

# Centreon Documentation

*Release 2.7.0*

**Centreon**

April 14, 2016









Centreon is open source software which enables you to supervise all the elements comprising your information system.

Contents:



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### About

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Centreon is a free Open Source monitoring software, published by the Centreon French society. It measures the availability and performance of the application layers, the user experience to the hardware resources.

Centreon is a powerful tool for the monitoring administrators and operators. It integrates since 2012 his own scheduler engine (Centreon Engine) and Event Manager (Centreon Broker).

Beyond configuration concepts that are the most advanced in the Nagios ecosystem , Centreon provides many features such as consultation of services state of monitored equipment, metrology, reporting, access to monitoring events, users advanced management via access control lists (ACLs), etc.

Additional extensions from the community and Centreonr also expand the functions. Found for example a BI tool, the mapping and many API for interacting with Centreon as automated configuration management.

Mature, reliable and innovative Centreon stands out by its ability to offer a platform tailored to the “trade” vision required by the responsible, while structuring and strategic IT core data (availability, ability, maintainability, reliability).

The unlimited distribution and performance of the data collection system are also of the strengths of the software suite. Centreon meets the constraints of scalability, network partitioning, geographically fragmented sites and limited pass-band.



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## Release notes

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You can find in this chapter all changelogs that give you knowledges about the changes integrated into each releases of Centreon Web.

Please find here the releases notes of the last major versions :

### 2.1 Centreon 2.7

Please find here the release notes dedicated to the last 2.7.x version of Centreon.

#### 2.1.1 Centreon 2.7.0

Released December 17, 2015

The 2.7.0 release for Centreon Web is now available for [download](#). The full release notes for 2.7.0 follow:

#### Features and Bug Fixes

- Changing the graphic charter to be consistent with the new logo Centreon
- Flat design (CSS and icons)
- Custom view improvement
- Adding an editing or visualization mode
- Graphic widgets relief to be able to put more on a page
- Adding a fullscreen mode
- Menu Review for improved navigation and simplified user actions
- Review og pages dedicated hosts and services pages in monitoring to include more informations.
- Redesign of the reporting page
- Recasting bar searches and filters in each page of Centreon
- Redesign Event Logs page (removing treeview + Added search system + Improved performances)
- Redesign view page (removing treeview + Added search system + Improved performances)
- Merging downtimes pages for hosts and services
- Merging comments pages for hosts and services

- Integration of a graphics module to replace a non-performing component QuickForm (Improved forms on multi element selection)
- Simplifying the configuration of Centreon Broker (Temporary and Failover are automatically configured + enhanced best practices)
- Ergonomic improvement of the configurations objects:
- Improved hosts form
- Improved services form
- Improved management macros: dynamic form system that provides the necessary inherited macros templates for proper operation of the configuration
- Added ability to set a description of each macro used in commands
- Review of the pathway for the generation of the configuration
- Automatic creation of a configuration file for the poller when it is created
- Deleting configuration options in the Administration section, now automatically configured. This simplifies the handling of Centreon
- Improved ACL system (Improved performances)
- Native integration of Centreon CLAPI
- Improved documentation
- Redesign Configuration part
- Redesign Exploitation part
- Integration of the API part

## Changes

- Important web design changes can make interface not compatible with older modules. A refactoring work will be needed to ensure optimal operation.
- Changing the timezone system : DST management (may need to check the timezones of each host and contact after the update)
- Changing databases schemes for hostgroups and servicegroups in the real state database (centreon\_storage) : added id and deletion of alias, url, url note, icon.
- Changing the path for generating the configuration of Centreon Engine instances : no more specific page to generate the configuration. The action is now available from the pollers list.
- Switching to InnoDB all Centreon tables (except logs and data\_bin too big for an automatic update).
- PHP 5.1 no longer supported
- Browser compatibility : IE 11, FF 5 et Chrome 39 at least
- Shared views in custom views are not automatically loaded in views of others users. Now views are able to be public and user can load them during the creation step.

## Security Fixes

- Removing PHP session ID in the URL of the Ajax flow of certain pages.
- Integration of a CSRF token in all forms to prevent “Man in the middle” effect.

## Removed Features

- Nagios and NDOutils are no longer compatible with Centreon web. Only Centreon Engine and Centreon Broker are compatible from version 2.7.0
- Removing centstorage and logAnalyser executables.
- Removing the Nagios configurations load module.
- Removing the ability to configure the colors of graphics templates
- Removing color choices for menus
- Removing choosing colors for monitoring status
- Removing the ability to configure Nagios CGI
- Transformation of the tactical overview in widget
- Transformation of the Monitoring Engine statistics Page in widget
- Deleting the Server Status page (phpsysinfo) become incompatible with the PHP version recommended for Centreon
- Remove timeperiod exclusions in the UI. This function don't work very fine whether with Centreon Engine 1.x or Nagios. We prefer removing the function in order to avoid problems.

## Known Bugs

- ACL of pages is not fully updated during the upgrade process. So please check all your ACL pages after the migration. You may have problems with the followings pages:
- Monitoring > Hosts
- Monitoring > Services
- Monitoring > Performances (new page)
- Monitoring > Downtimes
- Monitoring > Comments
- Monitoring > Eventlogs > System logs
- Graph slip not working
- Pagination is broken when you go on the last page, change the number of line to the Max. Page become empty.
- If you have timeperiods used in exception or inclusion of timeperiod and now deleted, their ids stays in the database in relation table. During the sql update process, this blocks an addition of constraint on this relation table. To fix it, you have to remove old timeperiod id.

```
mysql> DELETE FROM timeperiod_exclude_relations WHERE timeperiod_id NOT IN (SELECT tp_id FROM timeperiod) OR timeperiod_exclude_id NOT IN (SELECT tp_id FROM timeperiod); mysql> DELETE FROM timeperiod_include_relations WHERE timeperiod_id NOT IN (SELECT tp_id FROM timeperiod) OR timeperiod_exclude_id NOT IN (SELECT tp_id FROM timeperiod);
```

## How to Install ?

Now that you are aware about all specificities of this version, you can install it. If you install from scratch on your system, please follow the *installation guide*. Else you can refer to the *upgrade guide*. Take care about prerequisites and all upgrade steps in order to avoid data loss.

## 2.1.2 Centreon 2.7.1

Released January 07, 2016

The 2.7.1 release for Centreon Web is now available for [download](#). The full release notes for 2.7.1 follow:

### Notice

If you are upgrading from a version prior to 2.7.0, make sure to go through all the release notes available [here](#).

### CHANGELOG

#### Features and Bug Fixes

- Improved ergonomics of the select2 component
- Improved performances of monitoring pages
- Improved performances of the event logs page
- Improved performances of downtimes configuration on host page
- Improved documentation
- Fixed problem when sharing views in Custom views page
- Fixed a right problem in CLAPI generation of the configuration
- Fixed problem in services per hostgroups pages
- Fixed problems in configuration generation when mysql is not using 3306 port

## 2.1.3 Centreon 2.7.2

Released February 24, 2016

The 2.7.2 release for Centreon Web is now available for [download](#). The full release notes for 2.7.2 follow:

### Notice

If you are upgrading from a version prior to 2.7.0, make sure to go through all the release notes available [here](#).

### CHANGELOG

#### Features and Bug Fixes

- Fix eventlogs pages for performances and right for non admin users
- Fix Recurent Downtimes behaviour with timezones
- Fix some broken relations in web interface
- Fix Reporting pages for non admin users
- Fix some elements with the generation of the configuration
- Fix encoding problems



- Fix filters in configuration pages
- Fix Poller duplication
- Fix various ACL problems
- Fix some SQL queries
- Fix export of Meta Services
- Improve ACL on Custom Views

### Known Bugs

- Recurrent downtimes during for more than a day are not working
- It's impossible to remove relations between usergroup and custom views
- With the update some widgets have to be deleted and recreated

## 2.1.4 Centreon 2.7.3

Released March 15,2016

The 2.7.3 release for Centreon Web is now available for [download](#). The full release notes for 2.7.3 follow.

### Notice

If you are upgrading from a version prior to 2.7.0, make sure to go through all the release notes available [here](#).

## CHANGELOG

### Features and Bug Fixes

- Fix Recurent downtimes starting at 00:00
- Fix search in Poller configuration page
- Fix problems when sharing custom views
- Fix description problem with custom macros containing dash
- Fix time Interval change isn't being reflected in the polling Engine config
- Fix Missing GMT and UTC timezone
- Fix No performance graph for host group service
- Fix ACL were showing too much objects
- Fix Impossibility to delete custom macros on service
- Fix Split on multi graph
- Fix Design on Monitoring Performances page
- Fix CLAPI handled all broker parameters
- Fix Custom macros can contain dash
- Fix Time Interval change isn't being reflected in the polling Engine config

- Fix UI doesn't display the good limit of pagination
- Fix Some French translations were missing
- Enh Improve listing possibilities in Widget configuration (Pollers and categories)
- Enh Usability of select2
- Enh Possibility to reload several pollers in one time
- Enh Add an API to send External Commands

## 2.1.5 Centreon 2.7.4

Released April 14,2016

The 2.7.4 release for Centreon Web is now available for [download](#). The full release notes for 2.7.4 follow.

### Notice

If you are upgrading from a version prior to 2.7.0, make sure to go through all the release notes available [here](#).

### Fix of an encoding problem

Following a change of encoding tables in centreon database which occurred in the 2.7.0 version, bad encoded characters appear in the Centreon web interface. Indeed, the change charset "latin1" to "utf8" was not followed by an update of the content of tables in the database.

To restore a valid encoding of special and accented characters, it is necessary to manually run the script provided by Centreon.

### Warning

This script should be run once and only once.

If an operator has modified/corrected special characters or accented since the 2.7.0 update, processing performed by the script will truncate the string to turn on the first special or accented character. It will then be necessary to change the impacted objects to manually update them. (The script can unfortunately provide the list of impacted objects.

All contents of table type "varchar", "char" or "text" will be updated

### Prerequisites

Don't forget to backup your database before doing any operations.

### Installation

Download and install the script in "/usr/share/centreon/bin/" with the command:

wget [http://resources.centreon.com/upgrade-2.6-to-2.7/migrate\\_utf8.php](http://resources.centreon.com/upgrade-2.6-to-2.7/migrate_utf8.php) -O /usr/share/centreon/bin/migrate\_utf8.php

## Execution

From a shell terminal, perform the script:

```
php /usr/share/centreon/bin/migrate_utf8.php
```

## Validation

Connect to your web interface and check that there are no more bad encoded characters on it.

## CHANGELOG

### Features and Bug Fixes

- Fix: Contacts in contactgroups were exported with a wrong ID
- Fix: Error when saving “Administration > Parameters > Monitoring” page
- Fix: Zoom in Performance graph
- Fix: Select contactgroups / contacts in services & hosts configuration was not working
- Fix: Display only categories and not severities on form
- Fix: Scroll bar in “Configuration - Hosts - Host Groups”
- Fix: Category Relation on host and host template form
- Fix: Order in More Actions Menu
- Fix: generateSqlLite not install with source
- Fix: SSO connection with LDAP user
- Enh: Add possibility to set local to “browser” when adding a contact by CLAPI

## 2.2 Centreon 2.6

Please find here the release notes dedicated to the last 2.6.x version of Centreon.

### 2.2.1 Centreon 2.6.6

Released October 29, 2015

#### Notice

If you are upgrading from a version prior to 2.6.0, make sure to go through all the release notes available [here](#).

## CHANGELOG

### Bug fixes

- #3812: [2.6.3] Strange display of service group details page
- #3824: PHP Warning: array\_map(): Argument #2 should be an array
- #3840: [2.6.4] Wrong reporting graph data with default user language fr\_FR.UTF-8
- #3846: [2.6.5] CRSF Token critical: Impossible to upgrade a plugin
- #3847: [2.6.5] split component switch
- #3852: [2.6.5] CSRF error appears in user massive change form
- #3854: Cannot add new macro after deleting all macros already created
- #3855: Cannot add new host template to host after deleting all templates
- #3861: Comments shows only "A"
- #3864: [2.6.5] CSRF when trying to upload a SNMP MiB

## 2.2.2 Centreon 2.6.5

Released October 21, 2015

### Notice

If you are upgrading from a version prior to 2.6.0, make sure to go through all the release notes available [here](#).

## CHANGELOG

### Security fixes

- #3831: XSS injection in object lists (ZSL-2015-5266)
- #3835: CSRF Issues on Centreon (ZSL-2015-5263)

### Bug fixes

- #3821: Upgrade from 2.6.1 to 2.6.3 kill Centreon Frontend
- #3826: Split Component and zoom doesn't work
- #3827: Service Group Details page isn't displayed for non admin in Centreon 2.6.3
- #3837: Relation of passive service with SNMP traps problem with multihost link
- #3842: Full logs display on event logs page for a non admin user

## 2.2.3 Centreon 2.6.4

### Notice

If you are upgrading from a version prior to 2.6.0, make sure to go through all the release notes available [here](#).

### CHANGELOG

#### Bug fixes

- #3793: Problem when creating an empty hostgroup with non admin user
- #3795: Update Centreon Administration About page (forge -> Github)
- #3796: Problem when connect two time with same user in API
- #3797: Password in macro
- #3800: Current State Duration isn't displayed
- #3803: ACL : Manage multiple Resources group on the same ACL user group
- #3807: Unable to enable status option on main.cfg

## 2.2.4 Centreon 2.6.3

### Notice

If you are upgrading from a version prior to 2.6.0, make sure to go through all the release notes available [here](#).

### CHANGELOG

#### Bug fixes

- #564: Filter field does not work in service groups monitoring screen
- #1000: Services of service groups are dispatched on many pages
- #3782: SQL Keywords
- #3783: index\_data switch in option form
- #3788: Problem with static keywords

## 2.2.5 Centreon 2.6.2

### Notice

If you are upgrading from a version prior to 2.6.0, make sure to go through all the release notes available [here](#).

## CHANGELOG

### Features

- Modules can extend actions after restart/reload pollers

### Security fixes

- #2979 : Secure the type of media which file can be uploaded (ZSL-2015-5264)
- Fix some SQL injections (ZSL-2015-5265)

### Bug fixes

- #3559 : Fix query with MariaDB / MySQL configure in STRICT\_TRANS\_TABLES
- #3554 : Can send acknowledgement with multiline from monitoring page
- #3397 : Fix display graph with unicode characters in metric name
- #2362 : Correct value when use index\_data inserted by Centreon Broker in configuration
- #1195 : Display correct number of pollers in status bar
- #196 : Display all columns when filter is applied on Monitoring services unhandled view

## 2.2.6 Centreon 2.6.1

### Notice

If you are upgrading from a version prior to 2.6.0, make sure to go through all the release notes available [here](#).

## CHANGELOG

### Bug fixes

- #5655: Changing Host Templates doesn't delete services
- #5925: Popup Dialogs (Acknowledge, Downtimes etc.) not working with Internet Explorer
- #6224: Special characters in LDAP are replaced by underscore
- #6358: It's possible to bypass ACLs on Event Logs page
- #6375: servicegroups empty into servicegroups.cfg but ok in DB
- #6377: PHP logs are too much verbose with PHP 5.4
- #6378: PHP logs are too much verbose with PHP 5.3
- #6383: Random severity on services
- #6390: Escalations with contact groups containing space
- #6391: Some traps are skipped
- #6396: Warning and critical threshold display in centreon graph

- #6399: Wrong condition in centreonLDAP.class.php
- #6410: Do not limit to 20 the number of trap rules or macro in host and services config pages

## Features

- #6035: Removing Centreon Broker local module
- #6366: New option for Centreon Engine log
- #6392: Block choice of Nagios and NDO in installation processus

## 2.2.7 Centreon 2.6.0

### Notice

If you are upgrading from a version prior to 2.5.4, make sure to go through all the release notes available [here](#).

### What's new?

#### Compatibility with PHP 5.4.x

Centreon is now compatible with PHP in version 5.4.x. So, you do not need to downgrade to PHP 5.3.x version when you install it on Debian 6, Ubuntu 13.04, Redhat 7 and CentOS 7.

Centreon proprietary module (Centreon BAM, Centreon BI, Centreon MAP, Centreon KB) is not compatible as yet with this PHP version.

#### New options for Centreontrapd

It's now possible with Centreontrapd to :

- Filter services on same host ;
- Transform output (to remove pipe for example) ;
- Skip trap for hosts in downtime ;
- Add custom code execution ;
- Put unknown trap in another file.

#### ACL and configuration modification with admin users

ACL management has been improved to allow for a greater number of simultaneous sysadmin users to work on the same monitoring platform.

The synchronisation is more efficient in configuration page between admin and normal users.

### Partial rebuild of events information

It's now possible to partially rebuild events information with eventsRebuild script. You can now use option '-s' when rebuilding and the rebuild will start from this date.

Before, you had to rebuild from the beginning of the related data.

### Criticality inheritance

Centreon 2.6 introduces a capability for the dependent services of a host to automatically inherit its configured criticality. It's also possible to define the levels of global criticality of a particular host and dependent services cluster thanks to the use of templates.

### Integration of Centreon new logo

The new Centreon logo has been integrated into this new version.

## CHANGELOG

### Bug fixes

- #5655: Changing Host Templates doesn't delete services
- #5782: Warning daemon\_dumps\_core variable ignored
- #5795: ACL and configuration modification with admin users
- #5868: Generation of services groups isn't correct for poller
- #6052: Month\_cycle option in recurring downtime is not properly set
- #6119: Filter doesn't work on many pages in Administration -> Log
- #6163: A template should not be able to inherit from itself
- #6336: Problem with schedule downtime when using different timezones

### Features

- #3239: PHP-5.4 Compatibility
- #5238: Criticality inheritance
- #5334, #6114, #6120 : Optimisation and customization on Centreontrapd
- #5952: Add possibility to rebuild partially Events information
- #6160: New Centreon logo

Note: higher versions are now available in download on our [download portal](#). It's high recommended to update your platform in order to avoid bugs or security problems.

## 2.3 Centreon 2.5

Please find here the release notes dedicated to the last 2.5.x version of Centreon.



## 2.3.1 Centreon 2.5.4

### Notice

If you are upgrading from a version prior to 2.5.3, make sure to go through all the release notes available [here](#).

### CHANGELOG

#### Bug fixes

- #5458: Display problem with host groups
- #5924: Generation of service configuration files does not work when “service\_inherit\_contacts\_from\_host” is not enabled
- #5926: Centreon-Broker-2.7.x compatibility
- #5929: Fix problem in import service groups by cfg file
- #5942: Fix compatibility with IE
- #5946: Problem in reporting due to acknowledgement
- #5986: Session’s Id does not change after logout

#### Features

- #5433: Argument column larger in service configuration
- #5944: Services inherit criticality from hosts

## 2.3.2 Centreon 2.5.3

### Warning

This version include a couple of security fixes. Please proceed to the update of your platform if your centreon is not in version 2.5.3 at least. If you’re using Debian or Suse before doing the update, you need to install php5-sqlite package.

The update can take some times due to the update to UTF-8 format (#5609)

### Notice

If you are upgrading from a version prior to 2.5.2, make sure to go through all the release notes available [here](#).

### CHANGELOG

- #5895: Security Issues : CVE-2014-3828 & CVE-2014-3829
- #5888: Differences between update and fresh install for “Insert in index data” field
- #5829: Add config file in parameters for all crons of Centreon in order to install centreon on different directories
- #5852: Fix problem with massive change for “Inherit contacts from host” in service form
- #5841: Empty dependences are now remove automaticaly

- #5840: Fix problem with host duplication when this host has a “” in the alias
- #5790 & #5813 & #5750: Fix problems on Tactical Overview
- #5786: Fix problem when generating correlation config file.
- #5756: Fix problem with centstorage => Table log is growing to much
- #5609: Push Centreon Broker table to UTF-8
- #5589: Fix problem with Contact inheritance between service and its template who doesn't work
- #4865: Fix problem with search in Eventlog

### 2.3.3 Centreon 2.5.2

#### Notice

If you are upgrading from a version prior to 2.5.1, make sure to go through all the release notes available [here](#).

#### CHANGELOG

- #5593: Fixes a bug where trap advanced matching rules were not working
- #5600: Fixes a bug where it was impossible to add or modify a poller
- #5533: Fixes a bug where it was impossible to update the severity level of a service
- #5307: Tooltips messages were not translated in the Broker configuration form
- #5664: Enhances loading time of the service detail page
- #5439: Enhances loading time of the meta service page

### 2.3.4 Centreon 2.5.2

#### Notice

If you are upgrading from a version prior to 2.5.1, make sure to go through all the release notes available [here](#).

#### CHANGELOG

- #5593: Fixes a bug where trap advanced matching rules were not working
- #5600: Fixes a bug where it was impossible to add or modify a poller
- #5533: Fixes a bug where it was impossible to update the severity level of a service
- #5307: Tooltips messages were not translated in the Broker configuration form
- #5664: Enhances loading time of the service detail page
- #5439: Enhances loading time of the meta service page

### 2.3.5 Centreon 2.5.1

#### WARNING

If you are upgrading from Centreon 2.5.0 make sure to read the following.

If you are upgrading from a version prior to 2.5.0, just skip this notice and follow this procedure instead: <https://blog.centreon.com/centreon-2-5-0-release/>.

As usual, database backups are to be made before going any further.

It does not matter whether you run the commands below before or after the web upgrade; do note that those scripts may take some execution time depending on the size of your log tables.

#### You are using NDOUtils

If you are using NDOUtils, chances are that you have plenty of duplicate entries in your log table. Follow the procedure in order to re insert the logs:

Copy all the log files from the remote pollers to the local poller in `/var/lib/centreon/log/POLLERID/`. To know the POLLERID of each of your pollers, execute the following request against the MySQL server (centreon database):

```
mysql> SELECT id, name FROM nagios_server;
```

Then, execute the following script:

```
/path/to/centreon/cron/logAnalyser -a
```

#### You are upgrading from Centreon 2.5.0

There was a bug in Centreon 2.5.0 that probably messed up your reporting data, you will have to recover by running these commands:

```
/path/to/centreon/cron/eventReportBuilder -r
```

```
/path/to/centreon/cron/dashboardBuilder -r -s <start_date> -e <end_date>
```

`start_date` and `end_date` must be formatted like this `yyyy-mm-dd`; they refer to the time period you wish to rebuild your dashboard on.

### 2.3.6 Centreon 2.5

#### WARNING

If you are upgrading from Centreon 2.4.x make sure to read the following. As usual, database backups are to be made before going any further. Then, follow these procedures in order to ensure the integrity of the RRD graphs. Not following this may cause your graphs to malfunction!

#### If you are using Centreon Broker

- Check right of `conf.pm` file. Apache must have the right to modify `conf.pm` file
- Stop all the centreon-engine services
- Stop the centreon-broker daemon

- Upgrade Centreon-Broker on all the pollers
- Restart all the engines
- Upgrade Centreon (web install)
- Execute `/path/to/centreon/bin/changeRrdDsName.pl`
- Check that your graphs are showing properly on the web interface
- Start the centreon-broker daemon

#### **If you are using NDO**

- Stop centstorage
- Upgrade Centreon (web install)
- Execute `/path/to/centreon/bin/changeRrdDsName.pl`
- Start centstorage

#### **What's new?**

##### **ACL on configuration objects**

ACL rules are now applied to configuration objects. For more information regarding this feature, be sure to checkout our blog post: <http://blog.centreon.com/configuration-acl-with-centreon-2-5-2/>

##### **UI and sound notifications**

It is now possible to get UI and sound notifications on Centreon, you can set your preferences in your profile page. A quick overview there: <http://blog.centreon.com/centreon-ui-notification-system/>

Only available if you use Centreon Broker.

##### **New system with SNMP traps**

Centreon has evolved with an easiest way to handle SNMP traps. Some advantages of the new system:

- No more 'snmptt'
- More advanced configuration in SQL Database
- Local database (sqlite) on Pollers

You have to look on the centreon documentation in order to configure Centreon using this new system. Go in section: User guide > Advanced > SNMP TRAPS

#### **Important notes**

##### **Centcore is now mandatory**

External commands are now sent to centcore regardless of whether the poller is local or not. So be sure to have it running all the time from now on.

Note: higher versions are now available in download on our [download portal](#). It's high recommended to update your platform in order to avoid bugs or security problems.

## 2.4 Centreon 2.4

Please find here the release notes dedicated to the last 2.4.x version of Centreon.

### 2.4.1 Centreon 2.4.5

#### Important notes

##### Connector

You can now linked a command to a connector from the connector form in *Configuration > Commands > Connectors*.

##### Centreon Broker

Centreon 2.4.x branch is now compatible with Centreon Broker 2.5.x branch. Also several options have been added in Centreon Broker configuration form accessible in *Configuration > Centreon > Configuration* (Below Centreon-Broker label in the left panel). Here the new options:

- “Write timestamp” in *General* tab: To enable or disable timestamp logging in each log line (disable this option is useful with when Centreon-Broker is used with Nagios)
- “Write thread id” in *General* tab: To enable or disable thread id logging in each log line
- “Write metrics” in *Output* tab with *RRD - RRD file generator*: To enable or disable the update of the performance graph
- “Write status” in *Output* tab with *RRD - RRD file generator*: To enable or disable the update of the status graph
- “Store performance data in data\_bin” in *Output* tab with *Storage - Perfdata Generator (Centreon Storage)*: To enable or disable insertion of performance data in data\_bin table
- “Insert in index data” in *Output* tab with *Storage - Perfdata Generator (Centreon Storage)*: Allow Centreon-Broker to create entries in index\_data table (use with caution)

### 2.4.2 Centreon 2.4.4

#### Important notes

##### Graphs

It is now possible to set RRD graphs’ to “DERIVE” and “ABSOLUTE” type. In order to do so go to *Administration > Options > CentStorage > Manage*, then click on the metric you would like to update. In the “More actions” toolbar, you will now see the new data source types.

##### Monitoring consoles

A new option is available, allowing you to choose the display order of the monitored resources. The new option is available in *Administration > Options*, in the *Problem display properties* section.

## 2.4.3 Centreon 2.4.1

### Important notes

#### Connectors

If you are already using the *Centreon Connectors*, please note that the connector path is no longer called with user variable `$USER3$`. It is instead in the `Configuration > Centreon > Pollers > Centreon Connector` path. In that regard, be sure to fill this field and update the connector command line in `Configuration > Commands > Connectors` by removing the `$USER3$` prefix.

i.e:

```
$USER3$/centreon_connector_perl
```

should become:

```
centreon_connector_perl
```

Once you're done with updating those configurations, you may delete the former `$USER3$` as it will be no longer used.

## 2.4.4 Centreon 2.4

### What's new?

#### Better integration with Centreon Engine and Centreon Broker

The *installation* process has been reviewed: it is now possible to specify the monitoring engine (Centreon Engine or Nagios) and the event broker module (Centreon Broker or NDOUtils). All you need to do right after a fresh installation is export your configuration files, then reload your monitoring engine and the monitoring system should be up and running!

This version offers the possibility to define the *connectors* for Centreon Engine. Obviously, you do not need to configure these connectors if you are still using Nagios.

It's been said that Centreon Broker can be cumbersome to configure, especially if you are not familiar with its functioning. Centreon 2.4 offers a configuration wizard now!

#### Custom views

This new page enables users to make their own views with various widgets and they are able to share their custom views with their colleagues!

See the *user guide* to learn more about this feature.

#### Support for multiple LDAP servers

The LDAP authentication system is much more robust than before. Indeed, it is now possible to have *multiple LDAP configurations* on top of the failover system. The LDAP import form will let you choose the LDAP server to import from.

Make sure that all your LDAP parameters are correctly imported after an upgrade.

## New *autologin* mechanism

A better *autologin* mechanism has been introduced in this version. Now using randomly generated keys, it allows you to access specific pages without being prompted for a username and a password.

## Database indexes verification tool

If you upgrade from an old version of Centreon, now you can *check the existence of all database indexes* to ensure maximum performance

## Important notes

### Administration

**Communication with pollers** The default system user used by *Centcore* to communicate with pollers has changed from `nagios` to `centreon`. See `ces:pollers_basic_conf` for more information.

**Plugins** For better performances, we advise you to use `check_icmp` instead of `check_ping` if you are in an IPv4 network, that is (`check_icmp` is not yet compatible with IPv6). Switching from `check_ping` to `check_icmp` should be quite simple as the plugins take the same parameters. All you have to do is change the check commands: `check_centreon_ping`, `check_host_alive` and all the commands that call `check_ping`.

### Web interface

**Autologin** A new *autologin mechanism* has been added in Centreon 2.4. More secured than the previous one, it will soon replace it. If you currently use this feature, we recommend upgrading to the new one as soon as you can.

**Centreon Broker init script** If you are using *Centreon Broker*, make sure to fill the *Start script for broker daemon* parameter in Administration > Options > Monitoring. RRD graphs cannot be rebuilt if this parameter is omitted!

**Centcore options** Two parameters have been added into the Administration > Options > Monitoring page:

- Enable Perfdata Synchronisation (Centcore)
- Enable Logs Synchronisation (Centcore)

For performance issues, these options must be disabled if your monitoring system is running with Centreon Broker.

**Resource.cfg and CGI.cfg** The resource and CGI configuration objects are now specific to each monitoring poller. The values of `$USERx$` macros can be different from one poller to another.

**Interval length** The `interval_length` is now a global parameter that you have to set in Administration > Options > Monitoring, although it should be left at 60 seconds in most cases.

## Centstorage

**Supported data source types** *Centreon Broker* now supports all of the RRDtool data source types (COUNTER, GAUGE, DERIVE and ABSOLUTE). This support will not be added to *Centstorage* as it will soon be replaced by *Centreon Broker*.

See the *Centreon Broker documentation* to learn how you can convert your existing plugins.

Note: higher versions are now available in download on our [download portal](#). It's high recommended to update your platform in order to avoid bugs or security problems.

It is very important when you update your system to refer to this section in order to learn about behavior changes or major changes that have been made on this version. This will let you know the impact of the installation of these versions on the features you use or the specific developments that you have built on your platform (modules, widgets, plugins).

If you have any questions relating to the content of the notes, you can ask your questions on our [github](#).



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## Installation

---

This chapter describes how to install your Centreon monitoring platform.

The monitoring platform may be installed in several ways. However, **we strongly recommend using Centreon ISO (eg CES) to install your platform**. Enjoy of our work of industrialization during install and update steps of your the environment. Also enjoy optimizations installed by default on the system. Centreon Installation can be performed from source (tar.gz) but the work is more complex. In addition the installer shall be supported by the community. Before installation, be sure to follow the prerequisites installation and sizing (resources CPU, memory, disks, partitioning, etc ...). Also take care to choose the type of architecture that should be set up for your needs. Finally, you can install the platform.

### 3.1 Prerequisites

The Centreon web interface is compatible with the following list of web browser:

- Chrome (latest version)
- Firefox (latest version)
- Internet Explorer IE 11 (latest version)
- Safari (latest version)

Your screen resolution must be at least 1280 x 768.

#### 3.1.1 Softwares

##### Operating System

If you use CES v3.x the operating system will be CentOS v6. If you prefer to use Red Hat OS you must install it in v6 version. Else you can use another GNU/Linux operating system but installation will be more complex and realised using software sources.

##### DBMS

Centreon advises you to use MariaDB instead of MySQL.

Software	Version
MariaDB	>= 5.5.35
MySQL	>= 5.1.73

## Dependent software

The following table describes the dependent software:

Software	Version
Apache	2.2
GnuTLS	>= 2.0
Net-SNMP	5.5
openssl	>= 1.0.1e
PHP	>= 5.3.0
Qt	>= 4.7.4
RRDtools	1.4.7
zlib	1.2.3

### 3.1.2 Select type of architecture

The table below gives the prerequisites for the installation of CES 3.x:

Number of Services	Estimated number of hosts	Number of pollers	Central	Poller
< 500	50	1 central	1 vCPU / 1 GB	
500 - 2000	50 - 200	1 central	2 vCPU / 2 GB	
2000 - 10000	200 - 1000	1 central + 1 poller	4 vCPU / 4 GB	1 vCPU / 2 GB
10000 - 20000	1000 - 2000	1 central + 1 poller	4 vCPU / 8 GB	2 vCPU / 2 GB
20000 - 50000	2000 - 5000	1 central + 2 pollers	4 vCPU / 8 GB	4 vCPU / 2 GB
50000 - 100000	5000 - 10000	1 central + 3 pollers	4 vCPU / 8 GB	4 vCPU / 2 GB

**Note:** vCPU must have a frequency around 3 GHz

### 3.1.3 Define space disk

The space used for store collected and performance data depends on several criteria:

- Frequency of controls
- Number of controls
- Retention time

The following table provides an idea of the disk space needed for your platform with:

- Data are collected every 5 minutes
- The retention period is 6 month
- Each performance graph have 2 curves

Number of Services	/var/lib/mysql	/var/lib/centreon
< 500	10 GB	2.5 GB
500 - 2000	42 GB	10 GB
2000 - 10000	210 GB	50 GB
10000 - 20000	420 GB	100 GB
20000 - 50000	1.1 TB	250 GB
50000 - 100000	2,3 TB	1 TB

### 3.1.4 Define files system

---

**Note:** Your system must use LVM to manage files system.

---

#### Centreon server

Files system description:

- / (at least 20 GB)
- swap (at least 1x RAM space)
- /var/log (at least 10 GB)
- /var/lib/centreon (define in previous chapter)
- /var/lib/centreon-broker (at least 5 GB)
- /var/backup (use to backup you server)

#### MariaDB DBMS

Files system description:

- / (at least 10 GB)
- swap (at least 1x RAM space)
- /var/log (at least 10 GB)
- /var/lib/mysql (define in previous chapter)
- /var/backup (use to backup you server)

#### Monitoring poller

Files system description:

- / (at least 20 GB)
- swap (at least 1x RAM space)
- /var/log (at least 10 GB)
- /var/lib/centreon-broker (at least 5 GB)
- /var/backup (use to backup you server)

## 3.2 Examples of architectures

Centreon allows several choices in the composition of the architecture of your monitoring tool. In a relatively simple architecture with a server hosting all services, the architecture can also be organized around a strategic division that distributes the load over multiple collection servers with the establishment of collection points across multiple continents.

You will find here all architectures supported by this version 2.7 of the interface.

### 3.2.1 Simple architecture

#### Description

The simple architecture is to have all oversight entities within the same server, ie:

- Centreon web interface
- Databases (MySQL + RRD)
- Monitoring Engine
- Broker

This architecture is the simplest a user may encounter.

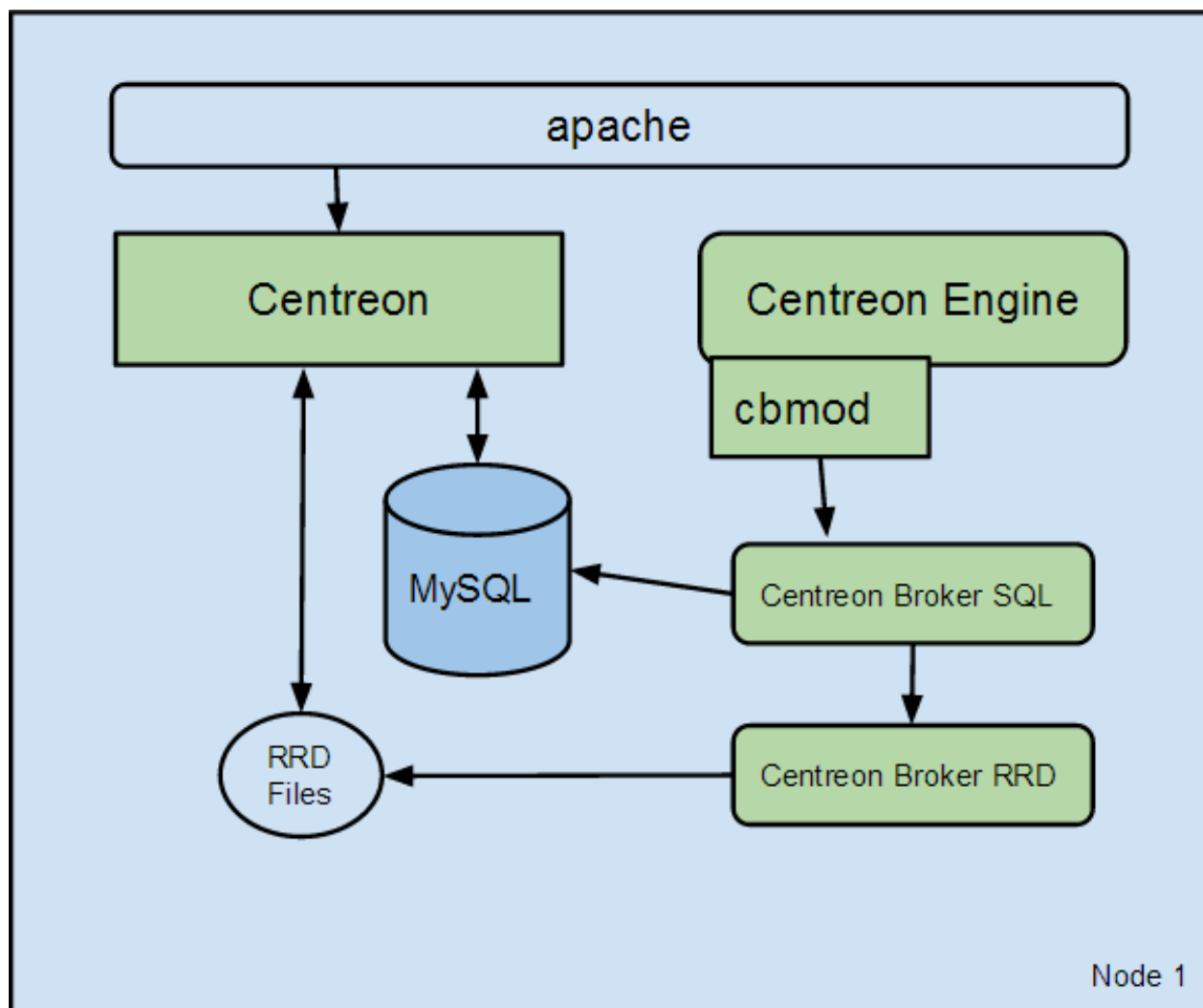
#### Components

Many components are used to build this architecture:

- Apache web server for Centreon web interface
- MariaDB databases to store Centreon configuration parameters as well as monitoring and performance data
- A monitoring engine to collect data
- Collected data are sent to Centreon Broker SQL using cbmod by monitoring engine
- Centreon Broker SQL allows to store information into MariaDB databases and forward them to Centreon Broker RRD
- Centreon Broker RRD generates and updates RRD files with data in order to display performance graphs

#### Architecture

The diagram below summarizes the architecture:



### 3.2.2 Distributed architecture

#### Description

The distributed architecture is to have two types of entities:

- A central Centreon server to display information
- One or more remote servers to collect data

The central Centreon server includes the following items:

- Centreon web interface
- Databases (MySQL + RRD)
- Monitoring Engine
- Broker

The remote servers include the following items:

- Monitoring Engine

- Broker module to forward collected data to a central broker

This architecture is used for:

- Enable load balancing across multiple remote monitoring servers
- Network streams isolation: if your monitoring architecture have to monitor a DMZ area, it is easier (and safe) to place a remote server in the DMZ network

## Components

### Central Centreon server

Many components are used to build a central Centreon server:

- Apache web server for Centreon web interface
- MariaDB databases to store Centreon configuration parameters as well as monitoring and performance data
- The Centcore process is used to send monitoring configuration to the remote server and to manage it
- A monitoring engine to collect data
- Collected data are sent to Centreon Broker SQL using cbmod by monitoring engine
- Centreon Broker SQL allows to store information into MariaDB databases and forward them to Centreon Broker RRD
- Centreon Broker RRD generates and updates RRD files with data in order to display performance graphs

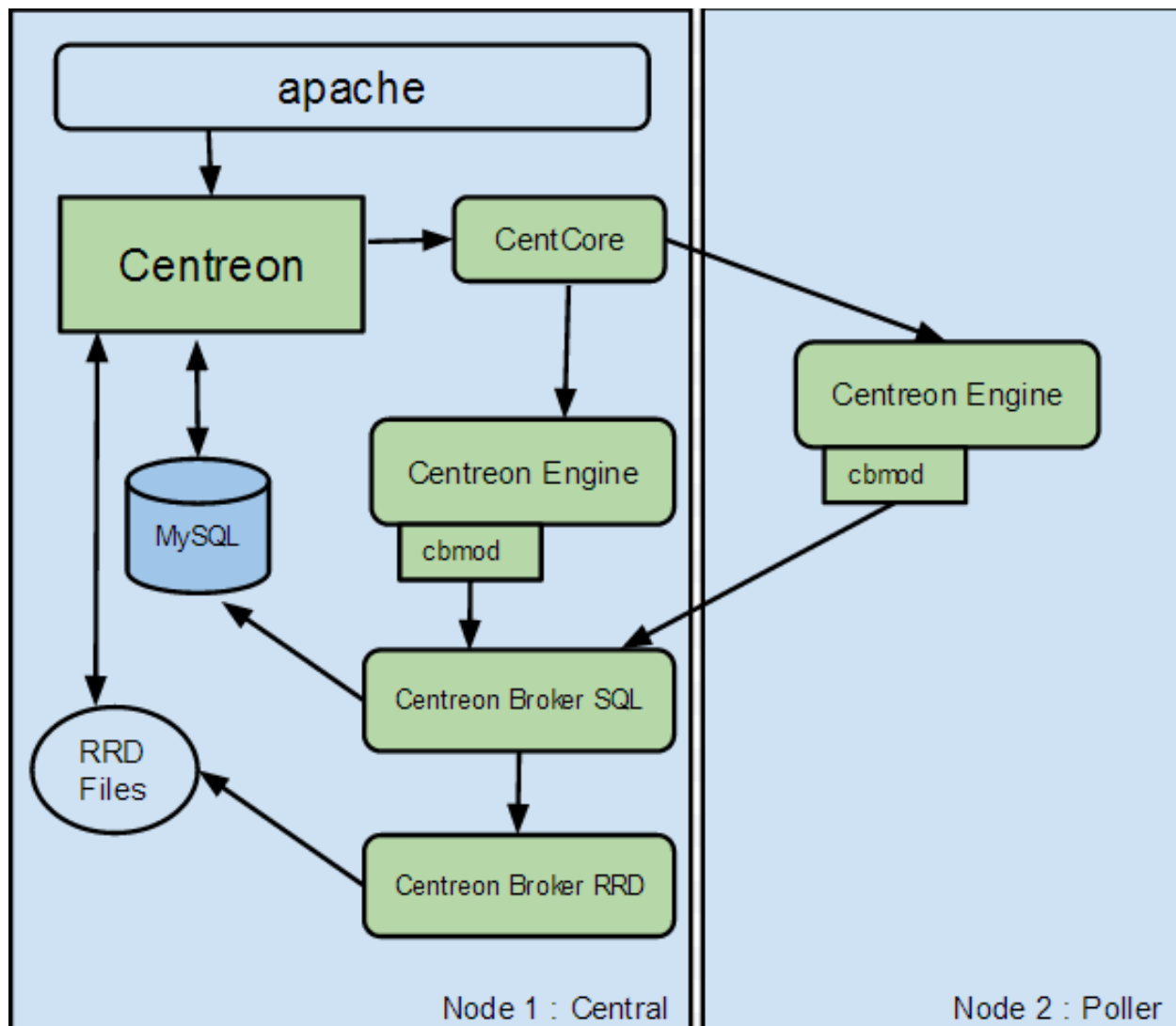
### Remote monitoring server

Many components are used to build a remote server:

- A monitoring engine to collect data
- Collected data are sent to Centreon Broker SQL using cbmod by monitoring engine
- Centreon Broker SQL allows to store information into MariaDB databases and forward them to Centreon Broker RRD
- Centreon Broker RRD generates and updates RRD files with data in order to display performance graphs

## Architecture

The diagram below summarizes the architecture:



### 3.2.3 Distributed architecture with remote DBMS

#### Description

The distributed architecture with remote DBMS is to have three types of entities:

- A central Centreon server to display information
- A DBMS server to store collected data
- One or more remote servers to collect data

The central Centreon server includes the following items:

- Centreon web interface
- Monitoring Engine
- Broker
- RRD files

The DBMS server store information into MySQL databases.

The remote servers include the following items:

- Monitoring Engine
- Broker module to forward collected data to a central broker

This architecture is used for:

- Enable load balancing across multiple remote monitoring servers
- Network streams isolation: if your monitoring architecture have to monitor a DMZ area, it is easier (and safe) to place a remote server in the DMZ network
- Have a remote DBMS

## Components

### DBMS server

The DBMS server is used only to store Centreon configuration parameters as well as monitoring and performance data into MariaDB databases

### Central Centreon server

Many components are used to build a central Centreon server:

- Apache web server for Centreon web interface
- The central Centreon server get configuration and collected data from DBMS server
- The Centcore process is used to send monitoring configuration to the remote server and to manage it
- A monitoring engine to collect data
- Collected data are sent to Centreon Broker SQL using cbmod by monitoring engine
- Centreon Broker SQL allows to store information into MariaDB databases and forward them to Centreon Broker RRD
- Centreon Broker RRD generates and updates RRD files with data in order to display performance graphs

### Remote monitoring server

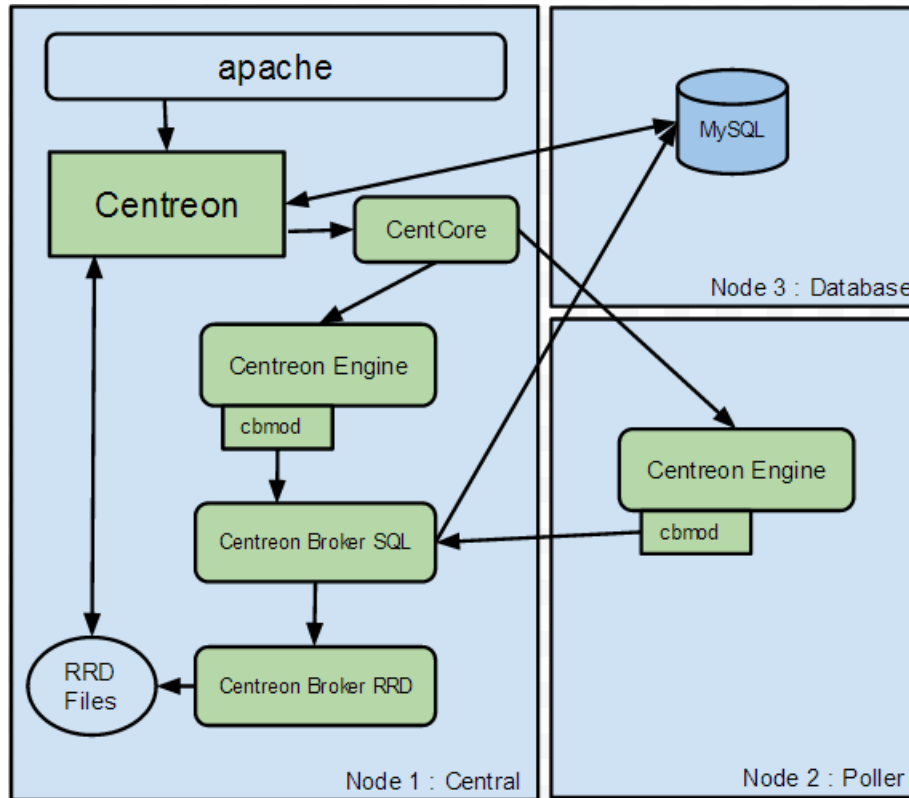
Many components are used to build a remote server:

- A monitoring engine to collect data
- Collected data are sent to Centreon Broker SQL using cbmod by monitoring engine
- Centreon Broker SQL allows to store information into MariaDB databases and forward them to Centreon Broker RRD
- Centreon Broker RRD generates and updates RRD files with data in order to display performance graphs



## Architecture

The diagram below summarizes the architecture:



### 3.2.4 Distributed architecture with failover

#### Description

The distributed architecture with remote DBMS is to have three types of entities:

- A central Centreon server to display information
- One or more remote servers to collect data

In order to have a failover the centreon central server is duplicated.

The central Centreon server includes the following items:

- Centreon web interface
- Monitoring Engine
- Broker
- Databases (MySQL + RRD)

The remote servers include the following items:

- Monitoring Engine
- Broker module to forward collected data to a central broker

This architecture is used for:

- Enable load balancing across multiple remote monitoring servers
- Network streams isolation: if your monitoring architecture has to monitor a DMZ area, it is easier (and safe) to place a remote server in the DMZ network
- Have a failover system: if the master centreon server is DOWN the other one allows to continue to display data.

## Components

### Central Centreon server

There is two types of Centreon central server:

- A master server
- A slave server which is configured as the master one but with only MySQL and Centreon Broker RRD monitoring processes started.

Many components are used to build a master Centreon server:

- Apache web server for Centreon web interface
- The central Centreon server get configuration and collected data from DBMS server
- The Centcore process is used to send monitoring configuration to the remote server and to manage it
- A monitoring engine to collect data
- Collected data are sent to Centreon Broker SQL using cbmod by monitoring engine
- Centreon Broker SQL allows to store information into MariaDB databases and forward them to the two Centreon Broker RRD (master and slave)
- Centreon Broker RRD generates and updates RRD files with data in order to display performance graphs

A bidirectional MySQL replication allows to store in both databases Centreon configuration and collected data.

The slave server is used in regular mode to generate and to update RRD files with data in order to display performance graphs.

In case of failure, the operator has to start the following process on slave server: Apache, CentCore, Centreon Engine and Centreon Broker SQL. The slave server becomes master.

The failover and the management of components are made by Corosync / Pacemaker system.

### Remote monitoring server

Many components are used to build a remote server:

- A monitoring engine to collect data
- Collected data are sent to Centreon Broker SQL using cbmod by monitoring engine
- Centreon Broker SQL allows to store information into MariaDB databases and forward them to Centreon Broker RRD
- Centreon Broker RRD generates and updates RRD files with data in order to display performance graphs



- Monitoring Engine
- Broker
- Databases (MySQL + RRD)

The remote servers include the following items:

- Centreon read-only local web interface
- Monitoring Engine
- Databases (MySQL + RRD)
- Broker module to forward collected data to a central broker

This architecture is used for:

- Enable load balancing across multiple remote monitoring servers
- Network streams isolation: if your monitoring architecture has to monitor a DMZ area, it is easier (and safe) to place a remote server in the DMZ network
- Have a failover system: if the master centreon server is DOWN the other one allows to continue to display data.
- Have a read-only interface on each poller to have access to locally collected data if a failure connection appears between remote server and Centreon central server.

## Components

### Central Centreon server

There is two types of Centreon central server:

- A master server
- A slave server which is configured as the master one but with only MySQL and Centreon Broker RRD monitoring processes started.

Many components are used to build a master Centreon server:

- Apache web server for Centreon web interface
- The central Centreon server get configuration and collected data from DBMS server
- The Centcore process is used to send monitoring configuration to the remote server and to manage it
- A monitoring engine to collect data
- Collected data are sent to Centreon Broker SQL using cbmod by monitoring engine
- Centreon Broker SQL allows to store information into MariaDB databases and forward them to the two Centreon Broker RRD (master and slave)
- Centreon Broker RRD generates and updates RRD files with data in order to display performance graphs

A bidirectional MySQL replication allows to store in both databases Centreon configuration and collected data.

The slave server is used in regular mode to generate and to update RRD files with data in order to display performance graphs.

In case of failure, the operator has to start the following process on slave server: Apache, CentCore, Centreon Engine and Centreon Broker SQL. The slave server becomes master.

The failover and the management of components are made by Corosync / Pacemaker system.

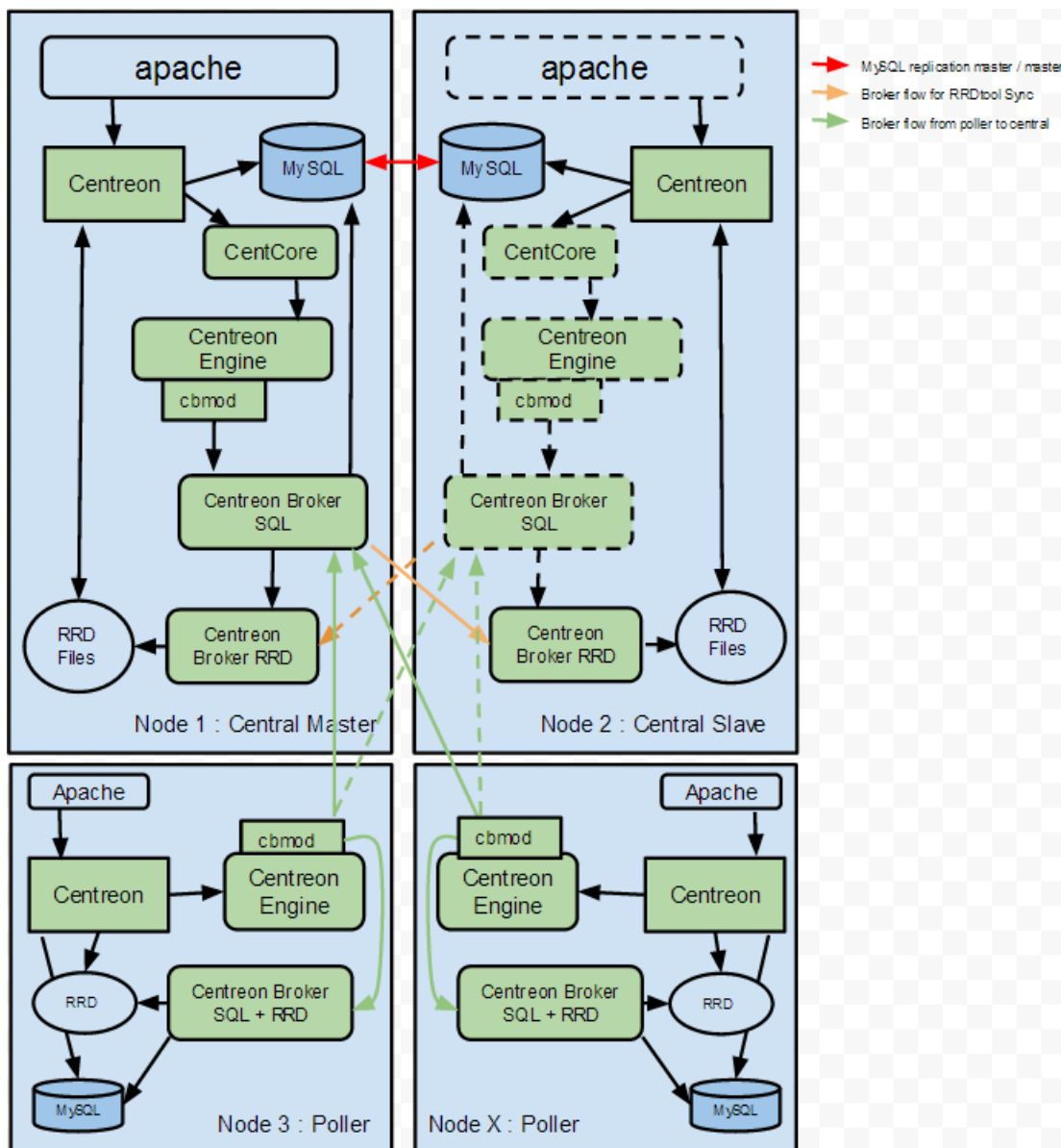
## Remote monitoring server

Many components are used to build a remote server:

- A monitoring engine to collect data
- Collected data are sent to Centreon Broker SQL VIP using cbmod by monitoring engine and locally.
- Centreon Broker SQL allows to store information into MariaDB databases and forward them to Centreon Broker RRD
- Centreon Broker RRD generates and updates RRD files with data in order to display performance graphs

## Architecture

The diagram below summarizes the architecture:



## 3.3 Downloads

### 3.3.1 Formats

Open Source software supplied by Centreon is generally available in 3 formats:

- RPM packages (recommended)
- archives containing the sources
- git repository

RPM packages are the best format to obtain our software. They are packaged by Centreon experts and relieve you of any concern over the installation process.

---

**Note:** Centreon recommends using the Centreon Enterprise Server packaged version. Installation is detailed in the chapter entitled: *First steps with CES 3*

---

If your platform does not support RPM packages, you should use archives containing the sources of stable versions of our software and install them manually. Manual compilation of some packages can be complex.

The last format available is oriented for developers or beta-testers. No official help can be provided on these software versions considered to be in the process of development.

For downloading centreon sources, please refer to our *website* <<https://download.centreon.com>>.

## 3.4 Using CES

### 3.4.1 Installation

#### Step 1 : Start

To install, start your server on the support (created from the ISO file) of the Centreon Enterprise Server. Start with the **Install or upgrade an existing system** option

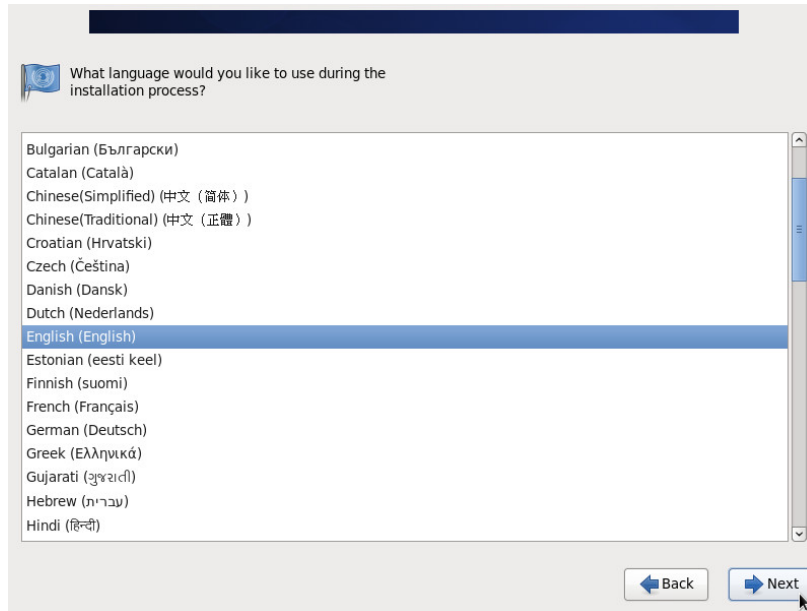


Click on **Next**

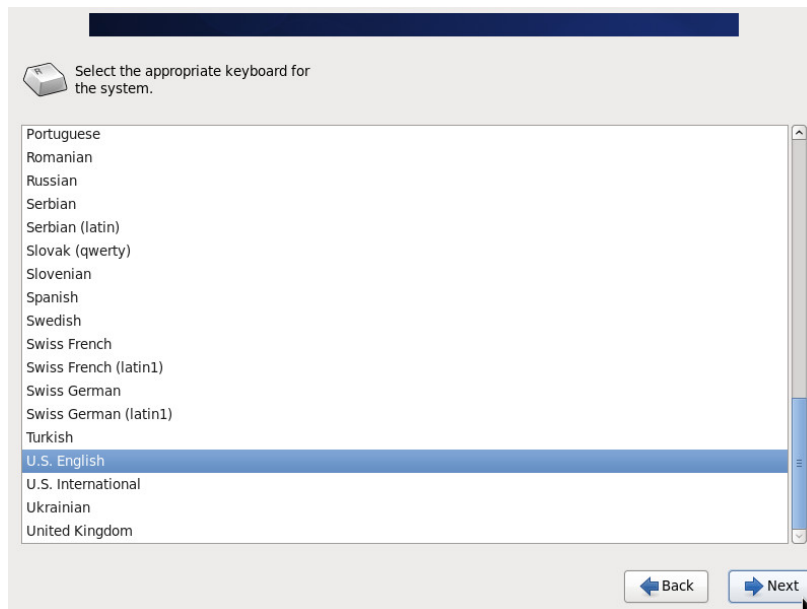


## Step 2 : Choice of language

Choose your language and click on **Next**.



