Centreon DSM Documentation

Release 18.10.0

Centreon

October 25, 2018

Contents

Centreon is an Open Source software package that lets you supervise all the infrastructures and applications comprising your information system. Centreon DSM is a module to manage undeclared alarms.

Contents:

CHAPTER 1

Installation

1.1 Using packages

Centreon provides RPM for its products through CES. Open source products are freely available from our repository.

1.1.1 Centreon installation

Install a central server

This part is to install **Centreon DSM** on a central server. Centreon DSM server and client will be installed on the main server.

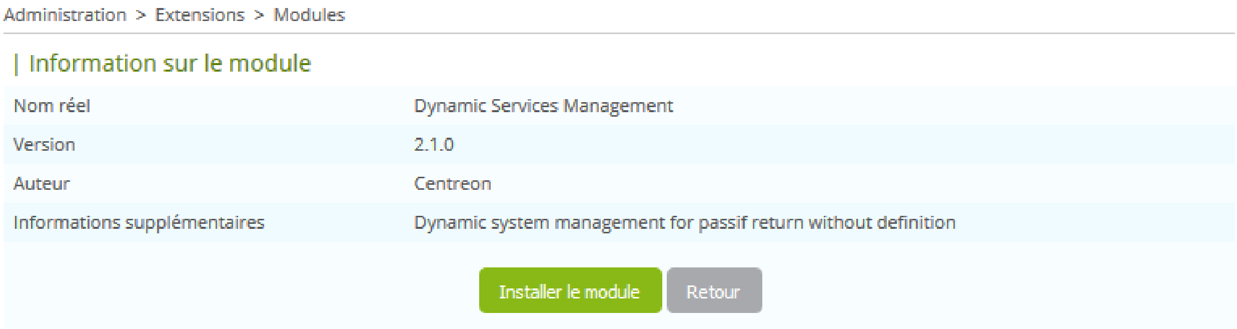
Run the command:

```
$ yum install centreon-dsm-server centreon-dsm-client
```

After installing the rpm, you have to finish the module installation via the web frontend. Go on :

```
Administration > Extensions
```

Install the Centreon-DSM module.

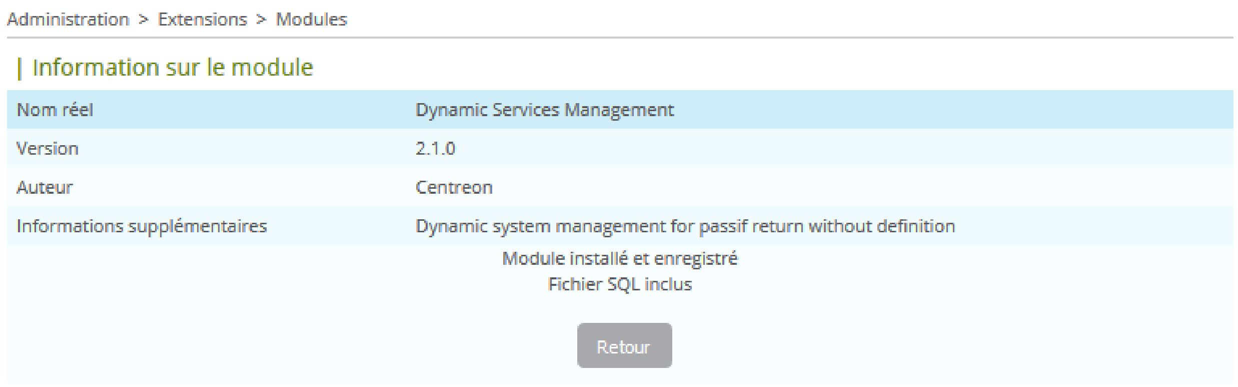


Administration > Extensions > Modules

| Information sur le module

Nom réel	Dynamic Services Management
Version	2.1.0
Auteur	Centreon
Informations supplémentaires	Dynamic system management for passif return without definition

Your Centreon DSM Module is now installed.



Administration > Extensions > Modules

| Information sur le module

Nom réel	Dynamic Services Management
Version	2.1.0
Auteur	Centreon
Informations supplémentaires	Dynamic system management for passif return without definition

Module installé et enregistré
Fichier SQL inclus

Install a poller

This part is to install **Centreon DSM** on a poller. Only client will be installed

Run the command:

```
$ yum install centreon-dsm-client
```

You have now to configure MySQL access in order that your poller is enable to connect to central server with the centreon user to the centreon and centreon_storage database.

Base configuration of pollers

In Centreon DSM the communication between a poller and a central server is by MySQL. DSM Client need to have access to MySQL server in order to store new alarms.

Note: The new trap system **centreontrapd** doesn't need an access to the database but Centreon-DSM does.

