

**System Center Monitoring Pack guide for Microsoft SharePoint 2016**

Microsoft Corporation

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**Quick Start**

**Required Software System**

System Center Operations Manager 2012 and Windows Server 2008 R2 Service Pack 1 with Full-Text Search feature are required to run System Center Monitoring Pack for SharePoint 2016.

**Get started**

This section provides instructions for setting up the environment, importing management packs and configuring the system for monitoring using Operations Manager 2012.

* Setup the System Center Operation Manager 2012 servers. For more information about installing and configuring Operations Manager 2012, see the Operations Manager 2012 Guide at <https://technet.microsoft.com/en-us/library/hh546785.aspx>.
* Identify all of the servers in the farm. You can identify all of the servers in the farm by using the Central Administration Web site. If your installation of SharePoint fails to install components on a particular server, it is recommended you troubleshoot the server or remove the server from the farm so the server does not appear in Central Admin; failing to do so may add complications in the management pack discovery.  **Note:** If discovery misses any server in the branch, discovery or monitoring may not function correctly.
* Install Operations Manager 2012 agent on servers identified in step 2 by running the Operations Manager 2012 Discovery Wizard. It is recommended that you install the agent by adding computers to agent managed through Operations Manager 2012 console. For more information about installing Operations Manager 2012 agents, see the Operations Manager 2012 Guide at <https://technet.microsoft.com/en-us/library/hh546785.aspx>.

**Note**: If an agent is already installed on the farm computers, you can skip this step.

* Configure Operations Manager 2012 alert notification – refer to the general guideline from Operations Manager 2012 guide.
* We recommended that you import and configure the Windows Server Operating System, SQL Server®, and Windows Server Internet Information Services (IIS) Management Packs according to the Management Pack guides. These Management Packs are available at <http://www.microsoft.com/en-us/download/details.aspx?id=34767>. Ensure that you are using the matching Management Packs for Windows 2008 R2.
* Download and install the System Center Monitoring Pack for SharePoint 2016.

**Note:** If the server where the Management Pack installation file is downloaded to runs a 64-bit version of Windows, the Management Pack gets installed to %ProgramFiles(x86)% folder by default.

**Note:** If you are reinstalling a newer version of this Management Pack, rename your existing file Microsoft.Sharepoint.Library.MP.config to Microsoft.Sharepoint.Library.MP-OLD.config before installing the latest version in order to save your existing changes and overrides to the Microsoft.Sharepoint.Library.MP.config. Once the newer version of the config file is installed, copy over any custom changes made in the Microsoft.Sharepoint.Library.MP-OLD.config file to the newer Microsoft.Sharepoint.Library.MP.config file.

* Ensure that the following files are in the “%ProgramFiles%\System Center Management Packs” folder on your Operations Manager 2012 management server:
* Microsoft.Sharepoint.Library.mpb
* Microsoft.Sharepoint.2016.Discovery.mpb
* Microsoft.Sharepoint.2016.Monitoring.mpb
* Microsoft.Sharepoint.Library.MP.config
* In the Operations Manager 2012 console, import the System Center Monitoring Pack for SharePoint 2016.
* On the Operations Manager 2012 management server, open the Operation Console.
* On the **Administration** tab, right click the **Management Packs** node and select **Import Management Packs**.
* Go to “%ProgramFiles%\System Center Management Packs”, and then select the following files:
* Microsoft.Sharepoint.Library.mpb
* Microsoft.Sharepoint.2016.Discovery.mpb
* Microsoft.Sharepoint.2016.Monitoring.mpb
* Click **Import** and then **Close**.
* Create a Run As account for Microsoft SharePoint 2016 discovery and monitoring in Operations Manager 2012 console
* On the Operations Manager 2012 management server, open the Operation Console
* On the **Administration** tab, expand the **Run As Configuration** node, right-click **Accounts**, and then select **Create Run As Account**.
* Follow the wizard to create the Run As account and record the account display name which is going to be used in the Microsoft.Sharepoint.Library.MP.config file as described in next step. You can name your Run As account “SharePoint Discovery/Monitoring Account” to avoid updating Microsoft.Sharepoint.Library.MP.config in next step.

**Note**: The Run As account must have sufficient permission to allow discovery and monitoring to run. The required permissions for the Run As account are:

* Member of the local Administrators group in Windows on all SharePoint 2016 servers
* Member of the Farm Administrators group within SharePoint 2016
* Member of the db\_owner role for all SharePoint 2016 databases

We recommend using the account which is a member of the Farm Administrators SharePoint group and has access to all SharePoint databases. Usually the account used to run the SharePoint 2016 Products Configuration Wizard has the required permissions.

* Run the Admin task on Operations Manager 2012 management server to configure Microsoft SharePoint 2016 discovery and monitoring:
* Update the Microsoft.Sharepoint.Library.MP.config file with the correct information
* Open the Microsoft.Sharepoint.Library.MP.config file under “%ProgramFiles%\System Center Management Packs”
* Find the section as below and update the account with the one you created in last step. Also add all computers in the farm for monitoring. For detailed information, please follow the instruction in Microsoft.Sharepoint.Library.MP.config. Ensure all computers that have SharePoint 2016 installed are included through the regular expression filter that is the value of the Name attribute of the Machine element in the Microsoft.Sharepoint.Library.MP.config file.

|  |
| --- |
| <Association Account="**DisplayName** of RunAS account" Type="Agent">  <Machine Name="agentMachineFilter1" />  <Machine Name="agentMachineFilter2" />  …  </Association> |

**Note:** The default value "" of Name attribute matches all agent managed computers. If a computer is included that does not have any SharePoint components, the side effect is that some registry checks will run on it to determine whether it has SharePoint installed on not.

* Run Admin task to configure the discovery and monitoring
* On the Operations Manager 2012 management server, open the Operations Console
* On the Monitoring tab, go to Monitoring **Microsoft** **SharePoint 2016** folder (expand it if needed).
* Click the **Administration** node under **Microsoft SharePoint 2016** folder
* Go to Actions Menu in the toolbar  Microsoft SharePoint Farm Group Tasks  Configure SharePoint Management Pack
* Ensure the Microsoft.Sharepoint.Library.MP.config file is at the right location. Click **Run.**

**Note -** The task will take a few minutes to complete.

* Close the dialog if there is no error.

If the task succeeds with no errors, proceed to the next step. Otherwise, fix the problem and rerun the task until it completes with no errors.

**Note:** You can perform this task by usingWindows PowerShell. For more information about using Windows PowerShell to perform this task, see the help for the “Get-Task” and “Start-Task” comdlets by starting the Operations Manager PowerShell console from the Start menu or from %ProgramFiles%\ System Center 2012\Operations Manager\Console\Microsoft.EnterpriseManagement.Monitoring.Consoleand typing “Get-Help Get-Task -full” or “Get-Help Start-Task -full”.

* After the previous step is completed wait for about half an hour to an hour to allow the discovery process to complete.
* Verify discovery results.
* Open the Operations Manager 2012 console.
* Go to the **Monitoring** tab (bottom left).
* Go to the **Microsoft SharePoint 2016** folder (expand it if needed).
* Click the **Diagram View** node.
* Expand the diagram view and review with your SharePoint administrator to see if all services that have been provisioned are discovered. If not, check FAQ to see if this is a known issue and what is the workaround. If there is none, please retry.

**You have completed setting up Operations Manager 2012 to monitor the SharePoint farm.**

**Note**: After completing the configuration, monitor your farm for alerts. You must reset some alerts manually after its status has changed to **Critical**. Otherwise, the monitor will remain in a **Critical** state without sending out new alerts.

**Files included in this Management Pack**

* Microsoft.Sharepoint.Library.mpb
* Microsoft.Sharepoint.2016.Discovery.mpb
* Microsoft.Sharepoint.2016.Monitoring.mpb
* System Center Monitoring Pack guide for Microsoft SharePoint 2016.docx
* Microsoft SharePoint 2016 Management Pack Readme.htm
* Microsoft.Sharepoint.Library.MP.config
* EULA.RTF

**Frequently Asked Questions and Known Issues**

* **How many farms can I monitor from one set of Operations Manager 2012 servers?**

With SharePoint Management Packs, one set of Operations Manager 2012 servers can monitor multiple SharePoint farms.

We do not recommend having multi-homed agent computer (SharePoint servers that are monitored in multiple Operations Manager 2012 management groups).

* **Is this Management Pack supported for both Operations Manager 2012 and Operations Manager 2012 R2?**

Yes, this Management Pack is supported in both Operations Manager 2012 and Operations Manager 2012 R2.

* **Why did the administration task not run successfully after system setup?**

You must restart the Operations Manager 2012 RMS and Management Servers at least once after you configure them for the administration task to run successfully.

* **Why do I not see the** Microsoft.Sharepoint.Library.MP.config **file on the 64-bit version of Windows Server 2008?**

On the 64-bit version of Windows Server 2008, the Microsoft.Sharepoint.Library.MP.config file is installed in the “%ProgramFiles(x86)%\System Center Management Packs” folder. You must copy the file to the “%Program Files\System Center Management Packs” folder before running the administration task. Otherwise, administrators will see the "Failed to load configuration file" error during management pack configuration

* **Why do components get discovered even after removing them?**

This might be caused by a caching problem. Upgrading or importing a new management pack, with changed monitoring classes properties may result in unexpected discovery results. This may occur when importing a new version of the management pack after importing the Technical Preview or Beta versions. It happens because old classes are still in cache. For more information about clearing the cache by using the clearcache switch with Microsoft.MOM.UI.Console.exe, see the Operations Manager 2012 documentation.

* **Does this management pack include the management packs for other Microsoft technologies?**

No. This management pack does not include monitors or rules for the Windows Operating System, SQL Server or Internet Information Services (IIS)**.** We recommend that you install these management packs to help monitor the services running on the agent computers.

* **Is it possible to override monitor parameters for a specific instance?**

If a monitor is implemented as [cook down](http://www.authormps.com/dnn/Concepts/WorkflowBasics/CookDown/tabid/117/Default.aspx) monitor, overriding a parameter will apply to all instances it targets. User cannot override a parameter that targets on only a specific instance.

Affected monitors in this management pack are:

* SPHA Availability Rule Monitor
* SPHA Configuration Rule Monitor
* SPHA Performance Rule Monitor
* SPHA Security Rule Monitor
* SPHA Custom Rule Monitor
* SPHA Availability Rule Monitor on SPServer
* SPHA Configuration Rule Monitor on SPServer
* SPHA Performance Rule Monitor on SPServer
* SPHA Security Rule Monitor on SPServer
* SPHA Custom Rule Monitor on SPServer
* **How do I get additional information on an alert?**

If an alert is triggered and you want to find additional information on top of the notification and alert description you could check out the health explorer. Here are the steps.

* Start the Operations Console.
* On the **Monitoring** tab, select the **Active Alerts** node.
* In the right pane, right-click the individual alert that you want to view, select **Open**, and then **Health Explorer.**
* In the **Health Explorer** window, select the individual failure that you want to view.
* On the **State Change Events** tab, view the **Details** section for description and event data.
* **If new agent computers are added to the SharePoint farm, do I have to rerun the** Microsoft.Sharepoint.Library.MP.config **file?**

Yes.

* **What happens to repeated events monitors if Event Log Flood Protection is on?**

If Event Log Flood Protection is enabled, repeated events monitors may not behave as expected. Repeated event monitors are designed to trigger if certain event gets logged for a specific number of times in a given time period. By default, suppression starts after five of the same event IDs are logged within two minutes. The first five events are written to the event log. Once an event starts flooding the log, a summary event (such as *ULSFloodedEventSuppressedCritical*) is logged every five minutes. The summary event has its own ID that is monitored separately.

* **Why is an Operations Manager 2012 event 2023 appearing on the Operations Manager 2012 agent computer?**

If you see this event with the message “The health service has removed some items from the send queue for management group ‘contoso-SCOM management group’ since it exceeded the maximum allowed size of 15 megabytes.”, clear the cache on the agent computer by performing the following steps

* Stop the OpsMgr health service.
* Navigate to the “%ProgramFiles%\System Center 2012\Operations Manager\Server\Health Service State\Health Service Store” folder and delete all files in that folder.
* Restart the OpsMgr health service.

**Note**: You must clear the cache. Restarting the agent health service or repairing the agent by using Operations Manager 2012 will not fix this problem.

* **How do I monitor a Web application or a site?**

For more information about monitoring a Web application or a site, see How to Create a Web Application Monitor (<https://technet.microsoft.com/en-us/library/hh457541.aspx>).

**Note**: If the SQL Server management pack is also installed for monitoring the database server there is a possibility of some redundant alerts being generated. To avoid redundant alerts, follow these steps:

* Open the Operations Console.
* in the **Authoring** tab, expand **Management Pack Objects** and click **Monitors.**
* Click **Change Scope…**
* Select **View all targets**, click **Select All,** and then click **OK.**
* Type “Auto Update Flag” in the **Look for** textbox, and then click **Find Now**.
* If both the SQL 2005 and 2008 management pack are installed two same targets will be listed. Disable the rule that corresponds to the version of SQL Server that SharePoint is not using.
* Right-click on “Auto Update Flag”, select **Overrides**, and then select **Override the monitor** for all objects of type: SQL <2005/2008> DB.
* Select the **Generates Alert and set Override Setting to False** check box.
* Under **Select destination management pack** select Microsoft.SharePoint.2016.Override, and then click **OK**.
* Repeat step 6 to 10 and change “Auto Update Flag” to “Auto Create Statistics Flag”.
* **Why do I see two alerts for some Service Monitors?**

There are two Monitors created for the following Services:

* Windows SharePoint Services Administration service
* Windows SharePoint Services Timer service
* Windows SharePoint Services User Code Host service
* Windows SharePoint Services Tracing service
* SharePoint Server Search service

One of the monitors is an Operations Manager 2012 monitor. The other monitor is a SharePoint Health Analyzer (SPHA) rule monitor. If you want to have only one alert per service application, you must disable the SPHA rule for each service by using the Central Administration Web site. Doing this will stop the SPHA rule monitor from raising alerts (**Note**: you will still receive alerts from the Operations Manager 2012 monitor).

* **Why did the ‘Ping Web Application Failed’ monitor fail upon installing the Management Pack?**  
  The ‘Ping Web Application Failed’ monitor is not technically a network ping, it is a monitor that attempts to access the Web application default URL through a HTTP GET request; if your System Center Operations Manager Console computer prohibits access to HTTP REQUESTS, this monitor will always be in an unhealthy state.  
  If this happens, we recommend that you disable this monitor using the System Center Operations Manager Console

To disable this monitor, follow these steps:

* Open the Operations Console.
* In the **Authoring** tab , expand the **Management Pack Objects** node and select the **Monitors** node.
* In the right pane, type ‘Ping Web Application Failed’ in the search field.
* Double-click the **Ping Web Application Failed** Monitor.
* In the **Overrides** tab, click **Disable**, and select **For all objects of type.**
* **What is SyncTime?**

SyncTime (start time) is a property of discoveries and monitors. SyncTime is a string value in the format of "HH:mm". SyncTime, IntervalSeconds and Management Pack Import time together determine the exact run time of a given workflow.

