

OpsMgr Self Maintenance Management Pack

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Feedback:

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- You are free to modify this management pack to suit your environments.
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- Even though this management pack has been fully tested, you may use it at your own risk. The Author does not hold any responsibility for any damages it may cause in your environments.

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1 Version History

Release Date	Version	Comments
March, 2013	V1.0.0.0	Initial Release
July, 2013	V2.0.0.0	<ul style="list-style-type: none">• Bug fixes in both OM12 and OM07 version of the MP.• Additional workflows in the OM12 version.
August, 2013	V2.1.0.0	<ul style="list-style-type: none">• Bug fix for the Backup MP Rule• Additional rule: detect manually closed monitor-generated alerts in the OM12 version.
February 2014	V2.3.0.0	<ul style="list-style-type: none">• Updated the Close Aged Rule Generated Alerts Rule• Additional Agent Task: Get management group(s) configured on an agent• Additional Rule: Auto Approve manually installed agents based on agent computer name and domain name regular expression match• Additional Monitor: monitor if each individual management server is in maintenance mode• Several minor bug fixes

2 Introduction

OpsMgr Self Maintenance Management Pack automates some routine tasks generally performed by OpsMgr administrators on a regular basis. It also provides few rules / monitors to monitor the OpsMgr management group itself. This management pack contains 2 version.

- The OpsMgr 2007 R2 version works on both 2007 R2 and 2012 versions of OpsMgr.
- The OpsMgr 2012 version only works on OpsMgr 2012.

The 2012 version of this management pack is able to utilize OpsMgr 2012 resource pools and also provides additional rules and monitors than the 2007 version. For OpsMgr 2012 environments, it's strongly recommended to use the 2012 version of this management pack.

The following workflows are included in the version 1.0.0.0 of this management pack:

- Automatically balance OpsMgr agents among a group of management servers.
- Automatically close aged rule-generated alerts
- Convert all manually installed OpsMgr agents to Remote-Manageable.
- Enable Agent-Proxy for all agents
- Backup Unsealed (and Sealed) management packs.
- Remove Disabled discovery objects

- Detect staled stage change events
- Monitoring the size of LocalizedText able from the OpsMgr operational database.
- Detects OpsMgr management servers in maintenance mode (Only available in OpsMgr 2012 version of the MP)
- Performance Collection rule for total number of SDK connection within the management group (among all management servers). (Only available in OpsMgr 2012 version of the MP).
- Agent tasks for:
 - Manually backup management packs
 - Get currently connected users to the SDK service
 - Enable Agent Proxy for all agents.

In addition, the following workflows have been added to the version 2.0.0.0 of this management pack (**For Operations Manager 2012 only**):

- Agent tasks to check Data Warehouse DB data retention
- Detect user defined overrides in the Default Management Pack
- Configure failover management servers for agents
- Monitoring Data Warehouse data sets daily and hourly aggregations (Adopted from Michel Kamp's blog article <http://michelkamp.wordpress.com/2013/03/24/get-a-grip-on-the-dwh-aggregations/>)
- Performance Collection rule to collect number of outstanding DW data set aggregations (Adopted from Michel Kamp's blog article <http://michelkamp.wordpress.com/2013/03/24/get-a-grip-on-the-dwh-aggregations/>)
- Views:
 - State view for RMS Emulator
 - State view for Management Server
 - State view for All Management Servers Resource Pool
 - State View for Unhealthy Health Service Watchers
 - Performance view for DW Standard Data Sets

Version 2.0.0.0 also includes the following bug fixes:

Bug fix	Impacted version
The Remove disabled discovery objects rule for the OpsMgr 2012 version of the management pack used OpsMgr 2007 version of the script in the workflow.	OpsMgr 2012
There is a typo in the scripts used by the balance agents workflows in both OpsMgr 2007 and 2012 version of the MP. The agent property "ManuallyInstalled" was spelled as "InManuallyInstalled". However this would only cause scripts to fail when trying to move manually installed agents.	OpsMgr 2007, OpsMgr 2012

Version 2.1.0.0 includes:

- Bug fix for the alert description generated by the Management Packs backup rule "OpsMgr 2012 Self Maintenance Management Packs Backup Rule"

- Additional rule: “OpsMgr 2012 Self Maintenance Detect Manually Closed Monitor Alerts Rule” which detects any monitor-generated alerts that were not closed by the System (manually closed).

Version 2.3.0.0 includes:

- Updated the Close Aged Rule Generated Alerts Rule to add a comment “Closed by OpsMgr 2012 Self Maintenance Management Pack” when closing alerts.
- Additional Agent Task: Get management group(s) configured on an agent
- Additional Rule: Auto Approve manually installed agents based on agent computer name and domain name regular expression match
- Additional Monitor: monitor if each individual management server is in maintenance mode
- Several minor bug fixes

3 Pre-requisites and Requirements

3.1 Pre-requisites

- All scripts used in the management pack are written in PowerShell, therefore, PowerShell execution policy needs to be configured to allow scripts execution on the following computers:
 - For OpsMgr 2007 – Root Management Server (if RMS is clustered, all cluster nodes in the RMS cluster).
 - For OpsMgr 2012 – **ALL** Management Servers.

3.2 Requirements

This management pack heavily relies on the OpsMgr SDK services.

For OpsMgr 2007, since there is only a single instance of SDK service running (which is on the RMS), the RMS needs to be in a healthy state for the workflows to run.

For OpsMgr 2012, SDK service is running on every management server, and with the concept of resource pools, all the workflows in the 2012 version of the MP are targeting “All Management Servers resource pool”. However, for the MP to function correctly, more than half of the management servers in “All Management Servers resource pool” need to be in healthy state otherwise the resource pool becomes offline and no longer being monitored.

4 Management Pack Objects

4.1 OpsMgr 2007 R2 Self Maintenance MP

Workflow Name	Type	Target
OpsMgr 2007 R2 Self Maintenance Balance Agents Rule	Rule	RMS
OpsMgr 2007 R2 Self Maintenance Close Aged Rule Generated Alerts Rule	Rule	RMS
OpsMgr 2007 R2 Self Maintenance Convert All Agents To Remote Manageable Rule	Rule	RMS
OpsMgr 2007 R2 Self Maintenance Enable Agent Proxy Rule	Rule	RMS
OpsMgr 2007 R2 Self Maintenance Management Packs Backup Rule	Rule	RMS
OpsMgr 2007 R2 Self Maintenance Remove Disabled Discovery Objects Rule	Rule	RMS
OpsMgr 2007 R2 Self Maintenance Stale State Change Events Detection Rule	Rule	RMS
OpsMgr 2007 R2 Self Maintenance Operational Database LocalizedText Table Health Monitor	Monitor	RMS
Enable Agent Proxy For All Agents	Agent Task	RMS
Get Currently Connected Users to the MG	Agent Task	RMS
Backup Management Packs	Agent Task	RMS

4.2 OpsMgr 2012 Self Maintenance MP

Workflow Name	Type	Target
OpsMgr 2012 Self Maintenance Legacy Balance Agents Data Source (Designed for OpsMgr 2007)	Rule	RMS Emulator
OpsMgr 2012 Self Maintenance Balance Agents Within Resource Pool Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Close Aged Rule Generated Alerts Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Convert All Agents To Remote Manageable Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Enable Agent Proxy Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Management Packs Backup Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Remove Disabled Discovery Objects Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Stale State Change Events Detection Rule	Rule	All Management Servers Resource Pool
Collect All Management Server SDK Connection Count Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Detect User Defined Overrides in Default MP Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Detect Manually Closed Monitor Alerts Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Data Warehouse Database Aggregation Process Performance Collection Rule	Rule	Data Set
OpsMgr 2012 Self Maintenance Configure Agents Failover Within Resource Pool Rule	Rule	Management Server
OpsMgr 2012 Self Maintenance Approve Manual Agents Rule	Rule	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Operational Database LocalizedText Table Health Monitor	Monitor	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Management Servers in Maintenance Mode Monitor	Monitor	All Management Servers Resource Pool
OpsMgr 2012 Self Maintenance Check Data Warehouse Database Daily Aggregation 3-State Monitor	Monitor	Data Set
OpsMgr 2012 Self Maintenance Check Data Warehouse Database Hourly Aggregation 3-State Monitor	Monitor	Data Set
OpsMgr 2012 Self Maintenance Local Management Server in Maintenance Mode Monitor	Monitor	OpsMgr 2012 Self Maintenance Management Server Maintenance Mode Watcher
Enable Agent Proxy For All Agents	Agent Task	All Management Servers Resource Pool
Get Currently Connected Users to the MS	Agent Task	Management Server
Backup Management Packs	Agent Task	All Management Servers Resource Pool
Get DW Retention	Agent Task	Management Server
Get Management Groups	Agent Task	Agents

State View for RMS Emulator	State View	RMS Emulator
State View for Management Servers	State View	Management Server
State View for All Management Servers Resource Pool	State View	All Management Servers Resource Pool
State View for Unhealthy Health Service Watchers	State View	Health Service Watcher
Performance view for DW Data Set	Perf View	Data Set
OpsMgr 2012 Self Maintenance Management Server Maintenance Mode Watcher Discovery	Discovery	OpsMgr 2012 Self Maintenance Management Server Maintenance Mode Watcher

5 Configurations

5.1 Overview

All the rules and monitors from the OpsMgr Self Maintenance management packs are disabled by default. This is to ensure OpsMgr administrators only turn on the workflows that are required for the OpsMgr environments they support and configure the required parameters for workflows to suit the environment.

