

Using Overrides in Operations Manager 2007

A short tutorial on use of overrides for rules and monitors in Operations Manager 2007

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Introduction

In this article we will show you how to work with overrides in Operations Manager 2007. There are a myriad of new features and functions to keep in mind if you are a current MOM 2005 administrator.

A new feature in Operations Manager 2007 is sealed management packs. In MOM 2005 all management packs can be edited after import, for example change thresholds in a rule. Unfortunately, the ability to change vendor rules after import can lead to a problem when importing a new version of the management pack in MOM 2005 if best practices in rule modification were not followed. With sealed management packs an MP author can lock down' an MP, so to speak, preventing direct edits to the MP itself. As you can't change anything in a sealed management pack in Ops Mgr 2007, new versions always override the current version, and all customization will stay. Microsoft and 3rd party ISVs distribute management packs in a sealed format. How can you modify management pack settings in Ops Mgr 2007? The answer is through overrides.

This change in architecture means 1) overrides will be used much more commonly in Ops Mgr 2007 vs. MOM 2005 and 2) admins are much less likely to make a change that will impede intended MP functionality, and 3) they should never lose changes when an MP is imported.

In this guide we will work with an alert about percentage of committed memory in use is too high.

Monitor or Rule?

What is the main difference between a rule and a monitor?

Monitors

Monitors are a new concept introduced in Operations Manager 2007

- Monitors exists for every instance in the system, rules act independently of one another
- Monitors are the only thing that can affect the state of an monitored object instance

For example, a monitor can be used to estimate the state of an event (if it exists) or the value of a performance counter. The result of that control the health state of a target and the alerts that are generated. There are three types of monitors:

- **Unit monitors** (created to monitor specific part of a application, device or service)
- **Aggregate rollup monitors** (this type of monitors roll up the health of monitors beneath them according to a defined algorithm.)
- **Dependency rollup monitors** (roll up health state from targets linked by either a hosting or a membership relationship)

Rules

Rules are like rules in MOM 2005, used to collect data and generate alerts. Rules can be used for a large number of reasons, the most common scenarios are:

- Collect events from Windows event logs
- Collect SNMP events, SNMP traps and SNMP Performance
- Collect Windows performance data

- Collect WMI performance data
- Collect event and performance data from scripts
- Alert on Windows events and/or SNMP traps

Investigate Present Settings

The first thing we should do it to investigate the present settings of the monitor. Sometimes the settings already are suitable for your environment and there is something else you should troubleshoot.