CHAPTER 2

Upgrade

2.1 From 1.x to 2.x

2.1.1 From RPM packages

Merethis provides RPM for its products through CES. Open source products are freely available from our repository.

2.1.2 Centreon upgrade

Upgrade a central server

This part is a how to upgrade a **Centreon DSM** for a central server.

Centreon DSM server and client will be installed on the main server.

The version 1.x of Centreon DSM doesn't contain a server and a client: the client embed the intelligence and the server is just a cron task.

This organization was a problem due of load problems. That's why we completely change this module. That's why this version is a major version.

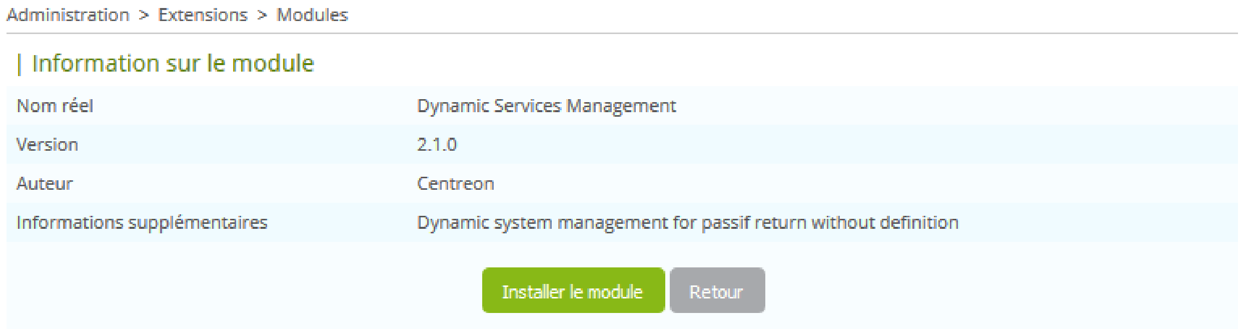
To upgrade run the following command:

```
$ yum upgrade centreon-dsm-server centreon-dsm-client
```

After installing the rpm, you have to finish the module installation via the web frontend. Go on:

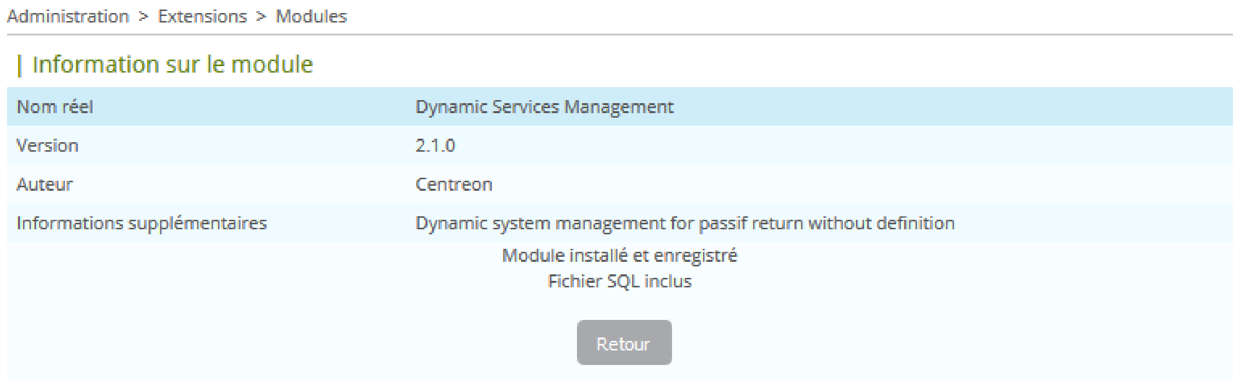
```
Administration > Modules
```

Install the Centreon-DSM module.



| Information sur le module
Nom réel	Dynamic Services Management
Version	2.1.0
Auteur	Centreon
Informations supplémentaires	Dynamic system management for passif return without definition

Your Centreon DSM Module is now installed.



Administration > Extensions > Modules

| Information sur le module

Nom réel	Dynamic Services Management
Version	2.1.0
Auteur	Centreon
Informations supplémentaires	Dynamic system management for passif return without definition

Module installé et enregistré
Fichier SQL inclus

In order to migrate the trap configuration, you have to change all specific commands configured on your specific traps. On each specific commands rename the following path:

```
/usr/share/centreon/bin/snmpTrapDyn.pl
```

by

```
/usr/share/centreon/bin/dsmclient.pl
```

All parameters are the same.

Install a poller

This part is a howto install Centreon DSM on a poller. Only client will be installed on a poller.

To install centreon DSM, run the following commands:

```
$ yum erase centreon-dsm
$ yum install centreon-dsm-client
```

You have now to configure MySQL access in order that your poller is enable to connect to central server with the centreon user to the centreon and centreon_storage database.