The agent tasks from the management packs are enabled by default.

An unsealed override management pack is provided for each version of the OpsMgr Self Maintenance MP. OpsMgr administrators can use provided unsealed override MP for customization or they can also create their own override MPs for this purpose.

5.2 Detailed Configuration Steps

5.2.1 Balancing OpsMgr Agents across multiple management servers

Workflow Names:

- OpsMgr 2007 R2 Self Maintenance Balance Agents Rule
- OpsMgr 2012 Self Maintenance Legacy Balance Agents Data Source (Designed for OpsMgr 2007)
- OpsMgr 2012 Self Maintenance Balance Agents Within Resource Pool Rule

It is very common that OpsMgr agents are installed using deployment tools such as System Center Configuration Manager or it is built-in as part of the SOE build. OpsMgr administrators rarely have to push agents out via Discovery method using OpsMgr operational console.

When OpsMgr agents are installed using deployment tools, the primary management server's FQDN which the agent reports to is specified as part of the installation command line. As the result, when the agents are installed using this method, all agents will end up reporting to a single management server.

In a large environment, where the OpsMgr management group contains multiple management servers for agent management, OpsMgr administrators often have to manually balance agents across multiple management servers.

These workflows serve this purpose by rule scripts on a schedule and automatically balance agents across management servers.

5.2.1.1 For OpsMgr 2007 R2 Environments

The workflow designed for this task is called "**OpsMgr 2007 R2 Self Maintenance Balance Agents Rule**". The following parameters can be configured using overrides:

- **AgentsOnRMS** (Boolean): Whether agents should move agents to/from RMS.
- **ExcludingMgmtServers**: A list of management servers (separated by comma",") to be excluded (untouched) when the rule runs. I.e. if there are dedicated management servers for network devices, they should be added to this list.
- **IntervalHours**: How often (in hours) does this rule run.

- **MaxAgentsToMove:** Maximum number of agents to be moved at a time.
- **SyncTime:** Optional, what time does the rule run.
- **TimeoutSeconds:** Timeout in seconds for the PowerShell script inside the rule.

An information alert is generated if any agents have been moved by the rule.

Note:

If any management servers are configured to be excluded, all the agents that report to the excluded management servers are not touched by this rule.

Gateway servers are automatically excluded by the script. There is no need to manually add gateway servers to the exclusion list.

5.2.1.2 For OpsMgr 2012 Environments

The “OpsMgr 2007 R2 Self Maintenance Balance Agents Rule” has been renamed to “OpsMgr 2012 Self Maintenance Legacy Balance Agents Rule (Designed for OpsMgr 2007)”. Even though this rule still works in OpsMgr 2012 environment, it’s recommended to use the rule “**OpsMgr 2012 Self Maintenance Balance Agents within Resource Pool Rule**” as it is specifically designed for 2012 environments.

“OpsMgr 2012 Self Maintenance Balance Agents within Resource Pool Rule” is targeting the “All Management Servers Resource Pool” as opposed to RMS in the 2007 version. It balances the agents among all management servers within a given resource pool. The following parameters can be configured using overrides for “OpsMgr 2012 Self Maintenance Balance Agents within Resource Pool Rule”:

- **IntervalHours:** How often (in hours) does this rule run.
- **ResourcePoolName:** Resource Pool Name
- **MaxAgentsToMove:** Maximum number of agents to be moved at a time.
- **SyncTime:** Optional, what time does the rule run.
- **TimeoutSeconds:** Timeout in seconds for the PowerShell script inside the rule.

An information alert is generated if any agents have been moved by the rule.

Note:

Any agents that are managed by management servers outside of the configured resource pool are not touched by this rule.

Gateway servers are automatically excluded even when the configured resource pool contains both management servers and gateway servers.

5.2.2 Remove Disabled Discovery Instance

Workflow Names:

- OpsMgr 2007 R2 Self Maintenance Remove Disabled Discovery Objects Rule
- OpsMgr 2012 Self Maintenance Remove Disabled Discovery Objects Rule

These workflows are designed to remove objects that were discovered by already disabled discoveries from the database. For more information, please refer to this blog article: <http://blogs.technet.com/b/jonathanalmquist/archive/2008/09/14/remove-disabledmonitoringobject.aspx>

The scripts inside the 2007 and 2012 versions of workflows are different, however, the configurable parameters are the same. The following parameters can be configured via overrides:

- **IntervalHours:** How often does the rule run. By default, every 24 hours.
- **SyncTime:** What time does the rule run. By default, 20:30
- **TimeoutSeconds:** Timeout in seconds for the PowerShell script inside the rule. By default, 3600 seconds.

5.2.3 Management packs Backup

Workflow Names:

- OpsMgr 2007 R2 Self Maintenance Management Packs Backup Rule
- OpsMgr 2012 Self Maintenance Management Packs Backup Rule

These rules run on a schedule and backup management packs that are currently loaded in the management group.

There are many community written MPs for this purpose, the rules from these management packs can be configured to also export (backup) sealed management packs. When they are configured to backup sealed MPs, the sealed MPs are exported to unsealed (XML) MPs.

A critical alert is raised when the backup failed.

I found this option useful sometimes when I wanted to quickly check the content of a sealed MP, all I had to do was to go to the backup destination and open the unsealed XML version using a text editor. It can also be useful when you need to quickly restore an in-house written MP. All you have to do is to grab the unsealed version of the MP from backup destination and seal it again using your own key.

The following parameters can be configured via overrides:

- **IntervalSeconds:** Schedule frequency in seconds
- **SyncTime:** Time when the rule runs. It's recommended to configure this rule to run BEFORE the nightly OS backup for the destination so they are backed up to backup media.
- **BackupLocation:** Backup destination. It can be a local folder or a UNC path. For the 2012 version, since this rule will potentially run on any management server in "All Management Servers Resource Pool", please use a UNC path instead of local path so MPs are backed up to a centralized location.
- **BackupSealedMP** (Boolean): Default value is set to true. Set it to false if sealed management packs do not need to be exported during the backup process.
- **RetentionDays:** Backup file retention. Any backup sets older than the retention period will be deleted.
- **TimeoutSeconds:** Timeout in seconds for the PowerShell script within this rule. Default is 900 seconds (15 minutes). Increase it if it's required.

Prior to enabling this job, please make sure the backup destination folder exists and the management server's action account has least Modify NTFS permission and Change Share permission to the destination folder.

Note:

The PowerShell script used by these workflows automatically creates a subfolder under "BackupLocation" with the name of the management group and management packs will be backed up to the sub-folder. In an environment with multiple OpsMgr management groups, administrators can use a single backup location for multiple management groups.

5.2.4 Covert All Agents to Remote Manageable

Workflow Names:

- OpsMgr.2007.R2.Self.Maintenance.Convert.All.Agents.To.Remote.Manageable.Rule
- OpsMgr 2012 Self Maintenance Convert All Agents To Remote Manageable Rule

These workflows runs on a schedule and convert any manually installed OpsMgr agents to “Remote Manageable” by using SQL command “**UPDATE MT_HealthService SET IsManuallyInstalled=0 WHERE IsManuallyInstalled=1**” against the operational DB.

If any agents have been converted, an information alert is created indicating number of agents been converted. For environments that are fairly static, this rule may not be required (or required to run less often).

The following parameters can be customized via overrides:

- **IntervalHours:** How often the rule is set to run, default is every 12 hours.
- **SQLQueryTimeoutSeconds:** timeout second for the SQL query execution within the PowerShell script. Default is 120 seconds.
- **SyncTime:** time when the rule runs.
- **TimeoutSeconds:** timeout seconds for the PowerShell script used by the rule.