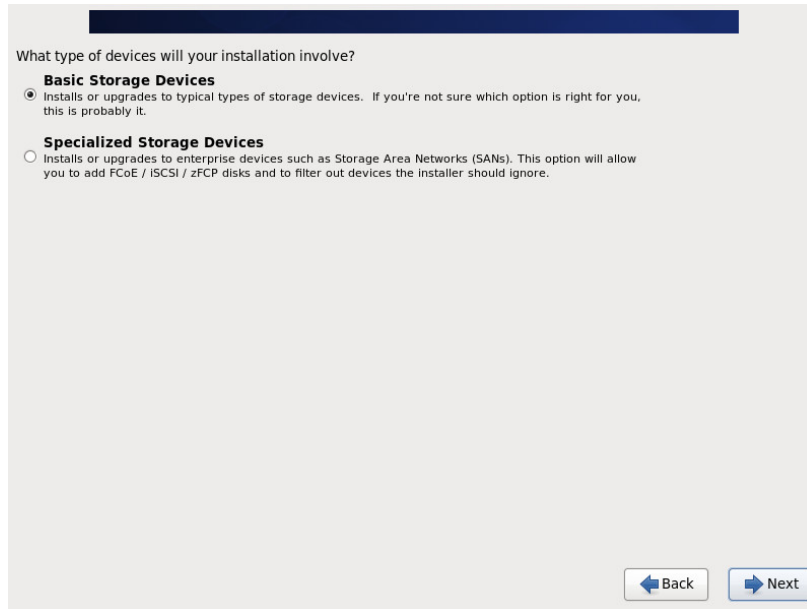
Select the keyboard used by your system and click on **Next**.



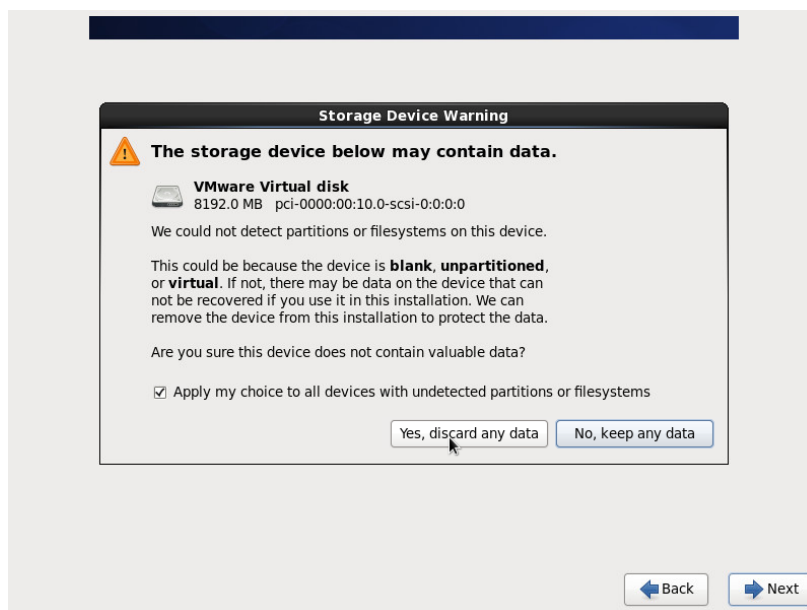
### Step 3 : General configuration

Depending on the type of storage required, choose the options necessary to obtain the partitioning that suits you best.



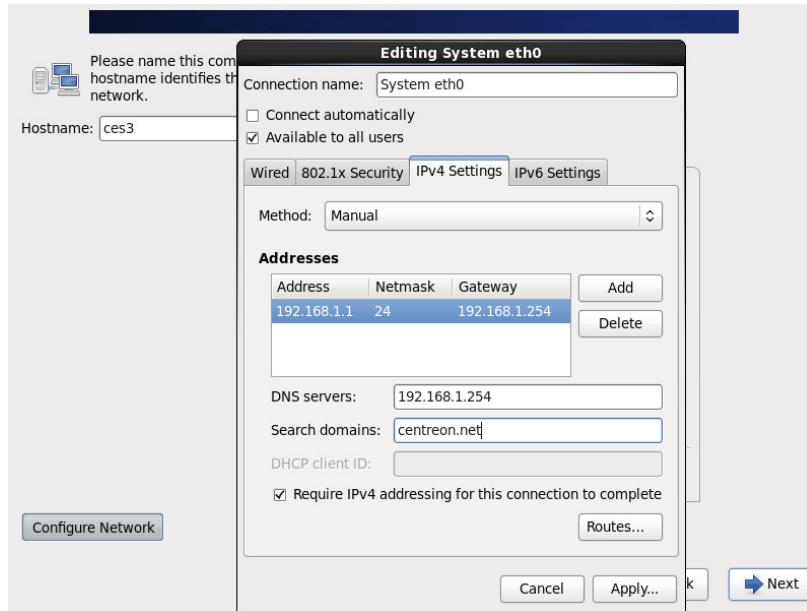


A warning message may appear



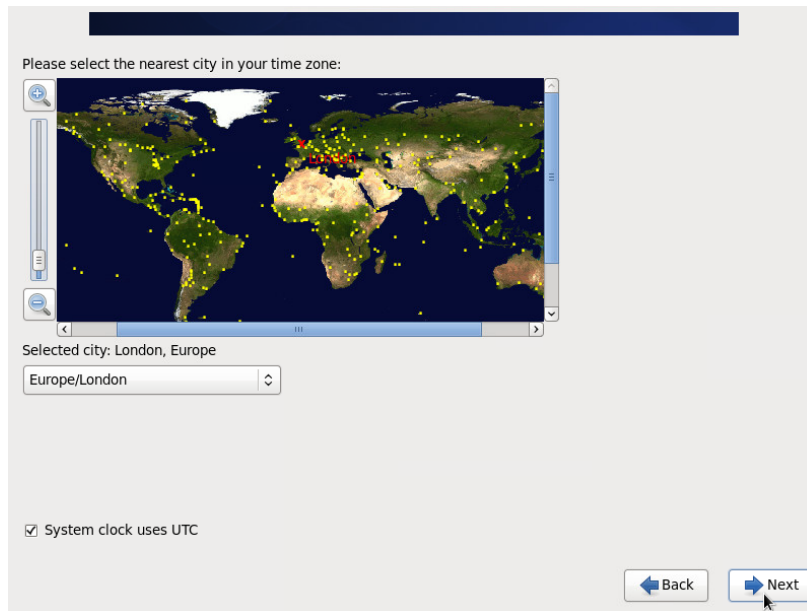
Choose your hostname and click on **Configure network** in order to modify your network card configuration.

Select the network card that you want to use and go into “IPv4 Settings” or “IPv6 Settings” tab (depending on the requirement) to configure the IP address of the interfaces. Click on **Apply** to save the changes.



Click on **Close** and **Next** to continue.

Select your time zone and click on **Next**.



Enter the desired root password, and click on **Next**.

Select the partitioning options that suit you best. Then validate.

Which type of installation would you like?

☐ **Use All Space**  
Removes all partitions on the selected device(s). This includes partitions created by other operating systems.  
**Tip:** This option will remove data from the selected device(s). Make sure you have backups.

☒ **Replace Existing Linux System(s)**  
Removes only Linux partitions (created from a previous Linux installation). This does not remove other partitions you may have on your storage device(s) (such as VFAT or FAT32).  
**Tip:** This option will remove data from the selected device(s). Make sure you have backups.

☐ **Shrink Current System**  
Shrinks existing partitions to create free space for the default layout.

☐ **Use Free Space**  
Retains your current data and partitions and uses only the unpartitioned space on the selected device(s), assuming you have enough free space available.

☐ **Create Custom Layout**  
Manually create your own custom layout on the selected device(s) using our partitioning tool.

☐ Encrypt system  
☐ Review and modify partitioning layout

[< Back](#) [Next >](#)

## Step 4 : Component selection

### Choose the server type

It is possible to choose different options in answer to the question: **Which server type would you like to install?:**

Which server type would you like to install?

☒ Central server with database ⓘ

☐ Central server without database ⓘ

☐ Poller server ⓘ

☐ Database server ⓘ

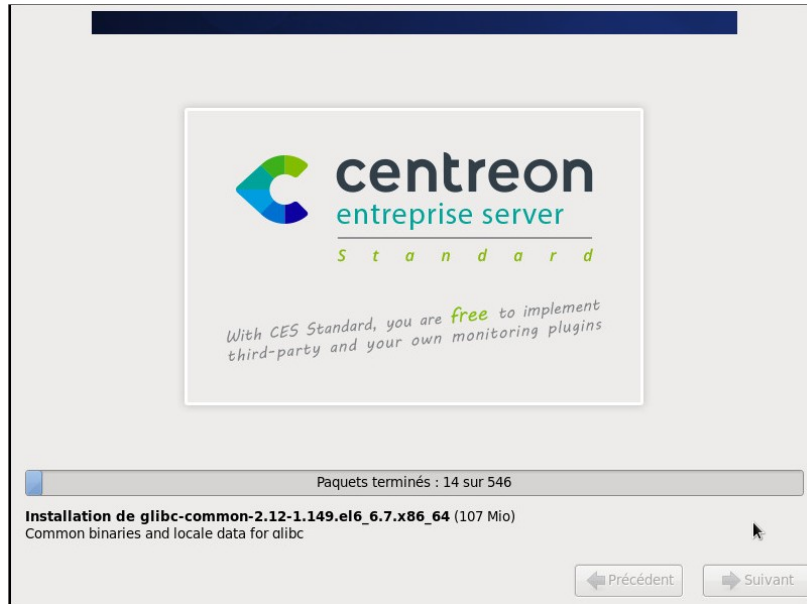
[< Back](#) [Next >](#)

- Central server with database : Install Centreon (web interface and database), monitoring engine and broker
- Central server without database : Install Centreon (web interface only), monitoring engine and broker

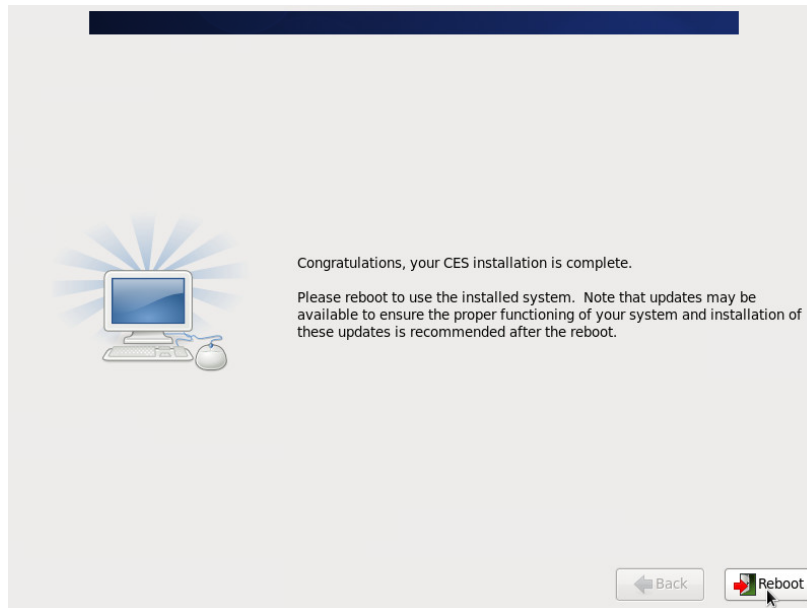
- Poller server : Install poller (monitoring engine and broker only)
- Database server : Install database server (use with **Central server without database** option)

In our box, we shall choose the **Centreon Server with database** option.

Once all these options have been selected, the installation starts.



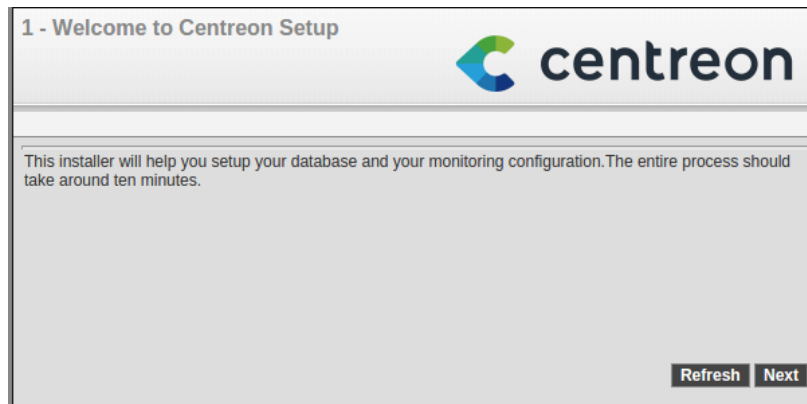
When the installation is finished, click on **Restart**.



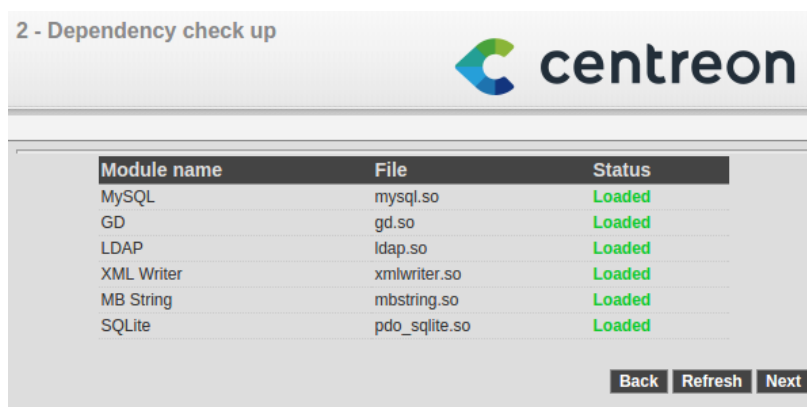
## 3.4.2 Configuration

### Via the web interface

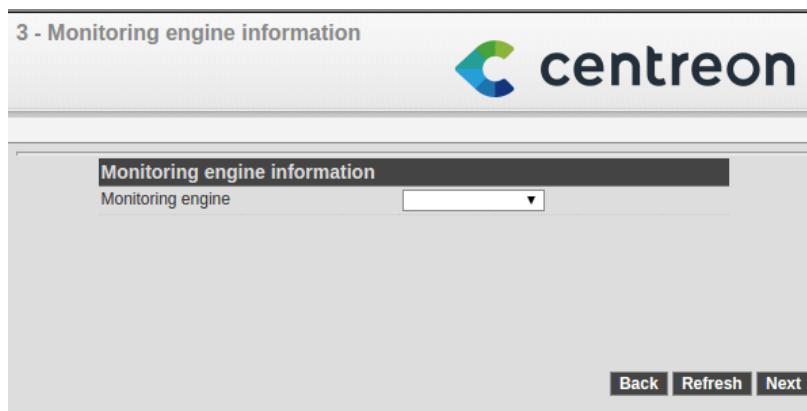
Log into web interface via : [http://\[SERVER\\_IP\]/centreon](http://[SERVER_IP]/centreon). The End of installation wizard of Centreon is displayed, click on **Next**.



The End of installation wizard of Centreon checks the availability of the modules, click on **Next**.




Choose the **centreon-engine** option.



Click on **Next**.

### 3 - Monitoring engine information




#### Monitoring engine information

Monitoring engine	centreon-engine ▼
Centreon Engine directory *	/usr/share/centreon-engine
Centreon Engine Stats binary *	/usr/sbin/centenginestats
Centreon Engine var lib directory *	/var/lib/centreon-engine
Centreon Engine Connector path	/usr/lib/centreon-connector
Centreon Engine Library (*.so) directory *	/usr/lib64/centreon-engine
Embedded Perl initialisation file	

Back Refresh Next

For the choice of broker, choose **Centreon-broker**.

### 4 - Broker module information




#### Broker Module information

Broker Module	▼
---------------	---

Back Refresh Next

Click on **Next**.

### 4 - Broker module information



#### Broker Module information

Broker Module	centreon-broker ▼
Centreon Broker etc directory *	/etc/centreon-broker
Centreon Broker module (cbmod.so) *	/usr/lib64/nagios/cbmod.so
Centreon Broker log directory *	/var/log/centreon-broker
Retention file directory *	/var/lib/centreon-broker
Centreon Broker lib (*.so) directory *	/usr/share/centreon/lib/cent

Back Refresh Next

Define the data concerning the admin user, click on **Next**.

5 - Admin information

centreon

**Admin information**

Login admin

Password \*

Confirm password \*

First name \* Administrator

Last name \* Centreon

Email \* admin@mycompany.com

Back Refresh Next

By default, the 'localhost' server is defined and the root password is empty. If you use a remote database server, these two data entries must be changed. In our box, we only need to define a password for the user accessing the Centreon databases, i.e. 'Centreon', click on **Next**.

6 - Database information

centreon

**Database information**

Database Host Address (default: localhost)

Database Port (default: 3306) 3306

Root password

Configuration database name \* centreon

Storage database name \* centreon\_storage

Utils database name \* centreon\_status

Database user name \* centreon

Database user password \*

Confirm user password \*

Back Refresh Next

If the following error message appears: **Add innodb\_file\_per\_table=1 in my.cnf file under the [mysqld] section and restart MySQL Server.** Perform the following operation:

1. Log-on to the 'root' user on your server
2. Modify this file

/etc/my.cnf

3. Add these lines to the file

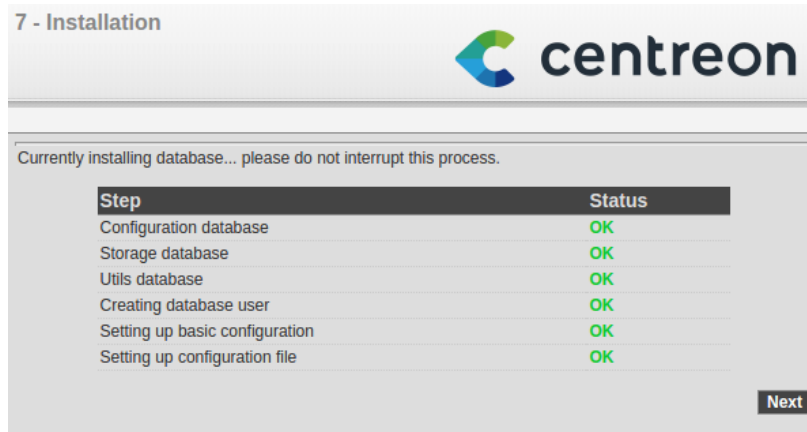
```
[mysqld] innodb_file_per_table = 1
```

4. Restart mysql service

```
/etc/init.d/mysql restart
```

5. click on **Refresh**

The End of installation wizard configures the databases, click on **Next**.



The installation is finished, click on Finish.



You can now log in.



## Start monitoring

To start monitoring engine :

1. On web interface, go to **Configuration ==> Monitoring engines**
2. Leave the default options and click on **Export**
3. Uncheck **Generate Configuration Files** and **Run monitoring engine debug (-v)**



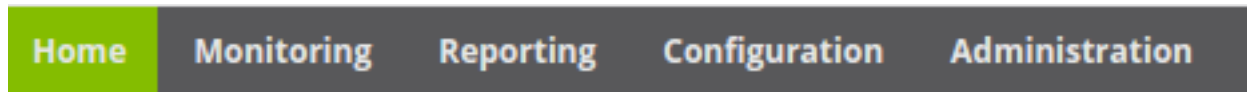
4. Check **Move Export Files** and **Restart Monitoring Engine**
5. Click on **Export** again
6. Log into the 'root' user on your server
7. Start Centreon Broker

```
/etc/init.d/cbd start
```

Monitoring is now working.

## Introduction to the web interface

Centreon web interface is made up of several menus, each menu has a specific function:



- The **Home** menu enables access to the first home screen after logging in. It summarises the general status of the supervision.
- The **Monitoring** menu contains the status of all the supervised elements in real and delayed time via the viewing of logs and performance graphics.
- The **Reporting** menu serves to view, intuitively (via diagrams), the evolution of the supervision on a given period.
- The **Configuration** menu serves to configure all monitored objects and the supervision infrastructure.
- The **Administration** menu serves to configure the Centreon web interface and to view the general status of the servers.

## Before going further

it is necessary update the CES 3.3 server. To do this:

1. Log in as a 'root' on the central server
2. Enter this command

```
yum -y update
```

Allow the update to run fully and then restart the server in case of a kernel update.

Start your configuration by clicking [here<configuration\\_start>>](#).

## 3.5 Using packages

Centreon supplies RPM for its products via the Centreon Enterprise Server (CES) solution Open Sources version available free of charge on our repository.

These packages have been successfully tested on CentOS and Red Hat environments in 6.x version.

### 3.5.1 Prerequisites

To install Centreon software from the CES repository, you should first install the file linked to the repository.

Perform the following command from a user with sufficient rights:

```
$ wget http://yum.centreon.com/standard/3.0/stable/ces-standard.repo -O /etc/yum.repos.d/ces-sta
```

The repository is now installed.

#### Any operating system

SELinux should be disabled; for this, you have to modify the file “/etc/sysconfig/selinux” and replace “enforcing” by “disabled”:

```
SELINUX=disabled
```

PHP timezone should be set; go to /etc/php.d directory and create a file named php-timezone.ini who contain the following line :

```
date.timezone = Europe/Paris
```

After saving the file, please don't forget to restart apache server.

The MySQL database server should be available to complete installation (locally or not). MariaDB is recommended.

### 3.5.2 Centreon installation

You should choose between one of the two configuration processes of your monitoring platform. Centreon recommends the first choice based on the “Centreon Engine” scheduler and the “Centreon Broker” stream multiplexer.

#### Install a central server

The chapter describes the installation of a Centreon central server.

Perform the command:

```
$ yum install centreon-base-config-centreon-engine centreon
```

After this step you should connect to Centreon to finalise the installation process. This step is described *here*.

#### Installing a poller

This chapter describes the installation of a collector.

Perform the command:

```
$ yum install centreon-poller-centreon-engine
```

#### Base configuration of a poller

The communication between a central server and a poller server is by SSH.

You should exchange the SSH keys between the servers.

If you don't have any private SSH keys on the central server for the Centreon user:

```
$ su - centreon
$ ssh-keygen -t rsa
```

Copy this key on the collector:

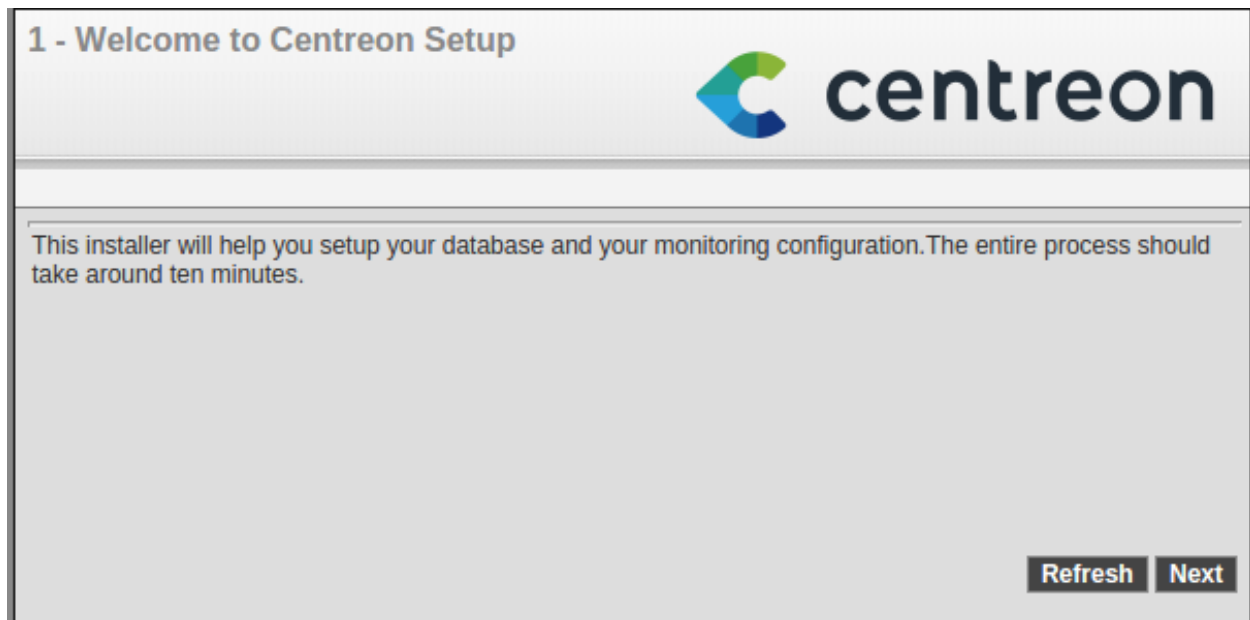
```
$ ssh-copy-id centreon@your_poller_ip
```

**Web Installation** Make sure that your Apache and MySQL servers are up and running before continuing.

Open your favorite web browser and go to the address:

`http://SERVER_ADDRESS/centreon`

You should see the following page:



Click on the **Next** button:

## 2 - Dependency check up



Module name	File	Status
MySQL	mysql.so	Loaded
GD	gd.so	Loaded
LDAP	ldap.so	Loaded
XML Writer	xmlwriter.so	Loaded
MB String	mbstring.so	Loaded
SQLite	pdo_sqlite.so	Loaded

[Back](#) [Refresh](#) [Next](#)

If a package is missing install it and click on the **Refresh** button. Click on the **Next** button as soon as everything is OK:

## 3 - Monitoring engine information



### Monitoring engine information

Monitoring engine

[Back](#) [Refresh](#) [Next](#)

Select your monitoring engine. Depending on the selection, the settings are different.

For Centreon Engine:

### 3 - Monitoring engine information



**Monitoring engine information**

Monitoring engine	<input type="text" value="centreon-engine"/>
Centreon Engine directory *	<input type="text" value="/usr/share/centreon-engine"/>
Centreon Engine Stats binary *	<input type="text" value="/usr/sbin/centenginestats"/>
Centreon Engine var lib directory *	<input type="text" value="/var/lib/centreon-engine"/>
Centreon Engine Connector path	<input type="text" value="/usr/lib/centreon-connector"/>
Centreon Engine Library (*.so) directory *	<input type="text" value="/usr/lib64/centreon-engine"/>
Embedded Perl initialisation file	<input type="text"/>

Click on the **Next** button as soon as all the fields are filled.

### 4 - Broker module information



**Broker Module information**

Broker Module	<input type="text"/>
---------------	----------------------

Select your Stream Multiplexer. Depending on the selection, the settings are different.

For Centreon Broker:

#### 4 - Broker module information



Broker Module information	
Broker Module	<input type="text" value="centreon-broker"/>
Centreon Broker etc directory *	<input type="text" value="/etc/centreon-broker"/>
Centreon Broker module (cbmod.so) *	<input type="text" value="/usr/lib64/nagios/cbmod.so"/>
Centreon Broker log directory *	<input type="text" value="/var/log/centreon-broker"/>
Retention file directory *	<input type="text" value="/var/lib/centreon-broker"/>
Centreon Broker lib (*.so) directory *	<input type="text" value="/usr/share/centreon/lib/cent"/>
<input type="button" value="Back"/> <input type="button" value="Refresh"/> <input type="button" value="Next"/>	

Click on the **Next** button when all parameters are filled.

#### 5 - Admin information



Admin information	
Login	<input type="text" value="admin"/>
Password *	<input type="password" value=""/>
Confirm password *	<input type="password" value=""/>
First name *	<input type="text" value="Administrator"/>
Last name *	<input type="text" value="Centreon"/>
Email *	<input type="text" value="admin@mycompany.com"/>
<input type="button" value="Back"/> <input type="button" value="Refresh"/> <input type="button" value="Next"/>	

Fill the form with your data. Be sure to remember your password. Click on the **next** button.

## 6 - Database information



Database information	
Database Host Address (default: localhost)	<input type="text"/>
Database Port (default: 3306)	<input type="text" value="3306"/>
Root password	<input type="password" value="....."/>
Configuration database name *	<input type="text" value="centreon"/>
Storage database name *	<input type="text" value="centreon_storage"/>
Utils database name *	<input type="text" value="centreon_status"/>
Database user name *	<input type="text" value="centreon"/>
Database user password *	<input type="password" value="....."/>
Confirm user password *	<input type="password" value="....."/> <input type="password"/>

Fill the form with information about your database. Click on the **Next** button.

## 7 - Installation



Currently installing database... please do not interrupt this process.

Step	Status
Configuration database	OK
Storage database	OK
Utils database	OK
Creating database user	OK
Setting up basic configuration	OK
Setting up configuration file	OK

The database structure will be installed during this process. All must be validated by **OK**.

**Note:** The installation process may ask you to change the settings of the MySQL server to **add innodb\_file\_per\_table=1** in the configuration file.

Click on the **Next** button.

## 8 - Installation finished



The installation is now finished. To get further information regarding Centreon please visit the following links:

- Official website: [www.centreon.com](http://www.centreon.com)
- Forum: [forum.centreon.com](http://forum.centreon.com)
- Documentation: [documentation.centreon.com](http://documentation.centreon.com)
- Wiki: [doc.centreon.com](http://doc.centreon.com)
- Bug Tracker: [forge.centreon.com](http://forge.centreon.com)

For professional support subscription please contact the [Centreon Support Center](#).

**Refresh** **Finish**

The installation is now finished, click on the **Finish** button, you will be redirected to the login screen:



Login: \*

Password \*

**Connect**

© Centreon 2005-2015  
v. 2.7.0

Enter your credentials to log in.



## 3.6 Using sources

### 3.6.1 Prerequisites

#### CentOS

CentOS and RHEL environments do not possess as standard on archives all the dependences necessary for the installation of Centreon. You should add the *RPM Forge* archive

64-bit system:

```
$ wget http://apt.sw.be/redhat/el6/en/x86_64/rpmforge/RPMS/rpmforge-release-0.5.3-1.el6.rf.x86_64.rpm
$ wget http://dag.wieers.com/rpm/packages/RPM-GPG-KEY.dag.txt
```

Use your favorite text editor and delete the first line of the RPM-GPG-KEY.dag.txt file. The first line should contain:

```
"-----BEGIN PGP PUBLIC KEY BLOCK-----"
```

Then perform the following commands:

```
$ rpm --import RPM-GPG-KEY.dag.txt
$ rpm -Uvh rpmforge-release-0.5.3-1.el6.rf.x86_64.rpm
```

You can now install the necessary prerequisites:

```
$ yum update
$ yum upgrade
$ yum install httpd gd fontconfig-devel libjpeg-devel libpng-devel gd-devel perl-GD perl-DateTime \
    openssl-devel perl-DBD-MySQL mysql-server mysql-devel php php-mysql php-gd php-ldap php-xml php-redis \
    perl-Config-IniFiles perl-DBI perl-DBD-MySQL rrdtool perl-rrdtool perl-Crypt-DES perl-Digest-SHA1 \
    perl-Digest-HMAC net-snmp-utils perl-Socket6 perl-IO-Socket-INET6 net-snmp net-snmp-libs php-snmp \
    dmidecode lm_sensors perl-Net-SNMP net-snmp-perl fping cpp gcc gcc-c++ libstdc++ glib2-devel \
    php-pear
```

Additional commands are necessary to configure the environment correctly:

```
$ usermod -U apache
$ pear channel-update pear.php.net
```

If you can't access the Internet directly but have to pass via a proxy, perform the following command:

```
$ pear config-set http_proxy http://my_proxy.com:port
```

Then execute:

```
$ pear upgrade-all
```

#### Debian / Ubuntu

Install the following prerequisites:

```
$ apt-get install sudo tofrodos bsd-mailx lsb-release mysql-server libmysqlclient18 libdatetime-perl \
    apache2 apache2-mpm-prefork php5 php5-mysql php-pear php5-intl php5-ldap php5-snmp php5-gd php5-redis \
    rrdtool librrds-perl libconfig-inifiles-perl libcrypt-des-perl libdigest-hmac-perl \
    libdigest-sha-perl libgd-perl snmp snmpd libnet-snmp-perl libsnmp-perl
```

To finish, you should install SNMP MIBs. Because of a license problem the MIB files are not available by default in Debian. To add them, change the `/etc/apt/sources.list` file and add the *non-free* category.

Then execute the following commands:

```
$ apt-get update
$ apt-get install snmp-mibs-downloader
```

## Suse

### Packages

Install the following prerequisites:

```
$ yast -i gcc gcc-c++ make automake apache2 php5 php5-mysql apache2-mod_php5 php5-pear \
  php5-ldap php5-snmp php5-gd php5-soap php5-intl php5-posix php5-gettext php5-mbstring mysql \
  libmysqlclient-devel perl-DBD-mysql mysql-community-server rrdtool perl-Config-IniFiles \
  net-snmp perl-Net-SNMP perl-SNMP gd libjpeg-devel libpng-devel fontconfig-devel \
  freetype2-devel sudo mailx fping iputils dos2unix cron dejavu
```

On some OpenSuse distributions, the default settings of the **mime** type are not valid to function with the Centreon web interface. Edit the `/etc/mime.types` file and find the lines:

```
text/x-xsl xsl
text/x-xslt xslt xsl
```

Replace them by:

```
text/xml xsl
text/xml xslt xsl
```

Save the file and restart Apache:

```
/etc/init.d/apache2 restart
```

## 3.6.2 Monitoring engine

Centreon is tested and approved only for the monitoring engine *Centreon Engine*.

You can install it following the procedure in documentation. Don't forget to install the Nagios plugins.

## 3.6.3 Stream Multiplexer

Centreon is tested and approved only for the stream multiplexer *Centreon Broker*.

Install this Stream Multiplexers before continuing with the installation.

**Warning:** Centreon Web is not compatible with Nagios monitoring engine.

## 3.6.4 Centreon

Download the latest version of Centreon *here*.

## Shell Installation

Extract the Centreon archive:

```
tar xzf centreon-2.x.x.tar.gz
```

Change directory:

```
cd centreon-2.x.x
```

Run the installation script:

```
./install.sh -i
```

---

**Note:** The installation script allows customised configuration; this process will show you the best paths to use. Furthermore quick yes/no questions can be replied to by [y] most of the time.

---

## Prerequisites check

If the Prerequisites installation step has been run successfully you should have no problem during this stage. Otherwise repeat the Prerequisites installation process:

```
#####
#
#                               Centreon (www.centreon.com)                               #
#                               Thanks for using Centreon                               #
#
#                               v2.7.0                                                 #
#
#                               infos@centreon.com                                     #
#
#                               Make sure you have installed and configured           #
#                               sudo - sed - php - apache - rrdtool - mysql            #
#
#####
-----
                Checking all needed binaries
-----
rm                                OK
cp                                OK
mv                                OK
/bin/chmod                        OK
/bin/chown                        OK
echo                              OK
more                              OK
mkdir                             OK
find                              OK
/bin/grep                         OK
/bin/cat                          OK
/bin/sed                          OK
```

## License agreement

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may

consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Library General Public License instead of this License.

Do you accept GPL license ?  
[y/n], default to [n]:  
> y

## Main components

Answer [y] to all the questions

-----  
Please choose what you want to install  
-----

Do you want to install : Centreon Web Front  
[y/n], default to [n]:  
> y

Do you want to install : Centreon CentCore  
[y/n], default to [n]:  
> y

Do you want to install : Centreon Nagios Plugins  
[y/n], default to [n]:  
> y

Do you want to install : Centreon Snmp Traps process  
[y/n], default to [n]:  
> y

## Definition of installation paths

-----  
Start CentWeb Installation  
-----

Where is your Centreon directory?  
default to [/usr/local/centreon]  
> /usr/share/centreon

Do you want me to create this directory ? [/usr/share/centreon]  
[y/n], default to [n]:  
> y  
Path /usr/share/centreon OK

Where is your Centreon log directory  
default to [/usr/local/centreon/log/]  
> /var/log/centreon

Do you want me to create this directory ? [/var/log/centreon/]  
[y/n], default to [n]:

```

> y
Path /var/log/centreon/ OK

Where is your Centreon etc directory
default to [/etc/centreon]
>

Do you want me to create this directory ? [/etc/centreon]
[y/n], default to [n]:
> y
Path /etc/centreon OK

Where is your Centreon binaries directory
default to [/usr/local/centreon/bin]
> /usr/share/centreon/bin

Do you want me to create this directory ? [/usr/share/centreon/bin]
[y/n], default to [n]:
> y
Path /usr/share/centreon/bin OK

Where is your Centreon data information directory
default to [/usr/local/centreon/data]
> /usr/share/centreon/data

Do you want me to create this directory ? [/usr/share/centreon/data]
[y/n], default to [n]:
> y

Where is your Centreon generation_files directory?
default to [/usr/local/centreon/]
> /usr/share/centreon
Path /usr/share/centreon/ OK

Where is your Centreon variable library directory?
default to [/var/lib/centreon]
>

Do you want me to create this directory ? [/var/lib/centreon]
[y/n], default to [n]:
> y
Path /var/lib/centreon OK

Where is your CentPlugins Traps binary
default to [/usr/local/centreon/bin]
> /usr/share/centreon/bin
Path /usr/share/centreon/bin OK

```

The **RRDs.pm** file can be located anywhere on the server. Use the following commands:

```

updatedb
locate RRDs.pm

```

```

Where is the RRD perl module installed [RRDs.pm]
default to [/usr/lib/perl5/RRDs.pm]
>

```

```

Path /usr/lib/perl5          OK
/usr/bin/rrdtool            OK
/usr/bin/mail               OK
/usr/bin/php                OK
/usr/bin/perl               OK
Finding Apache user :      apache
Finding Apache group :    apache

```

## Centreon user and group

The Centreon applications group: This group is used for the access rights between the various Centreon softwares:

```

What is the Centreon group ? [centreon]
default to [centreon]
>

What is the Centreon user ? [centreon]
default to [centreon]
>

```

## Monitoring user

This user executes the monitoring engine.

If you use Centreon Engine:

```

What is the Monitoring engine user ?
> centreon-engine

```

If you use Centreon Broker:

```

What is the Broker user ? (optional)
> centreon-broker

```

## Monitoring logs directory

If you use Centreon Engine:

```

What is the Monitoring engine log directory ?
> /var/log/centreon-engine

```

## Plugin path

```

Where is your monitoring plugins (libexec) directory ?
default to [/usr/lib/nagios/plugins]
>
Path /usr/lib/nagios/plugins          OK
Add group centreon to user apache    OK
Add group centreon to user centreon-engine OK
Add group centreon-engine to user apache OK
Add group centreon-engine to user centreon OK

```

## Sudo configuration

```
-----
Configure Sudo
-----

Where is sudo configuration file
default to [/etc/sudoers]
>
/etc/sudoers                                     OK
```

### If you use Centreon Engine:

```
What is the Monitoring engine init.d script ?
> /etc/init.d/centengine

What is the Monitoring engine binary ?
> /usr/sbin/centengine

What is the Monitoring engine configuration directory ?
> /etc/centreon-engine
```

### If you use Centreon Broker:

```
Where is the configuration directory for broker module ?
> /etc/centreon-broker

Where is the init script for broker module daemon ?
> /etc/init.d/cbd
```

### Sudo configuration:

```
Do you want me to reconfigure your sudo ? (WARNING)
[y/n], default to [n]:
> y
Configuring Sudo                                     OK
```

## Apache configuration

```
-----
Configure Apache server
-----

Do you want to add Centreon Apache sub configuration file ?
[y/n], default to [n]:
> y
Create '/etc/httpd/conf.d/centreon.conf'             OK
Configuring Apache                                   OK

Do you want to reload your Apache ?
[y/n], default to [n]:
> y
Reloading Apache service                             OK
Preparing Centreon temporary files
Change right on /var/log/centreon                     OK
Change right on /etc/centreon                         OK
Change macros for insertBaseConf.sql                 OK
Change macros for sql update files                   OK
```

Change macros for php files	OK
Change right on /usr/local/etc	OK
Add group centreon to user apache	OK
Add group centreon to user centreon-engine	OK
Add group centreon to user centreon	OK
Copy CentWeb in system directory	
Install CentWeb (web front of centreon)	OK
Change right for install directory	
Change right for install directory	OK
Install libraries	OK
Write right to Smarty Cache	OK
Copying libinstall	OK
Change macros for centreon.cron	OK
Install Centreon cron.d file	OK
Change macros for centAcl.php	OK
Change macros for downtimeManager.php	OK
Change macros for eventReportBuilder.pl	OK
Change macros for dashboardBuilder.pl	OK
Install cron directory	OK
Change right for eventReportBuilder.pl	OK
Change right for dashboardBuilder.pl	OK
Change macros for centreon.logrotate	OK
Install Centreon logrotate.d file	OK
Prepare export-mysql-indexes	OK
Install export-mysql-indexes	OK
Prepare import-mysql-indexes	OK
Install import-mysql-indexes	OK
Prepare indexes schema	OK
Install indexes schema	OK

## Pear module installation

---

### Pear Modules

---

#### Check PEAR modules

PEAR	1.4.9	1.9.4	OK
DB	1.7.6	1.7.14	OK
DB_DataObject	1.8.4	1.10.0	OK
DB_DataObject_FormBuilder	1.0.0RC4	1.0.2	OK
MDB2	2.0.0	2.4.1	OK
Date	1.4.6	1.4.7	OK
HTML_Common	1.2.2	1.2.5	OK
HTML_QuickForm	3.2.5	3.2.13	OK
HTML_QuickForm_advmultiselect	1.1.0	1.5.1	OK
HTML_Table	1.6.1	1.8.3	OK
Archive_Tar	1.1	1.3.1	OK
Auth_SASL	1.0.1	1.0.6	OK
Console_Getopt	1.2	1.2	OK
Validate	0.6.2	0.8.5	OK
Log	1.9.11	1.12.7	OK
Archive_Zip	0.1.2	0.1.2	OK
All PEAR modules			OK



## Configuration file installation

```
-----
                          Centreon Post Install
-----
Create /usr/share/centreon/www/install/install.conf.php      OK
Create /etc/centreon/instCentWeb.conf                       OK
```

## Centstorage installation

```
-----
                          Start CentStorage Installation
-----

Where is your Centreon Run Dir directory?
default to [/var/run/centreon]
>

Do you want me to create this directory ? [/var/run/centreon]
[y/n], default to [n]:
> y
Path /var/run/centreon                                     OK

Where is your CentStorage binary directory
default to [/usr/share/centreon/bin]
>
Path /usr/share/centreon/bin                               OK

Where is your CentStorage RRD directory
default to [/var/lib/centreon]
>
Path /var/lib/centreon                                     OK
Preparing Centreon temporary files
/tmp/centreon-setup exists, it will be moved...
install www/install/createTablesCentstorage.sql           OK
Creating Centreon Directory '/var/lib/centreon/status'     OK
Creating Centreon Directory '/var/lib/centreon/metrics'    OK
Change macros for centstorage binary                       OK
Install CentStorage binary                                 OK
Install library for centstorage                            OK
Change right : /var/run/centreon                           OK
Change macros for centstorage init script                  OK

Do you want me to install CentStorage init script ?
[y/n], default to [n]:
> y
CentStorage init script installed                          OK

Do you want me to install CentStorage run level ?
[y/n], default to [n]:
> y
Change macros for logAnalyser                              OK
Install logAnalyser                                         OK
Change macros for logAnalyser-cbroker                      OK
Install logAnalyser-cbroker                                OK
Change macros for nagiosPerfTrace                          OK
Install nagiosPerfTrace                                    OK
```

Change macros for purgeLogs	OK
Install purgeLogs	OK
Change macros for purgeCentstorage	OK
Install purgeCentstorage	OK
Change macros for centreonPurge.sh	OK
Install centreonPurge.sh	OK
Change macros for centstorage.cron	OK
Install CentStorage cron	OK
Change macros for centstorage.logrotate	OK
Install Centreon Storage logrotate.d file	OK
Create /etc/centreon/instCentStorage.conf	OK

## Centcore installation

```

-----
Start CentCore Installation
-----

Where is your CentCore binary directory
default to [/usr/share/centreon/bin]
>
Path /usr/share/centreon/bin          OK
/usr/bin/ssh                          OK
/usr/bin/scp                          OK
Preparing Centreon temporary files
/tmp/centreon-setup exists, it will be moved...
Change CentCore Macro                 OK
Copy CentCore in binary directory     OK
Change right : /var/run/centreon      OK
Change right : /var/lib/centreon      OK
Change macros for centcore.logrotate  OK
Install Centreon Core logrotate.d file OK
Replace CentCore init script Macro    OK

Do you want me to install CentCore init script ?
[y/n], default to [n]:
> y
CentCore init script installed        OK

Do you want me to install CentCore run level ?
[y/n], default to [n]:
> y
Create /etc/centreon/instCentCore.conf OK

```

## Plugin installation

```

-----
Start CentPlugins Installation
-----

Where is your CentPlugins lib directory
default to [/var/lib/centreon/centplugins]
>

Do you want me to create this directory ? [/var/lib/centreon/centplugins]

```

```

[y/n], default to [n]:
> y
Path /var/lib/centreon/centplugins                                OK
Preparing Centreon temporary files
/tmp/centreon-setup exists, it will be moved...
Change macros for CentPlugins                                    OK
Installing the plugins                                           OK
Change right on centreon.conf                                    OK
CentPlugins is installed

-----
                Start CentPlugins Traps Installation
-----

Where is your SNMP configuration directory
default to [/etc/snmp]
>
/etc/snmp                                                         OK

Where is your SNMPTT binaries directory
default to [/usr/local/centreon/bin/]
> /usr/share/centreon/bin
/usr/share/centreon/bin                                          OK
Finding Apache user :                                           apache
Preparing Centreon temporary files
/tmp/centreon-setup exists, it will be moved...
Change macros for CentPluginsTraps                               OK
Change macros for init scripts                                  OK
Installing the plugins Trap binaries                             OK
Change macros for snmptrapd.conf                                OK
Change macros for snmptt.ini                                    OK
SNMPTT init script installed                                    OK
Install : snmptrapd.conf                                         OK
Install : snmp.conf                                              OK
Install : snmptt.ini                                             OK
Install : snmptt                                                OK
Install : snmptthandler                                          OK
Install : snmpttconvertmib                                       OK
Create /etc/centreon/instCentPlugins.conf                       OK

```

**End**

```

#####
#
#           Go to the URL : http://localhost.localdomain/centreon/
#                   to finish the setup
#
#       Report bugs at https://github.com/centreon/centreon/issues
#
#           Thanks for using Centreon.
#           -----
#       Contact : infos@centreon.com
#               http://www.centreon.com
#
#####

```

### Any operating system

SELinux should be disabled; for this, you have to modify the file “/etc/sysconfig/selinux” and replace “enforcing” by “disabled”:

```
SELINUX=disabled
```

PHP timezone should be set; go to /etc/php.d directory and create a file named php-timezone.ini who contain the following line :

```
date.timezone = Europe/Paris
```

After saving the file, please don't forget to restart apache server.

The Mysql database server should be available to complete installation (locally or not). MariaDB is recommended.

After this step you should connect to Centreon to finalise the installation process. This step is described *here*.

---

## Migration from Nagios to Centreon

---

This chapter describes procedures to migrate from a Nagios based platform to a Centreon (CES) platform.

### 4.1 Nagios Reader to Centreon CLAPI

**Nagios Reader to Centreon CLAPI** is a free and open source project to analyse Nagios CFG configuration files and to transform monitoring configuration to Centreon CLAPI command in order to import configuration into Centreon web interface.

#### 4.1.1 Prerequisites

First of all you need a CES server installed and ready to use. Please see the documentation *to install a Centreon server* based on CES.

#### 4.1.2 Installation

This script uses the Perl-Nagios-Object library to read CFG files. To install it please follow this steps on your Nagios(R) server:

```
$ yum install perl-Module-Build
$ cd /tmp
$ wget http://search.cpan.org/CPAN/authors/id/D/DU/DUNCS/Nagios-Object-0.21.20.tar.gz
$ tar xzf Nagios-Object-0.21.20.tar.gz
$ cd Nagios-Object-0.21.20
$ perl Build.PL
$ ./Build
$ ./Build test
$ ./Build install
```

Download script from github on your Nagios(R) server:

```
$ cd /tmp
$ git clone https://github.com/centreon/nagiosToCentreon.git
$ cd nagiosToCentreon
```

### 4.1.3 Usage

On a fresh CES server the default poller is named “Central”. If you rename it or if you want to link this Nagios configuration to a predefined poller you have to change the poller name on line 65:

```
my $default_poller = "Central";
```

To display help use the command:

```
$ perl nagios_reader_to_centreon_clapi.pl --help
#####
#   Copyright (c) 2005-2015 Centreon                               #
#   Bugs to http://github.com/nagiosToCentreon                    #
#####
```

```
Usage: nagios_reader_to_centreon_clapi.pl
      -V (--version) Show script version
      -h (--help)    Usage help
      -C (--config)  Path to nagios.cfg file
```

To run the script please use the following command:

```
$ perl nagios_reader_to_centreon_clapi.pl --config /usr/local/nagios/etc/nagios.cfg > /tmp/centreon_c
```

Export the file /tmp/centreon\_clapi\_import\_commands.txt on your CES server.

Run the following command to import configuration into Centreon on your CES server:

```
$ /usr/share/centreon/www/modules/centreon-clapi/core/centreon -u admin -p @PASSWORD -i /tmp/centreon_c
```

---

**Note:** Replace @PASSWORD by password of **admin** Centreon web user.

---

---

## Quick Start

---

This chapter describes you how to quickly start to configure your Centreon monitoring interface by using configuration objects.

### 5.1 Login


To connect to your Centreon web interface access to URL: [http://IP\\_ADDRESS/centreon](http://IP_ADDRESS/centreon)

---

**Note:** Replace **IP\_ADDRESS** by the IP address or FQDN of your Centreon web server.

---

Inform your user name and associated password and click on **Connect** button:

Login: \*

Password \*

Connect

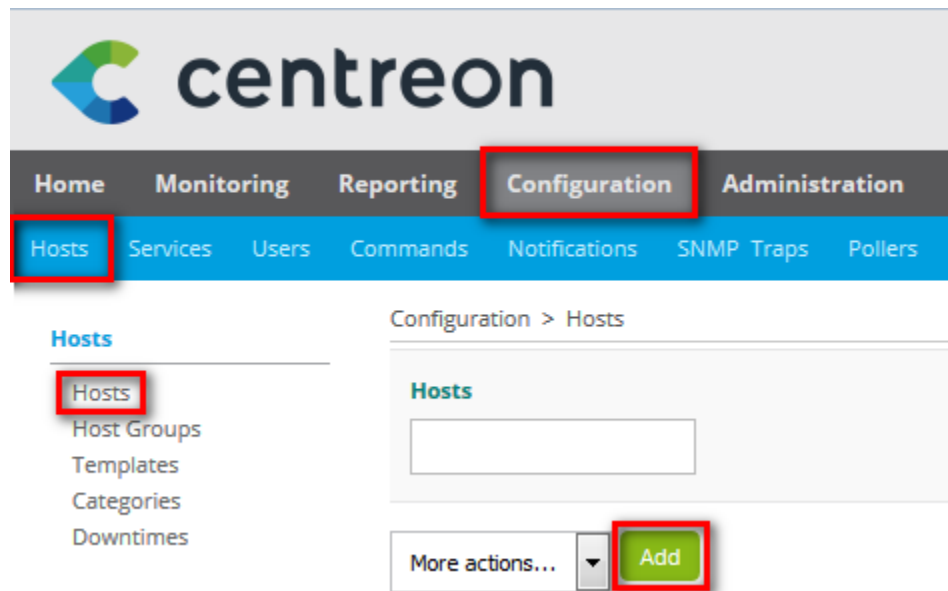
You are now connected to Centreon web interface.

## 5.2 Add a host

Your platform is now ready to monitor your first servers or network equipment but you don't know how to. Don't worry! It is simple to start monitoring.

First *connect* to your Centreon web interface with an administrator account or an account which allow to manage monitored object.

Go to the **Configuration > Hosts > Hosts** menu and click on **Add** button:



You access to a form to define your equipment to monitor but don't worry all fields are not necessary!

To start to monitor your equipment set:

- The name of object in **Host Name** entry field
- Describe your object in **Alias** entry field
- Set the IP address of DNS in **IP Address / DNS** entry field
- Click on + **Add a new entry** button and select **generic-host**
- Click on **Yes** button for **Create Services linked to the Template too** field



**Host basic information**

Host Name *	<input type="text" value="My_host"/>
Alias *	<input type="text" value="My first host"/>
IP Address / DNS *	<input type="text" value="127.0.0.1"/> <span>Resolve</span>
SNMP Community & Version	<input type="text"/> <input type="text"/>
Monitored from	<input type="text" value="Central"/>
Timezone / Location	<input type="text" value="Timezone / Location"/> <span>✖</span>
Host Templates	<p>A host can have multiple templates, their orders have a significant importance  <a href="#">Here is a self-explanatory image.</a></p> <p>+ Add a new entry</p> <p>Template <input type="text" value="generic-host"/> <span>⊕</span> <span>✖</span></p>
Create Services linked to the Template too	<input checked="" type="radio"/> Yes <input type="radio"/> No

Save the modification by clicking on **Save** button.

Configuration > Hosts

Hosts	Hostgroup	Poller	Template	Status	Search
<input type="text" value="My_host"/>	<input type="text"/>	<input type="text" value="All Pollers"/>	<input type="text"/>	<input type="text"/>	

More actions... Add 30

Name	Description	IP Address / DNS	Poller	Templates	Status	Options
<input type="checkbox"/> My_host	My first host	127.0.0.1	Central	...	Enabled	<span>✖</span> 1

More actions... Add 30

The host is now defined in Centreon web interface but the monitoring engine doesn't monitor it!

You have now to *generate the configuration, export it and send it to the monitoring engine.*

You can see result in **Monitoring > Status Details > Hosts** menu:

**centreon** Poller States 6 Hosts 6 0 0 0 48 Services 43 0/0 0/1 4/4 0

Welcome admin | Logout

**Home** **Monitoring** Reporting Configuration Administration

**Status Details** Performances Downtimes Event Logs

Monitoring > Status Details > Hosts

Host Status	Host	Status	Poller	Hostgroup
<input type="text" value="All"/>	<input type="text" value="My_host"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

More actions... ⌂ ⏮ ⏭ ⏹ 30

Hosts	Status	IP Address	Last Check	Duration	Tries	Status information
<input type="checkbox"/> My_host	UP	127.0.0.1	25/11/2015 16:15:43	N/A	1/5 (H)	OK - 127.0.0.1: rta 0.019ms, lost 0%

More actions... 30

**By Status**

- Services
- Hosts**
- Services Grid
- Services by Hostgroup
- Services by Servicegroup
- Hostgroups Summary

**Meta Services**

- Meta Services

**Connected Users**

- admin

## 5.3 Add a service

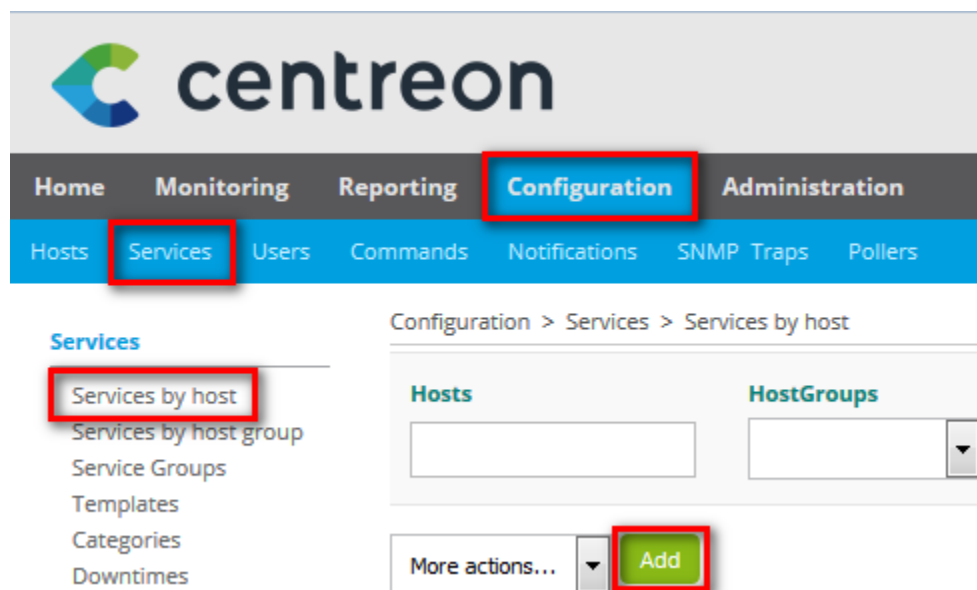
You already *added a host* and you want to monitor some indicators.