In order to do that, connect you on MySQL with root user and launch the following request:

```
$ GRANT SELECT ON `centreon`.`*` TO ’centreon’@’POLLER_IP’;
$ GRANT SELECT, INSERT, UPDATE ON `centreon_storage`.`*` TO ’centreon’@’POLLER_IP’;
```

Now, from your poller, try to connect with MySQL client. If you have problem to configure MySQL connection, please refer to the database documentation: http://dev.mysql.com/doc/refman/5.5/en/grant.html

Base configuration of pollers

The communication between a poller and a central server is by MySQL. DSM Client need to have access to MySQL server in order to store new alarms.

Note: The new trap system **centreontrapd** doesn’t need an access to the database but Centreon-DSM does.

CHAPTER 3

User guide

3.1 Overview

Centreon module, Dynamic Service Management (Centreon-DSM) is an extension to manage alarms with an eventlogs system. With DSM, Centreon can receive events such as SNMP traps resulting from the detection of a problem and assign events dynamically to a slot defined in Centreon, like a tray events.

A resource has a set number of “slots” (containers) on which alerts will be assigned (stored). While this event has not been taken into account by a human action, it will remain visible in the interface Centreon. When event is acknowledged, the slot becomes available for new events.

The goal of this module is to overhead the basic trap management system of Centreon. The basic function run with a single service and alarm crashed by successive alarms.

3.2 Architecture

The event must be transmitted to the server via an SNMP trap. The SNMP trap is thus collected by the **snmptrapd daemon**. If reception parameters are valid (authorized community), then it sends snmptrapd trap SNMP binary SNMPTT. Otherwise, the event is deleted.

Once the SNMP trap has been received, it is sent to the **centreontrapdforward** script which writes the information received in a buffer folder (by default: /var/spool/centreontrapd/).

The **centreontrapd** service reads the information received in the buffer folder and interprets the traps received checking, in the centreon database, the actions necessary to process these events. In Centreon DSM we execute a **special command**.

This special command is executing binary **dsmclient.pl** with arguments. This client will store the new trap in a slot queue that the daemon read every 5 seconds.

The daemon **dsmd.pl** will search in database “centreon” name slots (pool service liabilities) associated with the host. If no slot is created, the event is deleted. Otherwise, the binary will look if there is at least one free slot. If at least one slot is free, then it will transmit to monitoring engine external commands to change the state of the slot. Otherwise the data will be made no secret pending the release of a slot. A slot is releasable served by paying the liabilities.

3.3 Configure Slots

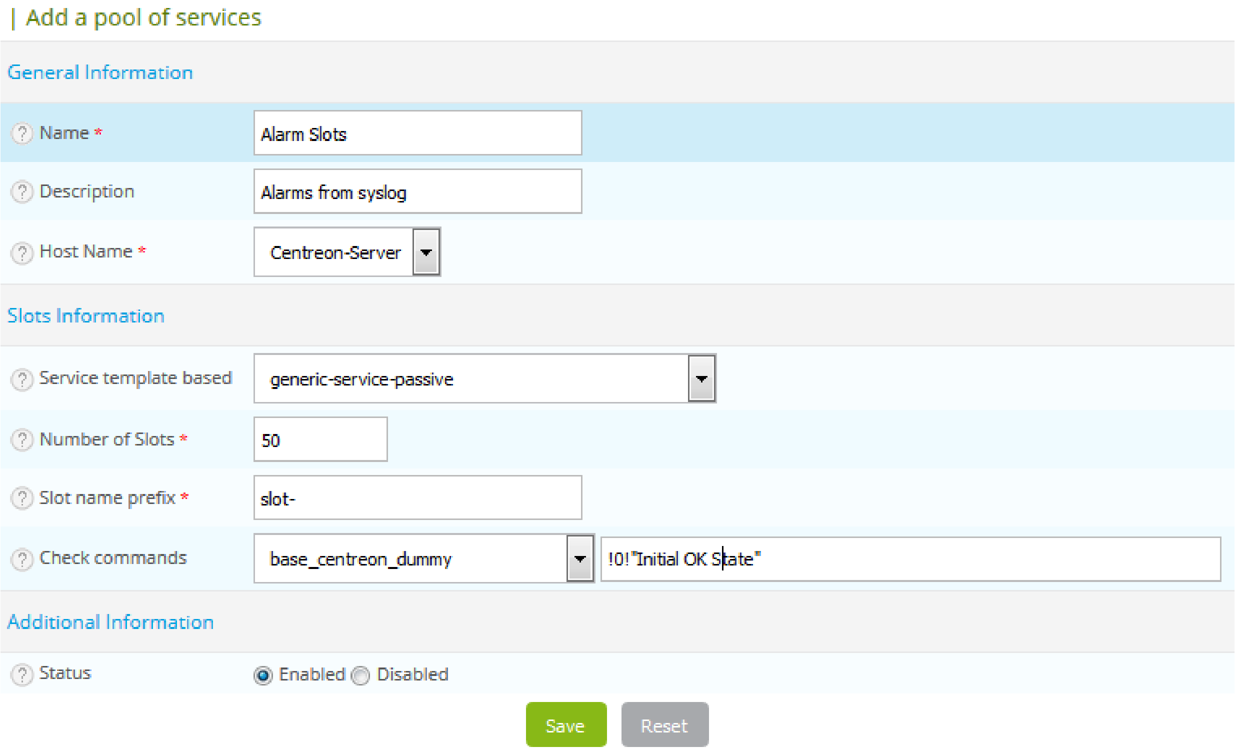
In Centreon WebUI, go on:

