



SCUtils Management Pack for MGE UPS Guide

Solution for Microsoft System Center 2012 Operations Manager

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1. Getting started

SCUtils Management Pack for MGE UPS is an extension for Microsoft System Center 2012 Operations Manager to monitor MGE UPS devices. The product is based on the 'mgeupsmib17_ac.mib' MIB file.

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2. Compatibility

SCUtils Management Pack for MGE UPS has been designed and tested for the following versions of Microsoft System Center 2012 Operations Manager:

- Microsoft System Center 2012 Operations Manager R2.

The product might work in Microsoft System Center 2012 Operations Manager and Microsoft System Center 2012 Operations Manager SP1, but it is not tested. If you intend to use **SCUtils Management Pack for MGE UPS** in pre-R2 environments, please carefully evaluate the product in the testing environment.

2.1. Try before buy

SCUtils Management Pack for MGE UPS has a unified installer for trial and full versions and can be obtained on <http://www.scutils.com> on the Download page. We highly recommend to evaluate the software in a testing lab before an implementing in the production environment.

The free 15-day trial version is fully functional and offers every feature of the product. Please become familiar with this guide before starting using **SCUtils Management Pack for MGE UPS** and do not hesitate to contact us at support@scutils.com with any questions. You are also more than welcome to our [YouTube channel](#) where you will find video tutorials for **SCUtils Management Pack for MGE UPS** and our other products.

2.2. Feedback

Our team is always on the way of the improvement of our solutions. We highly appreciate every feedback from our customers. Please send us your thoughts, complains, and feature requests at support@scutils.com.

3. Requirements

All MGE UPS devices must be discovered as network devices. Please refer to the [Operations Manager guide](#) to details.

4. Installation

Download the installation package **SCUtils Management Pack for MGE UPS Setup.msi** from Download page of www.scutils.com. Copy the installation package to the Operations Manager management server.

Run **SCUtils Management Pack for MGE UPS Setup.msi** file on the server.

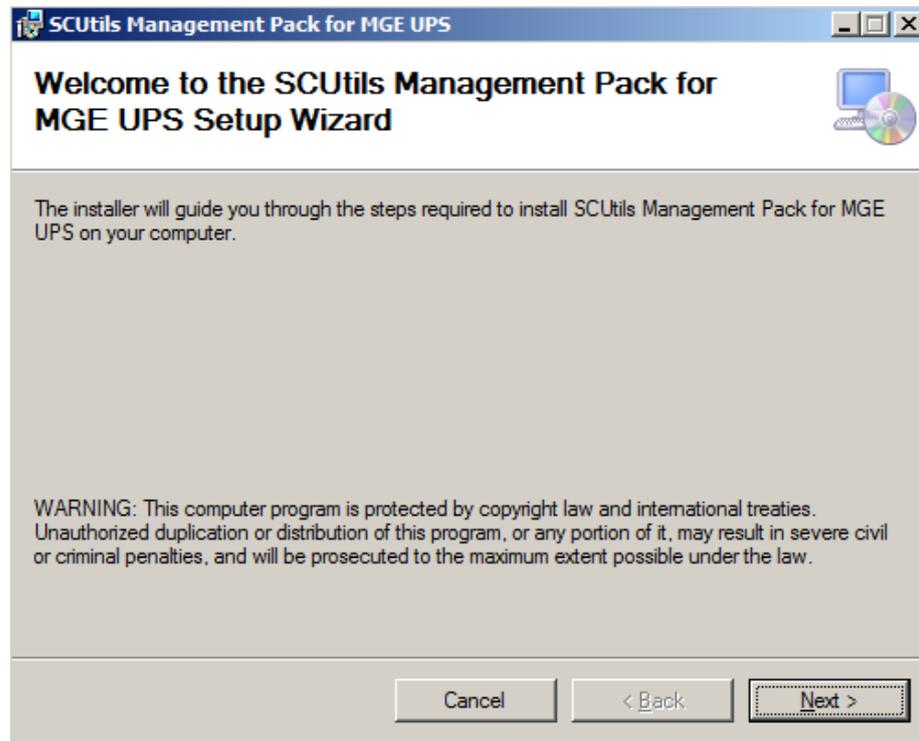


Fig.1 Installing

Follow the installation wizard steps (Fig.1). On the **Select Installation Folder** page you can change the location in which **SCUtils Management Pack for MGE UPS** will be installed.