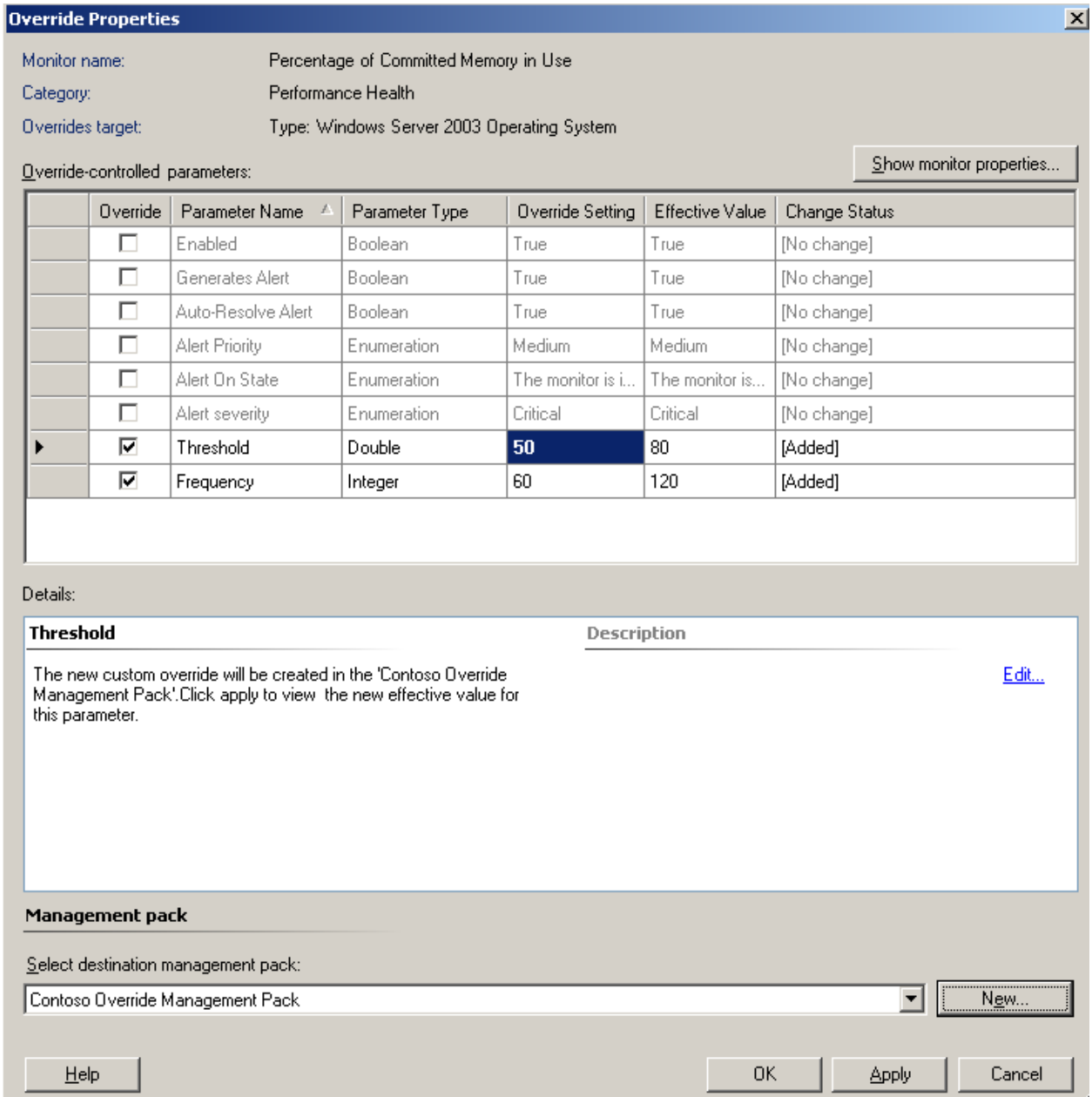
1. From the **Start Menu**, select the Operations **System Center Operations Console**
2. In the Navigation pane (left), Click **Authoring**
3. In the Authoring pane, expand **Management Pack Objects** and click **Monitors**
4. In the Action pane, input a portion of name of the rule name in the **Look for** textbox and click **Find Now**. In this example we will input "committed"
5. In the Action pane search result, **right-click** on the monitor and choose **properties** from the context menu.
6. On the properties screen, click the **Threshold Settings** tab. Here you can see the present settings, in my example the threshold are 80% on 3 samples. On the **Performance Counter tab** you can see the **interval** the monitor sample values, in my example every 2 minute. This means that if the value is over 80% for 6 minutes an alert will be generated. On the **General tab** you can see which machines that are affected by this monitor, **Monitor Target**. In this example it is Windows Server 2003 Operating System.

You can also click on the alert in the Active Alert view and choose View or edit the settings of this rule from the Actions pane.

Create a Override

The next is to plan your override and evaluate the change in a sandbox. In this example we will change the threshold to 50% and change the sample interval to every minute.

1. From the **Start Menu**, select the Operations **System Center Operations Console**
2. In the Navigation pane (left), Click **Authoring**
3. In the Authoring pane, expand **Management Pack Objects** and click **Monitors**
4. In the Action pane, input a part of name of the rule name in the **Look for** textbox and click **Find Now**. In this example we will input "committed"
5. In the Action pane search result, **right-click** on the monitor and choose **override, Override the Monitor, for all objects of type...** from the context menu. In this example the type would be Windows Server 2003 Operating System. You can choose any other group of machines here, for example all your Exchange servers.
6. On the Override Properties window, here you see all parameters that you can override. What you can override depends what the vendor allow you to override. In this example we will **enable override** for **Threshold** and **Frequency**. we will also change them to 50 and 60. You should store your override in a new management pack. Best practices would be to create a new management pack for each management pack you create overrides in. For example if you create an override for an Active Directory rule you create a management pack named Active Directory overrides. If you don't create new management packs it can be a problem for you remove management packs later. Then click **OK**.



NOTE: You'll notice in the overrides window above, there are a number of overrides options available, providing the functionality that would have been performed via a direct rule edit in MOM 2005.