---

**Note:** An indicator is named **service** in Centreon.

---

Go to the **Configuration > Services > Services by host** menu and click on **Add** button:



To add a service to a host you have to define only three fields:

- Select the host in **Linked with Hosts** field
- Define the name of the service in **Description** entry field
- Select a predefined template of service, for example Base-Ping-LAN, in **Service Template** field

---

**Note:** After selecting a template of service new field appear. This values describe arguments use to monitor your service. Most often it is the alert thresholds. You can use the default values or overwrite those.

---

General Information

Notifications

Relations

Data Processing

Service Extended Info

### Add a Service

?

Linked with Hosts \*

My\_host\*

?

Description \*

Ping

?

Service Template

Base-Ping-LAN

#### Service Check Options

?

Check Command \*

Check Command

+ Add a new entry

?

Custom macros

Template inheritance

Command inheritance

Name	PACKETNUMBER	Value	5	
Name	WARNING	Value	200,20%	
Name	CRITICAL	Value	400,50%	

Save the modification by clicking on **Save** button.

Configuration > Services > Services by host

Hosts

HostGroups

Services

Templates




Status

Search

Filters

More actions... Add

30

Host	Service	Scheduling	Parent Template	Status	Options
 My_host	 Ping	5 min / 2 min	Base-Ping-LAN   generic-active-service...	Enabled	 1

More actions... Add

30

The service is now defined in Centreon web interface but the monitoring engine doesn't monitor it!

You have now to *generate the configuration, export it and send it to the monitoring engine.*

You can see result in **Monitoring > Status Details > Services** menu:

## 5.4 Deploy a host from a template

In a previous quick start you *added a new host* using the **generic-host** template. This template provides a predefined minimum configuration to define a host.

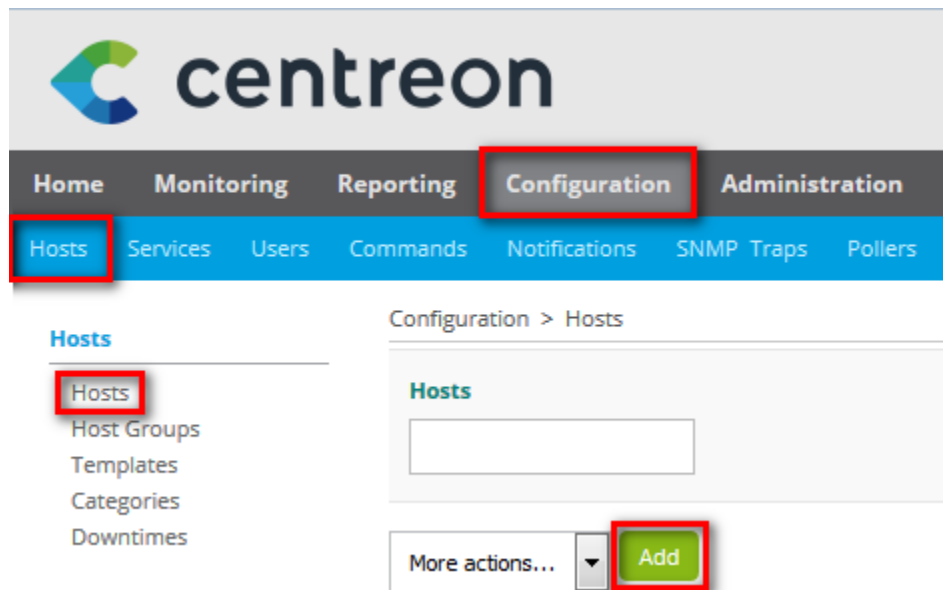
But the templates of host in Centreon web offer more than just a pre definition of values. In Centreon web you can *link templates of service to template of host*. With this process you can deploy easily a new host and their service in one time.

In this example we will use a template of host provided by **Centreon plugin packs** to monitor a Linux server. This template of host allows to deploy the following services:

- CPU
- Load
- Memory
- Swap

First *connect* to your Centreon web interface with an administrator account or an account which allow to manage monitored object.

Go to the **Configuration > Hosts > Hosts** menu and click on **Add** button:



You access to a form to define your equipment to monitor. To start to monitor your equipment set:

- The name of object in **Host Name** entry field
- Describe your object in **Alias** entry field
- Set the IP address of DNS in **IP Address / DNS** entry field
- Click on + **Add a new entry** button and select **OS-Linux-SNMP**
- Click on **Yes** button for **Create Services linked to the Template too** field

Configuration > Hosts

Host Configuration Notification Relations Data Processing Host Extended Infos

| Add a Host

Host basic information

Host Name *	My Linux Server
Alias *	A Linux Server
IP Address / DNS *	127.0.0.1 <span>Resolve</span>
SNMP Community & Version	public 2c
Monitored from	Central
Timezone / Location	Timezone / Location
Host Templates	<p>+ Add a new entry</p> <p>Template OS-Linux-SNMP</p>
Create Services linked to the Template too	<p><input checked="" type="radio"/> Yes <input type="radio"/> No</p>

Save the modification by clicking on **Save** button.

Configuration > Hosts

Hosts:  Hostgroup:  Poller:  Template:  Status:   Filters

More actions...  30

Name	Description	IP Address / DNS	Poller	Templates	Status	Options
My_Linux_Server	A Linux Server	127.0.0.1	Central	OS-Linux-SNMP...	Enabled	<input type="text" value="1"/>

More actions...  30

The host is now defined in Centreon web interface but the monitoring engine doesn't monitor it!

You have now to *generate the configuration, export it and send it to the monitoring engine*.

You can see result in **Monitoring > Status Details > Hosts** menu:

centreon

Poller States: 7 Hosts: 7 0 0 0 0 Services: 54 44 0/0 0/1 4/4 5

Welcome admin | Logout

Home **Monitoring** Reporting Configuration Administration

Status Details Performances Downtimes Event Logs

By Status

**Services**

Hosts

Services Grid

Services by Hostgroup

Services by Servicegroup

Hostgroups Summary

Meta Services

Meta Services

Connected Users

admin

Monitoring > Status Details > Services

Service Status:  Status:  Poller:

Host:  Service:  Hostgroup:  Output:

More actions...   30

Hosts	Services	Status	Duration	Last Check	Tries	Status Information
My_Linux_Server	Cpu		3s	25/11/2015 18:00:12	1/3 (H)	OK: CPU(s) average usage is: 14.00%
	Load		3s	25/11/2015 18:00:12	1/3 (H)	OK: Load average: 0.24, 0.07, 0.04
	Memory		3s	25/11/2015 18:00:12	1/3 (H)	OK: Ram Total: 1.83 GB, Used (-buffers/cache): 676.66 MB (36.04%), Buffer: 153.45 MB, Cached: 908.37 MB, Shared: 0.00 B
	Ping		3s	25/11/2015 18:00:12	1/3 (H)	OK - 127.0.0.1: rta 0.006ms, lost 0%
	Swap		3s	25/11/2015 18:00:12	1/3 (H)	OK: Swap Total: 1.60 GB Used: 49.84 MB (3.05%) Free: 1.55 GB (96.95%)

More actions... 30

## 5.5 Deploy services from a template

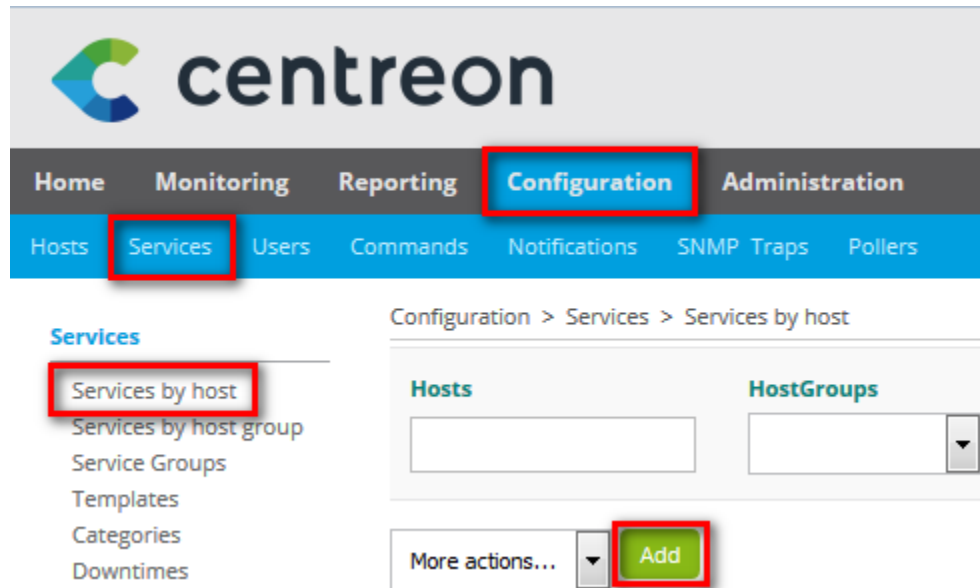
In a previous quick start you *added a new host from template* using the **OS-Linux-SNMP** template. This template of host deployed the following services:

- CPU
- Load
- Memory
- Swap

But some indicators aren't yet monitored because they depend of the server itself, for example name of files system, name of network interfaces, etc.

First *connect* to your Centreon web interface with an administrator account or an account which allow to manage monitored object.

Go to the **Configuration > Services > Services by host** menu and click on **Add** button:



To add a service to a host you have to define only three fields:

- Select the host in **Linked with Hosts** field
- Define the name of the service in **Description** entry field, for example **Traffic-eth0** to monitor the traffic bandwidth usage of interface eth0
- Select a predefined template of service, for example **OS-Linux-Traffic-Generic-Name-SNMP**, in **Service Template** field

---

**Note:** After selecting a template of service new field appear. This values describe arguments use to monitor your service. Most often it is the alert thresholds. You can use the default values or overwrite those.

---

Modify the value of macro **INTERFACENAME** to enter the name of network interface to monitor, for example **eth0**

General Information   Notifications   Relations   Data Processing   Service Extended Info

**| Add a Service**

? Linked with Hosts \*

? Description \*

? Service Template

**Service Check Options**

? Check Command \*

+ Add a new entry

Name	Value	Actions
INTERFACENAME	eth0	
WARNINGIN	80	
CRITICALIN	90	
WARNINGOUT	80	
CRITICALOUT	90	
EXTRAOPTIONS		

? Custom macros

- Template inheritance
- Command inheritance

Save the modification by clicking on **Save** button.

Hosts   HostGroups   Services   Templates   Status    Filters

My\_Linux

More actions... Add 30

Host	Service	Scheduling	Parent Template	Status	Options
My_Linux_Server	Cpu	5 min / 1 min	OS-Linux-Cpu-SNMP-Custom   OS-Linux-Cpu-SNMP   ...	Enabled	1
	Load	5 min / 1 min	OS-Linux-Load-SNMP-custom   OS-Linux-Load-SNMP   ...	Enabled	1
	Memory	15 min / 1 min	OS-Linux-Memory-SNMP-custom   OS-Linux-Memory-SNMP   ...	Enabled	1
	Ping	5 min / 2 min	Base-Ping-LAN-custom   Base-Ping-LAN   generic-active-service...	Enabled	1
	Swap	15 min / 1 min	OS-Linux-Swap-SNMP-Custom   OS-Linux-Swap-SNMP   ...	Enabled	1
	<b>Traffic-eth0</b>	5 min / 1 min	OS-Linux-Traffic-Generic-Name-SNMP   generic-active-service...	Enabled	1

More actions... Add 30

The service is now defined in Centreon web interface but the monitoring engine doesn't monitor it!



You have now to *generate the configuration, export it and send it to the monitoring engine*.

You can see result in **Monitoring > Status Details > Services** menu:

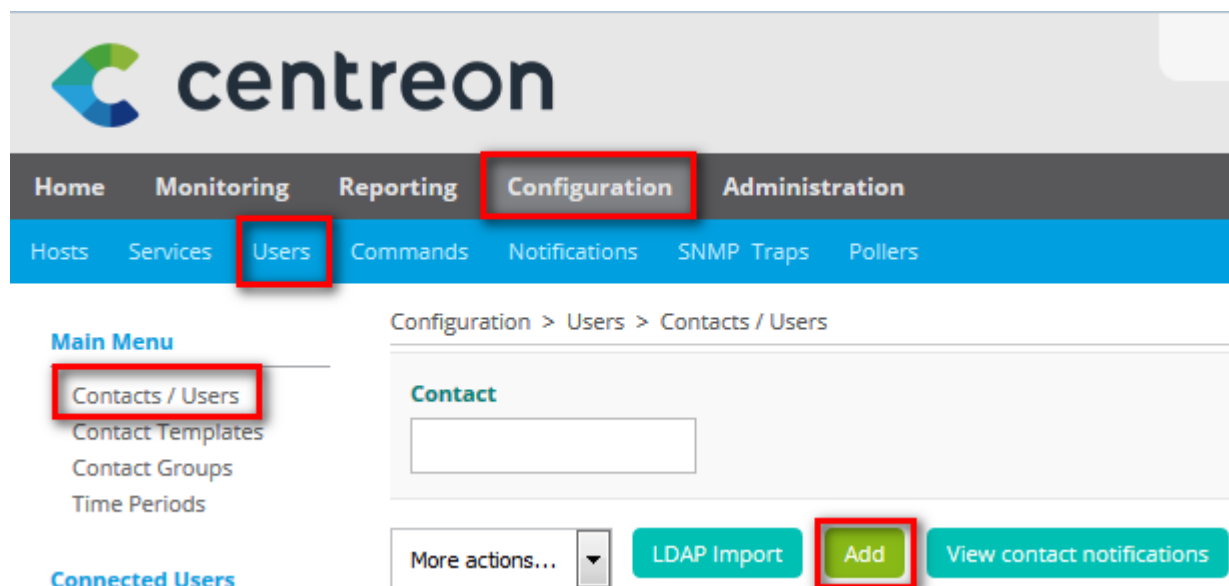
	Hosts ^	Services	Status	Duration	Last Check	Tries	Status information
	My_Linux_Server	Cpu	 OK	16h 31m 28s	26/11/2015 10:30:13	1/3 (H)	OK: CPU(s) average usage is: 14.00%
		Load	 OK	16h 31m 28s	26/11/2015 10:30:12	1/3 (H)	OK: Load average: 0.27, 0.15, 0.04
		Memory	 OK	16h 31m 28s	26/11/2015 10:30:12	1/3 (H)	OK: Ram Total: 1.83 GB, Used (-buffers/cache): 627.12 MB (33.41%), Buffer: 154.13 MB, Cached: 989.30 MB, Shared: 0.00 B
		Ping	 OK	16h 31m 28s	26/11/2015 10:30:12	1/3 (H)	OK - 127.0.0.1: rta 0.007ms, lost 0%
		Swap	 OK	16h 31m 28s	26/11/2015 10:30:12	1/3 (H)	OK: Swap Total: 1.60 GB Used: 49.84 MB (3.05%) Free: 1.55 GB (96.95%)
		Traffic-eth0	 OK	7s	26/11/2015 10:31:33	1/3 (H)	OK: Interface 'eth0' Status : up (admin: up), Traffic In : 15.12Kb/s (0.00%), Traffic Out : 30.81Kb/s (0.00%)

## 5.6 Add a user

A Centreon user is both a contact who can be notified of an alert of a host or service and someone who can connect to the Centreon web interface.

First *connect* to your Centreon web interface with an administrator account or an account which allow to manage monitored object.

Go to the **Configuration > Users > Contacts / Users** menu and click on **Add** button:



The screenshot shows the Centreon web interface. The top navigation bar includes 'Home', 'Monitoring', 'Reporting', 'Configuration' (highlighted with a red box), and 'Administration'. Below this, a sub-menu bar shows 'Hosts', 'Services', 'Users' (highlighted with a red box), 'Commands', 'Notifications', 'SNMP Traps', and 'Pollers'. On the left, the 'Main Menu' includes 'Contacts / Users' (highlighted with a red box), 'Contact Templates', 'Contact Groups', and 'Time Periods'. The main content area shows the breadcrumb 'Configuration > Users > Contacts / Users'. Below this is a 'Contact' form with a text input field. At the bottom, there are buttons for 'More actions...' (with a dropdown arrow), 'LDAP Import', 'Add' (highlighted with a red box), and 'View contact notifications'.

You access to a form to define your information but don't worry all fields are not necessary!

The form is divided into several sections:

- The first part to set notifications options for events of hosts and services
- A second part to define the credentials to access to the Centreon web interface
- A final section to set additional options

## 5.6.1 Mandatory options

On the first tab **General Information** define:

- your **Alias**, use as a login to connect to Centreon web interface
- your **Full Name**
- your **Email** address

Configuration > Users > Contacts / Users

General Information Centreon Authentication Additional Information

| Add a User

**General Information**

? Alias / Login *	jdoe
? Full Name *	John Doe
? Email *	john@doe.com

## 5.6.2 Notifications options

To receive notifications you have to fill some parameters:

- **Enable Notifications** allows to receive notification
- for **Host Notification Options** field select the status that you want to receive, for example: Down, Recovery, Flapping, Downtime Scheduled
- for **Host Notification Period** select the time slot during which you'll receive notifications, for example: 24x7
- for **Host Notification Commands** select how you will be notified, for example: host-notify-by-email
- for **Service Notification Options** field select the status that you want to receive, for example: Warning, Unknown, Critical, Recovery, Flapping, Downtime Scheduled
- for **Service Notification Period** select the time slot during which you'll receive notifications, for example: 24x7
- for **Service Notification Commands** select how you will be notified, for example: service-notify-by-email

Notification	
Enable Notifications	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Default
Host	
Host Notification Options	<input checked="" type="checkbox"/> Down <input type="checkbox"/> Unreachable <input checked="" type="checkbox"/> Recovery <input checked="" type="checkbox"/> Flapping <input checked="" type="checkbox"/> Downtime Scheduled <input type="checkbox"/> None
Host Notification Period	24x7 <span>✖</span>
Host Notification Commands	host-notify-by-email ✖
Service	
Service Notification Options	<input checked="" type="checkbox"/> Warning <input checked="" type="checkbox"/> Unknown <input checked="" type="checkbox"/> Critical <input checked="" type="checkbox"/> Recovery <input checked="" type="checkbox"/> Flapping <input checked="" type="checkbox"/> Downtime Scheduled <input type="checkbox"/> None
Service Notification Period	24x7 <span>✖</span>
Service Notification Commands	service-notify-by-email ✖

### 5.6.3 Access to Centreon web interface

To connect to Centreon web interface you have to fill information:

- **Reach Centreon Front-end** allows to connect to web interface
- define your **Password** and **Confirm Password**
- define your **Timezone / Location**
- define if you are **Admin** (full access to all menus and options in Centreon web interface) or not

General Information
Centreon Authentication
Additional Information

### Add a User

#### Centreon

? Reach Centreon Front-end \*
☒ Yes ☐ No

? Password

? Confirm Password

? Default Language \*

? Timezone / Location

? Admin \*
☐ Yes ☒ No

? Autologin Key

? Authentication Source \*

? LDAP DN (Distinguished Name)

#### Access lists

? Access list groups

Save the modification by clicking on **Save** button.

Configuration > Users > Contacts / Users

Contact

Filters

More actions...


30

<input type="checkbox"/>	Alias / Login	Full Name	Email	Host Notification Period	Services Notification Period	Language	Access	Admin	Status	Options
<input type="checkbox"/>	jdoe	John_Doe	john@doe.com	24x7 (d,r,f,s)	24x7 (w,u,c,r,f,s)	browser	Enabled	No	Enabled	<input type="button" value="✖"/> 1

More actions...

30

Depending on the configuration you made your account is ready to receive notification and/or connect to the Centreon web interface.

If you have ideas of “quick start” and want to participate in creating some of tutorials to help users of the community, please make you “pull-requests” for us to easily integrate them from [github](https://github.com).

---

## Configuration

---

This chapter will allow you to know all the configuration mechanisms of your supervision system. This stage of implementation of the supervision must be reflected to set up a supervision deployment strategy. Remember, the goal is to have a scalable and maintainable system.

Do forget to think about setting up a global strategy of the configuration in order to make able to have global actions configurations. For that, mechanisms are in place in Centreon to simplify your life such as *guest models and services*.

### 6.1 Generic actions

In the Configuration menu it is possible to perform certain “generic” actions on the various objects.

#### 6.1.1 Add / Delete

The addition of a new object is done via the **Add** instruction next to the **More actions menu...**

To delete an object :

1. Select the object(s) that you want to delete by checking the box(s) next to its name.
2. In the **More actions...** menu click on **Delete**.

**Warning:** Deletion of an object is final. If you delete an object by accident, you will need to re-create it. In the same way, deletion of an object automatically deletes all the objects linked to it and which cannot live without it. E.g.: Deletion of a host results in the deletion of all the services associated with this host.

To modify an object, click on its name.

#### 6.1.2 Duplication

##### Principle

Duplication of an object enables it to be copied / cloned to be able to re-use its Attributes for the creation of a new object. E.g.: I have 10 identical web servers to supervise:

- I add the first web server with all the necessary Attributes
- I duplicate this host 9 times

- It only remains for me to change the host names and the IP addresses of each duplication to adapt it to the 9 other web servers to be monitored

Thanks to this method, it is no longer necessary to create each host individually.

## Practice

To duplicate a host:

1. Select the host that you want to duplicate
2. In the **Options** column, enter the number of duplications that you want to obtain

	Centreon-central-server		Centreon Monitoring server	127.0.0.1	Central	App-Monitoring-Centreon-Central   App-DB-MySQL   OS-Linux-SNMP	Enabled		1
--	-------------------------	--	----------------------------	-----------	---------	--	---------	--	---

3. In the **More actions...** menu click on **Duplicate**

	Camera		Camera	10.100.1.110	Central	generic-active-host	Enabled		1
	Centreon-central-server		Centreon Monitoring server	127.0.0.1	Central	App-Monitoring-Centreon-Central   App-DB-MySQL   OS-Linux-SNMP	Enabled		1
	Centreon-Server		Monitoring Server	127.0.0.1	Central	generic-host	Enabled		1
	Equestria		Equestria	127.0.0.1	Central	Equestria	Enabled		1

## 6.1.3 Massive Change

### Principle

Massive change enable us to apply a change to multiple objects.

E.g.: All the web servers previously created change SNMP communities. A massive change enables us to change this community without it being necessary to change each sheet of each host individually.

### Practice

To perform a massive change:

1. Select the objects you want change
2. In the **More Actions...** menu click on **Massive Change**

The change menu opens, there are 2 types to change :

- Incremental: signifies that the change will be added to the existing options
- Replacement: signifies that the change will overwrite the existing options

## 6.1.4 Enable / disable

### Principle


The enabling and disabling of objects enables us to take the object into account or not during configuration generation. The main advantage is to be able to keep the configuration of an object without applying it.

## Practice

To enable / disable an object:

1. Select the objects you want change
2. In the **more actions...** menu click on **Enable / disable**

It is also possible to enable or disable an object via the “Status” field of the object detail sheet or by using the following icons:

-  to enable
-  to disable

## 6.2 Hosts

A host is any entity having an IP address corresponding to a resource of the information system. E.g.: A server, network printer, a NAS server, a temperature sensor, an IP camera, etc.

All these host additions take place in the menu: **Configuration ==> Hosts ==> Add.**

Host Configuration

Notification

Relations

Data Processing

Host Extended Infos

Modify a Host

Host basic information

Host Name \*

Centreon-central-server

Alias \*

Centreon Monitoring server

IP Address / DNS \*

127.0.0.1

Resolve

SNMP Community & Version

public

2c

Monitored from

Central

Timezone / Location

Timezone / Location

Host Templates

A host can have multiple templates, their orders have a significant importance  
[Here is a self explanatory image.](#)

Template App-Monitoring-Centreon-Central

Template App-DB-MySQL

Template OS-Linux-SNMP

Create Services linked to the Template too

Yes No

Host check options

Check Command

Check Command

Custom macros

Template inheritance

Command inheritance

Name MYSQLPASSWORD

Value centreon

Name MYSQLPORT

Value 3306

Name MYSQLUSERNAME

Value centreon

Name RRDCFGFILE

Value /etc/centreon-broker/central-md.

Name SQLCFGFILE

Value /etc/centreon-broker/central-brok



Name SNMPEXTRAOPTIONS

Value

## 6.2.1 Configuration of the host

### General information

- The **Host Name** field defines the host name that will be used by the Monitoring Engine.
- The **Alias** field shows the alias of the host.
- The **IP address / DNS** field defines IP address or DNS name of the host. The **Resolve** button enables us to resolve the domain name by questioning the DNS server configured on the central server.
- The **SNMP Community & Version** fields contain the name of the community and the SNMP version.
- The **Monitored from** field indicates which poller server is charged with monitoring this host.
- The **Timezone / Location** field indicates the timezone location of the monitored hosts.
- The **Host Templates** field enables us to associated one or more models of hosts with this object.

In case of conflicts of settings present on multiple models, the host model above overwrites the identical properties defined in host models below. The button  enables us to change the order of host models. The button  serves to delete the host model.


- If the **Create Services linked to the Template too** field is defined as **Yes**, Centreon automatically generates the services based their self on the service templates linked to the host templates defined above (see the chapter *Templates*).


### Monitoring properties of the host


- The **Check Command** field indicates the command use to check the availability of the host.
- The **Args** field defines the arguments given to the check command (each argument starts with a "!" ).


The Macros part serves to add custom macros.

- The **Macro name** and **Macro value** field enable us to define the name and value of the macro.
- The **Password** box enables the value of the macro to be hidden.

To reinitialize to the default value (defined in template) click on .

To view the description of the macro, click on .

To delete the macro, click on .

To change the order of the macros, click on .

### Scheduling options of the host

- The **Check Period** field defines the time period during which the scheduler checks the status of the object.
- The **Max Check Attempts** field defines the number of checks to be performed before confirming the status of the host: when the status is confirmed the notification process is triggered.



- The **Normal Check Interval** is expressed in minutes. It defined the interval between checks when the host status is OK.
- The **Retry Check Interval** is expressed in minutes. It defined the check interval of the Not-OK status of the host.
- The **Active Checks Enabled** and **Passive Checks Enabled** fields enable / disable the active and passive checks.

### 6.2.2 Notification tab

- The **Notification Enabled** field enables us to enable or disable the notifications concerning the object.
- The **Notification Options** define the statuses for which a notification will be sent.
- The **Notification Interval** is expressed in minutes. It indicates the time between sending each notifications when the status is Not-OK. If the value is defined as 0 the scheduler sends a single notification per status change.
- The **Notification Period** field indicates the time period during which the notifications will be enabled.
- The **First notification delay** is expressed in minutes. It refers to the time delay to be respected before sending the first notification when a Not-OK status is validated.
- If the **Contact additive inheritance** box is checked, Centreon does not overwrite the configuration of the parent host model but adds the contacts in addition to the contacts defined in the parent model.
- The list of **Linked contacts** indicates the contacts which will receive the notifications.
- If the **Contact group additive inheritance** box is checked, Centreon does not overwrite the configuration of the parent host template but adds the contact groups in addition to the contact groups defined in the parent template.
- The list of **Linked contacts Groups** indicates the groups of contacts which will receive the notifications.

### 6.2.3 Relations tab

- The **Parent Host Groups** list defined the host groups to which the host belongs.
- The **Parent Host Categories** list defined the categories to which the host belongs.
- The **Parent Hosts** list enables us to define the physical family relationships between objects.
- The **Child Hosts** list enables us to define the physical family relationships between objects.

### 6.2.4 Data processing tab

- If **Obsess Over Host** is enabled, the host check feedback command will be enabled.
- The **Check Freshness** field allows us to enable or disable the result freshness check.
- The **Freshness Threshold** is expressed in seconds. if during this period no host status change request (passive command) is received the active check command is executed.
- The **Flap Detection Enabled** field allows us to enable or disable the detection flapping in the statuses (status value changing too often on a given period).
- The **Low Flap Threshold** and **High Flap Threshold** fields define the high and low thresholds for the detection of flapping in percentage of status change.
- The **Process Perf Data** field allows us to enable or disable performance data processing (and so the generation of performance graphics). This option is not necessary when Centreon Broker is use.

- The **Retain Status Information** and **Retain Non Status Information** fields indicate if the information concerning the status is saved after every time the check command is repeated.
- The **Stalking Options** field defined the options to be recorded if retention is enabled.
- The **Event Handler Enabled** field allows us to enable or disable the events handler.
- The **Event Handler** field defined the command to be executed if the event handler is enabled.
- The **Args** field defined the arguments of the events handler command.

## 6.2.5 Host Extended Infos tab

### Monitoring engine

- The **URL** field defined a URL that can be used to give more information on the host.
- The **Notes** field permits us to add optional notes concerning the host.
- The **Action URL** field defined a URL normally use for giving information on actions on the host (maintenance, etc.).
- The **Icon** field indicates the icon use for the host.
- The **Alt Icon** field is the text use if the icon cannot be Display.
- The **Severity level** field indicates the severity level of the host.

The fields presented below are fields that are only use by the CGI of the scheduler (usually Nagios). Consequently, they do not present much interest if Centreon Engine and Centreon Broker are in use.

- The **VRML image** field defined the logo for the 3D engine of the host (not compatible with Centreon Engine).
- The **Status Map Image** field defined the logo for the scheduler CGI.
- The **2d Coords** and **3d Coords** fields indicates the 2D and 3D coordinates use by the CGI.

### Access groups

- The **ACL Resource Groups** (only displayed for non administrator) allows to link this host to an hostgroup in order to visualise it (See *Access control list* chapter).

### Additional Information

- The **Status** field allows us to enable or disable the host.
- The **Comments** field can be used to add a comment concerning the host.

## 6.3 Services

A service is a check point linked / attached to a host. E.g.: Percentage of partition use on a server, ink level in a printer.

All additions of services are done in the menu: **Configuration ==> Services ==> Add**.

Service Configuration
Relations
Data Processing
Service Extended Info

| Modify a Service

General Information

Description \*
Cpu

Service Template
OS-Linux-Cpu-SNMP-Custom

Service State

Is Volatile
Yes No ☒ Default

Check Period \*
Check Period

Check Command \*
Check Command

Args
Argument
Value
No argument found for this command

Max Check Attempts \*

Normal Check Interval \*
\* 60 seconds

Retry Check Interval \*
\* 60 seconds

Active Checks Enabled
Yes No ☒ Default

Passive Checks Enabled
Yes No ☒ Default

Macros

+ Add a new entry

Custom macros

Template inheritance
Command inheritance

Name WARNING Value 80

Name CRITICAL Value 90

Name EXTRAOPTIONS Value

## 6.3.1 Configuration of the service

### General information

- The **Description** field defined the name of the service.
- The **Service template** field indicates the model of service to which the service is linked.

### Service State

- The field **Is Volatile** indicates if the service is volatile or not (normally only passive services are volatile).
- The **Check Period** field defined the time period during which the scheduler checks the status of the service.
- The **Check Command** field indicates the command use to check the availability of the service.
- The **Args** table defined the arguments given for the check command (the number of arguments varies according to the check command chosen).
- The **Max Check Attempts** of the status field defined the number of checks to be carried out to confirm the status of the service. When the status is validated, the notification process is engaged
- The **Normal Check Interval** field is expressed in minutes. It defined the interval between checks when the service status is OK.
- The **Retry Check Interval** field is expressed in minutes. It defined the confirmation interval for the Not-OK service status
- The **Active Checks Enabled** and **Passive Checks Enabled** fields enable / disable the type of check on the service.

## Macros

The **Macros** part serves to add customised macros. The **macro name** and **macro value** fields allow us to define the name and value of the macro. The **Password** box can be used to hide the value of the macro.



To reinitialize to the default value (defined in template) click on .



To view the description of the macro, click on .



To delete the macro, click on .



To change the order of the macros, click on .

## Notification

- The **Notification Enabled** field allows us to enable or disable the notifications for the object.
- The **Inherit contacts from host** field allows us to cause the contacts to be inherited from the configuration of the host.
- If the **Contact additive inheritance** box is checked, Centreon does not overwrite the configuration of the parent service model but adds the contacts in addition to the contacts defined at the parent model level.
- The **Implied Contacts** indicates the contacts that will receive the notifications.
- If **Contact group additive inheritance** box is checked, Centreon does not overwrite the configuration of the parent service model but adds the contact groups in addition to the contact groups defined at the parent model level.
- In the **Implied Contact Groups** list all the contacts belonging to the contact groups defined will receive the notifications.
- The **Notification Interval** field is expressed in minutes. It indicates the time between sending of notifications when the status is Not-OK. If the value is defined as 0 the scheduler sends a single notification per status change.
- The **Notification Type** define the statuses for which a notification will be sent.
- The **First notification delay** time is expressed in minutes. It refers to the time delay to be respected before sending the first notification when a Not-OK status is validated.

## 6.3.2 Relations tab

### Relations

- The **Linked with Hosts** list allows us to define the host(s) to which to link this service.
- The **Linked with Servicegroups** list allows us to link the service to one or more service groups.

### SNMP traps

The **Service Trap Relation** field allows us to define the SNMP traps that will be able to change the behavior of the service.

### 6.3.3 Data processing

- If the **Obsess over service** field is enabled, the monitoring feedback command of the host will be enabled.
- The **Check freshness** field allows us to enable or disable the check on the freshness of the result.
- The **Freshness threshold** field is expressed in seconds. If during this period no request for a change in the status of the service (passive command) is received the check command is executed.
- The **Flap Detection Enabled** field allows us to enable or disable the detection of disruption in the statuses (status value changing too often on a given period).
- The **Low flap threshold** and **High flap threshold** fields define the high and low thresholds for the detection of disruption in percentage of status change.
- The **Performance data processing** field allows us to enable or disable performance data processing (and hence the generation of performance graphics). This option is not necessary when Centreon Broker is use.
- The **Retain status information** and **Retention non status information** fields indicate if the information concerning or not concerning the status is saved after every time the check command is repeated.
- The **Stalking Options** field defined the options to be recorded if retention is enabled.
- The **Event handler enabled** field allows us to enable or disable the events manager.
- The **Event handler** field defined the command to be executed if the event manager is enabled.
- The **Args** field defined the arguments of the events handler command.

### 6.3.4 Additional information on the service

#### Centreon

- **Graph template:** Defines the graphics model to be use to present the performance data linked to the service.
- **Categories:** Defines the category(s) to which the service belongs.

#### Monitoring engine

- The **URL** field defined a URL that can be used to give more information on the service.
- The **Notes** field permits us to add optional notes concerning the service.
- The **Action URL** field defined a URL normally use for giving information on actions on the service (maintenance, etc.).
- The **Icon** field indicates the icon use for the service.
- The **Alt icon** field is the text use if the icon cannot be Displays.
- The **Severity level** field indicates the criticality level of the service.

#### Additional information

- The **Status** field allows us to enable or disable the service.
- The **Comment** field can be used to add a comment concerning the service.

## 6.3.5 Detachment of a service

If a service is linked to several hosts, it will be identical for each one of them. Hence it will not be possible to modify the service of one host individually to change a property. This why it is possible to convert this service linked to multiple hosts into a single service for each host:

1. In the list of services, select the service linked to multiple hosts (this service is usually highlighted in orange)
2. In the **more actions....** menu click on **Detach** and confirm

There is now a single service per host.

## 6.4 Commands

### 6.4.1 Definition

A command is the definition of a line of command which uses a script or an application to perform an action. It is possible to execute this command by specifying arguments.

There are three types of command:

- **Verification** commands are used by the schedulers to verify the status of a host or of a service.
- **Notification** commands are used by the schedulers to alert the contacts (via mail, SMS, etc.).
- **Discovery** commands are used by the schedulers to discover some elements on monitored node.
- **Miscellaneous** commands are used by the additional modules (to perform certain actions), by the scheduler for data processing, etc.

All the commands can be configured in the menu: **Configuration ==> Commands**.

Command						
<input type="text"/>						
<input type="button" value="Search"/>						
Filters						
More actions... <input type="button" value="Add"/>						
1 2 3 4 >						
30						
<input type="checkbox"/>	Name	Command Line	Type	Host Uses	Services Uses	Options
<input type="checkbox"/>	App-Centreon-MYSQL-Partitioning	\$USER1\$/centreon_plugins.pl --plugin=database:mys...	Check	0 (0)	0 (1)	1
<input type="checkbox"/>	App-CentreonBroker-Retention-Local	\$USER1\$/centreon_plugins.pl --plugin=apps:centreo...	Check	0 (0)	1 (2)	1
<input type="checkbox"/>	App-DB-MYSQL	\$USER1\$/centreon_plugins.pl --plugin=database:mys...	Check	0 (0)	0 (8)	1
<input type="checkbox"/>	App-DB-MYSQL-Database-Size	\$USER1\$/centreon_plugins.pl --plugin=database:mys...	Check	2 (0)	0 (1)	1
<input type="checkbox"/>	App-DB-MYSQL-Long-Queries	\$USER1\$/centreon_plugins.pl --plugin=database:mys...	Check	0 (0)	0 (1)	1
<input type="checkbox"/>	App-DB-MYSQL-QCache-Hitrate	\$USER1\$/centreon_plugins.pl --plugin=database:mys...	Check	0 (0)	0 (1)	1
<input type="checkbox"/>	base-centreon-dummy	\$USER1\$/check_centreon_dummy -s \$ARG1\$ -o \$ARG2\$ ...	Check	1 (1)	0 (1)	1
<input type="checkbox"/>	base-centreon-ping	\$USER1\$/check_icmp -H \$HOSTADDRESS\$ -n \$SERVICEPA...	Check	1 (0)	0 (1)	1
<input type="checkbox"/>	base_host_alive	\$USER1\$/check_icmp -H \$HOSTADDRESS\$ -w 3000.0.80% ...	Check	0 (1)	0 (0)	1
<input type="checkbox"/>	check-centreon-gpu	\$USER1\$/check_centreon_snmp_cpu -H \$HOSTADDRESS\$ ...	Check	0 (0)	0 (1)	1
<input type="checkbox"/>	check-centreon-dummy	\$USER1\$/check_centreon_dummy -s \$ARG1\$ -o \$ARG2\$ ...	Check	0 (0)	0 (0)	1
<input type="checkbox"/>	check-centreon_load_average	\$USER1\$/check_centreon_snmp_loadaverage -H \$HOSTAD...	Check	0 (0)	0 (1)	1
<input type="checkbox"/>	check-centreon_memory	\$USER1\$/check_centreon_snmp_memory -H \$HOSTADDRESS...	Check	0 (0)	0 (1)	1
<input type="checkbox"/>	check-centreon_nb_connections	\$USER1\$/check_centreon_snmp_TcpConn -H \$HOSTADDRES...	Check	0 (0)	0 (0)	1
<input type="checkbox"/>	check-centreon_nt	\$USER1\$/check_nt -H \$HOSTADDRESS\$ -p 12489 -w \$ARG...	Check	0 (0)	0 (0)	1
<input type="checkbox"/>	check-centreon_ping	\$USER1\$/check_icmp -H \$HOSTADDRESS\$ -n \$ARG1\$ -w \$...	Check	1 (0)	0 (2)	1

### 6.4.2 Adding a command

Before adding a command:

1. In the left menu select the type of command that you want to add (Checks, Notifications or Miscellaneous).

## Commands

Checks

Notifications


Discovery

Miscellaneous

### 2. Click on **Add**

| **Modify a Command**

Check

Command Name *	OS-Linux-SNMP-Cpu		
Command Type	<input type="radio"/> Notification <input checked="" type="radio"/> Check <input type="radio"/> Misc <input type="radio"/> Discovery		
Command Line *	<pre>\$USER1\$/centreon_plugins.pl --plugin=os::linux::snmp::plugin --mode=cpu --hostname=\$HOSTADDRESS\$ --snmp-version=\$HOSTSNMPVERSIONS\$ --snmp-community=\$HOSTSNMPCOMMUNITYS\$ \$HOSTSNMPEXTRAOPTIONS\$ --warning=\$SERVICEWARNING\$ --critical=\$SERVICECRITICAL\$ \$SERVICEEXTRAOPTIONS\$</pre> <div>&lt;&lt; \$USER1\$ (path to the plugins) &gt;&gt; &lt;&lt; /Centreon/SNMP &gt;&gt; &lt;&lt; \$ADMINEMAILS &gt;&gt;</div>		
Enable shell	<input type="checkbox"/>		
Argument Example	<input type="text"/> \$HOSTADDRESS\$ <input type="text"/> 		
Argument Descriptions	<div>Describe arguments Clear arguments</div> <div></div>		
Macros Descriptions	<div>Describe macros</div> <div>MACRO (SERVICE) WARNING : MACRO (SERVICE) CRITICAL : MACRO (SERVICE) EXTRAOPTIONS : MACRO (HOST) SNMPVERSION : MACRO (HOST) SNMPCOMMUNITY : MACRO (HOST) SNMPEXTRAOPTIONS :</div>		

Additional Information


Connectors	Select a connector...
Graph template	CPU
Comment	<div></div>

Save Reset

**Note:** The configuration fields of a command are the same regardless of the type of command chosen.

### 6.4.3 Configuration fields

- The **command Name** field defined the name of the command.
- The **Command Type** field allows us to choose the type of command.
- The **Command Line** field indicates the application or the script use with the command.
- The **Enable shell** box allows us to enable functions that are specific to a shell such as the pipe, etc.
- The **Argument Example** and **\$HOSTADDRESS\$** fields define examples of arguments (each argument starts with a "!"") and a test IP address respectively. These fields serve to execute the command line defined above via

the web interface by clicking on the blue arrow : .

- The **Describe arguments** button serves to add a description to arguments of the "\$ARGn\$" type. This description will be visible when using the command in a host or service form.

- The **Clear arguments** button deletes the description of arguments defined
- The **Describe macros** button serves to add a description to all macros. This description will be visible when using the command in a host or service form.
- The **Connectors** field serves to link a Connector to the command. For more information on Connectors refer to the chapter entitled: [Perl Connector's documentation](#) and [SSH Connector's documentation](#).
- The **Graph template** field serves to link the command to a graphic model.
- The **Comment** field can be used to make a comment on the command.

## 6.4.4 Arguments and macros

In the **Command Line** field it is possible to import macros and arguments.

The arguments are used to be able to pass various settings to the scripts called up by the commands. During execution of the command by the scheduler, each of the arguments and macros are replaced by their respective values. Each argument appears in the form **\$ARGn\$** where n is naturel whole number greater than 0.

E.g.: order line using the arguments : `$USER1$/check-bench-process-DB -w $ARG1$ -c $ARG2$ -n $ARG3$`

---

**Note:** Good practice requires replacing the arguments by *custom macros*.

---

## 6.5 Time periods

### 6.5.1 Definition

A time period is the definition of a time interval for every day of the week. These time periods serve to enable the functionalities of the scheduler on a given period.

Time periods apply to two types of actions:

- Execution of check commands
- Sending of notifications

### 6.5.2 Configuration

The configuration of time periods is done in the menu: **Configuration ==> Users ==> Time periods**.

#### Basic options

- The **Time period name** and **Alias** fields define the name and description of the time period respectively.
- The fields belonging to the **Time range** sub-category define the days of the week for which it is necessary to define time periods.
- The **Exceptions** table enables us to include days excluded from the time period.



## Syntax of a time period

When creating a time period, the following characters serve to define the time periods :

- The character “:” separates the hours from the minutes. E.g.: HH:MM
- The character “-” indicates continuity between two time periods
- The character “,” serve s to separate two time periods

Here are a few examples:

- 24 hours a day and 7 days a week: 00:00-24:00 (to be applied on every day of the week).
- From 08h00 to 12h00 and from 14h00 to 18h45 (to be applied on weekdays only).

General Information	
Time Period Name *	24x7
Alias *	24_Hours_A_Day_7_Days_A_Week
Time Range	
Sunday	00:00-24:00
Monday	00:00-24:00
Tuesday	00:00-24:00
Wednesday	00:00-24:00
Thursday	00:00-24:00
Friday	00:00-24:00
Saturday	00:00-24:00
Time Range exceptions	
GMT is activated on your system. Exceptions will not be generated.	
Exceptions	Days Time Range +
<div>Save Reset</div>	

## Time Range exceptions

The exceptions allow us to include exceptional days in the time period (overload of the definition of regular functioning of the day).

E.g.: An administrator wants to define a time period which covers the times when the offices are closed i.e.:

- From 18h00 to 07h59 on weekdays
- Round the clock at weekends
- National holidays and exceptional closure days

To be able to define the national holidays days and the exceptional closure days, it is necessary to use the exceptions. To add an exception, click on the button **+**. For each exceptional day, you will need to define a time period. The table below shows some possible examples :

Day(s)	Time period	Meaning
1 january	00:00-24:00	All day on 1 January of every year
2014-02-10	00:00-24:00	All day on 10 February 2014
1 july - 1 august	00:00-24:00	Every day from the 1 July to 1 August, every year
november 30	08:00-19:00	From 08h00 to 19h00 every 30 November, every year
day 1 - 20	00:00-24:00	All day from 1 to 20 of every month
saturday -1	08:00-12:00,14:00-18:45	Every last Saturday of the month during opening hours
monday -2	00:00-24:00	Every last but one Monday of the month during all day

## Extended Settings

In the extended settings, it is possible to **include** or to **exclude** periods in the definition of the object.

Example of application: Let us take two time periods:

- One period is defined as 24 hours a day / 7 days a week, called **24x7**
- Another which covers the office opening hours, called **working\_hours**

To obtain the office closing hours, we simply have to create a time period in which we include the period **24x7** and from which we exclude the **working\_hours** period.

## 6.6 Contacts

### 6.6.1 Definition

The contacts in Centreon are used to:

- Log in to the Centreon web interface: each contact has its own rights of connection to the web interface.
- Be warned in case of necessity (notification).

To add a contact, simply go to the menu: **Configuration ==> Users ==> Add**.

General Information	
Alias / Login *	admin
Full Name *	Admin_Admin
Email *	admin@domain.tld
Pager	admin
Contact template used	
Group Relations	
Linked to Contact Groups	Supervisors x
Notification	
Enable Notifications	<input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Default
Host	
Host Notification Options	<input checked="" type="checkbox"/> Down <input type="checkbox"/> Unreachable <input checked="" type="checkbox"/> Recovery <input type="checkbox"/> Flapping <input type="checkbox"/> Downtime Scheduled <input type="checkbox"/> None
Host Notification Period	24x7
Host Notification Commands	host-notify-by-email x
Service	
Service Notification Options	<input type="checkbox"/> Warning <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Critical <input checked="" type="checkbox"/> Recovery <input type="checkbox"/> Flapping <input type="checkbox"/> Downtime Scheduled <input type="checkbox"/> None
Service Notification Period	24x7
Service Notification Commands	service-notify-by-email x

Save Reset

To display the matrix of notification of a contact, click on **View contact notifications** next to the **Add** menu).

## 6.6.2 General information

- The **Alias/Login** field defined the login to access the web interface.
- The **Full Name** field contains the name and first name of the user.
- The **E-Mail** and **Pager** fields contain respectively the e-mail address and the telephone number of the user (in the case of a notification by SMS or call for instance).
- The field **Contact template used** allows us to link the contact to a Model of contact.
- The **Linked to Contact Groups** list associated the contact to one or more groups of contacts.
- The **Enable Notifications** field allows us to enable the sending of notifications to the user.
- The **Host / Service Notification Options** field serves to define the statuses to which notifications are sent.
- The **Host / Service Notification Period** field serves to choose the time period in which notifications are sent.
- The **Host / Service Notification Command** field serves to choose the notification command to a host or a service.

## 6.6.3 Centreon authentication

- The **Reach Centreon Front-end** field serves to authorize the user to access the Centreon web interface.
- The **Password** and **Confirm Password** fields contain the user password.
- The **Default Language** field serves to define the language of the Centreon interface for this user.

- The **Admin** field defined if this user is the administrator of the supervision platform or not.
- The **Autologin key** serves to define a connection key for the user. The user will no longer need to enter his / her login and password but will use this key to log in directly. Connection syntax:

`http://[IP_DU_SERVER_CENTRAL]/index.php?autologin=1&useralias=[login_user]&token=[value_autologin]`

---

**Note:** The Possibility of automatic connection (auto login) should be enabled in the menu: **Administration ==> Options**.

---

- The **Authentication Source** field specifies if the connection information comes from an LDAP directory or information stored locally on the server.
- The **Access list groups** field serves to define an access group to a user (group use for access control (ACL)).

---

**Note:** A Administrative user is never concerned by access control even linked to an access group.

---

## 6.6.4 Additional information

- The **Address** fields allow us to specify the data of additional contacts (other e-mails, other telephone numbers, etc.).
- The **Status** and **Comment** fields serve to enable or disable the contact and to make comments on it.

## 6.7 Groups

A group allows us to group together one or more objects. There are three kinds of groups: hosts, services and contacts.

The hosts groups and services groups serve mainly for viewing graphics or to group the objects. Contact groups are used mainly for the configuration of ACLs.

### 6.7.1 Host Groups

To add a host group:

1. Go to the menu: **Configuration ==> Hosts**
2. In the left menu, click on **Host Groups**
3. Click on **Add**

General Information	
Host Group Name *	Linux-Servers
Alias *	All linux servers
Linked Hosts	Centreon-Server x Linux_6 x
Extended Information	
Notes	
Notes URL	
Action URL	
Icon	
Map Icon	
Additional Information	
RRD retention	days
Comments	
Status	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled

- The **Host Group Name** and **Alias** defines the name and the alias of the host group.
- The **Linked Hosts** list allows us to add hosts in the hostgroup.
- The **Notes** field allows us to add optional notes concerning the host group.
- The **Notes URL** field defined a URL which can be used to give more information on the hostgroup.
- The **Action URL** field defined a URL normally use to give information on actions on the hostgroup (maintenance, etc.).
- The **Icon** field indicates the icon to be use for the host group.
- The **Map Icon** is the icon use for mapping.
- The **RRD retention** field is expressed in days, it serves to define the duration of retention of the services belonging to this hostgroup in the RRD database. It will be the default duration defined in the menu: “ **Administration** ==> **Options** ==> **CentStorage** ” if this value is not defined.
- The **Status** and **Comments** fields allow to enable or disable the host group and to make comments on it.

## 6.7.2 Service Groups

To add a service group:

1. Go into the menu: **Configuration** ==> **Services**
2. In the left menu, click on **Service Groups**
3. Click on **Add**

General Information	
Service Group Name *	group_svc
Description *	group svc
Relations	
Linked Host Services	Linked Host Services
Linked Host Group Services	Linked Host Group Services
Linked Service Templates	Linked Service Templates
Additional Information	
Status	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Comments	

- The **Service Group Name** and **Description** fields describes the name and the description of the service group.
- The **Linked Host Services** list allows us to choose the various services that will be included in this group.
- The **Linked Host Group Services** list allows us to choose the services linked to a host group that will be part of this group.
- The **Linked Service Templates** list allows to deploy a service based on this template on all hosts linked to this group.
- The **Status** and **Comments** fields allow to enable or disable the service group and to make comment on it.

### 6.7.3 Contact Groups

To add a group of contacts:

1. Go into the menu: **Configuration ==> Users**
2. In the left menu, click on **Contact Groups**
3. Click on **Add**

General Information	
Contact Group Name *	Supervisors
Alias *	Centreon supervisors
Relations	
Linked Contacts	Admin_Admin *
Linked ACL groups	Linked ACL groups
Additional Information	
Status	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Comments	

- The **Contact Group Name** and **Alias** fields define the name and the description of the contact group.
- The **Linked Contacts** list allows us to add contacts to the contact group.

- The **Status** and **Comment** fields allow to enable or disable the group of contacts and to make comment on it.

---

**Note:** For more information refer to the associated chapter covering *groups*.

---

## 6.8 Categories

Categories are used to define ACLs on the hosts and the services. The aim is to be able to classify the hosts or the services within a category.

Centreon 2.4 includes a new functionality called “Severity”. As from version 2.5, the levels of criticality are linked to a category, they have become a type of category. A criticality level is an indicator for defining the criticality of a host or a service. The aim is to be able to handle the problems of hosts or services by order of priority. By this system, it is thus possible to filter the objects in the “Supervision” views by criticality.

### 6.8.1 Host categories

To add a category of hosts:

1. Go into the menu: **Configuration ==> Hosts**
2. In the left menu, click on **Categories**
3. Click on **Add**

The screenshot shows the 'Add Category' form in Centreon. It has two main sections: 'General Information' and 'Additional Information'.  
 - **General Information:**  
 - 'Host Category Name \*': Text input field with 'Category' entered.  
 - 'Alias \*': Text input field with 'category' entered.  
 - 'Linked Hosts': Text input field with 'Linked Hosts' entered, followed by a red 'X' icon.  
 - 'Linked Host Template': Text input field with 'Linked Host Template' entered, followed by a red 'X' icon.  
 - 'Severity type': A small square icon.  
 - **Additional Information:**  
 - 'Status': Radio buttons for 'Enabled' (selected) and 'Disabled'.  
 - 'Comments': A large text area.  
 - At the bottom right, there are 'Save' and 'Reset' buttons.

- The **Host Category Name** and **Alias** fields contain respectively the name and the alias of the category of host.
- The **Linked hosts** list allows us to add hosts to the category.
- If a host template is added to **Linked host template** list all the hosts which inherit from this Model belong to this category.
- The **Severity type** box signifies that the category of hosts has a criticality level.
- The **Level** and **Icon** fields define a criticality level and an associated icon respectively.
- The **Status** and **Comment** fields allow us to enable or disable the category of host and to comment on it.

## 6.8.2 Categories of services

To add a category of services:

1. Go into the menu: **Configuration ==> Services**
2. In the left menu, click on **Categories**
3. Click on **Add**

Information

? Name \* Traffic

? Description \* Traffic

Relations

? Linked Service Templates OS-Windows-Traffic-Generic-Id-SNMP-c OS-Windows-Traffic-Generic-Name-SNM OS-Windows-Traffic-Generic-Id-SNMP-c

? Severity type

Information

? Status ☒ Enabled ☐ Disabled

Save Reset

- The **Name** and **Description** fields define the name and the description of the category of service.
- if a service template is added to **Service Template Descriptions** list all the services which inherit from this Model belong to this category.
- The **Severity type** box signifies that the category of service has a criticality level.
- The **Level** and **Icon** fields define a criticality level and an associated icon respectively.
- The **Status** field allows us to enable or disable the category of services.

---

**Note:** For more information refer to the associated chapter covering *categories*.

---

## 6.9 Templates

### 6.9.1 Definition

A Template is a pre-configuration of settings of an object that could be used to configure it. The main advantage is to be able to define default values for certain objects to speed up the creation of similar objects.

On creation of a Template, only the template name is mandatory. The other attributes are optional.

There are 3 types of templates:

- Hosts Templates
- Services Templates
- Contacts Templates

The advantages are:

- Simplified element definition
- No duplication of data



- Facility of addition of new resources
- Predefined configurations assimilated to a “catalogue of indicators”
- Templates can inherit from other templates.

## 6.9.2 Host Templates

### Inheritance

A host or a host template can inherit from one or more host templates. This heritage may be:

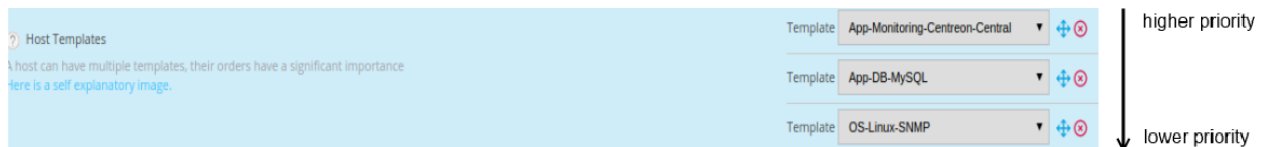
- associative (addition of multiple host templates)
- parent-child type

#### Parent-child type inheritance

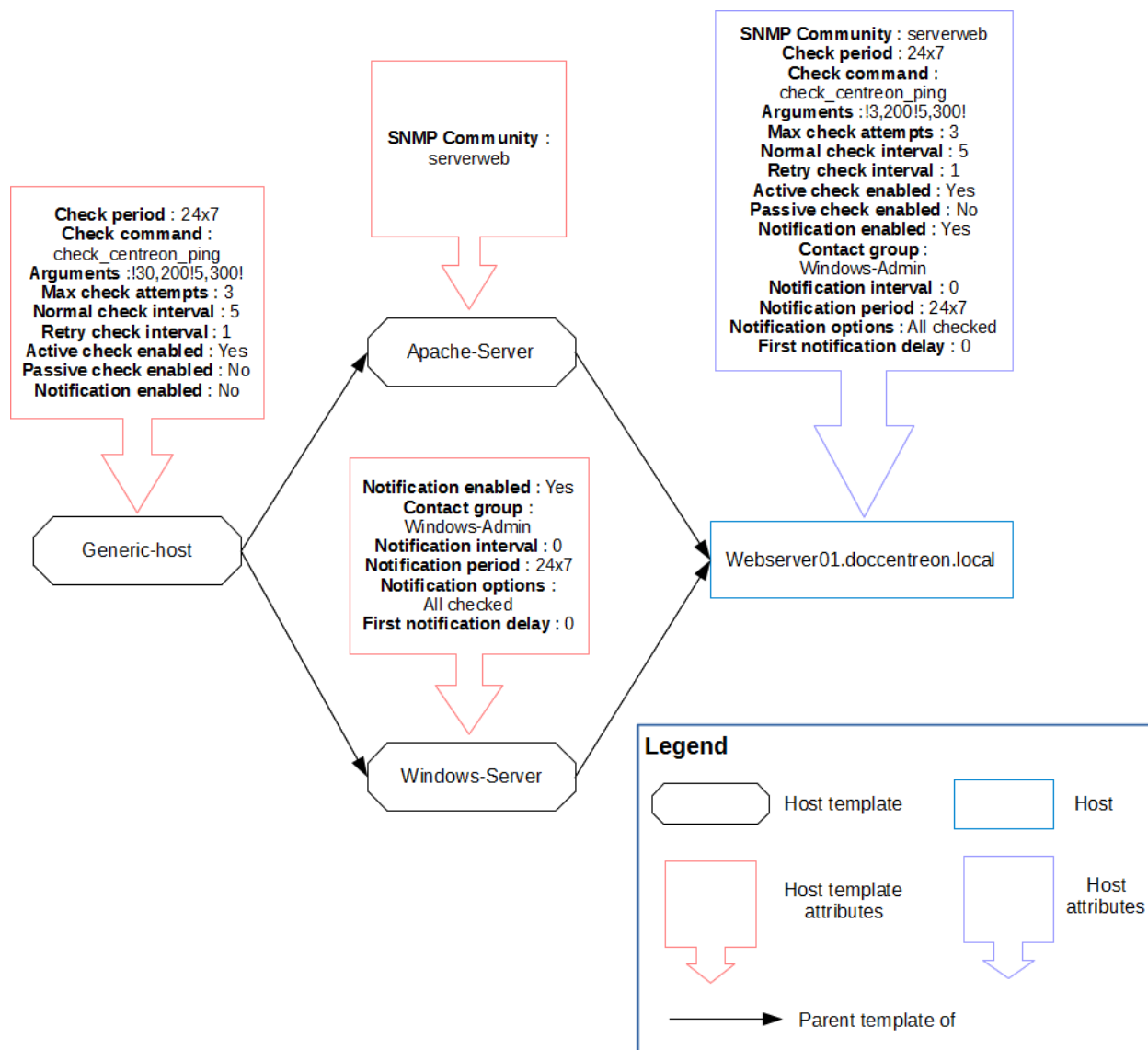
This is a predefinition of settings at “n” levels. The object inherits from its Template which can itself inherit from its Template. If the child redefines a setting, this setting overwrites that defined in the higher level templates. Otherwise it is added to the settings.