After the successful installation, the installation folder will be opened automatically.

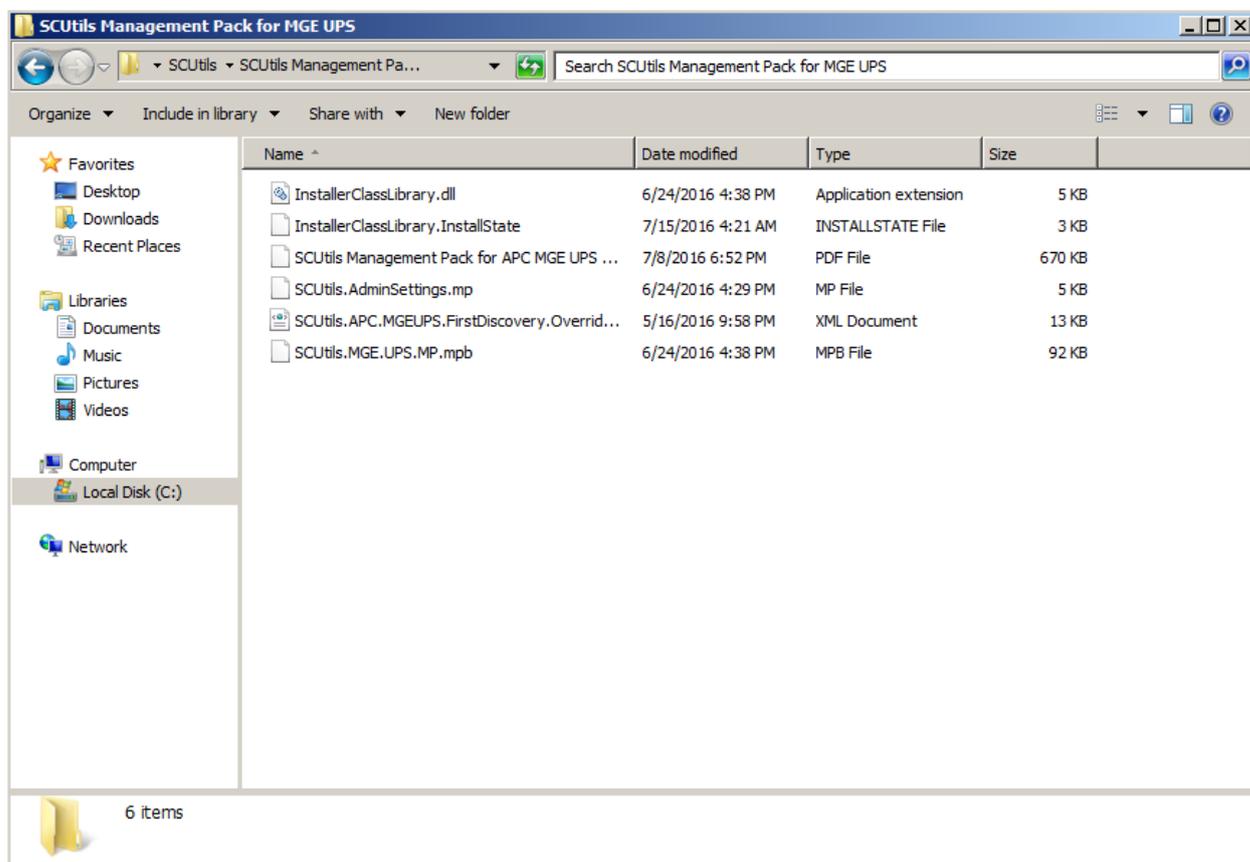


Fig. 2 Installation folder

To install the management packs:

1. Log on to the computer that hosts the **Operations Manager console** using an account that administrative rights in the Operations Manager.
2. In the Operations Manager console, select **Administration**.
3. In the **Administration** pane, select **Management Packs**.
4. In the **Tasks** pane, under **Actions**, click **Import Management Packs**.
5. In the **Select Management Packs** box, click on **Add** button, select **Add from disk**, in the **Online Catalog Connection** dialog select **No**.
6. In the **Select Management Packs to Import** box, point to the location of **SCUtils Management Pack for MGE UPS** installation folder (the default path is '*C:\Program Files\SCUtils\ SCUtils Management Pack for MGE UPS*').
7. In the list of files, select the management packs **SCUtils.AdminSettings.mp** (might be already presented if you have deployed our other products) and **SCUtils.MGE.UPS.MP.mpb**, and then click **Open**.
8. In the window **Import Management Packs**, click **Install**.