For example, if IntervalSeconds = 21600 (6 hours) and SyncTime = "01:15", the possible run time of the workflow is 1:15AM, 7:15AM, 1:15PM, 7:15PM; if the Management Pack is imported after 1:15AM but before 7:15AM, it will start at 7:15AM, if the Management Pack is imported after 1:15PM but before 7:15PM, it will start at 7:15PM. However, due to other factors such as network delay the actual start time may still vary.Do not change the default SyncTime value unless absolutely required.

* **How to display the events report collected by System Center Monitoring Pack for SharePoint Server 2016?**
* In the Operations Manager 2012 console, navigate to the reporting panel,
* Go to **Reporting** and navigate to Microsoft SharePoint 2016.
* In the right panel, click the report. This brings up the report window.
* In the report window, select the Microsoft SharePoint 2016 Products Management Pack check box, and then configure the rest of the fields.
* Click **Run**.
* The report information from the Microsoft SharePoint 2016 Products Management Pack is displayed.

**Issues**

* **Issue:** An *Import* level error occurs if you import the management pack when you have the Technical Preview or Beta management pack installed. **Resolution:** remove or uninstall the Technical Preview or Beta management pack before importing the RTM management pack.
* **Issue:** Performance data is not available in the Performance View and Report, or an Operations Manager 2012 event 10102 or 10103 is raised with the message “In PerfDataSource, could not resolve (or find) counter xxx”, and the module will be unloaded. **Resolution:** Because all SharePoint performance counters are dynamic counters, currently there is a bug in Operations Manager 2012 on collecting data for such counters. Operations Manager 2012 has hot fixes for SP1 and R2. For more information about these fixes, see the Microsoft Support article: [http://support.microsoft.com/kb/ HYPERLINK "http://support.microsoft.com/kb/2843219"2843219](http://support.microsoft.com/kb/2843219) .
* **Issue:** When Operations Manager 2012 is monitoring multiple language Agents, the first event in the system for an event, alert, or rule will set the description language context. The Operations Manager 2012 cache will keep that context. **Resolution:** The work-around for this issue is to restart the Health Service on the agent that the user would like to set the event description language, and make sure that the event is fired from this agent first.
* **Issue:** When the override-controlled parameter “Count” is set to “1” for repeated-event type monitors, the new value will not work and the monitor will fail to change the health state. **Resolution:** This is a known Operations Manager 2012 issue. There is no resolution at the time of writing this document.
* **Issue:** The monitor “SQL Database Connection Failed” is used to ping databases, but does not work for stand-alone SharePoint deployments. (This monitor is disabled by default). **Resolution:** The stand-alone server is using SQL Server Express, in which remote access is disabled by default. This means that Rights Management Services (RMS) cannot ping the database. To enable this monitoring for the stand-alone deployment, change the SQL Server setting to enable remote access. For more information about this, see the Microsoft Support article How to configure SQL Server 2005 to allow remote connections (<http://support.microsoft.com/kb/914277>).
* **Issue**: The computer appears in the “Unidentified Machines” view in the Operations Manager 2012 console. When a computer is under “Unidentified Machines” view, it means that the discovery process could not identify the SharePoint farm to which this computer belongs. A computer can be in the “Unidentified Machines” view for one or more of the following reasons:
* The computer cannot access the SharePoint configuration database
* SharePoint 2016 is not installed on this computer
* The server configuration failed
* The Agent proxy is not enabled in Operations Manager 2012 for that server
* The Operations Manager 2012 agent has a heartbeat failure preventing it from communicating with the Operations Manager 2012 RMS. In this case, the computer icon appears as a gray circle in Operations Manager 2012 Console.
* There is network connectivity issue
* SharePoint 2016 could not connect to the configuration or the database server
* The Run As account used for discovery or monitoring does not have permission to access the SharePoint Object Model. To find if this is the issue, run the “Set DebugTrace For SharePoint Management Pack” task (for information in the “Understand Tasks” section of this guide), rerun the Admin Task, and then go to Operations Manager Event channel on the server and check events with ID = 0. Look for the timestamp in the event log and then check the SharePoint ULS trace log to ensure that it is the case. For more information about the ULS trace log, see the SharePoint 2016 documentation on TechNet (<http://technet.microsoft.com/en-us/sharepoint/ee263910.aspx> ).
* The agent is being associated with the SharePoint Run As Profile during the SharePoint 2016 Discovery cycle interval.
* The main server (the server on which most of the discovery scripts run) is not associated with the SharePoint discovery/monitor Run As profile. In this case all the servers that were supposed to discover using these scripts will end up in the unidentified group.
* If the agent computer is a new server added to the farm after the last discovery, it will be in unidentified group until the next farm discovery. On-demand discovery is not supported in this version of Operations Manager 2012.
* **Issue:** If you add a SPHA Rule by using the Central Administration Web site the management pack interprets this rule as a ‘null-HealthRuleType’ and is unable to monitor the SPHA rule. **Resolution:** Create the custom SPHA rule by adding it through the SharePoint API by manually coding the SPHA Rule.
* **Issue:** The **c**omputer is not showing up in the System Center Diagram View. **Resolution:** Investigate the following possible causes:
* The computer has run out of resources (RAM, CPU)
* The computer has a communication issue with the Operations Manager 2012 Server
* The computer has not been restarted since Windows PowerShell was installed. Restart the computer and rerun the task.
* The computer joined the farm after the SharePoint task has finished running. Either wait for the next farm discovery cycle or rerun the task.

**System Center Monitoring Pack for SharePoint 2016**

The System Center Monitoring Pack for SharePoint 2016 helps you manage Microsoft® Windows® SharePoint® 2016 environments.

The highly collaborative environment provided by SharePoint 2016 offers rich support for working across organizational and geographical boundaries. The groups who perform this work have spurred its adoption, quickly recognizing it as a solution for collaboration challenges. This management pack facilitates management of identified environments by monitoring the health of the components of these environments that affect performance and availability. The monitored components include:

SharePoint 2016 -related services (Timer, Tracing, and Search)

SharePoint 2016 -related events

Internet Information Services-related events (Only events emitted from SharePoint Application not from IIS)

Microsoft SQL Server™ database-related events (Only events emitted from SharePoint Application not from SQL Server)

SharePoint 2016 server performance.

When there is a problem that may cause a service outage or poor performance, Microsoft System Center Operations Manager 2012 uses the management pack to detect the issue and alert you so that you can diagnose and fix the issue.

For example, if the management pack detects that the SharePoint 2016 Search service cannot update an index because there is insufficient drive space, a monitor changes state to Critical and raises an alert in Operations Manager 2012. You can then use the **Alerts** view to determine which server has insufficient disk space. After you determine this, you can delete files from the drive or move the index files to another drive.

**Requirements   
for System Center Monitoring Pack for SharePoint 2016**

This section explains the prerequisites that are necessary for you to use the System Center Monitoring Pack for SharePoint 2016, and describes some important security considerations of which you should be aware.

**Prerequisites for Using the Management Pack**

To use this management pack, you must:

* Download the management pack from the [System Center Pack Catalog](http://technet.microsoft.com/en-us/systemcenter/cc462790.aspx) (<http://technet.microsoft.com/en-us/systemcenter/cc462790.aspx>).
* Have System Center Operations Manager 2012 deployed in at least one Management Group. A *Management Group* consists of an Operations Manager 2012 database, at least one Operations Manager 2012 Management Server, the Operations Manager 2012 Operator Console, and managed computers.
* Have the Operations Manager 2012 agent deployed on all computers that you want to monitor.
* If an agent computer in a SharePoint deployment is running Windows Server 2008, ensure that all the hotfixes mentioned in the Microsoft Support article ([http://support.microsoft.com/kb/ HYPERLINK "http://support.microsoft.com/kb/2843219"2843219](http://support.microsoft.com/kb/2843219)) are installed on these computers.

For information about deploying Operations Manager 2012, see the *Operations Manager 2012* [*https://technet.microsoft.com/en-us/library/hh278852.aspx*](https://technet.microsoft.com/en-us/library/hh278852.aspx)

For information about how to deploy the Operations Manager 2012 agent, see “Operations Manager Agent Installation Methods” in the Operations Manager 2012 Online Help at <https://technet.microsoft.com/en-us/library/hh551142.aspx>.

**Security Considerations for the System Center Monitoring Pack for SharePoint 2016**

This section covers security considerations for the management pack. To use this management pack correctly, you must know:

How to configure the **SharePoint Discovery/Monitoring Account** Run As profile with Run As accounts that have the correct privileges.

Whether the management pack provides support for agentless monitoring.

**Configure the SharePoint Discovery/Monitoring Account Run As Profile**

The rules, monitors, tasks and discoveries that are defined in the management pack require credentials to run on a computer. By default, these credentials come from the Default Action Account on each server that has the Operations Manager 2012 agent installed on it.

**Note**

The agent is an Operations Manager 2012 service that runs on each computer that you want to monitor. It captures information from the computer on which it is running, applies rules to the captured data, and performs actions as defined by the rules.

The Default Action Account runs activities such as monitoring and collecting Windows event log data and performance data.

Because the Default Action Account may not have the necessary privileges to accomplish the monitoring activities of the management pack, Operations Manager 2012 allows you to use Run As profiles and Run As accounts to provide the needed credentials.

When a management pack is created, its discoveries, rules, monitors, and tasks are associated with Run As profiles; the management pack discoveries, rules, monitors and tasks are associated with the **SharePoint Discovery/Monitoring Account** Run As profile.

Run As accounts allow you to specify the necessary privileges to run the management pack discoveries, rules, monitors, and tasks on specific computers. As an administrator, you can associate Run As accounts with Run As profiles to provide the necessary credentials to run the management pack discoveries, rules, monitors, and tasks.

In order for the management pack to have the necessary credentials to run its rules, monitors, and tasks, you must make the following configuration:

**Configuring the management pack**

Create a “SharePoint Discovery/Monitoring Account” Run As Account (pick the DisplayName for the account listed in this config file) that is associated with a user account that has SharePoint 2016 farm administrative privileges and access to the related databases and application programming interface (API). For example, the account used to setup SharePoint 2016 and run the SharePoint Products and Technologies Configuration Wizard should have the required privileges.

**Automatic:**

The System Center Monitoring Pack for SharePoint 2016 installs a configuration file (Microsoft.Sharepoint.Library.MP.config) that allows user to configure the management pack by running a task.

**Note:** Ensure that the Microsoft.Sharepoint.Library.MP.config file is located at %ProgramFiles%\System Center Management Packs\ on the Operations Manager 2012 Root Management Server.

Microsoft.Sharepoint.Library.MP.config Contents:

<?xml version="1.0" encoding="utf-8"?>

<Configuration>

<Annotation>

This is the configuration file for the admin task in Microsoft SharePoint 2016 Management Pack.

To run the task, save this file on the Root Management Server machine under %ProgramFiles%\System Center Management Packs

</Annotation>

<Annotation Element="Association">

Association element specifies account association. You can have 0, 1, or many Association elements.

- The Account attribute specifies what RunAs account to be associated. The account must exist before running the admin task.

RunAs account can be created in the Administration pane of the Operations Console.

- The Type attribute may have one of two values: "Agent" and "ManagementServer". "Agent" indicates that the account applies to

agent managed machines. "ManagementServer" indciates that the account applies to management servers.

- Each Machine node serves as a machine filter. Machine that matches any filter will be associated with the account in the profile.

- The Name attribute of Machine node holds a regular expression value on full machine name. Go to [http://www.bing.com](http://www.bing.com/) and search for

"Regex Tutorial" to learn more about regular expression. If you leave the Name attribute empty, all of machines (agent managed or

management server depending on the type) match.

- For "Agent" type, discovery proxy is also enabled on the matched machines so that farm level discoveries can work correctly.

</Annotation>

<Association Account="SharePoint Discovery/Monitoring Account" Type="Agent">

<Machine Name="" />

</Association>

<Annotation Element="WorkflowCycle">

WorkflowCycle element specifies the schedule of list workflows. You can have 0, 1, or many WorkflowCycle elements. But if you

have multiple WorkflowCycle elements, you should avoid listing the same workflow in different WorkflowCycle elements.

- The BaseStartTime attribute can have value in the form of "HH:mm" or integer. "HH:mm" format works as the start time alignment based on which

the cycle repeats. Integer format functions as setting the alignment start time to be the current time plus that many seconds. Be aware that

if you set integer value, every time you rerun the admin task, the cycle start time is recalculated.

- The Length attribute specifies the length (in seconds) of each cycle.

- The Spacing attribute specifies the spacing time (in seconds) between one workflow's timeout time and the next workflow's start time.

For example, SPFarm.Discovery has timeout 300 and base start time at "14:00". If the Spacing is 60, the base start time of SPService.Discovery

is set to 14:00 + Ceiling[(300 + 60) / 60] = 14:06. If you set negative Spacing, workflows may overlap and cause performance and out of memory problems.

- The WorkflowTimeout attribute (optional) if defined applies to each workflow in the cycle unless being overridden in the Script node.

If not set, current timeout values are respected.

- The Id attribute of Workflow node is a list of the discovery/monitor Id(s) separated by ';' (for the workflow).

- The MP attribute (optional) of Workflow node is for workflow not defined in the SharePoint MP.

- The Type attribute of Workflow node indicates the workflow type. Only "Discovery" and "Monitor" are supported.

- The Times attribute of Workflow node specifies how many times the workflow needs to run within a cycle.

If you set it to 0 or negative, the workflow is disabled.

- The Timeout attribute (optional) of Workflow node if defined overrides the timeout of the workflow.