`Administration > Modules > Dynamic Services`

and click on the **add** link. In order to create or modify a slot group, please follow the table below in order to understand the role of all parameters.

Parameters	Descriptions
Name	This is the name of the slot group.
Description	This is the description of the group.
Host Name	The name which host the slots.
Service template bas	The base service template use to create service slots on the host. This template must have been a passive template. This template must be 100 % passive and a custom macro have to be created on it. The macro is named "ALARM_ID" and the default value must be "empty".
Number of slots	The number of slot that Centreon will create on the selected host when the form will be validated.
Slot name prefix	The prefix is user to give the name of slots. The name will be follow by a number incremented from 0 to the number of slots.
Check command	This check command is used when the service have to be forced in order to free a slot. The check command must have to send a ok return code.
Status	The status of the slot.

You can find in the following picture, an example of form.



Add a pool of services

General Information

Name *	Alarm Slots
Description	Alarms from syslog
Host Name *	Centreon-Server

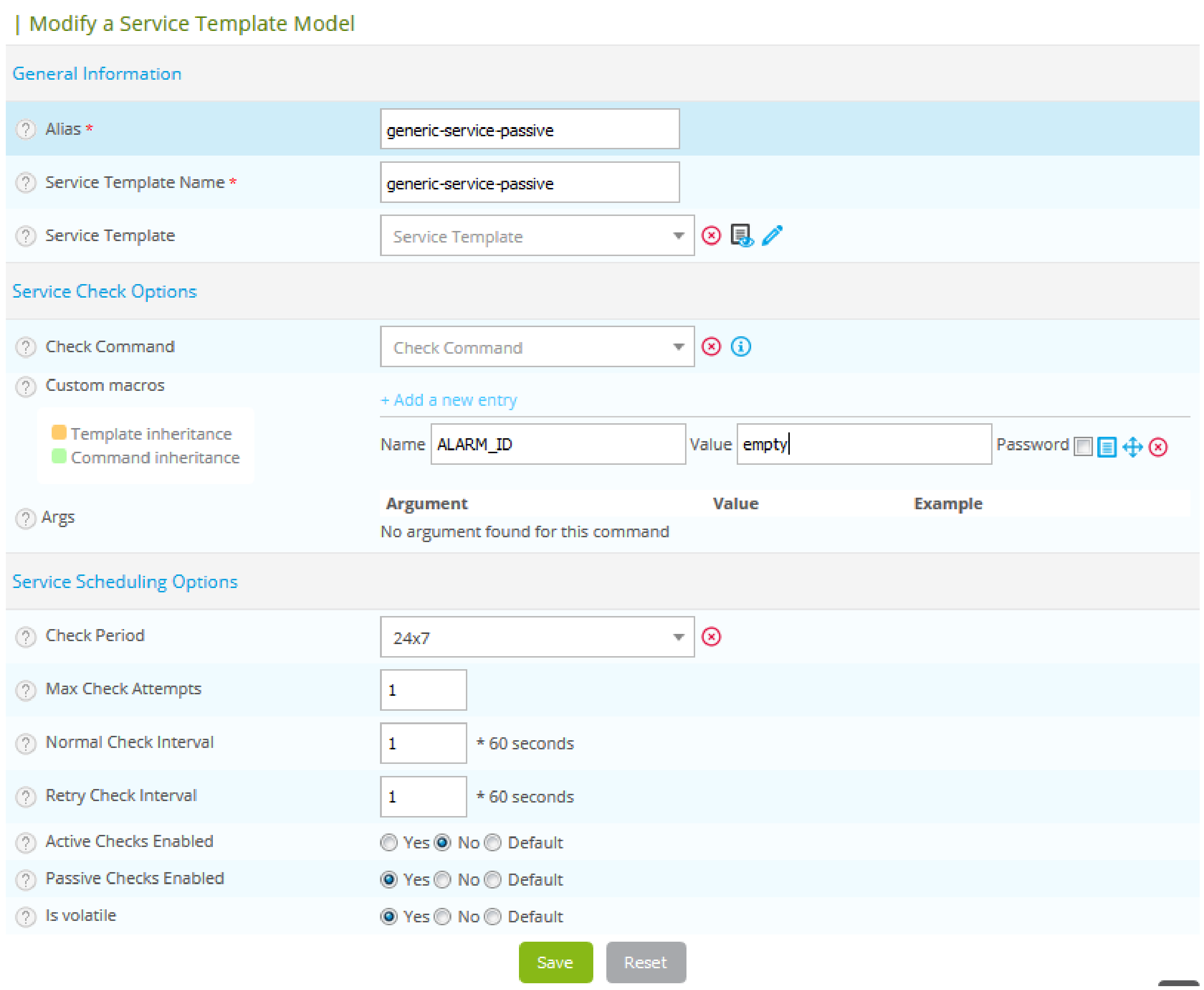
Slots Information

Service template based	generic-service-passive	
Number of Slots *	50	
Slot name prefix *	slot-	
Check commands	base_centreon_dummy	!0!"Initial OK State"

Additional Information

Status	● Enabled ○ Disabled

An example of passive service template is available below:



| Modify a Service Template Model

General Information

Alias *	generic-service-passive
Service Template Name *	generic-service-passive
Service Template	Service Template

Service Check Options

Check Command	Check Command
Custom macros	+ Add a new entry Name ALARM_ID Value empty Password □

Args	Argument	Value	Example
	No argument found for this command		

Service Scheduling Options

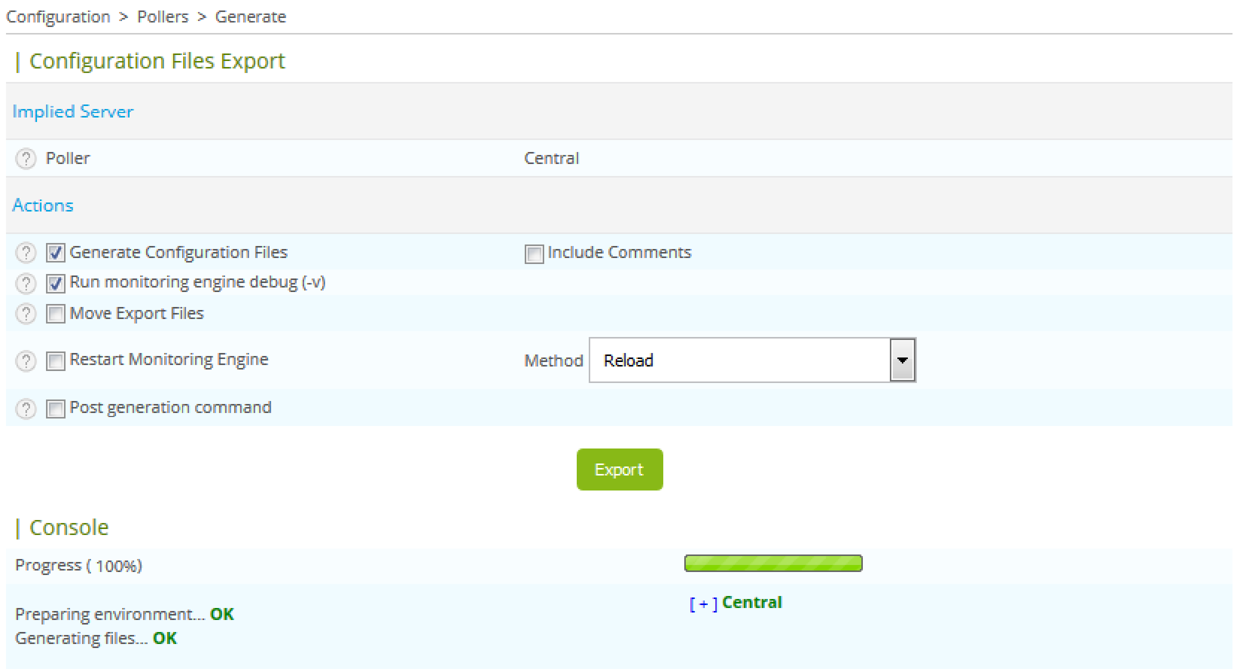
Check Period	24x7
Max Check Attempts	1
Normal Check Interval	1 * 60 seconds
Retry Check Interval	1 * 60 seconds
Active Checks Enabled	○ Yes ● No ○ Default
Passive Checks Enabled	● Yes ○ No ○ Default
Is volatile	● Yes ○ No ○ Default

Warning: The macro ALARM_ID is mandatory. The default empty is also necessary.

