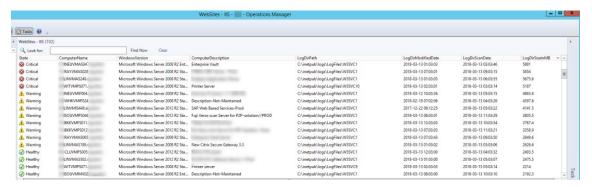
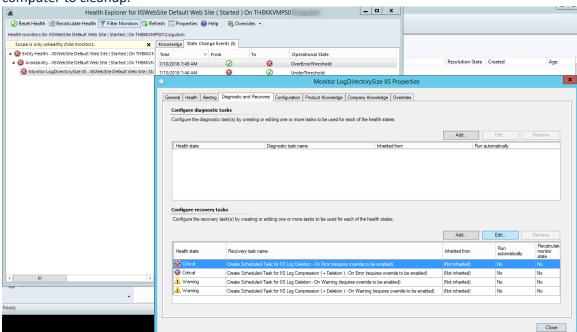
Monitoring Webservers' Log directory size with SCOM

IIS, Apache and Tomcat can write log files. Often, these files occupy large space cause a disk filling up.

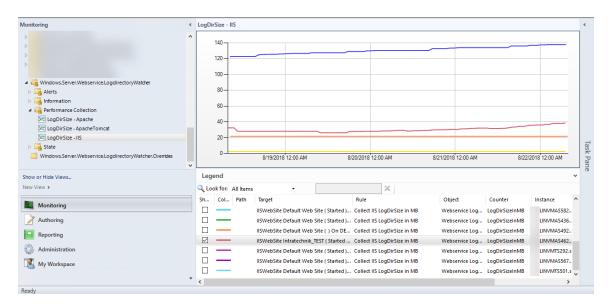
This Management Pack discovers log-folders and raises alerts based on thresholds. - Thresholds and alert behavior can be overridden as usual.



An integrated recovery task can help to control the growing by providing two log rotation mechanisms. If enabled, one of both tasks schedule a PowerShell script on the monitored computer to cleanup.



For better analysis experience the log directory size is logged.



This version is **not** compatible to build 1.0.0.329. The old Management Pack needs to be removed before importing the current one.

To ensure the code also runs on Windows Server 2008 R2 it uses PowerShell version 2.

Change History

| Date | Build No. | Changes |
|------------|-----------|--|
| 2018-03-13 | 1.0.0.114 | Initial Upload to GitHub |
| 2018-05-17 | 1.0.0.231 | Added recovery task for log file deletion |
| 2018-07-13 | 1.0.0.329 | Added recovery task for compression (+ deletion) |
| 2018-08-22 | 1.0.0.353 | Added performance collection rule for log directory size |

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Management Pack components

Classes

Everything in SCOM that has a Health State is an object. Classes are the blueprint that define the properties of objects. Following tables show the classes that this Management Pack adds.

Webserver definition:

| Class ID | Base |
|--|--|
| Windows.Server.Webservice.LogdirectoryWatcher.Computer | Windows!Microsoft.Windows.ComputerRole |
| Windows.Server.Webservice.LogdirectoryWatcher.Computer.Manage | Windows.Server.Webservice.LogdirectoryWatcher.Co |
| dByTask | mputer |
| Windows.Server.Webservice.LogdirectoryWatcher.Computer.IIS | Windows.Server.Webservice.LogdirectoryWatcher.Co |
| | mputer |
| Windows.Server.Webservice.LogdirectoryWatcher.Computer.Apache | Windows.Server.Webservice.LogdirectoryWatcher.Co |
| | mputer |
| Windows.Server.Webservice.LogdirectoryWatcher.Computer.ApacheT | Windows.Server.Webservice.LogdirectoryWatcher.Co |
| omcat | mputer |

Website log directory definition:

| Class ID | Base |
|---|---|
| Windows.Server.Webservice.LogdirectoryWatcher.WebSite.Ba | System!System.LogicalEntity |
| se | |
| Windows.Server.Webservice.LogdirectoryWatcher.WebSite.IIS | Windows.Server.Webservice.LogdirectoryWatcher.WebSite.B |
| | ase |
| Windows. Server. Webservice. Log directory Watcher. Web Site. Apa | Windows.Server.Webservice.LogdirectoryWatcher.WebSite.B |
| cheBase | ase |
| Windows. Server. Webservice. Log directory Watcher. Web Site. Apa | Windows.Server.Webservice.LogdirectoryWatcher.WebSite.A |
| che | pacheBase |
| Windows.Server.Webservice.LogdirectoryWatcher.WebSite.Apa | Windows.Server.Webservice.LogdirectoryWatcher.WebSite.A |
| cheTomcat | pacheBase |

Discoveries

The mechanism of finding objects and storing it in the SCOM database is called discovery. There are different types of discoveries, starting from matching registry values over results of an WMI query to scripts that can cover everything. Targets define on which component the discovery shall run.