</Annotation>

<WorkflowCycle BaseStartTime="+300" Length="28800" Spacing="60">

<Workflow Id="WSSInstallation.Discovery" Type="Discovery" Times="1" />

<Workflow Id="SPFarm.Discovery" Type="Discovery" Times="1" />

<Workflow Id="SPService.Discovery" Type="Discovery" Times="4" />

<Workflow Id="SPSharedService.Discovery" Type="Discovery" Times="4" />

<Workflow Id="SPHARule.Discovery" Type="Discovery" Times="1" />

<Workflow Id="SPHARuleMonitor.Availability;SPHARuleMonitor.Security;SPHARuleMonitor.Performance;SPHARuleMonitor.Configuration;SPHARuleMonitor.Custom" Type="Monitor" Times="8" />

<Workflow Id="SPHARuleMonitor.SPServer.Availability;SPHARuleMonitor.SPServer.Security;SPHARuleMonitor.SPServer.Performance;SPHARuleMonitor.SPServer.Configuration;SPHARuleMonitor.SPServer.Custom" Type="Monitor" Times="8" />

</WorkflowCycle>

</Configuration>

**Note:** Ensure that you run the Admin Task after updating file,

For more information about Run As profiles and Run As Accounts, see:

“Managing Run As Accounts in System Center 2012” at <https://technet.microsoft.com/en-us/library/hh495673.aspx> .

**Support for Agentless Monitoring**

The System Center Monitoring Pack for SharePoint 2016 does not contain rules for agentless monitoring.

**Getting Started   
with the System Center Monitoring Pack for SharePoint 2016**

This section describes how System Center Monitoring Pack for SharePoint 2016 is componentized, and how to import and configure the management pack.

To install the System Center Monitoring Pack for SharePoint 2016, you must download the files to your management server and then import the management pack into Operations Manager 2012. After you import the management pack, you can create optional configurations for the Operations Manager 2012 agents on your SharePoint 2016 servers.

**Components of System Center Monitoring Pack for SharePoint 2016**

System Center Monitoring Pack for SharePoint 2016 is comprised of 3 components: Library, Discovery and Monitoring management packs.

The Microsoft.SharePoint.Library.mpb file is common for all SharePoint versions; the SharePoint.2016.Discovery.mpb and SharePoint.2016.Monitoring.mpb file are specific for SharePoint 2016. The new Discovery.mpb and Monitoring.mpb files for the future SharePoint versions can be easily added into the SharePoint Management Pack and reuse the common object types and groups defined in the Library.mpb file. It’s easier for the support of multiple SharePoint versions in the future. Even though Library.mpb will have the same common libraries must be updated as well for future releases.

|  |  |  |
| --- | --- | --- |
| File Name | Display Name | Description |
| Microsoft.SharePoint.Library.mpb | Microsoft SharePoint Core Library | This Management Pack contains the object types and groups that are common to SharePoint 2016 and forward. |
| Microsoft.SharePoint.2016.Discovery.mpb | Microsoft SharePoint 2016 (Discovery) | This Management Pack contains definitions for object types and groups that are specific to SharePoint 2016. It contains the discovery logic to detect all objects of the type defined specific for SharePoint 2016. |
| Microsoft.SharePoint.2016.Monitoring.mpb | Microsoft SharePoint 2016 (Monitoring) | This Management Pack provides all monitoring for SharePoint 2016. |

**Import the Management Pack   
into Operations Manager 2012**

**To import the System Center Monitoring Pack for SharePoint 2016:**

1. Log on to a management server with an account that is a member of the Operations Manager 2012 Administrators role for the Operations Manager 2012 Management Group.
2. In the Operations Console, click the **Administration** workspace button in the lower-left side of the console.
3. In the Administration tree view, right-click the **Management Packs** node, and then click **Import Management Packs**. The **Select Management Packs to import** dialog box appears.
4. If necessary, navigate to the directory where the System Center Monitoring Pack for SharePoint 2016 is located.
5. Select **Microsoft.Sharepoint.Library.mp, Microsoft.Sharepoint.2016.Discovery.mp, and Microsoft.Sharepoint.2016.Monitoring.mp**, and then click **Open**. The **Import Management Packs** dialog box opens.
6. Click **Import**. When the import process is complete, the dialog box displays an icon next to the management pack that indicates whether the import succeeded or failed.
7. Click **Close**. The **Management Packs** pane of the Operations Console now lists the Microsoft SharePoint 2016 management pack.
8. After importing the management pack, you must run the admin task to enable SharePoint farm discovery as described in the “Configure the SharePoint Discovery/Monitoring Account Run As Profile” section in this guide. You can also choose to customize or disable its rules. For information about how to customize the management pack or disable its rules, see the “Optional Configuration for the System Center Monitoring Pack for SharePoint 2016” section in this guide.

**Deploy and Configure Servers   
for the Operations Manager 2012 Agent**

It is important to ensure that the Operations Manager 2012 agent is deployed on each SharePoint 2016 server that you want to monitor. For information about how to deploy the agent, see “Operations Manager Agent Installation Methods” in the Operations Manager 2012 Online Help at <https://technet.microsoft.com/en-us/library/hh551142.aspx>.

To configure each server to use the Operations Manager 2012 agent with the System Center Monitoring Pack for SharePoint 2016:

**Resize the Agent Event Logs**

As a best practice, resize the agent event logs to at least 10 MB each for optimal monitoring. The System Center Monitoring Pack for SharePoint 2016 uses the following event logs to monitor the servers:

Windows Application event log

Microsoft SharePoint 2016\Operational event log

**To resize the agent event logs:**

1. On each server with an Operations Manager 2012 agent installed on it, open the Event Viewer.
2. In the Event Viewer console tree, click **Application** and on the **Action** menu, and then click **Properties**.
3. On the **General** tab, in **Maximum log size (KB)**, specify a log size of at least 10240 KB.
4. To apply the new setting, click **Clear Log**. If you want to retain the information that is currently in the log, click **Yes** when a message appears asking if you want to save the original log before clearing it.
5. Click **OK**.
6. Repeat the above process for the Microsoft SharePoint 2016 \Operational event log.

**Disable Event Log Replication for Monitoring Clustered Servers**

Some SharePoint 2016 components can be installed on clustered servers. By default, when clustering is installed on servers that are running Windows 2008 Enterprise Server or Windows 2008 Datacenter, events logged in the event log of one node in the cluster are also shown in the event logs of the other nodes. To monitor these clustered servers using Operations Manager 2012, event log replication must be disabled on each of the servers within the cluster.

**Optional Configuration   
for the System Center Monitoring Pack for SharePoint 2016**

The management pack can be customized on each Operations Manager 2012 Server to focus its monitoring on specific aspects of the environment that are important to the administrator. You customize the management pack by using overrides to reconfigure the default settings of its rules or by disabling rules entirely.

In a large, dispersed network, you may have SharePoint 2016 deployed in a number of different Management Groups. Because each Management Group contains its own Operations Manager 2012 Management Server, you can install the management pack in each Management Group and customize it to focus on collecting only the information that is needed for that Management Group environment.

Imported management packs, including the System Center Monitoring Pack for SharePoint 2016, are *sealed*; therefore, overrides cannot be saved to them. Instead, Operations Manager 2012 saves the overrides to the unsealed default management pack, which is imported as part of the Operations Manager 2012 installation. Sealed management pack, have the file extension “mp” or “mpb”. These are binary files that cannot be edited. Unsealed management pack, have the file extension .xml. These are XML files that can be edited.

It is a best practice to put overrides to a sealed management pack into a new unsealed management pack instead of the default management pack for the following reasons:

It simplifies the process of exporting overrides that were created in your test and pre-production environments to your production environment.

It allows you to delete the original management pack without deleting the default management pack.

It makes it possible to export the overrides to another Management Group.

**Important**

Running the “Configure SharePoint Management Pack” task automatically creates an override management pack “Microsoft.SharePoint.Library.Override”.

We recommend putting all the override values for the System Center Monitoring Pack for SharePoint 2016 in an override management pack.

If you do not store your override in an override management pack, the overrides automatically go into the default management pack.

**Customize the Management Pack**

Use the following four-step process to customize the management pack:

1. Create a new unsealed management pack to contain the overrides.
2. Override the System Center Monitoring Pack for SharePoint 2016 and save the customizations to the new unsealed management pack.
3. Export the new management pack that contains the overrides.
4. Import the new management pack and the System Center Monitoring Pack for SharePoint 2016 to another Management Group.

The detailed procedures for this four-step process are provided later in this document:

**Important**

For Operations Manager 2012 to use the overrides in an unsealed management pack, both the unsealed management pack and the original, sealed management pack on which the overrides were based must be imported to another Management Group.

For more information about sealed and unsealed management packs, see “Sealed and Unsealed Management Packs” in the Operations Manager 2012 Online Help at <https://technet.microsoft.com/en-us/library/hh212794.aspx>.

For more information about management pack customizations and the default management pack, see at <https://technet.microsoft.com/en-us/library/hh212709.aspx> .

**To create a new management pack for overrides:**

1. In the Operations Console, click the **Administration** button.
2. In the **Administration** pane, right-click **Management Packs**, and then click **Create Management Pack**. The **Create a Management Pack** wizard appears.
3. In the **General Properties** page, type a name for the management pack in **Name**, the correct version number in **Version**, and a short description in **Description**.
4. Click **Next**. The **Knowledge** page opens.
5. Click **Edit** to create the overview knowledge article for this Management Pack. Include information about the purpose of the management pack in the article.
6. When you finish the article, click **File**, and then click **Save to MOM**.
7. To finish creating the Management Pack, click **Create**.

**Note**

When you create a management pack to store overrides, you should use a name for the management pack that contains the name of the management pack that holds the default settings. For example, to override the default settings in the System Center Monitoring Pack for SharePoint 2016, you can create a management pack named “Microsoft SharePoint 2016 Overrides”.

**Caution**

The overrides that you save to this new management pack will supersede the default settings in the original management pack.

**To override rules and save the customizations to the new management pack:**

1. In the Operations Console, click the **Authoring** button.
2. In the **Authoring** pane, expand **Management Pack Objects**, and then click **Rules**.
3. In the **Rules** pane, click a rule that you want to override.
4. On the **Operations** **Manager** toolbar, click **Overrides**, and then point to **Override the Rule**. You can choose to override this rule for objects of a specific type, or for all objects within a category. After you choose which category or object type to override, the **Override Properties** dialog box opens, which enables you to view the parameters that can be overridden for the rule. You can then choose whether to override each individual parameter that is contained in the rule.
5. In the **Override Properties** dialog box, select the appropriate check box in the **Override** column for each parameter that you want to override.
6. When you complete your changes, select the management pack that you created for the overrides in the **Select destination management pack** drop-down box.
7. Click **OK**.
8. Repeat this process for each rule that you want to customize.

**Important**

You must have Advanced Operator user rights to create an override.

For more information, see the following Operations Manager 2012 Online Help topics:

“Create Management Pack Override” at <https://technet.microsoft.com/en-us/library/hh212841.aspx>.

“How to override Rule or Monitor” at <https://technet.microsoft.com/en-us/library/hh212869.aspx> .

“Tuning Monitors using Overrides” at <https://technet.microsoft.com/en-us/library/hh230704.aspx> .

**To export the new management pack that contains the overrides:**

1. In the Operations Console, click the **Administration** button.
2. In the **Administration** pane, click **Management Packs**. This displays a list of the imported management packs.
3. In the **Management Packs** pane, right-click the management pack that contains the overrides, and then click **Export Management Pack**.
4. In the **Save As** dialog box, enter the path and file name for the management pack, or click **Browse** to save to a different directory, and then click **Save**.

The management pack is saved as an Operations Manager 2012 XML management pack file and is ready to be imported to another Management Group.

**Note**

You can only export an unsealed management pack.

**To import the new management pack and the System Center Monitoring Pack for SharePoint 2016 to another Management Group:**

1. Log on to the computer with an account that is a member of the Operations Manager Administrators role for the Management Group.
2. In the Operations Console, click the **Administration** button.
3. Right-click the **Management** **Packs** node, and then click **Import** **Management** **Packs**. The **Select Management Packs to Import** dialog box appears.
4. If necessary, change to the directory that contains the System Center Monitoring Pack for SharePoint 2016 files.
5. Click **Microsoft SharePoint 2016 Management** **Pack** and then click **Open**. The **Import Management Packs** dialog box appears.
6. In the **Import** **Management** **Packs** dialog box, click **Add**. The **Select Management Packs to Import** dialog box appears again.
7. Click the management pack that contains the overrides, and then click **Open**.
8. In the **Import Management Packs** dialog box, click the **Import** button.
9. After the import process is complete, click the **Close** button.

**Disable a Monitor or Rule**

There may be situations in which you decide not to collect certain warnings, performance data, or miscellaneous non-critical events. These situations may include:

Deployments across satellite links.

Large branch office deployments.

Deployments with very slow wide area network (WAN) links.

Deployments where alerts are forwarded to a global network operations center.

Situations where warnings and informational messages are not needed.

**Note**: Disabling rules might result in insufficient data for reports. For example if you disable alert for a particular monitor, that alert will not be counted in number of alerts hence will not be reflected in top alerts report

In situations such as these, you can disable the rules that generate the data that you do not want to be notified about. For more information, see “How to override Rule or Monitor” at <https://technet.microsoft.com/en-us/library/hh212869.aspx>.

**Understanding the Microsoft SharePoint 2016  
Management Pack Operations**

This section describes the objects that the management pack discovers, how health information rolls up, key monitoring scenarios, and how health is defined and indicated.

**Objects the System Center Monitoring Pack for SharePoint 2016 Discovers**

The purpose of the management pack is to discover and monitor SharePoint 2016 components in your farm. The management pack discovers these objects.

**Understanding Health Monitoring**

One of the most important features of the management pack is its ability to monitor the health of your SharePoint 2016 environment. The management pack uses monitors to continually assess the health state of monitored components.

**Note**

A monitor is a management pack feature that uses events, performance data, and other information to assess the health state of a monitored component.

This section describes the types of Operations Manager 2012 monitors, lists the monitors that the management pack contains, explains how the roll up of the monitors for a SharePoint 2016 component determines its overall health, and describes how health is indicated in the Operations Console.

**About the System Center Monitoring Pack for SharePoint 2016 Monitors**

There are various types of monitors that are available in Operations Manager 2012. The management pack contains the following three types of monitors:

* Unit monitors
* Aggregate rollup monitors
* Dependency monitors

**Unit monitors** are used to monitor specific counters, events, scripts, and services. Unit monitors are rolled up to aggregate rollup monitors.

