Applications

What's New in System Center 2012 - Operations Manager

System Center 2012 – Operations Manager has a number of new capabilities and changes outlined in this document. We urge you to read the [System Center 2012 – Operations Manager Release Candidate Release Notes](#) for details about known issues.

Setup and Upgrade

Setup

Operations Manager has a new Setup wizard. For important instructions about how to install Operations Manager, see the [Deployment Guide for System Center 2012 – Operations Manager](#).

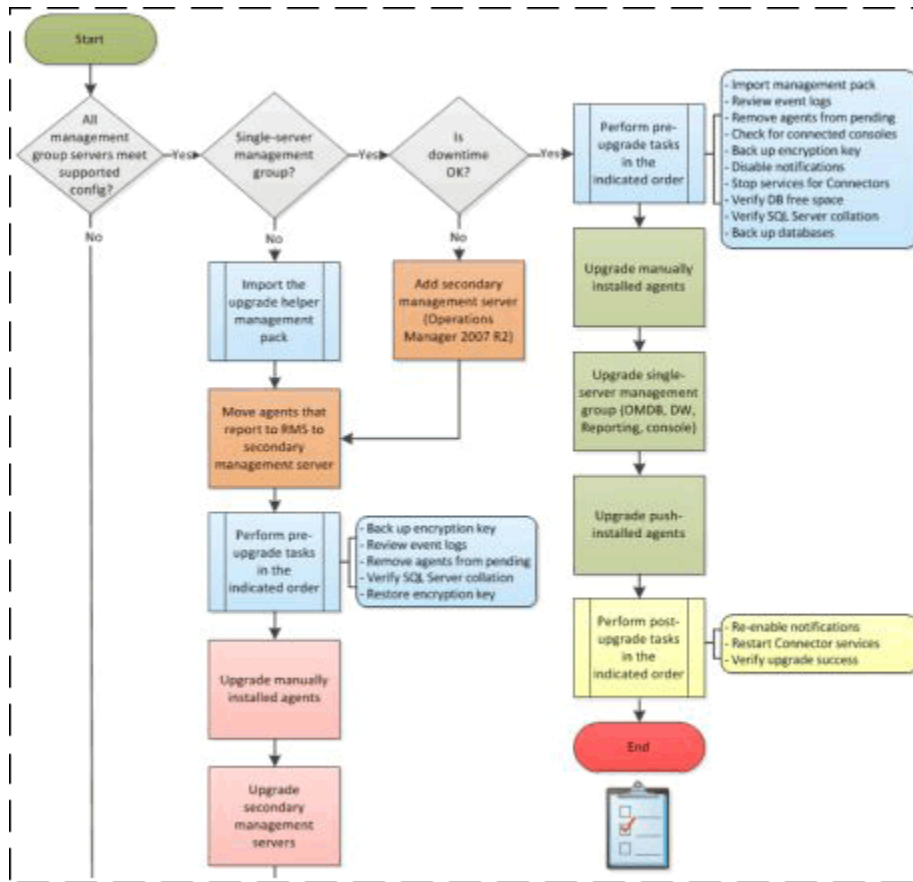
Upgrading to System Center 2012 – Operations Manager

Operations Manager provides an upgrade wizard to help you upgrade your System Center Operations Manager 2007 R2 environment to System Center 2012 – Operations Manager Release Candidate. For more information, see [Upgrading to System Center 2012 – Operations Manager](#).

New process flow diagrams help you determine your upgrade path from System Center Operations Manager 2007 R2 to System Center 2012 – Operations Manager Release Candidate and map your upgrade process. To open and view content for any step in the process, just click a process box.

Upgrade process flow diagram

Upgrade process flow diagram



The following table lists the process flow diagrams and descriptions of when each upgrade path should be used.