#### Associative type inheritance

This consists of adding together several templates within the same object in order to add together all the settings available. If a host inherits from several host templates and if the same setting is defined on several templates, the host templates situated above the other templates has priority in relation to its ancestors.



The diagram below shows a host inheriting from multiple host templates.



## Configuration

To add a host template:

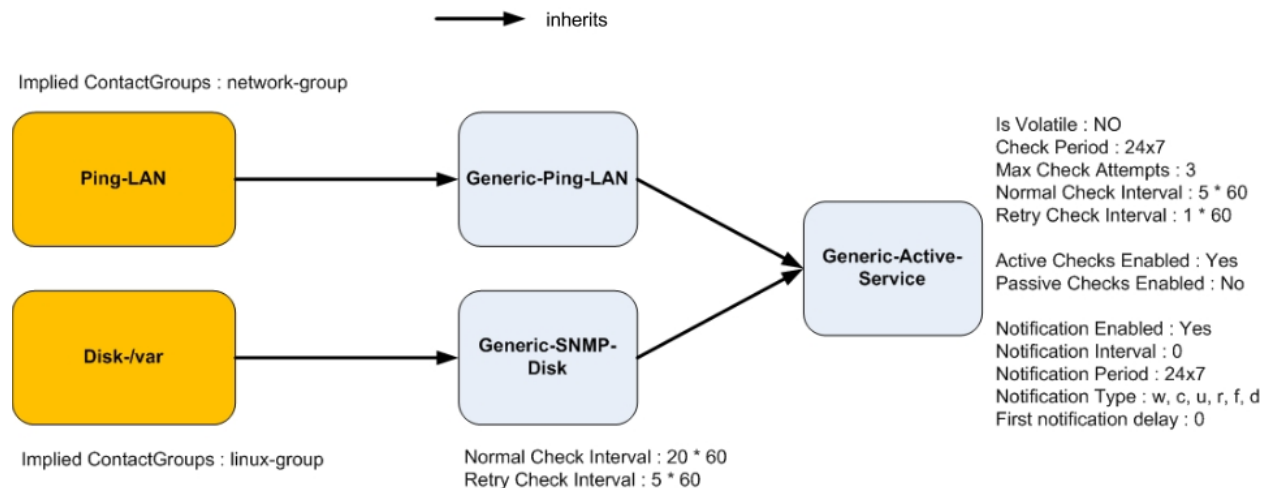
1. Go into the menu: **Configuration ==> Hosts**
2. In the left menu, click on **Templates**
3. Click on **Add**

**Note:** Refer to the chapter covering configuration of *hosts* to configure a template because the form is identical.

## 6.9.3 Services Templates

### Inheritance

A service or a service template can only inherit from a single service template (parent-child type inheritance).



### Configuration

To add a Service Template:

1. Go into the menu: **Configuration ==> Services**
2. In the left menu, click on **Templates**
3. Click on **Add**

---

**Note:** Refer to the chapter covering configuration of *services* to configure a template because the form is identical.

---

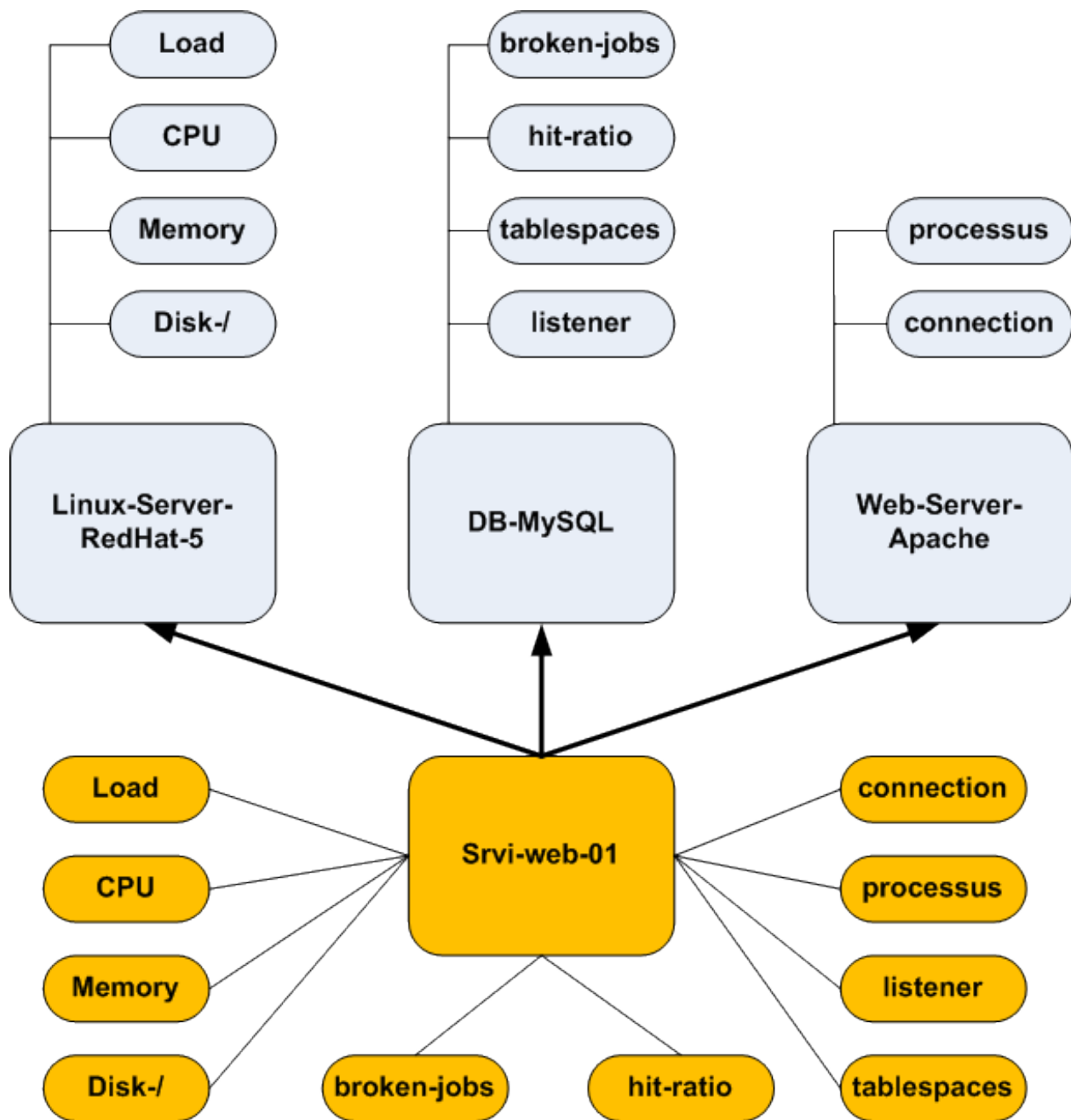
## 6.9.4 Best practice

### Explanations

Good practice requires that services templates be associated with host's templates: on creation of a host, the services are generated automatically from host's templates. There are two advantages in linking services templates to hosts templates:

- The services generated automatically retain their granularity: it is possible to change the Attributes of a service without affecting the other services obtained from this template
- The creation of new hosts is speeded up greatly: you simply have to define the host and the host's templates associated with it

E.g.: We create the srvi-web-01 host according to the template below:



The host srvi-web-01 will automatically possess the following services:

- Load, CPU, Memory, disk-/ from services templates linked to the host template “Linux-Server-RedHat-5”
- Broken-jobs, hit-ratio, tablespaces, listener from services templates linked to the host template “DB-MySQL”
- Process and connection from services templates linked to the host template “Web-Server-Apache”

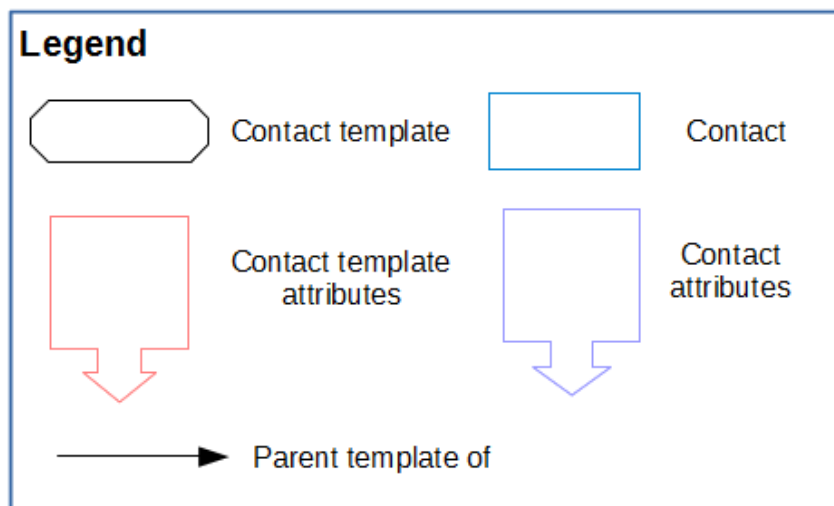
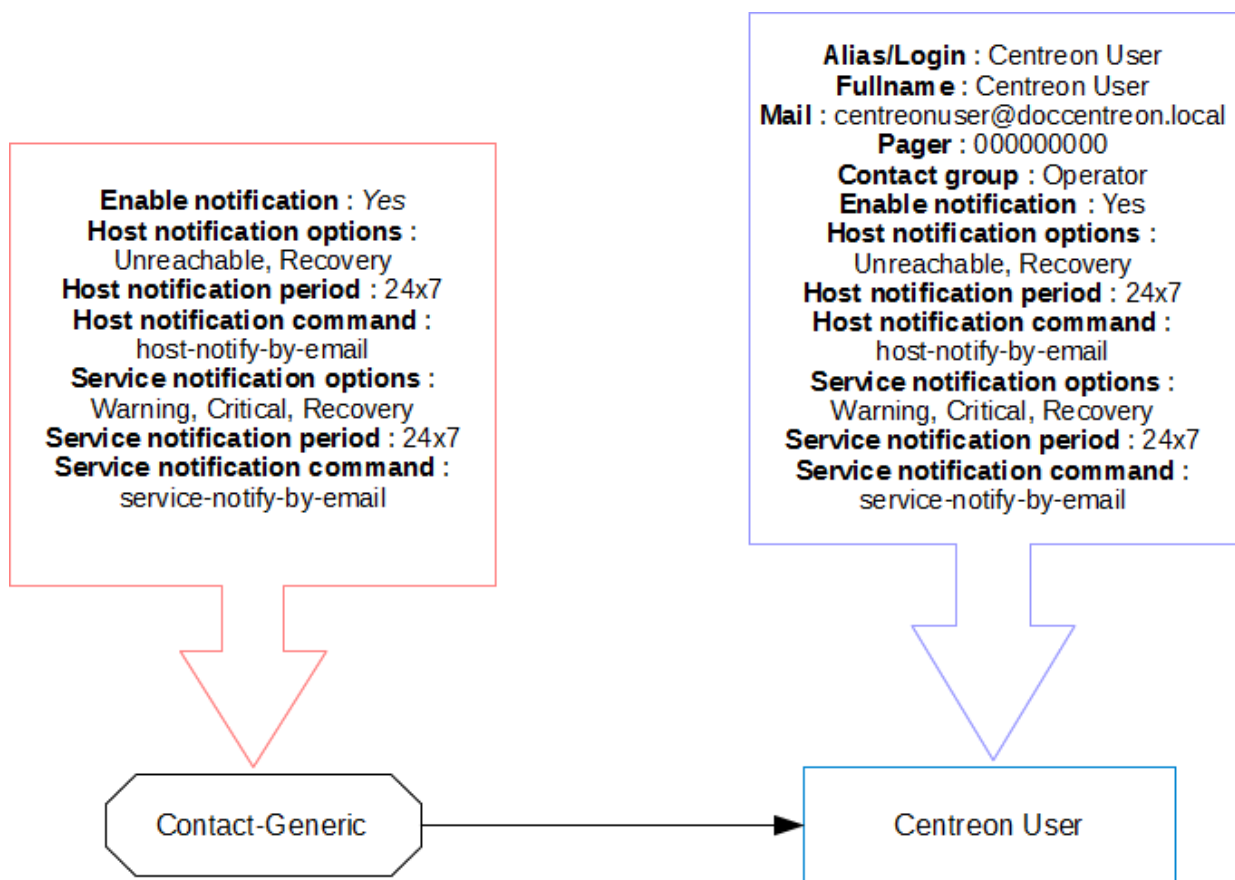
When the services of a host are generated from host’s templates, it is possible that certain services generated are not checked by the supervision tool. In this case, it is necessary to disable the services that are not used (but not to delete them). In case of deletion of services, regeneration of services of the host from host’s templates will re-create the services deleted.

## Configuration

The linking of services templates with host's templates takes place in the **Relations** tab of the services templates or hosts templates.

### 6.9.5 Contact Templates

A contact or a contact template can only inherit one contact template.



## Configuration

To add a contact template:

1. Go into the menu: **Configuration ==> Users**
2. In the left menu, click on **Contact Templates**

### 3. Click on **Add**

---

**Note:** Refer to the chapter covering configuration of *contacts*. In addition, the contacts templates are used for automatic import of profiles via *LDAP*.

---

## 6.10 Advanced configuration

This is the advanced configuration for Centreon.

### 6.10.1 Macros

A macro is a variable used to retrieve certain values. A macro always starts and finishes by the “\$” sign.

#### Standard macros

Standard macros are macros predefined in the source code of the monitoring engines. These different macros allow us to retrieve the value of various objects from commands.

E.g.: \* The macro called **\$HOSTADDRESS\$** enables us to retrieve the IP address of a host \* The macro called **\$CONTACTEMAIL\$** enables us to retrieve the e-mail address of the contact

---

**Note:** A complete list of macros is available at the following address: [List of macros](#)

---

#### Custom macros

##### Definition

Customised macros are macros defined by the user at the creation of a host or a service. They are used in check commands. Customised macros start with **\$\_HOST** for customised macros of hosts and by **\$\_SERVICE** for customised macros of services.

There are several advantages to using customised macros instead of arguments:

- The function of the macro is defined in its name. The macro **\$\_HOSTMOTDEPASSEINTRANET\$** is easier to read than **\$ARG1\$**
- The macros inherit models of hosts and of services, the hence it is possible to modify a single macro for a host or a service. On the other hand, the arguments all need to be redefined if a single argument is changed
- The number of arguments is limited to 32, unlike customised macros which are unlimited

A macro of a host is used to define a variable that is specific to the host and which will not change regardless of the service questioned: host connection identifiers, a port of connection to a particular service, an SNMP community, etc. A macro of a service is used more to define settings specific to a service: a **WARNING / CRITICAL** threshold, a partition to be questioned, etc.

##### Example

During the definition of a host, the following macros are created:

Macro name :	USERLOGIN	Macro value :	john-doe	Mot de passe :	<input type="checkbox"/>		
Macro name :	USERPASSWORD	Macro value :	.....	Mot de passe :	<input checked="" type="checkbox"/>		

To retrieve these macros in a check command, you need to call it using the following variables: `$_HOSTUSERLOGIN$`, `$_HOSTUSERPASSWORD$`.

On definition of a service, the following macros are created:

Macro name :	PARTITION	Macro value :	/user	Mot de passe :	<input type="checkbox"/>		
Macro name :	WARNING	Macro value :	80	Mot de passe :	<input type="checkbox"/>		
Macro name :	CRITICAL	Macro value :	90	Mot de passe :	<input type="checkbox"/>		

To retrieve these macros in a check command, you need to invoke them using the following variables: `$_SERVICEPARTITION$`, `$_SERVICEWARNING$`, `$_SERVICECRITICAL$`.

### A special case

The **Community SNMP & Version** fields in a host form automatically generates the following customised macros: `$_HOSTSNMPCOMMUNITY$` and `$_HOSTSNMPVERSION$`.

### Resource macros

Macros of resources are global macros that are used by the monitoring engine. These macros can be invoked by any type of command. They come in the form: `$USERn$` where 'n' lies between 1 and 256.

In general, these macros are used to make reference to paths containing supervision probes. By default the `$USER1$` macro is created, and its value is the following: `/usr/lib/nagios/plugins`.

To add a resources macro:

- Go into the menu: **Configuration ==> Pollers ==> Ressources**
- Click on **Add**

General Information	
Resource Name *	\$USER1\$
MACRO Expression *	/usr/lib/nagios/plugins
Linked Instances *	Central
General Information	
Status	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Comment	path to the plugins
<div>Save Reset</div>	

- The **Resource Name** field defines the name of the resource macro. E.g.: `$USER3$`
- The **MACRO Expression** field defines the value of the macro.



- The **Linked Instances** list allows us to define which monitoring poller will be able to access this macro.
- The **Status** and **Comment** fields serve to enable / disable the macro and to comment on it.

## Environment macros

Environment macros (also called “to the demand” or “on demand” in English) allow us to retrieve information from all the objects obtained from the supervision. They are used to retrieve, at given moment, the value of an object.

They are complementary to standard macros. E.g.:

- The standard macro `$CONTACTEMAIL$` makes reference to the e-mail address of the contact who uses the command of notification
- The environment macro `$CONTACTEMAIL:centreon$` returns the e-mail address of the user: “centreon”

The complete documentation on macros “on demand” is available at this address: [macro list](#).

**Note:** The use of these macros is not recommended because the search for a value of a setting of an object from another object is a consumer in terms of resources.

**Warning:** The enabling of the setting **Use large installation tweaks** makes it impossible to use environment macros.

## 6.10.2 Meta-services

### Definition

A meta-service is a virtual service providing the aggregation of metrics from different services via a mathematical operation. Meta-services are managed in the same way as a service i.e. they have thresholds, a notification process, generate a performance graph, etc.

E.g.: It is possible to determine the total consumption of WAN traffic by adding together, within a meta-service, all the services supervising the WAN traffic individually.

### Types of computing

Several types of calculation are possible on the metrics retrieved:

- **Average:** calculate the average of the performance data
- **Sum:** calculate the sum of the performance data
- **Min:** retrieve the minimum of all the performance data
- **Max:** retrieve the maximum of all the performance data

### Types of data sources

The result of the calculation is an item of performance data (metric) which generates a performance graph. To trace the result most effectively, it is necessary to select the type of data source (GAUGE by default). The types of data sources available are:

- The **GAUGE** type records an instantaneous value (temperature, humidity, processor, etc.)

- The **COUNTER** type records an incremental value in relation to the previous result
- The **DRIFT** type stores the derivative of the line from the last to the current value of the data. This can be useful for capacities, for example for measuring the rate of people entering or leaving a room.
- The **ABSOLUTE** type is for counters which reset on reading. It is used for fast counters that have a tendency to over-run.

**Note:** More information on the RRDTools <<http://oss.oetiker.ch/rrdtool/doc/rrdcreate.en.html>> \_ website

## Configuration

To add a meta-service:

1. Go into the menu: **Configuration ==> Services**
2. In the left menu, click on **Meta Services**
3. Click on **Add**

General Information	
Meta Service Name *	Test_Meta
Output format string (printf-style)	%s
Warning Level	2
Critical Level	3
Calculation Type *	Average ▼
Data Source Type	GAUGE ▼
Selection Mode *	<input checked="" type="radio"/> Service List <input type="radio"/> SQL matching
SQL LIKE-clause expression	
Metric	load1 ▼
Meta Service State	
Check Period *	24x7 ▼
Max Check Attempts *	5
Normal Check Interval *	5 * 60 seconds
Retry Check Interval *	5 * 60 seconds
Notification	
Notification Enabled *	<input type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Default
Implied Contacts	Admin_Admin ✕
Linked Contact Groups *	Supervisors ✕
Notification Interval *	5 * 60 seconds
Notification Period *	24x7 ▼
Notification Type *	<input type="checkbox"/> Warning <input type="checkbox"/> Unknown <input type="checkbox"/> Critical <input checked="" type="checkbox"/> Recovery <input type="checkbox"/> Flapping
Additional Information	
Graph Template	▼
Status	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
Comments	

Save Reset

## General information

- The **Meta Service Name** field corresponds to the name of the meta-service Displayed in the interface.

- The **Output format string (printf-style)** field corresponds to the output message ('output') visible in Centreon. The “%d” value corresponds to the value calculated by the meta-service
- The **Warning level** and **Critical level** correspond to the “WARNING” and “CRITICAL” thresholds of the meta-service respectively.
- The **Calculation Type** and **Data source Type** fields correspond to the calculations and to the description of the data source respectively
- The **Selection Mode** field serves to select the services containing the metrics that will be used in the meta-service calculation.

If the **Service list** selection mode is selected the metrics chosen will be obtained from services selected manually.

If the **SQL matching** selection mode is selected the services used will be selected automatically by Centreon via a search based on the LIKE type SQL expression to be searched field. The metric to be used in this case will be selected from the Metric drop down list.

---

**Note:** More information on PRINTF formatting [PRINTF](#)

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### Meta Service status

- The **Check Period** field defines the time period during which the scheduler checks the status of the meta-service.
- The **Max Check Attempts** field defines the number of checks to be made before confirming the status of the meta-service: when the status is valid a notification is sent.
- The **Normal Check Interval** field is expressed in minutes. It defines the interval between checks when the status of the meta-service is OK.
- The **Retry Check Interval** field is expressed in minutes. It defines the checking interval of the Not-OK status of the meta-service.

### Notification


- The **Notification Enabled** field serves to enable the notifications.
- The **Linked Contacts Groups** list serves to define the groups of contacts that will be alerted.
- The **Notification Interval** field is expressed in minutes and can be used to define the time interval between the sending of two notifications.
- The **Notification Period** field can be used define the period of notification.
- The **Notification Type** field defines the types of notification sent.




### Additional informations

- The **Graphic Template** list defines the graphic model used by this meta-service.
- The **Status** and **Comments** fields serve to enable / disable or comment on the meta-service.

### Select services manually

If you have chosen the option **Service list**, in the screen containing all the meta-services:

1. Click on  to select the metrics entering into the calculation of the meta-service. These metrics are called indicators.
2. Click on **Add**

Add a Meta Service indicator	
Host *	fw-cape-town 
Service	nbr-connect  connection () 
Comments	Nb of connection on fw-cape-town firewall
Status	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled

- The **Host** field serves to select the host to which the service to be selected belongs.
  - The **Service** field serves to choose the service (first list) as well as the metric in this service (second list).
  - The **Status** and **Comment** fields serve to enable / disable or comment on the indicator.
3. Repeat the operation until you have added all the indicators necessary for the calculation of the meta-service.

---

**Note:** A meta-service should be considered as a regular service. It is necessary to generate the configuration of the central scheduler, to export it and then restart the scheduler.

---

## 6.10.3 Dependencies

### Principle

Dependencies are used to satisfy two main requirements :

- Limit the sending of notifications
- Target the alerts

The dependencies of objects are of two types:

- **Physical** dependencies between objects: a load balancing switch is situated upstream of a set of servers and downstream of a router
- **Logical** dependencies between objects: the access to a website with authentication LDAP depends on the status of the LDAP directory itself

### Physical dependencies

Physical dependencies consist of taking into account physical links between equipment. This link can only be defined for objects of the "Host" type.

The configuration of a physical dependencies takes place in the **Relations** tab of a configuration sheet of a host (**Configuration ==> Hosts ==> Add**).

It is possible of define two settings:

- **Parent hosts:** signifies that the hosts selected are parents of this host (situated upstream). If all the parent hosts selected become unavailable or impossible to reach the host itself will be considered by the scheduler as impossible to reach.
- **Child hosts:** signifies that the host becomes the parent of all the child hosts selected.

**Note:** All the parents of a host must be in a Not-OK status for the host itself to be considered impossible to reach. If only one access path is down (physical dependencies link), the scheduler will continue to monitor this host.

## Logical dependencies

Logical dependencies consist of installing logical links between multiple objects that may or not be of different types. E.g.: a service is in charge of supervising the access to a web page requiring an authentication based on a LDAP. It is logical that if the LDAP server is down, the access to the web page will be difficult or even impossible. In this situation, the notification issued should only be communicated to the LDAP directory and not to the website.

## Hosts

To configure a logical dependencies:

1. Go into the menu: **Configuration ==> Notifications**
2. In the left menu, under the title: **Dependencies**, click on **Hosts**
3. Click on **Add**

Information	
⑦ Name *	<input type="text"/>
⑦ Description *	<input type="text"/>
⑦ Parent relationship	<input checked="" type="radio"/> Yes <input type="radio"/> No
⑦ Execution Failure Criteria	<input type="checkbox"/> Up <input type="checkbox"/> Down <input type="checkbox"/> Unreachable <input type="checkbox"/> Pending <input type="checkbox"/> None
⑦ Notification Failure Criteria	<input type="checkbox"/> Ok/Up <input type="checkbox"/> Down <input type="checkbox"/> Unreachable <input type="checkbox"/> Pending <input type="checkbox"/> None
⑦ Host Names *	<input type="text" value="Host Names"/>
⑦ Dependent Host Names	<input type="text" value="Dependent Host Names"/>
⑦ Dependent Services	<input type="text" value="Dependent Services"/>
Comments	<input type="text"/>

In this case, we have two types of host that come into play: one or more hosts (called master hosts) of which the status controls the execution and notification of other hosts (called dependent hosts). If you use the Centreon Broker, it is also possible to control the execution and notification of services (called dependent services) from master hosts.

- The **Name** and **Description** fields indicate the name and the description of the dependencies
- The **Parent relationship** field should be ignored if you use the Centreon Engine. If it is enabled, and if the dependencies links of the master host become unavailable, the dependencies in the process of creation is not taken into account.
- The **Execution Failure Criteria** field indicates the statuses of the master host(s) preventing the check of the hosts or the dependent services
- The **Notification Failure Criteria** field indicates the statuses of the master host(s) preventing the sending of notifications to the hosts or the dependent services

- The **Hostnames** list defines the master host(s)
- The **Dependent Host Names** list defines the dependent hosts
- The **Dependent Services** list defines the dependent services
- The **Comments** field can be used to comment on the dependencies

## Services

To add a dependencies at the services level:

1. Go into the menu: **Configuration ==> Notifications**
2. In the left menu, under the title: **Dependencies**, click on **Services**
3. Click on **Add**

The screenshot shows the 'Information' tab of the 'Dependencies Services' configuration form. It includes fields for Name, Description, Parent relationship (radio buttons for Yes/No), Execution Failure Criteria, Notification Failure Criteria, Services (with a red 'x' icon), Dependent Services (with a red 'x' icon), and Dependent Hosts (with a red 'x' icon'). There is also a Comments field and Save/Reset buttons at the bottom right.

In this case, we have two entities that come into play: the (“master”) services which control the execution and the notification of other (“dependent”) services. If you use Centreon Broker, it is also possible of control the execution and the notification of other hosts.

- The **Name** and **Description** fields indicate the name and description of the dependencies
- The **Parent relationship** field should be ignored if you use the Centreon Engine. If it is enabled, and if the links of dependencies of the master service become unavailable the dependencies in the process of creation is no longer taken into account.
- The **Execution Failure Criteria** field indicates the statuses of the master service(s) preventing the check of the hosts or the dependent services
- The **Notification Failure Criteria** field indicates the statuses of the master service(s) preventing the sending of notifications to the hosts or the dependent services
- The **Services** list defines the master service(s)
- The **Dependent services** list defines the dependent services
- The **Dependent hosts** list defines the dependent hosts
- The **Comments** field can be used to comment on the dependencies

## Host groups

To add a dependencies at the host groups level:

1. Go into the menu: **Configuration ==> Notifications**
2. In the left menu, under the title: **Dependencies**, click on **Host Groups**
3. Click on **Add**

The screenshot shows the 'Host Groups' configuration form. It has a light blue header with the word 'Information'. Below the header, there are several fields with labels and icons (a question mark in a circle) to the left. The fields are: 'Name \*' (text input), 'Description \*' (text input), 'Parent relationship' (radio buttons for 'Yes' and 'No', with 'Yes' selected), 'Execution Failure Criteria' (checkboxes for 'Ok/Up', 'Down', 'Unreachable', 'Pending', 'None'), 'Notification Failure Criteria \*' (checkboxes for 'Ok/Up', 'Down', 'Unreachable', 'Pending', 'None'), 'Host Groups Name \*' (text input with a red 'x' icon), and 'Dependent Host Groups Name \*' (text input with a red 'x' icon). At the bottom, there is a 'Comments' section with a text area. Below the form, there are two buttons: 'Save' (green) and 'Reset' (grey).



Two types of host groups: a host group is called a master if it controls the execution and the notification of other (“dependent”) host groups.

- The **Name** and **Description** fields indicate the name and the description of the dependencies
- The **Parent relationship** field should be ignored if you use the Centreon Engine. If it is enabled, and if the links of dependencies of the master host group become unavailable the dependencies in the process of creation is no longer taken into account.
- The **Execution Failure Criteria** field indicates the statuses of the master host group(s) preventing the check of the dependent host groups
- The **Notification Failure Criteria** field indicates the statuses of the master host(s) preventing the sending of notifications to the dependent host groups
- The **Host groups name** list defines the master host group(s)
- The **Dependent host group name** list defines the dependent host group(s)
- The **Comments** field can be used to comment on the dependencies

## Service groups

To add a dependencies at the service groups level:

1. Go into the menu: **Configuration ==> Notifications**
2. In the left menu, under the title: **Dependencies**, click on **Service Groups**
3. Click on **Add**

Information	
? Name *	<input type="text"/>
? Description *	<input type="text"/>
? Parent relationship	<input checked="" type="radio"/> Yes <input type="radio"/> No
? Execution Failure Criteria	<input type="checkbox"/> Ok <input type="checkbox"/> Warning <input type="checkbox"/> Unknown <input type="checkbox"/> Critical <input type="checkbox"/> Pending <input type="checkbox"/> None
? Notification Failure Criteria *	<input type="checkbox"/> Ok <input type="checkbox"/> Warning <input type="checkbox"/> Unknown <input type="checkbox"/> Critical <input type="checkbox"/> Pending <input type="checkbox"/> None
? Linked with Servicegroups *	<input type="text" value="Linked with Servicegroups"/> 
? Linked with Servicegroups *	<input type="text" value="Linked with Servicegroups"/> 
Comments	<input type="text"/>
<input type="button" value="Save"/> <input type="button" value="Reset"/>	

Two types of service group: a service group is called a “master” if it controls the execution and the notification of other (“dependent”) service groups.



- The **Name** and **Description** fields indicate the name and the description of the dependencies
- The **Parent relationship** field should be ignored if you use the Centreon Engine. If it is enabled, and if the links of dependencies of the master service group become unavailable the dependencies in the process of creation is no longer taken into account.
- The **Execution Failure Criteria** field indicates the statuses of the master service group(s) preventing the check of the dependent service groups
- The **Notification Failure Criteria** field indicates the statuses of the master host(s) preventing the sending of notifications to the dependent service groups
- The **Service group names** list defines the group(s) of master services
- The **Dependent service group names** list defines the group(s) of dependent services
- The **Comments** field can be used to comment on the dependencies

## Meta-services

To add a dependencies at the meta-services level:

1. Go into the menu: **Configuration ==> Notifications**
2. In the left menu, under the title: **Dependencies**, click on **Meta Services**
3. Click on **Add**



Information	
? Name *	<input type="text"/>
? Description *	<input type="text"/>
? Parent relationship	<input checked="" type="radio"/> Yes <input type="radio"/> No
? Execution Failure Criteria	<input type="checkbox"/> Ok <input type="checkbox"/> Warning <input type="checkbox"/> Unknown <input type="checkbox"/> Critical <input type="checkbox"/> Pending <input type="checkbox"/> None
? Notification Failure Criteria	<input type="checkbox"/> Ok <input type="checkbox"/> Warning <input type="checkbox"/> Unknown <input type="checkbox"/> Critical <input type="checkbox"/> Pending <input type="checkbox"/> None
? Meta Service Names *	<input type="text" value="Meta Service Names"/> 
? Dependent Meta Service Names *	<input type="text" value="Dependent Meta Service Names"/> 
Comments	<input type="text"/>

Two types of meta-services: a meta-service is called a “master” if it controls the execution and the notification of other (“dependent”) meta-services.

- The **Name** and **Description** fields indicate the name and description of the dependencies
- The **Parent relationship** field should be ignored if you use the Centreon Engine. If it is enabled, and if the links of dependencies of the master meta-service become unavailable the dependencies in the process of creation is no longer taken into account.
- The **Execution Failure Criteria** field Indicates which are the statuses of the meta-master service(s) that will prevent the check of the meta-dependent services
- The **Notification Failure Criteria** field indicates the statuses of the meta-service(s) preventing the sending of notifications to meta-dependent services
- The **Meta-service name** list defines the master meta-service(s)
- The **Dependent meta-service** names list defines the dependent meta-service(s)
- The **Comments** field can be used to comment on the dependencies

## 6.10.4 Notification escalation

### Definition

Generally, if an alert is triggered, a notification serves to contact one or more contacts (or groups of contacts). In the same way it is possible to send multiple notifications at regular time intervals.

An escalation of notifications serves to contact various groups of contacts during the notifications process or to change the means of notification (replace mails by an SMS). The definition of a notification escalation to a host, a host group, a service, a service group or a meta-service overwrites the normal configuration of notifications for this object.

E.g.: a service A is set to send notifications to a group of contacts “A” in case of Not-OK status. These notifications are sent every 5 minutes. If during a certain number of notifications sent the status of the service is still Not-OK, it is possible to contact the individuals of the group of contacts “B” etc...

Escalations of notification are convenient in the situation where level 1, level 2, level 3, etc., support level teams exist within a company. When a problem appears the level 1 support team is contacted. If after a certain time the level 1 team has not succeeded in solving the problem, the level 2 team is alerted, etc.

### Configuration

To add an escalation of notification:

1. Go into the menu: **Configuration ==> Notifications ==> Escalations**
2. Click on **Add**

Information

Escalation Name *	<input type="text"/>
Alias	<input type="text"/>
First Notification *	<input type="text"/>
Last Notification *	<input type="text"/>
Notification Interval *	<input type="text"/> * 60 seconds
Escalation Period	Escalation Period <input type="button" value="x"/>
Hosts Escalation Options	<input type="checkbox"/> Down <input type="checkbox"/> Unreachable <input type="checkbox"/> Recovery
Services Escalation Options	<input type="checkbox"/> Warning <input type="checkbox"/> Unknown <input type="checkbox"/> Critical <input type="checkbox"/> Recovery
Linked Contact Groups *	Linked Contact Groups <input type="button" value="x"/>
Comments	<div></div>

Save
Reset

- The **Escalation Name** and **Alias** fields serve to define a name and an alias for the notification escalation.
- The **First Notification** field allows us to choose the notification number as of which the group of contacts is alerted.
- The **Last Notification** allows us to choose the last notification number at which the group of contacts is alerted. If the group of contacts is the last level of the escalation the value of this field is 0.
- The **Notification Interval** field defines the notification interval between alerts.
- The **Escalation Period** field defines the notification time period.
- The **Hosts Escalation Options** and **Services Escalation Options** service escalation fields define the statuses of hosts and of services for which the escalation is used.
- The **Linked Contact Groups** defines the group of contacts to be contacted on triggering the escalation.
- The **Comments** field can be used to comment on the escalation.

### Application of the escalation

To select the various objects that will be concerned by this escalation, the **Hosts Escalation**, **Services Escalation**, **Hostgroups Escalation**, **Meta Service Escalation** and **Servicegroups Escalation** tabs serve to choose the objects to which the escalations are applied.

## 6.10.5 Recurrent downtimes

### Definition

A downtime period is a time period during which the notifications to a host or a service are disabled. Downtime periods are convenient during maintenance operations on a host or a service: they allow us to avoid receiving false positive.

Recurrent Downtime periods are Downtime periods that recurs repetitively.

E.g.: A back-up of the virtual machines is performed every day from 20h00 to midnight. This type of back-up has a tendency to saturate the CPU use of all the virtual machines. It is necessary to program recurrent Downtime periods on the services concerned to avoid receiving notifications from 20h00 to midnight.

**Note:** The Downtime periods are taken into account in the calculation of the availability ratio of the resource in the menu: “Dashboard”.

## Types of Downtime periods

There are two types of Downtime periods:

- The **fixed** downtime period: This means that the downtime period takes place during exactly the time period defined.
- The **flexible** downtime period: This means that if during the time period defined the service or the host returns a Not-OK status the downtime period lasts a certain number of seconds (to be defined in the form) from the moment when the host or the status returns a Not-OK status.

## Configuration

To add a recurrent downtime period:

1. Go into the menu: **Configuration ==> Hosts** (or **Services** depending on the type of object on which the downtime period is to be implemented)
2. In the left menu, click on **Downtimes**
3. Click on **Add**

The screenshot shows the 'General Information' and 'Periods' sections of the Centreon configuration interface. The 'General Information' section includes fields for 'Name', 'Description', and 'Enable' (with radio buttons for 'Yes' and 'No'). The 'Periods' section features a '+ Add new period' button and a form for 'Period 1'. The form has three tabs: 'Weekly basis' (selected), 'Monthly basis', and 'Specific date'. Under 'Weekly basis', there are checkboxes for days of the week (Sunday through Saturday). Below this is a 'Time period' field with a range selector. The 'Downtime type' section has radio buttons for 'Fixed' (selected) and 'Flexible', followed by a text input field and a dropdown menu currently set to 'Seconds'. At the bottom right, there are 'Save' and 'Reset' buttons.

## Configuration of Downtime periods

- The **Name** and **Description** fields serve to give a name and describe the recurrent downtime period.
- The **Enable** field serves to enable or disable the downtime period.
- The **Periods** field serves to define one or more periods of recurrent downtime periods. To add a period, click on the symbol.

It is possible to choose three types of period:

- **Weekly**: to choose the days of the week
- **Monthly**: to choose the days of the month
- **Specific date**: to choose specific dates
- The **Days** field defines the day(s) concerned.
- The **Time period** field contains the time period concerned (expressed in HH:MM - HH:MM).
- The **Downtime type** field defines the type of downtime period desired.

---

**Note:** It is possible to combine several types of periods within the same downtime period.

---

## Relations

- The **Linked with Hosts** list can be used to choose the host(s) concerned by the recurrent downtime period.
- If **Linked with Host Groups** is chosen with the list **Linked with the host group** all the hosts belonging to this group are concerned by the recurrent downtime period.
- The **Linked with Services** list can be used to choose the service(s) concerned by the recurrent downtime period.
- If a service group is chosen with the list **Linked with Service Groups** all the services belonging to this group are concerned by the recurrent downtime period.

## 6.10.6 SNMP traps

### Definition

SNMP traps are information sent using the SNMP protocol from monitored equipment to a poller server (satellite). This information contains multiple Attributes including:

- Address of the equipment sending the information.
- The root OID (Object Identifier) corresponding to the identifier of the message received.
- The message sent via the SNMP trap which corresponds to a set of settings (1 to N).

In order to be able interpret the event received the Network supervisor server needs to possess in its configuration the necessary elements to translate the event. For this it must have a database containing the OID and the descriptions, this is what is called MIB files. There are two types of MIB:

- Standard MIBs which use standardised OIDs and which are implemented by numerous manufacturers on their equipment.
- MIB manufacturers who are specific to each one and often to each equipment model.

MIB manufacturers can be retrieved from the equipment. Centreon allows us to store the definition of SNMP traps in its MySQL database. The traps can subsequently be linked to passive services via the **Relations** tab of the definition of a service.

## Architecture

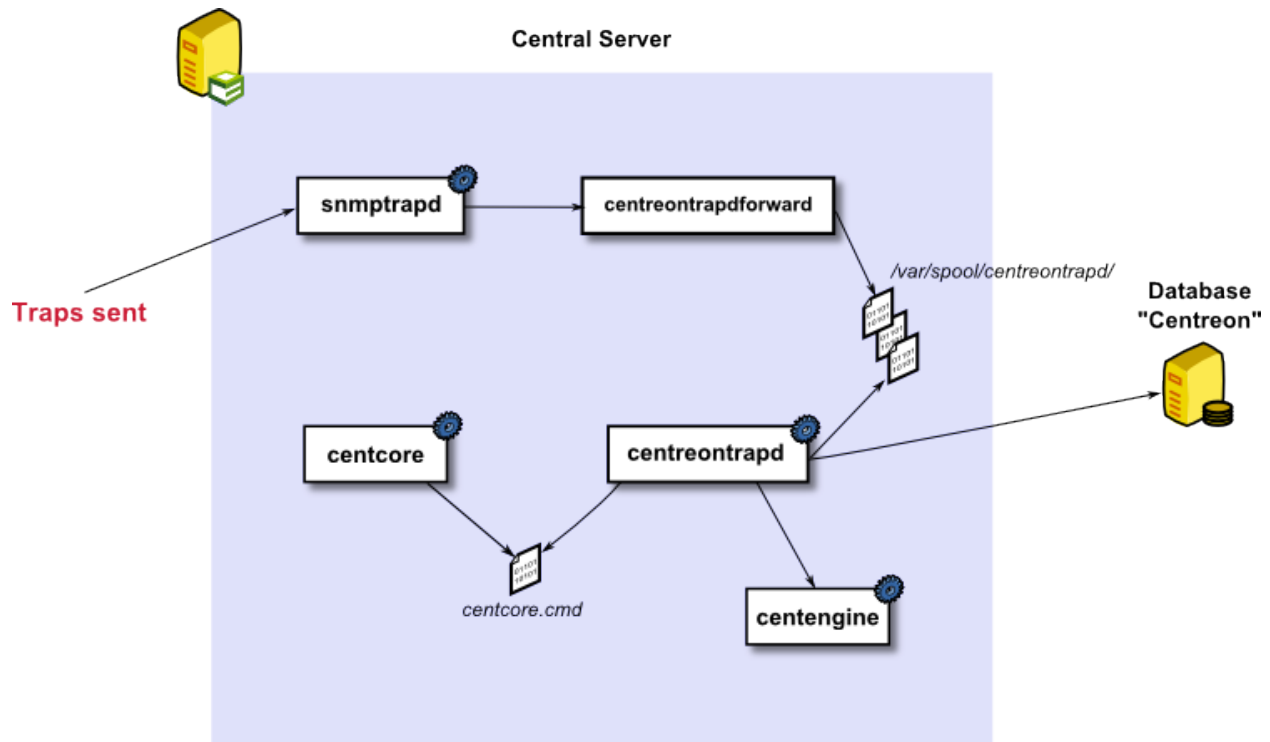
With centreon 2.5.x, the management of the SNMP traps has been reviewed completely in comparison to the previous versions:

- The 'snmptt' and 'centrtrapd' processes have been combined in a single process called 'centreontrapd'.
- The 'snmptthandler' process is replaced by the 'centreontrapdforward' process.
- The satellites can have their own definition of SNMP traps within a SQLite dedicated base thus deleting the access to the centreon MySQL server.

### Processing of a trap by the central server

Here is the processing of an SNMP trap with centreon 2.5.x:

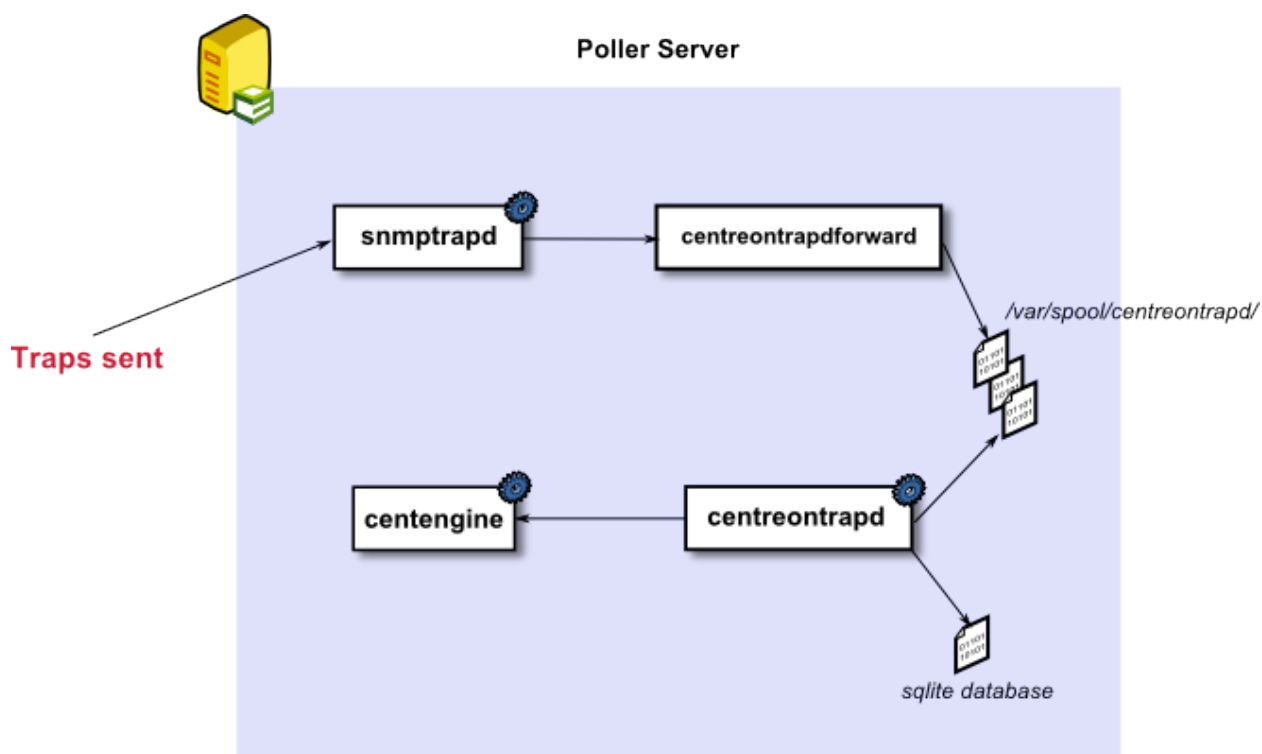
1. snmptrapd is the service enabling the retrieval of SNMP traps sent by the equipment (by default it listens on the **UDP 162** port).
2. Once the SNMP trap has been received, it is sent to the 'centreontrapdforward' script which writes the information received in a buffer folder (by default **/var/spool/centreontrapd/**).
3. 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.
4. The 'centreontrapd' service transmits the information to the scheduler or the 'centcore' service (to send the information to a remote scheduler) which changes the status and the information associated with service to which the SNMP trap is linked.



## Processing of a trap by a satellite server

To keep a copy of the configuration of the SNMP traps on each satellite server, a SQLite database is charged with keeping cached the information of the traps contained in the MySQL database. This SQLite database is automatically generated by the central server. Here is the processing of an SNMP trap with centreon 2.5.x :

1. `snmptrapd` is the service serving to retrieve the SNMP traps sent by the equipment (by default it listens on the **UDP 162** port).
2. Once the SNMP trap is received, it is sent to the `'centreontrapdfoward'` script which writes the information received in a buffer folder (by default `/var/spool/centreontrapd/`).
3. The `'centreontrapd'` service reads the information received in the buffer folder and interprets the various traps received checking in the SQLite database the actions to be taken to process the traps received.
4. The `'centreontrapd'` service transmits the information to the scheduler which changes the status and the information associated with the service to which the SNMP trap is linked.



**Note:** the Centcore process is responsible, as for the export of configuration of the supervision, to copy the SQLite base on the remote collector.

## Configuration of services

### Snmpttrapd

To call the `'centreontrapdfoward'` script, the file `/etc/snmp/snmptrapd.conf` must contain the following lines:

```
disableAuthorization yes
traphandle default su -l centreon -c "/usr/share/centreon/bin/centreontrapdfoward"
```

You can optimise the performances of `snmptrapd` by using the following options:

- **-On** don't try to convert the OIDs
- **-t** don't log the traps to the syslog server
- **-n** don't try to convert the IP addresses into host names

These options can be changed in the file **/etc/sysconfig/snmptrapd**:

```
OPTIONS="-On -d -t -n -p /var/run/snmptrapd.pid"
```

It is also possible to place the snmptrapd buffer folder in the RAM. For this, add the following line in the file **/etc/fstab**:

```
tmpfs /var/run/snmpd tmpfs defaults,size=128m 0 0
```

### centreontrapdforward

To change the buffer folder towards which the information will be written, change the configuration file **/etc/centreon/centreontrapd.pm**:

```
our %centreontrapd_config = (
    spool_directory => '/var/spool/centreontrapd/',
);

1;
```

You can also map the folder in the RAM, by adding the following line in the file: **/etc/fstab**:

```
tmpfs /var/spool/centreontrapd tmpfs defaults,size=512m 0 0
```

### centreontrapd

Two configuration files existent in centreontrapd:

- **/etc/centreon/conf.pm** contains the connection information to the MySQL database
- **/etc/centreon/centreontrapd.pm** contains the configuration of the centreontrapd service

**Configuration of the service** In the file **/etc/centreon/centreontrapd.pm** we advise changing three settings only (if necessary):

- If the **mode** option is defined in 1 centreontrapd functions on a satellite server, otherwise it functions on a central server (centreon).
- The **centreon\_user** option can be used to change the user executing the actions.
- The **spool\_directory** option can be used to change the buffer folder to be read (if you have changed it in the 'centreontrapdforward' configuration file).

Here is an example of possible configuration of the file **/etc/centreon/centreontrapd.pm** (the configuration file can be changed with '-config-extra = xxx'):

```
our %centreontrapd_config = (
    # Time in seconds before killing not gently sub process
    timeout_end => 30,
    spool_directory => "/var/spool/centreontrapd/",
    # Delay between spool directory check new files
    sleep => 2,
    # 1 = use the time that the trap was processed by centreontrapdforward
    use_trap_time => 1,
```

```

net_snmp_perl_enable => 1,
mibs_environment => '',
remove_backslash_from_quotes => 1,
dns_enable => 0,
# Separator for arguments substitution
separator => ' ',
strip_domain => 0,
strip_domain_list => [],
duplicate_trap_window => 1,
date_format => "",
time_format => "",
date_time_format => "",
# Internal OID cache from database
cache_unknown_traps_enable => 1,
# Time in seconds before cache reload
cache_unknown_traps_retention => 600,
# 0 = central, 1 = poller
mode => 0,
cmd_timeout => 10,
centreon_user => "centreon",
# 0 => skip if MySQL error | 1 => dont skip (block) if MySQL error (and keep order)
policy_trap => 1,
# Log DB
log_trap_db => 0,
log_transaction_request_max => 500,
log_transaction_timeout => 10,
log_purge_time => 600
);

1;

```

**Configuration of the connection to the database** It is possible of configure the file `/etc/centreon/conf.pm` in two ways:

- Retain the connection to the MySQL server database (necessary for the central server and possible for the satellite servers). Content of the file:

```

$centreon_config = {
VarLib => "/var/lib/centreon",
CentreonDir => "/usr/share/centreon/",
"centreon_db" => "centreon",
"centstorage_db" => "centreon_storage",
"db_host" => "localhost:3306",
"db_user" => "centreon",
"db_passwd" => "centreon"
};

1;

```

- Connect centreontrapd to the local SQLite database. Contents of the file:

```

$centreon_config = {
VarLib => "/var/lib/centreon",
CentreonDir => "/usr/share/centreon/",
"centreon_db" => "dbname=/etc/snmp/centreon_traps/centreontrapd.sdb",
"centstorage_db" => "dbname=/etc/snmp/centreon_traps/centreontrapd.sdb",
"db_host" => "",
"db_user" => "",

```



```
"db_passwd" => "",
"db_type" => 'SQLite',
};

1;
```

## Centreon configuration

### Add a manufacturer

Within centreon, the root OIDs of the SNMP traps is filed by manufacturer. To add a manufacturer:

1. Go into the menu: **Configuration ==> SNMP traps**
2. In the left menu, click on **Manufacturer**
3. Click on **Add**

| Add Vendor

Vendor Name *	<input type="text"/>
Alias *	<input type="text"/>
Description	<input type="text"/>

Save Reset

- The **Name** and **Alias** fields define the name and the alias of the manufacturer
- The **Description** field provides an indication about the manufacturer

### Importation of MIBs

It is also possible to import OIDs from MIBs provided by the manufacturers. To do this :

1. Go into the menu: **Configuration ==> SNMP traps**
2. In the left menu, click on **MIBs**

Import SNMP traps from MIB file

Vendor Name *	Cisco Networks ▼
File (.mib) *	Choisissez un fichier Aucun fichier choisi

- The **Manufacturer** list can be used to choose the manufacturer to which the MIB that you are importing belongs
- The **File (.mib)** field can be used to load the MIB

3. Click on **Import**

| Import SNMP traps from MIB file

Vendor Name *	Cisco ▼
File (.mib) *	Choisissez un fichier fortmail.mib

Import

**Note:** The dependencies of the MIBS that you import must be present in the folder `/usr/share/snmp/mibs`. Once the import is completed, delete the dependences previously copied.

**Note:** Once the SNMP traps are imported, it is necessary to verify the “Monitoring” status associated with the events. By default it will be “OK”.

## Manual configuration of traps

**Basic configuration** It is also possible to create definitions of SNMP traps manually:

1. Go into the menu: **Configuration ==> SNMP traps**
2. Click on **Add**

The screenshot shows the 'Modify a Trap definition' form in the Centreon interface. The form is divided into several sections:

- Convert Trap information:** Contains fields for 'Trap name' (ccmCLIRunningConfigChanged), 'OID' (1.3.6.1.4.1.9.9.43.2.0.2), and 'Vendor Name' (Cisco).
- Convert Trap information:** Contains fields for 'Output Message' (This notification indicates that the running S\*), 'Default Status' (Ok), 'Default Severity' (dropdown), 'Advanced matching mode' (checkbox), 'Disable submit result if no matched rules' (checkbox), and 'Advanced matching rules' (+ Add a new entry, Nothing here, use the "Add" button).
- Action 1 : Submit result to Monitoring Engine:** Contains a checkbox for 'Submit result'.
- Action 2 : Force rescheduling of service check:** Contains a checkbox for 'Reschedule associated services'.
- Action 3 : Execute a Command:** Contains a checkbox for 'Execute special command' and a text field for 'Special Command'.
- Trap description:** Contains a text area for 'Comments' with the following text: 'This notification indicates that the running configuration of the managed system has changed from the CLI. If the managed system supports a separate configuration mode (where the configuration commands are entered under a configuration session which affects the running configuration of the system), then this notification is sent when the configuration mode is exited. During this configuration session there can be'.

At the bottom right of the form are 'Save' and 'Reset' buttons.

- The field **Trap name** defines the name of the trap.
- The field **OID** defines the Root OID to be received for this trap to be considered as received.
- The field **Vendor name** defines the name of the manufacturer to which the trap to be selected in the drop-down list belongs.
- The field **Output message** contains the message to be displayed in the event of reception of a trap containing the OID configured above.

**Note:** By default, the MIB contains the definition of this variable (E.g.: “Link up on interface \$2. State: \$4.”, here \$2

will be replaced by the 2nd argument received in the event.). In the opposite situation, the variable \$\* can be used to display all the arguments contained in the trap.

---

**Note:** It is possible to construct the output message yourself. For this, use the MIB to know the arguments that will be present in the body of the event and retrieve the arguments with the variables \$n. As each argument is identified by a OID, it is possible to use this OID directly to place it in the output message without knowing its position via the variable @{OID}.

---

- The **Default status** field defines the “monitoring” status of the service in case of reception of the trap.
- If the **Submit result** box is checked the result is submitted to the Network supervisor engine.
- The **Comments** field (last field) contains by default the comment by the manufacturer of the SNMP trap. Most of the time, this comment indicates the list of variables contained in the SNMP trap (see the next chapter on advanced configuration).

**Advanced configuration of the traps** It is possible to determine the status of a service from the value of a setting of the SNMP trap rather than from the Root OID. Previously the manufacturer defined an SNMP trap (Root OID) by type of event to be sent (linkUp / linkDown). Today, the tendency is to define a Root OID by category of events and then to define the event via a set of settings.

To do this, it is possible to define **Advanced Matching mode** by clicking on **Add a new entry** and by creating as many rules as necessary. For each rule, define the settings:

- **String** defines the element on which the search will be applied (@OUTPUT@ defined all the **Output messages** translated).
- **Regex** defined the REGEXP type search to be applied.
- **Status** defines the status of the service in the event of concordance.

---

**Note:** The order is important in the rules of correspondence because the process will stop at the first rule of which the correspondence is assured.

---

- The **Disable submit result if no matched rules** field disables the sending of information to the scheduling engine if no correspondence with a rule is confirmed.
- If the **Reschedule associated services** box is checked the next check on the service, which should be ‘active’, should be reprogrammed as soon as possible after reception of the trap.
- If the **Execute special command** box is checked the command defined in Special command is executed.

**Very advanced configuration of the traps** The **Advanced** tab serves to configure the behavior of the handling process of the SNMP traps on its reception of the latter.