**Unit monitor type definitions:**

* **Event Manual Reset Monitor:** This monitor monitors an Event Log to watch for specific events. If an event is triggered, this monitor will change its health to a defined health state. The monitor will remain in that health state until an administrator manually switches it back to a different health state through the Operations Console.
* **Event Timer Reset Monitor:** This monitor monitors an event Log to watch for specific events. If an event is triggered, this monitor will change its health to a defined health state. After a defined period of time, the monitor will reset its health to a new health state.
* **Repeated Event Manual Reset Monitor:** This monitor monitors an event Log to watch for specific events. If the event is triggered multiple times, this monitor will change its health to a defined health state when the threshold is met. The monitor will remain in that health state until an administrator manually switches it back to a different health state through the Operations Console.
* **Repeated Event Timer Reset Monitor:** This monitor monitors an event Log to watch for specific events. If the event is triggered multiple times, this monitor will change its health to a defined health state when the threshold is met. After a defined period of time, the monitor will reset its health to a new health state.
* **Service Monitor:** This monitor watches over a Windows Service. If the component is a Windows Service, this monitor can watch over the service status.
* **Delayed Windows Service State Check Monitor:** This monitor watches over a Windows Service. If the component is a Windows Service, this monitor can watch over the service status. If it finds the services is down, it will wait for several minutes to double check the service state before it sets unhealthy state and raises an alert.
* **Performance Simple Threshold Monitor:** This monitor watches over a single Performance Counter threshold. If the Performance Counter goes over the threshold, this monitor will change health state.
* **Performance Double Threshold Monitor:** This monitor watches over a single Performance Counter threshold. If the Performance Counter goes over or under the defined thresholds, this monitor will change health state.
* **Performance Consecutive Threshold Monitor:** This monitor watches whether a Performance Counter hits a defined threshold multiple times in a certain period of time. If that threshold is met, the monitor will change health state.

An **aggregate rollup monitor** reflects the state of unit, dependency rollup, or other aggregate rollup monitors targeted to an object. You typically use an aggregate rollup monitor to group multiple monitors into one monitor and then use that monitor to set the health state and generate an alert.

A **dependency rollup monito**r rolls up health states from objects linked by either a hosting or a containment relationship. Hosting and containment relationships for a given target are defined in most Management Packs. A dependency rollup monitor can be used to make the health state of a particular object dependent on the health state of components that are either hosted or contained.

**Important**

The health state of the following aggregate monitors must be manually reset when they display an error or warning state:

* Security Token Service Signing Certificate Is Missing
* Security Token Service Cannot Create Signing Credential
* Claims Auth Cannot Establish EndPoint
* Claims Auth Provider Exception Error
* Business Data Catalog Service Application Not Accessible
* Business Data Catalog Metadata Database Exception
* Business Data Catalog Database Backend Connectivity Exception
* Business Data Catalog Web Service Backend Connectivity Exception
* Insufficient Permission
* Database Full
* Product Help Library Site Collection Permission Could Not Refresh
* Windows SMTP Service Is Not Running
* SharePoint Lists Cannot Receive Email
* Mail Service Cannot Deliver Email
* Usage Service Unable To Access Log Directory
* Usage Service Timer Job Failed
* Topology Service Is Not Available
* Shared Service Application Endpoints Are Not Available
* Not Enough Free Space For Usage Log
* Not Enough Trace Log Free Space
* SharePoint Web Application Invalid Application Pool Account
* Credential Deployment Timer Job Failed
* Application Server Administration Service Timer Job Failed

For more information, see “Types of monitors” at <https://technet.microsoft.com/en-us/library/hh457603.aspx> .

**To view the management pack monitors:**

1. In the Operations Console, click the **Authoring** button.
2. In the **Authoring** pane, expand **Management Pack Objects**, and then click **Monitors**. The monitors appear in the **Monitors** pane. To see more information in the **Monitor** **Details** pane, click any monitor.

**How Health Rolls Up**

The management pack regards the components of SharePoint 2016 as a hierarchy. The health of each level depends on the health of the level below it.

When a unit monitor changes state, the state of the monitor at the level above changes to match; in other words, the health of the lower level rolls up to the level above it.

**How Health Is Indicated in the Operations Console**

This management pack monitors the state of the health of the SharePoint 2016 environment. Operations Manager 2012 continuously updates the status of its managed computers and presents the status as part of the **State** view in the **Monitoring** pane of the Operations Console. Table 3 lists the icons that are used in the **State** view to indicate the server status.

**Table 3. Icons Used in the State View**

|  |  |
| --- | --- |
|  | Indicates that all services are running correctly and that the server is available. |
|  | Indicates that there may be an issue with one or more services or that the server itself may be unavailable. |
|  | Indicates that one or more services are unavailable or that the server itself is unavailable. |

**Key Monitoring Scenarios**

This section describes the key monitoring scenarios that represent the types of information that the management pack collects.

**Table 4. System Center Monitoring Pack for SharePoint 2016 Monitoring Scenarios**

|  |  |
| --- | --- |
| **Scenario** | **Description** |
| Active Directory® | Monitors the application pool account for insufficient permission to add or read users from Active Directory. |
| Authentication | Monitors for issues that result from improper configuration of the authentication provider. |
| Backup and restore | Monitors backup failures and recycle bin quotas. |
| Databases | Monitors for connectivity issues with SQL database servers. |
| Diagnostic system | Monitors events related to the health of the tracing infrastructure. |
| E-mail | Monitors connectivity with the SMTP server. |
| IIS | Monitors the application pool account for issues writing to disk or registry key. |
| Performance | Monitors performance counters. |
| Search | Monitors events that are critical to the sound operation of the search service. |
| State monitoring and service discovery | Monitors Windows NT® service availability, including the following:   * Microsoft SharePoint 2016 Timer * Microsoft SharePoint 2016 Tracing * Microsoft SharePoint 2016 Search * Microsoft Internet Information Service |
| Timer | Monitors events associated with the Timer service. |
| Web parts and event handlers | Monitors events associated with failures to load event handlers and safe control assembly paths. |

**Understanding Rules**

The management pack rules collect data that its monitored components generate. The rules are grouped into categories that are based on these components. The management pack Rules could be conceptually grouped as follows:

• Rules for Search Service

• Rules for SQL Server Database

• Rules for System Performance

• Rules for Web Server Performance

• Rules for Windows Services

• Rules for Microsoft SharePoint 2016

**To view the management pack rules:**

1. In the Operations Console, click the **Authoring** button.
2. In the **Authoring** pane, expand **Management Pack Objects**, and then click **Rules**. The rules appear in the **Rules** pane.
3. To view more information in the **Rule Details** pane, click any rule.

For more information, see “Rules” in the Operations Manager 2012 Online Help at <https://technet.microsoft.com/en-us/library/hh457603.aspx> .

**Understanding Tasks:**

Tasks are a predefined command, script or code that can be run on a monitored computer. Tasks are primarily used for diagnostic or corrective action purposes. Task may also be used to configure monitoring environments. The management pack includes the tasks that are shown in Table 5.

**Table 5. System Center Monitoring Pack for SharePoint 2016 Tasks**

|  |  |
| --- | --- |
| **Task Name** | **Description** |
| **Configure SharePoint Management Pack** | **This admin task configures the management pack by ensuring the existence of an override management pack** |
| **Set DebugTrace For SharePoint Management Pack** | **Enable or Disable DebugTrace for SharePoint Management Pack Discovery and Monitoring scripts.** |
| Restart Admin Service | Task to restart SharePoint Admin Service. |
| Restart Timer Service | Task to restart SharePoint Timer Service. |
| Restart SPTrace Service | Task to restart SharePoint Tracing Service. |
| Restart Sandboxed Code Service | Task to restart SharePoint Sandboxed Code Service. |

The “Set DebugTrace For SharePoint Management Pack” task will enable debug trace on those agent computers that run Windows PowerShell script based discoveries and SPHA monitors. By default it is turned off. When it is enabled, the script based discoveries and monitors will write debug trace information to Event Log in Operations Manager channel on all agent computers, and all the debug trace events have an event ID of 0. Typically the event description will include script name, startup/stop information and how long each script runs. A sample debug trace event is shown as below:

[Debug] C:\Program Files\System Center Operations Manager 2012\Health Service State\Monitoring Host Temporary Files 7\2\WSSBPAMonitor.ps1

Current User: [username]

Current PID: 1584

start time: 10/26/2009 1:03:09 PM

stop time: 10/26/2009 1:04:21 PM

time taken: 71046.3459

Windows PowerShell script WSSBPAMonitor.ps1 execution ended.

**To run the SetDebugTrace task, from the Operations Manager 2012 console:**

1. Select Monitoring, then select SharePoint 2016 Products, and then select Administration view.
2. On the **Actions** panel, click the task named “Set DebugTrace For SharePoint Management Pack”. A Run Task window will popup,
3. To enable debug trace (the default option), click **Run**. To disable debug trace, click **Override**.
4. Set the Enabled parameter value to “False” in the popup dialog.
5. Click **Override** to close the dialog.
6. Click **Run**.
7. Wait for the task to finish in Task Status window, and then check the Task Output to ensure that the task completes successfully.
8. Click **Close**.
9. If you have the management packs for both Microsoft SharePoint 2016 and Microsoft SharePoint 2016 Products imported, the task will turn on trace for all discoveries and script monitors in both management packs, otherwise, it will only turn on trace for System Center Monitoring Pack for SharePoint 2016.

For more information, see “Quick references to Operations Manager Tasks” in the Operations Manager 2012 Online Help at <https://technet.microsoft.com/en-us/library/hh230738.aspx> .

**To view the management pack tasks:**

1. In the Operations Console, click the **Authoring** button.
2. In the **Authoring** pane, expand **Management Pack Objects**, and then click **Tasks**. The tasks appear in the **Tasks** pane. The **Management Pack** column lists the tasks that belong to the System Center Monitoring Pack for SharePoint 2016.
3. To view more information in the **Task** **Details** pane, click any task.

**Viewing Information in the Operations Console**

This section describes the Operations Manager 2012 Operations Console and explains how to view status and performance data and the management pack views, rules, attributes, and object discoveries.

**About the Operations Manager 2012 Operations Console**

The Operations Console is the main user interface for Operations Manager 2012, with navigation buttons that enable you to access to the **Monitoring**, **Authoring**, **Reporting**, **Administration**, and **My** **Workspace** panes.

Each Operations Console pane has a specific purpose:

The **Monitoring** pane is used to display monitoring data, and track and resolve issues easily. You can use this pane to view the health status of your monitoring environment and handle alerts. This pane displays different views of the monitoring data that Operations Manager 2012 collects.

The **Authoring** pane is used to configure management pack objects—such as monitors, rules, and tasks—distributed applications, groups, and management pack templates.

The **Reporting** pane is used to display default and management pack-specific reports, and to save and schedule reports.

The **Administration** pane is used to edit Operations Manager 2012 settings and perform a number of functions including importing and creating management packs, and creating overrides for management packs.

The **My Workspace** pane is used to customize how you view the Operations Console.

**Viewing Status and Performance Data in the Monitoring Pane**

The **Monitoring** pane of the Operations Console provides numerous views that you can use to check the status and performance of the SharePoint 2016 environment. This section describes the management pack views, explains how to select a view in the **Monitoring** pane and get detailed information about an alert or event, and discusses creating custom views.

**The System Center Monitoring Pack for SharePoint 2016 Views**

This management pack has the following views:

|  |  |
| --- | --- |
| View Name | Description |
| Diagram View | SharePoint 2016 farm group diagram view. |
| Active Alerts | Displays all active SharePoint Services alerts. |
| Events | Displays all events collected for SharePoint Services objects. |
| Administration | This is the entry point for administration tasks to configure SharePoint farm discovery and monitoring. |
| Farms | Displays the state of SharePoint farms. |
| Servers | Displays the state of SharePoint servers. |
| Services | Displays state of the SharePoint services. |
| Web Applications | Displays state of the SharePoint Web applications. |
| Shared Services | Displays state of the SharePoint service applications. |
| Task Status | Displays status of SharePoint tasks. |
| Performance | Displays performance view of SharePoint Services objects in Operations Manager 2012 console. |
| Configuration Databases | Displays state of SharePoint Services configuration databases. |
| Content Databases | Displays state of SharePoint Services content databases. |
| SPHA Rules | Displays state of SharePoint Health Analyzer (SPHA) rules. |
| Service Front Ends | Displays state of the SharePoint Web servers. |
| Unidentified Machines | Displays state of unidentified SharePoint computers. |

**To select a view:**

1. In the **Monitoring** pane of the Operations Console, expand **Monitoring.**
2. Expand **Microsoft SharePoint 2016 Management Pack.**
3. Click a view.

**To view detailed information about a particular alert or event:**

1. In the **Monitoring** pane of the Operations Console, expand **Monitoring.**
2. Expand **Microsoft SharePoint 2016 Management Pack.**
3. Click the **Alerts** or **Events** view.
4. In the **Alerts** or **Events** pane, click an alert or event. More information about the alert or event appears in the **Alert Details** or **Event Details** pane.
5. In the **Alert Details** or **Event Details** pane, click the name of the rule that generated the alert or collected the event.

The **Properties** dialog box for the generating rule opens. This dialog box displays information about the rule, including knowledge about the causes and resolution of the alert or event.

1. In the **Properties** dialog box, click the **Product** **Knowledge** tab. Click the link to get product knowledge.

For more information, see “Creating Views in Operations Manager 2012” in the Operations Manager 2012 Online Help at <http://technet.microsoft.com/en-us/library/dd440893.aspx>.

**Custom Views**

You can create custom views to suit your environment. For information about creating custom views, see the following Operations Manager 2012 Online Help topics:

“Creating Views in Operations Manager” at <https://technet.microsoft.com/en-us/library/hh230752.aspx>

“How to Create a Diagram View” at <http://technet.microsoft.com/en-us/library/bb309701.aspx>

**Viewing Management Pack Views in the Authoring Pane**

You can view the management pack views in the **Authoring** pane of the Operations Console. This allows you to see the properties, such as the criteria and display settings, of a particular view including the criteria and display settings for the view. You can use this information to customize the view or create a different view with similar characteristics.

**To view the Management Pack views:**

1. In the Operations Console, click the **Authoring** button.
2. In the **Authoring** pane, expand **Management Pack Objects** and then click **Views**. The views appear in the **Views** pane.
3. The **Management Pack** column lists the views that belong to the management pack.
4. To see more information in the **View Details** pane, click any view.
5. To see the properties of the view, click **Properties** in the **Actions** pane.

For detailed descriptions of the views, see "Viewing Status and Performance Data in the Monitoring Pane" in this guide.

**Viewing Management Pack Rules in the Authoring Pane**

You can view the management pack rules in the **Authoring** pane of the Operations Console. This allows you to find rules that you may want to disable or modify. For more information about modifying and disabling rules, see "Optional Configuration for the System Center Monitoring Pack for SharePoint 2016 " in this guide.

**To view the Management Pack rules**

* In the Operations Console, click **Authoring**.
* In the Authoring pane, expand **Management Pack Objects**.
* Click the **Rules** node. The rules are displayed in the Rules pane.
* On the Operations Manager toolbar, click **Scope**. The **Scope Management Packs by targets(s)** dialog box opens.
* Click **Clear All** to clear the existing selection.
* Enter “Microsoft SharePoint 2016” in the **Look for** text box.
* Click **Select All**.
* Click **OK**.
* In the **Rules** pane, click a rule. More information about the rule appears in the **Rule Details** pane.
* In the **Rule Details** pane, click **View Knowledge** to open the **Properties** dialog box for the rule.

