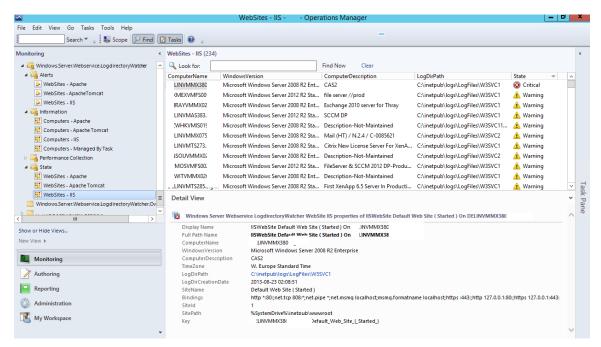
Monitoring Webservers' Log directory size with SCOM

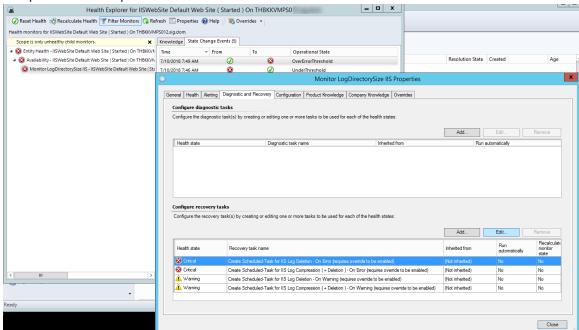
IIS, Apache and Tomcat can write log files. Often, these files occupy large space cause a disk filling up.

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

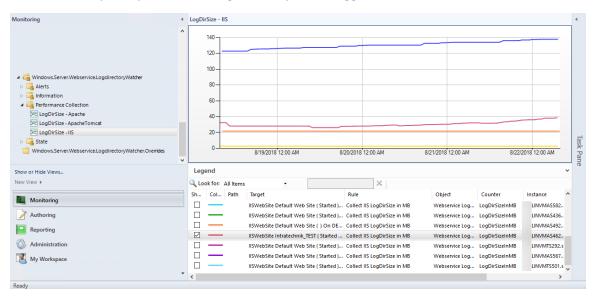


An integrated recovery task can help to control the growing by providing two log rotation mechanisms. If enabled, one of both tasks schedule a PowerShell script on the monitored

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.LogdirectoryWatcher.WebSite.Apa	Windows.Server.Webservice.LogdirectoryWatcher.WebSite.B
cheBase	ase
Windows.Server.Webservice.LogdirectoryWatcher.WebSite.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.LogdirectoryWatcher.Discovery.Windows.Server.Webservic	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. Log directory Watcher. 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::

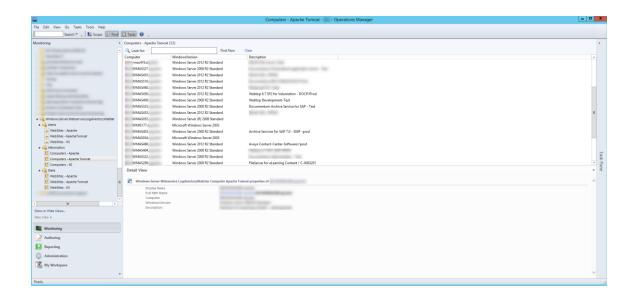
ID	Target
Windows.Server.Webservice.LogdirectoryWatcher.Rule.LogDirWatcher	Windows.Server.Webservice.LogdirectoryWatcher.We
.LogDirSize.Apache	bSite.Apache
Windows.Server.Webservice.LogdirectoryWatcher.Rule.LogDirWatcher	Windows.Server.Webservice.LogdirectoryWatcher.We
.LogDirSize.IIS	bSite.IIS
Windows.Server.Webservice.LogdirectoryWatcher.Rule.LogDirWatcher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

Views

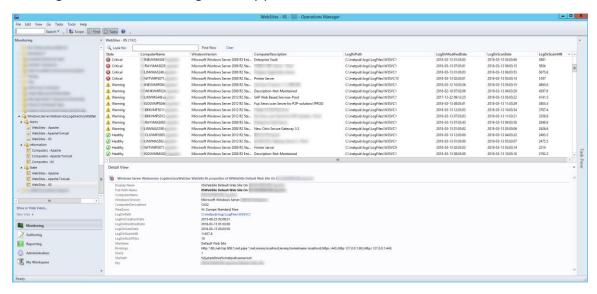
To make all discovered objects and their health state visible a state views are used.

State Views:

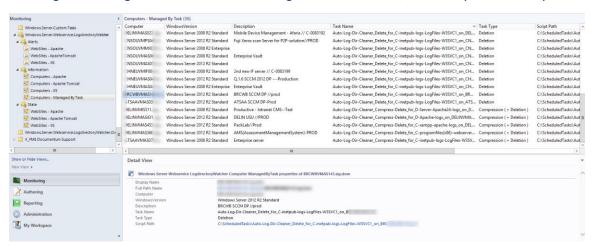
Showing discovered web servers plus some meta information.



Showing discovered website log directory plus some additional information.

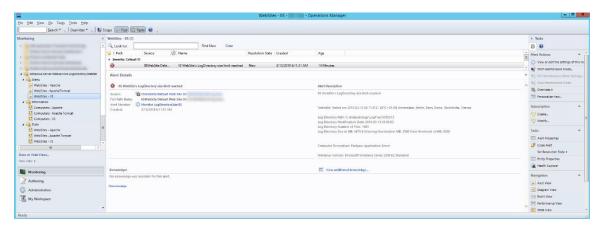


Showing website log directories that are managed scheduled task, created by the recovery task.