After the installation you have to activate your copy of the software. There are two ways to activate the product: online (recommended) and offline.

4.1. Using with gateway servers

If you plan to use Operations Manager gateway server as members of a resource pool to monitor MGE UPS devices, you have to perform the following actions in this manner:

1. Install the **Operations Manager console** on **each gateway server** that is a member of a resource pool for monitoring MGE UPS devices.
2. Adjust a firewall if a gateway server and its management server are separated by the firewall.

3. Specify the **credentials** for an account that will be used to connect to a management server of the gateway. This action has to be performed on **each gateway server** that is a member of a resource pool for monitoring APC MGE UPS devices.

If the gateway server and management server are separated by a firewall, you have to adjust the firewall to open the following ports in both directions between the gateway server and its management server:

1. TCP 5723
2. TCP 5724

Please refer to the [Microsoft article](#) to find an additional information about ports used by Operations Manager servers.

If you have already specified the **credentials** on gateway servers for **other SCUtils products**, you don't need to repeat the procedure. If not, you need to set the credentials for the connectivity.

To specify the credentials:

1. Prepare an account that is a member of **Operations Manager Read-Only Operators** group.
2. Copy **SetAccountToRegistry.exe** from the installation folder (the default path is 'C:\Program Files\SCUtils\ SCUtils Management Pack for MGE UPS') to **each gateway server** that is a member of a resource pool for monitoring APC MGE UPS devices.
3. Run **SetAccountToRegistry.exe** using a local administrator account.
4. Fill in all the required fields.
5. Click on **Test** button.
6. If the connectivity test has succeeded, click on **Save** button (the password will be encrypted before saving). Otherwise, reenter the information and try to test again.
7. Repeat the procedure on **each gateway server** that is a member of a resource pool for monitoring MGE UPS devices.

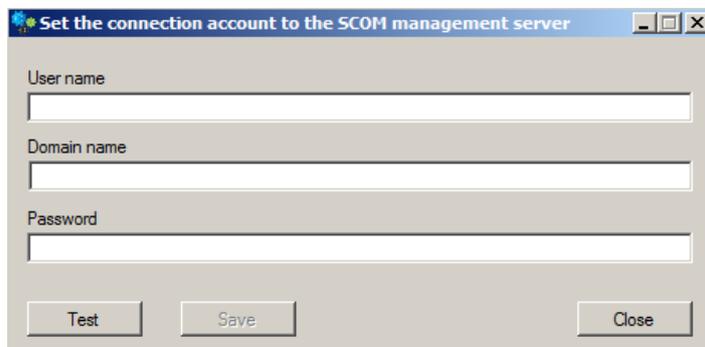


Fig. 3 SetAccountToRegistry dialog.

4.2. Online activation

Run the Operations Manager console under an Operations Manager administrative account on the computer connected to internet. Open **SCUtils Management Pack for MGE UPS Activation** to activate the copy of the product:

1. In the Operations Manager console, select **Administration**.
2. In the **Administration** pane, expand **SCUtils Settings**.
3. In the **SCUtils Products Activation** view, click **SCUtils Management Pack for MGE UPS Activation**.
4. In the **Tasks** pane, under **SCUtils Management Pack for MGE UPS Activation Tasks**, click **Activate**.

5. **Run Task - Activate** window will be opened (Fig.4).