**Viewing Management Pack Object Discoveries in the Authoring Pane**

In Operations Manager 2012, object discoveries are used to find the specific objects on a network that need to be monitored based on the object types that the management pack defines. Because management pack developers do not know the specific objects that are in your network environment, they only define the types of objects that their management pack monitors. However, the developers also include object discoveries to find the specific objects on your network that the management pack monitors.

Table 6 lists the object discoveries that are included in the management pack.

**Table 6. System Center Monitoring Pack for SharePoint 2016 Object Discoveries**

|  |  |
| --- | --- |
| Name | Description |
| SharePoint Farm | One of the farm in SharePoint Farm Group. |
| SharePoint Installed Machine | The machine with SharePoint installed. |
| Unidentified SharePoint Machine | All machines which could not be identified as SharePoint machines. |
| SharePoint Configuration Database | SharePoint Configuration Database stores all configuration information for a farm. |
| SharePoint Server Group | Server group in a SharePoint farm. |
| SharePoint Server | SharePoint Server. |
| SharePoint Services Group | This group contains all SharePoint 2016 services. |
| SharePoint Web Application Group | This group contains all Web Application running in a farm. |
| SharePoint Shared Service Group | This group contains all shared services for a farm. |
| Admin Service In SPService | Admin Service in SPService for a particular farm. |
| Admin Service In SPServiceInstance | Admin Service in SPServiceInstance for a particular server. |
| Incoming E-Mail Service In SPService | Incoming E-Mail Service in SPService for a particular farm. |
| Incoming E-Mail Service In SPServiceInstance | Incoming E-Mail Service in SPServiceInstance for a particular server. |
| Timer Service In SPService | Timer Service in SPService for a particular farm. |
| Timer Service In SPServiceInstance | Timer Service in SPServiceInstance for a particular server. |
| Sandboxed Code Service In SPService | Sandboxed Code Service in SPService for a particular farm. |
| Sandboxed Code Service In SPServiceInstance | Sandboxed Code Service in SPServiceInstance for a particular server. |
| Trace In SPServiceInstance | Trace Windows Service in SPServiceInstance for a particular server. |
| CentralAdmin Service In SPServiceInstance | CentralAdmin Service in SPServiceInstance for a particular server. |
| Web Service In SPService | Web Services in SPService for a particular farm. |
| Web Service In SPServiceInstance | Web Service in SPServiceInstance for a particular server. |
| WebApplication Service In SPService | WebApplication Service in SPService for a particular farm. |
| SharePointWeb Application Instance Collection | Collection of all IIS sites created for a SharePoint Web Application. |
| SharePoint Web Application Instance | This is an instance (IIS site) of SharePoint web application. |
| SharePoint Content Database Collection | This collection contains all Content Databases in a SharePoint farm. |
| SharePoint Content Database | This is one of the SharePoint Content Databases, and it stores actual content for one or many sites. |
| System Timer Job Hosting Object | This object is the target of various System Timer Job monitors. |
| InfoPath Forms Services Instance | InfoPath Forms Services Instance |
| InfoPath Forms Service | InfoPath Forms Services |
| DC Load Balancer Service Instance | Document Conversions Load Balancer Service Instance |
| DC Load Balancer Service | Document Conversions Load Balancer Service |
| DC Launcher Service | Document Conversions Launcher Service |
| DC Launcher Service Instance | Document Conversions Launcher Service Instance |
| Project Event Service | Project Event Service |
| Project Event Service Instance | Project Event Service Instance |
| Project Queue Service | Project Queue Service |
| Project Queue Service Instance | Project Queue Service Instance |
| Usage Service In SPServiceInstance | Usage Service in SPServiceInstance for a particular server. |
| Usage Shared Service | Usage Shared Service. |
| SharePoint Usage Application | Usage application instance. |
| Shared Service - Business Data Connectivity | Shared Service - Business Data Connectivity |
| Shared Service - Business Data Connectivity App | Shared Service - Business Data Connectivity Application |
| Business Data Connectivity Service Instance | Business Data Connectivity Service Instance |
| Business Data Connectivity Service App Database | Business Data Connectivity Service Application Database |
| Shared Service - SecurityToken | Shared Service - SecurityToken |
| SecurityToken Service Instance | SecurityToken Service Instance |
| Shared Service - SecurityToken Application | Shared Service - SecurityToken Application |
| SharePoint Topology Application | Topology application instance. |
| Topology In SPServiceInstance | Topology Service in SPServiceInstance for a particular server. |
| Topology Shared Service | Topology Shared Service. |
| Access Page Instance | Access Page Instance |
| Shared Service Access | Shared Service Access |
| Shared Service Access Application | Shared Service Access Application |
| Access Service Instance | Access Service Instance |
| Access Page Instance 2 | Access Page Instance 2 |
| Shared Service Access 2 | Shared Service Access 2 |
| Shared Service Access Application 2 | Shared Service Access Application 2 |
| Access Service Instance 2 | Access Service Instance 2 |
| Shared Service Visio | Shared Service Visio |
| Shared Service Visio Application | Shared Service Visio Application |
| Visio Service Instance | Visio Service Instance |
| Shared Service SecureStore | Shared Service SecureStore |
| Shared Service SecureStore Application | Shared Service SecureStore Application |
| SecureStore Service Instance | SecureStore Service Instance |
| Shared Service SecureStore Application Database | Shared Service SecureStore Application Database |
| Shared Service UserProfile | Shared Service UserProfile |
| Shared Service UserProfile Application | Shared Service UserProfile Application |
| UserProfile Service Instance | UserProfile Service Instance |
| MySiteHost Site | MySiteHost Site |
| TimerJob for UserProfile | TimerJob for UserProfile |
| TimerJob Instance for UserProfile | TimerJob Instance for UserProfile |
| Shared Service Word Automation | Shared Service Word Automation |
| Shared Service Word Automation Application | Shared Service Word Automation Application |
| Visio Word Automation Instance | Word Automation Service Instance |
| TimerJob for Word Automation | TimerJob for Word Automation |
| TimerJob Instance for Word Automation | TimerJob Instance for Word Automation |
| Word Automation Services Queue Database | Queue Database for Word Automation Services Application |
| Shared Service Taxonomy | Shared Service Taxonomy |
| Shared Service Taxonomy Application | Shared Service Taxonomy Application |
| Taxonomy Service Instance | Taxonomy Service Instance |
| Shared Service Taxonomy Application Database | Shared Service Taxonomy Application Database |
| Shared Service PerformancePoint | Shared Service PerformancePoint |
| Shared Service PerformancePoint Application | Shared Service PerformancePoint Application |
| PerformancePoint Service Instance | PerformancePoint Service Instance |
| Shared Service PerformancePoint Application Database | Shared Service PerformancePoint Application Database |
| Shared Service Project | Shared Service Project |
| Shared Service Project Application | Shared Service Project Application |
| Project Service Instance | Project Service Instance |
| Project PWA Site | Project PWA Site |
| Crawl Component | Crawl Component |
| Index Component | Index Component |
| Admin Component | Admin Component |
| Analytics Processing Component | Analytics Processing Component |
| Content Processing Component | Content Processing Component |
| Query Processing Component | Query Processing Component |
| Search Component Group | Search Component Group |
| Shared Service Search | Shared Service Search |
| SPShared Service Application: SearchGroup | SPShared Service Application: SearchGroup |
| SPShared Service Application Host Controller Group | SPShared Service Application Host Controller Group |
| Host Controller | Host Controller |
| Search Application | Search Application |
| SPHA Availability Rule | SharePoint Health Analyzer (SPHA) Availability Rule defined in a SharePoint Farm. |
| SPHA Configuration Rule | SharePoint Health Analyzer (SPHA) Configuration Rule defined in a SharePoint Farm. |
| SPHA Custom Rule | SharePoint Health Analyzer (SPHA) Custom Rule defined in a SharePoint Farm. |
| SPHA Performance Rule | SharePoint Health Analyzer (SPHA) Performance Rule defined in a SharePoint Farm. |
| SPHA Security Rule | SharePoint Health Analyzer (SPHA) Security Rule defined in a SharePoint Farm. |

**To view the Management Pack object discoveries:**

1. In the Operations Console, click the **Authoring** button.
2. In the **Authoring** pane, expand **Management Pack Objects**, and then click **Object Discoveries**. The object discoveries appear in the **Object Discoveries** pane. The **Management Pack** column lists the object discoveries that belong to the management pack.
3. To view more information in the **Object Discovery Details** pane, click any object discovery.

**Using the Microsoft SharePoint 2016 Management Pack Reports**

To look at trends in your environment across days, weeks, or months, you can use the management pack reports. This section:

Describes how to select a management pack report and shows an example of a report.

Lists all the reports that the management pack provides.

Explains the purpose of and the lists the rules that collect the data for each report.

**Selecting a Report**

**To select a Management Pack report:**

1. In the Operations Console, click the **Reporting** button.
2. Expand **Reporting**.
3. Click **Microsoft SharePoint 2016 (Monitoring)**.
4. In the **Reports** pane, click a report and then click **Open**.
5. A dialog box that displays the parameters for the selected report appears.

**Note**

The instructions for selecting report parameters are beyond the scope of this guide. For information about how to select the parameters for a report, see “How to run a Report” in the Operations Manager 2012 Online Help at <https://technet.microsoft.com/en-us/library/hh230683.aspx> .

1. After you enter the parameters for the report, click **Run** in the toolbar to run the report.

The report graphs the data that you have selected and shows the rules that collected the data.

**Report Descriptions**

The System Center Monitoring Pack for SharePoint 2016 provides the following reports:

|  |  |
| --- | --- |
| Server Alert | This report renders all alerts raised by specified server(s). |
| Service Alert | This report renders all alerts raised by specified service(s). |
| Server Event | This report renders all events raised on specified server(s). |
| Service Event | This report renders all events raised on specified service(s). |
| Top Server Events | This report renders top 20 events raised on specified server(s). |
| Top Service Events | This report renders top 20 events raised on specified service(s). |
| Top Alerts | This Most Common Alert Report helps to identify high volume alerts, the volume a distinct alert contributes to the total number of alerts and the resolution times. This report helps in tuning the alerts. |
| Server Performance | This report renders performance data for specified server(s). |
| Entity State | This report renders entity state for specified SharePoint object(s) over time. |