Note:

If both this rule and the balance agents rule are enabled, it’s recommended to schedule this rule to run first, because agents need to be remotely manageable to move to other management servers.

5.2.5 Detect Stale State Change Events in Database

Workflow Names:

- OpsMgr 2007 R2 Self Maintenance Stale State Change Events Detection Rule
- OpsMgr 2012 Self Maintenance Stale State Change Events Detection Rule

These workflows detect if stale state change events exist in the database (event age older than the state change event data grooming setting). This is because state change events created by already disabled monitors are not groomed out by the grooming jobs. A critical alert is raised when the earliest state change event in the database is more than 1 day older than the “State change events data” grooming setting. The SQL command used to delete these events is included in the knowledge article of the rule.

For more information, please refer to this blog article: <http://blogs.technet.com/b/kevinholman/archive/2009/12/21/tuning-tip-do-you-have-monitors-constantly-flip-flopping.aspx>

The following parameters can be customized using overrides:

- **DaysOfWeekMask:** The day of the week when the rule runs. This rule does not need to run too often, the default is every Sunday. Please refer to the PublicSchedulerType definition <http://msdn.microsoft.com/en-us/library/ee692976.aspx> if you wish to modify which day(s) this rule should run.
- **StartTime:** Time when the run rules. Default is 3:00am (Sunday)
- **SQLQueryTimeout:** timeout second for the SQL query execution within the PowerShell script. Default is 120 seconds.
- **TimeoutSeconds:** timeout seconds for the PowerShell script used by the rule.

Note:

The table below outlines what the integer value of the “DaysOfWeekMask” represents:

Day	Value
Sunday	1
Monday	2
Tuesday	4
Wednesday	8
Thursday	16
Friday	32
Saturday	64

To specify a single day, enter the enumerator value for that day directly into the DaysOfWeekMask configuration element.

To specify multiple days, add the enumerator values for the days together. For example, for Monday, Wednesday, and Friday, specify 42 (2+8+32).

5.2.6 Close Old Rule-Generated Alerts (Version 1.0.0.0 Only)

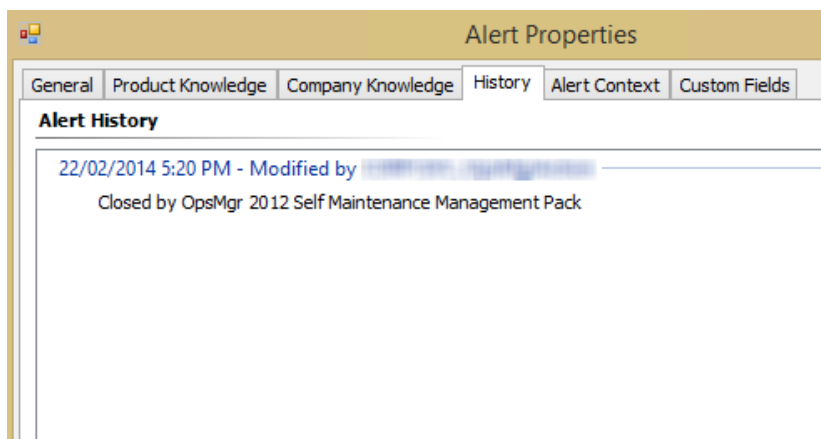
Workflow Names:

- OpsMgr 2007 R2 Self Maintenance Close Aged Rule Generated Alerts Rule
- OpsMgr 2012 Self Maintenance Close Aged Rule Generated Alerts Rule

These workflows close rule generated alerts. The following parameters can be customized via overrides:

- **CloseCriticalAlerts** (Boolean): Whether critical alerts should be closed.
- **CloseInfoAlerts** (Boolean): Whether information alerts should be closed.
- **CloseWarningAlerts** (Boolean): Whether warning alerts should be closed.
- **DaysToKeep**: Alerts maximum age before been closed.
- **IntervalSeconds**: How often in seconds the rule runs. By default, 86400 seconds (1 day).

This rule adds a comment to the alert upon closing:



If there are any alerts failed to be closed, a warning alert is generated.

5.2.7 Close Old Rule Generated Alerts (Version 2.0.0.0, OpsMgr 2012 Only)

Workflow Name:

- OpsMgr 2012 Self Maintenance Close Aged Rule Generated Alerts Rule

This rule close rule generated alerts. The following parameters can be customized via overrides:

- **CloseCriticalAlerts** (Boolean): Whether critical alerts should be closed.
- **CloseInfoAlerts** (Boolean): Whether information alerts should be closed.
- **CloseWarningAlerts** (Boolean): Whether warning alerts should be closed.
- **DaysToKeep**: Alerts maximum age before been closed.
- **IntervalSeconds**: How often in seconds the rule runs. By default, 86400 seconds (1 day).
- **UseLastModifiedDate**: Default value is set to false. Set it to true if you wish to filter alerts using 'LastModified' date rather than 'TimeRaised' date. When set to true, only alerts that have not been updated for the given period will be closed.

Note:

This rule has been updated in version 2.0.0.0 for OpsMgr 2012. It now has an option to use “LastModified” date rather than “TimeRaised” date. This is to cater in situations where alerts suppression is configured for the alert generating rule, administrators may not want to close the alert if the Repeat Count is still increasing.

5.2.8 Enable Agent Proxy for all agents

Workflow Names:

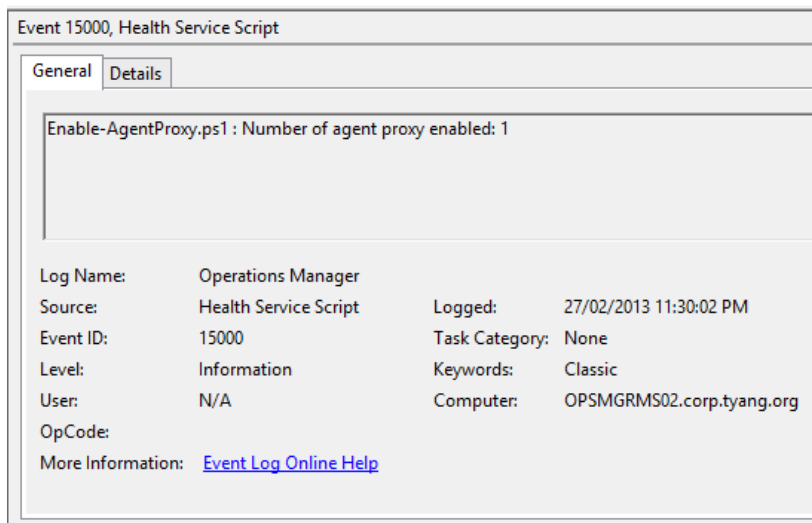
- OpsMgr.2007.R2.Self.Maintenance.Enable.Agent.Proxy.Rule
- OpsMgr 2012 Self Maintenance Enable Agent Proxy Rule

These workflows runs on a schedule and enables Agent Proxy setting for all OpsMgr agents. They use the script posted in this blog article: <http://blog.tyang.org/2012/09/06/powershell-script-to-enable-scom-agent-proxy-in-a-more-efficient-way/>

The following parameters can be customized via overrides:

- **IntervalSeconds:** How often in seconds the rule runs. By default, 86400 seconds (1 day).
-
- **SQLQueryTimeout:** timeout second for the SQL query execution within the PowerShell script. Default is 120 seconds.
- **TimeoutSeconds:** timeout seconds for the PowerShell script used by the rule.

The script used in the workflows logs an information event with event ID 15000 in the Operations Manager event log on the management server where it ran from (RMS for 2007 version).



5.2.9 Collect Total SDK Client Connections among All Management Servers (For OpsMgr 2012 Only)

Workflow Name:

- Collect All Management Server SDK Connection Count Rule

This performance collection rule runs on a schedule to collect SDK connection count from each management server in the OpsMgr 2012 management group and present the total number of SDK connections as performance data.

The performance data can be access either via any performance reports or performance views in operational console.

- **Target:** All Management Servers Resource Pool
- **Perf Data Object:** OpsMgr SDK Service
- **Perf Data Counter:** Total Client Connections

5.2.10 Checking the size of LocalizedText table in Operational DB

Workflow Names:

- OpsMgr 2007 R2 Self Maintenance Operational Database LocalizedText Table Health Monitor
- OpsMgr 2012 Self Maintenance Operational Database LocalizedText Table Health Monitor

These monitors detect if the LocalizedText table is the largest table in the Operational database and the row count is above configured threshold. These monitors run on a schedule (by default once a day), and raises alert if LocalizedText table is the largest table AND the row count is above configured threshold (default threshold is 1,000,000).