Main
Relations
Advanced

| Modify a Trap definition

Route parameters

? Enable routing ☐

? Route definition

? Filter services

Pre execution commands

? PREEEXEC command [+ Add a new entry](#)  
Nothing here, use the "Add" button

Misc

? Insert trap's information into database ☐

? Timeout  seconds

? Execution interval  seconds

? Execution type ☒ None ☐ By OID ☐ By OID and Host

? Execution method ☒ Parallel ☐ Sequential

? Check Downtime ☒ None ☐ Real-Time ☐ History

? Output Transform

? Custom code

Save Reset

- **Enable routing** is used to enable the routing of information.
- **Route definition** is used to define the command to be used for routing.

Before performing the processing of the event (translation of the **Output message**), it is possible to execute a command called PREEEXEC. To do this, it is possible to define **PREEEXEC command (SNMPTT type)** by clicking on **Add a new entry** and create as many rules as necessary.

- **PREEEXEC command** defines the command to be executed.

Here is an example of use with the linkUP trap:

For a Cisco equipment, \$2 == ifDescr contains the port number of the interface (GigabitEthernet0/1 for instance). The best description of the interface is in the SNMP if Alias field.

The following command can be used to retrieve this value :

```
snmpget -v 2c -Ovq -c <community> <cisco switch> ifAlias.$1
```

To use the result of the PREEEXEC command in the **Output message**, it is necessary to use the variable \$p{n} where 'n' corresponds to the order of definition of the command.

Example:

```
"Interface $2 ( $p1 ) linkUP. State: $4." "$CA"
```

The result will have the form: Interface GigabitEthernet0/1 ( NAS Server ) linkUP. State: up

- The **Insert trap's information into database** box, if checked, record the SNMP trap information in the database field can be used define whether or not to classify the traps by day in the database.
- The **Timeout** field expressed in seconds is used to define the maximum processing time of the event including the pre-processing commands (PREEEXEC) and post-processing commands (special command).
- The **Execution interval** field expressed in seconds is used to define the maximum waiting time between two processing operations of an event.

- The **Execution Type** field is used to enable the Execution interval by defining the conditions by Root OID, by the Root OID and host combination or, to disable this restriction, None.
- The **Execution Method** field is used to define if on reception of multiple same events (Root OID). The execution is either **Sequential** or **Parallel**.

## Variables

When adding a rule of correspondence or executing a special command it is possible to transmit arguments to the **String** or **Special command** fields. These arguments are listed in the table below:

Macro name	Description
@{NUMERIC_OID}	Retrieval of the value of an argument via its OID, e.g.: @{.1.3.6.1.4.1.9.9.43.1.1.1}
\$1, \$2...	Retrieval of the value of an argument via its order of appearance
\$p1, \$p2,...	Value of the command: PREEXEC (\$p1 = at the first command, \$p2 at the second, ...)
\$*	All the arguments separated by a space
@HOSTNAME@	Host name (in centreon) to which the service is attached
@HOSTADDRESS@	IP address of the host sending the trap
@HOSTADDRESS2@	DNS name of the host sending the trap (if the server fails to effect a reverse DNS resolution we retrieve the IP address)
@SERVICEDESC@	Service name
@TRAPOUTPUT@ ou	Output of the traps
@OUTPUT@	
@STATUS@	Service state
@SEVERITYNAME@	Criticality name
@SEVERITYLEVEL@	Criticality level
@TIME@	Trap reception timestamp
@POLLERID@	ID of the poller having received the trap
@POLLERADDRESS@	IP address of the poller having received the trap
@CMDFILE@	Path to the command file of CentCore (central) or of centreon Engine (collector)

In addition, there are special variables that can be used in the **Routing settings** section at the level of the **Routing command** if the option Enable routing is selected :

Macro name	Description
@GETHOST-BYADDR(\$1)@	Reverse DNS resolution used to find the DNS name DNS from the IP address (127.0.0.1 -> localhost)
@GETHOSTBY-NAME(\$1)@	DNS resolution used to find the IP address from the DNS name (localhost -> 127.0.0.1)

## Applying the changes

To be able to export the OID present in the database in the configuration file to centreontrapd, follow the following procedure:

1. Go into the menu: **Configuration ==> SNMP traps**
2. In the left menu, click on **Generate**
3. Select the poller to which you want to export the configuration files
4. Check **Generate traps database** and **Apply configurations**
5. In the drop-down list **Send signal** (the **Reload** option is preferable)
6. Click on the **Generate** button

## 6.11 Poller

### 6.11.1 Remote servers

#### Presentation

Remote servers (also called pollers) are monitoring server equipped with a scheduler and a broker module. Their function is to monitor the equipment and send the results to the Centreon central server (for display of the results...).

#### Installation

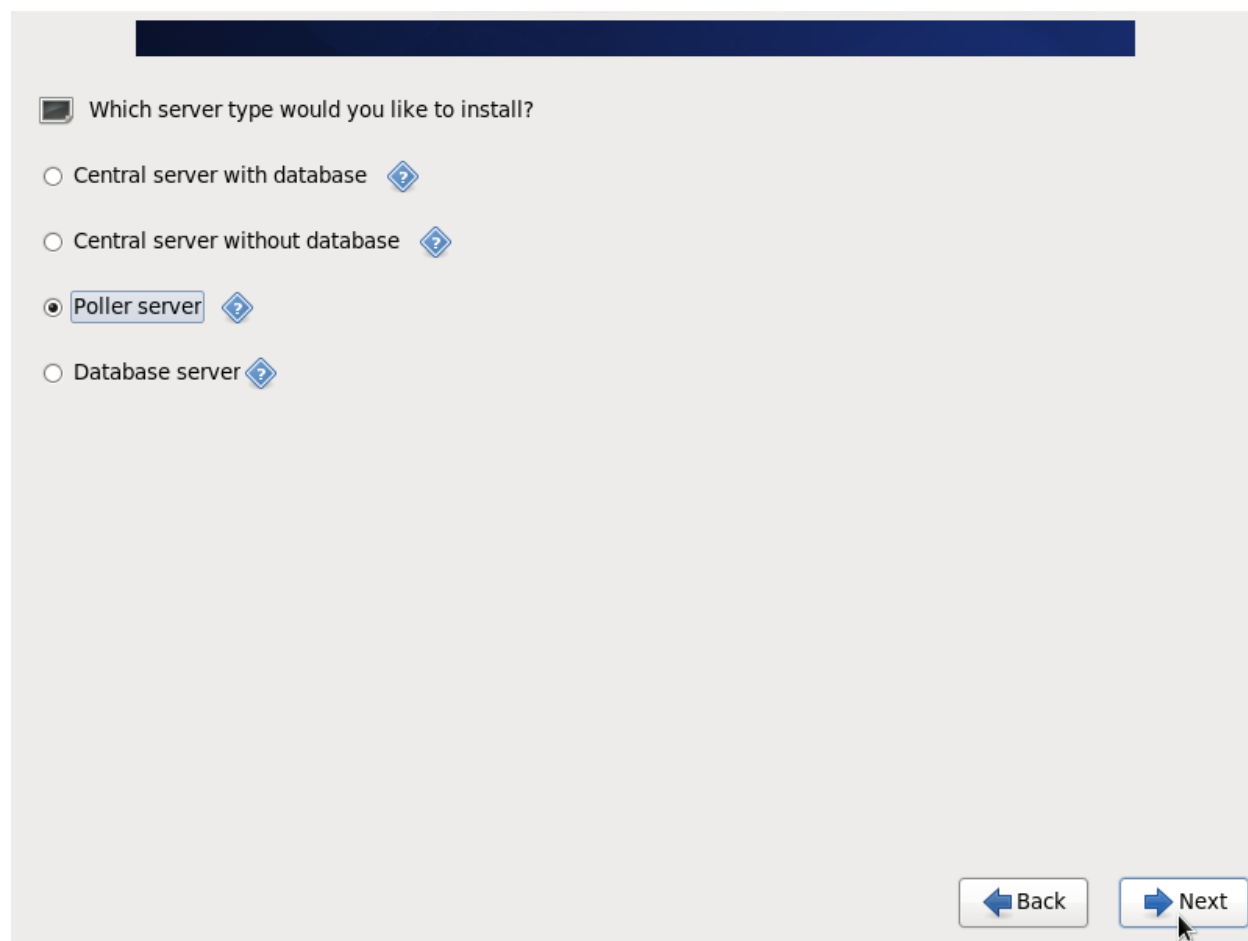
The installation process is identical to a Centreon central server installed from the iso file of CES.

---

**Note:** Refer to the documentation: *first steps with CES 3.0*

---

For the question **Which server type would you like to install?** choose the option **Poller server**.



Which server type would you like to install?

☐ Central server with database ?

☐ Central server without database ?

☒ Poller server ?

☐ Database server ?

Back Next

### 6.11.2 Configuration of the scheduler

Once the installation is completed, it is necessary to integrate this remote server into the Centreon configuration.

1. Go into the menu: **Configuration ==> Pollers**

2. Click on **Add**
3. Change the following settings, and save:
  - Change the name of the **Poller Name**.
  - Enter the IP address of the collector in the **IP Address** field.
  - Enable the collector by clicking on **Enabled** in the **Status** field.

#### Modify a poller Configuration

Server Information	
Poller Name *	poller-1
IP Address	
Localhost ?	<input type="radio"/> Yes <input checked="" type="radio"/> No
Is default poller ?	<input type="radio"/> Yes <input checked="" type="radio"/> No
SSH Information	
SSH port	22
Monitoring Engine Information	
Engine	Centreon Engine ▼
Monitoring Engine Init Script	/etc/init.d/centengine
Monitoring Engine Binary	/usr/sbin/centengine
Monitoring Engine Statistics Binary	/usr/sbin/centenginestats
Perfdata file	/var/log/centreon-engine/service-perfdata
Centreon Broker	
Centreon Broker configuration path	/etc/centreon-broker
Centreon Broker modules path	/usr/share/centreon/lib/centreon-broker
Centreon Connector	
Centreon Connector path	
Centreon Trap Collector	
Centreontrapd init script path	/etc/init.d/centreontrapd
Directory of light database for traps	/etc/snmp/centreon_traps/
Miscellaneous	
Post-Restart command	+ Add a new entry Nothing here, use the "Add" button
Status	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled

1. Go into the menu: **Configuration ==> Pollers ==> Engine configuration**
2. Select your last added configuration.
3. Change the following settings, and save:
  - In the **Data** tab - **Multiple broker module** field change the name of the of Centreon Broker configuration file **central-module.xml** to for example: poller1-module.xml.

#### Modify a Monitoring Engine Configuration File

Broker Module	
Multiple Broker Module This directive can be used multiple times, see nagios documentation. NDO use the broker module directive.	<div>+ Add a new entry</div> <div>Event broker directive /usr/lib64/centreon-engine/externalcmd.so + ⊖</div> <div>Event broker directive /usr/lib64/nagios/cbmod.so /etc/centreon-broker/central-module.xml + ⊖</div>
Broker Module Options	-1

### 6.11.3 Centreon Broker configuration

It is necessary to generate a configuration file for Centreon Broker:

1. Go into the menu: **Configuration ==> Pollers ==> Centreon-Broker ==> Configuration**
2. Use **Add with wizard**
3. Choose **Simple Poller**
4. Indicates a configuration name and the Central monitoring server address
5. Click on Finish



Configuration name\*

Requester

Serialization protocol

Central address\*

*Information :*

Additional daemon : None

Communication port : 5669

### 6.11.4 Centreontrapd Configuration

It is necessary to change the configuration files of Centreontrapd so that the service can question the SQLite database (see the chapter: *SNMP traps*).

### 6.11.5 Plugins synchronisation

You can synchronise the plugins between your central server and your remote servers using **rsync** software.

**Warning:** Don't perform this action if your plugins depend on third party libraries that need to have been installed previously.

### 6.11.6 Exchanging SSH keys

For the central server to be able to export the configuration files of the monitoring engine, it is necessary to make a SSH key exchange between the central server and the new remote server.



On the remote server:

1. Log in as a 'root'
2. Change the Centreon user password:

```
# passwd centreon
```

On the central server:

1. Log in as 'Centreon':
2. If you have not already generated a public / private key pair, enter the following command (leave the default options):

```
$ ssh-keygen
```

3. Then export your SSH key to the remote server:

```
$ ssh-copy-id -i /var/spool/centreon/.ssh/id_rsa.pub centreon@[POLLER_IP]
```

4. Check that you can log in from the central server to the remote server as a Centreon user. You can use the command:

```
$ ssh centreon@[POLLER_IP]
```

### 6.11.7 Export the configuration

It only remains to export the configuration to verify that the installation of the remote server has been executed correctly.

---

**Note:** Refer to the documentation: *Export configuration*

---

### 6.11.8 Centreon Broker configuration via wizard

You can create configurations of Centreon Broker via the wizard, to do this: #. Go to the menu **Configuration ==> Pollers ==> Centreon-Broker ==> Configuration #**. Click on Add with wizard

Two choices are available:

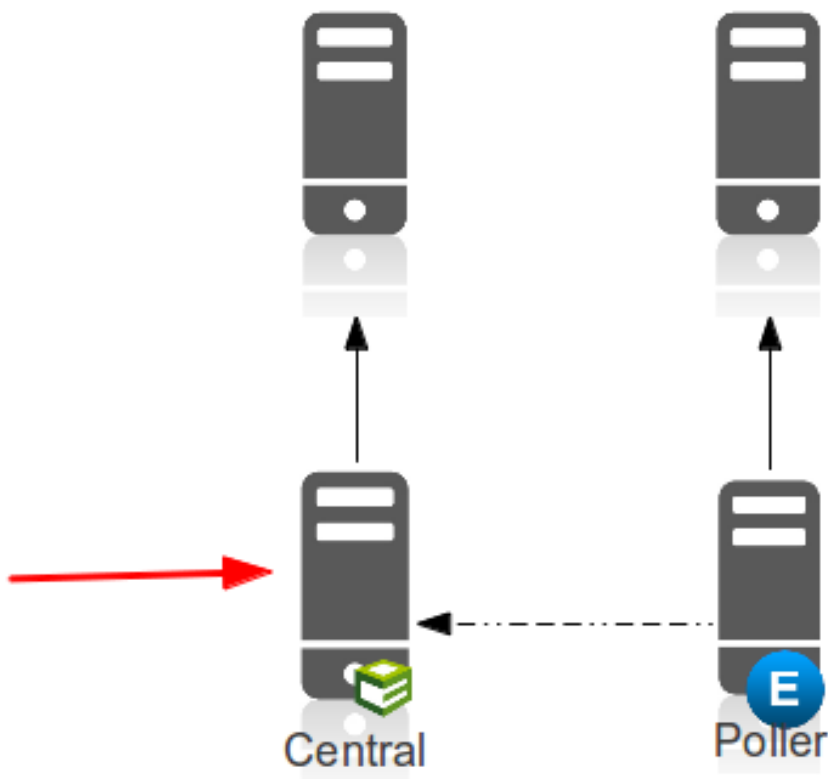
## Welcome to Centreon Broker configuration

Choose a configuration template:

- ☒ Central
- ☐ Simple poller

Next

### Configuration of central server



**Note:** Distributed monitoring schema

---

1. Choose **Central**

2. Enter a name for the configuration

Configuration name\*

Central-Server|

Serialization protocol

BBDO ▼

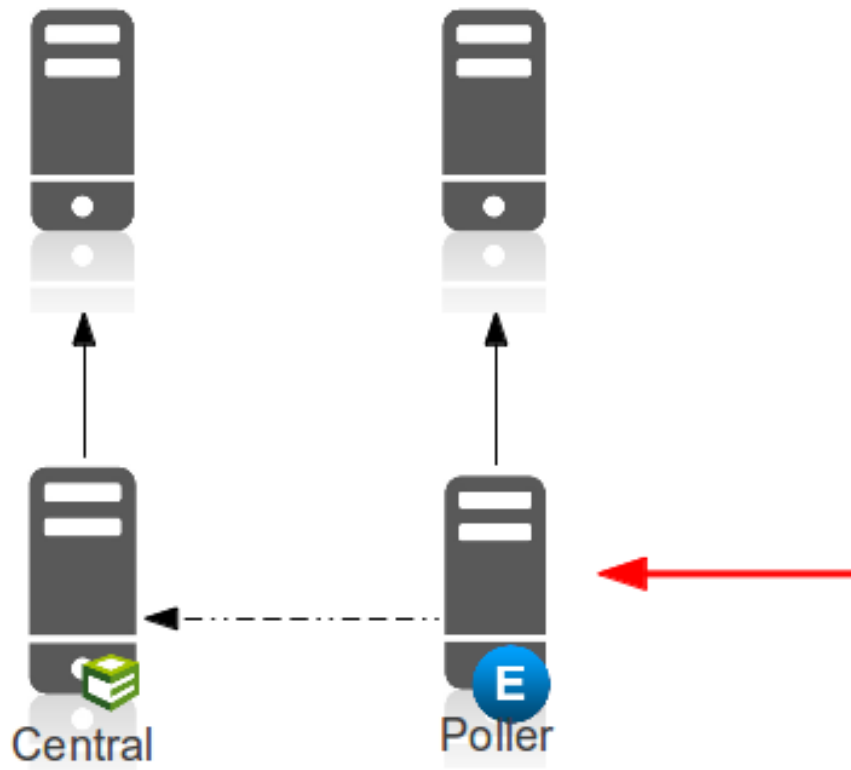
*Information :*  
Requester : Central  
Additional daemon : 2

Previous

Finish

### Configuration of a poller for a distributed architecture

**Warning:** For this configuration you must have previously installed a poller.



1. Choose **Simple poller**
2. Enter a name for the configuration
3. Select a poller
4. Enter the IP address or the **FQDN** DNS name of the central server

Configuration name\*

Requester

Serialization protocol

Central address\*

*Information :*  
 Additional daemon : None  
 Communication port : 5669

## 6.12 Deploying a configuration

### 6.12.1 Procedure

On creation/deletion/change of objects via the configuration interface, the changes performed are not applied automatically to the scheduler. To apply the changes performed, it is necessary to follow the procedure below.

**Note:** It should always be done in 2 steps.

#### First step

1. Go into the menu: **Configuration ==> Pollers**
2. Click on the Generate action icon for the poller

Configuration > Pollers

**Poller**

More actions...  30

<input type="checkbox"/>	Name	IP Address	Localhost	Is running ?	Conf Changed *	PID	Start time	Last Update	Version	Default	Status	Actions	Options
<input type="checkbox"/>	Central	127.0.0.1	Yes	YES	No	16943	20/11/2015 23:49:51	01/12/2015 21:18:45	Centreon Engine 1.5.0	No	Enabled	<input type="button" value="Generate"/> <input type="button" value="Refresh"/> <input type="button" value="Stop"/>	1

More actions...  30

1. Check the boxes: **Generate Configuration Files** and **Run monitoring engine debug (-v)**
2. Click on **Export**

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

[+] Central

Generating files... OK

Check that no error appears during generation.

**Note:** If there are errors, correct the errors and repeat the first step.

## Second step

1. Uncheck the boxes: **Generate Configuration Files** and **Run monitoring engine debug (-v)**
2. Then check the boxes: **Move Export Files** and **Restart Monitoring Engine**
3. Click on **Export**

## | Configuration Files Export

## Implied Server

?	Poller	Central
---	--------	---------

## Actions

?	<input type="checkbox"/> Generate Configuration Files	<input type="checkbox"/> Include Comments
---	---	---

?	<input type="checkbox"/> Run monitoring engine debug (-v)
---	---

?	<input checked="" type="checkbox"/> Move Export Files
---	---

?	<input checked="" type="checkbox"/> Restart Monitoring Engine	Method	Reload
---	---	--------	--------

?	<input type="checkbox"/> Post generation command
---	--

Export

## | Console

Progress ( 100%)

Preparing environment... OK

Moving files... OK

Restarting engine... OK

**Note:** The **Post generation command** option can be used to request the execution of the command post-generation set at the configuration of the scheduler.

## 6.12.2 Explanations

Multiple options are available in the configuration generation page:

1. **Generate Configuration Files:** Generates the scheduler configuration files in a temporary directory. This configuration is generated from objects configured via the web interface
2. **Run monitoring engine debug (-v):** Enables the scheduler to check the generated configuration
3. **Move Export Files:** Moves the configuration files from the temporary directory to the scheduler directory
4. **Restart Monitoring Engine:** Restarts the scheduler to apply the new configuration files
5. **Post generation command:** Executes the command post-generation set at the configuration of the scheduler level

Once setup is finished, supervision will allow you to get informations on the health status of your IT systems. For having more information regarding the operation interface, please refer to the exploitation guide.





---

## Exploitation

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### 7.1 General

#### 7.1.1 How to use select box

##### Multiple selection

There's a variety of way to do multiple selections with Centreon's select box

##### Using Shift key

You can select a range of items by holding "Shift" key between two selected items, by clicking on a first element then a second one.

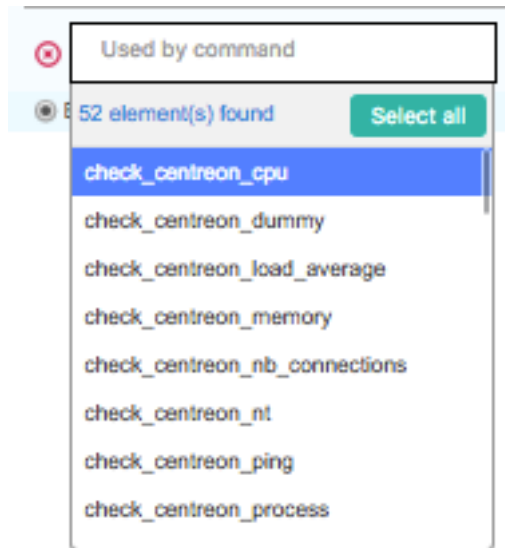
##### Using Control key

You can select multiple items by holding "Ctrl" key when you select an item. This feature work only on Linux and Windows.

##### Select all action

You can select all elements of a select by clicking on the "Select all" button in dropdown.

This action add to selection all element even the element not visible in select dropdown. This selection is filtered using the search fields.



### Full title on hover

When you hover a selected or unselected element, his title appears fully inside a popover.

## 7.2 Custom views

### 7.2.1 Presentation

The custom views allow each user to have his own monitoring view. A view may contain 1 to 3 columns. Each column can contain widgets.

A widget is a module allowing certain information to be viewed on certain objects. It is possible to insert multiple widgets of different types in the same view. By default, Centreon offers widgets allowing to obtain information on: hosts, host groups, services, service groups. Finally, the last widget allows to view real time performance graphs.

### 7.2.2 Views Management

All the manipulations below take place in the page entitled **Home ==> Custom Views**. This page is also the first page displayed when a user logs into Centreon.

#### Add view

To add a view, click on **Add view**.

- The **View name** field indicates the name of the view which will be visible by the user
- The **Layout** field allows to choose the number of columns in the view

To change an existing view, click on **Edit view**.

---

**Note:** The reduction in the number of columns removes the widgets associated with the column.

---

## Share view

It is possible to share an existing view with one or more users. To do this, click on **Share view**.

- If the **Locked** field is defined as **Yes**, the other users cannot change the view
- The **User List** field allows to define the users with whom the view is shared
- The **User Group List** field allows to define the user groups with which the view is shared

## Insert widget


To add a widget, click on **Add widget**.




- The **Widget Title** field is used to define a name for our widget
- Choose from the table below the widget type you want to add

## Customize widget


It is possible to move a widget by drag-and-drop from the title bar. To reduce a widget, click on . By default, the information contained in the widget is refreshed regularly. To refresh it manually, click on .

To customize your widget, click on .

### Delete widget

It is possible to delete the widget by clicking on .

## 7.2.3 Widgets Details

The paragraphs below detail the attributes of each widget after clicking on .

### Host widget

#### Filters

- The **Host Name Search** field can be used to make a search on one or more hostnames
- If the **Display Up** box is checked, the hosts with UP status will be displayed
- If the **Display Down** box is checked, the hosts with DOWN status will be displayed
- If the **Display Unreachable** box is checked, the hosts with UNREACHABLE status will be displayed
- The **Acknowledgement Filter** list allows to display the acknowledged or not acknowledged hosts (if the list is empty, the two types of hosts will be displayed)
- The **Downtime Filter** list allows to display the hosts that are subject or not subject to a downtime (if the list is empty, the two types of hosts will be displayed)
- The **State Type** list allows to display the hosts in SOFT or HARD states (if the list is empty, the two types of hosts will be displayed)
- The **Hostgroup** list allows to display the hosts belonging to a certain host group (if the list is empty, all the hosts will be displayed)
- The **Results** list limits the number of results

#### Columns

- If the **Display Host Name** box is checked, the host name will be displayed
- If the **Display Output** box is checked, the message associated with the status of the host will be displayed
- The **Output Length** list can be used to limit the length of the message displayed
- If the **Display Status** box is checked, the status of the host is displayed
- If the **Display IP** box is checked, the IP address of the host is displayed
- If the **Display last Check** box is checked, the date and the time of the last check is displayed
- If the **Display Duration** box is checked, the time during which the host has retained its status is displayed
- If the **Display Hard State Duration** box is checked, the time during which the host has retained its HARD state is displayed
- If the **Display Tries** box is checked, the number tries before the validation of the status is displayed
- The **Order By** list allows to classify the hosts in alphabetical order according to multiple settings

## Misc

- The **Refresh Interval (seconds)** field allows to define the time before data refreshment

## Service widget

### Filters

- The **Host Name** field can be used to make a search on one or more hostnames
- The **Service Description** field can be used to make a search on one or more service names
- If the **Display Ok** box is checked, the services with OK status will be displayed
- If the **Display Warning** box is checked, the services with WARNING status will be displayed
- If the **Display Critical** box is checked, the services with CRITICAL status will be displayed
- If the **Display Unknown** box is checked, the services with UNKNOWN status will be displayed
- If the **Display Pending** box is checked, the services with PENDING status will be displayed
- The **Acknowledgement Filter** list allows to display the services acknowledged or not acknowledged (if the list is empty, the two types of hosts will be displayed)
- The **Downtime Filter** list allows to display the services that are subject or not subject to a downtime (if the list is empty, the two types of hosts will be displayed)
- The **State Type** list allows to display the services with SOFT or HARD states (if the list is empty, the two types of hosts will be displayed)
- The **Hostgroup** list allows to display the services belonging hosts belonging to a certain host group (if the list is empty, all the services will be displayed)
- The **Servicegroup** list allows to display the services belonging to a certain service group (if the list is empty, all the services will be displayed)
- The **Results** list limits the number of results

### Columns

- If the **Display Host Name** box is checked, the host name will be displayed
- If the **Display Service Description** box is checked, the name of the service will be displayed
- If the **Display Output** box is checked, the message associated with the status of the host will be displayed
- The **Output Length** list can be used to limit the length of the message displayed
- If the **Display Status** box is checked, the status of the host is displayed
- If the **Display last Check** box is checked, the date and the time of the last check is displayed
- If the **Display Duration** box is checked, the time during which the host has retained its status is displayed
- If the **Display Hard State Duration** box is checked, the time during which the host has retained its HARD state is displayed
- If the **Display Tries** box is checked, the number of tries before the validation of the status is displayed
- The **Order By** list allows to classify the services in alphabetical order according to multiple settings

## Misc

- The **Refresh Interval (seconds)** field allows to define the time before data refreshment

## Performance Graph widget

- The **Service** field is used to choose the service for which the graph will be displayed
- The **Graph period** list is used to choose the time period for which the graph will be displayed
- The **Refresh Interval (seconds)** field allows to define the time before data refreshment

## Host Group widget

- The **Hostgroup Name Search** field can be used to choose the host groups displayed
- If the **Enable Detailed Mode** box is checked, all the host names and the services associated with these hosts will be displayed for the hostgroups selected
- The **Results** list allows us to limit the number of results
- The **Order By** list is used to classify the service in alphabetical order according to multiple settings
- The **Refresh Interval (seconds)** field allows to define the time before data refreshment

## Service Group widget

- The **Servicegroup Name Search** field can be used to choose the service groups displayed
- If the **Enable Detailed Mode** box is checked, all the host names and the services associated with these hosts will be displayed for the service groups selected
- The **Results** list allows us to limit the number of results
- The **Order By** list is used to classify the service in alphabetical order according to multiple settings
- The **Refresh Interval (seconds)** field allows to define the time before data refreshment

# 7.3 Realtime monitoring

The **Monitoring** menu can be used to view the evolution of the supervision of its information system in real time.

## 7.3.1 Object status

Statuses are indicators for the hosts or the services. Each status has a precise meaning for the object. To each status corresponds a code generated by the monitoring plugin according to thresholds defined by the user.

### Host status

The table below summarises all the possible statuses for a host.

Status	Exit code	Description
UP	0	The host is available and reachable
DOWN	1	The host is unavailable
UNREACHABLE	2	The host is unreachable

## Service status

The table below summarises all the possible statuses for a service.

Status	Exit code	Description
OK	0	The service presents no problem
WARNING	1	The service has reached the warning threshold
CRITICAL	2	The service has reached the critical threshold
UNKNOWN	3	The status of the service cannot be checked (e.g.: SNMP agent down, etc.)

## Advanced statuses

In addition to the standard statuses, new statuses can be used to add additional information:

- The PENDING status is a status displayed for a service or a host freshly configured but which has not yet been checked by the scheduler.
- The UNREACHABLE status is a status indicating that the host (parental relationship) is situated downstream of a host with a DOWN status.
- The FLAPPING status is a status indicating that the status change percentage of the object is very high. This percentage is obtained from calculations performed by the network monitoring engine.
- The ACKNOWLEDGED status is a status indicating that the incident of the service or of the host has been taken into account by a user.
- The DOWNTIME status is a status indicating that the incident of the service or of the host occurred during a downtime period.

## SOFT and HARD states

A host or a service can have two states:

- SOFT: Signifies that an incident has just been detected and that it has to be confirmed.
- HARD: Signifies that the status of the incident is confirmed. Once the status is confirmed, the notification process is engaged (sending of a mail, SMS, etc.).

## Status confirmation

An incident (Not-OK status) is confirmed as of the moment when the number of validation attempts has reached its end. The configuration of an object (host or service) requires a regular check interval, a number of attempts to confirm a Not-OK status and an irregular check interval. As soon as the first incident is detected, the state is “SOFT” until its confirmation into “HARD”, triggering the notification process.

Example:

A service has the following check settings:

- Max check attempts: 3
- Normal check interval: 5 minutes




- Retry check interval: 1 minute

Let us imagine the following scenario:

- Instant  $t + 0$ : The service is checked, it has the OK status.
- Instant  $t + 5$ : The second check shows that the service has the CRITICAL status. The service goes into the SOFT state (attempt 1/3).
- Instant  $t + 6$ : The third check is performed, the service still has the CRITICAL status in SOFT (attempt 2/3).
- Instant  $t + 7$ : The fourth check shows that the service still has the CRITICAL status (attempt 3/3). The number of tests has been completed; the state is configured (HARD). The notification process is triggered.
- Instant  $t + 8$ : The service recovers OK status. It goes directly into the HARD state. The notification process is triggered.
- Instant  $t + 13$ : The service has the WARNING status. It goes into the SOFT state (attempt 1/3).
- Instant  $t + 14$ : The service still has the WARNING status (attempt 2/3).
- Instant  $t + 15$ : The service has the CRITICAL status. It remains in the SOFT state because it has changed status.

## 7.3.2 Generic actions

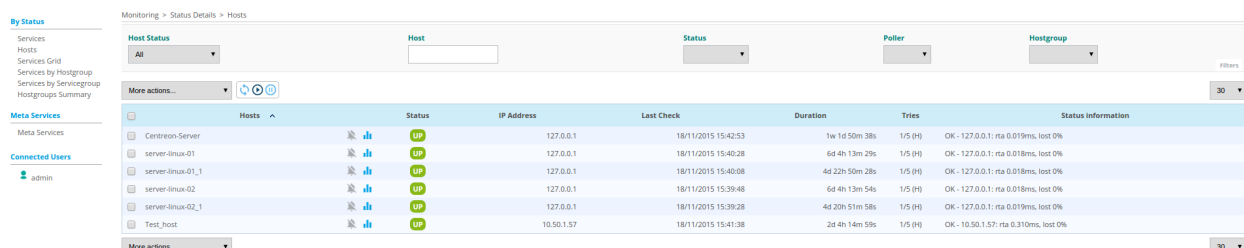
By default, during viewing of statuses of hosts or services, the monitoring data is refreshed automatically (15 seconds by default). Nevertheless, several icons can be used to check the refreshing of the data. The table below summarises the functions of these icons:

Icon	Description
	Serves to refresh the results manually.
	Serves to put the automatic data refreshment into pause.
	Serves to restart automatic data refreshment.

## 7.3.3 Hosts

### Viewing

To view the status of hosts, go into the menu **Monitoring ==> Status Details ==> Hosts**



Host Status	Host	Status	IP Address	Last Check	Duration	Tries	Status information
UP	Centreon-Server	UP	127.0.0.1	18/11/2015 15:42:53	1w 1d 50m 38s	1/5 (H)	OK - 127.0.0.1: rta 0.019ms, lost 0%
UP	server-linux-01	UP	127.0.0.1	18/11/2015 15:40:28	6d 4h 13m 29s	1/5 (H)	OK - 127.0.0.1: rta 0.018ms, lost 0%
UP	server-linux-01_1	UP	127.0.0.1	18/11/2015 15:40:08	4d 22h 50m 28s	1/5 (H)	OK - 127.0.0.1: rta 0.018ms, lost 0%
UP	server-linux-02	UP	127.0.0.1	18/11/2015 15:39:48	6d 4h 13m 54s	1/5 (H)	OK - 127.0.0.1: rta 0.018ms, lost 0%
UP	server-linux-02_1	UP	127.0.0.1	18/11/2015 15:39:28	4d 20h 51m 58s	1/5 (H)	OK - 127.0.0.1: rta 0.019ms, lost 0%
UP	Test_host	UP	10.50.1.57	18/11/2015 15:41:38	2d 4h 14m 59s	1/5 (H)	OK - 10.50.1.57: rta 0.310ms, lost 0%

You can use filter to adapt the view.

- To view the hosts with a problem but not acknowledged, choose **Unhandled Problems** in **Host Status** filter.
- To view all the hosts with a problem, choose **Host Problems** in **Host Status** filter.
- To view all the hosts, choose **All** in **Host Status** filter.





- To view the hosts classified by host groups, click on **Hostgroups Summary**

Hostgroup	Poller	Filters
Host Group	Hosts Status	Services Status
Host-test (Host-test)	2	14
Linux-Servers (Linux-Servers)	6	30
testhostgroup (testhostgroup)	1	9

## Host tables

The table below gives a description of all the columns of the table displayed when viewing hosts:

Column name	Description
S	Displays the severity level of the host.
Hosts	Displays the name of the host. The icon  indicates that the notifications for this host are disabled. The icon  can be used to view all the performance graphs for this host.
Status	Serves to view the status of the host.
IP Address	Indicates the IP address of the host.
Last Check	Displays the date and the time of the last check.
Duration	Displays the time that the host a has kept its current status.
Hard State	Displays the time that the host a has kept its current hard state (does not appear when viewing of all the hosts).
Duration	Displays the number of tries before confirming the state.
Tries	Displays the message explaining the status of the host.
Status information	

**Note:** The severity column and the associated filter appear if at least one object displayed has a severity level.

## Available filters

You can filter the result presented via the following filters:

- **Host:** can be used to filter by name of host via an SQL LIKE type search.
- **Status:** can be used to filter by the status of hosts.
- **Severity:** can be used to filter by severity.
- **Poller:** can be used to filter the hosts by poller. Only the hosts of the poller selected will be displayed.
- **Hostgroup:** can be used to filter by host group. Only the hosts of the host group selected will be displayed.

**Note:** The search on text fields only starts after entry of at least 3 characters.

## Host groups table

The table below gives a description of all the columns of the table displays when of the viewing host groups:



Attributes	Description
Host Status	Displays the status of the host.
Status information	Displays the information of the status of the host.
Performance Data	Displays performance data associated to the check.
Current Attempt	Displays the number of attempts before status validation.
State Type	Displays the type of state ('SOFT' or 'HARD').
Last Check	Displays the last check of the host.
Next Check	Displays the next scheduled check of the host.
Latency	Displays the latency in seconds between the scheduled check and the real check execution.
Execution Time	Displays the execution time of the check.
Last State Change	Displays when the status of the host changed.
Current State Duration	Displays the date and time from which the host is in the present state.
Last Notification	Displays the sent date and time of the last notification.
Next Notification	Displays the sent date and time of the next notification.
Current Notification Number	Displays the number of sent notifications.
Is This Host Flapping?	Indicates if the host is in flapping state.
Percent State Change	Displays the percentage change of state.
In Scheduled Downtime?	Indicates if the host is in scheduled downtime.
Last Update	Displays the date and time of the last information update.

### Options and controls available

Options and controls allow you to perform a number of actions on the host. Options are described in the chapter *Exploitation guide*.

### Host Shortcuts

You have here direct action to the host :

- Configure host xxxx : Allows to access to host's configuration page
- View logs for host xxxx : Allows to display host's event logs
- View status of all services on host xxxx : Allows to display all the status of services linked to the host
- View report for host xxxx : Allows to display host's availability reporting
- View graphs for host xxxx : Allows to display performance graphs of all services of the host

### Tools

The **Tools** box allows:

- make a PING to the host
- make a traceroute to the host

### Links

The **Links** container allows to display the hostgroups linked to the host.

## Notifications

The **Notifications** container allows to display the contacts and contactgroups linked to the host which will receive notifications.

## 7.3.4 Services

### Viewing

To view the status of hosts, go into the menu **Monitoring ==> Services Grid**.

Hosts	Services	Status	Duration	Last Check	Tries	Status Information
Centreon-Server	cpu-detailed	OK	5d 4h 36m 1s	18/11/2015 15:57:26	1/3 (H)	OK: CPU Usage: Wait 6.09 %, Idle 90.37 %, User 2.94 %, Soft Inq 0.03 %, System 0.57 %, Kernel 0.00 %, Interrupt 0.00 %, Nice 0.00 %
Centreon-Server	cpu-detailed_1	OK	2d 4h 29m 26s	18/11/2015 15:55:22	1/3 (H)	OK: CPU Usage: Wait 5.38 %, Idle 90.49 %, User 3.41 %, Soft Inq 0.03 %, System 0.68 %, Kernel 0.00 %, Interrupt 0.01 %, Nice 0.00 %
Centreon-Server	Disk-/	OK	1w 1d 1h 2m 51s	18/11/2015 15:55:40	1/3 (H)	Disk OK - / TOTAL: 13.567GB USED: 2.603GB (19%) FREE: 10.963GB (81%)
Centreon-Server	Load	OK	1w 1d 1h 4m 6s	18/11/2015 15:54:38	1/3 (H)	OK - 127.0.0.1: rta 0.009ms, lost 0%
Centreon-Server	Memory	OK	1w 1d 1h 5m 21s	18/11/2015 15:58:15	1/3 (H)	OK - 127.0.0.1: rta 0.009ms, lost 0%
Centreon-Server	Packet-error-eth0	OK	5d 4h 38m 4s	18/11/2015 15:57:49	1/3 (H)	OK: Interface 'eth0' Status : up (admin: up), Packets In Discard : 0.00% (0), Packets In Error : 0.00% (0), Packets Out Discard : 0.00% (0), Packets Out Error : 0.00% (0)
Centreon-Server	Ping	OK	1w 1d 1h 6m 36s	18/11/2015 15:57:26	1/3 (H)	OK - 127.0.0.1: rta 0.008ms, lost 0%
Centreon-Server	Test-passif	CRITICAL	1d 22h 19m 50s	16/11/2015 17:39:49	2/3 (S)	critical
Centreon-Server	Traffic-eth0	OK	5d 4h 33m 40s	18/11/2015 15:59:28	1/3 (H)	OK: Interface 'eth0' Status : up (admin: up), Traffic In : 10.80Kb/s (0.00%), Traffic Out : 22.43Kb/s (0.00%)
Centreon-Server	Uptime	OK	5d 4h 34m 50s	18/11/2015 15:08:07	1/3 (H)	OK: System uptime is: 8 days
server-linux-01	Disk-/	OK	5d 4h 38m 22s	18/11/2015 15:56:26	1/3 (H)	Disk OK - / TOTAL: 13.567GB USED: 2.603GB (19%) FREE: 10.963GB (81%)
server-linux-01	Load	OK	6d 4h 26m 57s	18/11/2015 15:55:05	1/3 (H)	OK - 127.0.0.1: rta 0.009ms, lost 0%
server-linux-01	Memory	OK	6d 4h 28m 12s	18/11/2015 15:59:02	1/3 (H)	OK - 127.0.0.1: rta 0.009ms, lost 0%
server-linux-01	Ping	OK	6d 4h 29m 27s	18/11/2015 15:57:39	1/3 (H)	OK - 127.0.0.1: rta 0.009ms, lost 0%
server-linux-01_1	Disk-/	OK	4d 23h 3m 3s	18/11/2015 15:56:16	1/3 (H)	Disk OK - / TOTAL: 13.567GB USED: 2.603GB (19%) FREE: 10.963GB (81%)
server-linux-01_1	Load	OK	4d 23h 4m 10s	18/11/2015 15:54:56	1/3 (H)	OK - 127.0.0.1: rta 0.010ms, lost 0%
server-linux-01_1	Memory	OK	4d 23h 5m 18s	18/11/2015 15:58:51	1/3 (H)	OK - 127.0.0.1: rta 0.009ms, lost 0%
server-linux-01_1	Ping	OK	4d 23h 6m 26s	18/11/2015 15:57:39	1/3 (H)	OK - 127.0.0.1: rta 0.008ms, lost 0%
Test_host	service-test	CRITICAL	4d 21h 7m 48s	18/11/2015 09:55:03	3/3 (H)	Connection to 127.0.0.1 failed
Test_host	service-test11	CRITICAL	4d 21h 3m 36s	18/11/2015 09:55:03	3/3 (H)	Connection to 127.0.0.1 failed

The grey search bar can be used to filter the result displays. You can use filter to adapt the view.

- To view the services problems but not acknowledged, choose **Unhandled Problems** in **Service Status** filter
- To view all the services in non-OK status, choose **Service Problems** in **Service Status** filter
- To view all the services, choose **All** in **Service Status** filter
- To view all services (short by host) in any status, click on **Services Grid** and choose for Display **Details**

Hosts	Status	Services Information
Centreon-Server	UP	Test-passif, Disk-/, Load, Memory, Ping, Traffic-eth0, cpu-detailed, Packet-error-eth0, Uptime, cpu-detailed_1
server-linux-01	UP	Memory, Ping, Disk-/
server-linux-01_1	UP	service-test, service-test11, Disk-/
server-linux-02	UP	Disk-/, Load, Memory, Ping
server-linux-02_1	UP	Disk-/, Load, Memory, Ping
Test_host	UP	Ping, Cpu, Load, Memory, Swap

- To view the number of services (short by host and by status), click on **Services Grid** and choose for Display **Summary**

Hosts	Status	Services Information
Centreon-Server	UP	9
server-linux-01	UP	4
server-linux-01_1	UP	2
server-linux-02	UP	4
server-linux-02_1	UP	4
Test_host	UP	5

- To view the all services (short by host's groups) in any status, click on **Services by Hostgroup** and choose for Display **Details**

Search	Filter	Hostgroup	Display	Display details	Filters
			Details	All	
Hostgroups / Hosts					
Host-test					
Centreon-Server	UP	Test-passif	Disk-/	Load	Memory
Test_host	UP	Ping	Cpu	Load	Memory
Linux-Servers					
Centreon-Server	UP	Test-passif	Disk-/	Load	Memory
server-linux-02	UP	Disk-/	Load	Memory	Ping
server-linux-01	UP	Memory	Ping	Disk-photo	Load
server-linux-01_1	UP	Service-test	Service-test11	Disk-photo	Load
server-linux-02_1	UP	Disk-/	Load	Memory	Ping
Test_host	UP	Ping	Cpu	Load	Memory
Hostgroup					
Centreon-Server	UP	Test-passif	Disk-/	Load	Memory

- To view the number of services (short by host's groups), click on **Services by Hostgroup** and choose for Display **Summary**

Search	Filter	Hostgroup	Display	Display details	Filters
			Summary	All	
Hostgroups / Hosts					
Linux-Servers					
Test_host	UP	5			
server-linux-02	UP	4			
server-linux-02_1	UP	4			
server-linux-01	UP	4			
server-linux-01_1	UP	2	4		
Centreon-Server	UP	1	9		
Host-test					
Test_host	UP	5			
Centreon-Server	UP	1	9		
Hostgroup					
Centreon-Server	UP	1	9		

- To view the all services (short by services' groups), click on **Services by Servicegroup** and choose for Display **Details**

Host	Servicegroup	Filter	Display	Display details	Filters
			Details	All	
Servicegroups / Hosts					
Services_Linux_2,7					
server-linux-01_1	UP	Service-test	Service-test11		
Centreon-Server	UP	Disk-/	Load	Memory	Ping
Test_host	UP	Cpu	Load	Memory	Swap

- To view the number of services (short by services' groups), click on **Services by Servicegroup** and choose for Display **Summary**





Host	Servicegroup	Filter	Display	Display details	Filters
			Summary	All	
Servicegroups / Hosts					
Services_Linux_2,7					
server-linux-01_1	UP	2			
Centreon-Server	UP	6			
Test_host	UP	4			

- To view the meta services, click on **Meta Services**

Service	Filter
More actions...	
Meta Services	Status
meta_1	OK
More actions...	

## Services' table

The table below gives a description of all the columns of the table displayed when viewing services:



Column name	Description
S	Displays the severity level of the service.
Host	Displays the name of host. The  icon allows to access to host's page details.
Services	Displays the name of service. The  icon indicates that notifications are disabled for this service. The  icon Allows to display performance graphs of the service. The  icon allows to access to service's page details.
Duration	Displays the duration of the actual status.
Last Check	Displays the date and time of the last check.
Tries	Displays the number of attempts before status validation.
Status information	Displays the message explaining the status of the service.

**Note:** The severity column and the associated filter appear if at least one object displayed has a severity level.

**Note:** The **Hard State Duration** doesn't appear in **All Services** menu.


## Tables of objects' groups

The table below gives a description of all the columns of the table of services sorted by groups:

Column name	Description
Host or Host Groups Hosts or Service Group Hosts	Allows to display hosts or hosts linked to hostgroups or hosts linked to servicegroups. The  icon allows to display all services linked to the host. The  icon allows to display all performance graphs of services linked to the host.
Status	Displays the status of the host.
Services information	Displays the status of services ( <b>details</b> mode) or the number of services classified by status ( <b>summary</b> mode).

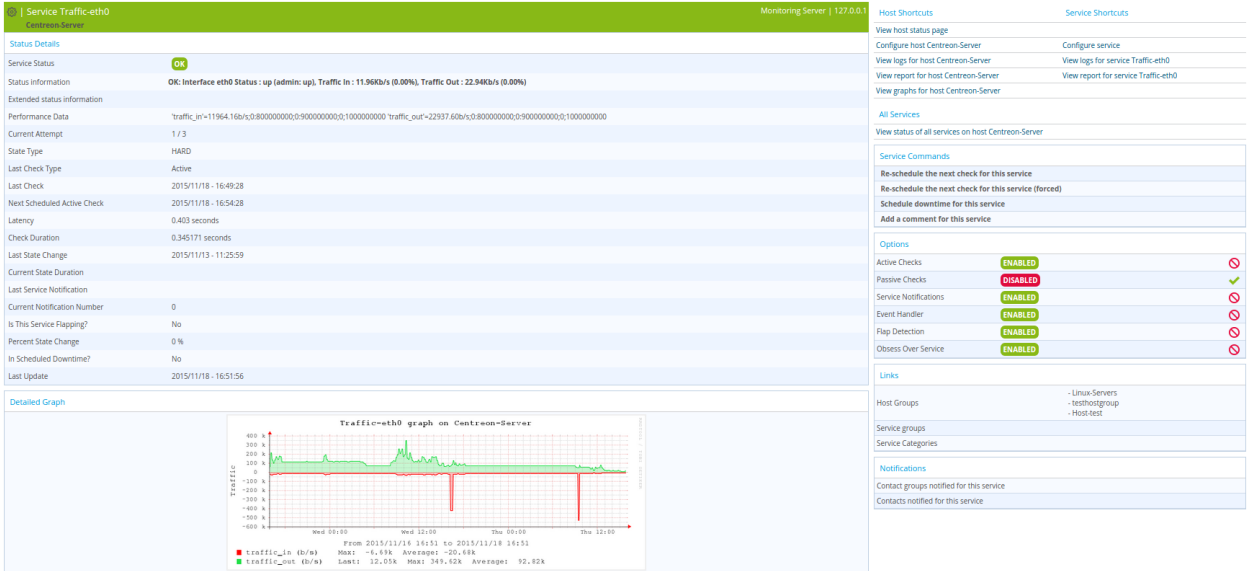
## Meta Services' table

The table below gives a description of all the columns of the table of meta services:

Column name	Description
Meta Services	Displays the name of the meta service. The  icon allows to display performance graphs linked to the meta service.
Status	Displays the status of the meta service.
Duration	Displays the duration of the actual status.
Last Check	Displays the date and time of the last check.
Tries	Displays the number of attempts before status validation.
Status information	Displays the message explaining the status of the service.

### Service details

When you click on a service, the following screen appears:



### Status details

The table below summarizes the attributes of this part:

Attributes	Description
Service Status	Displays the status of the service.
Status information	Displays the information of the status of the service.
Extended status information	Displays long output of the service.
Performance Data	Displays performance data associated to the check.
Current Attempt	Displays the number of attempts before status validation.
State Type	Displays the type of state ('SOFT' or 'HARD').
Last Check Type	Indicates if the last type of check is 'active' or 'passive'.
Last Check	Displays the last check of the service.
Next Scheduled Active Check	Displays the next scheduled check of the service.
Latency	Displays the latency in seconds between the scheduled check and the real check execution.
Check Duration	Displays the execution time of the check.
Last State Change	Displays when the status of the service changed.
Current State Duration	Displays the date and time from which the host is in the present state.
Last Service Notification	Displays the sent date and time of the last notification.
Current Notification Number	Displays the number of sent notifications.
Is This Service Flapping?	Indicates if the service is in flapping state.
Percent State Change	Displays the percentage change of state.
In Scheduled Downtime?	Indicates if the host is in scheduled downtime.
Last Update	Displays the date and time of the last information update.

### Options and controls available

Options and controls allow you to perform a number of actions on the host. Options are described in the chapter *Exploitation guide*.

### Detailed graph and status graph

The **Detailed Graph** and **Status Graph** allow to display performance graphs and the history chart statutes for this service.

### Host Shortcuts

The host shortcuts are the same than as those from *host's details page*.

### Service Shortcut

You have here direct action to the service :

- Configure service : Allows to access to service's configuration page
- View logs for service xxxx : Allows to display services event logs
- View report for service xxxx : Allows to display service's availability reporting



## Links

The **Links** container allows to display:

- The groups of hosts which this service is linked.
- The groups of services which this service is linked.
- The categories of services which this service is linked.

## Notifications

The **Notifications** container allows to display the contacts and contactgroups linked to the host which will receive notifications.

## 7.3.5 Monitoring Engine

This part allows to display information about monitoring scheduling queue, comments or downtimes of objects.

**Note:** For more information about comments and downtimes please see *Exploitation guide* chapter.

## Downtime

To visualize downtimes:

1. Go to the menu **Monitoring ==> Downtimes ==> Downtimes**

Host Name	Service	Output	Author
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<input checked="" type="checkbox"/> Display Finished Downtime	<input checked="" type="checkbox"/> Display Downtime Cycle	<input type="button" value="Search"/>	

More actions...

Add a service downtime

Add a host downtime

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<input type="checkbox"/>	Host Name	Services	Start Time	End Time	Duration	Author	Comments	Started	Fixed	Started	Actual End
<input type="checkbox"/>	Test_host	Cpu	11/18/2015 18:05	11/18/2015 18:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Test_host	Load	11/18/2015 18:05	11/18/2015 18:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Test_host	Memory	11/18/2015 18:05	11/18/2015 18:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Test_host	Swap	11/18/2015 18:05	11/18/2015 18:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Test_host	Ping	11/18/2015 18:05	11/18/2015 18:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Centreon-Server	Disk- /	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Centreon-Server	Load	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Centreon-Server	Memory	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Centreon-Server	Ping	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Centreon-Server	Traffic-eth0	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Centreon-Server	cpu-detailed	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Centreon-Server	Packet-error-eth0	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Centreon-Server	Uptime	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	Centreon-Server	cpu-detailed_1	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01	Ping	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01	Memory	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01	Load	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01	Disk- /	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01_1	Disk- /	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01_1	Load	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01_1	Memory	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01_1	Ping	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01_1	service-test	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-01_1	service-test11	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-02	Disk- /	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-02	Load	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-02	Memory	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-02	Ping	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-02_1	Disk- /	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A
<input type="checkbox"/>	server-linux-02_1	Load	11/18/2015 17:05	11/18/2015 17:45	2400 s	Downtime cycle	[Downtime cycle #1]	No	Yes	No	N/A

More actions...

Add a service downtime

Add a host downtime

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The table below gives a description of all the columns:

Column name	Description
Host Name	Indicates the name of host.
Services	Indicates the name of service.
Start Time and End Time	Displays the start and end date and time.
Duration	Displays the duration of the downtime.
Author	Displays the name of user who set the downtime.
Comments	Displays the comments linked to the downtime.
Started	Indicates if the downtime is started or not.
Fixed	Indicates if the start and end datetime if fixe or not.

## Available filters

You can filter the result presented via the following filters:

- **Host:** can be used to filter by name of host via an SQL LIKE type search.
- **Service:** can be used to filter by name of service via an SQL LIKE type search.
- **Output:** can be used to filter by output of services.
- **Author:** can be used to filter by author.
- **Display Finished Downtime:** allows to display recurring finished downtime.
- **Display Downtime Cycle:** allows to display recurring downtime.

**Note:** The search on text fields only begins entering the third character.

## Comments

To visualize comments:

1. Go to the menu **Monitoring ==> Downtimes ==> Comments**

Monitoring > Downtimes > Comments

Host name

Service

Output

Search

Add a Service comment

Add a Host comment

Delete

1 2 >

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<input type="checkbox"/>	Host Name	Service Description	Entry time	Authors	Comments	Persistent
<input type="checkbox"/>	Centreon-Server	Disk-/	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Centreon-Server	Load	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Centreon-Server	Memory	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Centreon-Server	Ping	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Centreon-Server	Traffic-eth0	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Centreon-Server	cpu-detailed	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Centreon-Server	Packet-error-eth0	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Centreon-Server	Uptime	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Centreon-Server	cpu-detailed_1	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-02	Disk-/	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-02	Load	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-02	Memory	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-02	Ping	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-01	Ping	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-01	Load	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-01	Disk-htop	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-01_1	Disk-htop	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-01_1	Load	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-01_1	Memory	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-01_1	Ping	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-01_1	service-test	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-01_1	service-test11	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-02_1	Disk-/	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-02_1	Load	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-02_1	Memory	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	server-linux-02_1	Ping	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 17:05:00 to 18-11-2015 17:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Test_host	Cpu	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 18:05:00 to 18-11-2015 18:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Test_host	Load	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 18:05:00 to 18-11-2015 18:45:00 Notifications for the service will not be sent out during that time period.	No
<input type="checkbox"/>	Test_host	Memory	11/18/2015 16:55	(Centreon Engine Process)	This service has been scheduled for fixed downtime from 18-11-2015 18:05:00 to 18-11-2015 18:45:00 Notifications for the service will not be sent out during that time period.	No

Add a Service comment

Add a Host comment

Delete

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The table below gives a description of all the columns:

Column name	Description
Host Name	Indicates the name of host.
Services (only available of services page)	Indicates the name of service.
Entry Time	Displays the date and time when comment had been written.
Author	Displays the name of user who set the comment.
Comments	Displays the content of the comment.
Persistent	Indicates if the comment is persistent when the monitoring engine restarts.

### Available filters

You can filter the result presented via the following filters:

- **Host:** can be used to filter by name of host via an SQL LIKE type search.
- **Service:** can be used to filter by name of service via an SQL LIKE type search.
- **Output:** can be used to filter by output of services.

---

**Note:** The search on text fields only begins entering the third character.

---

## 7.4 Performance graphs management

### 7.4.1 Graphs

#### Definition

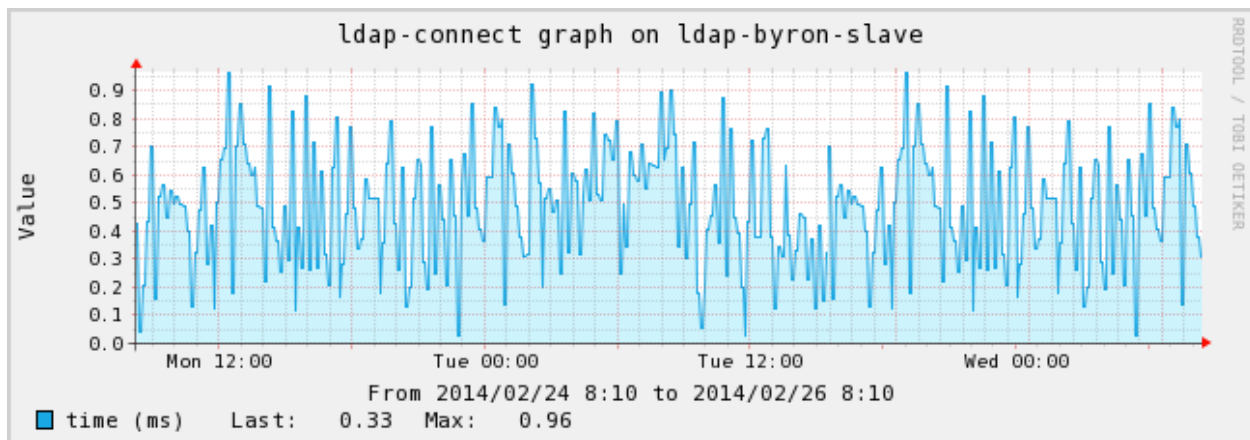
Centreon can be used to generate graphs from monitoring information. There are two types of graph:

- Performance graphs serve to view the evolution of services intuitively. E.g.: filling level of a hard disc, network traffic, etc.
- History graphs (or status graphs) serve to view the evolution of the statuses of a service.