**Monitors**

|  |  |
| --- | --- |
| Name | Description |
| Access Services 2010: Cannot Create Session Cache | A critical state of this Monitor indicates that the back end application server Access Data Services machine was not able to create an in memory cache for a user session. Users may be unable to use that specific machine for querying data for Access Services applications. |
| Access Services 2010: Configuration Database Access Failed | A warning state of this Monitor indicates that the back end Access Data Services application server failed to access the configuration database and may not be able to read or save any settings. |
| Access Services 2010: Failed To Contact Access Application Server | A warning state of this Monitor indicates that a web front end machine was unable to communicate with a specific back end Access Data Services application server. Traffic will be load balanced to another server if one is available. |
| Access Services 2010: Failed To Load Calculation Library | A critical state of this Monitor indicates that the Access Services failed to load a required library, the calculation library. The server may not be able to process requests. |
| Access Services 2010: Machine No Longer Available | A warning state of this Monitor indicates that a web front end machine failed to contact a back end Access Data Services machine. All future requests to this Access Data Services machine will likely fail. Traffic may be load balanced to other Access Data Services machines if they exist. |
| Access Services 2010: Machine Not Available | A critical state of this Monitor indicates that no Access Data Services machines are available. All requests for Access Service applications that consume any data will fail. |
| Access Services 2010: Out Of Memory | A critical state of this Monitor indicates that the back end Access Data Services application server machine ran out of memory. |
| Access Services 2010: Template File Error | A warning state of this Monitor indicates that an Access template file was missing, there was an error reading it from the hard disk, or the template file wasn't valid. |
| Access Services: Cannot Create Session Cache | A critical state of this Monitor indicates that the back end application server Access Data Services machine was not able to create an in memory cache for a user session. Users may be unable to use that specific machine for querying data for Access Services applications. |
| Access Services: Configuration Database Access Failed | A warning state of this Monitor indicates that the back end Access Data Services application server failed to access the configuration database and may not be able to read or save any settings. |
| Access Services: Excessive Failed SQL Connections | Access Services: Excessive Failed SQL Connections |
| Access Services: Excessive failed SQL connections | The average failed attempts to connect to SQL Azure is too high. This means many of our customer aren’t able to connect to their data. |
| Access Services: Excessive SQL Connection Retries | We're retrying too many times when connecting to the application SQL database. |
| Access Services: Excessive SQL connection retries | The average number of retries per connection attempt is too high, this likely means user experience is severely degraded. |
| Access Services: Excessive SQL Write Failures | We're seeing too many failures when we're trying to write to the SQL application databases. |
| Access Services: Excessive SQL write failures | The average number of write failures compared to total write attempts is too high, this means the user is either not able to write to their DB or their performance is severely degraded. |
| Access Services: Failed To Contact Access Application Server | A warning state of this Monitor indicates that a web front end machine was unable to communicate with a specific back end Access Data Services application server. Traffic will be load balanced to another server if one is available. |
| Access Services: Failed To Load Calculation Library | A critical state of this Monitor indicates that the Access Services failed to load a required library, the calculation library. The server may not be able to process requests. |
| Access Services: Failed to register database server | Access Services: Failed to register database server |
| Access Services: LocalDB connection failure | Access was unable to connect to the SQL Server Express LocalDB instance. |
| Access Services: Low Availability in Access Workload | There is low availability of logical servers in the Access Workload |
| Access Services: Low Availability in Application Workload | There is low availability of logical servers in the Application Workload |
| Access Services: Low Capacity in Access Workload | There is low remaining database capacity in the Access Workload |
| Access Services: Low Capacity in Application Workload | There is low remaining database capacity in the Application Workload |
| Access Services: Machine No Longer Available | A warning state of this Monitor indicates that a web front end machine failed to contact a back end Access Data Services machine. All future requests to this Access Data Services machine will likely fail. Traffic may be load balanced to other Access Data Services machines if they exist. |
| Access Services: Machine Not Available | A critical state of this Monitor indicates that no Access Data Services machines are available. All requests for Access Service applications that consume any data will fail. |
| Access Services: No application info from content database | A warning state of this monitor indicates that we cannot retrieve the information of a number of applications from the SharePoint content database. |
| Access Services: No available ADS servers | This monitor triggers an alert warning when the number of available ADS boxes is low, and then triggers an error when there are no available ADS boxes. |
| Access Services: No default proxy | There is no default Access Services application proxy. This indicates that Access Services is misconfigured in this farm. |
| Access Services: No servers available for database creation | There are no SQL servers available for creating databases. |
| Access Services: Out Of Memory | A critical state of this Monitor indicates that the back end Access Data Services application server machine ran out of memory. |
| Access Services: Partitioned SSS communication failure | We are unable to communicate with partitioned SSS. This means that we are unable to retrieve or update credentials for application databases. |
| Access Services: Template File Error | A warning state of this Monitor indicates that an Access template file was missing, there was an error reading it from the hard disk, or the template file wasn't valid. |
| Access Services: Trigger for excessive failed SQL connections requests | A trigger for a number of connections. We don't want this firing for a very small number of users. |
| Access Services: Trigger for excessive SQL connection retries | A trigger for the number of connection retries. Fires if there are 1000 within a 5 minute interval. |
| Access Services: Trigger for excessive SQL write failures | A trigger for the number of SQL write failures. Fires if there are 1000 within a 5 minute interval. |
| Access Services: Unpartitioned SSS communication failure | We are unable to communicate with unpartitioned SSS. This means that we are unable to retrieve or update credentials for database servers used for applications. |
| Access Services: WFE to ADS communication failure | A critical state of this monitor indicates that we have failed to communicate with Access Data Services machines repeatedly for a period of time. All requests for Access Service applications that consume any data will fail. |
| Admin Application Pool Credential Deployment Timer Job Failed | A critical state of this Monitor indicates that SPAdminAppPoolCredentialDeploymentJobDefinition timer job has thrown an exception. |
| Admin Service Is Not Running | A critical state of this Monitor indicates that the Admin Service is not running on a particular server. |
| Analytics analysis: failed to start - search analytics | Analytics analysis: failed to start - search Analytics |
| Analytics analysis: failed to start warning - search analytics | Analytics analysis: failed to start warning - search analytics |
| Application Discovery And Load Balancer Service Application Are Not Available | A critical state of this Monitor indicates that the Application Discovery and Load Balancer Service Application are unable to retrieve the list of published service applications from the remote farm. |
| Business Data Connectivity Database Backend Connectivity Exception | A critical state of this Monitor indicates that Business Data Connectivity failed to open connection. |
| Business Data Connectivity Metadata Database Exception | A critical state of this Monitor indicates that Business Data Connectivity service application failed because of a database exception. |
| Business Data Connectivity Service Application Not Accessible | A critical state of this Monitor indicates that Business Data Connectivity service application is not accessible. |
| Business Data Connectivity Web Service Backend Connectivity Exception | A critical state of this Monitor indicates that Business Data Connectivity Service Application could not obtain a proxy to web service for External Data Source. |
| Claims Auth Cannot Establish EndPoint | A critical state of this Monitor indicates that an exception occurred when trying to establish an endpoint for context. |
| Claims Auth Provider Exception Error | A critical state of this Monitor indicates that Claims provider exception occurred. |
| Content Application Pool Credential Deployment Timer Job Failed | A critical state of this Monitor indicates that SPContentAppPoolCredentialDeploymentJobDefinition timer job has thrown an exception. |
| Content Processing: Fallback word breaker did not load | Content Processing: Fallback word breaker did not load |
| Content Processing: flow failed to start | Content Processing: flow failed to start |
| Content Processing: Gatherer Content Processing connector | Content Processing: Gatherer Content Processing connector |
| Content Processing: Query classification dictionary close to size limit | Content Processing: Query classification dictionary close to size limit |
| Content Processing: Query classification dictionary exceeds size limit | Content Processing: Query classification dictionary exceeds size limit |
| Content Processing: Search Custom Dictionaries Update | Content Processing: Search Custom Dictionaries Update |
| Content Processing: Spelling dictionary close to size limit | Content Processing: Spelling dictionary close to size limit |
| Content Processing: Spelling dictionary exceeds size limit | Content Processing: Spelling dictionary exceeds size limit |
| Content Processing: Spelling Dictionary Update | Content Processing: Spelling Dictionary Update |
| Crawler: Search Gatherer Host Unavailable | Crawler: Search Gatherer Host Unavailable |
| Credential Deployment Timer Job Failed | A critical state of this Monitor indicates that SPWindowsServiceCredentialDeploymentJobDefinition timer job has thrown an exception. |
| Database Full | A critical state of this Monitor indicates that a SQL database is full. |
| Database Not Found | A critical state of this Monitor indicates that the database was not available on a particular instance on SQL Server. |
| DocParsing: No More Parser Server Workers | DocParsing: No More Parser Server Workers |
| DocParsing: Parser Server Worker Failed to Restart | DocParsing: Parser Server Worker Failed to Restart |
| Document Conversion Launcher Is Unavailable | A critical state of this Monitor indicates that the Document Conversion Launcher service is unavailable. |
| Document Conversion LoadBalancer Is Unavailable | A critical state of this Monitor indicates that the Document Conversion Load Balancer service is unavailable. |
| Enterprise Content Management Deployment Failed | A critical state of this Monitor indicates that Content Deployment has failed. |
| Enterprise Content Management Disk-Based Cache Is At Critical Capacity | A critical state of this Monitor indicates that the Disk-based Cache is at or near full capacity. |
| Enterprise Content Management Disk-Based Cache Is Compacting | A warning state of this Monitor indicates that the Disk-Based Cache is compacting. |
| Enterprise Content Management Disk-Based Cache Is Flushing | A warning state of this Monitor indicates that the Disk-Based Cache is flushing. |
| Enterprise Content Management Disk-Based Cache Is Misconfigured | A warning state of this Monitor indicates that the Disk-Based Cache is misconfigured. |
| Enterprise Managed Metadata Service Is Inaccessible | A critical state of this Monitor indicates that the Enterprise Managed Metadata Service is Inaccessible. |
| Failed To Write File | A critical state of this Monitor indicates that the application pool account has insufficient permissions to write files. |
| Failed To Write Registry Entry | A critical state of this Monitor indicates that there are failures of web application when writing to server registry. |
| Generate Password Timer Job Failed | A critical state of this Monitor indicates that SPGeneratePasswordJobDefinition timer job has thrown an exception. |
| Host Controller Dependency Rollup Host Controller Group: Availability | Host Controller Dependency Rollup Host Controller Group: Availability |
| Host Controller Dependency Rollup Host Controller Group: Configuration | Host Controller Dependency Rollup Host Controller Group: Configuration |
| Host Controller Dependency Rollup Host Controller Group: Performance | Host Controller Dependency Rollup Host Controller Group: Performance |
| Host Controller Dependency Rollup Host Controller Group: Security | Host Controller Dependency Rollup Host Controller Group: Security |
| Index Lookup: Missing partition | Index Lookup: Missing partition |
| Index Lookup: Schema service availability query processing | Index Lookup: Schema service availability query processing |
| Index: Indexing Blocked | Index: Indexing Blocked |
| Index: Journal IO Exception Read | Index: Journal IO Exception Read |
| Index: Journal IO Exception Write | Index: Journal IO Exception Write |
| Index: Lost Generations | Index: Lost Generations |
| Index: Missing partition | Index: Missing partition |
| InfoPath Forms Services Cannot Load ifsFileNames.xml | A critical state of this Monitor indicates that InfoPath Forms Services cannot load ifsFileNames.xml. |
| InfoPath Forms Services Form Templates In-Memory Cache Are Being Reloaded Frequently | A warning state of this Monitor indicates that form templates in the InfoPath Forms Services in-memory cache are being reloaded frequently. This could indicate high memory pressure and suboptimal performance. |
| InfoPath Forms Services Is Not Functional Due To Invalid State Service Configuration | A critical state of this Monitor indicates that InfoPath Forms Services is not functional and browser forms cannot be used because the State Service configuration is not valid. |
| InfoPath Forms Services User Has Exceeded The Maximum Allowable Number Of Postbacks | A warning state of this Monitor indicates that a user has exceeded the threshold that has been set for the number of postbacks allowed per form session. When this condition occurs, the user session is terminated to protect the server. |
| InfoPath Forms Services User Has Exceeded The Maximum Number Of Actions Per Postback | A warning state of this Monitor indicates that a user has exceeded the threshold that has been set for the number of form actions allowed per postback. When this condition occurs, InfoPath Forms Services terminates the user session to protect the server. |
| Insufficient Permission | A critical state of this Monitor indicates that a server has insufficient SQL Server database permissions. |
| Login Failed | A critical state of this Monitor indicates that an Application Login failed on this server. |
| Machine Translation Service not accessible | A critical state of this monitor indicates that the Machine Translation Service is not accessible. |
| Machine Translation Service: Content not accessible | A critical state of this monitor indicates that the Machine Translation Service cannot access the content it needs to translate. |
| Machine Translation Service: Machine translation failure | A critical state of this monitor indicates that the online machine translation service failed. |
| Machine Translation Service: Queue database not accessible | A critical state of this monitor indicates that the Machine Translation Service queue database is not accessible. |
| Machine Translation Service: Timer job failure | A critical state of this monitor indicates that the Machine Translation Service timer job failed. |
| Machine Translation Service: Worker failure | A critical state of this monitor indicates that Machine Translation Service worker processes failed. |
| Mail Service Cannot Deliver Email | A warning state of this Monitor indicates that a large number of Incoming Email Service lookup fails. |
| Master Passphrase Deployment Timer Job Failed | A critical state of this Monitor indicates that SPMasterPassphraseDeploymentJobDefinition timer job has thrown an exception. |
| Not Enough Free Space For Usage Log | A critical state of this Monitor indicates that the usage log does not have enough free disk space. |
| Not Enough Trace Log Free Space | A critical state of this Monitor indicates that the trace log does not have enough free disk space. |
| Password Management Timer Job Failed | A critical state of this Monitor indicates that SPPasswordManagementJobDefinition timer job has thrown an exception. |
| PerformancePoint Services DB Cannot Be Reached | A critical state of this Monitor indicates that the PerformancePoint Services DB cannot be reached. |
| PerformancePoint Services Is Not Running | A critical state of this Monitor indicates that PerformancePoint Services is not running. |
| PerformancePoint Services Unattended Service Account Status | A critical state of this Monitor indicates that the Unattended Service Account login failed. |
| Ping A Site Failed | A critical state of this Monitor indicates that a ping attempt failed for the site URL. |
| Ping Web Application Failed | A critical state of this Monitor indicates that a ping attempt failed for the Web Application URL. |
| Product Help Library Site Collection Permission Could Not Refresh | A critical state of this Monitor indicates that there is an issue when refreshing permissions for product help library. |
| Project Active Directory Connection Failed | A warning state for this Monitor indicates that Project Server could not access the Active Directory. |
| Project Active Directory Exception Occurred During Synchronization | An error state for this Monitor indicates that Project Server Failed to obtain a reference to an Active Directory Group. |
| Project Active Directory Nested Foreign Security Principal Could Not Be Resolved | A warning state for this Monitor indicates that Project Server could not resolve a nested Active Directory foreign security principal during Active Directory synchronization (not the top-level Active Directory group). |
| Project Active Directory Nested Object Could Not Be Resolved | A warning state for this Monitor indicates that Project Server could not resolve a nested Active Directory object during Active Directory synchronization (not the top-level Active Directory group). |