For more information in regards to LocalizedText table, please refer to this blog article: <http://blogs.technet.com/b/kevinholman/archive/2008/10/13/does-your-opsdb-keep-growing-is-your-localizedtext-table-using-all-the-space.aspx>

The following parameters can be customized via overrides:

- **IntervalHours:** How often does the monitor run. By default, every 24 hours.
- **SQLQueryTimeout:** timeout second for the SQL query execution within the PowerShell script. Default is 300 seconds.
- **RowCountThreshold:** The row count threshold, default is 1,000,000 (1 million).
- **SyncTime:** time when the monitor runs.
- **TimeoutSeconds:** timeout seconds for the PowerShell script used by the rule.

5.2.11 Detecting Management Servers in Maintenance Mode (For OpsMgr 2012 only)

Workflow Name:

- OpsMgr 2012 Self Maintenance Management Servers in Maintenance Mode Monitor

This monitor targets All Management Servers Resource Pool and runs a schedule to check if any OpsMgr 2012 management servers have been placed into maintenance mode.

A critical alert is generated if any management servers have been placed into maintenance mode.

There are 2 overrideable parameters that can be used to customize this monitor:

- **IntervalSeconds:** How often is this monitor set to run. Default is 300 (5 minutes).
- **TimeoutSeconds:** Timeout value for the PowerShell script that is used by this monitor.

Note:

This monitor will only work under below conditions:

- There are multiple management servers in the OpsMgr 2012 management group.
- Only less than half of the management servers have been placed in maintenance mode. This is because when over half of the management servers have lost heartbeat or been placed into maintenance mode, the “All Management Servers Resource Pool” becomes offline and workflows (including this monitor) targeting this resource pool no longer runs. This is a known issue.

5.2.12 Agent Task: Enable Agent Proxy For All Agents

This agent task is available in both version of the management pack. For 2007 agent. The task in 2007 version is targeting RMS and the 2012 version is targeting All Management Servers resource pool.

This task runs the same write action module as the Enable Agent Proxy For All Agents rule.

5.2.13 Agent Task: Backup Management Packs

This agent task is available in both version of the management pack. For 2007 agent. The task in 2007 version is targeting RMS and the 2012 version is targeting All Management Servers resource pool.

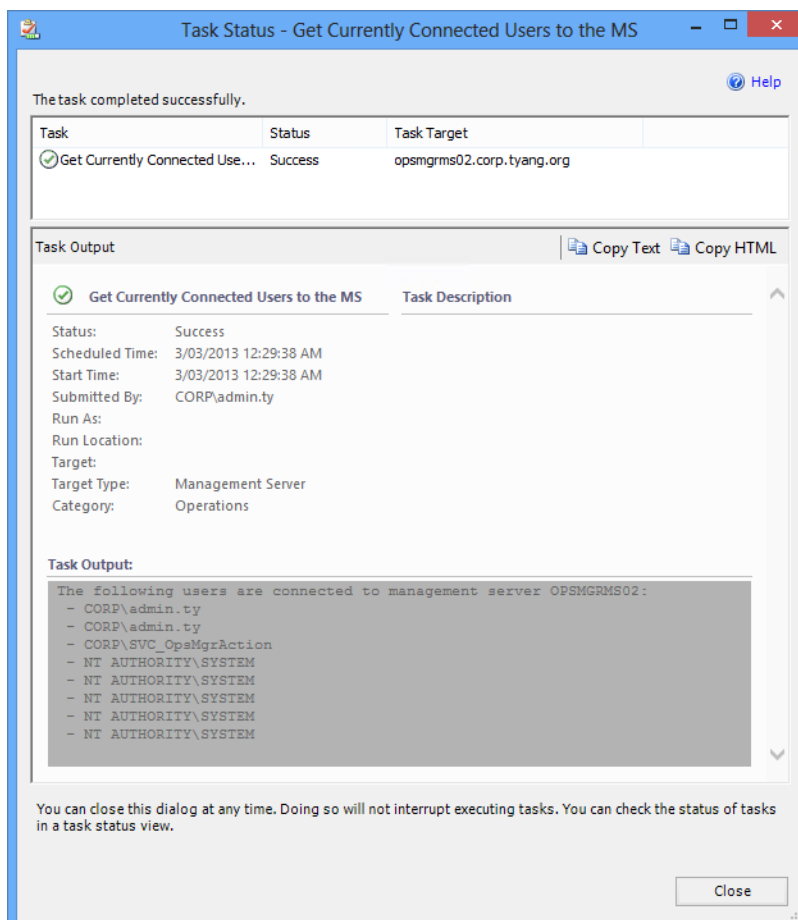
This task can be used to manually backup management packs.

5.2.14 Agent Task: Get Current Connected Users to MG / MS

This agent task is available in both version of the management pack. For 2007 agent. The task in 2007 version is targeting RMS and the 2012 version is targeting Management Servers.

This task displays the user names who are currently connected to the SDK service on the RMS (for OpsMgr 2007) and for the particular management server (for OpsMgr 2012).

i.e.



5.2.15 Agent Task: Get DW Retention (For OpsMgr 2012 Only)

This agent task is targeting the management server class and it runs a script which then calls the `dwdatarp.exe` which is embedded in the management pack bundle as a binary resource. The task displays the data retention period for each data warehouse data set:

The task completed successfully.

Task	Status	Task Target
Get DW Retention	Success	opsmgrms03.corp.tyang.org

Task Output

```

DW Retention Setting:
Dataset name      Aggregation name  Max Age  Current Size, K
-----
Alert data set    Raw data          60       7,976 ( 1% )
Client Monitoring data set  Raw data          30       0 ( 0% )
Client Monitoring data set  Daily aggregations 60       16 ( 0% )
Configuration dataset  Raw data          60      116,120 ( 9% )
Event data set     Raw data          30     197,400 ( 15% )
Microsoft.Windows.Client.Win8.Dataset.ClientPerf Raw data          7
16 ( 0% )
Microsoft.Windows.Client.Win8.Dataset.ClientPerf Daily aggregations 91
16 ( 0% )
Microsoft.Windows.Client.Win8.Dataset.DiskFailure Raw data          7
0 ( 0% )
Microsoft.Windows.Client.Win8.Dataset.DiskFailure Daily aggregations 182
32 ( 0% )
Microsoft.Windows.Client.Win8.Dataset.Memory Raw data          7
0 ( 0% )
Microsoft.Windows.Client.Win8.Dataset.Memory Daily aggregations 91
0 ( 0% )
Microsoft.Windows.Client.Win8.Dataset.ShellPerf Raw data          7
0 ( 0% )
Microsoft.Windows.Client.Win8.Dataset.ShellPerf Daily aggregations 91
0 ( 0% )
Performance data set    Raw data          10     265,496 ( 21% )
Performance data set    Hourly aggregations 30     424,032 ( 34% )
Performance data set    Daily aggregations 30     20,128 ( 2% )
State data set          Raw data          15       2,064 ( 0% )
State data set          Hourly aggregations 30     230,224 ( 18% )
State data set          Daily aggregations 30       11,088 ( 1% )

```

You can close this dialog at any time. Doing so will not interrupt executing tasks. You can check the status of tasks in a task status view.

Note:

`Dwdatarp.exe` is a standalone tool released by Microsoft. For more information regarding to `dwdatarp.exe`, please refer to the following blog article:

<http://blogs.technet.com/b/momteam/archive/2008/05/14/data-warehouse-data-retention-policy-dwdatarp-exe.aspx>

5.2.16 Detecting User Defined Overrides in the Default Management Pack (For OpsMgr 2012 Only)

The “OpsMgr 2012 Self Maintenance Detect User Defined Overrides in Default MP Rule” detects any user defined overrides that are saved in the OpsMgr 2012 Default Management Pack

This rule targets the “All Management Servers Resource Pool” and it is triggered when an updated Default Management Pack is received by the management group. It then executes a PowerShell script to detect user defined overrides in the default MP. This rule can be modified using the following override parameters:

- **MinutesToCheck:** used by the PowerShell script, it looks for any user defined overrides created since x minutes ago. When set this value to 0, the script will look for ALL user defined overrides. The Default value is 10.

- **TimeoutSeconds:** Defines the number of seconds allowed for the PowerShell script execution. Default value is 120.

An alert is generated when users have saved overrides in the Default Management Pack. This is against the OpsMgr best practice. It will create unnecessary dependencies between the default MP and other MPs, which will cause problems when deleting management packs.