Condition	Process flow diagram
When you have a single-server or distributed management group that already meets the minimum supported configuration requirements for System Center 2012 – Operations Manager.	Single-Server and Distributed Upgrade (Simple) Process Flow Diagram
When your single-server management group does not yet meet the minimum supported configuration requirements for System Center 2012 – Operations Manager, and requires new hardware.	Single-Server Upgrade (Complex) Process Flow Diagram
When your distributed management group has one or more servers that do not meet the minimum supported configuration requirements	Distributed Upgrade (Complex) Process Flow Diagram

Condition	Process flow diagram
for System Center 2012 – Operations Manager, and might require new hardware.	

New Monitoring Capabilities

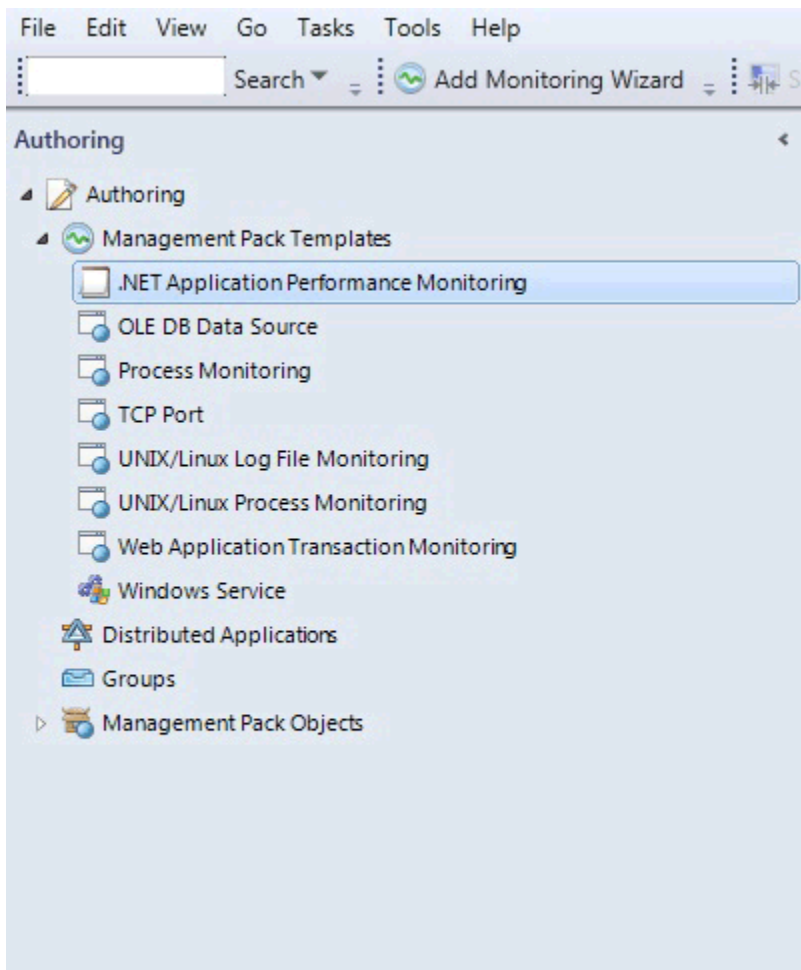
Network Monitoring

Operations Manager provides the ability to discover and monitor network routers and switches, including the network interfaces and ports on those devices and the virtual LAN (VLAN) that they participate in. You can also delete discovered network devices and prevent the deleted network devices from being rediscovered the next time discovery runs.

Application Monitoring

In Operations Manager, you can monitor Internet Information Services (IIS)-hosted .NET applications from server-side and client-side perspectives to get details about application performance and reliability that can help you pinpoint root causes of incidents. When you specify settings, the types of events to collect, the performance goals to measure, and servers to monitor, .NET Application Performance Monitoring reveals how web-based applications are running. You can see how frequently a problem is occurring, how a server was performing when a problem occurred, and the chain of events related to the slow request or method that is raising exceptions. This information is required to partner with software developers and database administrators to help ensure that applications perform correctly and reliably for your customers. For more information, see [Authoring the .NET Application Performance Monitoring Template](#) and [Monitoring .NET Applications](#).