When you validate the form, Centreon will create or update all slot. If you don't have changed any value, you don't have to do other action. Else you have to go to:

```
Configuration > Monitoring Engine
```

In order to generate configuration of the poller who have been impacted by the changes. If you don't do that, you will not see your changes appears into Centreon Monitoring UI.



Configuration > Pollers > Generate

| Configuration Files Export

Implied Server

Poller: Central

Actions

☑ Generate Configuration Files — □ Include Comments
☑ Run monitoring engine debug (-v)
□ Move Export Files
□ Restart Monitoring Engine — Method: Reload
□ Post generation command

Export

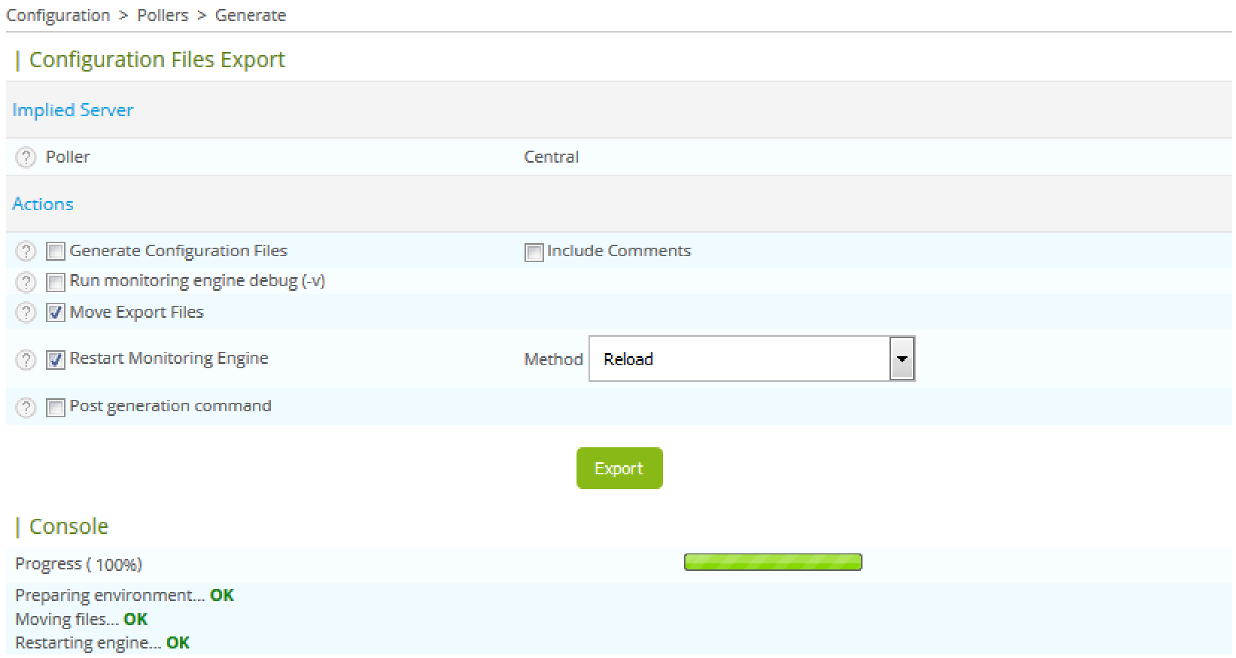
| Console

Progress (100%)

[+] Central

Preparing environment... OK
Generating files... OK

Now the configuration has been generated and validated by Centreon Engine. You can now push the configuration files and restart.



Configuration > Pollers > Generate

| Configuration Files Export

Implied Server

Poller: Central

Actions

□ Generate Configuration Files — □ Include Comments
□ Run monitoring engine debug (-v)
☑ Move Export Files
☑ Restart Monitoring Engine — Method: Reload
□ Post generation command

Export

| Console

Progress (100%)