To resolve the issue, firstly, identify and remove the override. Then export the default MP, delete the reference to the source MP and re-import the default MP back to the management group.

Note:

This rule is triggered events in the Operations Manager event log. When all of the following conditions are true:

- Event ID = 1201
- Event Source = HealthService
- The first parameter in the event data = "Microsoft.SystemCenter.OperationsManager.DefaultUser" (the default management pack)

This rule will not alert on the two (2) built-in overrides stored in the Default Management Pack.

For more information in regards to cleaning up the Default Management Pack, please refer to the article below:

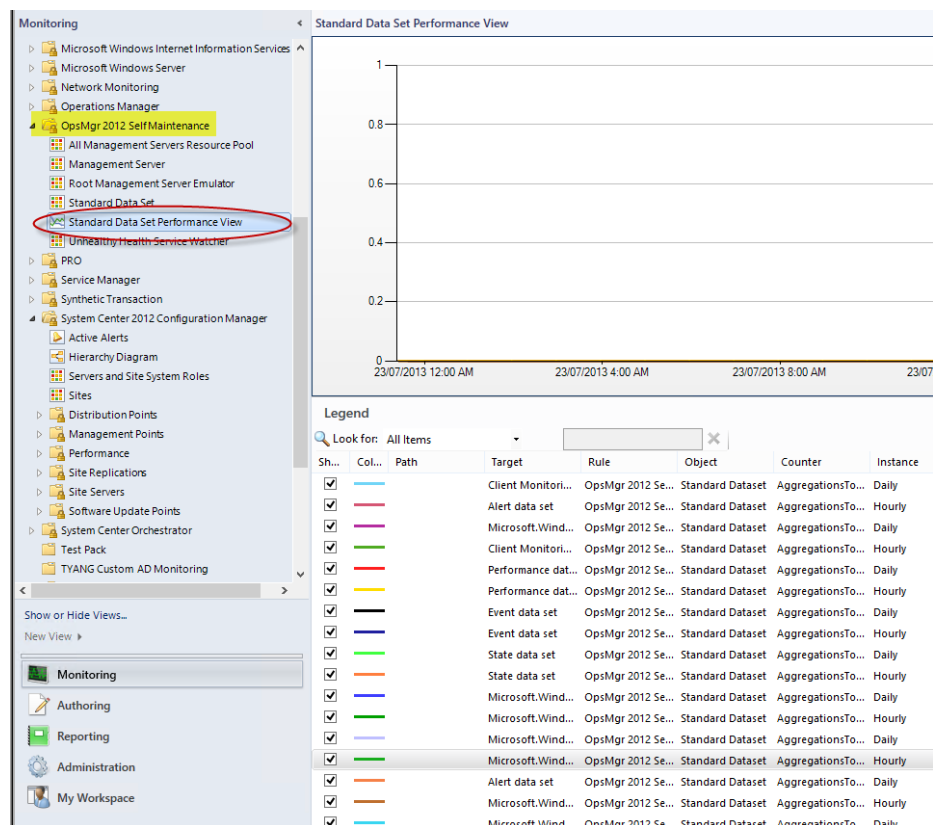
<http://blogs.technet.com/b/kevinholman/archive/2008/11/11/cleaning-up-the-default-mp.aspx>

5.2.17 Collecting the Outstanding Number of Data Sets to be Processed by DW DB Aggregation Processes (For OpsMgr 2012 Only)

The “OpsMgr 2012 Self Maintenance Data Warehouse Database Aggregation Process Performance Collection Rule” collects the outstanding count of dataset still to be processed by the DW DB hourly and daily aggregation process. Higher count may indicate there is a performance related issue with the OpsMgr Data Warehouse Database. This rule is adopted from Michel Kamp's blog post:

<http://michelkamp.wordpress.com/2013/03/24/get-a-grip-on-the-dwh-aggregations/>

The performance data collected by this rule can be viewed in the “Standard Data Set Performance View”:



By default, this rule runs hourly against DW standard Data Sets. There are also two (2) separate 3-state monitors from this management pack that would generate alerts when the outstanding data sets are above configured thresholds.

There are several possible causes for the higher performance reading. More information can be found from this article: <http://blogs.technet.com/b/operationsmgr/archive/2011/09/06/standard-dataset-maintenance-troubleshooter-for-system-center-operations-manager-2007.aspx>

For additional information in regards to this issue, please refer to the article below:

<http://michelkamp.wordpress.com/2012/04/10/scom-dwh-aggregations-data-loose-tip-and-tricks/>

5.2.18 Configuring Failover Management Servers for Agents within a Resource Pool (For OpsMgr 2012 Only)

The “OpsMgr 2012 Self Maintenance Configure Agents Failover within Resource Pool Rule” runs on ALL management servers according to a schedule and configure failover management servers for agents reporting to the management server if the management server is a member of the resource pool as defined via the override. All other management servers that are member of the defined resource pool will be configured as failover management servers for the agents.

This rule can be customized using overrides:

- **IntervalHours:** How often (in hours) does this rule run.
- **ResourcePoolName:** Resource Pool Name.
- **MaxAgentsToConfig:** Maximum number of agents to be configured at a time.
- **SyncTime:** What time does this rule run.
- **TimeoutSeconds:** Timeout in seconds for the PowerShell script inside the rule. Note: in a large management group, this script may take a long time to run.

This rule will configure failover management servers for agents which the number of current failover management server does not equal to the number of the remaining management servers (not including the primary management server) within the resource pool. This script will not make any configuration changes if it is being targeted to a gateway management server or if the targeted management server is not a member of the resource pool.

An information alert is generated if the rule has configured at least one (1) agent(s) on the management server.

Note:

This rule is targeting every management server due to concerns with performance. The script within this workflow checks if the targeted management server is a member of the defined resource pool. It will not continue if the management server is not a member.

The “Balancing agents within resource pool” rule also configures failover management servers for agents when the agents are being moved. However, if the agent has never been moved to another management server by the balancing agents rule, the failover management servers would not be configured. Therefore this rule fills the gap by configuring all required agents.

5.2.19 Monitoring Outstanding DW Data Sets to be Aggregated (For OpsMgr 2012 Only)

Workflow Names:

- OpsMgr 2012 Self Maintenance Check Data Warehouse Database Daily Aggregation 3-State Monitor
- OpsMgr 2012 Self Maintenance Check Data Warehouse Database Hourly Aggregation 3-State Monitor

These two (2) monitors run on a schedule and check for number of DW standard data sets that are waiting to be aggregated (aggregation type: Hourly and Daily). These two (2) monitors are adopted from Michel Kamp's blog post: <http://michelkamp.wordpress.com/2013/03/24/get-a-grip-on-the-dwh-aggregations/>

By default, these monitors run hourly and have 2 thresholds. The default warning threshold is configured to 4 and critical threshold is configured to 10.

There are several possible causes for this monitor to become unhealthy. More information can be found from this article: <http://blogs.technet.com/b/operationsmgr/archive/2011/09/06/standard-dataset-maintenance-troubleshooter-for-system-center-operations-manager-2007.aspx>

The instruction provided from the article below can be used as a guide to rectify the issue:

<http://michelkamp.wordpress.com/2012/03/23/dude-where-my-availability-report-data-from-the-scom-dwh/>

Additional Information:

<http://michelkamp.wordpress.com/2012/04/10/scom-dwh-aggregations-data-loose-tip-and-tricks/>

5.2.20 Detect Manually Closed Monitor-Generated Alerts (For OpsMgr 2012 Only)

Workflow Name:

- OpsMgr 2012 Self Maintenance Detect Manually Closed Monitor Alerts Rule

This rule runs on a schedule and detects if any monitor-generated alerts have been closed manually by OpsMgr operators. A warning alert is generated with when manually closed monitor-generated alerts are detected:

The screenshot shows the 'Alert Details' window for an alert titled 'Monitor Generated Alerts Have been Manually Closed'. The alert is categorized as a warning. The 'Source' is 'All Management Servers Resource Pool'. The 'Full Path Name' is 'All Management Servers Resource Pool'. The 'Alert Rule' is 'OpsMgr 2012 Self Maintenance Detect Manually Closed Monitor Alerts Rule'. The 'Created' date is '18/08/2013 12:40:00 PM'. The 'Alert Description' states: 'Over the last 1440 minutes, 3 monitor generated alert(s) have been closed manually by 2 users: CORP\tyang: 1 alert(s) CORP\admin: 2 alert(s)'. Below the alert details, there is a 'Knowledge' section with a 'View additional knowledge...' link. The 'Summary' section explains that the rule runs on a schedule and detects if any monitor-generated alerts have been closed manually by OpsMgr operators. The 'Configuration' section states that by default, the rule runs once a day at 00:05am and detects if any monitor-generated alerts were closed manually since last run. The following parameters are configurable via overrides: IntervalMinutes: Schedule frequency in minutes. The interval cannot be longer than the Operational DB Grooming setting for Resolved Alerts (by default 7 days). SyncTime: Time when the rule runs. TimeoutSeconds: Timeout in seconds for the PowerShell script within this rule. Default is 900 seconds (15 minutes). Increase it if it's required. The 'Causes' section states that monitor generated alerts should not be closed manually. The 'Resolutions' section states that you may need to reset health on the objects where the monitors are targeted. The 'Additional Information' section states that alerts that are raised by the monitors should not be manually resolved in Operations Manager. The 'Impact of Closing an Alert' section is also visible.