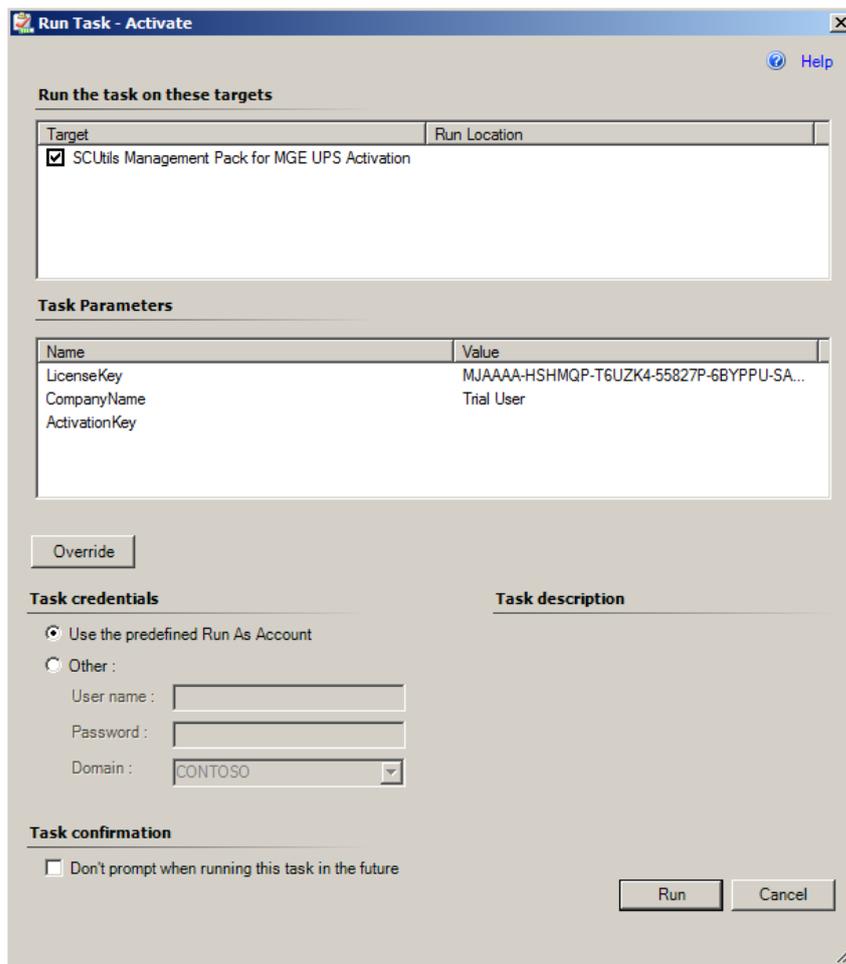


Fig.4 SCUtils Management Pack for MGE UPS Activation

If you want to evaluate the product, simply click on **Run** button.

If you want to activate a full version, click on **Override** button, then define new values for **CompanyName** and **LicenseKey** (exactly as in the license), then click on **Run** button.

If the management server haven't finished the deployment of the management pack's resources, you could receive errors or the task will stay in a scheduled state. In this case, just wait for 2-5 minutes and run the **Activate** task again.

If you have any issues with the activation process or are not able to use the online activation, please send your **Unique ID** at support@scutils.com and we will provide you with an offline **Activation Key**. To get the **Unique ID** of your environment, use **Get a Unique ID for an offline activation** task.

4.3. Offline activation

If you prefer to activate offline or for some reasons you are not able to use the online activation, send your **Unique ID** at support@scutils.com and specify what activation type you need (trial or full) and we will provide you with offline **Activation Key**.

After you receive the Activation Key, use **Override** button fill out **CompanyName**, **LicenseKey**, and **ActivationKey** (of just **ActivationKey** for a trial activation), then click on **Run** button.

5. Uninstallation

To uninstall **SCUtils Management Pack for MGE UPS** log in the Operations Manager management server where the product was installed. Open **Control Panel**, click on **Uninstall a program**, select **SCUtils Management Pack for MGE UPS**, and click on **Uninstall**.

Open Operations Manager 2012 console, go to **Administration -> Management Packs**. Select **SCUtils Management Pack for MGE UPS** and click on **Delete** task. If required, delete all depending management pack as well. If you don't have any other SCUtils products, you can also delete **SCUtils Base Settings Library** management pack.

6. Using SCUtils Management Pack for MGE UPS

Once you complete the activation process, you can start using **SCUtils Management Pack for MGE UPS**.

6.1. Discovery MGE UPS devices

After the successful activation the discovery process will start. The default interval for discoveries is set to **86400** seconds. It allows to discover all MGE UPS instances within 1 or 2 days. You can use override to specify shorter intervals to speed up the process. The installation folder includes a management pack named **SCUtils.APC.MGE.UPS.FirstDiscovery.Overrides.xml**. You could import it to set the intervals for all discoveries to 600 seconds (10 minutes). When the discovery is over, please don't forget to delete this management pack (**Overrides for SCUtils Management Pack for MGE UPS**). Please refer to the [Operations Manager guide](#) to details.

To change the scope in the Object Discoveries view in the Authoring Pane, please filter objects by 'MGE UPS'.