Preparing environment... OK
Moving files... OK
Restarting engine... OK

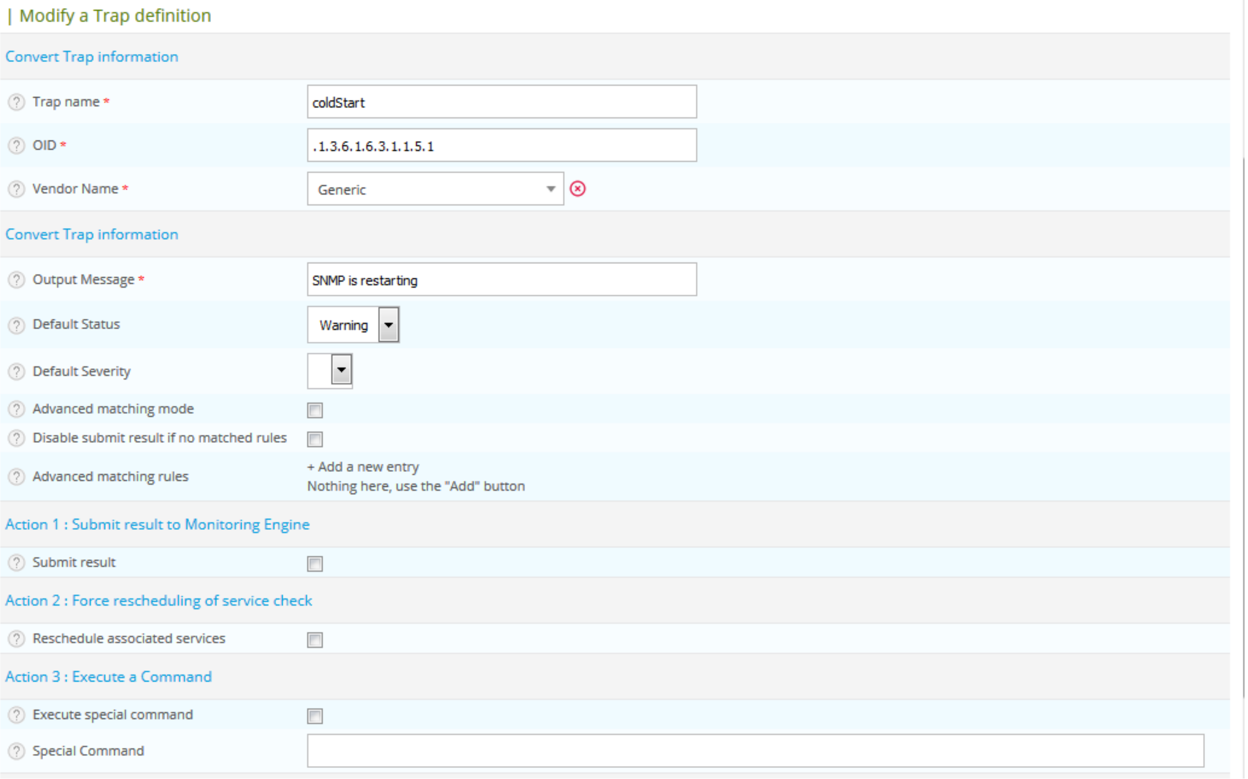
3.4 Configure traps

The last step is to configure traps that you want to redirect to you slots. This configuration is a little complexe for the moment but we will try to simplify it for the next versions of Centreon DSM.

Edit a SNMP trap that you want to redirect to slots systems. Go on:

```
Configuration > SNMP traps.
```

You find the following form:



| Modify a Trap definition

Convert Trap information

Trap name *	coldStart
OID *	.1.3.6.1.6.3.1.1.5.1
Vendor Name *	Generic

Convert Trap information

Output Message *	SNMP is restarting
Default Status	Warning
Default Severity	
Advanced matching mode	□
Disable submit result if no matched rules	□
Advanced matching rules	+ Add a new entry Nothing here, use the "Add" button

Action 1 : Submit result to Monitoring Engine

Submit result	□

Action 2 : Force rescheduling of service check

Reschedule associated services	□

Action 3 : Execute a Command

Execute special command	□
Special Command	

In order to redirect alarms to slots, you have to enable **Execute special command** in the form and add the following command into the “special command” field