By default, this rule runs once a day at 00:05am and detects if any monitor-generated alerts were closed manually since last run. The following parameters are configurable via overrides:

IntervalMinutes: Schedule frequency in minutes. The interval cannot be longer than the Operational DB Grooming setting for Resolved Alerts (by default 7 days).

SyncTime: Time when the rule runs.

TimeoutSeconds: Timeout in seconds for the PowerShell script within this rule. Default is 900 seconds (15 minutes). Increase it if it's required.

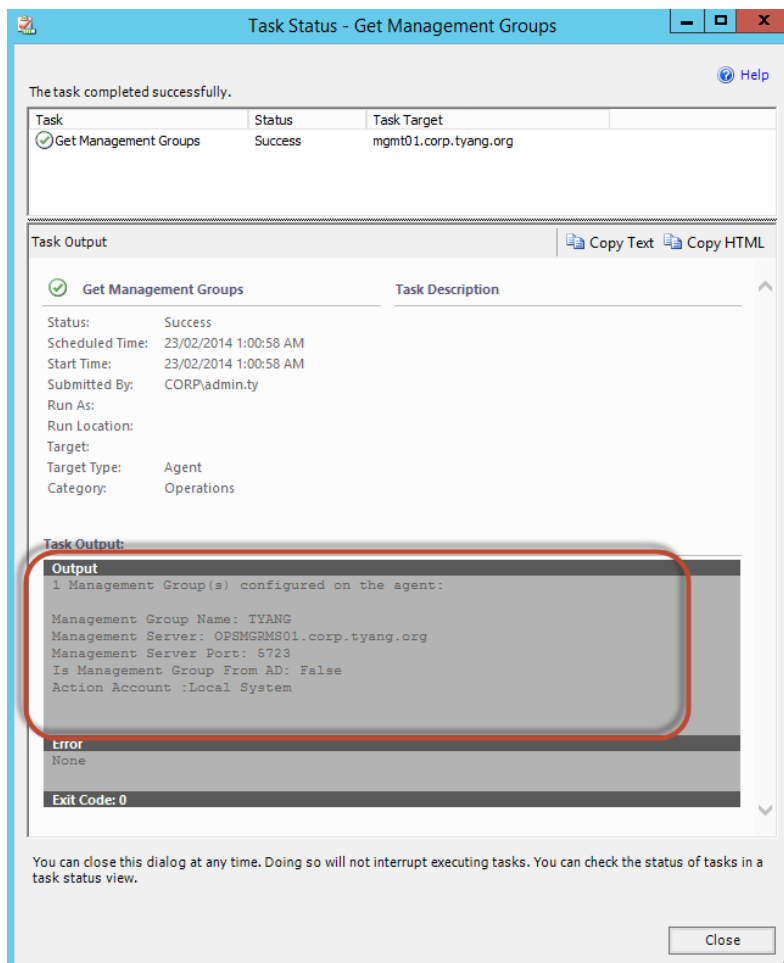
More information regarding to this behaviour:

[Alerts that are raised by the monitors should not be manually resolved in Operations Manager](#)

[Impact of Closing an Alert](#)

5.2.21 Agent Task: Get Management Groups (For OpsMgr 2012 Only)

This agent task is targeting the “Agent” object in OpsMgr 2012. it displays the management group(s) that are currently configured on the agent.



5.2.22 Auto Approve Manually Installed Agents based on Agents computer name and domain name regular expression match (For OpsMgr 2012 Only)

Workflow Name:

- OpsMgr 2012 Self Maintenance Approve Manual Agents Rule

By default in OpsMgr, there are 3 possible options for manually installed agents:

- Reject all
- Automatically Approve all
- Manually Approve by OpsMgr administrators

The “OpsMgr 2012 Self Maintenance Approve Manual Agents Rule” runs on a schedule and approve manually installed agents of which computer name and domain name match the configurable computer name and domain name regular expression. This rule presents 2 benefits:

1. Allow OpsMgr to automatically approve agents based on preconfigured naming convention. It eliminates the needs for administrators to manually approve agents.

2. Agents approvals are staged. This prevents large number of agents are approved at once. In a large OpsMgr environment, this is particularly important as approving a large number of agents at once could consume a lot of system resources on management servers to transfer management packs and process the initial discovery workflows submitted from the agents.

This rule can be customized using overrides:

IntervalMinutes: How often (in minutes) does this rule run.

AgentNameRegex: Regular Expression for acceptable Agent computer names

AgentDomainRegex: Regular Expression for acceptable Agent domain names

MaxToApprove: Maximum number of manually installed agents to be approved at a time.

SyncTime: What time does this rule run.

TimeoutSeconds: Timeout in seconds for the PowerShell script inside the rule.

This rule will approve manually installed agents (up to the number configured for MaxToApprove) if both agent's computer name and domain name match configured regular expressions.

An information alert is generated if the rule has approved at least one (1) agent(s).

Alert Details

Some Manually Installed Agents have been approved

Source: All Management Servers Resource Pool

Full Path Name: All Management Servers Resource Pool

Alert Rule: OpsMgr 2012 Self Maintenance Approve Manual Agents Rule

Created: 22/02/2014 8:18:42 PM

Alert Description

According to the agent computer name and domain name regular expression configured in the OpsMgr 2012 Self Maintenance Approve Manual Agents Rule, 2 manually installed agent(s) have been approved.

Agent Computer Name Regex: CLIENT

Agent Domain name Regex: ^corp.tyang.org\$

Please Check to the alert context for the list of approved agents.

Knowledge: [View additional knowledge...](#)

Summary

The "OpsMgr 2012 Self Maintenance Approve Manual Agents Rule" runs on a schedule and approve manually installed agents of which computer name and domain name match the configurable computer name and domain name regular expression.

Configuration

This rule can be customized using overrides:

The list of approved agents is available in Alert Context:

Alert Properties

General

Product Knowledge

Company Knowledge

History

Alert Context

Custom Fields

Date and Time:

22/02/2014 8:18:42 PM

Property Name

Property Value

AgentNameRegex

CLIENT

AgentDomainRegex

^corp.tyang.org\$

ApprovedComputers

CLIENT03.corp.tyang.org;CLIENT01.corp.tyang.org

ApprovedCount

2

MaxToApprove

2

5.2.23 Detect if each individual management server is in maintenance mode (For OpsMgr 2012 Only)

Workflow Names:

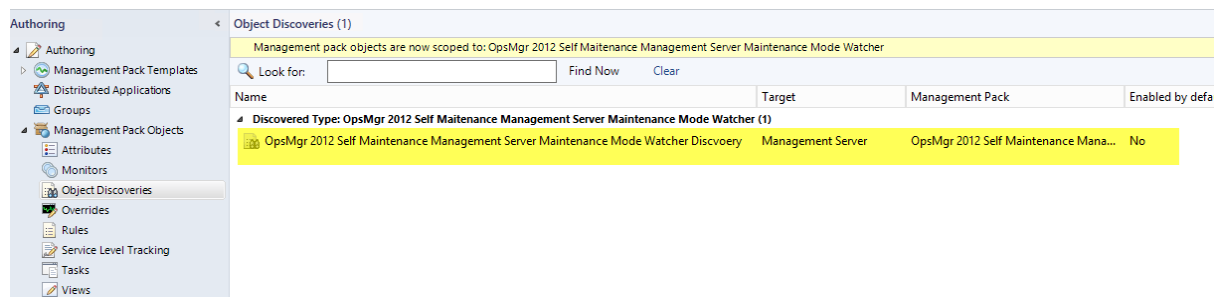
- OpsMgr 2012 Self Maintenance Management Server Maintenance Mode Watcher Discovery
- OpsMgr 2012 Self Maintenance Local Management Server in Maintenance Mode Monitor
- OpsMgr.2012.Self.Maintenance.Local.Management.Server.In.Maintenance.Mode.Monitor.Recovery.Task