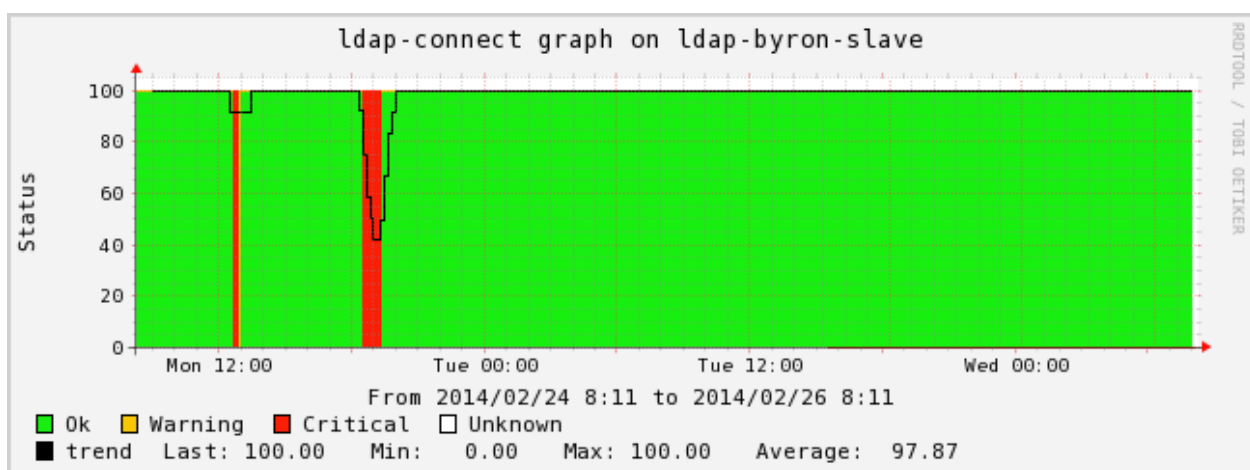
Performance graphs always have a time period for the x-axis and a unit as the y-axis (Volts, Octets, etc.). History graphs always have a time period for the x-axis, their y-axes do not vary. Only the color of the graph can be used to view the status of the object:

- Green for OK status
- Orange for WARNING status
- Red for CRITICAL status
- Grey for UNKNOWN status

Example of performance graphs:




Example of status history graphs:



## Visualization

### Performance graphs

There are several ways to view performance graphs:

- Viewing the graph in the list of services (**Monitoring ==> Services**) by mouse-over the icon 
- Viewing the graph from the page of details of an object by clicking on **View graphs for host**
- Go into the menu: **Monitoring ==> Performances** to view multiple graphs

### Status graphs

In the same way as for the performance graphs, there are several ways of accessing status history graphs:

- From the detail page of an object (see the chapter covering *real time monitoring*)
- From the menu: **Monitoring ==> Performances**, by first selecting a specific service and then checking the **Display Status** box.

## Viewing multiple graphs

To view all graphs, go into the menu: **Monitoring ==> Performances**.



All the filter on the top of the page allow you to select the graph you want on the period you want.

The option **Hosts** show all graphs to all hosts linked.

The option **Services** show only graph of the selected services.

The option **Graph Period** can be used to select the time period over which we want to view the graphs. The drop-down list can be used to select predefined time periods.

It is possible to choose the time period manually using the fields **From** and **To**, this replaces the predefined selection.

Several actions are possible on the graphs:

- **Split components**: separates multiple curves of a graph into multiple graphs each containing one curve
- **Display Status**: Displays the history graphs linked to performance graphs displayed

To use the data from graphs, it is possible to:

- View the performance graph on one day, one week, one month or one year by clicking on the performance graphs of your choice



- Zoom on the graph by clicking on the icon



- Back-up the graph by clicking on the icon



- Download all the data contained in the graph in the .csv format by clicking on the icon

## 7.4.2 Customizing graphs

### Graphs template

#### Definition

Graph models are models which can be used to shape graph layouts. Graph models can be used to configure multiple presentation settings including the y-axis measurement, the width and the height of the graph, or colors, etc.

#### Configuration

To add a new graph model:

1. Go into the menu: **Monitoring ==> Performances**
2. In the left menu, click on **Templates**
3. Click on **Add**

General Information		
Template Name *	CPU	
Vertical Label *	Processor Use	
Width *	550	px
Height *	140	px
Lower Limit	0	
Upper Limit	110	Size to max <input type="checkbox"/>
Base	1000 ▼	
Legend		
Grid background color	<input type="text"/>	<input type="button" value="Modify"/>
Main grid color	<input type="text"/>	<input type="button" value="Modify"/>
Secondary grid color	<input type="text"/>	<input type="button" value="Modify"/>
Outline color	<input type="text"/>	<input type="button" value="Modify"/>
Background color	<input type="text"/>	<input type="button" value="Modify"/>
Text color	<input type="text"/>	<input type="button" value="Modify"/>
Arrow color	#FF0000	<input type="button" value="Modify"/>
Top color	<input type="text"/>	<input type="button" value="Modify"/>
Bottom color	<input type="text"/>	<input type="button" value="Modify"/>
Split Components	<input checked="" type="checkbox"/>	
Scale Graph Values	<input checked="" type="checkbox"/>	
Default Centreon Graph Template	<input type="checkbox"/>	
Comments	<input type="text"/>	

#### General informations

- The field **Template name** can be used to define a name for the graph model.
- The **Vertical label** field contains the legend for the y-axis (type of data measured).
- The **Width** and **Height** fields are expressed in pixels and express respectively the width and the height of the model.

- The **Lower limit** field defines the minimum limit of the y-axis.
- The **Upper limit** field defines the maximum limit of the y-axis.
- The **Base** list defines the calculation base for the data during the scaling of the graph y-axis. Use 1024 for measurements like the Bytes (1 KB = 1 024 Bytes) and 1 000 for measurements like the volt (1 kV = 1 000 Volts).

---

**Note:** If the box **Size to max** is checked, the graph will automatically be scaled to the scale of the maximum value ordinates shown on the given period.

---

## Legend

- The **Grid background color** field defines the background color of the grid, where the data is developed.
- The **Main grid color** field defines the grid, to the main scale.
- The **Secondary grid color** field defines the grid, to the secondary scale.
- The **Outline color** field defines the color of the contours.
- The **Background color** field defines the background color of the graph.
- The **Text Color** field defines the color of the text in the graph.
- The **Arrow color** field defines the color of the x- and y-axis arrows.
- The **Top color** field defines the color of the left and top borders of the image.
- The **Bottom color** field defines the color of the right and bottom borders of the image.
- If the **Split Components** box is checked, the curves are automatically separated on display.
- If the **Scale Graph Values** box is checked, the graph is automatically put to scale by the graph generation motor.
- If the **Default Centreon Graph Template** box is checked, this model becomes the default model for all the graphs for which no model is defined.
- The **Comment** field can be used to comment on the graph model.

## Using a graph template

You can add this layout model on edition of the object for:

- A service (or a model of service) by going into the **Service Extended Info** tab in configuration form.
- A command

## Curves

### Definition

A curve is the representation of the evolution performance data (metrics produced from the collection of data) visible via performance graphs. A graph may contain multiple curves. It is possible to customise the curves by changing certain settings: curve profile, position of the curves on the graph, legend and additional information (average, total value, etc.).

## Configuration

To add a new curve model:

1. Go into the menu: **Monitoring ==> Performances**
2. In the left menu, click on **Curves**
3. Click on **Add**

**General Information**

Template Name *	CPU
Linked Host Services <small>Choose a service if you want a specific curve for it.</small>	Linked Host Services
Data Source Name *	cpu

**Display Optional Modifier**

Stack	<input type="checkbox"/>
Order	1
Invert	<input type="checkbox"/>

**Colors**

Thickness	1 px
Line color	Random Manual #FF0000
Area color	#FFFFFF
Transparency	%
Filling	<input type="checkbox"/>

**Legend**

Legend Name	
Display Only The Legend	<input type="checkbox"/>
Empty Line After This Legend	0
Print Max value	<input checked="" type="checkbox"/>
Print Min value	<input checked="" type="checkbox"/>
Round the min and max	<input type="checkbox"/>
Print Average	<input checked="" type="checkbox"/>
Print Last Value	<input checked="" type="checkbox"/>
Print Total Value	<input type="checkbox"/>
Comments	

**Save** **Reset**

- The **Template Name** field defines the name of the model.
- The **Hosts/Service Data Source** lists defines the host/service for which this curve will be used. If this information is not filled in, this curve definition will be applied to all services in which this metric appears.
- The **Data Source Name** field can be used to select the metric which will use this definition. The List of known metrics list can be used to choose the already existing metrics used by the services.
- If the **Stack** box is checked, this curve will be stacked on the others (useful to see the proportion of one metric in relation to another).
- If the **Order** box is checked, the Order list can be used to define the order display / stacking of the curve (the smaller the number, the closer it will be to the x-axis).
- If the **Invert** box is checked, the curve is reversed (opposite to the absolute value) in relation to the y-axis (useful for seeing the proportion of the incoming traffic compared to the outgoing traffic).



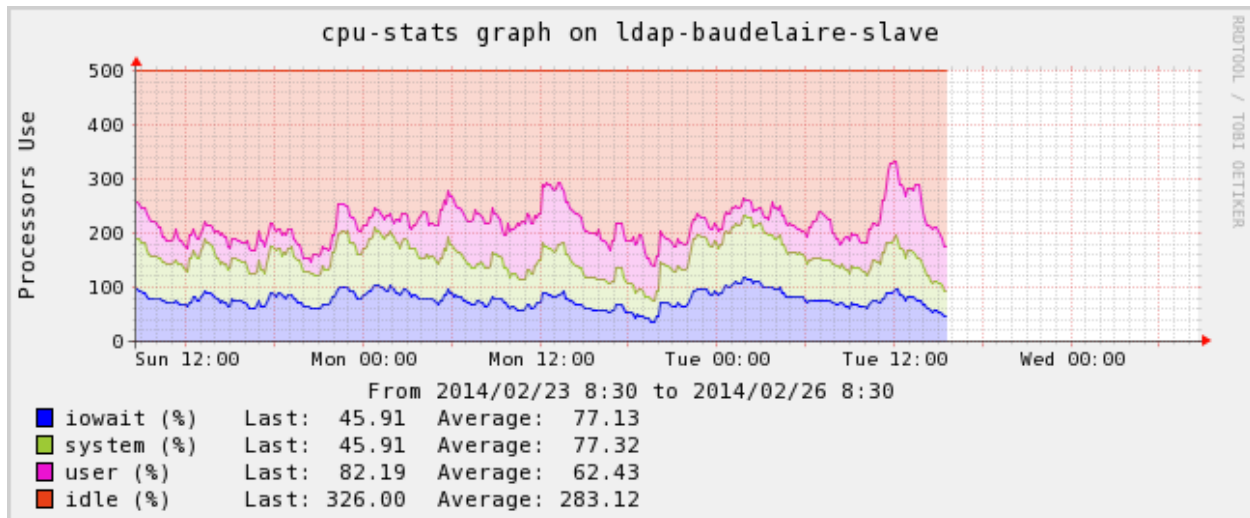
- The **Thickness** list expresses the thickness of the line of the curve (expressed in pixels).
- The **Line color** field defines the color of the curve.
- The **Area color** field concerns the filling color of the curve if the Filling option is checked, (see below). It contains 3 fields that correspond with the colors of the OK, WARNING and CRITICAL statuses respectively.
- The **Transparency** field defines the level of transparency of the contour color.
- If the **Filling** box is checked, all the curve is filled with the color of the area defined according to the status.

The attributes below concern the information situated under the graph.

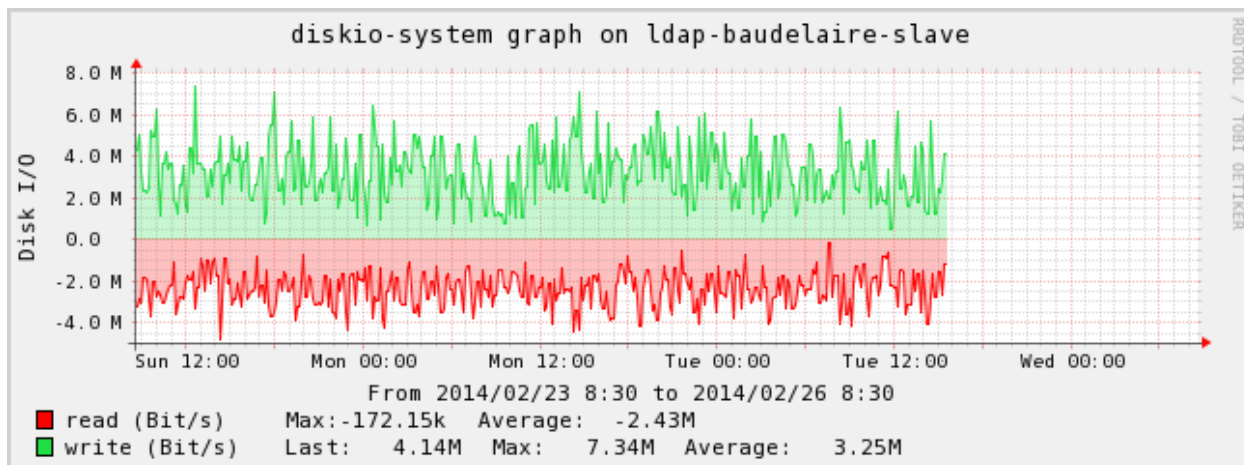
- The **Legend** field defines the legend of the curve.
- If the **Display only the legend** box is checked, the curve will be masked but the legend will be visible.
- The **Empty lines after this legend** list can be used to define a certain number of empty lines after the legend.
- If the **Print max value** box is checked, the maximum value reached by the curve will be displayed.
- If the **Print min value** box is checked, the minimum value reached by the curve will be displayed.
- If the **Round the min and max** box is checked, the minimum and maximum values will be rounded.
- If the **Print Average** box is checked, the average of the points of the curve will be displayed.
- If the **Print last value** box is checked, the last value collected from the curve will be displayed.
- If the **Print total value** box is checked, the total value is displayed (sum of all the values of the curve on the selected period).
- The **Comment** field can be used to comment on the curve.

### Some examples of curves

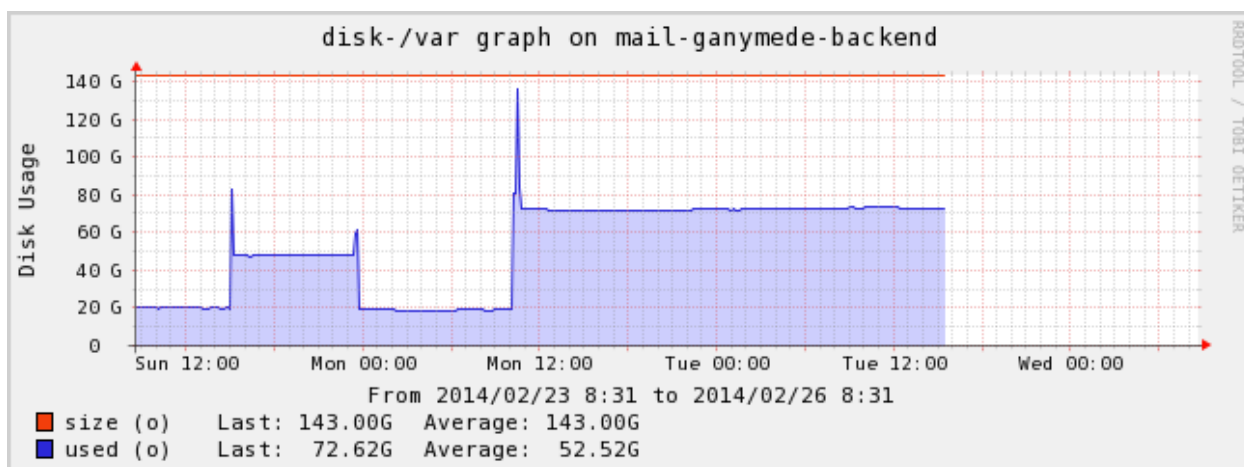
Stacked curves:



Reversed curves:



Curves with filling:



## Virtual metrics

### Definition

The virtual metrics are the display of curves resulting from the processing / aggregation of data from a set of data. The set of data corresponds to various values of curves on the period covered by the graph. The creation of virtual metrics is based on the RPN (Reverse Polish Notation) language.

Two types of sets of data are available:

- CDEF: this command creates a new set of points starting from one or more series of data. The aggregation is performed on each point (data).
- VDEF: the result of each aggregation is a value and a time component. This result can also be used in the miscellaneous graph and printing elements.

**CDEF v. VDEF** The CDEF type works on a set of points (data table). The result of the processing (e.g.: multiplication by 8 to convert bits into Bytes) will be a set of points. The VDEF type enables us to extract the maximum from a set of points.

**Note:** For more information on the RPN type notation, refer to the [official RRD documentation](#)

## Configuration

To add a virtual metric:

1. Go into the menu: **Monitoring ==> Performances**
2. In the left menu, click on **Metrics** (under **Virtuals**)
3. Click on **Add**

The screenshot shows the 'Add Virtual Metric' configuration form in Centreon. It is divided into several sections: 'General Information', 'RPN Function', and 'Options'.  
- **General Information:** Includes fields for 'Metric Name' (set to 'Test load'), 'Host / Service Data Source' (set to 'Centreon-Server' / 'Load'), and 'DEF Type' (set to 'CDEF').  
- **RPN Function:** Includes a 'Notes' section with instructions on mixing metrics and using VDEF. The 'RPN (Reverse Polish Notation) Function' field contains 'load1,10,\*'. There is also a 'Metric Unit' field, a 'Warning Threshold' field, and a 'Critical Threshold' field.  
- **Options:** Includes a 'Hidden Graph And Legend' checkbox (unchecked) and a 'Comments' text area.  
At the bottom right, there are 'Save' and 'Reset' buttons.

- The field **Metric name** defines the name of the metric.
- The **Host/Service Data Source** list can be used to define the service from which to work the metrics.
- The **DEF Type** field defines the type of data set used to calculate the virtual curve.
- The **RPN (Reverse Polish Notation) Function** field defines the formula to be used to calculate the virtual metric.

**Note:** It is not possible to add together the metrics of different services. However, it is possible to add virtual metrics for the calculation of a new metric.

- The **Metric Unit** field defines the units of the metric.
- The **Warning threshold** field defines the alert threshold to be displayed on the graph.
- The **Critical threshold** field defines the critical threshold to be displayed on the graph.
- If the **Hidden Graph and Legend** box is checked, the curve and the legend are hidden.
- The **Comment** field can be used comment on the metric.

## 7.5 Monitoring management

### 7.5.1 Acknowledging a problem

#### Principle

When a host or a service presents an incident and this incident is confirmed, the notification process is triggered; it can generate a notification sent to a contact. If the problem persists and depending on the configuration produced (resend a notification at regular time intervals, escalation of notification, etc.) it is possible that other alerts be send.

The acknowledgement of an incident can be used to stop the notification process (sending of notifications) until the host or the service recovers its nominal status.

Example of use:

A service is charged with checking the health of the hard disks in a disc array. A hard disk goes down on a disk array; a notification is sent. The supervision operator acknowledges the service specifying that a team is in the process of dealing with the problem. Notifications are no longer sent. The service will return to its nominal state after a change of disk.

---

**Note:** The acknowledgement of an incident signifies the taking into account of the problem by a user of the supervision (and not the correction of the incident which can only be effective when the check returns to its nominal state).

---

#### Practice

To acknowledge an incident, there are two solutions:

#### From real time monitoring

1. Go into the menu: **Monitoring ==> Status Details ==> Hosts** (or **services**)
2. Select the object(s) that you want acknowledge
3. In the menu: **More actions** click on **Hosts: Acknowledge** or on **Services: Acknowledge**

The following window appears:

### Acknowledge problems

Sticky

☒

Notify

☐

Persistent

☒

Alias

Comment \*

Acknowledged by admin

Force active checks

☒

Acknowledge selected problems

Reset

- If the **Sticky** box is checked, the acknowledgement will be maintained in case of a change of Not-OK status (E.g.: DOWN to REACHABLE or WARNING to CRITICAL). Otherwise, the acknowledgement disappears and the notification process is reactivated.
- If the **Notify** box is checked, a notification is sent to the contacts linked to the object to warn that the incident on the resource has been acknowledged (in the situation the contact possesses the activity acknowledgement notification filter).
- If the **Persistent** box is checked, the acknowledgement will be maintained in the case of a restart of the scheduler. Otherwise, the acknowledgement disappears and the notification process is reactivated.
- The **Comment** field is generally used to provide the reason of the acknowledgement; it is mandatory
- If the **Acknowledge services attached to hosts** box is checked, all the services linked to the host will be acknowledged (option visible only if we acknowledge a host).
- If the **Force active checks** box is checked, a command will be sent to the scheduler to recheck the resource as soon as possible.

To delete the acknowledgement of an incident on an object:

1. Go into the menu: **Monitoring ==> Status Details ==> Hosts** (or **services**)
2. Select the objects you want to delete the acknowledgement
3. In the menu: **More actions**, click on **Hosts: Disacknowledge** or on **Services: Disacknowledge**

#### From the detailed sheet of an object

From of the detail page of an object, click on the icon  associated with the **Acknowledged** field in the **Options** frame

You will access the dedicated page enabling you to acknowledge the incident.

**Note:** The fields are identical to the window obtained from the real time monitoring menu.

## 7.5.2 Add comment

### Principle

Centreon allows us to add comments on an object. This Comment is visible by anyone having access to the resource (host or service). A comment has the following properties:

- Hostname
- Servicename if the comment is associated with a service
- Date of entry of the comment
- Author of the comment
- The contents of the comment
- The validity of the comment against a restart of the scheduler

### Practice

There are two solutions to add a comment:

#### From the detailed sheet of an object

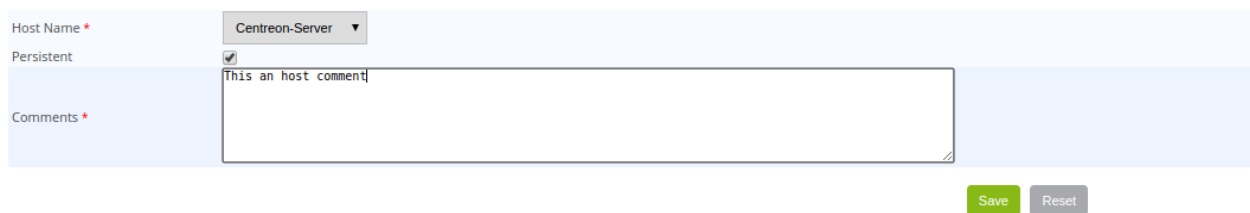
1. Access to the details page of the object
2. In the category **Host/Service Commands**, click on **Add a comment for this host/this service**

#### From the Comment menu

1. Go into the menu: **Monitoring ==> Downtimes ==> Comments**
2. Click on **Add a Service Comment** or **Add a Host Comment**

### Attributes

The following window appears:



- The **Host Name** field defines the host concerned by the comment.
- If you have chosen to add a comment to a **Service**, the Service field can be used to select the service concerned by the comment.
- If the **Persistent** box is checked, the comment will be maintained in the event of a restart of the scheduler.
- The **Comments** field contains the comment itself.

## 7.5.3 Programming a downtime period

### Principle

A downtime period is a time period during which the notifications to a resource are disabled. Downtimes period are used during a programmed maintenance operation; they save us receiving false-positive alerts.

---

**Note:** It is important to select the all the resources necessary to prevent false-positives and false-negatives. In addition, the time spent in this state is taken into account during the generation of the availability data.

---

There are two types of downtime:

- The **fixed** downtime: it starts and stops at the preview time.
- The **flexible** downtime: it starts during the preview time window as soon as an incident is detected and finishes when preview time in seconds expires.

### Practice

There are three different possibilities to define a downtime:

- From the detail sheets of a host or of the service
- From the real time monitoring interface
- From the **Downtime** menu

#### From the detailed sheet of an object

1. Access the detail page of an object
2. In the category: **Commands**, click on **Schedule downtime for this host/service**

#### From real time monitoring

1. Go into the menu: **Monitoring ==> Status Details ==> Hosts** (or **services**)
2. Select the(s) object(s) on which you want to program a downtime period
3. In the menu: More actions..., click on **Hosts : Set Downtime** or **Services : Set Downtime**

#### From the Downtime menu

1. Go into the menu: **Monitoring ==> Downtimes ==> Downtimes**
2. Click on **Add a service downtime** or **Add a host downtime**

### Attributes

- The **Host Name** field defines the host concerned by the downtime
- The **Service** field defines the service concerned by the downtime
- If the **Fixed** box is checked the downtime is fixed. Otherwise, it is flexible

- If the downtime is flexible, the **Duration** field defines the length of the downtime
- The **Start Time** and **End Time** fields define the beginning and end date of the downtime
- The **Comments** field can be used to indicate why the downtime is defined

#### Delete/Cancel

From the menu **Monitoring ==> Downtimes**, you can delete or cancel downtimes. The results are:

- **Cancel:** Stop the selected dwontimes but keep historics
- **Delete:** Stop the selected downtimes and delete historics

## 7.5.4 Management of checks

### Principle

It is possible to temporarily enable or disable check on a host or a service.

**Warning:** Changes to settings checks do not affect the configuration of the object in the database. These changes are made on the supervision in real time; they are cancelled if the scheduler is restarted.

### Practice

#### From the detailed sheet of an object

1. Access the details page of the object
2. In the category: **Options** go to the line: **Active checks** to check the state of the checks.

To:

- Enable the check, click on



- Disable the check, click on



#### From real time monitoring

1. Go into the menu: **Monitoring ==> Status Details ==> Hosts** (or **services**)
2. Select the object(s) on which you want to enable or disable the check
3. In the menu: **More actions...** click on:
  - **Hosts : Disable Check** or **Services: Disable Check** to stop the check on a host or a service
  - **Hosts: Enable Check** or **Services: Enable Check** to enable the check of a host or of a service



## 7.5.5 Submitting a result

### Principle

For passively checked services, it is possible send a result manually to the scheduler so that it is taken into account.

### Practice

To submit a result, access the details page of the object. In the category **Service Commands** click on **Submit result for this service**

### Attributes

- The **Host Name** and **Service** fields define the host and the service the result will be submitted
- The **Check result** field defines the status of the service
- The **Check output** field defines the message to be displayed for the service
- The **Performance data** field can be used to define performance data for the generation of graphs

## 7.5.6 Management of notifications

### Principle

It is possible to temporarily enable or disable the notification of a host or a service.

**Warning:** Changes the notifications settings do not affect the configuration of the object in the database. These changes are made on the real time monitoring; they are cancelled if the scheduler is restarted.

### Practice

There are two ways of managing the notifications:

#### From the detailed sheet of an object

1. Access the details page of the object
2. In the category: **Options** go to the line: **Service Notifications**

To:

- Enable the notification, click on



- Disable the notification, click on



### From real time monitoring

1. Go into the menu: **Monitoring ==> Status Details ==> Hosts** (or **services**)
2. Select the host(s) / service(s) you want enable or disable the notification
3. In the menu: **More actions...** click on:
  - **Hosts: Disable Notification** or **Services: Disable Notification** to stop the notification of a host or of a service
  - **Hosts: Enable Notification** or **Services: Enable Notification** to enable the notification of a host or a service

## 7.5.7 Reprogramming checks

### Principe

By default, the checks (checks on a service) are executed at regular intervals following the configuration defined by the user. It is possible to interact on the check scheduling pile to change the programming of the checks.

There are two types of programming:

- Normal programming: the service check is given priority in the scheduler queue (asap).
- Forced programming: the service check is given priority in the scheduler queue (asap) even if the time of the execution request is outside the check period or if the service is not of the active type.

### Practice

There are two ways of forcing the check of a service:

#### From the detailed sheet of the object

1. Access the detail page of the object
2. In the category **Host Commands** (or **Service Commands**), click on **Re-schedule the next check for this host / service** or **Re-schedule the next check for this host / service (forced)**

### From real time monitoring

1. Go into the menu: **Monitoring ==> Status Details ==> Hosts** (or **services**)
2. Select the objects to for which you want to force the check
3. In the menu: **More actions...** click on **Schedule immediate check** or **Schedule immediate check (Forced)**

## 7.6 Reporting

### 7.6.1 Dashboard

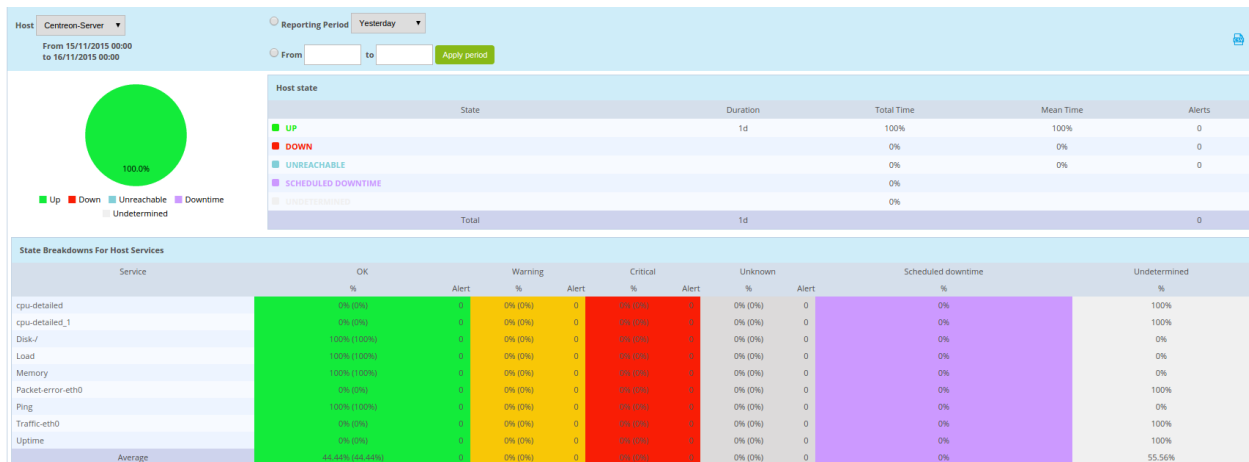
#### Description

The availability reports of monitoring objects from Centreon web interface allows to display the availability rate about hosts, hostgroup or servicegroup on a selected period.

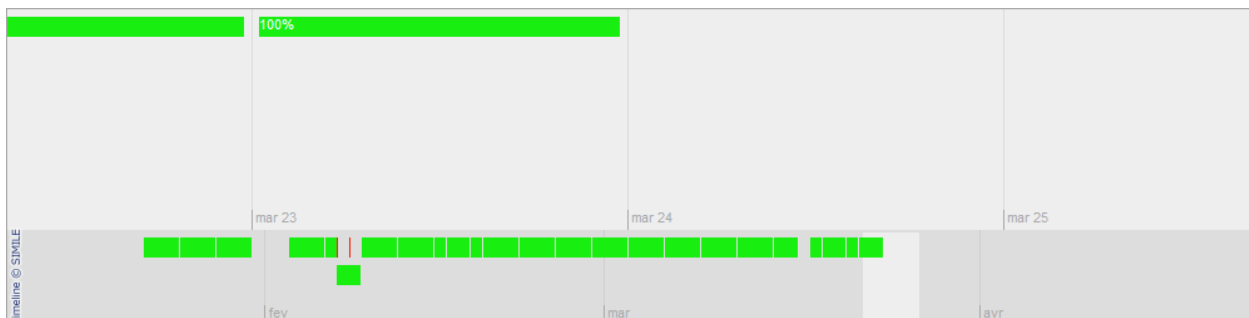
## Visualisation

To access to availability reports:

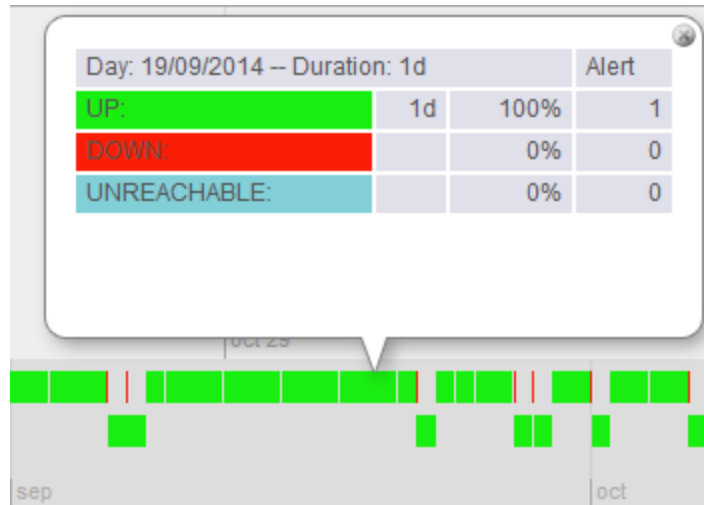
1. Go into the menu: **Reporting ==> Dashboard**
2. In the left menu, click on **Host**
3. Select defined host in **Host** list



- The **Reporting Period** allows to select a predefined period or to define it manually using **From** to **to** fields.
- The **Host state** table displays the availability rates of object.
- The **State Breakdowns For Host Services** table displays the availability of linked objects.
- The timeline allows you to see intuitively the status of the object in short time.

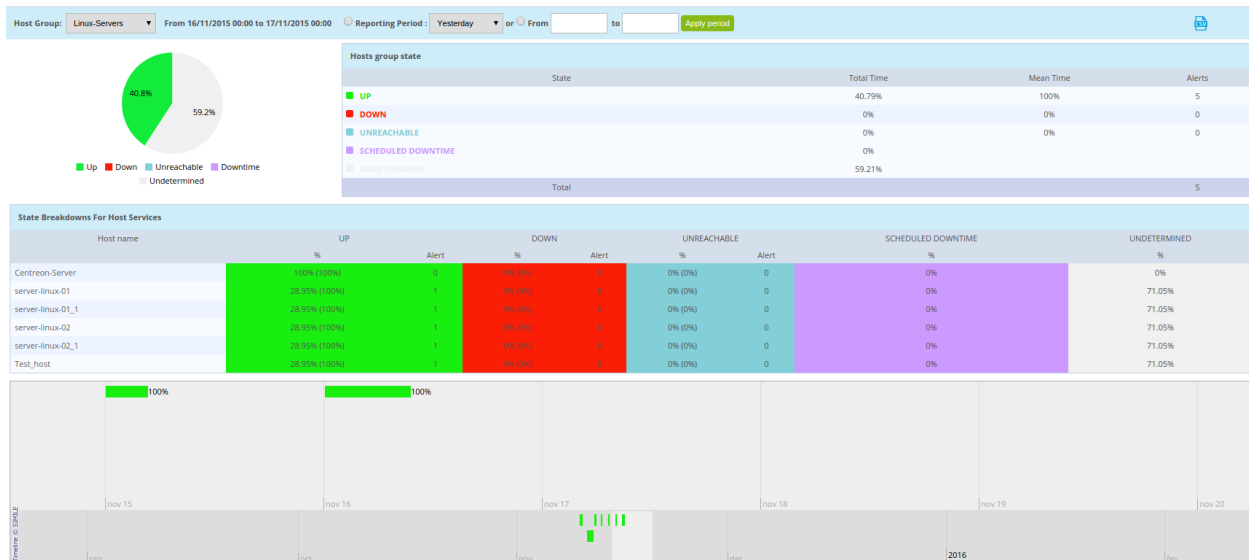


Moreover, clicking on a day in the timeline, you get the report of the day:

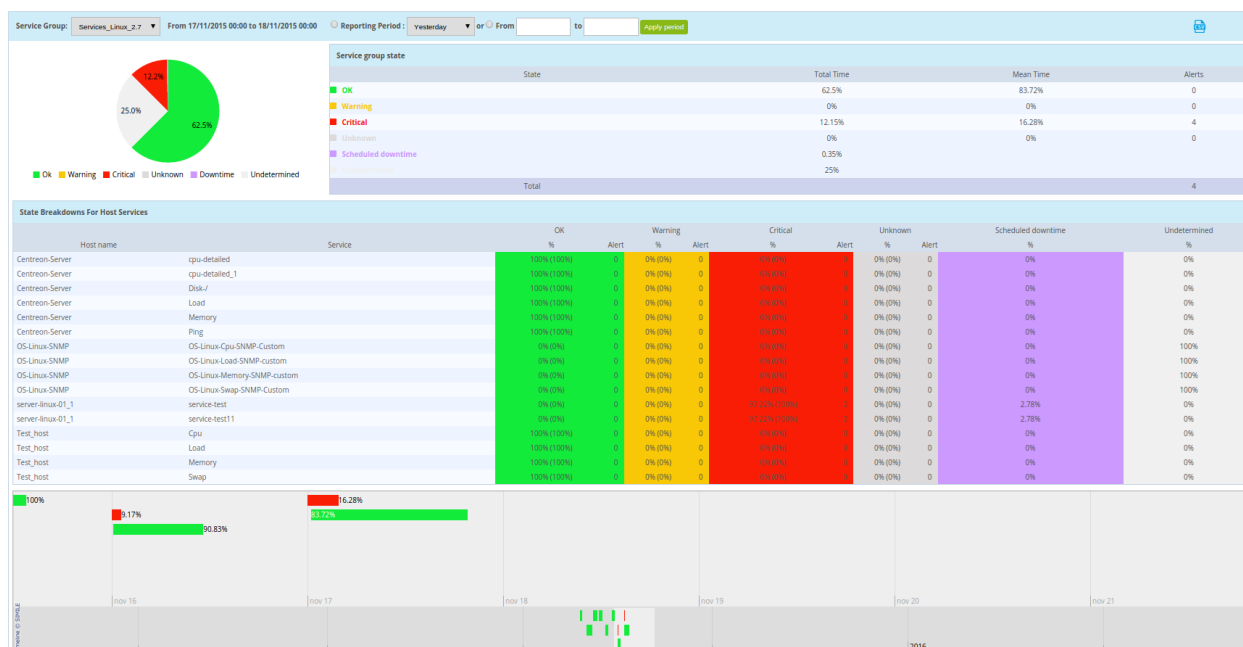



It is also possible to view web reports:

- The groups of hosts: Click on **Host Groups** in the left menu

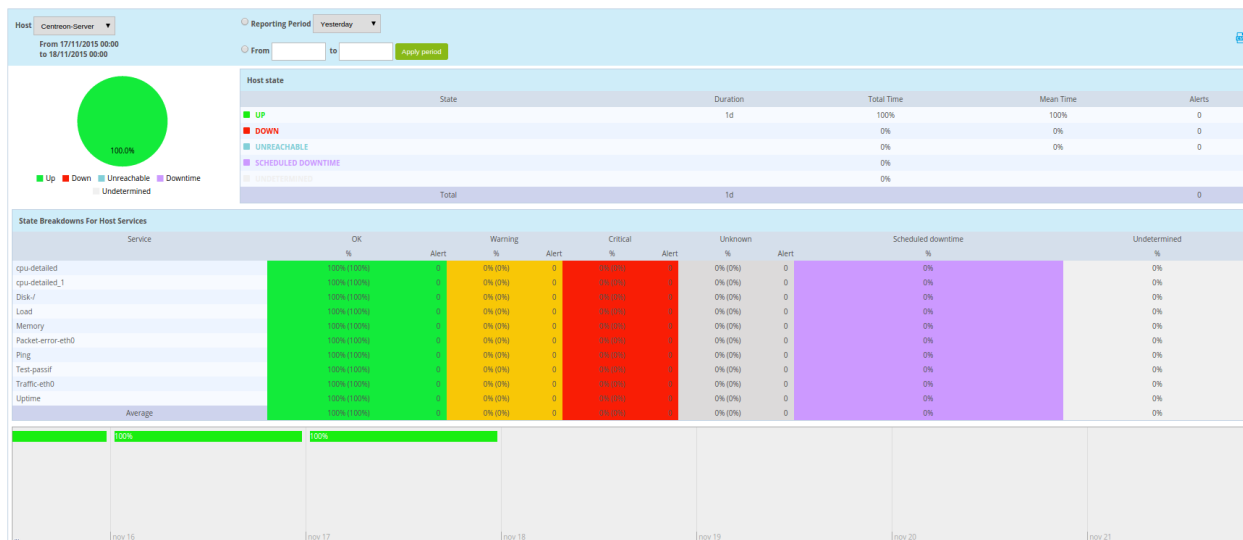


- The groups of services: Click on **Service Groups** in the left menu



The  allows to export data into CSV file.

**Note:** It is also possible to access to availability of a service by clicking on the service name in the host or servicegroup report.



## 7.7 Event logs

### 7.7.1 Definition

Event logs allow us to:

- View the changes of status and state of the monitored objects

- See the notifications sent and their recipients

These logs can be viewed over a given time.

## 7.7.2 Viewing

To view the event logs, go into the menu: **Monitoring ==> Event logs.**

Day	Time	Object name	Status	Type	Retry	Output	Contact	Command
2015/11/16	17:39:53	Centreon-Server	Test-passif	CRITICAL	SOFT	2	critical	
2015/11/16	17:39:38	Centreon-Server	Test-passif	UNKNOWN	SOFT	1	Unknown	
2015/11/16	17:39:28	Centreon-Server	Test-passif	OK	HARD	3	ok	
2015/11/16	17:39:18	Centreon-Server	Test-passif	WARNING	HARD	3	Warning	
2015/11/16	17:38:43	Centreon-Server	Test-passif	CRITICAL	HARD	3	critical	
2015/11/16	17:38:13	Centreon-Server	Test-passif	CRITICAL	SOFT	2	critical	
2015/11/16	17:37:53	Centreon-Server	Test-passif	CRITICAL	SOFT	1	critical	
2015/11/13	18:58:07	server-linux-01_1	service-test11	CRITICAL	HARD	3	Connection to 127.0.0.1 failed	
2015/11/13	18:57:07	server-linux-01_1	service-test11	CRITICAL	SOFT	2	Connection to 127.0.0.1 failed	
2015/11/13	18:56:07	server-linux-01_1	service-test11	CRITICAL	SOFT	1	Connection to 127.0.0.1 failed	
2015/11/13	18:53:52	server-linux-01_1	service-test	CRITICAL	HARD	3	Connection to 127.0.0.1 failed	
2015/11/13	18:52:52	server-linux-01_1	service-test	CRITICAL	SOFT	2	Connection to 127.0.0.1 failed	
2015/11/13	18:51:52	server-linux-01_1	service-test	CRITICAL	SOFT	1	Connection to 127.0.0.1 failed	

The upper menu can be used to select the hosts and/or the services event logs to be viewed. You can choose a selection of services or hosts in a list contained in servicegroup or hostgroup.

The **Message Type** and **status** field can be used to select the search filters to display the events required.

The **Log Period** field can be used to select the time period for which we want to view the events. The drop-down list can be used to select generic time periods. If the drop-down list is empty it is possible to choose the time period manually using the **From** and **To** fields.

The table can be used to view the results.

## 7.7.3 Filtering the logs

### Type of logs

It is possible to display several types of log on the given period:

- Services with the **WARNING** status by checking **Alerts**
- Errors (hosts not available or services with the **CRITICAL** status) by checking **Errors**
- Confirmed incidents on hosts or services (“HARD”) by clicking on **Hard only**
- Notifications sent by clicking on **Notifications**

### Status of the host or the service

**Note:** The choice made here affects the checked boxes in **Message Type**. It is also possible to view the different messages by selecting the status desired for the hosts or services manually.

### 7.7.4 Results

The table below describes the columns of the table of results.

Column name	Description
Day	Show log date
Time	Show log time
Object Name	Show object name (host and/or service)
Status	Show object status
Type	Show object state ('SOFT' or 'HARD')
Retry	Show number of try since actual status
Output	Show output for the host or the service
Contact	Show contact (only for notification)
Command	Show the notification command (only for notification)





---

## Administration

---

### 8.1 Access control list

Access control lists (ACL) serve to limit users' access to the web interface Centreon via miscellaneous rules. The ACL are also used to create multiple user profiles making possible to focalise on a precise set of resources.

**Note:** The management of access checks is a function specific to Centreon, the export of the configuration to the monitoring engine is not necessary to enable them.

Access groups are groups containing the Centreon users. For each access group, it is possible to define three types of access:

- Access filters to resources serve to limit access to Centreon objects (hosts, services, etc.)
- Access filters to menus serve to limit access to Centreon menus
- Access filters on actions serve to limit access to actions that the user can undertake on a monitoring engine or on the resources themselves (program a downtime, stop a monitoring engine, etc.)

**Note:** A user can belong to several access groups thus making it possible to add together all the access authorisations.

The ACLs respect very strict rules:

- Centreon administrators are not subject to ACLs (property of the contact).
- A user (non-administrator) who does not belong to any access group has no right on the monitoring platform (screen empty after logging in).
- The ACLs are recalculated every minute; this why it is sometimes necessary to wait a few seconds before seeing the change applied to the profile.

**Note:** The addition of additional modules to Centreon sometimes makes it possible to add additional filters to the access groups. E.g.: Centreon modules BI, BAM and MAP can be subjected to filters.

#### 8.1.1 Access groups

To add an access group:

1. Go into the menu: **Administration ==> ACL**
2. Click on **Add**

General Information

Group Name \*

ALL

Alias \*

ALL

Relations

Linked Contacts

Available

Guest

Add

Remove

Selected

User

Linked Contact Groups

Available

Supervisors

test-ACL

GRP-VERACRYPT (LDAP : Test-RWE)

AUTH-WEB-COMMON (LDAP : Test-RWE)

AUTH-WEB-LIC-GENERATOR (LDAP : Test-RWE)

AUTH-WEB-WIKI-COMMERCIAL (LDAP : Test-RV)

BU-DSI (LDAP : Test-RWE)

BU-COMMERCIAL (LDAP : Test-RWE)

Add

Remove

Selected

Guest

Additional Information

Status

☒ Enabled
☐ Disabled

Save

Reset

## General information

- The **Group Name** and **Alias** fields define the name and the alias of the group
- The **Linked Contacts** list can be used to link contacts to the access group
- The **Linked Contact Groups** list can be used to link groups of contacts to the access group
- The **Status** field can be used to enable or disable the access group

---

**Note:** The contact group can be groups coming from the LDAP directory connected to the Centreon interface.

---

## Authorizations information

The lists presented in this tab can be used to link the various types of access already created to the access group.

### 8.1.2 Resources Access

The access filters for the resources serve to limit the viewing of objects (hosts, host groups, services and service groups) to a user profile.

To add resources access filter:

1. Go into the menu: **Administration ==> ACL**
2. In the left menu, click on **Resources Access**
3. Click on **Add**

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General Information

Access list name \*

All Resources

Description

All Resources

People linked to this Access list

Linked Groups

Available

MyAccessGroup

RWE

Selected

ALL

Add

Remove

Additional Information

Status

☒ Enabled
 ☐ Disabled

Comments

Save

Delete

**Note:** Once the filters on the resources are set, you can to view the result via the menu: **Check User View**, next to the add option.

## General information

- The **Access list name** and **Description** fields define the name and the description of the filter
- The **Linked groups** list can be used to link access groups to this resource filter
- The **Status** and **Comments** fields serve to enable / disable the filter and to comment on it

## Hosts Resources

The **Hosts Resources** tab enables us to add:

- Hosts
- Host groups

If the **Include all hosts** or **Include all hostgroups** box is checked, all newly created objects will be added to the filter automatically.

**Note:** It is possible to explicitly exclude hosts from the filter (useful in cases where only 1 or 2 hosts must not be part of the filter) if *Include all hosts\** or **Include all hostgroups** options are checked.

## Services Resources

The **Services Resources** tab can be used to add service groups to the filter.

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## Meta Services

The Meta-Services tab can be used to add meta-services to the filter.

## Filters

- The **Poller Filter** list can be used to select the hosts according to monitoring poller (if none is selected all the pollers are taken into account)
- The **Host Category Filter** list can be used to filter the hosts by category
- The **Service Category Filter** list can be used to filter the services by category

**Warning:** The filters by poller or by category of object are inclusion filters (UNION). Only the objects belonging to these filters in addition to groups of objects (hosts and services) will be visible.

### 8.1.3 Menus Access

The access filters to the menu serve to limiter the access to various menus of the Centreon interface. The menus are ranked as follows:

- Level 1 menus (Home, Monitoring, Views, etc.)
- Level 2 menus (Monitoring ==> Hosts, Monitoring ==> Services, etc.)
- Level 3 context menus (Monitoring ==> Services ==> By Hosts / Details)
- Level 4 context menus (Monitoring ==> Services ==> By Hosts / Details ==> Problems)

**Note:** To access to a level of menu 'n-1', the user must have access to the menu of level 'n' otherwise he will not be able to view the menu via the interface. If this is not the case the user will have to access directly to the page concerned via a direct link (autologin, etc.).

To add an access filter to the menus:

1. Go into the menu: **Administration ==> ACL**
2. In the left menu, click on **Menus Access**
3. Click on **Add**

**General Information**

ACL Definition \* Configuration pages

Alias Acces on configuration pages

Status ☒ Enabled ☐ Disabled

Linked Groups

Available		Selected
ALL MyAccessGroup	Add	RWE
	Remove	

**Accessible Pages**

Centreon Map Client (user) : ☐

Centreon Map Client (admin) : ☐

+ Home : ☐

+ Monitoring : ☐

+ Views : ☐

+ Reporting : ☐

+ Configuration : ☒

+ Administration : ☐

**Additional Information**

Comments

- The **ACL Definition** and **Alias** fields define the name and the alias of the access filter
- The **Status** field is used to enable or disable the filter
- The **Linked Groups** list can be used to associate an access group to the filter
- The **Accessible Pages** can be used to associate menus to the filter (The parent menu should be checked to be able to access the child menu)
- The **Comments** field gives indications on the filter

**Warning:** On the access definition to the **Configuration** ==> **Hosts** and **Configuration** ==> **Service** menus, it is possible to give read only or read / write access to various objects.

**Note:** At each addition of a new Centreon module possessing a web interface accessible via a new menu, it should be added in the access groups so that the users can access.

## 8.1.4 Actions Access

Filters on actions enable us to limit access to actions that can be performed on resources (hosts and services) and on monitoring engines (stopping notifications, restarting the scheduler, etc.).

To add an access filter to the actions:

1. Go into the menu: **Administration ==> ACL**
2. In the left menu, click on **Actions Access**
3. Click on **Add**

The screenshot shows the 'Actions Access' configuration interface. It includes a 'General Information' section with input fields for 'Action Name' and 'Description', both containing 'Simple User'. Below this is the 'Relations' section, which features a 'Linked Groups' list with two entries: 'RWE' and 'MyAccessGroup ALL'. To the right of this list are 'Add' and 'Delete' buttons. The 'Global Functionalities Access' section contains three checkboxes: 'Display Top Counter' (checked), 'Display Top Counter pollers statistics' (checked), and 'Display Poller Listing' (unchecked). The 'Global Monitoring Engine Actions (External Process Commands)' section lists several actions with checkboxes, all of which are currently unchecked.

- The **Action Name** and **Description** fields contain the name of the filter and its description
- The **Linked Groups** list serves to associate an access group to the filter

The table below describes the general access functionalities:

Field	Associated actions
Display Top Counter	The monitoring overview will be displayed at the top of all pages
Display Top Counter pollers statistics	The monitoring poller status overview will be displayed at the top of all pages.
Display Poller Listing	The poller filter will be available to users in the monitoring consoles

The table below describes all the actions that can be authorised on the scheduler:

Field	Associated actions
Shutdown Monitoring Engine	Allows users to stop the monitoring systems
Restart Monitoring Engine	Allows users to restart the monitoring systems
Enable/Disable notifications	Allows users to enable or disable notifications
Enable/Disable service checks	Allows users to enable or disable service checks
Enable/Disable passive service checks	Allows users to enable or disable passive service checks
Enable/Disable passive host checks	Allows users to enable or disable passive host checks
Enable/Disable Event Handlers	Allows users to enable or disable event handlers
Enable/Disable Flap Detection	Allows users to enable or disable flap detection
Enable/Disable Obsessive service checks	Allows users to enable or disable obsessive service checks
Enable/Disable Obsessive host checks	Allows users to enable or disable obsessive host checks
Enable/Disable Performance Data	Allows users to enable or disable performance data processing

The table below describes all the actions that can be authorised on services:

Field	Associated actions
Enable/Disable Checks for a service	Allows users to enable or disable checks of a service
Enable/Disable Notifications for a service	Allows users to enable or disable notifications of a service
Acknowledge a service	Allows users to acknowledge a service
Re-schedule the next check for a service	Allows users to re-schedule next check of a service
Re-schedule the next check for a service (Forced)	Allows users to re-schedule next check of a service by placing its priority to the top
Schedule downtime for a service	Allows users to schedule downtime on a service
Add/Delete a comment for a service	Allows users to add or delete a comment of a service
Enable/Disable Event Handler for a service	Allows users to enable or disable the event handler processing of a service
Allows users to enable or disable flap detection of a service	Allows users to enable or disable flap detection of a service
Enable/Disable passive checks of a service	Allows users to enable or disable passive checks of a service
Submit result for a service	Allows users to submit result to a service

The table below describes the all the actions that can be authorised on hosts:

Field	Associated actions
Enable/Disable Checks for a host	Allows users to enable or disable checks of a host
Enable/Disable Notifications for a host	Allows users to enable or disable notifications of a host
Acknowledge a host	Allows users to acknowledge a host
Disacknowledge a host	Allows users to disacknowledge a host
Schedule the check for a host	Allows users to re-schedule next check of a host
Schedule the check for a host (Forced)	Allows users to re-schedule next check of a host by placing its priority to the top
Schedule downtime for a host	Allows users to schedule downtime on a host
Add/Delete a comment for a host	Allows users to add or delete a comment of a host
Enable/Disable Event Handler for a host	Allows users to enable or disable the event handler processing of a host
Enable/Disable Flap Detection for a host	Allows users to enable or disable flap detection of a host
Enable/Disable Checks services of a host	Allows users to enable or disable all service checks of a host
Enable/Disable Notifications services of a host	Allows users to enable or disable service notifications of a host
Submit result for a host	Allows users to submit result to a host

- The **Status** field is used to enable or disable the filter

## 8.1.5 Reload ACL

It is possible to reload the ACLs manually:

1. Go into the menu: **Administration ==> ACL**
2. In the left menu, click on **Reload ACL**
3. Select the user(s) you want to reload the ACL
4. In the **More actions** menu, click on **Reload ACL**

## 8.2 Extensions

### 8.2.1 Modules

























The modules can be used to add additional functionalities to Centreon. It is possible to install modules using the YUM utility or source files (\*.tar.gz).


There are 3 kinds of modules:

- **Community** modules, under licence GPL v2, developed by the Centreon community
- **Core** modules, under licence GPL v2, developed by the Centreon team
- **Proprietary** modules, subject to a licence, developed by [Centreon](#)

To install a module:





1. Install the module from the associated documentation (most often in the directory: **/usr/share/centreon/www/modules** on the central server)
2. Go into the menu: **Administration ==> Extensions**

Name	Real name	Informations	Release	Author	Expiration date	Installed	Status	Actions
 centreon-map-server	Centreon Map	Advanced cartography software for Centreon	3.7.2	Centreon	26/10/2015	Yes		
 centreon-clapi	Centreon Command Line API	A tool for Centreon Management in command line.	1.8.0	Centreon	N/A	Yes		
 centreon-autodiscovery-server	Centreon Auto Discovery	Auto Discovery Module	2.0.0	Centreon Team	N/A	Yes		
 centreon-pp-manager	Centreon Plugin Pack Manager		1.2.6	Merethis Team	N/A	Yes		
 centreon-map-light	Centreon Map Light	Light web interface for maps created with Centreon Map	0.9.1	Centreon	N/A	Yes		
 centreon-bam-server	Centreon Business Activity Monitoring	Business Activity Monitoring package	3.2.0	Centreon	15/10/2015	Yes		
 centreon-bi-server	Centreon Business Intelligence	Business Intelligence based on IT monitoring	2.2.1	Centreon Team	30/05/2016	Yes		
 centreon-knowledgebase	centreon-knowledgebase	How to link resources to their technical procedures	2.0.0	Merethis Team	07/10/2020	Yes		

3. Click on the  icon to start installation of the module
4. Click now on Install to install the module

The table below summarises the columns of the page:




Column	Description
Name	Contains module name
Real name	Contains module complete name
Informations	Contains information about the module
Release	Indicates the module version
Author	Indicates the module author
Expiration date	Indicates licence expiration date
Installed	Indicates if the module is installed or not
Status	Indicates the module status : installed, installed but without license, unknown etc.
Actions	Serves to perform actions on a module :  To install a module, click on  To configure a module, click on  To delete a module, click on  , and then confirm the deletion To update a module, click on  and then follow the process




## 8.2.2 Widgets

Widgets enable us to construct customised views, dealt with in the chapter covering *widgets*.

To install a widget:

1. Install the widget from the associated documentation (most commonly in the directory entitled: **/usr/share/centreon/www/widgets** on the central server)
2. Go into the menu: **Administration ==> Extensions**
3. In the left menu, click on **Setup** under **Widgets**
4. Click on  to start the installation of the widget

The table below summarises the columns of the page:

Column	Description
Title	Contains widget name
Description	Contains information about the widget
Version	Indicates widget version
Author	Indicates widget author
Actions	Serves to perform actions on a widget:  To install a widget, click on  To delete a widget, click on  , and then confirm the deletion To update a widget, click on  and then follow the process

## 8.3 Medias

Medias are images used by the Centreon web interface. These images are used to represent the monitored resource in a more intuitive way, propose backgrounds for cartography modules, etc.

### 8.3.1 Image management

All the images are stored in the folder entitled: `/usr/share/centreon/www/img/media` of the Centreon server.

There are two methods for adding images to this folder:



- Do it manually
- Use automatic synchronisation: this method has the advantage of being able to import multiple images at the same time.