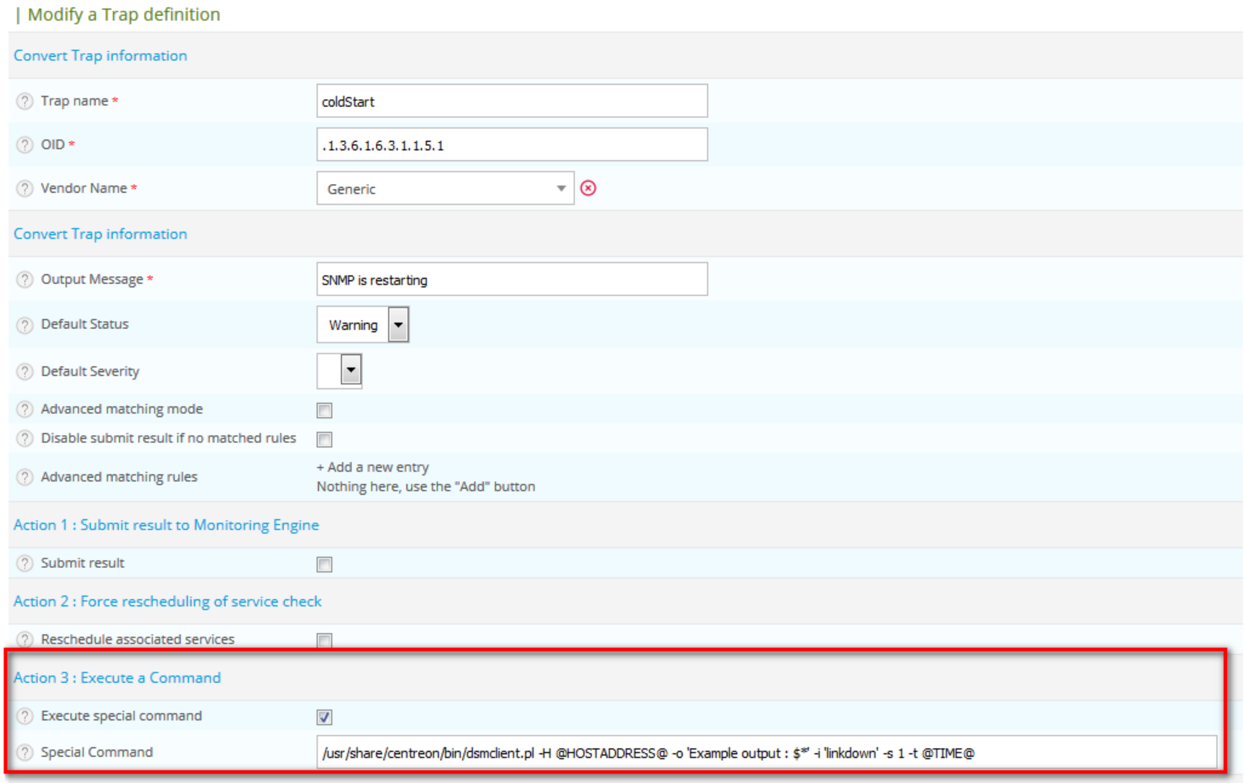
```
/usr/share/centreon/bin/dsmclient.pl -H @HOSTADDRESS@ -o 'Example output : $*' -i 'linkdown' -s 1 -t
```

This command launch for each trap received this command in order to redirect alarms to dsmd daemon.

This command take some parameters. You can find in the following table the list and the description of each parameter:

Parameters	Description
-H	Host address (ip or name) in which you want to redirect the alarm. You can pass the value @HOSTADDRESS@ in order to keep the same host or you can use whatever you want in order to centralized all alarms on the same virtual host for example who host all alarms.
-o	This is the output that dsm will put when the command will submit the result in the good slot. This output can be built will all $* value and with a specific string that you pass in parameter.
-i	This is the id of the alarm. The alarm id can be built with the concatenation of some variables like “$1-$4”. The id enable the possibility to use the option of auto-acknowledgement of alarm when you have the possibility to create the same id during the opening and the closing treatment of the alarm.
-s	This is the status that you want to pass in parameter to the alarm. You can use @STATUS@ in order to use the inherited status build from matching rule system.
-t	This is the time that you want to pass to dsm in order to keep the real trap reception time.
-m	This is the list of macros and its values that you want to update during the treatment of the alarm. Please follow the syntax below: macro1=value1|macro2=value2|macro3=value3 This function is used to update some parameters in live on the nagios or Centreon-Engine core memory without a restart.

Your form should now be like that:



| Modify a Trap definition

Convert Trap information

Trap name *	coldStart
OID *	.1.3.6.1.6.3.1.1.5.1
Vendor Name *	Generic

Convert Trap information

Output Message *	SNMP is restarting
Default Status	Warning
Default Severity	
Advanced matching mode	□
Disable submit result if no matched rules	□
Advanced matching rules	+ Add a new entry Nothing here, use the "Add" button

Action 1 : Submit result to Monitoring Engine

Submit result	□

Action 2 : Force rescheduling of service check

Reschedule associated services	□

Action 3 : Execute a Command

Execute special command	☑
Special Command	/usr/share/centreon/bin/dsmclient.pl -H @HOSTADDRESS@ -o 'Example output : $*' -i 'linkdown' -s 1 -t @TIME@

After saving the form, please generate the SNMP traps configuration file. Go on:

```
Configuration > SNMP Traps > Generate
```

Select your poller, select generate and validate the form.

You can now start the daemon on your server:

```
/etc/init.d/dsmd start
```

You should now have DSM activated for all traps you have configured.

3.5 Configure Traps links

One thing is different compared to Centreon Trap system is that you cannot link directly the service template of the slot to the trap in order to not received x time the trap (x represent here the number of slots).

You have to create dummy service completely passive. This service will be link to the trap that you want to redirect to slots. You can call this service trap-link. This service can stay disable in order to not show it in the monitoring page.