This monitor is different than the “OpsMgr 2012 Self Maintenance Management Servers in Maintenance Mode Monitor” from Section 5.2.11 of this document. It is different in the following ways:

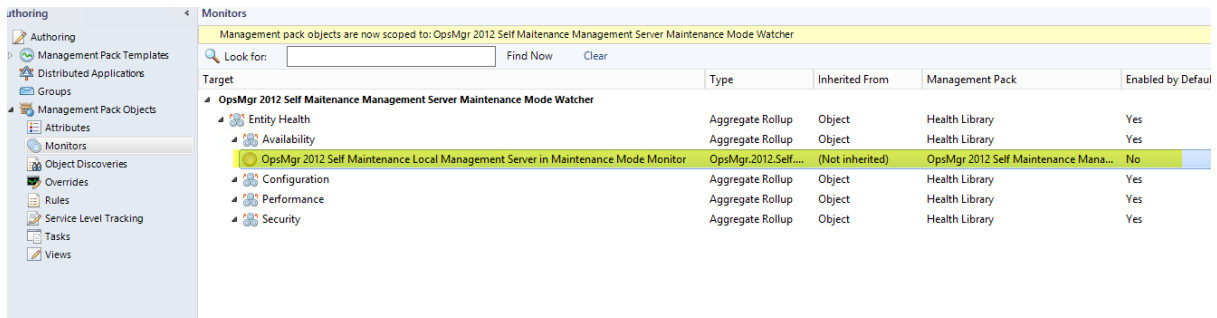
1. Instead of running the workflow on “All Management Servers Resource Pool”, a separate unhosted class called “OpsMgr 2012 Self Maintenance Management Server Maintenance Mode Watcher” is created for the management servers.
 - This class is discovered on each OpsMgr management server but it is not hosted by Windows Computer. I have taken this idea from Kevin Holman’s blog article [How to create workflows that wont go into Maintenance Mode](#). By doing so, the monitor that’s targeting this class will still run even when the management server’s Windows Computer object has been placed into maintenance mode.
 - The “OpsMgr 2012 Self Maintenance Management Servers in Maintenance Mode Monitor” from Section 5.2.11 has a limitation that it will only generate alerts when more than 50% of members of “All Management Servers Resource Pool” is healthy and not in maintenance mode.
2. A recovery task is also associated to this monitor (disabled by default). When enabled, it will automatically end the maintenance mode for the management server.
 - Please enable this recovery task with caution. i.e. If the monitor is configured to run every 5 minutes, you will never be able to place a management server into maintenance mode for more than 5 minutes. It may not always be desired.

In order to use this monitor, the following workflows need to be enabled via overrides:

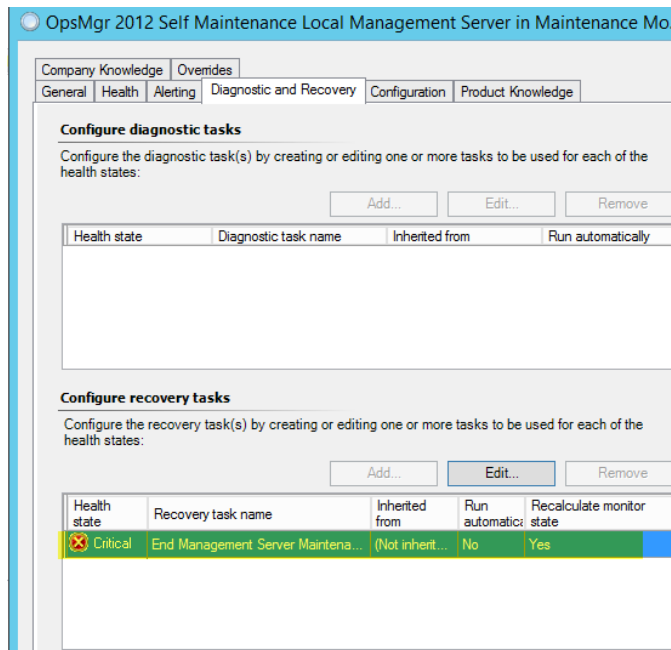
- OpsMgr 2012 Self Maintenance Management Server Maintenance Mode Watcher Discovery



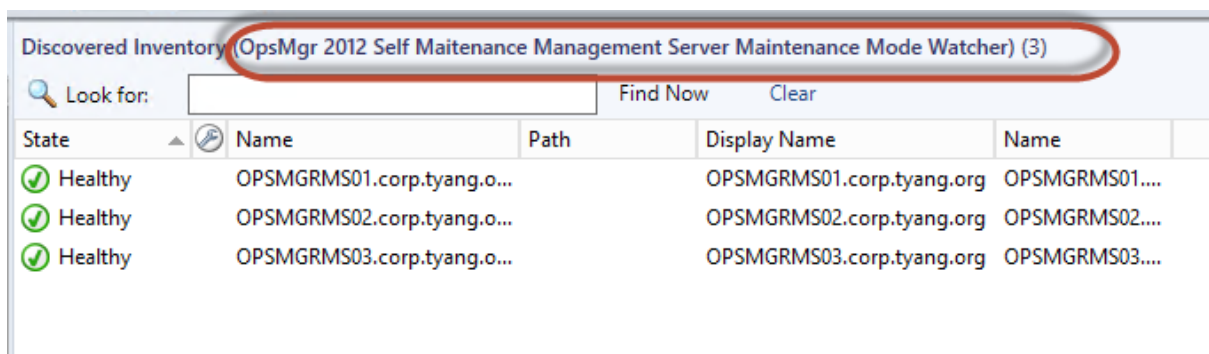
- OpsMgr 2012 Self Maintenance Local Management Server in Maintenance Mode Monitor



- OpsMgr.2012.Self.Maintenance.Local.Management.Server.In.Maintenance.Mode.Monitor.Recovery.Task (Optional)



When the object is enabled, a Maintenance Mode Watcher object will be created for each management server:



When the monitor is enabled, and management servers are placed into maintenance mode, The health state for the Maintenance Mode Watcher object becomes unhealthy and alerts are generated:

Management servers in Maintenance Mode:

Discovered Inventory (Management Server) (3)							
Look for:		Find Now		Clear			
State	Name	Path	Display Name	Authentication...	Maximum Que...	Maximi	
Not monito...	OPSMGRMS02....	OPSMGRMS02....	OPSMGRMS02....	OPSMGRMS02....	104857600		
Not monito...	OPSMGRMS03....	OPSMGRMS03....	OPSMGRMS03....	OPSMGRMS03....	104857600		
Not monito...	OPSMGRMS01....	OPSMGRMS01....	OPSMGRMS01....	OPSMGRMS01....	104857600		

Maintenance Mode Watcher Objects:

Discovered Inventory (OpsMgr 2012 Self Maintenance Management Server Maintenance Mode Watcher) (3)						
Look for:		Find Now		Clear		
State	Name	Path	Display Name	Name		
Critical	OPSMGRMS01.corp.tyang.org		OPSMGRMS01....	OPSMGRMS01....		
Critical	OPSMGRMS02.corp.tyang.org		OPSMGRMS02....	OPSMGRMS02....		
Critical	OPSMGRMS03.corp.tyang.org		OPSMGRMS03....	OPSMGRMS03....		