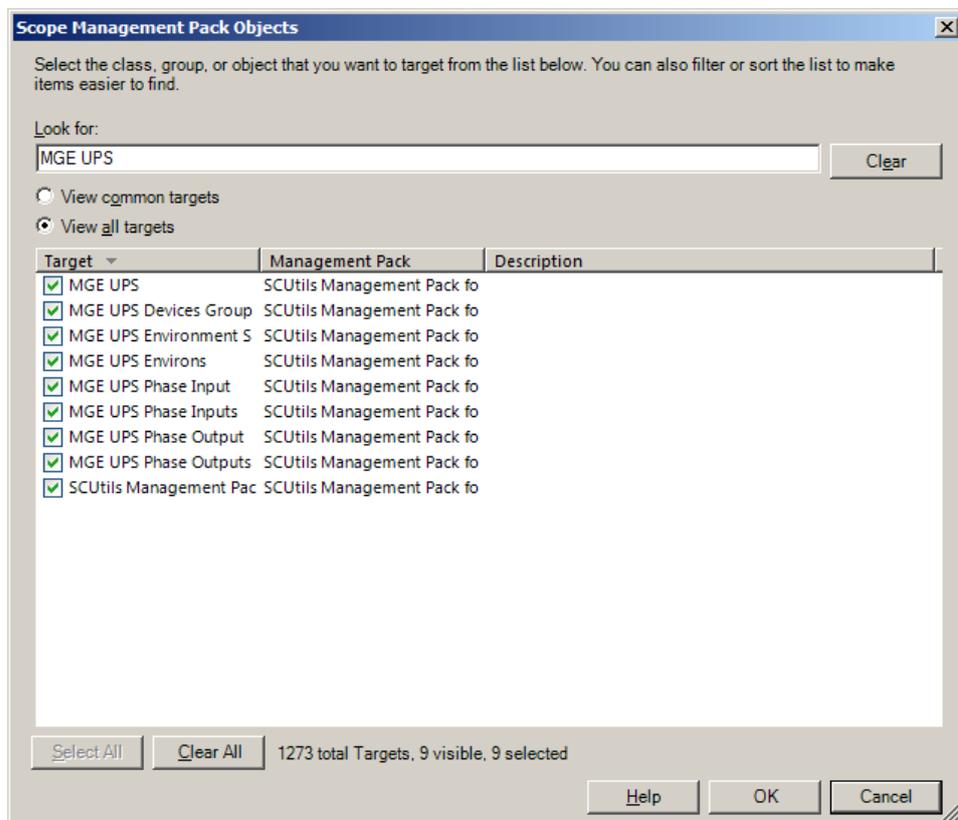


Fig. 5 Changing the scope in Object Discoveries

6.2. MGE UPS Environment Sensor Discovery

MGE UPS Environment Sensor Discovery is disabled by default. If there are environment sensors connected to MGE UPS devices, you have to enable this discovery for UPS devices equipped with the environment sensors.

Name	Target	Management Pack	Enabled by default
MGE UPS Details Discovery	MGE UPS	SCUtils Management Pack for MGE UPS	Yes
MGE UPS Phase Outputs Discovery	MGE UPS	SCUtils Management Pack for MGE UPS	Yes
MGE UPS Phase Inputs Discovery	MGE UPS	SCUtils Management Pack for MGE UPS	Yes
SCUtils.MGE.UPS.Devices.Group.Discovery	MGE UPS Devices Group	SCUtils Management Pack for MGE UPS	Yes
MGE UPS Environs Discovery	MGE UPS	SCUtils Management Pack for MGE UPS	Yes
Discovered Type: MGE UPS Devices Group (1)			
SCUtils.MGE.UPS.Devices.Group.Discovery	MGE UPS Devices Group	SCUtils Management Pack for MGE UPS	Yes
Discovered Type: MGE UPS Environment Sensor (1)			
MGE UPS Environment Sensor Discovery	MGE UPS Environs	SCUtils Management Pack for MGE UPS	No
Discovered Type: MGE UPS Environs (2)			
MGE UPS Environment Sensor Discovery	MGE UPS Environs	SCUtils Management Pack for MGE UPS	No
MGE UPS Environs Discovery	MGE UPS	SCUtils Management Pack for MGE UPS	Yes
Discovered Type: MGE UPS Phase Input (1)			
MGE UPS Phase Input Discovery	MGE UPS Phase Inputs	SCUtils Management Pack for MGE UPS	Yes

Fig. 6 MGE UPS Environment Sensor Discovery

6.3. Monitors

SCUtils Management Pack for MGE UPS uses monitors to control the state of MGE UPS's components as well as connected environment sensors if presented.