7. In the Action pane search result, **right-click** on the monitor and choose **Overrides Summary**
8. In the Overrides Summary window, verify your override settings, then click **Close**

How to Create a Group

In this example we will create a dynamic group of agent managed computers that are in the HQ Active Directory site.

1. From the **Start Menu**, select the Operations **System Center Operations Console**
2. In the Navigation pane (left), Click **Authoring**
3. In the Authoring pane, right-click **Groups** and choose **New Group**
4. In the Create Group Wizard - General Properties window, input a suitable **name** and choose a management pack, you should have one explicit **management packs** for all your overrides. Click **Next**
5. In the Create Group Wizard - Explicit Members window, choose any machines that will always be a member of this group even if they don't fulfill the dynamic member formula. Click **Next**
6. In the Create Group Wizard - Dynamic Members window, click **Create/Edit rules...**
7. In the Create Group Wizard - Query Builder, build your formula, in my case we will choose **System Center Center Managed Computers (Any OS)** from the drop-down menu and then click **Add**. we will then choose **Active Directory Site** in the property menu, **equals** in the operator menu and input **HQ** in the Value field. Click **OK**
8. In the Create Group Wizard - Dynamic Members window, the formula will now look like this
(Object is System Center Managed Computer (Any OS) AND (Active Directory Site Equals HQ)
)
9. In the Create Group Wizard - Dynamic Members window, click **Next**
10. In the Create Group Wizard - Subgroups window, choose subgroups to add to this group. Click **Next**
11. In the Create Group Wizard - Excluded Members, choose any machines that will not be a member of this group even if they don't fulfill the dynamic member formula. Click **Create**

This group can now be used to target overrides for rules and monitors.

Setup Backup of your Overrides

In this example we will create a schedule backup of a management pack where I store overrides. We will use a script including a number of Operations Manager command shell commands.

1. **Create a directory** where you want to store the backup, in this example we will use **C:\Backups**
2. Open **notepad.exe**, paste the following script into notepad and store it as **C:\backup_script.ps1**

```
$ServerName = "COOM01"
add-pssnapin "Microsoft.EnterpriseManagement.OperationsManager.Client";
set-location "OperationsManagerMonitoring::";
new-managementGroupConnection -ConnectionString:$serverName;
set-location $ServerName;
$mps = get-managementpack | where-object {$_.Sealed -eq $false}
foreach($mp in $mps)
{
export-managementpack -managementpack $mp -path "C:\Backup\"
}
```

3. Now we will need to setup a schedule task to run the script. From the **Start Menu**, select **All Programs, Accessories, System Tools** and click on **Scheduled Tasks**.
4. In the Scheduled Tasks window, double click **Add Scheduled Task**
5. In the Scheduled Task Wizard, click **Next**
6. In the Scheduled Task Wizard, click **Browser** and select **C:\Windows\System32\windowspowershell\v1.0\powershell.exe**
7. In the Scheduled Task Wizard, **Input a name** for the task, for **example Ops Mgr Backup Customized MP**. Choose **Daily** and click **Next**
8. In the Scheduled Task Wizard, input a suitable **time** and **start date**. Make sure this backup doesn't interrupt other backups or tasks. Click **Next**
9. In the Scheduled Task Wizard, input an **account** and **password** to run the task as. Make sure not to use account with unnecessary high permissions. Click **Next**
10. In the Scheduled Task Wizard, verify your settings and check **Open advanced properties for this task when I click Finish**, then click **Finish**
11. In the <task name> properties window, in the **Run field**, after the command input the **path to your script**, for example

C:\WINDOWS\system32\windowspowershell\v1.0\powershell.exe C:\backup.ps1

click **OK**

12. In the Set Account Information, input account information and click **OK**

Now you have a scheduled task that will make a backup of all your unsealed management packs to the specified directory.

Additional Resources

Backing up Your Overrides in Operations Manager 2007

<http://www.systemcenterforum.org/backing-up-your-overrides-in-operations-manager-2007/>

System Center Operations Manager 2007 Product Documentation

<http://www.microsoft.com/technet/opsmgr/2007/library/proddocs.mspix>

Feedback

I hope you find this article helpful. Your feedback is always welcome and appreciated at anders@contoso.se or administrator@systemcenterforum.org