Location of .NET Application Performance Monitoring



Performance and Scale

Resource Pools

A resource pool contains only management servers and provides the ability to distribute workloads across multiple management servers, such as availability, network device monitoring, distributed monitor health rollup, and group calculation. For more information, see [How to Create a Resource Pool](#).

Removal of Root Management Server

In Operations Manager, all management servers are peers; there is no root management server. The workload is split among all management servers in a management group, which provides high availability without requiring a cluster.

Improved Experience

Web Console

Operations Manager introduces a new web console that is optimized for faster load times and provides you with access to the new IT pro dashboards.

Dashboard Views

Operations Manager includes new comprehensive dashboard views that combine multiple panels of information into a single view. In Operations Manager, you can add the new dashboard views to My Workspace and the Monitoring workspace.

Creating Dashboard Views

Dashboard views have been significantly upgraded in Operations Manager from their capabilities in System Center Operations Manager 2007 R2, including custom layouts and nested dashboard views.

Display Dashboard Views in SharePoint

The Operations Manager web part displays specified dashboard views and can be added to Microsoft SharePoint 2010 sites. For more information, see [Add a Dashboard to a SharePoint Site](#).

System Center 2012 - Orchestrator Replaces Microsoft-Developed Connector Functionality

Connectors developed by Microsoft have been discontinued for System Center 2012 – Operations Manager and their functionality has been replaced by System Center 2012 - Orchestrator.



Note

Orchestrator is not required to create and test non-Microsoft-developed connectors against System Center 2012.

Orchestrator provides the ability to create and run automated workflows, called runbooks, made of multiple activities that each performs a distinct function. The connector functionality of enabling System Center Operations Manager 2007 R2 to synchronize alerts with remote systems is achieved by creating runbooks, using activities that interact with Operations Manager and one or more other products. Because runbooks can include sophisticated logic and activities from any number of Integration Packs, you can implement scenarios that cannot be easily achieved with connectors. Integration Packs will be delivered for each System Center component and provide additional activities specific to a particular component.

Operations Manager Module for Windows PowerShell

Operations Manager provides a Windows PowerShell 2.0 module containing a full set of new cmdlets. The cmdlets in this module are only compatible with Operations Manager. You can recognize the Operations Manager cmdlets by the "SC" preceding the noun. For additional information about the Operations Manager cmdlets, open the Operations Manager command shell and type **Get-Help about_OpsMgr_WhatsNew**. For information about how the Operations Manager 2007 cmdlets map to the Operations Manager cmdlets, type **Get-Help about_OpsMgr_Cmdlet_Names**.

To use the Operations Manager cmdlets, you must establish a connection to an Operations Manager management group. You can establish either a persistent connection in which you can run multiple cmdlets, or a temporary connection when running a single cmdlet. For more information about connections, open the Operations Manager Shell and type **Get-Help about_OpsMgr_Connections**.

UNIX- and Linux-Based Computers

In Operations Manager, you can perform privileged operations on UNIX-based and Linux-based computers using unprivileged Run As accounts by combining with "sudo" elevation on the target UNIX-based and Linux-based computers. This capability avoids the need for UNIX or Linux root passwords to be known on the management server, and keeps the privilege control entirely within the domain of the UNIX or Linux administrator. Operations Manager also includes new Windows PowerShell cmdlets for performing agent maintenance functions on UNIX-based and Linux-based computers, allowing for scripting and background operations. In addition, the resource pool feature supports computers running UNIX and Linux. If a management server fails, another management server in the resource pool can take over the monitoring, providing high availability. For more information, see [Monitoring UNIX- and Linux-Based Computers](#)

Operations Console

You will notice some subtle changes to the Operations console. The **Actions** pane is now the **Tasks** pane, and includes a new section called **Navigation Tasks** that makes it easy for you to open views for a selected object. The **Tasks** pane offers two tabs: one for actions and one for resources and Help links. The **Navigation** and **Tasks** panes can be minimized or expanded instantly by clicking the arrow in the title bar of the pane.

See Also

[Operations Guide for System Center 2012 – Operations Manager](#)

[Authoring Guide for System Center 2012 – Operations Manager](#)