All monitors are enabled by default. Please use overrides to disable any monitor if required.

Monitor	Description
Fault Battery Monitor	The battery fault status
No Battery Monitor	The UPS has no Battery status
Battery Replacement Monitor	The UPS Battery to be replaced status
Unavailable Battery Monitor	The UPS Battery is unavailable status
Battery Not High Charge Monitor	The UPS Battery quit high condition status
Low Battery Monitor	The battery low status
Battery Charger Fault Monitor	The UPS Battery is not charging status
Battery Low Condition Monitor	The UPS is at low condition status
Battery Low Recharge Monitor	The UPS Battery is not recharged status
Input Bad Status Monitor	The utility power bad voltage or bad frequency status
Input Line Fail Cause Monitor	The utility power failure cause: <ul style="list-style-type: none"> • is for no utility failure, • is for voltage out of tolerance, • is for frequency out of tolerance, • is for no voltage at all
Output On Battery Monitor	The UPS on battery / on main status
Output On ByPass Monitor	The UPS on bypass status
Output Unavailable ByPass Monitor	The bypass unavailable status
Output No ByPass Monitor	The UPS bypass installed status
Output Utility Off Monitor	The UPS utility off status
Output On Boost Monitor	The UPS on booster status
Output Inverter Off Monitor	The UPS Inverter on / off status
Output OverLoad Monitor	The output over load status
Output Over Temperature Monitor	The ups over temperature status
Environment Communication Failure Monitor	The sensor communication failure
Environment Temperature Low Monitor	Temperature is below low threshold
Environment Temperature High Monitor	Temperature is below high threshold

Monitor	Description
Environment Humidity Low Monitor	Humidity is below low threshold
Environment Humidity High Monitor	Humidity is above high threshold
UPS Test Diag Result Monitor	The automatic test diagnostic result
Test Battery Result Monitor	The test battery result
Output Load Per Phase Monitor	The output load per phase
Input Voltage Monitor	The Input voltage per phase

6.4. Informative rules

The table below presents all informative rules of **SCUtils Management Pack for MGE UPS**.

Rule	Description
Battery Recharge Level Rule	The actual value of the battery recharge level that will be reached during the time delay necessary to restart after power returns.
Battery Full Recharge Time Rule	The battery full recharge time (from 0 to 100 percent) at current load.
Battery Voltage Rule	The actual battery voltage.
Battery Recharge Time Rule	The actual operational battery recharge time to set point equal to upsmgConfigRechargeLevel.
Battery Temperature Rule	The battery temperature.
Battery Remaining Time Rule	The time remaining actual charge vs actual load (dynamic).
Battery Current Rule	The actual battery current.
% Battery Level Rule	The battery level as a percentage of charge.
Environment Temperature	The temperature measurement in unit 0.1 Cel.
Environment Humidity %	The humidity measurement in unit 0.1 %
Input Phase Voltage	The input phase voltage
Input Phase Current	The input phase current
Output Phase Voltage	The output phase voltage
Output Load Per Phase	The output load per phase
Output Phase Current	The output phase current

6.5. Using SNMP traps

SCUtils Management Pack for MGE UPS supports monitoring with SNMP traps.

Please make sure that SNNMP Trap service is not running on the management servers belong to resource pools used for network monitoring.

Name	Description	Status	Startu... ^	Log On As
 Routing and Remot...	Offers rout...	Disabled		Local System
 SNMP Trap	Receives tr...	Disabled		Local Service
 SQL Server Browser	Provides S...	Disabled		Local Service
 SSDP Discovery	Discovers ...	Disabled		Local Service
 UPnP Device Host	Allows UPn...	Disabled		Local Service
 Application Experie...	Processes ...	Manual		Local System
 Application Identity	Determines...	Manual		Local Service

Fig. 7 Inactive SNMP Trap service

Then set up MGE UPS devices to send SNMP traps to specific events using **IP address** or **hostname** of the **management server** from the network monitoring resource pool.

Specify **SNMP v.1**, if required.

Specify the **same community string** as in a discovery rule for that MGE UPS device.

Please refer to manuals of your MGE UPS device or SNMP/web network management card for details.