Finding webservers:

| 0 | |
|---|---------------------------------|
| ID | Target |
| Windows. Server. Webservice. Log directory Watcher. Discovery. Windows. Server. Webservice. The property of | Windows!Microsoft.Windows.Serve |
| e.Computer.ApacheTomcat | r.Computer |
| Windows.Server.Webservice.LogdirectoryWatcher.Discovery.Windows.Server.Webservic | Windows!Microsoft.Windows.Serve |
| e.Computer.IIS | r.Computer |
| Windows.Server.Webservice.LogdirectoryWatcher.Discovery.Windows.Server.Webservic | Windows!Microsoft.Windows.Serve |
| e.Computer.Apache | r.Computer |

Finding web sites log directories:

| ID | Target |
|---|--|
| Windows.Server.Webservice.LogdirectoryWatcher.Discovery.Windows.W | Windows.Server.Webservice.LogdirectoryWatcher. |
| ebService.WebSite.Apache | Computer.Apache |
| Windows.Server.Webservice.LogdirectoryWatcher.Discovery.Windows.W | Windows.Server.Webservice.LogdirectoryWatcher. |
| ebService.WebSite.IIS | Computer.IIS |
| Windows.Server.Webservice.LogdirectoryWatcher.Discovery.Windows.W | Windows.Server.Webservice.LogdirectoryWatcher. |
| ebService.WebSite.ApacheTomcat | Computer.ApacheTomcat |

Monitors

Monitors are for finding out which Health State an object has. – An object can be either Healthy (green), in Warning (yellow) or Critical (red).

Unit Monitors:

| ID | Target |
|--|---|
| Windows.Server.Webservice.LogdirectoryWatcher.Monitor.LogDirec | Windows.Server.Webservice.LogdirectoryWatcher.Web |
| torySize.ApacheTomcat | Site.ApacheTomcat |
| Windows.Server.Webservice.LogdirectoryWatcher.Monitor.LogDirec | Windows.Server.Webservice.LogdirectoryWatcher.Web |
| torySize.IIS | Site.IIS |
| Windows.Server.Webservice.LogdirectoryWatcher.Monitor.LogDirec | Windows.Server.Webservice.LogdirectoryWatcher.Web |
| torySize.Apache | Site.Apache |

Custom monitor type

| ID | Target |
|--|--|
| Windows.Server.Webservice.LogdirectoryWatcher.Monitor. | Windows.Server.Webservice.LogdirectoryWatcher.Monitor.Thre |
| ThreeState.Test.MonitorType | eState.Test.PropertyBag.Filtered |

Rules

Performance Collection Rules are used to log the log directory size. They need to be enabled via Override and store the current size (in MB) hourly.

Performance Collection Rules::

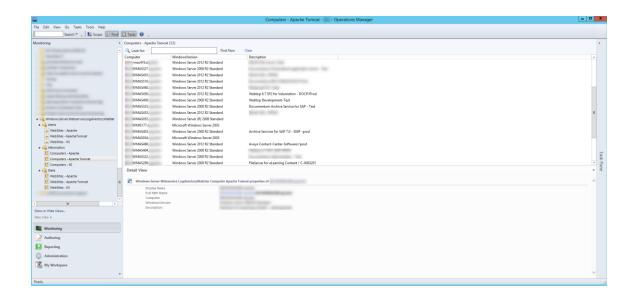
| ID | Target |
|--|--|
| Windows.Server.Webservice.LogdirectoryWatcher.Rule.LogDirWatcher | Windows.Server.Webservice.LogdirectoryWatcher.We |
| .LogDirSize.Apache | bSite.Apache |
| Windows.Server.Webservice.LogdirectoryWatcher.Rule.LogDirWatcher | Windows.Server.Webservice.LogdirectoryWatcher.We |
| .LogDirSize.IIS | bSite.IIS |
| Windows.Server.Webservice.LogdirectoryWatcher.Rule.LogDirWatcher | Windows.Server.Webservice.LogdirectoryWatcher.We |
| .LogDirSize.ApacheTomcat | bSite.ApacheTomcat |