#### Manual addition

To add an image in Centreon:

1. Go into the menu: **Administration** ==> **Parameters** ==> **Media**
2. Click on **Add**

The following window is displayed:

<input type="checkbox"/>	Name	Image	Comment
<input type="checkbox"/>	equipment		
<input type="checkbox"/>	 1292536210_satellite	equipment/1292536210_satellite.png	
<input type="checkbox"/>	 3com	equipment/3com.png	
<input type="checkbox"/>	 Aix	equipment/Aix.png	
<input type="checkbox"/>	 cisco	equipment/cisco.png	
<input type="checkbox"/>	 debian	equipment/debian.png	
<input type="checkbox"/>	 dell	equipment/dell.png	
<input type="checkbox"/>	 EMC	equipment/EMC.png	
<input type="checkbox"/>	 fedora	equipment/fedora.png	
<input type="checkbox"/>	 firewall	equipment/firewall.png	
<input type="checkbox"/>	 ftp	equipment/ftp.png	

- **Existing or new directory** field can be used to add a new folder in the image folder or to choose an existing folder into which the image can be copied
- **Image or archive** field can be used to select the image or the set of images contained in an archive which will be imported
- **Comments** field can be used to describe the image

#### Synchronising the images

To synchronise one or more images in the Centreon medias:

1. Copy your images in the image folder (the images may be situated in folders)
2. Make sure that the user who executes your web server has the read rights on these images
3. Go into the menu: **Administration** ==> **Options** ==> **Media**
4. Click on **Synchronize Media Directory**

The following window imports the new images:

### Media Detection

```
Bad picture alias detected : 0  
New directory added : 0  
New images added : 32  
Convert gd2 -> png : 0
```

Close

## 8.4 Administration options of the Centreon platform

The following options enable us to change the settings of the Centreon architecture.

### 8.4.1 Centreon UI

This part covers the configuration of the general options of the Centreon web interface.

1. Go into the menu: **Administration** ==> **Parameters** ==> **Centreon UI**

The following window is displayed:

Centreon information	
⑦ Directory	<input type="text" value="/usr/share/centreon/"/>
⑦ Centreon Web Directory	<input type="text" value="/centreon/"/>
Maximum page size	
⑦ Limit per page (default)	<input type="text" value="30"/>
⑦ Limit per page for Monitoring	<input type="text" value="30"/> ▼
⑦ Graph per page for Performances	<input type="text"/>
Sessions Properties	
⑦ Sessions Expiration Time	<input type="text" value="120"/> minutes
Refresh Properties	
⑦ Refresh Interval for statistics	<input type="text" value="15"/> seconds
⑦ Refresh Interval for monitoring	<input type="text" value="15"/> seconds
Display Options	
⑦ Display Template	<input type="text" value="Centreon-2"/> ▼
Display properties	
⑦ Sort by	<input type="text" value="Hosts"/> ▼
⑦ Order sort	<input type="text" value="Ascending"/> ▼
Problem display properties	
⑦ Sort problems by	<input type="text" value="Duration"/> ▼
⑦ Order sort problems	<input type="text" value="Ascending"/> ▼

- **Directory** indicates the directory where Centreon is installed
- **Centreon Web Directory** field indicates the web directory on which Centreon is installed
- **Limit per page (default)** field defines the number of objects displayed per **Configuration** page
- **Limit per page for Monitoring** field defines the number of objects displayed per page in the **Monitoring** menu
- **Sessions Expiration Time** field, expressed in minutes, indicates the maximum session duration
- **Refresh Interval for statistics** field, expressed in seconds, indicates the refreshment interval for the statistics page
- **Refresh Interval for monitoring** field, expressed in seconds, indicates the refreshment interval for the objects on the monitoring page
- **Display Template** field indicates the theme to be used for the Centreon web interface
- **Sort problems by** field is used to choose how to sort the incidents in the **Monitoring** menu
- **Order sort problems** field indicates the display order for incidents, by rising or falling order of gravity
- **Enable Autologin** box authorises the users to log into the web interface via the autologin mechanism
- **Display Autologin shortcut** box serves to display the connection short-cut at the top right
- **Enable SSO authentication** box enables SSO authentication
- **SSO mode** field indicates if the authentication should take place only by SSO or using local authentication as well (Mixed)
- **SSO trusted client addresses** field indicates which are the trusted clients for SSO. The trusted clients are separated by commas
- **SSO login header** field indicates the variables of the header that will be used as a login / pseudo
- **Timezone** field indicates timezone of your monitoring server

- If the **Enable strict mode for host parentship management** box is checked, the operator cannot define parental relationships of a host in objects supervised by different pollers.
- **Centreon Support Email** field indicates the e-mail address of the **Customer's service support centre** for the Centreon platform. This e-mail address will be displayed at the bottom of the page on the link **Centreon Support**

## 8.4.2 Monitoring

This part covers the general options of the real time monitoring interface.

1. Go into the menu: **Administration ==> Parameters ==> Monitoring**
2. Click on **Monitoring**

Monitoring Engine	
Default Engine	Centreon Engine ▼
Interval Length	60 seconds
Images Directory	
Plugins Directory	/usr/lib/nagios/plugins/
Centreon Broker	
Start script for broker daemon	/etc/init.d/cbd
Centreon Broker socket path	
Mailer path	
Directory + Mailer Binary	/bin/mail
Tactical Overview	
Maximum number of hosts to show	100 ▼
Maximum number of services to show	100 ▼
Page refresh interval	20 seconds
Default acknowledgement settings	
Sticky	<input checked="" type="checkbox"/>
Notify	<input type="checkbox"/>
Persistent	<input checked="" type="checkbox"/>
Acknowledge services attached to hosts	<input checked="" type="checkbox"/>
Force Active Checks	<input checked="" type="checkbox"/>
Default downtime settings	
Fixed	<input checked="" type="checkbox"/>
Set downtimes on services attached to hosts	<input checked="" type="checkbox"/>
Duration	3600 seconds ▼

Save Reset

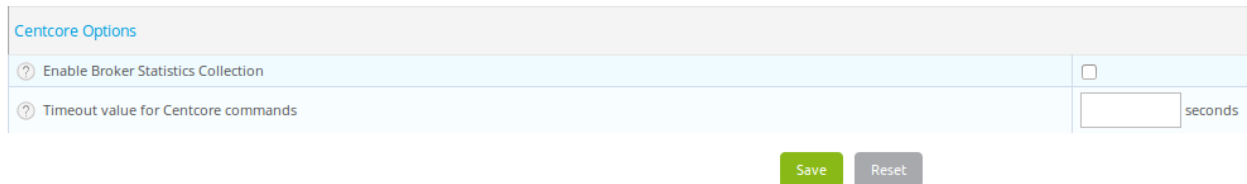
- **Default Engine** list defines the type of scheduler by default
- **Interval Length** field indicates the time interval in seconds used to programme the checks and notifications
- **Images Directory** field defines the image directory in which the medias are stored
- **Plugins Directory** field defines the directory where monitoring plugins are stored
- **Start script for broker daemon** field contains the path to the init script of the broker
- **Centreon Broker socket path** Centreon Broker socket path for send external command
- **Directory + Mailer Binary** field contains the path to the executable file for sending e-mails

- **Maximum number of hosts to show** and **Maximum number of services to show** lists contain the maximum number of hosts or services to be displayed in the overall view (menu: **Home** ==> **Home**)
- **Page refresh interval** field defines the data refreshment interval in the overall view
- The boxes in the **Default acknowledgement settings** and **Default downtime settings** categories define the options by default that will be checked or not during definition of an acknowledgement or of a downtime

### 8.4.3 CentCore

This part can be used set the operation of the CentCore process.

1. Go into the menu: **Administration** ==> **Parameters** ==> **Centcore**



Centcore Options

Enable Broker Statistics Collection	<input type="checkbox"/>
Timeout value for Centcore commands	<input type="text"/> seconds

Save Reset





- **Enable Broker Statistics Collection** field enables the retrieval of statistics from the Centreon Broker by CentCore. This can be a blocking option because the reading of the pipe can be a blocking action
- **Timeout value for Centcore commands** field can be used to define a timeout for local commands and commands via SSH process.

### 8.4.4 LDAP

This part can be used to configure the connection to LDAP directories.

To add a new directory:

1. Go into the menu: **Administration** ==> **Options** ==> **LDAP**
2. Click on **Add**

General information	
Configuration name *	Test-LDAP
Description *	LDAP for test
Enable LDAP authentication	<input checked="" type="radio"/> Yes <input type="radio"/> No
Store LDAP password	<input type="radio"/> Yes <input checked="" type="radio"/> No
Auto import users	<input checked="" type="radio"/> Yes <input type="radio"/> No <a href="#">Import users manually</a>
LDAP search size limit	60
LDAP search timeout	60
Contact template	Contact-templ  
Use service DNS	<input type="radio"/> Yes <input checked="" type="radio"/> No
LDAP Servers	
<a href="#">+ Add a new entry</a>	
LDAP servers	Host address <input type="text"/> Port <input type="text"/> SSL <input type="checkbox"/> TLS <input type="checkbox"/>  
LDAP Information	
Bind user	CN=ldapbind,CN=Users
Bind password	*****
Protocol version	3 ▼
Template	Active Directory ▼
Search user base DN	<input type="text"/>
Search group base DN	<input type="text"/>
User filter	(&(samAccountName=%s)(objectClass=user)(sam
Login attribute	samaccountname

- **Configuration name** and **Description** fields define the name and the description of the LDAP server
- **Enable LDAP authentication** field serves to enable authentication via the LDAP server
- **Store LDAP password** field can be used to store user passwords in the database, useful to authenticate users in the event of loss of connection with the LDAP
- **Auto import users** field serves to import the users of the LDAP directory automatically into Centreon. By clicking on **Import users manually**, you can chose the users that you want to import

**Note:** If the **Auto import users** option is checked, the LDAP settings of any new user who logs into the Centreon interface will automatically be imported into Centreon (name, first name, e-mail address, etc.). ACL profiles will be applied on access (link to [ACL](#)). However, if this option is not checked, only the users imported manually will be able to authenticate.

- **LDAP search size limit** field can be used to limit the size of user searches
- **LDAP search timeout** field can be used define the maximum time for the LDAP search
- **Contact template** field defines the contact template that will be linked to all the users imported from this LDAP directory
- **Use service DNS** field indicates if it is necessary to use the DNS server to solve the IP address of the LDAP directory
- **LDAP servers** field can be used to add one or more LDAP directories to which Centreon will connect

The table below summarises the settings to add an LDAP server:

Column	Description
Host address	Contains the IP address or DNS name of the LDAP server
Port	Indicates the connection port to access the LDAP
SSL	Indicates if the SSL protocol is used for the connection to the server
TLS	Indicates if the TLS protocol is used for the connection to the server

- **Bind user** and **Bind password** fields define the user name and the password for logging to the LDAP server
- **Protocol version** field indicates the version of the protocol using to login
- **Template** list can be used to pre-configure the search filters for users on the LDAP directory. These filters serve to propose, by default, a search on the MS AD or of Posix type directories.

**Note:** Before any import, check the default settings proposed. If you have not selected a Model, you will need to define the search filters manually by filling in the fields.

With Centos 6, it's possible to not check server certificate, follow procedure :

Add the following line in file “/etc/openldap/ldap.conf” :

```
TLS_REQCERT never
```

Then restart Apache :

```
/etc/init.d/httpd restart
```

## 8.4.5 RRDTool

This part can be used to configure the RRDTool graphs generation engine and the sizes of the typefaces used for their presentation.

1. Go into the menu: **Administration ==> Parameters ==> RRDTool**

RRDTool Configuration	
Directory + RRDTool Binary	/usr/bin/rrdtool
RRDTool Version	1.4.7
Title Properties	
Font	Arial
Font size	5 px
Unit Properties	
Font	Arial
Font size	5 px
Axis Properties	
Font	Arial
Font size	5 px
Legend Properties	
Font	Arial
Font size	5 px



- **Directory + RRDTool Binary** field defines the path to the RRDTool executable
- The fields belonging to the categories **Title Properties**, **Unit Properties**, **Axis Properties**, **Legend Properties** and **Watermark Properties** are used to define the typeface and character size for the property selected
- **Enable RRDCached** field serves to enable the RRDCached process (only works with the Centreon Broker)
- **TCP Port** field defines the port on which RRDCached listens (don't enable the TCP connection)
- **UNIX Socket path** field defines the path to the Unix socket

**Warning:** Don't enable RRDCacheD unless your monitoring platform encounters too many disk accesses concerning the writing of data in RRD files.

## 8.4.6 Debug

This part can be used to configure the enabling of the logging of activity on Centreon processes.

1. Go into the menu: **Administration ==> Parameters ==> Debug**

Debug	
Logs Directory	<input type="text" value="/var/log/centreon/"/>
Authentication debug	<input type="checkbox"/>
Monitoring Engine Import debug	<input type="checkbox"/>
RRDTool debug	<input type="checkbox"/>
LDAP User Import debug	<input type="checkbox"/>
SQL debug	<input type="checkbox"/>
Centcore Engine debug	<input type="checkbox"/>
Centstorage debug	<input type="checkbox"/>
Centreontrapd debug	<input type="checkbox"/>

- **Logs Directory** field defines the path where event logs will be recorded
- **Authentication debug** box can be used to log authentications to the Centreon interface
- **Monitoring Engine Import debug** box enables logging of the scheduler debugging
- **RRDTool debug** box enables logging of the RRDTool graph engine debugging
- **LDAP User Import debug** box enables logging of debugging of the import of LDAP users
- **SQL debug** box enables the logging of SQL requests executed by the Centreon interface
- **Centcore Engine debug** box enables logging of Centcore process debugging
- **Centreontrapd debug** box enables logging of the Centreontrapd process debugging

## 8.5 Logging configuration changes

### 8.5.1 Principle

By default, Centreon retains all user actions concerning changes to configuration in a log. To access this data, go into the menu: **Administration ==> Logs**.

Time	Modification type	Type	Object	Author
09/11/2015 17:21:57	Disabled	timeperiod	workhours_5	Admin_Admin (admin)
09/11/2015 17:21:57	Disabled	timeperiod	workhours_6	Admin_Admin (admin)
09/11/2015 17:21:57	Disabled	timeperiod	workhours_7	Admin_Admin (admin)
09/11/2015 17:13:06	Changed	host	Host-Linux	Admin_Admin (admin)
09/11/2015 17:13:00	Changed	host	Host-Linux	Admin_Admin (admin)
09/11/2015 17:12:55	Changed	host	Host-Linux	Admin_Admin (admin)
09/11/2015 17:04:55	Changed	host	Centreon-Central-server	Admin_Admin (admin)
09/11/2015 16:03:05	Changed	host	testhost	Admin_Admin (admin)
09/11/2015 16:00:51	Added	host	testhost	Admin_Admin (admin)
09/11/2015 11:04:24	Enabled	host	Centreon-Central-server	Admin_Admin (admin)
09/11/2015 11:04:22	Disabled	host	Centreon-Central-server	Admin_Admin (admin)
06/11/2015 14:54:44	Changed	host	Host-Linux	Remi_Werquin (rwerquin)
06/11/2015 14:54:32	Changed	hostcategories	severity-1	Remi_Werquin (rwerquin)
06/11/2015 14:52:45	Added	hostcategories	severity-1	Remi_Werquin (rwerquin)
06/11/2015 14:49:33	Deleted	service	OperStatusLoopback	Remi_Werquin (rwerquin)
06/11/2015 14:49:33	Deleted	service	App-Monitoring-Centreon-Database - OperStatusLoopback	Remi_Werquin (rwerquin)
06/11/2015 14:41:13	Changed	escalation	YourTest	Remi_Werquin (rwerquin)
06/11/2015 14:40:28	Changed	service	App-Centreon-MySQL-Partitioning-custom	Remi_Werquin (rwerquin)
06/11/2015 14:40:01	Changed	host	App-Monitoring-Centreon-Central	Remi_Werquin (rwerquin)
06/11/2015 14:39:36	Changed	host	Centreon-Sim	Remi_Werquin (rwerquin)
06/11/2015 14:38:26	Changed	host	Centreon-Sim	Remi_Werquin (rwerquin)
06/11/2015 14:38:00	Changed	host	Centreon-Sim	Remi_Werquin (rwerquin)
06/11/2015 14:33:07	Changed	contact	Remi_Werquin	Admin_Admin (admin)
06/11/2015 11:21:24	Changed	contact	Guest	Admin_Admin (admin)
06/11/2015 11:21:21	Changed	host	Centreon-Central-server	Admin_Admin (admin)
06/11/2015 11:21:17	Changed	contact	CBIS	Admin_Admin (admin)
06/11/2015 11:05:55	Changed	host	App-DB-MySQL	Admin_Admin (admin)
06/11/2015 11:05:18	Changed	command	App-DB-MySQL-Long-Queries	Admin_Admin (admin)
06/11/2015 11:05:10	Changed	command	App-DB-MySQL-Qcache-Hitrate	Admin_Admin (admin)
06/11/2015 11:05:05	Changed	command	App-DB-MySQL	Admin_Admin (admin)

The grey search bar can be used to filter the information presented via filters:

- **Object** used to filter on object name (host, service, contact, SNMP trap definition, group, etc.)
- **User** used to filter by change author
- **Object Type** used to filter by object type

## 8.5.2 Practice

E.g.: To see all the actions performed by the user: **admin**, enter “admin” in the **User** field and click on **Search**.

The table below defines the columns in the results table:

Column Name	Description
Time	Indicates the date of the event
Modification type	Contains the type of action performed. There are several types of action possible: <ul style="list-style-type: none"> <li>• Added: Indicates that the object has been added</li> <li>• Changed: Indicates that the object has been changed</li> <li>• Deleted: Indicates that the object has been deleted</li> <li>• Massive Change: Indicates a massive change of configuration on objects.</li> <li>• Enabled: Indicates that the object has been enabled</li> <li>• Disabled: Indicates that the object has been disabled</li> </ul>
Type	Indicates object type
Object	Indicates object name
Author	Indicates the user having performed this change

By clicking on the name of an object, you can view the history of the changes performed on it.

Date	Contact Name	Type	Field Name	Before	After
09/11/2015 17:13	Admin_Admin	Change		No modification was made.	
09/11/2015 17:13	Admin_Admin	Change		No modification was made.	
09/11/2015 17:12	Admin_Admin	Change	host_location		335
06/11/2015 14:54	Remi_Werquin	Change		No modification was made.	
21/10/2015 12:01	Admin_Admin	Massive change		No modification was made.	
01/10/2015 17:46	Admin_Admin	Create	host_name		Host-Linux
			host_alias		Host-Linux
			host_address		127.0.0.1
			host_active_checks_enabled		2
			host_passive_checks_enabled		2
			host_obsess_over_host		2
			host_check_freshness		2
			host_event_handler_enabled		2
			host_flap_detection_enabled		2
			host_process_perf_data		2
			host_retain_status_information		2
			host_retain_nonstatus_information		2
			host_notifications_enabled		2
			host_snmp_community		public
			host_snmp_version		2c
			host_register		1
			host_activate		1
			nagios_server_id		1

The table below defines the columns of the changes table:

Column Name	Description
Date	Date of the change
Contact Name	Name of the person having performed the change
Type	Modification type
	The last column describes the change itself : <ul style="list-style-type: none"> <li>• Field name: Describes the field that has been changed</li> <li>• Before: Indicates the previous value</li> <li>• After: Indicates the new value</li> </ul>

## 8.6 Server Status

### 8.6.1 Databases

1. Go into the menu: **Administration ==> Server Status**
2. In the left menu, click on **Databases**

Centreon DataBase Statistics		
	centreon	centreon_storage
Length	9.48 Mo	67.12 Mo
Number of entries	4775	1894771

The page can be used to view size of the various databases.

## 8.7 The notification process in Centreon

### 8.7.1 Notifying a contact in Centreon

Before a contact can be notified in Centreon, it is necessary to go through several steps. If no notification escalation is defined, the notification management process is standard. It is described below:

1. A service (or a host) is checked at regular intervals according to the check period defined for it (In the case of a passive service, we wait for the status of the service to change)

2. If an anomaly occurs (Not-OK status), the service (or the host) goes into the SOFT state
3. After the Max Check Attempts has taken place and if the service (or the host) persists in retaining its Not-OK status its state changes from SOFT to HARD. The monitoring engine caches the notification number to the service (or the host): i.e. 0.

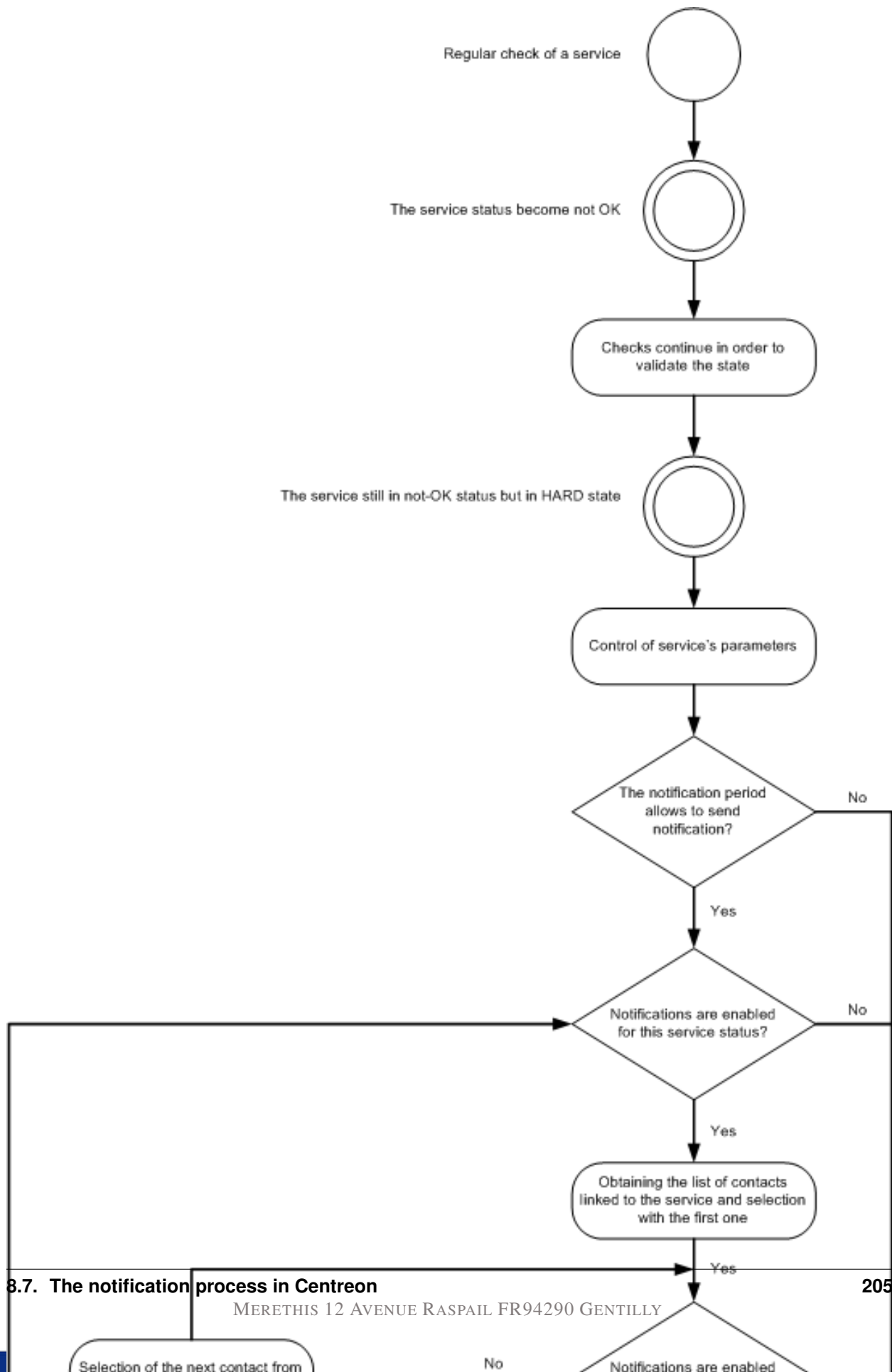
At each notification interval of the service (or the host) and until the end of the Not-OK status, the monitoring engine performs the following operations:

4. The monitoring engine checks that the notification period defined for the service (or the host) allows the notification for the service (or the host) when is switched into the HARD state. If the answer is yes, we go to the next step otherwise we wait for period defined for the service (or the host) to allow notification.
5. The monitoring engine checks that the notification is enabled to the current status of the service (or of the host)

For every contact associated with the service (or the host):

6. The monitoring engine checks several settings:
  - Is notification to this contact enabled?
  - Does the notification period defined for the contact allow notification?
  - Is the contact configured to be notified of the current status of the service (or the host)?
7. If these three conditions are confirmed, the monitoring engine alerts the contact using the notifications script defined for the service or the host.
8. The monitoring engine increments the notification number by 1

The diagram below summarises the notifications management in Centreon:



## 8.7.2 Notifications escalation in Centreon

Notifications escalations allow two things:

- Notifying various contacts according to the number of notifications sent
- Changing the command of notification over time

In case of the use of notifications escalations, the retrieval of the list of contacts is a little different:

1. A service (or a host) is checked at regular intervals according to the check period defined for it
2. If an anomaly occurs (Not-OK status), the service (or the host) goes into the SOFT state
3. After the Max Check Attempts exceeded and if the service (or the host) persists in its Not-OK status its state changes from SOFT to HARD. The monitoring engine caches the notification number for the service (or the host): i.e. 0.

At each interval or sending of notification to the service (or the host) and until the end of the Not-OK status, the monitoring engine performs the following operations:

1. If no notification escalation is defined for the service (or the host) and the current notification number, the notification is processed in the same way as for a normal notification: the monitoring engine uses the notification configuration defined for the service (or the host).
2. If a notification escalation is defined for the service (or the host) and the current notification number, the monitoring engine bases itself on the configuration of the escalation to select the contacts to be notified and the mechanism to be used.
3. The processing mechanism for a notification is the same as the sending of a normal notification

For information the configuration of notification escalations is defined in the chapter covering *The notifications escalations*.

## 8.8 Managing logical dependencies

We have seen in the *dependencies* configuration chapter how to configure dependences between objects (hosts, services, host groups, etc.). This sub-chapter illustrates the use of these dependences via a few actual cases.

---

**Note:** The dependencies are based on failure criteria that is “do not do if”. Do not notify if the service is in a Critical state. Do not perform the check if the service is in a Critical, Alert, Unknown, ... state.

---

### 8.8.1 Services dependences

A service is checked using a Selenium scenario. This scenario connects to a web interface with an identifier and a password. This connection information is stored in a MySQL database.

Consequently, if the database server does not reply, the Selenium scenario cannot complete. It seems obvious that it is necessary to create a logical dependence link between the service which uses the Selenium scenario and the service that is responsible for checking the status of the MySQL server.

Moreover, considering that the Selenium scenario cannot perform properly, no performance data can be stored in the database. So it is necessary not only to stop the notification for the service using the Selenium scenario but also the check.

To create this dependence:

1. Go into the menu: **Configuration ==> Notifications**

2. In the left menu under **Dependencies**, click on **Services**
3. Click on **Add**
4. Enter the name and the description of the dependence
5. For the **Execution Failure Criteria** and **Notification Failure Criteria** fields, check Warning, Critical, Unknown and Pending
6. In the **Services** list select the service that is responsible for checking the status of the MySQL server
7. In the **Dependent Services** list, select the service that uses the Selenium scenario
8. Save

From now on, if the service responsible for checking the status of the MySQL server has “Warning”, “Critical”, “Unknown” or “Pending” status, the service responsible for executing the Selenium scenario will not be executed until the master recovers its OK status.

### 8.8.2 Hosts dependences

Let us take the case of two hosts which operate as a cluster. Three hosts are created to be able to monitor this cluster: a host A, a host B (both members of the cluster) and a host C (which centralises the information from the cluster).

If host A or host B has a Not-OK status the services of host C will automatically be considered to be Not-OK. So it is necessary to add a dependence which prevents the sending of notifications if host A or host B become faulty. However, performance data feed-back must always be operational; this is why it is necessary to continue the monitoring of host C.

To create this dependence:

1. Go into the menu: **Configuration ==> Notifications**
2. In the left menu under **Dependencies**, click on **Hosts**
3. Click on **Add**
4. Enter the name and the description of the dependence
5. For the **Notification Failure Criteria** field, check Warning, Critical, Unknown and Pending
6. In the **Host Names** list, select host A
7. In the **Dependent Host Names** list select host C
8. Save

Repeat this operation for host B.

### 8.8.3 Service Groups dependences

Let us take the example of a set of Oracle services on which the ERP application bases itself. Two service groups are needed:

- The Oracle Application group
- The ERP Application group

If the Oracle services become critical, the services of the ERP application are automatically critical. It is necessary to create a dependence link to prevent the check and notification of the services of the application ERP if the Oracle application is Not-OK.

To create this dependence:

1. Go into the menu: **Configuration ==> Notifications**
2. In the left menu under **Dependencies**, click on **Service Groups**
3. Click on **Add**
4. Enter the name and the description of the dependence
5. For the **Execution Failure Criteria** and **Notification Failure Criteria** fields, check Critical and Pending
6. In the **Service Group Names** list select the service group Oracle Application
7. In the **Dependent Service Group Names** list, select the service group ERP Application
8. Save

## 8.9 Managing groups and categories

In Centreon, it is possible to group together one or more objects within different groups:

- *Host Groups*
- *Service Groups*
- *Contact Groups*

It is also possible to create categories of *hosts* or *services*.

### 8.9.1 Groups

Generally speaking, the groups are containers in which sets of objects having a common property can be grouped together:

- Same material identity (Dell, HP, IBM, etc., servers), logical identity (network equipment) or geographical identity (Europe, Asia, Africa, North America, etc.)
- Belonging to the same application (CMS application, etc.) or to a same sector of activity (Salary management, etc.)
- Etc.

### Service Groups and Host Groups

Host groups and service groups are used to group together objects by logical entities. They are used to:

- Configure ACLs to link a set of resources to a type of profile
- Allow viewing of availability reports per group. Generate a “Paris Agency” availability report for resources.
- Enable viewing the status of a set of objects by selecting in the search filters of a group of objects
- Search several performance graphs quickly by browsing the object tree structure by group and then by resource

Generally speaking, we try to group together hosts by functional level. E.g.: DELL and HP hosts or Linux, Windows, etc., hosts. We also try to group services by application jobs. E.g.: Salary management application, ERP Application, etc.

---

**Note:** For the hosts belonging to a host group, the retention of RRD files can be defined in the host group. This definition overrides the global definition. In the event that the same host belongs to several groups each possessing a retention definition, the highest value will be selected for the host.

---



## Contact Groups

Contact Groups are used to notify contacts:

- On definition of a host or of a service
- On definition of an escalation of notifications

In addition, the groups of contacts are also used during the definition of an access group.

Consequently, it is necessary to group together contacts in a logical way. Most of the time, they are grouped together according to their roles in the information systems. E.g.: DSI, Windows Administrators, Linux Administrators, Person in charge of the application of Salary Management, etc.

## 8.9.2 Categories

Generally speaking, the categories serve either to define a criticality level for a host or a service, or to group together technically a set of objects (services linked to the execution of a request on a MariaDB DBMS, etc.). Good practice requires that we group hosts or services together into categories to facilitate the filtration of these objects in ACL. The categories are also used to define types of objects in the Centreon MAP module or to classify the objects within sub-groups in the Centreon BI module.

## 8.10 Managing SNMP traps with Centreon

### 8.10.1 Receive SNMP traps with Centreon

This section presents the different stages in order to monitor equipment using SNMP traps.

#### Import of SNMP traps

To import SNMP traps, you must follow the following steps:

1. Create a Manufacturer linked to the SNMP trap that you created, see this *section*
2. Import MiB in the Centreon web interface, see this *section*

When import a MiB file, it's possible that dependences are necessary. In order to find the dependencies of your MIB, you must open your MIB file using a standard text editor, then:

1. Locate the line that starts with IMPORTS
2. All dependencies required to import your MIB file are after the keyword **FROM**

Eg. :

```

IMPORTS
    MODULE-IDENTITY, OBJECT-TYPE,
    OBJECT-IDENTITY,
    snmpModules, Counter32          FROM SNMPv2-SMI
    TEXTUAL-CONVENTION, TestAndIncr,
    RowStatus, RowPointer,
    StorageType, AutonomousType    FROM SNMPv2-TC
    MODULE-COMPLIANCE, OBJECT-GROUP FROM SNMPv2-CONF
    SnmpAdminString, SnmpEngineID,
    snmpAuthProtocols, snmpPrivProtocols FROM SNMP-FRAMEWORK-MIB;

```

In the MIB file shown above, there are four dependencies required to import the MIB: SNMPv2-SMI, SNMPv2-TC, SNMPv2-CONF, SNMP-FRAMEWORK-MIB. Once the import is complete, it is necessary to modify the definition of the trap to change its default status:

1. Go into the menu **Configuration ==> SNMP Traps**
2. Click on the trap you want to modify.

Depending on the associated trap message, change the default status of the service. In case the status of the service depends on the received message, use the advanced matching mode.

### Create a passive service template

To facilitate the configuration of services using SNMP traps, it is more convenient to create a passive service template. In this way, when creating a service there will be more than inherit the service from this model and link the trap or SNMP traps linked to this service.

1. Go in the menu **Configuration ==> Services**
2. In the left menu click on **Templates**
3. Click on **Add**

The table below summarizes all the attributes of a passive service template:

Attributes	Description
<b>Service Configuration Tab</b>	
Alias	TRAP
Service Template Name	generic-passive-service
Check Period	24x7
Check Command	check_centreon_dummy
Args	Status : 0 Output : "No trap since 24 hours"
Max Check Attempts	1
Active Checks Enabled	No
Passive Checks Enabled	Yes
<b>Data Processing Tab</b>	
Check Freshness	TRAP
Freshness Threshold	86400 (24 hours)

**Note:** The check\_centreon\_dummy plugin will be called if no trap is received within 24 hours.

## Service creation

Then create the service and associate it with the passive service template. You just have to go to the **Relations** tab and linked in the field **Service Trap Relation**, SNMP traps that can change the status of the service.

Now *Generate configuration files* to apply changes.

## Send an example trap

You can test the reception of SNMP traps on your device. You can send an fake SNMP event to your monitoring server using the utility line `snmptrap` orders.

Syntax:

```
snmptrap -v SNMP-VERSION -c COMMUNITY IP-DESTINATION UPTIME TRAP-OID PARAMETER-OID PARAMETER-TYPE PARAMETER-VALUE
```

With:

- **SNMP-VERSION**: SNMP version. For the syntax above is necessarily 2c
- **COMMUNITY**: SNMP Community
- **DESTINATION-IP**: SNMP trap destination IP. It could be the Centreon central server or a poller.
- **TRAP-OID**: OID of the SNMP trap
- **UPTIME**: Time in seconds since last restart of the device. When an empty string is specified, this argument is automatically filled by the binary “snmptrap”.

Any additional parameters to SNMP trap must contain the following 3 variables. They must be repeated for each additional parameter:

- **PARAMETER-OID**:
- **PARAMETER-TYPE**: Type of the parameter, ‘i’ for ” Integer ”, ‘s’ for ” String ”, etc.
- **PARAMETER-VALUE**: related to the parameter value. Quoting a string containing spaces

Trap example for sending “linkUp” event on ‘eth0’ interface:

```
snmptrap -v2c -c public 192.168.1.1 '' .1.3.6.1.6.3.1.1.5.4 ifIndex i 2 ifDescr s eth0 ifAdminStatus
```

## 8.10.2 Modify the output

### Use all the arguments

For a SNMP trap, when configuring the output message, the argument \$ \* will display all the information (the value of arguments) contained within the SNMP trap. However, it is possible to display only certain information contained in the SNMP trap by calling unitarily arguments.

Eg:

## | Modify a Trap definition

Convert Trap information	
Trap name *	ccmCLIRunningConfigChanged
OID *	1.3.6.1.4.1.9.9.43.2.0.2
Vendor Name *	Cisco
Convert Trap information	
Output Message *	This notification indicates that the running \$*
Default Status	ok
Default Severity	
Advanced matching mode	<input checked="" type="checkbox"/>
Disable submit result if no matched rules	<input checked="" type="checkbox"/>
Advanced matching rules	+ Add a new entry Nothing here, use the "Add" button
Action 1 : Submit result to Monitoring Engine	
Submit result	<input checked="" type="checkbox"/>
Action 2 : Force rescheduling of service check	
Reschedule associated services	<input checked="" type="checkbox"/>
Action 3 : Execute a Command	
Execute special command	<input checked="" type="checkbox"/>
Special Command	

The output message “Link down on interface \$2. State: \$4.” will display only the name of the interface and its status (\$2 and \$4 argument).

Where can I find the arguments?

The arguments are in the documentation of the MIB manufacturer or in the **Comments** field of the SNMP trap.

Eg:

Trap description	
Comments	<p>This notification indicates that the running configuration of the managed system has changed from the CLI.</p> <p>If the managed system supports a separate configuration mode (where the configuration commands are entered under a configuration session which affects the running configuration of the system), then this notification is sent when the configuration mode is exited.</p> <p>During this configuration session there can be one or more running configuration changes.</p> <p>Variables:</p> <p>1: ccmHistoryRunningLastChanged</p> <p>2: ccmHistoryEventTerminalType</p>

To show:

- The index link, use the \$1 argument
- The interface name , use the \$2 argument
- The administrative state of the interface, use the \$3 argument
- The state interface, use the \$4 argument

Eg, the following output message displays all the arguments:

Link down on interface: \$2 (index: \$1). Operational state: \$4, Administration state: \$3

## Active checks after trap reception

**Reschedule associated services** option to actively check the service after the trap reception.

The active service linked in the service configuration is executed.

## Execute special command

Its possible with Centreontrapd to execute a special command after the reception of a SNMP trap. Just use the option **Execute special command** followed by the description of this command.

## Use all the arguments (via OID)

It's also possible to have directly an argument value without knowing arguments order (\$1, \$2, \$3, etc.). to do this, use the complete OID number of needed arguments.

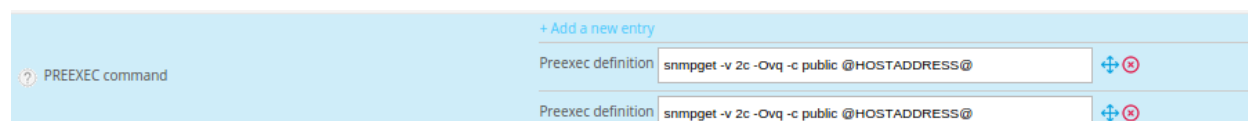
Eg:

```
Link down on interface: @{.1.3.6.1.2.1.2.2.1.2} (index: @{.1.3.6.1.2.1.2.2.1.1}). Operational state:
```

## Use an external variable

It's also possible to modify the output message by retrieving information via scripts or external commands and get the result to insert it in the output. To do this, within the definition of your SNMP trap, go to the **Advanced** tab and add one (or more) preexec commands.

Eg:



The first command “snmpget -v 2c -Ovq -c public @HOSTADDRESS@ ifAlias.\$1” and allows you to retrieve the alias interface. The “\$1” variable is for the argument 1 associated value of linkUp/linkDown traps.

The second command “snmpget -v 2c -Ovq -c public @HOSTADDRESS@ ifSpeed.\$1” and allows you to retrieve interface speed. The “\$1” variable is for the argument 1 associated value of linkUp/linkDown traps.

In order to exploit the result of the first command in the output, you have to use \$p1 argument. For exploiting the result of the second command in output, you have to use \$p2 argument.

Therefore, we can deduce the following output message:

```
Link down on interface: $2 (index: $1). Operational state: $4, Administration state: $3, Alias : $p1,
```

## Use a Regular expression

It's also possible to modify the output by using a regular expression with **Output Transform** option. You just have to define the regexp and it will be executed at trap reception.

For example

```
:: s/|/-/g
```

Will replace | in the output to -.

### 8.10.3 Route/Transfer SNMP traps

It's possible to have a SNMP trap concentrator. Eg: Oracle GRID. Oracle GRID is responsible for federating information for all Oracle servers if necessary, it's the Oracle GRID server who sends the SNMP trap to the monitoring server.

However, from a SNMP trap sent from Oracle GRID, we want to extract the IP address of the host and display the message in the service trap not belonging to Oracle Grid but to the correct host.

To do this, perform the following steps:

1. Create a generic trap, with the following parameters:

Attributes	Description
<b>Main Tab</b>	
Trap Name	Trap name
OID	OID of the trap
Default Status	Trap default status
Output Message	Custom output message
<b>Advanced Tab</b>	
Enable routing	Checked
Route definition	\$2 (In this example \$2 argument is for IP address of the host)

2. Create a second trap definition:

Attributes	Description
<b>Main Tab</b>	
Trap Name	Trap name (not the same as previous)
OID	OID of the trap (same as previous)
Default Status	Trap default status
Output Message	Custom output message

3. Associate the first definition to a service (eg PING) of Oracle GRID server

4. Associate the second definition to a passive service of the host.

5. Generate SNMP traps definitions and restart centreontrapd

In the **Route definition** field you can use the following arguments:

Variable name	Description
@GETHOST-BYADDR(\$2)@	Reverse DNS resolution to know the DNS name from IP address (127.0.0.1 -> localhost)
@GETHOSTBY-NAME(\$2)@	DNS resolution to know the Ip address from the DNS (localhost -> 127.0.0.1)

## Ignore SNMP Trap when resource is on downtime

**Check Downtime** allow centreontrapd to check if the service is not in Downtime status at trap reception. The submission can be cancelled.

---

**Note:** It's only possible with Centreon Broker and on central monitoring.

---

There are three ways to configure this :

- None : nothing to do, the trap is sent as normal ;
- Real-Time : with this option, a trap sent with a current downtime, the service state is not updated ;
- History : option used to do not acknowledge a trap snmp that concerning a past event during a downtime.

## 8.10.4 FAQ

As seen in Chapter *SNMP traps*, several elements are involved in the SNMP traps management. In case of problem, it is necessary to check the proper functioning of its architecture, there are several things to check.

### Sender settings

The first point is to control the configuration of the equipment or application that issued the trap that you should have received. Check IP address or DNS name, the SNMP community and version.

## Firewall, routing

The second point is to control network firewalls and software permissions and the implementation of a specific routing. If one or more network firewalls are present or if a port translation and/or IP address is in place, make sure the connection is possible between the emitter and the poller. The use of network probes, debug network devices (firewalls and routers) or software tcpdump/wireshark on the poller may help you to confirm receipt of data on UDP port 162.

## Snmpttrapd

After validation of the connection, check the operating status of snmpttrapd process (which must be running) and its configuration options. It is possible to enable logging of the process. To do this change the “/etc/sysconfig/snmpttrapd.options” file and replace the “OPTIONS” line:

```
# snmpttrapd command line options
# OPTIONS="-On -d -t -n -p /var/run/snmpttrapd.pid"
OPTIONS="-On -Lf /var/log/snmpttrapd.log -p /var/run/snmpttrapd.pid"
```

Restart the process to take the changes into account. Thus, for any receiving SNMP traps, these events will be listed in the “/var/log/snmpttrapd.log” log.

In case you filter by SNMP community, check allowed communities in the configuration file “/etc/snmp/snmpttrapd.conf”. If after all these checks, SNMP traps are not included in the log, verify that the process is listening on UDP port 162 for remote equipment using the command:

```
# netstat -ano | grep 162
udp        0      0 0.0.0.0:162          0.0.0.0:*               off (0.00/0/0)
```

If not, change the listening port of the process.

---

**Note:** Don't forget to deactivate the logs after your check. Otherwise, the volume of the logs can be very important.

---

## Centreontrapdforward

Once the snmpttrapd process is validated, check the centreontrapdforward process. The first step is to check the access parameters of this process snmpttrapd in the file “/etc/snmp/snmpttrapd.conf”:

- Check that snmpttrapd service executes centreontrapdforward. To do this, edit the file **/etc/snmp/snmpttrapd.conf** and verify that it contains:

```
traphandle default su -l centreon -c "/usr/share/centreon/bin/centreontrapdforward"
```

If path to the file is incorrect, change it and restart the snmpttrapd process. You can check the proper functioning of binary centreontrapdforward by checking the configuration part of *centreontrapdforward*.

## Centreontrapd

The next process to check is Centreontrapd. This daemon allows to connect a SNMP trap to a passive service linked to an host in Centreon using IP address or DNS from distant equipment. To check its operation, you should check the centreontrapd configuration settings.

You can check the proper functioning of binary centreontrapdforward by checking the configuration part of *centreontrapd*.

## CentCore

CentCore daemon must be running to forward information from Centreontrapd to the monitoring engine as an external command. Enable the debug mode via **Administration ==> Options ==> Debug** menu and restart process.

---

**Note:** You can edit debug severity level in `/etc/sysconfig/centcore` file.

---

If any external command are sent to the monitoring engine please check the path to “\$cmdFile” in `/etc/centreon/conf.pm` configuration file. The path should be `/var/lib/centreon/centcore.cmd` for a central Centreon server.

## Poller

The monitoring engine must receive external commands from Centcore process in order to change status and output of the passive service. Please check the event log. for Centreon Engine, the path is `/var/log/centreon-engine/centengine.log`. you should find lines as:

```
[1352838428] EXTERNAL COMMAND: PROCESS_SERVICE_CHECK_RESULT;Centreon-Server;Traps-SNMP;2;Critical pr
[1352838433] PASSIVE SERVICE CHECK: Centreon-Server;Traps-SNMP;2;Critical problem
```

If only the external command appears but not the consideration thereof by the scheduler (“PASSIVE SERVICE CHECK”), there may be a system clock problem synchronizing issue. The server is late and the order will be processed later, either in advance and the order will not be taken into account.

## Centreon

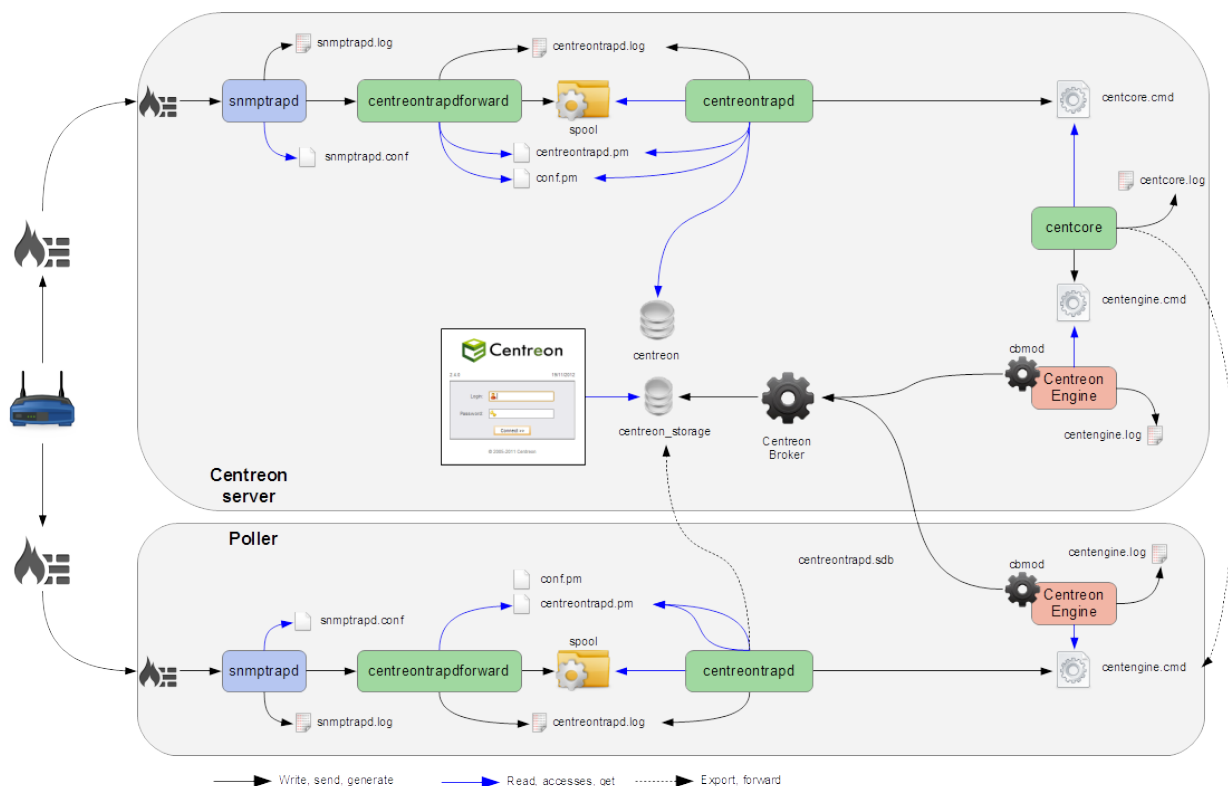
To display the result in Centreon the monitoring engine must forward using NEB module information to the broker to store them into database. Centreon will display result from “centreon\_storage” database. If you can reach Centreon web interface you must see the change of the output and maybe the status of the passive service. If any change appears a connection failure between the monitoring engine and the broker can be the root cause of this issue. Problems can be:

- The monitoring engine doesn’t load the NEB module to connect to the distant broker.
- The NEB module settings are wrong to connect to the distant broker.
- A firewall stops the connection.

## Detailed diagram

You will find below a detailed diagram of all the processes used and/or present at the reception of an SNMP trap:





## 8.11 Configuring Broker

This section aims to help user understand how Centreon Broker works and how it should be configured. It references Centreon's best practices and describe the various options used by Centreon Broker.

### 8.11.1 General Overview

Centreon Broker is at its core a simple multiplexing engine. It takes events from *Inputs* and send them to various *Outputs*. *Inputs* are typically other instances of Centreon Broker over TCP/IP, while *Outputs* can be a SQL database, other brokers, a BI/BAM engine, Centreon Map, etc.

Each *Input* or *Output* has a *type* that describe what it does and several parameters, some of them mandatory and other optional. Additionally, an *Output* can have a *Failover* that will start when the *Output* is in an error state to allow retention of data.

An important distinction to make is the standalone Centreon Broker versus a Centreon Broker installed as Centreon Engine's module. Both have the exact same capabilities and support the same *Inputs* and *Outputs*. The difference is that Centreon Broker configured as a module will be automatically started when Centreon Engine starts and automatically generates the events associated to this Centreon Engine. Often, those modules only have one *Output* to an instance of Centreon Broker acting as a concentrator.

### 8.11.2 Main Configuration Page

This section lists all the instances of Centreon Broker configured in your park, either in standalone or module mode. Each instance has a name, is associated with a poller, has a number of *Inputs*, *Outputs*, and *Loggers*, and can be 'enabled' or 'disabled'.

A poller of type 'Central' will have three instances of Centreon Broker by default. One Centreon Broker installed as a module for Centreon Engine (here called *central-module-master*), one Centreon Broker acting as a stand-alone concentrator (here called *central-broker-master*) and one Centreon Broker specialized in generating the RRD data used by the graphs (here called *central-rrd-master*). A best practice is to always use a separate instance of Centreon Broker to generate RRD data. This way, an issue in the RRD stack will not cause any issue in your main monitoring.

As expected, *central-module-master* has only one *Output* and zero *Input*. Configured as a module to Centreon Engine, it generates events on its own and forward them to the standalone instance of Centreon Broker.

A poller generally only have an instance of Centreon Broker, configured as a module for Centreon Engine.

### 8.11.3 Broker General Configuration Page

This section lists all the general options associated with an instance of Centreon Broker.

Main options:

**Poller** The poller where this instance lives.

**Name** The name of this instance.

**Config file name** The name of the configuration file used by this instance.

**Retention path** When an *Output* is in an error state, a *Failover* is launched. *Failovers* save data in files called retention files. Those in turn are saved in the directory specified here. Best practice is `/var/lib/centreon-broker/`

**Status** This is used to enable or disable this instance.

Log options:

**Write timestamp** If activated, each log entry is preceded by the timestamp of the time it was written down. This is useful to know when an error occurred. Best practice is 'Yes'.

**Write thread id** If activated, each log entry is preceded by the ID of the thread being executed at this instant. This is only useful for advanced debugging purpose. Best practice is 'No'.

Advanced Options:

**Statistics** Centreon Broker has a mechanism of on-demand status reporting that can be enabled here. This is used by Centreon Web to check the status of this instance at any time, to know which *Inputs* and *Outputs* are in an error state, and to generate various statistics on event processing. Best practice is 'Yes'.

**Correlation** Centreon Broker has a mechanism of top-level correlation. This should only be activated if top-level correlation has been properly configured in Centreon Web. In all other cases, default to 'No'.

**Event queue max size** The max size of the in-memory queue, in events. If the number of events in memory exceeds this number, Centreon Broker will start to use 'temporary files' to prevent Broker from using too much memory at the cost of additional disk I/O. The exact number can be tweaked to use more or less memory. A good default is '50000'.

If 'Statistics' is enabled, on-demand status can be queried manually through a file placed in `/var/lib/centreon-broker/name.stats`.

### 8.11.4 Broker Input Configuration Page

This section lists all the *Inputs* activated for this instance of Centreon Broker. Centreon Broker can have as many *Inputs* as needed.

Inputs read events from a TCP connection. All *Inputs* have the following parameters:

**Name** The name of the input. Must be unique.

**Serialization protocol** The protocol that was used to serialize the data. Can be either 'BBDO' or 'NDO'. NDO is an old textual protocol that suffers from very poor performance, poor density of data, and poor security. BBDO is a next-gen binary protocol that is performant and secure. NDO is deprecated. It should never be used in new installation. Best practice is 'BBDO'.

**Compression** If compression was used to serialize the data. Can be 'auto', 'yes', or 'no'. If left on 'auto' Centreon Broker will detect if compression was used while doing a TCP handshake (or assume no compression was used for files). Default to 'auto' for TCP, 'no' for files.

**Filter category** The categories of events accepted by this *Input*. If empty, no restriction on events accepted. If filled, only events of the given type will be processed. *Input* that accept data from Centreon Engines' Broker module should be set to accept only 'Neb' events.

**Connection Port** Which port will be used for the connection. Mandatory.

**Host to connect to** This important parameter will decide if this input will listen or attempt to initiate a connection. Left empty, this input will listen on its given port. If filled, this input will attempt to initiate a connection to the given host/port.

**Enable TLS encryption** Enable the encryption of the flux. For the encryption to work, the private key file, the public certificate and the trusted CA's certificate need to be set on both end. Default to 'auto', i.e 'no' unless TCP negotiation has been activated and the remote endpoint has activated encryption.

**Private Key File** The private key file used for the encryption.

**Public certificate** The public certificate used for the encryption.

**Trusted CA's certificate** The trusted CA certificate used for the encryption.

**Enable negociation** Enable negociation. If 'yes', this *Input* will try to negotiate encryption and compression with the remote endpoint.

**One peer retention mode** By default, a listening input will accept any number of incoming connections. In 'one peer retention' mode only one connection is accepted at the same time, on a first-come first-serve basis. Default to 'no'.

To reiterate, TCP *Input* can either listen on a given port or can attempt to initiate a connection if a host is given. This allow flexible network topology.

### 8.11.5 Broker Logger Configuration Page

This section lists all the loggers activated for this instance of Centreon Broker. Centreon Broker can have as many loggers as needed.

For each logger, the parameters are:

**Type** 4 types of loggers are managed by Centreon Broker.

1. 'File': This logger will write its log into the file specified into its 'name' parameter.
2. 'Standard': This logger will write into the standard output if named 'stdout' or 'cout' or into the standard error output if named 'stderr' or 'cerr'.
3. 'Syslog': This logger will write into the syslog as provided by the system, prefixed by 'centreonbroker'.
4. 'Monitoring': This logger will write into the log of Centreon Engine. It can only be activated if this instance of Centreon Broker is a module.

**Name** The name of this logger. This name must be the path of a file if the logger has the type 'File' or 'stdout', 'cout', 'stderr' or 'cerr' if the logger has the type 'Standard'. This option is mandatory.

**Configuration messages** Should configuration messages be logged? Configuration messages are one-time messages that pop-up when Centreon Broker is started. Default is 'Yes'.

**Debug messages** Should debug messages be logged? Debug messages are messages used to debug Broker's behavior. They are extremely verbose and should not be used in a production environment. Default is 'No'.

**Error messages** Should error messages be logged? Error messages are messages logged when a runtime error occurs. They are generally important. Default is 'Yes'.

**Informational messages** Should informational messages be logged? Informational messages are messages that are used to provide an information on a specific subject. They are somewhat verbose. Default is 'No'.

**Logging level** The level of the verbosity accepted by this logger. The higher the verbosity, the more messages will be logged. Default to 'Base'.

Additionally, the type 'File' has the following parameter:

**Max file size** The maximum size of log file in bytes. When the file has reached its limit, old data will be overwritten in a round robin fashion.

A Broker will usually have at least one 'File' logger which will log Configuration and Error messages. Others can be configured freely. A maximal logger (every category to 'Yes' and logging level to 'Very detailed') is valuable to debug some issues, but be warned that it will generate a very large amount of data quickly.

### 8.11.6 Broker Output Configuration Page

This section lists all the *Outputs* activated for this instance of Centreon Broker. Centreon Broker can have as many *Outputs* as needed.

For each *Outputs*, the parameters are:

**Type** There is a several types for *Outputs* managed by Centreon Broker.

1. 'TCP - IPV4' and 'TCP - IPV6': This *Output* forwards data to another server, either another Centreon Broker or Centreon Map.
2. File: This *Output* write data into a file.
3. RRD: This *Output* will generate RRD data from performance data.
4. Storage: This *Output* will write metrics into the database and generate performance data.
5. SQL: This *Output* will write real time status into Centreon's database.
6. Dumper Reader: This *Output* will read from a database when Broker is asked to synchronize databases.
7. Dumper Writer: This *Output* will write into a database when Broker is asked to synchronize databases.
8. BAM Monitoring: This *Output* will generate BAM data from raw events and update real time BAM status.
9. BAM Reporting: This *Output* will write long term BAM logs that can then be used by BI.

**Failover** A *Failover* is an *Output* that will be started when this *Output* is in error state. Example are TCP connections gone haywire, MySQL server suddenly disconnecting, etc. By default, each *Output* has an automatic *Failover* that will automatically store data in retention files and replay it when the primary *Output* recover from its error state. This is what you want in 99% of the case. Otherwise, you can specify here another *Output* that will act as a *Failover* if this is what you need.