Alert for each management server:

Severity: Critical (19)						
UNIX LINUX Management Resource Poo...	Resource Pool Heartbeat Failure	New	22/02/2014 10:32:54 PM	< 1 Minute		
Network Devices Monitoring Resource P...	Resource Pool Heartbeat Failure	New	22/02/2014 10:32:24 PM	< 1 Minute		
AD Assignment Resource Pool Watcher	Resource Pool Heartbeat Failure	New	22/02/2014 10:32:24 PM	< 1 Minute		
OPSMGRMS02.corp.tyang.org	OpsMgr 2012 Management Server is in Maintenance ...	New	22/02/2014 10:32:02 PM	1 Minute		
OPSMGRMS01.corp.tyang.org	OpsMgr 2012 Management Server is in Maintenance ...	New	22/02/2014 10:31:05 PM	2 Minutes		
OPSMGRMS03.corp.tyang.org	OpsMgr 2012 Management Server is in Maintenance ...	New	22/02/2014 10:29:14 PM	3 Minutes		
Alert Details						
OpsMgr 2012 Management Server is in Maintenance Mode			Alert Description			
Source: OPSMGRMS02.corp.tyang.org			The OpsMgr 2012 Management Server is in maintenance mode.			
Full Path Name: OPSMGRMS02.corp.tyang.org			Maintenance Mode Details: OPSMGRMS02.corp.tyang.org (22/02/2014 11:31:51 AM - 22/02/2014 12:01:51 PM UTC),			
Alert Monitor: OpsMgr 2012 Self Maintenance Local Management Server in Maintenance Mode Monitor			Reason: PlannedOther, Created by: CORPadmin.ty			
Created: 22/02/2014 10:32:02 PM						

If the recovery task is enabled, the management server will automatically be taken out of maintenance mode:

Time	From	To	Operational State
22/02/2014 11:57 PM	✗	✓	Healthy
22/02/2014 11:57 PM	✓	✗	Error
22/02/2014 11:26 PM	✗	✓	Healthy
22/02/2014 11:25 PM	✓	✗	Error
22/02/2014 10:36 PM	✗	✓	Healthy
22/02/2014 10:32 PM	✓	✗	Error
22/02/2014 10:27 PM	○	✓	Healthy

Details

Context:

Date and Time:	22/02/2014 11:57:02 PM
Property Name	Property Value
MgmtServer	OPSMGRMS02.corp.tyang.org
IsRMSE	false
IsGateway	false
MonitoringObjectID	41979c5b-ce3f-11fc-8fb8-2e3b9201792b
InMaintMode	true
MaintModeStartTimeUTC	22/02/2014 12:56:03 PM
MaintModeScheduledEndTimeUTC	22/02/2014 1:26:03 PM
MaintModeReason	0
MaintModeCreatedBy	CORP\admin.ty

MaintModeDetails

OPSMGRMS02.corp.tyang.org (22/02/2014 12:56:03 PM - 22/02/2014 1:26:03 PM UTC), Reason: PlannedOther, Created by: CORP\admin.ty

Diagnostic and Recovery Options:

Task History:

✓ Recovery task ran successfully:	End Management Server Maintenance Mode
Scheduled Time:	22/02/2014 11:57 PM
Start Time:	22/02/2014 11:57 PM
Finish Time:	22/02/2014 11:57 PM
Submitted by:	

Recovery Output:

OPSMGRMS02.corp.tyang.org is currently in maintenance mode. Stopping Maintenance Mode... Done.

Additional Recovery Options:

Recovery Tasks:

- End Management Server Maintenance Mode

6 Views

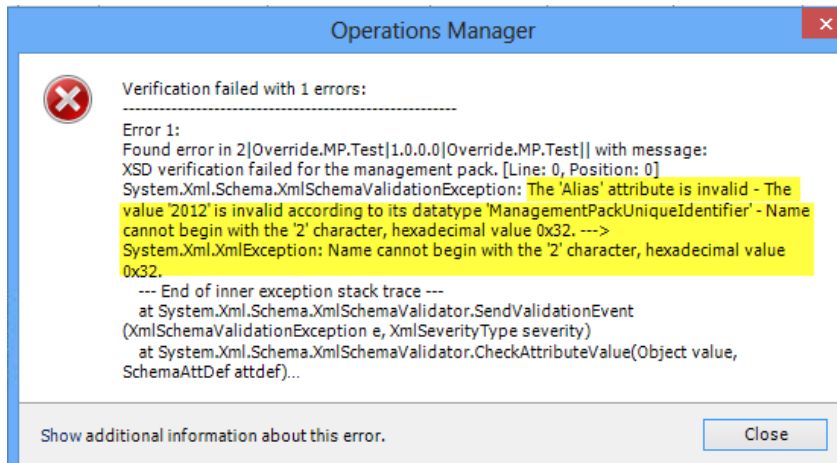
The following views are configured in the version 2.0.0.0 of the MP for OpsMgr 2012:



The purpose of creating the state views is to help OpsMgr administrators and operators to easily find the tasks that are targeting each OpsMgr class.

7 Known Issues

When configuring overrides for both OpsMgr 2007 R2 Self Maintenance MP and OpsMgr 2012 Self Maintenance MP, if the destination for the override is created inside the OpsMgr operations console (in another word, the provided override MP is not used), you may see an error when trying to save the MP:



This is because both Self Maintenance MPs contain the phrase “2012” or “2007” as part of the names and when the Operations console is trying to create a reference in the override MP, the alias it uses starts with the character “2” which is not allowed.

If the provided override MP cannot be used, to fix this issue, please follow the following steps:

1. Export the override MP
2. Remove the reference to the self maintenance MP if exists (in <manifest> <references> section, which is located at the top of the xml).
3. For OpsMgr 2012 version of the MP, Add the following lines inside the <references> tag:

```
<References>

<Reference Alias="OM12SelfMaint">

<ID>OpsMgr.2012.Self.Maintenance</ID>

<Version>1.0.0.1</Version>

<PublicKeyToken>136b1dfd385ca82a</PublicKeyToken>

</Reference>
```

4. For OpsMgr 2007 R2 version of the MP, Add the following lines inside the <references> tag:

```
<References>

<Reference Alias="OM07SelfMaint">

<ID>OpsMgr.2007.R2.Self.Maintenance</ID>

<Version>1.0.0.0</Version>
```

<PublicKeyToken>136b1dfd385ca82a</PublicKeyToken>

</Reference>

Appendix A: Event Log Entries Generated by This MP

Workflow	Script Name	Event ID	Event Severity	Description
OpsMgr.2012.Self.Maintenance.Balance.Agents.Within.ResourcePool.Rule	Balance-ManagementServersWithinResourcePool.ps1	9703	Error	Resource Pool Not Found
OpsMgr.2012.Self.Maintenance.Configure.Agents.Failover.Within.ResourcePool.Rule	Configure-AgentsFailoverWithinResourcePool.ps1	9708	Error	Resource Pool Not Found
OpsMgr.2012.Self.Maintenance.Configure.Agents.Failover.Within.ResourcePool.Rule	Configure-AgentsFailoverWithinResourcePool.ps1	9709	Info	The failover MS for agent xxxxx has been reconfigured. Failover MS before and after count.
OpsMgr.2012.Self.Maintenance.Configure.Agents.Failover.Within.ResourcePool.Rule	Configure-AgentsFailoverWithinResourcePool.ps2	9710	Info	The server is either a gateway server or it's not a member of the resource group. No changes have been made.
OpsMgr.2012.Self.Maintenance.User.Defined.Overrides.In.Default.MP.Detection.Rule	Detect-OverridesInDefaultMP.ps1	9706	Error	Unable to find Default MP
OpsMgr.2012.Self.Maintenance.User.Defined.Overrides.In.Default.MP.Detection.Rule	Detect-OverridesInDefaultMP.ps2	9707	Info	xx(number) user defined override(s) found in default MP
OpsMgr.2012.Self.Maintenance.MS.In.Maint.Mode.Monitor	MgmtServerInMaintModeProbe.ps1	9705	Info	No management servers are currently in maint mode
OpsMgr.2012.Self.Maintenance.MS.In.Maint.Mode.Monitor	MgmtServerInMaintModeProbe.ps1	9704	Warning	MS in maint mode, maint mode details
OpsMgr.2012.Self.Maintenance.Remove.Disabled.Discovery.Objects.Rule	Remove-DisabledDiscoveryObjects12.ps1	9700	Info	Start removing disabled discovery objects via SDK service on <MS Name>
OpsMgr.2012.Self.Maintenance.Remove.Disabled.Discovery.Objects.Rule	Remove-DisabledDiscoveryObjects12.ps1	9701	Info	Finished removing disabled discovery objects via SDK service on <MS Name>

OpsMgr.2012.Self.Maintenance.Local.Management.Server.In.Maintenance.Mode.Monitor	LocalMgmtServerInMaintModeProbe.ps1	9702	Info	LocalMgmtServerInMaintModeProbe.ps1 : Checking if OpsMgr Management Server <Mgmt Server FQDN> is in maintenance mode.
OpsMgr.2012.Self.Maintenance.Close.Aged.Rule.Generated.Alerts.Rule	Close-AgedRuleAlerts.ps1	9900	Warning	Incorrect configuration detected for the OpsMgr Self Maintenance Close Aged Rule Generated Alerts Rule. All 3 alert severities are configured to be excluded!
OpsMgr.2012.Self.Maintenance.Enable.Agent.Proxy.Rule	Enable-AgentProxy.ps1	15000	Info	number of agents proxy enabled