Views

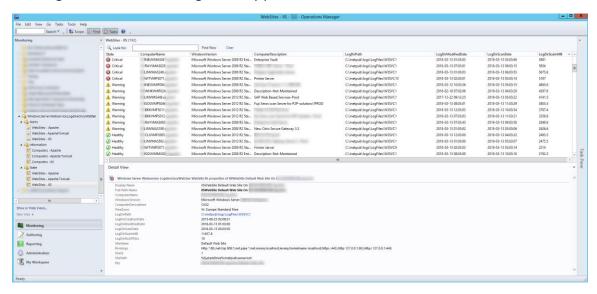
To make all discovered objects and their health state visible a state views are used.

State Views:

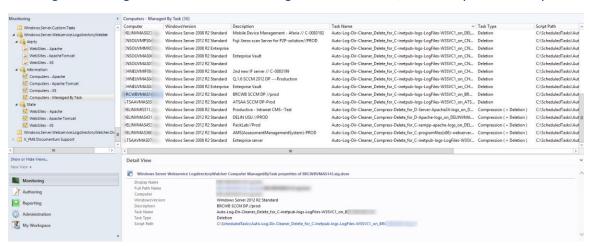
Showing discovered web servers plus some meta information.



Showing discovered website log directory plus some additional information.

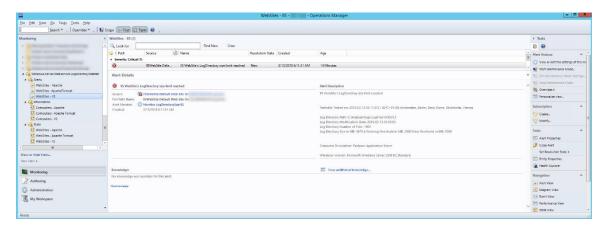


Showing website log directories that are managed scheduled task, created by the recovery task.



Alert Views:

Alerts of website log directories' which size exceeds the thresholds.



Recoveries

The recovery tasks help to control the log file folder growth. They are disabled by default. By overriding the value, you explicitly agree that modifications on the web-server happen, that old logs are been deleted.

The tasks itself runs a PowerShell script which creates a Scheduled Task on the web server. The Scheduled Task runs daily and calls another PowerShell script which deletes log files.

The folder for the Scheduled Task – PowerShell script and the days that the logs should be retained can be customized.

Note! For Apache's the web-server services is stopped during deletion and afterwards started again. — It usually happens quickly.

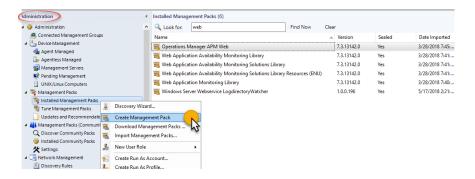
Please note that folder names with blanks / spaces are not supported.

Two recovery jobs are available.

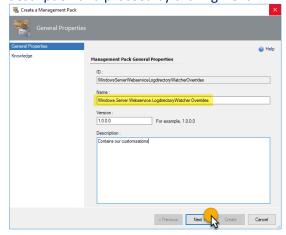
- 1. Create Scheduled-Task for <WebServer> Log Deletion
 - a. The PowerShell script which is triggered by the local Task Scheduler deletes logs older than predefined (customizable) value.
- 2. Create Scheduled-Task for <WebServer> Log Compression (+ Deletion)
 - a. The PowerShell script which is launched by the local Task Scheduler compresses logs older than a value and deletes the compressed logs older than another value. Both values are predefined and can be changed.

Create an empty Management Pack to store the customizations.

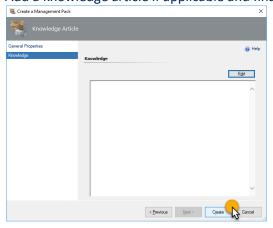
 Switch to the Administration pane, select Installed Management Packs and click on Create Management Pack.



Name the Management Pack with the suggested name:
Windows.Server.Webservice.LogdirectoryWatcher.Overrides, add optionally a description and proceed by clicking Next.