The management pack contains of around 60 rules for each trap type. For each rule you can specify your own **Priority** and **Severity** level using **overrides**. Please refer to the [Operations Manager guide](#) to details.

The name of trap alert rule starts with 'UPS Trap Alert Rule'.

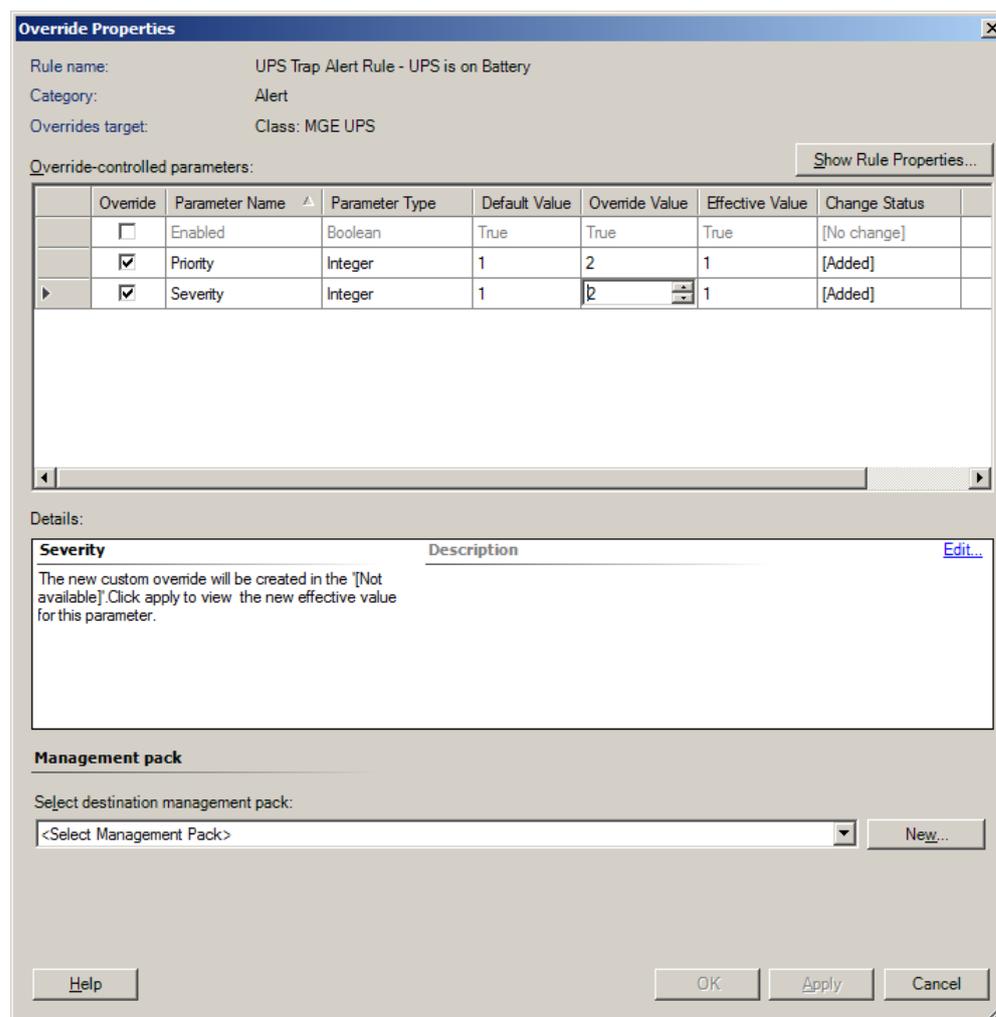


Fig. 8 Overriding Priority and Severity.

Severity defines the alert severity and can be one of the following values:

- 0 - Information
- 1 - Warning
- 2 – Critical

Priority defines the alert priority and the mapping, and it can be one of the following values:

- 0 - Low
- 1 - Medium
- 2 – High

6.6. Reports

SCUtils Management Pack for MGE UPS includes 11 reports available in the Reporting workspace.

7. Known issues and troubleshooting

Here we describe the known issues. If you haven't found a solution in this section, please contact us at support@scutils.com.

7.1. The Activate task fails to complete

If you've just installed the management packs and try to activate the product, the Activate task may fail to complete. It happens because the management servers require some time to complete the deployment of the management pack's resources. Please wait for 2-5 minutes and try to activate again. If the task fails again, just give a bit more time and repeat the attempt.