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.

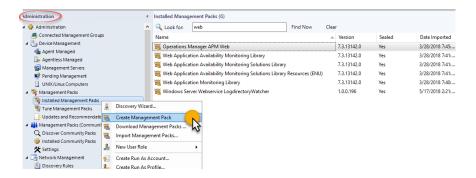
Please note that folder names with blanks / spaces are not supported.

Two recovery jobs are available.

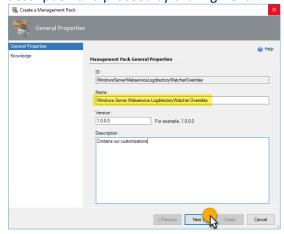
- 1. Create Scheduled-Task for <WebServer> Log Deletion
 - a. The PowerShell script which is triggered by the local Task Scheduler deletes logs older than predefined (customizable) value.
- 2. Create Scheduled-Task for <WebServer> Log Compression (+ Deletion)
 - a. The PowerShell script which is launched 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.

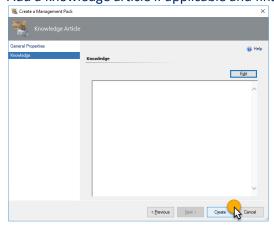
 Switch to the Administration pane, select Installed Management Packs and click on Create Management Pack.



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

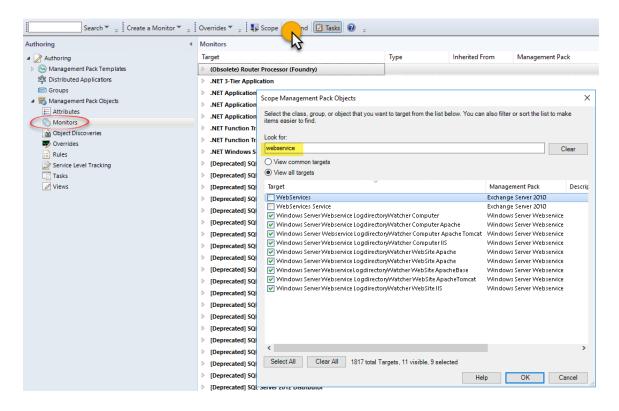


• Add a knowledge article if applicable and finalize the wizard with **Create**.



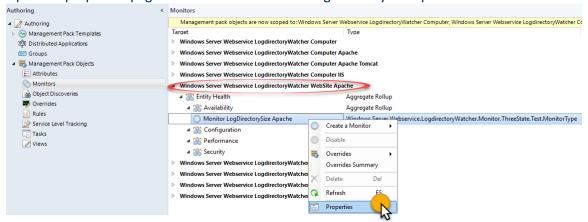
Enable the recovery tasks by overriding

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

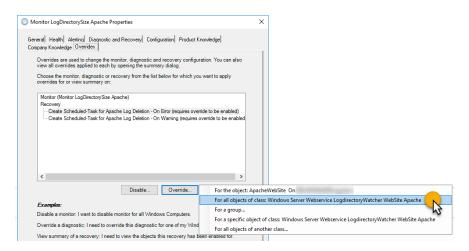


Example 1 - Enabling it for all Apache Webservers

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

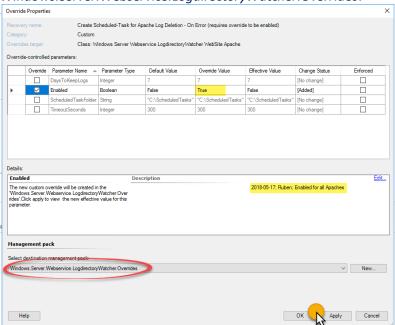


Select the **Overrides** tab, select the first recovery task, click on **Override** ... and choose the class *For all objects of class: Windows Server Webservice LogdirectoryWatcher WebSite Apache*



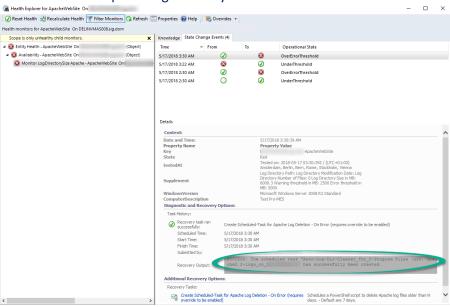
In the Override Properties window, check the parameter **Enabled** and choose as Override Value **True**. If liked, add a Description and store the changes in the newly created Management Pack

Windows.Server.Webservice.LogdirectoryWatcher.Overrides.



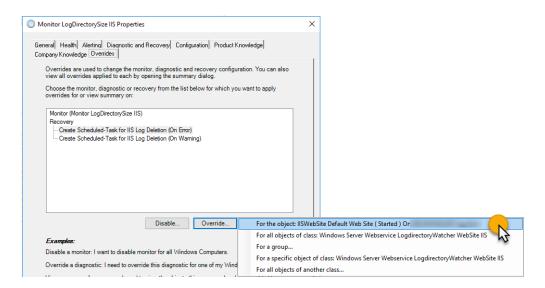
Repeat the steps for the other recovery task.

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*.