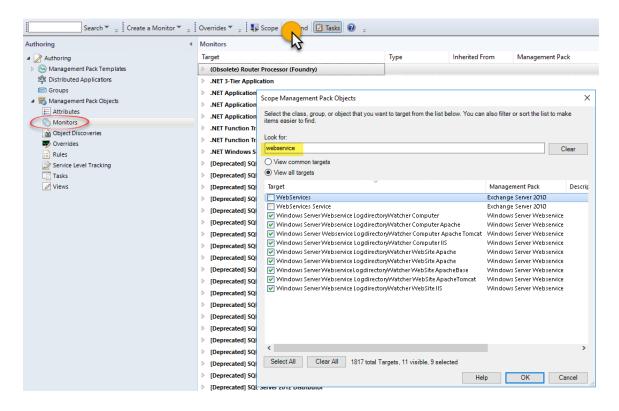


• Add a knowledge article if applicable and finalize the wizard with **Create**.



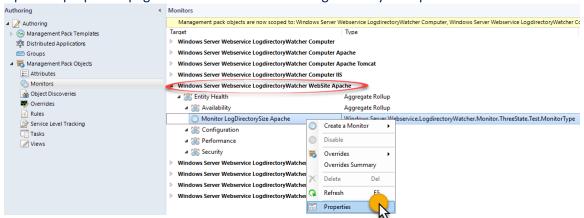
Enable the recovery tasks by overriding

Open the **Authoring pane**, select **Monitors** and scope the search for 'webservice' by having all all targets enabled

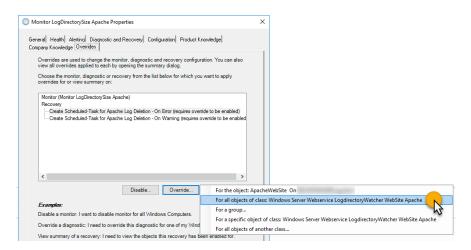


Example 1 - Enabling it for all Apache Webservers

Open the properties page of the Monitor 'Monitor LogDirectorySize Apache'

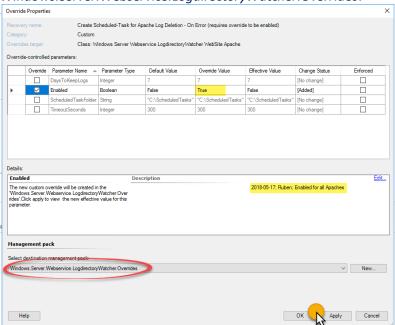


Select the **Overrides** tab, select the first recovery task, click on **Override** ... and choose the class *For all objects of class: Windows Server Webservice LogdirectoryWatcher WebSite Apache*



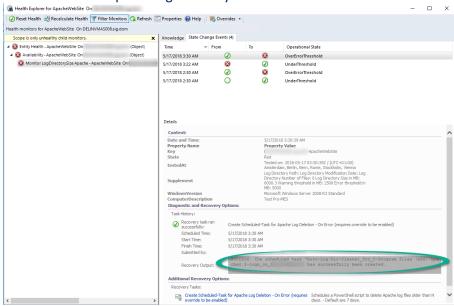
In the Override Properties window, check the parameter **Enabled** and choose as Override Value **True**. If liked, add a Description and store the changes in the newly created Management Pack

Windows.Server.Webservice.LogdirectoryWatcher.Overrides.



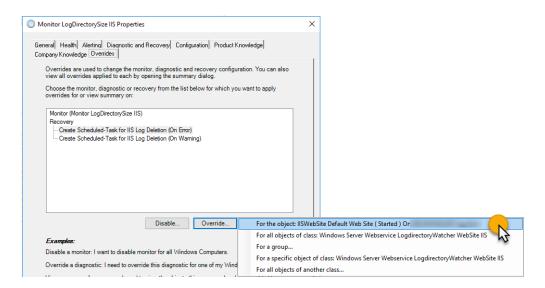
Repeat the steps for the other recovery task.

The next time an Apache log directory throws an alert the task runs:



Example 2 – Customizing for an individual IIS Websites Log directory Missing screenshots from taking the individual website!

In the Monitor properties select the **Overrides** tab, select the first recovery task, click on **Override** ... and choose the individual site, here **For the object IISWebSite Default WebSite (Started) ON** ...



In the Override Properties window check the **DaysToKeepLogs** parameter and set the Override Value to **14** for example. If applicable set a description and store the configuration in the newly created management pack *Windows.Server.Webservice.LogdirectoryWatcher.Overrides*.