| Project Active Directory PWA Group Could Not Be Resolved | An error state for this Monitor indicates that during security group synchronization, the top-level Active Directory object could not be resolved. |
| Project Active Directory Top-Level Group Has No Members | A warning state for this Monitor indicates that the top-level Active Directory group that is mapped to the Enterprise Resource Pool or a Project Web Access Security Group does not contain any members. |
| Project Creating Report Center Web Failed | An error state for this Monitor indicates that the ProjectBICenter could not be created during provisioning. |
| Project Cube Build Service Analysis Services Server Connection Failure | An error state for this Monitor indicates that Project Server failed to connect to the Analysis Services server for building cubes. |
| Project Cube Build Service Analysis Services Server Lock Time Out | An error state for this Monitor indicates that Project Server could not get a lock on the Analysis Services database that was generated. |
| Project Cube Build Service Attempt To Overwrite Failed | An error state for this Monitor indicates that the Cube Build Service failed to build an Analysis Services database because another Analysis Services database already exists with the same name. |
| Project Cube Build Service Decision Support Object Is Not Installed | A warning state for this Monitor indicates that the Cube Build Service requires the DSO component of Analysis Services to be installed. |
| Project Cube Build Service OLAP Processing Failure | An error state for this Monitor indicates that after the cube structures are built, the Analysis Services server has failed to process the cube. |
| Project Failure Creating A Project Workspace | An error state for this Monitor indicates that the asynchronous Project Workspace creation on a project publish through the Queue Service has failed. |
| Project General Data Access Layer Error Connecting To Database | An error state for this Monitor indicates that the Data Access Layer attempted but failed to connect to one of the four Project Server databases. |
| Project General Data Access Layer Error While Getting Connection Strings | An error state for this Monitor indicates that the Data Access Layer cannot read information from the configuration database of the SharePoint farm. |
| Project Notification E-mail Delivery Failed | An error state for this Monitor indicates that the notification e-mail delivery failed because the connection to the SMTP server failed. |
| Project Notification XSLT Transformation Error | An error state for this Monitor indicates that the XSL used to transform XML data in the body of a notification e-mail has failed. |
| Project Queue General Percentage SQL Retries Per Day | A warning state for this Monitor indicates that the percentage of SQL retries has exceeded the acceptable threshold for the past day. |
| Project Queue General Percentage SQL Retries Per Hour | A warning state for this Monitor indicates that the percentage of SQL retries has exceeded the acceptable threshold for the past hour. |
| Project Queue Jobs Average Wait Time Per Day | A warning state for this Monitor indicates that the average amount of time jobs are waiting in the queue before being processed has exceeded the acceptable threshold for the past hour. |
| Project Queue Jobs Percentage Jobs Failed Per Day | A warning state for this Monitor indicates that the percentage of jobs that failed in the queue has exceeded the acceptable threshold for the past day. |
| Project Queue Jobs Percentage Jobs Failed Per Hour | A warning state for this Monitor indicates that the percentage of jobs that failed in the queue has exceeded the acceptable threshold for the past hour. |
| Project Reporting Server Side Event Has Failed | An error state for this Monitor indicates that custom server-side event handler within the Reporting Data Service component has failed. |
| Project Server Event Handler Could Not Be Found | An error state for this Monitor indicates that a registered event hander for a server side event could not be located. |
| Project Server Event Service Could Not Be Found | An error state for this Monitor indicates that the Project Server Eventing Service is unavailable (stopped, paused, and so on). |
| Project SQL User View Refresh Message Was Not Queued | A warning state for this Monitor indicates that queue service or application logic problem has stopped a request to regenerate a SQL view and the view now may be out of date. |
| Project User View Was Truncated | A warning state for this Monitor indicates that the Reporting Data Service has recreated the Reporting Database views and the reporting database is configured with more than 1024 columns. |
| Project WFE to application server connection failed | An error state of this monitor indicates that there was an error with connecting to an application server from the Web Front End. |
| Project Windows SharePoint Services Format Error | An error state for this Monitor indicates that Issue, Risk, or Deliverable data from lists defined within each workspace contains data that cannot be stored in its associated Reporting database table. |
| Project Winproj Average Time Taken For Project Open | A warning state for this Monitor indicates that the average time taken for a project to open has exceeded the acceptable threshold. |
| Project Winproj Percentage Of Incremental Save To Full Save | A warning state for this Monitor indicates that the percentage of incremental saves to full saves that are occurring has exceeded the acceptable threshold. |
| Project Workspace User Synchronization Failed | An error state for this Monitor indicates that the synchronization of users from Project Server to the Project Workspace has failed. |
| Query Parsing: Scope Cache Availability - Query Processing | Query Parsing: Scope Cache Availability - Query Processing |
| Query Processing: Component Availability - Query Processing | Query Processing: Component Availability - Query Processing |
| Query Processing: Fallback word breaker did not load | Query Processing: Fallback word breaker did not load |
| Query Processing: flow failed to start | Query Processing: flow failed to start |
| Query Processing: Query classification dictionary update | Query Processing: Query classification dictionary update |
| Query Processing: Query Component Get Configuration | Query Processing: Query Component Get Configuration |
| Query Processing: Query Normalization Schema Service Availability | Query Processing: Query Normalization Schema Service Availability |
| Query Processing: Query Parsing Schema Service Availability | Query Processing: Query Parsing Schema Service Availability |
| Query Processing: QueryParsing Scope Cache Availability | Query Processing: QueryParsing Scope Cache Availability |
| Query Service: Service availability query processing | Query Service: Service availability query processing |
| Query Service: Start Service Availability - Query Processing | Query Service: Start Service Availability - Query Processing |
| Query Service: Unable to stop query processing | Query Service: Unable to stop query processing |
| Query URL Mapping: Alternate URL Mapping Service Availability - Query Processing | Query URL Mapping: Alternate URL Mapping Service Availability - Query Processing |
| Read Only Database | A critical state of this Monitor indicates that the database is read only. Write permission is required to set this Monitor into a healthy state. |
| Sandboxed Code Service Is Not Running | A critical state of this Monitor indicates that the Sandboxed Code Service is not running on a particular server. |
| Schema Reader: Schema Service Availability - Query Processing | Schema Reader: Schema Service Availability - Query Processing |
| Search Admin Platform Services: Repository Initialization Failed | Search Admin Platform Services: Repository Initialization Failed |
| Search Admin Platform Services: Repository Installation Failed | Search Admin Platform Services: Repository Installation Failed |
| Search Admin Platform Services: Repository Replication | Search Admin Platform Services: Repository Replication |
| Search Analytics: analysis run state Search Analytics | Search Analytics: analysis run state Search Analytics |
| Search Analytics: analysis run state search analytics | Search Analytics: analysis run state search analytics |
| search analytics: Timer job cannot resolve Analytics Processing Engine (APE) | search analytics: Timer job cannot resolve Analytics Processing Engine (APE) |
| Search Analytics: Timer job cannot resolve Link database | Search Analytics: Timer job cannot resolve Link database |
| Search Application Dependency Rollup SP Shared Service Application Search Group: Availability | Search Application Dependency Rollup SP Shared Service Application Search Group: Availability |
| Search Application Dependency Rollup SP Shared Service Application Search Group: Configuration | Search Application Dependency Rollup SP Shared Service Application Search Group: Configuration |
| Search Application Dependency Rollup SP Shared Service Application Search Group: Performance | Search Application Dependency Rollup SP Shared Service Application Search Group: Performance |
| Search Application Dependency Rollup SP Shared Service Application Search Group: Security | Search Application Dependency Rollup SP Shared Service Application Search Group: Security |
| Search Component Dependency Rollup Search Component Group: Availability | Search Component Dependency Rollup Search Component Group: Availability |
| Search Component Dependency Rollup Search Component Group: Configuration | Search Component Dependency Rollup Search Component Group: Configuration |
| Search Component Dependency Rollup Search Component Group: Performance | Search Component Dependency Rollup Search Component Group: Performance |
| Search Component Dependency Rollup Search Component Group: Security | Search Component Dependency Rollup Search Component Group: Security |
| Search Component Group Dependency Rollup Search Application: Availability | Search Component Group Dependency Rollup Search Application: Availability |
| Search Component Group Dependency Rollup Search Application: Configuration | Search Component Group Dependency Rollup Search Application: Configuration |
| Search Component Group Dependency Rollup Search Application: Performance | Search Component Group Dependency Rollup Search Application: Performance |
| Search Component Group Dependency Rollup Search Application: Security | Search Component Group Dependency Rollup Search Application: Security |
| Search Gatherer: Disk Full Crawler | Search Gatherer: Disk Full Crawler |
| Search Usage Analytics: Analysis configuration failed | Search Usage Analytics: Analysis configuration failed |
| Search Usage Analytics: Analysis failed to start | Search Usage Analytics: Analysis failed to start |
| Search Usage Analytics: Feeding failure | Search Usage Analytics: Feeding failure |
| Search Usage Analytics: Reporting API write failure | Search Usage Analytics: Reporting API write failure |
| Search Usage Analytics: Store not available | Search Usage Analytics: Store not available |
| Search Usage Analytics: Usage analytics APE not available | Search Usage Analytics: Usage analytics APE not available |
| Secure Store Service Application Inaccessible | A warning state of this Monitor indicates that Secure Store service application is not accessible. |
| Secure Store Service Credential Encryption Failed | A critical state of this Monitor indicates that Secure Store Service credential encryption process failed. |
| Secure Store Service Database Exception | A critical state of this Monitor indicates that Secure Store Service application had a database exception. |
| Secure Store Service Master Key Status | A critical state of this Monitor indicates that Secure Store Service application master encryption key was not found. |
| Security Token Service Cannot Create Signing Credential | A critical state of this Monitor indicates that SharePoint is unable to create the signing credentials to sign the security token. It is possible that the certificate is corrupt. |
| Security Token Service Signing Certificate Is Missing | A critical state of this Monitor indicates that the Security Token Service Signing Certificate is missing. |
| Service Application Endpoints Are Not Available | A critical state of this Monitor indicates that the Application Discovery and Load Balancer Service Application are unable to retrieve the list of endpoints for a service application from the remote farm. |
| Services Host Controller | Services Host Controller |
| SharePoint Lists Cannot Receive Email | A critical state of this Monitor indicates that SharePoint Lists cannot receive email. |
| SharePoint Timer Service Backup Timer Creation Failure | A warning state of this Monitor indicates that the same item is already in the process of being backed up or restore. To check the status of that process, go to the backup/restore job status page in the administration site. |
| SharePoint Web Application Invalid Application Pool Account | A critical state of this Monitor indicates that the IIS Application Pool account is not registered in Active Directory as a Service Principal Name in the Web Application Domain. |
| Site Creation Failed | A critical state of this Monitor indicates that site creation failed on the SPHostInstance. |
| SPHA Availability Rule Monitor | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Availability Rule failed. |
| SPHA Availability Rule Monitor On SPServer | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Availability Rule failed on SPServer. |
| SPHA Configuration Rule Monitor | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Configuration Rule failed. |
| SPHA Configuration Rule Monitor On SPServer | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Configuration Rule failed on SPServer. |
| SPHA Custom Rule Monitor | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Custom Rule failed. |
| SPHA Custom Rule Monitor On SPServer | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Custom Rule failed on SPServer. |
| SPHA Performance Rule Monitor | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Performance Rule failed. |
| SPHA Performance Rule Monitor On SPServer | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Performance Rule failed on SPServer. |
| SPHA Security Rule Monitor | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Security Rule failed. |
| SPHA Security Rule Monitor On SPServer | A critical state of this Monitor indicates that SharePoint Health Analyzer (SPHA) Security Rule failed on SPServer. |
| SQL Database Connection Failed | A critical state of this Monitor indicates that a SQL Database connection attempt failed for a specified connection string.Note:This Monitor is disabled by default, enable this Monitor if you want this Management Pack to monitor the SQL Database Connection for SharePoint 2016. |
| SQL Server Not Found | A critical state of this Monitor indicates that a SQL Server was not found. |
| Throttling Status | A warning state of this Monitor indicates that the server is entering into throttling state. |
| Timer Service Is Not Running | A critical state of this Monitor indicates that the Timer Service is not running on a particular server. |
| Timer Service Restart Failed | A critical state of this Monitor indicates that the timer service restart has failed. |
| Trace Log Reaching Max Storage | A warning state of this Monitor indicates that the trace log is reaching max storage. |
| Trace Service Is Not Running | A critical state of this Monitor indicates that the Trace Service is not running on a particular server. |
| Unacceptable Response Time | A critical state of this Monitor indicates that the Response Time to render content is more than 7500ms for 3 consecutive performance values. |
| Usage Log Reaching Max Storage | A warning state of this Monitor indicates that the usage log is reaching max storage. |
| Usage Service Timer Job Failed | A warning state of this Monitor indicates that the Usage timer job failed. You can rerun this job using the Timer Job status page in the SharePoint Central Administration site. |
| Usage Service Unable To Access Log Directory | A critical state of this Monitor indicates that the usage service was unable to access log directory. |
| Usage table exceeded max bytes limit | Usage table exceeded max bytes limit. |
| User Profile Service Audience Compilation Failed | A critical state of this Monitor indicates that User Profile Service Audience Compilation Failed. |
| User Profile Service Commit User Profile Failure | A critical state of this Monitor indicates that there was a failure during a User Profile commit operation. |
| User Profile Service Create My Site Failure | A critical state of this Monitor indicates that a creation of a user's my site failed. |
| User Profile Service Synch Scheduler Failed | A critical state of this Monitor indicates that the Sync Scheduler for sync between Microsoft SharePoint and Microsoft SharePoint Server User Profile service failed. |
| User Profile Service Timer Job Failed | A critical state of this Monitor indicates that one of User Profile timer jobs has thrown an exception. |
| Visio Graphics Service cannot find the configuration manager | A critical state of this monitor indicates that the Visio Graphics Service is not configured properly or doesn’t exist. |
| Visio Graphics Service failed to initialize the rasterizer | A critical state of this monitor indicates that the Visio Graphics Service failed to initialize the rasterizer. |
| Visio Graphics Service unable to connect to the application server returned by the application proxy | A critical state of this monitor indicates that Visio Graphics Service is unable to connect to the application server returned by the application proxy. |
| Windows SMTP Service Is Not Running | A critical state of this Monitor indicates that Windows SMTP Service is not running; without the Windows SMTP Service, SharePoint Incoming Email Service cannot send/receive email. |
| Word Automation Services Could Not Find Needed Language Pack | A warning state of this Monitor indicates that the Word Automation Service requires a language pack that is not currently installed. An admin needs to install the correct language pack. |
| Word Automation Services Needs To Be Updated | A warning state of this Monitor indicates that the Word Automation Service is encountering files that were created with a newer version of Word. The Word Automation Service needs to be updated. |
| Word Automation Services Queue Database Not Accessible | A critical state of this Monitor indicates that the Word Automation Services Queue Database is not accessible. |
| Word Automation Services Third Party PDF Converter Failed | A critical state of this Monitor indicates that the Word Automation Service is unable to convert files to PDF because the 3rd party PDF converter is failing. |
| Word Automation Services Third Party XPS Converter Failed | A critical state of this Monitor indicates that the Word Automation Service is unable to convert files to XPS because the 3rd party XPS converter is failing. |
| Word Automation Services Timer Job Inactive | A warning state of this Monitor indicates that the Word Automation Services Timer Job is not running when it should be running. If the Timer Job does not run then Word Automation Services will stop functioning. |

**Rules**

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| --- | --- | --- |
| Name | Description | |
| **Access Denied For Writing To Disk** | This Rule collects data when the application pool used by SharePoint attempts to update a file folder and is denied access because the service account used by the application pool has inadequate permissions. |
| **Access Denied For Writing To Registry** | This Rule collects data when the application pool used by SharePoint attempts to update a registry key or file folder and is denied access because the service account used by the application pool has inadequate permissions. |
| **Access Services 2010: Cannot Create Session Cache** | This Rule collects data when the back end application server Access Data Services machine is not able to create an in memory cache for a user session. Users may be unable to use that specific machine for querying data for Access Services applications. |
| **Access Services 2010: Failed To Access Configuration Database** | This Rule collects data when the back end Access Data Services application server fails to access the configuration database and may not be able to read or save any settings. |
| **Access Services 2010: Failed To Contact Access Application Server** | This Rule collects data when a web front end machine was unable to communicate with a specific back end Access Data Services application server. Traffic will be load balanced to another server if one is available. |
| **Access Services 2010: Failed To Load Calculation Library** | This Rule collects data when Access Services fails to load a required library, the calculation library. The server may not be able to process requests. |
| **Access Services 2010: Machine Is Not Available** | This Rule collects data when no Access Data Services machines are available. All requests for Access Service applications that consume any data will fail. |
| **Access Services 2010: Machine No Longer Available** | This Rule collects data when a web front end machine failed to contact a back end Access Data Services machine. All future requests to this Access Data Services machine will likely fail. Traffic may be load balanced to other Access Data Services machines if they exist. |
| **Access Services 2010: Out Of Memory** | This Rule collects data when the backend application server Access Data Services machine runs out of memory. |
| **Access Services 2010: Template File Error** | This Rule collects data when an Access template file is missing or when there was an error reading it from the hard disk or the template file wasn't valid. |
| **Access Services: Failed To Access Configuration Database** | This Rule collects data when the back end Access Data Services application server fails to access the configuration database and may not be able to read or save any settings. |
| **Access Services: Failed To Contact Access Application Server** | This Rule collects data when a web front end machine was unable to communicate with a specific back end Access Data Services application server. Traffic will be load balanced to another server if one is available. |
| **Access Services: Failed To Load Calculation Library** | This Rule collects data when Access Services fails to load a required library, the calculation library. The server may not be able to process requests. |
| **Access Services: Machine Is Not Available** | This Rule collects data when no Access Data Services machines are available. All requests for Access Service applications that consume any data will fail. |
| **Access Services: Machine No Longer Available** | This Rule collects data when a web front end machine failed to contact a back end Access Data Services machine. All future requests to this Access Data Services machine will likely fail. Traffic may be load balanced to other Access Data Services machines if they exist. |
| **Access Services: Template File Error** | This Rule collects data when an Access template file is missing or when there was an error reading it from the hard disk or the template file wasn't valid. Event ID: [EventID] Event Description: [EventMessage] |
| **Alternate Access Mapping Update Failed** | This Rule collects data when the timer job used to update alternate access mappings failed on the specified server. |
| **An Error Occurred While Communicating With The SMTP Server** | This Rule collects data when an error occurs while trying to communicate with the SMTP server. |
| **Backup Failed Due To Insufficient Permissions** | This Rule collects data when the backup of a website fails due to the administrator having inadequate permissions to perform a backup to a file share or folder on the local server, or to the SQL Server database. |
| **Backup Failed Due To Timer Job Failure** | This Rule collects data when the SharePoint timer job used to perform the backup of a site failed. |
| **Cannot Connect To SMTP Host** | This Rule collects data when SharePoint cannot connect to the Simple Mail Transfer Protocol SMTP host. |
| **Cannot Connect To SQL Server** | This Rule collects data when SharePoint could not connect to the SQL Server database. |
| **Cannot Resolve Name Of The Outbound SMTP Server** | This Rule collects data when SharePoint cannot resolve the name of the Simple Mail Transfer Protocol SMTP server. This can happen because the name of the SMTP mail server is incorrect or the Domain Name Server DNS server is unavailable. |
| **Collect Usage table exceeded max bytes limit event** | Collect Usage table exceeded max bytes limit event. |
| **Enterprise Content Management Deployment Failed** | This Rule collects data when Enterprise Content Management deployment has failed. |
| **Enterprise Content Management Deployment Failed** | This Rule collects data when Enterprise Content Management deployment has failed. |
| **Enterprise Content Management Disk Based Cache Is At Critical Capacity** | This Rule collects data on Blob Cache Fill Ratio counter to measure the ratio of amount of disk occupied to max disk-based cache size configured. |
| **Enterprise Content Management Disk Based Cache Is At Critical Capacity** | This Rule collects data on Blob Cache Fill Ratio counter to measure the ratio of amount of disk occupied to max disk-based cache size configured. |
| **Enterprise Content Management Disk-Based Cache Is Compacting** | This Rule collects data on Total Number Of Cache Compactions counter to measure the total number of times the disk-based cache has compacted due to size. |
| **Enterprise Content Management Disk-Based Cache Is Flushing** | This Rule collects data on Blob Cache Flushes / Second counter to measure the rate at which the disk-based cache is updating due to site changes. |
| **Enterprise Content Management Disk-Based Cache Is Misconfigured** | This Rule collects data when Enterprise Content Management Disk-Based Cache is misconfigured. |
| **Enterprise Managed Metadata Service Is Inaccessible** | This Rule collects data when Enterprise Managed Metadata Service is inaccessible. |
| **Event Handler Failed To Load** | This Rule collects data when the specified event handler failed to load. This can happen because the event receiver assembly is missing or the assembly does not have the event receiver class. |
| **Event Log Flooding Protection Activated** | This Rule collects data when Event Log Flood Protection was activated because an event was fired more than 5 times in 2 minutes. |
| **Event Receiver Failed** | This Rule collects data when the event receiver failed. |
| **Exception In Execute Method Of Job Definition** | This Rule collects data when an exception occurred in the execute method of the job definition for a particular timer job. |
| **Failed To Create Site** | This Rule collects data when an attempt to create a new SharePoint site has failed. |
| **InfoPath Forms Services An Illegal Cross-Domain Query Data Connection Was Attempted** | This Rule collects data when a form could not retrieve data from a data source because it would violate cross-domain restrictions. |
| **InfoPath Forms Services An Illegal Cross-Domain Submit Data Connection Was Attempted** | This Rule collects data when a form could not be submitted to a data source by InfoPath Forms Services because this action would violate cross-domain security restrictions. |
| **InfoPath Forms Services Business Logic Attempted To Store A Non-Serializable Object** | This Rule collects data when InfoPath Forms Services Business Logic attempts to store a non-serialized object. |
| **InfoPath Forms Services Business Logic Exceeded The Maximum Limit Of Operations** | This Rule collects data when an error occurred in the business logic of a form. |
| **InfoPath Forms Services Business Logic Exception Occurred While Loading A Form Template** | This Rule collects data when a form template cannot be loaded by InfoPath Forms Services due to a business logic exception. |
| **InfoPath Forms Services Business Logic Failed Due To An Exception** | This Rule collects data when Business Logic in a form template failed due to an exception. |
| **InfoPath Forms Services Business Logic Out Of Memory** | This Rule collects data when a memory allocation made by business logic could not be satisfied. |
| **InfoPath Forms Services Failed To Load A Form Template** | This Rule collects data when a form template could not be loaded by InfoPath Forms Services. |
| **InfoPath Forms Services Form Templates Are Being Reloaded Frequently In Memory** | This Rule collects data when Form Templates are being reloaded frequently in memory. |
| **InfoPath Forms Services Form Templates Have Conflicting Business Logic Assembly Identities** | This Rule collects data when conflicting assemblies are identified, an entry is logged in the Windows Event log. |
| **InfoPath Forms Services Postback Failure** | This Rule collects data when an error occurred while a form request was being processed by InfoPath Forms Services. |
| **Insufficient SQL Server Database Permissions** | This Rule collects data when insufficient privileges have been granted in the SQL Server database to the service account specified in SharePoint. |
| **Mail Service Cannot Deliver Email Rule** | This Rule collects data when a large number of Incoming Email Service lookup fails. |
| **Page Response Time** | This Rule collects data on Executing Time/Page Request counter which counts the amount of time application is taking to render a webpage. |
| **Project Active Directory Connection Failed** | This Rule collects data when Project Server could not access the Active Directory. |
| **Project Active Directory Exception Occurred During Synchronization** | This Rule collects data when Project Server Failed to obtain a reference to an Active Directory Group. |
| **Project Active Directory Nested Foreign Security Principal Could Not Be Resolved** | This Rule collects data when Project Server could not resolve a nested Active Directory foreign security principal during Active Directory synchronization not the top-level Active Directory group. |
| **Project Active Directory Nested Object Could Not Be Resolved** | This Rule collects data when Project Server could not resolve a nested Active Directory object during Active Directory synchronization not the top-level Active Directory group. |
| **Project Active Directory PWA Group Could Not Be Resolved** | This Rule collects data when during security group synchronization, the top-level Active Directory object could not be resolved. |
| **Project Active Directory Top-Level Group Has No Members** | This Rule collects data when the top-level Active Directory group that is mapped to the Enterprise Resource Pool or a Project Web Access Security Group does not contain any members. |
| **Project Creating Report Center Web Failed** | This Rule collects data when the ProjectBICenter could not be created during provisioning. |
| **Project Cube Build Service Analysis Services Server Connection Failure** | This Rule collects data when Project Server failed to connect to the Analysis Services server for building cubes. |
| **Project Cube Build Service Analysis Services Server Lock Time Out** | This Rule collects data when Project Server could not get a lock on the Analysis Services database that was generated. |
| **Project Cube Build Service Attempt To Overwrite Failed** | This Rule collects data when the Cube Build Service failed to build an Analysis Services database because another Analysis Services database already exists with the same name. |
| **Project Cube Build Service Decision Support Object Is Not Installed** | This Rule collects data when the Cube Build Service requires the DSO component of Analysis Services to be installed. |
| **Project Cube Build Service OLAP Processing Failure** | This Rule collects data when after the cube structures are built, the Analysis Services server has failed to process the cube. |
| **Project Failure Creating A Project Workspace** | This Rule collects data when the asynchronous Project Workspace creation on a project publish through the Queue Service has failed. |
| **Project General Data Access Layer Error Connecting To Database** | This Rule collects data when the Data Access Layer attempted but failed to connect to one of the four Project Server databases. |
| **Project General Data Access Layer Error While Getting Connection Strings** | This Rule collects data when the Data Access Layer cannot read information from the configuration database of the SharePoint farm. |
| **Project Notification E-mail Delivery Failed** | This Rule collects data when the notification e-mail delivery failed because the connection to the SMTP server failed. |
| **Project Notification XSLT Transformation Error** | This Rule collects data when the XSL used to transform XML data in the body of a notification e-mail has failed. |
| **Project Queue General Percentage SQL Retries Per Day** | The Queue General Percentage SQL Retries Per Day Counter measures the number of SQL retries per day that the Queue hits when it is trying to read jobs from the Project database or write status back. |
| **Project Queue General Percentage SQL Retries Per Hour** | The Queue General Percentage SQL Retries Per Hour Counter measures the number of SQL retries per hour that the Queue hits when it is trying to read jobs from the Project database or write status back. |
| **Project Queue Jobs Average Wait Time Per Day** | The Queue Jobs Average Wait Time Per Day Counter measures the the amount of time that jobs are waiting in the queue on average before being processed. |
| **Project Queue Jobs Percentage Jobs Failed Per Day** | The Queue Jobs Percentage Jobs Failed Per Day Counter measures the percentage of jobs that failed in the queue of a specific Project Server application server. This percentage is calculated as follows: % jobs failed = Total number of jobs that failed / Total number of jobs processed. |
| **Project Queue Jobs Percentage Jobs Failed Per Hour** | The Queue Jobs Percentage Jobs Failed Per Hour Counter measures the percentage of jobs that failed in the queue of a specific Project Server application server over the past hour. This percentage is calculated as follows: % jobs failed = Total number of jobs that failed during the past hour / Total number of jobs processed during the past hour |
| **Project Queue System Restarting Due To Unexpected Error** | This Rule collects data when the Queue System is forced to restart due to an unexpected error. |
| **Project Reporting Server Side Event Has Failed** | This Rule collects data when custom server-side event handler within the Reporting Data Service component has failed. |
| **Project Server Event Handler Could Not Be Found** | This Rule collects data when a registered event hander for a server side event could not be located. |
| **Project Server Event Service Could Not Be Found** | This Rule collects data when the Project Server Eventing Service is unavailable stopped, paused, and so on. |
| **Project SQL User View Refresh Message Was Not Queued** | This Rule collects data when queue service or application logic problem has stopped a request to regenerate a SQL view and the view now may be out of date. |
| **Project User View Was Truncated** | This Rule collects data when the Reporting Data Service has recreated the Reporting Database views and the reporting database is configured with more than 1024 columns. |
| **Project WFE to application server connection failed** | This rule collects the data for the Project WFE to application server connection failed monitor. The monitor indicates failure in a connection between an application server and the Web Front End. |
| **Project Windows SharePoint Services Format Error** | This Rule collects data when Issue, Risk, or Deliverable data from lists defined within each workspace contains data that cannot be stored in its associated Reporting database table. |
| **Project Winproj Average Time Taken For Project Open** | The Winproj Average Time Taken For Project Open Counter measures the average time taken in seconds for a project to open on a Project Server application server using Office Project Professional 2010. The average time taken for a project to open is calculated as follows: Average time taken for project to open = Total time taken for all projects to open / total number of times projects were opened. |
| **Project Winproj percentage Of Incremental Save To Full Save** | The Winproj Percentage Of Incremental Save To Full Save Counter measures the percentage of incremental saves to full saves. The first time a project is created on the Project Server application server from Project Professional, it is saved using a full save, which means that all of the project data is transmitted and saved in the database used by the Project Server application server. Subsequent saves of the project are saved incrementally, by default. This is mainly to optimize performance. |
| **Project Workspace User Synchronization Failed** | This Rule collects data when the synchronization of users from Project Server to the Project Workspace has failed. |
| **Server Is About To Enter Into Throttling State** | This Rule collects data when the Server is about to enter into throttling state. |
| **Service Instance Provisioning Failed** | This Rule collects data when an attempt to start or stop a service instance on a server in the server farm has failed. Additional details about why the service could not be started or stopped are included in the exception message of the Windows NT Event log. |
| **SharePoint Administration Service Is Disabled** | This Rule collects data when the SharePoint timer job is executed and discovers that the sharePoint Administration service is disabled. |
| **SharePoint Lists Cannot Receive Email Rule** | This Rule collects data when SharePoint Lists cannot receive email. |
| **SQL Server Database Is Full** | This Rule collects data when a SQL Server error occurred because the database size limit has been reached. |
| **SQL Server Database Login Failed** | This Rule collects data when the user name or password for the SharePoint account was invalid before the session or became invalid during the session. |
| **The Active Directory Organization Unit Registered In SharePoint Does Not Exist** | This Rule collects data when the Active Directory organizational unit that was created for account creation mode does not exist. This condition can occur due to a provisioning-time error or a runtime error. |
| **The Application Pool Account Has Insufficient Permissions To Add User Accounts To Active Directory** | This Rule collects data when the application pool account used by a SharePoint site lacks permissions to add user information to the Active Directory. |
| **The Application Pool Account Must Be Registered As A Kerberos Service Provider** | This Rule collects data when the application pool account has insufficient permissions to add user accounts to Active Directory. When using Kerberos authentication, the service account used by the Internet Information Services IIS application pool for your Web application must be registered in Active Directory as a Service Principal Name SPN on the domain on which the Web front-end is a member. |
| **Timer Job To Update Central Admin Failed** | This Rule collects data when the SharePoint timer job to update central administration on a particular URL failed. |
| **Unable To Load Authentication Provider** | This Rule collects data when the Role Manager or Membership Provider that is specified for a particular web application is incorrectly configured. |
| **Unable To Write To Trace Log** | This Rule collects data when the SharePoint cannot write to the Windows Trace log. This can happen because the hard drive on which the Trace log is located is full or the permissions on the trace logging directory are not set correctly. |
| **User Profile Service Commit User Profile Failure** | This Rule collects data when User Profile fails to commit a User Profile. |
| **User Profile Service Create MySite Failure** | This Rule collects data when User Profile fails to create a MySite. |
| **Visio Graphics Services: Can't connect to the application server** | This rule collects data when the Visio Graphics Service cannot connect to the application server. |
| **Visio Graphics Services: Can't find configuration manager** | This rule collects data when the Visio Graphics Service cannot find the configuration manager. |
| **Visio Graphics Services: Failed to initialize the rasterizer** | This rule collects data when the Visio Graphics Service failed to initialize the rasterizer. |
| **Visio Graphics Services: Requested data from a non-trusted provider** | This rule collects data when Visio Graphics Service tried to get data from a provider that is not in the trusted provider's list. |
| **Visio Graphics Services: Unable to connect to a requested data provider** | This rule collects data when Visio Graphics Service was unable to connect to a requested data provider. |
| **Windows SMTP Service Is Not Running Rule** | This Rule collects data when Windows SMTP Service is not running. |