**Retry interval** When this *Output* is in error state, this parameter control how much time the *Output* will wait before retrying. Default is one attempt every 30 seconds.

**Buffering timeout** When this *Output* is in error state, Centreon Broker will wait this much time before launching the *Failover*. This is mainly useful if you want to make Centreon Broker wait for another software to initialize before activating its *Failover*. In all other cases, this should not be used. Default is 0 seconds.

**Filter category** The categories of events accepted by this *Output*. If empty, no restriction on events accepted. If filled, only events of the given type will be processed. The exact best practices are *Output* specific.

1. 'BAM Reporting' should only accept 'Bam' events.
2. 'Dump Writer' should only accept 'Dumper' events.
3. 'RRD' should only accept 'Storage' events.

In all other cases, no restriction should be configured.

Events generated by an *Output* are reinjected into Centreon Broker's event queue.

Some *Outputs* only works when consuming data generated by another *Output*. A 'RRD' *Output* consumes data from a Storage *Output*, a 'Dumper Writer' consumes data from a 'Dumper Reader', and a 'BAM Reporting' *Output* consumes data from a 'BAM Monitoring' *Output*.

Centreon Web needs at least an active *Output* 'SQL' to activate its real time monitoring capabilities. The *Outputs* 'Storage' and 'RRD' are needed to activate Centreon Web metric plotting. The *Output* 'BAM Monitoring' is needed for real time BAM data and the *Output* 'BAM Reporting' for BI report.

Due to the fully distributed nature of Centreon Broker, producer and consumer *Outputs* can be located on logically or physically different instances, as long as they are connected to each other.

**Important:** Centreon Web 2.x features two databases, the configuration database and the real time database. Those are respectively called 'centreon' and 'centreon-storage'. Different *Outputs* expect different database in their configuration.

Output Type	Expected database
SQL	centreon-storage
Storage	centreon-storage
Dumper Reader	centreon
Dumper Writer	centreon
BAM Monitoring	centreon
BAM Reporting	centreon-storage

## TCP Outputs

TCP *Outputs* forward events to a remote endpoint. As with TCP *Inputs*, TCP *Output* can either listen on a given port or can attempt to initiate a connection if a host parameter is given. This allow flexible network topology.

*Outputs* of type 'TCP' have the following parameters:

**Serialization protocol** The protocol that will be used to serialize the data. Can be either 'BBDO' or 'NDO'. NDO is an old textual protocol that suffers from very poor performance, poor density of data, and poor security. BBDO is a next-gen binary protocol that is performant and secure. NDO is deprecated. It should never be used in new installation. Best practice is 'BBDO'.

**Enable negotiation** Enable negotiation. If 'yes', this *Output* will try to negotiate encryption and compression with the remote endpoint.

**Connection Port** Which port will be used for the connection. Mandatory.

**Host to connect to** This important parameter will decide if this *Output* will listen or attempt to initiate a connection. Left empty, this *Output* will listen on its given port. If filled, this *Output* will attempt to initiate a connection to the given host/port.

**Enable TLS encryption** Enable the encryption of the flux. For the encryption to work, the private key file, the public certificate and the trusted CA's certificate need to be set on both end. Default to 'auto', i.e 'no' unless TCP negotiation has been activated and the remote endpoint has activated encryption.

**Private Key File** The private key file used for the encryption.

**Public certificate** The public certificate used for the encryption.

**Trusted CA's certificate** The trusted CA certificate used for the encryption.

**One peer retention mode** By default, a listening *Output* will accept any number of incoming connections. In 'one peer retention' mode only one connection is accepted at the same time, on a first-come first-serve basis. Default to 'no'.

**Compression** If compression should be used to serialize the data. Can be 'auto', 'yes', or 'no'. If left on 'auto' Centreon Broker will detect if compression is supported by the endpoint during a TCP negotiation. Default to 'auto' for TCP.

**Compression Level** The level of compression that should be used, from 1 to 9. Default (or if not filled) is 6. The higher the compression level is, the higher the compression will be at the cost of processing power.

**Compression Buffer** The size of the compression buffer that should be used. Best practice is '0' or nothing.

## File Outputs

File *Outputs* send events into a file on the disk. Additionally, they have the capability of replaying the data of this file if used as a *Failover Output*. Most 'File' *Outputs* will be used as *Failovers*.

*Outputs* of type 'File' have the following parameters:

**Serialization protocol** The protocol that will be used to serialize the data. Can be either 'BBDO' or 'NDO'. NDO is an old textual protocol that suffers from very poor performance, poor density of data, and poor security. BBDO is a next-gen binary protocol that is performant and secure. NDO is deprecated. It should never be used in new installation. Best practice is 'BBDO'.

**File path** The path of the file being written to.

**Compression** If compression should be used to serialize the data. Can be 'auto', 'yes', or 'no'. 'auto' is equal to 'no' for files.

**Compression Level** The level of compression that should be used, from 1 to 9. Default (or if not filled) is 6. The higher the compression level is, the higher the compression will be at the cost of processing power.

**Compression Buffer** The size of the compression buffer that should be used. Best practice is '0' or nothing.

## RRD Outputs

RRD *Outputs* generate RRD data (used by Centreon Web to generate graphs) from metrics data generated by a 'Storage' *Output*. Best practice is to isolate this *Output* on its own instance of Centreon Broker to ensure that an issue in the RRD stack will not have any effect on the main instance of Centreon Broker.

*Outputs* of type 'RRD' have the following parameters:

**RRD file directory for metrics** The directory where the RRD files of the metrics will be written. A good default is `/var/lib/centreon/metrics/`.

**RRD file directory for statuses** The directory where the RRD files of the statuses will be written. A good default is `/var/lib/centreon/statuse/`

**TCP port** The port used by RRDCached, if RRDCached has been configured on this server. If not, nothing.

**Unix socket** The unix socket used by RRDCached, if RRDCached has been configured on this server. If not, nothing.

**Write metrics** Should RRD metric files be written? Default 'yes'.

**Write status** Should RRD status files be written? Default 'yes'.

## Storage Outputs

Perfdata storage *Outputs* save metric data into a database and generate RRD data used by the 'RRD' *Output*. This *Output* usually generates a lot of queries and is very performance intensive. If Centreon Broker is slow, tweaking the Maximum Queries Per Transaction parameter of this *Output* is the first optimization to attempt.

This *Output* can be tasked to rebuild 'RRD' data from a database of stored metric data. This is usually a costly, slow process, during which it is still able to process new metric data, though not as quickly.

*Outputs* of type 'Storage' have the following parameters:

**DB Type** The type of the database being accessed. MariaDB is a state-of-the-art database that has been extensively tested with Centreon. We advice the use of MariaDB.

**DB Port** The port of the database being accessed.

**DB User** The user used by this *Output* to connect to this database.

**DB Name** The name of this database. In Centreon term, this is the database containing the real-time monitoring data, generally called 'centreon-storage'.

**DB Password** The password used by this *Output* to connect to this database.

**Maximum queries per transaction** This parameter is used to batch several queries in large transaction. This allow fine performance tuning but can generate latency if not enough queries are generated to fill those batches. The Default is 20000 queries per transaction. If you have very low load and unexpectedly high latency, try lowering this number. If you have a very high load and high latency, try raising this number.

**Transaction commit timeout** How many seconds are allowed to pass before a forced commit is made. Default is infinite. If you have very low load and unexpectedly high latency, try 5 seconds.

**Replication enabled** Should Centreon Broker check that the replication status of this database is complete before trying to insert data in it? Only useful if replication is enabled for this database.

**Rebuild check interval in seconds** The amount of seconds between each rebuild check. Default 300 seconds.

**Store in performance data in data\_bin** Should this *Output* saves the metric data in the database? Default 'yes'. If 'no', this *Output* will generate RRD data without saving them into the database, making a rebuild impossible.

**Insert in index data** Insert new ids into the database. Default 'no'. This should never be modified unless prompted by Centreon Support or explicetely written down into a documentation.

## SQL Outputs

SQL *Outputs* save real time status data into the real time database used by Centreon Web. This is the most important *Output* for the operation of Centreon Web.

Moreover, this *Output* has a garbage collector that will clean old data from the database occasionally. This is an optional process, as old data is marked 'disabled', and can actually be useful to keep around for debugging purpose.

*Outputs* of type 'SQL' have the following parameters:

**DB Type** The type of the database being accessed. MariaDB is a state-of-the-art database that has been extensively tested with Centreon. We advice the use of MariaDB.

**DB Port** The port of the database being accessed.

**DB User** The user used by this *Output* to connect to this database.

**DB Name** The name of this database. In Centreon term, this is the database containing the real-time monitoring data, generally called 'centreon-storage'.

**DB Password** The password used by this *Output* to connect to this database.



**Maximum queries per transaction** This parameter is used to batch several queries in large transaction. This allow fine performance tuning but can generate latency if not enough queries are generated to fill those batches. The Default is 20000 queries per transaction. If you have very low load and unexpectedly high latency, try lowering this number. If you have a very high load and high latency, try raising this number.

**Transaction commit timeout** How many seconds are allowed to pass before a forced commit is made. Default is infinite. If you have very low load and unexpectedly high latency, try 5 seconds.

**Replication enabled** Should Centreon Broker check that the replication status of this database is complete before trying to insert data in it? Only useful if replication is enabled for this database.

**Cleanup check interval** How many seconds between each run of the garbage collector cleaning old data in the database? Default is never.

**Instance timeout** How many seconds before an instance is marked as 'unresponding' and all of its hosts and services marked as 'unknown'. Default is 300 seconds.

## Dumper Reader/Writer

A Dumper Reader/Writer pair is used to synchronize part of a database between two instances of Centreon Broker. In the future there will be an extensive synchronization mechanism, but today it is mainly used to synchronize BA for the BAM Poller Display mechanism.

The BAM Poller Display configuration documentation explains how to properly configure those *Outputs*.

*Outputs* of type 'Dumper Reader' and 'Dumper Writer' have the following parameters:

**DB Type** The type of the database being accessed. MariaDB is a state-of-the-art database that has been extensively tested with Centreon. We advice the use of MariaDB.

**DB Port** The port of the database being accessed.

**DB User** The user used by this *Output* to connect to this database.

**DB Name** The name of this database. In Centreon term, this is the database containing the configuration data, generally called 'centreon'.

**DB Password** The password used by this *Output* to connect to this database.



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## **How to Monitor ?**

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With Centreon, you can monitor many environments of your IT systems. Serveurs, applications, UPS, website, network equipments: all this systems have their specificities. That's why the Centreon Company provides Plugin packs based on Centreon Plugins. In order to help you to implement you monitoring easily, this documentation section will give you keys to setup them into you Centreon.

If you have experiences that you want to share to the Centreon community, please don't hesitate to push it on Github. Your howto will be integrated into official Centreon Documentation.



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## Upgrade

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This chapter describes how to upgrade your Centreon monitoring platform.

This procedure is linked to your initial version of centreon. You will have to use package if you installed using CES and sources files if you installed from sources. Before upgrading Centreon, please don't forget to make a backup.

### 10.1 Upgrade using RPM

The CES v3.3 includes Centreon web 2.7, Centreon Engine 1.5, Centreon Broker 2.11 and are based on CentOS 6 operating system.

#### 10.1.1 Prerequisites

The prerequisites for Centreon web 2.7 are evolved. It is strongly recommended to follow the instructions to set up your platform: **Centreon advises you to use MariaDB** instead of MySQL.

Software	Version
MariaDB	>= 5.5.35
MySQL	>= 5.1.73

#### 10.1.2 Dependent software

The following table describes the dependent software:

Software	Version
Apache	2.2
GnuTLS	>= 2.0
Net-SNMP	5.5
openssl	>= 1.0.1e
PHP	>= 5.3.0
Qt	>= 4.7.4
RRDtools	1.4.7
zlib	1.2.3

## Upgrade

### Stop Centreon components

**Warning:** Before to start the update, check if you don't have any Centreon-Broker retention files.

Stop Centreon Broker and Centreon Engine on **all poller**:

```
# /etc/init.d/centengine stop
# /etc/init.d/cbd stop
```

### Update components

In order to update the Centreon monitoring interface, simply run the following command:

```
# yum update centreon
```

**Warning:** If you encounter dependency problems with centreon-engine-webservices, please remove this RPM that is now deprecated. Run the following line: `# yum remove centreon-engine-webservices`

If you come from Centreon 2.7.0-RC2, in order to avoid the rpm naming problem please launch the following command line:

```
# yum downgrade centreon-2.7.0 centreon-plugins-2.7.0 centreon-base-config-centreon-engine-2.7.0
```

### Restart web server

Due to the installation of PHP-intl it is necessary to restart the Apache web server to load new extension.

```
# /etc/init.d/httpd restart
```

### Conclude update via Centreon web interface

Connect to your Centreon web interface and follow instructions to update Centreon's databases. During this process a new configuration file will be created.

## 1 - Centreon Upgrade



You are about to upgrade Centreon. The entire process should take around ten minutes.  
It is strongly recommended to make a backup of your databases before going any further.

[Refresh](#) [Next](#)

Presentation

**Check dependencies** This step checks the dependencies on php modules.

## 2 - Dependency check up



Module name	File	Status
MySQL	mysql	Loaded
GD	gd	Loaded
LDAP	ldap	Loaded
XML Writer	xmlwriter	Loaded
MB String	mbstring	Loaded
SQLite	pdo_sqlite	Loaded
INTL	intl	Loaded

[Back](#) [Refresh](#) [Next](#)

## Centreon 2.7.0<sub>1</sub>

The 2.7.0 release for Centreon Web is now available for [download](#). The full release notes for 2.7.0 follow:

### Features and Bug Fixes<sub>1</sub>

- Changing the graphic charter to be consistent with the new logo Centreon
- Flat design (CSS and icons)
- Custom view improvement
  - Adding an editing or visualization mode
  - Graphic widgets relief to be able to put more on a page
- Adding a fullscreen mode
- Menu Review for improved navigation and simplified user actions
- Review of pages dedicated hosts and services pages in monitoring to include more informations.
- Redesign of the reporting page
- Recasting bar searches and filters in each page of Centreon
- Redesign Event Logs page (removing treeview + Added search system + Improved performances)
- Redesign view page (removing treeview + Added search system + Improved performances)
- Merging downtimes pages for hosts and services
- Merging comments pages for hosts and services
- Integration of a graphics module to replace a non-performing component QuickForm (Improved forms on multi element selection)
- Simplifying the configuration of Centreon Broker (Temporary and Failover are automatically configured + enhanced best practices)
- Ergonomic improvement of the configurations objects:
  - Improved hosts form
  - Improved services form
  - Improved management macros: dynamic form system that provides the necessary inherited macros templates for proper operation of the configuration
  - Added ability to set a description of each macro used in commands
  - Review of the pathway for the generation of the configuration
  - Automatic creation of a configuration file for the poller when it is created
- Deleting configuration options in the Administration section, now automatically configured. This simplifies the handling of Centreon
- Improved ACL system (Improved performances)
- Native integration of Centreon CLAPI
- Improved documentation
  - Redesign Configuration part
  - Redesign Exploitation part
  - Integration of the API part

#### Release notes

**Upgrade the database** This step upgrades database model and data, version by version.

## 4 - Installation



Currently upgrading database... please do not interrupt this process.

Step	Status
2.6.6 to 2.7.0-RC1	OK
2.7.0-RC1 to 2.7.0-RC2	OK
2.7.0-RC2 to 2.7.0	OK

Next

## 5 - Upgrade finished



Congratulations, you have successfully upgraded to Centreon version 2.7.0.

Refresh Finish

Finish

### Generate and export configuration to all poller

To conclude the installation it is necessary to generate Centreon Engine and Centreon Broker configuration. To perform this operation go to **Configuration > Poller** menu and click on the generate configuration icon (new icon).

**Note:** The generate page was removed from Centreon web. You have to select your poller and to click on the new icon.

### Restart all Centreon components on all poller

Start Centreon Broker and Centreon Engine on **all poller**:

```
# /etc/init.d/centengine start
# /etc/init.d/cbd start
```

Then, if all is ok, go on the Centreon interface and log out and follow the steps :

### 10.1.3 The identified risks during update

To reduce risks and issues during update to Centreon web 2.7 linked to Centreon Engine 1.5 and Centreon Broker 2.11 we shared to you a list of known issues. Please check this points during and after your upgrade.

- Dependency issue between Centreon Engine and Centreon Broker because this two components (Centreon Broker 2.11.0 and Centreon Engine 1.5.0) are prerequisites for Centreon web 2.7.0
- Update databases global schema issue
- Change database engine from MyISAM to InnoDB for all tables (except logs and data\_bin tables)
- Update hostgroup and servicegroup tables schemas
- The Centreon Broker temporaries and failovers are now manage by Centreon web by default. It may have a conflict with existing configuration of Centreon Broker. Please check the configuration and logs of all Centreon Broker to be sure that all broker are running and no data are lost.
- Browser cache issue: you have to clean browser cache after Centreon web migration and just after first connection.
- PHP dependency issue: a new PHP component is needed by Centreon web interface. You have to restart Apache web server.
- Incompatibility with Centreon modules already installed. Since v2.7.0 version Centreon web interface have a new look. If you have modules please don't upgrade Centreon web.
- Generation of configuration issue: the Centreon configuration generation engine was entirely rewritten. There is therefore a risk of errors in the exported configurations
- Abrupt change from NDOutils to Centreon Broker during Centreon web 2.7.0 update. Centreon web 2.7.0 is no more compatible with Nagios and NDOutils. Numerus issues will appear if you want to update your platform based on Nagios and NDOutils.

## 10.2 From sources

In order to upgrade Centreon from sources, *download* the latest Centreon package.

### 10.2.1 Shell installation

Extract the package:

```
$ tar xvfz centreon-2.x.x.tar.gz
```

Change the directory:

```
$ cd centreon-2.x.x
```

Run the upgrade script:

```
$ ./install -u /etc/centreon
```

Where /etc/centreon is to be replaced by configuration directory.



## Prerequisites check

If [Step 01] is successful, you should not have any problem here. Otherwise, go back to [Step 01] and install the prerequisites:

```
#####
#
#                               Centreon (www.centreon.com)                               #
#                               Thanks for using Centreon                               #
#
#                               v2.6.6                                                 #
#
#                               infos@centreon.com                                     #
#
#                               Make sure you have installed and configured           #
#                               sudo - sed - php - apache - rrdtool - mysql            #
#
#####
-----
          Checking all needed binaries
-----
rm                                OK
cp                                OK
mv                                OK
/bin/chmod                        OK
/bin/chown                        OK
echo                              OK
more                              OK
mkdir                             OK
find                              OK
/bin/grep                         OK
/bin/cat                          OK
/bin/sed                          OK
-----
          Detecting old installation
-----
Finding configuration file in: /etc/centreon          OK
You seem to have an existing Centreon.
```

## Main components

Load the previous installation parameters:

```
Do you want to use the last Centreon install parameters ?
[y/n], default to [y]:
> y
```

```
Using: /etc/centreon/instCentCore.conf
/etc/centreon/instCentPlugins.conf
/etc/centreon/instCentStorage.conf
/etc/centreon/instCentWeb.conf
```

Answer y to components you want to upgrade:

```
Do you want to install : Centreon Web Front
[y/n], default to [n]:
> y
```

```

Do you want to install : Centreon CentCore
[y/n], default to [n]:
> y

Do you want to install : Centreon Nagios Plugins
[y/n], default to [n]:
> y

Do you want to install : Centreon Snmp Traps process
[y/n], default to [n]:
> y
Convert variables for upgrade:

```

## Upgrade Centreon Web Front

New information is required.

The path to binaries for Centreon Web:

```

-----
Start CentWeb Installation
-----

```

```

Where is your Centreon binaries directory
default to [/usr/local/centreon/bin]
>
Path /usr/local/centreon/bin                                OK

```

The path for extra data for Centreon Web:

```

Where is your Centreon data information directory
default to [/usr/local/centreon/data]
>

Do you want me to create this directory ? [/usr/local/centreon/data]
[y/n], default to [n]:
> y
Path /usr/local/centreon/data                                OK
/usr/bin/perl
Finding Apache user :                                       www-data
Finding Apache group :                                     www-data

```

The group of Centreon applications : This group is used for access rights between monitoring applications:

```

What is the Centreon group ? [centreon]
default to [centreon]
>

Do you want me to create this group ? [centreon]
[y/n], default to [n]:
> y

```

The user of Centreon applications:

```

What is the Centreon user ? [centreon]
default to [centreon]
>

Do you want me to create this user ? [centreon]

```

```
[y/n], default to [n]:  
> y
```

The user of broker module.

This user is used for adding rights to Centreon on the configuration and logs directories. If left empty, it will use the Monitoring Engine user instead.

For example:

- Centreon Broker : *centreon-broker*
- ndo2db : *nagios*

```
What is the Broker user ? (optional)  
>
```

The path to monitoring engine log directory.

For example:

- Centreon Engine : */var/log/centreon-engine*
- Nagios : */var/log/nagios*

```
What is the Monitoring engine log directory ?  
> /var/log/nagios
```

The path to monitoring plugins:

```
Where is your monitoring plugins (libexec) directory ?  
default to [/usr/lib/nagios/plugins]  
>
```

```
Path /usr/lib/nagios/plugins                                OK  
Add group centreon to user www-data                        OK  
Add group centreon to user nagios                          OK  
Add group nagios to user www-data                          OK  
Add group nagios to user centreon                          OK
```

```
-----  
Configure Sudo  
-----
```

The path to Monitoring engine init script.

For example :

- Centreon Engine : */etc/init.d/centengine*
- Nagios : */etc/init.d/nagios*

```
What is the Monitoring engine init.d script ?  
> /etc/init.d/nagios
```

The path to broker module configuration directory.

For example :

- Centreon Broker : */etc/centreon-broker*
- NDO : */etc/nagios*

Where is the configuration directory for broker module ?  
> /etc/nagios

The path to broker daemon init script.

For example :

- Centreon Broker : */etc/init.d/cbd*
- *ndo2db* : */etc/init.d/ndo2db*

Where is the init script for broker module daemon ?  
> /etc/init.d/ndo2db  
Your sudo has been configured previously

Replace or not your sudoers file. For more security, you can backup the file **/etc/sudoers**.

Do you want me to reconfigure your sudo ? (WARNING)  
[y/n], default to [n]:  
> y  
Configuring Sudo OK

```
-----
      Configure Apache server
-----
Create '/etc/apache2/conf.d/centreon.conf' OK
Configuring Apache OK

Do you want to reload your Apache ?
[y/n], default to [n]:
> y
Reloading Apache service OK
Preparing Centreon temporary files
Change right on /usr/local/centreon/log OK
Change right on /etc/centreon OK
Change macros for insertBaseConf.sql OK
Change macros for sql update files OK
Change macros for php files OK
Change right on /etc/nagios3 OK
Disconnect users from WebUI
All users are disconnected OK
Copy CentWeb in system directory
Install CentWeb (web front of centreon) OK
Change right for install directory
Change right for install directory OK
Install libraries OK
Write right to Smarty Cache OK
Copying libinstall OK
Change macros for centreon.cron OK
Install Centreon cron.d file OK
Change macros for centAcl.php OK
Change macros for downtimeManager.php OK
Change macros for eventReportBuilder.pl OK
Change macros for dashboardBuilder.pl OK
Install cron directory OK
Change right for eventReportBuilder.pl OK
Change right for dashboardBuilder.pl OK
Change macros for centreon.logrotate OK
Install Centreon logrotate.d file OK
Prepare export-mysql-indexes OK
```

```

Install export-mysql-indexes          OK
Prepare import-mysql-indexes          OK
Install import-mysql-indexes          OK
Prepare indexes schema                OK
Install indexes schema                OK

```

#### ----- Pear Modules -----

```

Check PEAR modules
PEAR          1.4.9      1.9.4      OK
DB            1.7.6      1.7.14     OK
DB_DataObject 1.8.4      1.10.0     OK
DB_DataObject_FormBuilder 1.0.0RC4   1.0.2      OK
MDB2          2.0.0      2.4.1      OK
Date          1.4.6      1.4.7      OK
HTML_Common   1.2.2      1.2.5      OK
HTML_QuickForm 3.2.5      3.2.13     OK
HTML_QuickForm_advmultiselect 1.1.0      1.5.1      OK
HTML_Table    1.6.1      1.8.3      OK
Archive_Tar   1.1        1.3.7      OK
Auth_SASL     1.0.1      1.0.6      OK
Console_Getopt 1.2        1.2.3      OK
Net_SMTP      1.2.8      1.6.1      OK
Net_Socket    1.0.1      1.0.10     OK
Net_Traceroute 0.21       0.21.3     OK
Net_Ping      2.4.1      2.4.5      OK
Validate      0.6.2      0.8.5      OK
XML_RPC       1.4.5      1.5.5      OK
SOAP          0.10.1     0.13.0     OK
Log           1.9.11     1.12.7     OK
Archive_Zip   0.1.2      0.1.2      OK
All PEAR modules OK

```

#### ----- Centreon Post Install -----

```

Create /usr/local/centreon/www/install/install.conf.php OK
Create /etc/centreon/instCentWeb.conf      OK
Convert variables for upgrade:

```

## Upgrade Centreon Storage

New information is required.

#### ----- Start CentStorage Installation -----

```

Preparing Centreon temporary files
/tmp/centreon-setup exists, it will be moved...
install www/install/createTablesCentstorage.sql OK
CentStorage status Directory already exists    PASSED
CentStorage metrics Directory already exists    PASSED
Change macros for centstorage binary            OK
Install CentStorage binary                      OK
Install library for centstorage                 OK
Change right : /var/run/centreon                OK

```

```

Change macros for centstorage init script          OK
Replace CentCore default script Macro             OK

Do you want me to install CentStorage init script ?
[y/n], default to [n]:
> y
CentStorage init script installed                  OK
CentStorage default script installed               OK

Do you want me to install CentStorage run level ?
[y/n], default to [n]:
> y
update-rc.d: using dependency based boot sequencing
insserv: warning: current start runlevel(s) (3 5) of script 'centstorage' overwrites defaults (2 3 4)
Change macros for logAnalyser                      OK
Install logAnalyser                                OK
Change macros for logAnalyser-cbroker              OK
Install logAnalyser-cbroker                        OK
Change macros for nagiosPerfTrace                  OK
Install nagiosPerfTrace                           OK
Change macros for purgeLogs                        OK
Install purgeLogs                                  OK
Change macros for purgeCentstorage                 OK
Install purgeCentstorage                           OK
Change macros for centreonPurge.sh                 OK
Install centreonPurge.sh                           OK
Change macros for centstorage.cron                 OK
Install CentStorage cron                           OK
Change macros for centstorage.logrotate            OK
Install Centreon Storage logrotate.d file          OK
Create /etc/centreon/instCentStorage.conf          OK
Convert variables for upgrade:

```

## Upgrade Centreon Core

New information is required.

```

-----
Start CentCore Installation
-----
Preparing Centreon temporary files
/tmp/centreon-setup exists, it will be moved...
Change CentCore Macro                             OK
Copy CentCore in binary directory                  OK
Change right : /var/run/centreon                    OK
Change right : /var/lib/centreon                    OK
Change macros for centcore.logrotate                OK
Install Centreon Core logrotate.d file              OK
Replace CentCore init script Macro                  OK
Replace CentCore default script Macro              OK

Do you want me to install CentCore init script ?
[y/n], default to [n]:
> y
CentCore init script installed                      OK
CentCore default script installed                   OK

```

```

Do you want me to install CentCore run level ?
[y/n], default to [n]:
> y
update-rc.d: using dependency based boot sequencing
insserv: warning: current start runlevel(s) (3 5) of script 'centcore' overwrites defaults (2 3 4 5)
Create /etc/centreon/instCentCore.conf OK
Convert variables for upgrade:

```

## Upgrade Centreon Plugins

New information is required.

```

-----
Start CentPlugins Traps Installation
-----
Finding Apache user :                               www-data
Preparing Centreon temporary files
/tmp/centreon-setup exists, it will be moved...
Change macros for CentPluginsTraps                  OK
Change macros for init scripts                      OK
Installing the plugins Trap binaries                 OK
Backup all your snmp files                          OK
Change macros for snmptrapd.conf                    OK
Change macros for snmptt.ini                       OK
SNMPTT init script installed                       OK
SNMPTT default script installed                    OK
update-rc.d: using dependency based boot sequencing
Install : snmptrapd.conf                            OK
Install : snmp.conf                                OK
Install : snmptt.ini                               OK
Install : snmptt                                    OK
Install : snmptthandler                            OK
Install : snmpttconvertmib                         OK
Generate SNMPTT configuration                      OK
Create /etc/centreon/instCentPlugins.conf           OK

```

The end of upgrade:

```

#####
#
#           Go to the URL : http://localhost/centreon/
#           to finish the setup
#
#       Report bugs at https://github.com/centreon/centreon/issues
#
#           Thanks for using Centreon.
#           -----
#           Contact : infos@centreon.com
#           http://www.centreon.com
#
#####


```

## 10.2.2 Web installation

During the web installation, follow these steps.

## Presentation

### 1 - Centreon Upgrade



You are about to upgrade Centreon. The entire process should take around ten minutes.


It is strongly recommended to make a backup of your databases before going any further.

[Refresh](#) [Next](#)

## Check dependencies

This step checks the dependencies on php modules.

### 2 - Dependency check up



Module name	File	Status
MySQL	mysql	Loaded
GD	gd	Loaded
LDAP	ldap	Loaded
XML Writer	xmlwriter	Loaded
MB String	mbstring	Loaded
SQLite	pdo_sqlite	Loaded
INTL	intl	Loaded

[Back](#) [Refresh](#) [Next](#)



### 3 - Release notes



## Centreon 2.7.0<sub>1</sub>

The 2.7.0 release for Centreon Web is now available for [download](#). The full release notes for 2.7.0 follow:


### Features and Bug Fixes<sub>1</sub>

- Changing the graphic charter to be consistent with the new logo Centreon
- Flat design (CSS and icons)
- Custom view improvement
  - Adding an editing or visualization mode
  - Graphic widgets relief to be able to put more on a page
- Adding a fullscreen mode
- Menu Review for improved navigation and simplified user actions
- Review of pages dedicated hosts and services pages in monitoring to include more informations.
- Redesign of the reporting page
- Recasting bar searches and filters in each page of Centreon
- Redesign Event Logs page (removing treeview + Added search system + Improved performances)
- Redesign view page (removing treeview + Added search system + Improved performances)
- Merging downtimes pages for hosts and services
- Merging comments pages for hosts and services
- Integration of a graphics module to replace a non-performing component QuickForm (Improved forms on multi element selection)
- Simplifying the configuration of Centreon Broker (Temporary and Failover are automatically configured + enhanced best practices)
- Ergonomic improvement of the configurations objects:
  - Improved hosts form
  - Improved services form
  - Improved management macros: dynamic form system that provides the necessary inherited macros templates for proper operation of the configuration
  - Added ability to set a description of each macro used in commands
  - Review of the pathway for the generation of the configuration
  - Automatic creation of a configuration file for the poller when it is created
- Deleting configuration options in the Administration section, now automatically configured. This simplifies the handling of Centreon
- Improved ACL system (Improved performances)
- Native integration of Centreon CLAPI
- Improved documentation
  - Redesign Configuration part
  - Redesign Exploitation part
  - Integration of the API part

## Upgrade the database

This step upgrades database model and data, version by version.

**4 - Installation**




Currently upgrading database... please do not interrupt this process.

Step	Status
2.6.6 to 2.7.0-RC1	OK
2.7.0-RC1 to 2.7.0-RC2	OK
2.7.0-RC2 to 2.7.0	OK

Next

## Finish

**5 - Upgrade finished**



Congratulations, you have successfully upgraded to Centreon version 2.7.0.

Refresh Finish

## 11.1 Administration

### 11.1.1 How does the *Empty all services data* action work?

In order to preserve global performance, this action won't remove all data from the database right after you launched it. Entries will be removed from `index_data` and `metrics` tables but not from `data_bin`.

The main reason for that is `data_bin` quickly stores a huge amount of data and uses the MyISAM engine which doesn't support per-row locking. If you try to remove too many entries simultaneously, you could block all your database for several hours.

Anyway, it doesn't mean the data will stay into your database indefinitely. It will be removed in the future, depending on your data retention policy.

### 11.1.2 No graph seems to be generated, what should I look into?

There are various things to check when RRDs don't seem to be generated.

#### Disk space

By default, the graph files (`.rrd`) are stored in `/var/lib/centreon/metrics`, it is obviously necessary to have enough space in your filesystem.

#### Permissions

Can the `.rrd` files be written in the `/var/lib/centreon/metrics` directory? Process that usually writes in this directory is either `centstorage` or `cbd`.

#### Plugins

Does your plugin return the correct output? Refer to the [Plugin API documentation](#) for more information

## If you are using NDOUtils

Make sure that `centstorage` is running:

```
$ /etc/init.d/centstorage status
centstorage (pid 30276) is running...
```

The `service-perfdata` path of your poller must be correctly set in `Configuration > Centreon`

Also this path must match with the one in the `process-service-perfdata` plugin:

```
$ head -43 plugin_path/process-service-perfdata | tail -1
PERFFILE="/var/log/centreon-engine/service-perfdata"
```

## If you are using Centreon Broker

Centreon Broker must be configured properly, refer to this *documentation* for more information.

The `cbd rrd` daemon must be running:

```
$ /etc/init.d/cbd status
* cbd_central-rrd is running
```

Make sure to have the *Start script for broker daemon* parameter filled in `Administration > Options > Monitoring`.

# 11.2 Performance

This is a guide on improving Centreon's performance

## 11.2.1 Databases

The database server is one of the central components of Centreon. Its performance has a direct impact on the end user application's speed. Centreon uses two or three databases depending on your monitoring broker:

- `centreon` – Storing metadata
- `centreon_storage` – Real-time monitoring and history
- `centreon_status` – Real-time monitoring for `ndo2db`

The database `centreon_status` is installed even if you don't use `ndo2db`.

## Indexes

Databases use indexes to speed up queries. In case indexes are missing queries are executed slower.

## Synchronizing indexes

Starting with Centreon 2.4.0 for each release, index information files are generated. They are found in `data` folder usually located next to the `bin` or `www` folders. They are JSON files and there is one for each database:

- `centreonIndexes.json` – Indexes for `centreon` database
- `centreonStorageIndexes.json` – Indexes for `centreon_storage` database

- `centreonStatusIndexes.json` – Indexes for `centreon_status` database

Check if your database is desynchronized:

```
$ cd CENTREONBINDIR
$ ./import-mysql-indexes -d centreon -i ../data/centreonIndexes.json
```

If any differences are detected you can synchronize your database. The process usually takes several minutes **BUT if your database contains a lot of data and no index exists the process may take up to 2 hours**. Make sure you have enough free space on the disk because indexes may require a lot of space:

```
$ ./import-mysql-indexes -d centreon -i ../data/centreonIndexes.json -s
```

---

**Note:** Indexes used by foreign keys cannot be synchronized.

`-s` or `--sync` options should be used in order to alter the database. If you need to specify the username and/or password you can use `-u` and `-p` options respectively.

---

## InnoDB optimizations

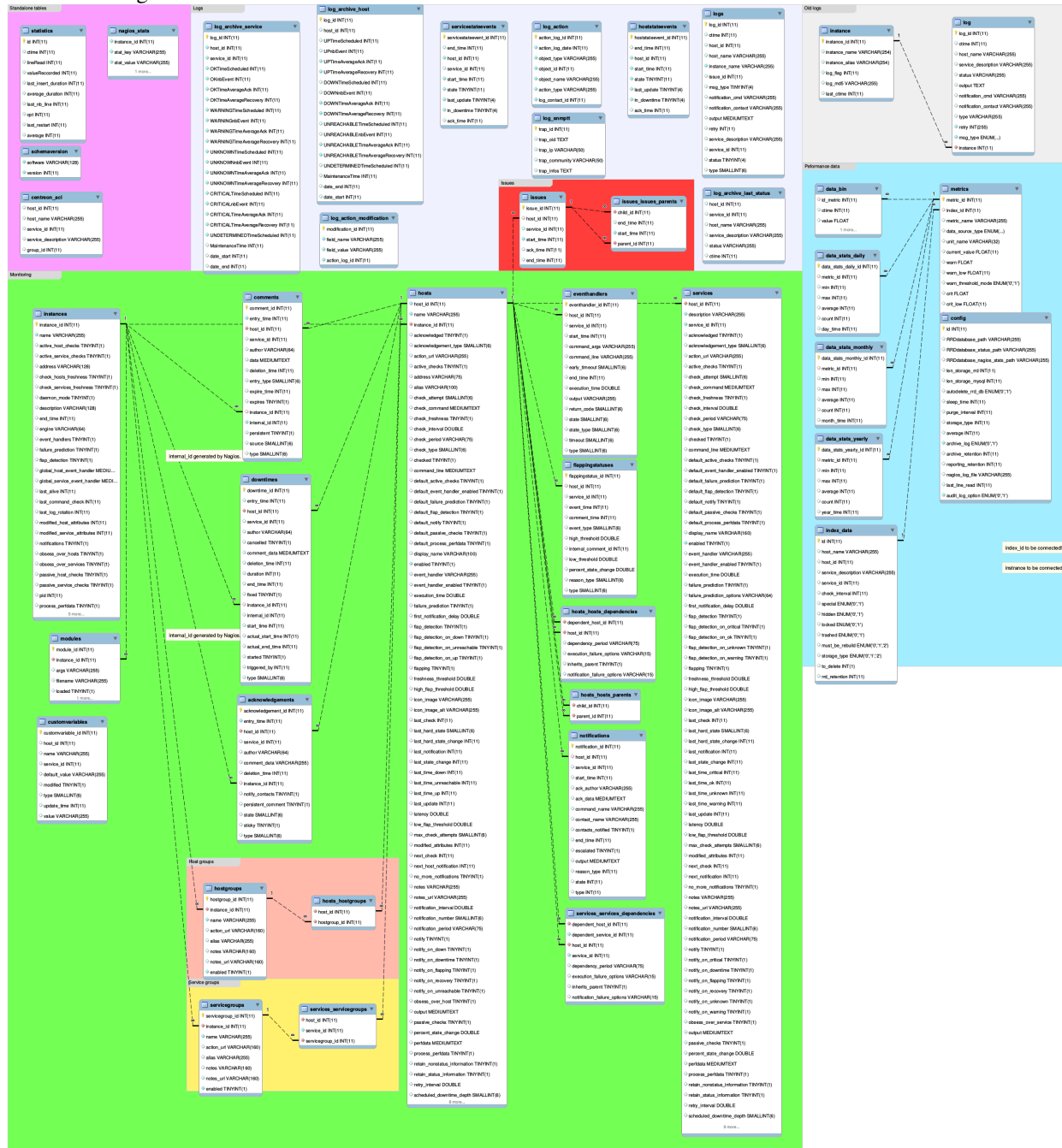
This section is not documented yet.

## Databases schema

Centreon database schema can be view here :



Centreon storage database schema can be view here :



## 11.2.2 RRDCacheD

RRDCacheD is a process to reduce disk I/O during the update of performance's graphs and status' graphs. The RRDCacheD process is loaded by the Centreon Broker module and mutualise I/O disques instead of recording one by one the data from the collect.

## Installation

The RRDCacheD process is available in **rrdtool** package and already installed on your server.

## Configuration

### Main settings

Edit the `/etc/sysconfig/rrdcached` file and complete information:

```
# Settings for rrdcached
OPTIONS="-m 664 -l unix:/var/rrdtool/rrdcached/rrdcached.sock -s rrdcached -b /var/rrdtool/rrdcached"
RRDC_USER=rrdcach
```

**Note:** The order of setting is pretty important. If **-m 664** is defined before **-l unix:/var/rrdtool/rrdcached/rrdcached.sock** option then rights will be incorrect on socket.

Options are following one:

Option	Description
-w	Data are written every x seconds on disk (3600s in example represent 1h)
-z	Should be less than <b>-w</b> option. RRDCacheD uses a range value from [0:-z] to do not write in RRDs in same time.
-f	Timeout in cache before write data to disk.

**Note:** Please modify values with your needs.

### Groups configuration

Create groups using commands:

```
# usermod -a -g rrdcached centreon-broker
# usermod -a -g rrdcached apache
# usermod -a -g centreon rrdcached
# usermod -a -g centreon-broker rrdcached
```

Restart Apache process:

```
# /etc/init.d/httpd restart
```

Start RRDCacheD process:

```
# /etc/init.d/rrdcached start
```

### Centreon web configuration

Go to **Administration -> Options -> RRDTool** menu, enable process and set unix socket path:

Rrdcached configuration : work only with Centreon Broker	
Enable RRDCached	<input checked="" type="radio"/> Yes <input type="radio"/> No
TCP Port	<input type="text"/>
UNIX Socket path	<input type="text" value="/var/rrdtool/rrdcached/rrdcached.sock"/>



**Warning:** Instead of configuration was made into **Administration** you need to generate and export configuration of central server and restart cbd process to apply changes.

Output 1 - RRD file generator	
② Nom *	RRDFile
② RRD file directory for metrics	/var/lib/centreon/metrics/
② Failover name	
② RRD file directory for statuses	/var/lib/centreon/status/
② Retry interval	
② Buffering timeout	
② Unix socket	/var/rrdtool/rrdcached/rrdcached.sock
② TCP port	
② Write metrics	<input type="radio"/> No <input checked="" type="radio"/> Yes
② Write status	<input type="radio"/> No <input checked="" type="radio"/> Yes
② Filter category	<div><div>Available</div><div><div>BAM</div><div>Correlation</div><div>Neb</div><div>Storage</div></div><div><div>Add</div><div>Remove</div></div><div>Selected</div></div>

### Centreon web interface

RRDCacheD don't update performance's graphs in real time. If a blanc range appear on right of performance's graphs it means that cache are not yet written to disk.

**Warning:** If the **RRDCacheD process crash** (in theory because it's a stable process) data will be lost! It is not possible to get data unless rebuild all graphs from Centreon web.



## 12.1 How to write a module

You want to create a new module for Centreon 2 or to adapt an existing one? You're at the right place!

You should know Centreon contains a page dedicated to the installation and the uninstallation of modules (*Administration > Modules*). To make the module appears on this page, its directory must be placed inside Centreon's `modules/` directory. Example:

```
/usr/local/centreon/www/modules/module-Dummy
```

An empty module template can be found inside [Centreon's repository](#).

### 12.1.1 Basis

The essential elements your module's directory must contain are presented below (\* = required):

**[conf.php]\*:**

```
// Short module's name. Must be equal to your module's directory name
$module_conf['dummy']['name'] = "dummy";
// Full module's name
$module_conf['dummy']['rname'] = "Dummy Module";
// Module's version
$module_conf['dummy']['mod_release'] = "2.0";
// Additional information
$module_conf['dummy']['infos'] = "First of all";
// Allow your module to be uninstalled
$module_conf['dummy']['is_removeable'] = "1";
// Module author's name
$module_conf['dummy']['author'] = "Centreon Team";
// 1: the module executes an SQL file for installation and/or uninstallation
// 0: the module doesn't execute any SQL file
$module_conf['dummy']['sql_files'] = "1";
// 1: the module executes a PHP file for installation and/or uninstallation
// 0: the module doesn't execute any SQL file
$module_conf['dummy']['php_files'] = "1";
```

**[infos > infos.txt]**

This file can contain various information about your module.

**[php > install.php]**

This PHP file is executed at module installation if it is configured inside the *conf.php* file.

#### [php > uninstall.php]

This PHP file is executed at module uninstallation if it is configured inside the *conf.php* file.

#### [sql > install.sql]

This SQL file is executed during the module installation if it is configured inside the *conf.php* file. If you want your module to be available from Centreon menus, you must insert new entries into the `topology` table of the `centreon` database. An example is available inside the `Dummy` module.

#### [sql > uninstall.sql]

This SQL file is executed during the module uninstallation if it is configured inside the *conf.php* file. It can also remove your module from Centreon menus.

#### [generate\_files > \*.php]

The PHP files contained inside the `generate_files` directory will be executed during the monitoring engine configuration files generation (inside *Configuration > Monitoring Engines*). Those files must generate configuration files.

#### [UPGRADE > dummy-x.x > sql > upgrade.sql]

Centreon provides an upgrade system for modules. To use it, just add a directory under `UPGRADE` named using the following pattern: `<module name>-<version>`. When clicking on the upgrade button, Centreon will search for scripts to execute, following the logical order of versions.

For example, if the version 1.0 of the dummy module is installed and the following directories exist:

```
$ ls UPGRADE
dummy-1.1 dummy-1.2
```

Centreon will execute the scripts in the following order : 1.1, 1.2. A configuration file in each upgrade directory is present in order to allow (or not) the execution.

You're free to organize the remaining files (your module's content) as you like.

## 12.1.2 Advanced

That's great, you know how to install a module! As an empty module is not really usefull, put your imagination at work. Knowing that you can do almost everything, it should not be too complicated :-).

### Connecting to the database

You can use the `centreon`, `centstorage` and `ndo` databases by calling the following file: `centreon/www/class/centreonDB.class.php`.

For example, execute requests like this:

```
<?
$pearDB = new CentreonDB();
$pearDB->query("SELECT * FROM host");
?>
```

## Existing functions

You can access most of the functions already developed within Centreon using `include()` statements. They're generally stored in `centreon/www/class/`.

Before developing your own function, check the existing code, it could spare your time!

## 12.2 How to write a widget

Centreon (since version 2.4) offers a custom view system which allows user to view one or different widgets in the same page : *Home > Custom views*.

You may have specific needs that are not yet covered by our widget catalog and this tutorial will explain to you how to write your first widget for Centreon.

### 12.2.1 Should I make a widget or a module?

If you are wondering if you should be making a module or a widget, then ask yourself if your project is meant to contain many menus or is it rather a plain page which is going to display little information?

Of course, you could make a widget that would only work with a certain module.

### 12.2.2 Directory structure

Widgets work pretty much like Modules. They have to be placed in the following directory:

```
# centreon/www/widgets/name-of-your-widget/
```

Your widget must contain one mandatory file named **configs.xml** at its root.

### 12.2.3 Configuration file

This is the XML configuration file of our Dummy widget:

```
<configs>
  <title>Dummy</title>
  <author>Centreon</author>
  <email>contact@centreon.com</email>
  <website>http://www.centreon.com</website>
  <description>Dummy widget</description>
  <version>1.0.3</version>
  <keywords>dummy, widget, centreon</keywords>
  <screenshot></screenshot>
  <thumbnail>./widgets/dummy/resources/logoCentreon.png</thumbnail>
  <url>./widgets/dummy/index.php</url>
  <autoRefresh></autoRefresh>
  <preferences>
    <preference label="text preference" name="text preference" defaultValue="default value" type="text"/>
    <preference label="boolean preference" name="boolean preference" defaultValue="1" type="boolean"/>
    <preference label="date" name="date" defaultValue="" type="date"/>
    <preference label="host preference" name="host preference" defaultValue="" type="host"/>
    <preference label="list preference" name="list preference" defaultValue="none" type="list">
      <option value="all" label="all"/>
    </preference>
  </preferences>
</configs>
```

```

        <option value="none" label="none"/>
    </preference>
    <preference label="range preference" name="range preference" defaultValue="5" type="range">
    <preference label="host search" name="host search" defaultValue="notlike _Module_%" type="text">
</preferences>
</configs>

```

Now, let's see what these tags refer to.

## Basic tags

\* = Mandatory tag

Tag	nameDescription
title*	Title of your widget
author*	Your name
email	Your email address
website	URL of your project
description*	Short description of your widget
version*	Version of your widget. Increment this number whenever you publish a new version.
keywords	A few key words that describe your widget
screenshot	Screenshot that shows the best side of your widget. Screenshot should be placed within your widget directory.
thumbnail	Logo of your project. Best size is 100px x 25px. Thumbnail should be placed within your widget directory.
url*	Path of the main page of your widget
autorefresh	This parameter is not implemented yet

## Parameter attributes

\* = Mandatory parameter

Tag attributes	Description
label*	Label of the parameter
name*	Name of the parameter that will be used for retrieving its value
defaultValue*	Default Value of the parameter
requirePermission	Value can be "1" or "0". When set to 1, this parameter will not be shown to unauthorized users.
type*	Parameter type, must be one of the following: text,boolean,date,list,range,compare,host,hostgroup,hostTemplate,servicegroup,serviceTemplate
min*	For range type only. It refers to the minimum value of the range parameter
max*	For range type only. It refers to the maximum value of the range parameter
step*	For range type only. It refers to the step value of the range parameter

## Parameter type

Type name	Description
text	Renders a text input element
boolean	Renders a checkbox
date	Renders two text input elements. One for the date of start, the other one for the date of end.
list	Renders a selectbox. The selectbox will be populated with the option tags which have to be defined within the preference tag.
range	Renders a selectbox which will be populated with values depending on the min, max and step definitions.
compare	Renders a selectbox and a text input. Selectbox will contain SQL operands such as: > : greater than < : less than >= : greater or equal <= : less or equal = : equal != : not equal LIKE : can be used with the wildcard % NOT LIKE : can be used with the wildcard %
host	Renders a selectbox populated with a list of hosts.
hostgroup	Renders a selectbox populated with a list of hostgroups.
hostTemplate	Renders a selectbox populated with a list of host templates.
servicegroup	Renders a selectbox populated with a list of servicegroups.
serviceTemplate	Renders a selectbox populated with a list of service templates.

The preference window would look like this as a result:

Widget Preferences for

text preference	<input type="text" value="default value"/>
boolean preference	<input checked="" type="checkbox"/>
date	<input type="text"/> to <input type="text"/>
host preference	<input type="text"/>
list preference	<input type="text" value="none"/>
range preference	<input type="text" value="5"/>
host search	<input type="text" value="NOT LIKE"/> <input type="text" value="_Module_%"/>

Apply
 Reset

## 12.2.4 Code

All languages are separated in different files, one file for each language. The file “configs.xml” call the php’s file and the php’s file call html’s file etc...

We use Smarty, it’s an engine and template’php compiler (<http://smarty.net>).

To use Smarty you need to :

1.configuration of smarty:

2.creating php template to be use in html:

3.affectation of html's file to execute:

To call template php's variable in the html look dummy.ihtml

To do request in database:

initialization of databases's centreon, centreon storage and recovering preferences:

```
try {  
    global $pearDB;  
  
    $db_centreon = new CentreonDB("centreon");  
    $db = new CentreonDB("centstorage");  
    $pearDB = $db_centreon;  
  
    $widgetObj = new CentreonWidget($centreon, $db_centreon);  
    $preferences = $widgetObj->getWidgetPreferences($widgetId);  
    $autoRefresh = 0;  
    if (isset($preferences['refresh_interval'])) {  
        $autoRefresh = $preferences['refresh_interval'];  
    }  
} catch (Exception $e) {  
    echo $e->getMessage() . "<br/>";  
    exit;  
}
```

then request in database with class' methods.



Contents:

## 13.1 CLAPI

Centreon CLAPI is a Centreon API that enables users to configure their monitoring system through command lines.

This documentation aims to introduce all the actions you can perform with Centreon CLAPI, from adding host objects to restarting a remote monitoring poller.

Contents:

### 13.1.1 Overview

Centreon CLAPI aims to offer (almost) all the features that are available on the user interface in terms of configuration.

#### Features

- Add/Delete/Update objects such as hosts, services, host templates, host groups, contacts etc...
- Generate configuration files
- Test configuration files
- Move configuration files to monitoring pollers
- Restart monitoring pollers
- Import and export objects

#### Basic usage

All actions in Centreon CLAPI will require authentication, so your commands will always start like this:

```
# cd /usr/share/centreon/www/modules/centreon-clapi/core
# ./centreon -u admin -p centreon [...]
```

Obviously, the **-u** option is for the username and the **-p** option is for the password. If your passwords are encoded with SHA1 in database, use the **-s** option:



```

[1440681047] [15559] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440681047] [15559] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440681047] [15559] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440681047] [15559] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440681047] [15559] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440681047] [15559] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440681047] [15559] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440681047] [15559] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440681047] [15559] Reading resource file '/usr/share/centreon/filesGeneration/nagiosCFG/5/resource
[1440681047] [15559] Checking global event handlers...
[1440681047] [15559] Checking obsessive compulsive processor commands...
[1440681047] [15559]
[1440681047] [15559] Checked 55 commands.
[1440681047] [15559] Checked 0 connectors.
[1440681047] [15559] Checked 7 contacts.
[1440681047] [15559] Checked 0 host dependencies.
[1440681047] [15559] Checked 0 host escalations.
[1440681047] [15559] Checked 0 host groups.
[1440681047] [15559] Checked 1 hosts.
[1440681047] [15559] Checked 0 service dependencies.
[1440681047] [15559] Checked 0 service escalations.
[1440681047] [15559] Checked 0 service groups.
[1440681047] [15559] Checked 1 services.
[1440681047] [15559] Checked 5 time periods.
[1440681047] [15559]
[1440681047] [15559] Total Warnings: 1
[1440681047] [15559] Total Errors: 0

```

-----  
Return code end : 0

## Move monitoring engine configuration files

In order to move configuration files for poller “Local Poller” of id 1 to the final engine directory, use the **CFGMOVE** command:

```

[root@centreon core]# ./centreon -u admin -p centreon -a CFGMOVE -v 2
OK: All configuration will be send to 'Remote Poller' by centcore in several minutes.
Return code end : 1

```

You can move the configuration files using the poller name:

```

[root@centreon core]# ./centreon -u admin -p centreon -a CFGMOVE -v "Remote Poller"
OK: All configuration will be send to 'Remote Poller' by centcore in several minutes.
Return code end : 1

```

## Restart monitoring engine of a poller

In order to restart the monitoring process on poller “Local Poller” of id 1, use the the **POLLERRESTART** command:

```

[root@centreon core]# ./centreon -u admin -p centreon -a POLLERRESTART -v 2
OK: A restart signal has been sent to 'Remote Poller'
Return code end : 1

```

You can restart the poller using its name:

```
[root@centreon core]# ./centreon -u Remote Poller -p centreon -a POLLERRESTART -v "Remote Poller"
OK: A restart signal has been sent to 'Remote Poller'
Return code end : 1
```

## All in one command

Use the **APPLYCFG** command in order to execute all of the above with one single command:

```
[root@centreon core]# ./centreon -u admin -p centreon -a APPLYCFG -v 1
```

You can execute using the poller name:

```
[root@centreon core]# ./centreon -u admin -p centreon -a APPLYCFG -v "Remote Poller"
```

This will execute **POLLERGENERATE**, **POLLERTEST**, **CFGMOVE** and **POLLERRESTART**.

## Reload monitoring engine of a poller

In order to reload the monitoring process on poller “Remote Poller” of id 2, use the **POLLERRELOAD** command:

```
[root@centreon core]# ./centreon -u admin -p centreon -a POLLERRELOAD -v 2
OK: A reload signal has been sent to Remote Pollerpoller'
Return code end : 1
```

You can reload poller using its name:

```
[root@centreon core]# ./centreon -u admin -p centreon -a POLLERRELOAD -v "Remote Poller"
OK: A reload signal has been sent to 'Remote Poller'
Return code end : 1
```

## Execute post generation commands of a poller

In order to execute post generation commands of a poller, use the **POLLEREXECCMD** command:

```
[root@centreon core]# ./centreon -u admin -p centreon -a POLLEREXECCMD -v 2
Running configuration check...done.
Reloading nagios configuration...done
```

You can execute post generation commands of a poller using its name:

```
[root@centreon core]# ./centreon -u admin -p centreon -a POLLEREXECCMD -v "Remote Poller"
Running configuration check...done.
Reloading nagios configuration...done
```

## Perform an all-in-one command

It is possible to perform the following commands all at the same time: **POLLERGENERATE**, **POLLERTEST**, **CFGMOVE**, **POLLERRESTART** and **POLLEREXECCMD**.

In order to do that, use the **APPLYCFG** command:

```
[root@centreon core]# ./centreon -u admin -p centreon -a APPLYCFG -v 5
2015-08-27 16:52:32 - APPLYCFG
Configuration files generated for poller '5'
```

Warning: Nagios Poller 5 can restart but configuration is not optimal. Please see debug bellow :

OK: All configuration will be send to 'Remote Poller' by centcore in several minutes.

```
[root@centreon core]# ./centreon -u admin -p centreon -a APPLYCFG -v "Remote Poller"
2015-08-27 16:54:46 - APPLYCFG
Configuration files generated for poller 'Remote Poller'
```

```

-----
[1440687287] [18877] Reading main configuration file '/usr/share/centreon//filesGeneration/nagiosCFG/5/
[1440687287] [18877] Warning: temp_path variable ignored
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Processing object config file '/usr/share/centreon/filesGeneration/nagiosCFG/5/
[1440687287] [18877] Reading resource file '/usr/share/centreon/filesGeneration/nagiosCFG/5/resource
[1440687287] [18877] Checking global event handlers...
[1440687287] [18877] Checking obsessive compulsive processor commands...
[1440687287] [18877]
[1440687287] [18877] Checked 55 commands.
[1440687287] [18877] Checked 0 connectors.
[1440687287] [18877] Checked 7 contacts.
[1440687287] [18877] Checked 0 host dependencies.
[1440687287] [18877] Checked 0 host escalations.
[1440687287] [18877] Checked 0 host groups.
[1440687287] [18877] Checked 1 hosts.
[1440687287] [18877] Checked 0 service dependencies.
[1440687287] [18877] Checked 0 service escalations.
[1440687287] [18877] Checked 0 service groups.
[1440687287] [18877] Checked 1 services.
[1440687287] [18877] Checked 5 time periods.
[1440687287] [18877]
[1440687287] [18877] Total Warnings: 1
[1440687287] [18877] Total Errors: 0
-----

```

OK: All configuration will be send to 'Remote Poller' by centcore in several minutes.

Return code end : 1

### 13.1.3 Object management

#### ACL

##### Overview

Object name: **ACL**

##### Reload

In order to reload ACL, use the **RELOAD** command:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACL -a reload
```

##### Lastreload

In order to check when the ACL was last reloaded, use the **LASTRELOAD** command:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACL -a lastreload
1329833702
```

If you wish to get a human readable time format instead of a timestamp, use the following command:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACL -a lastreload -v "d-m-Y H:i:s"
21-02-2012 15:17:01
```

You can change the date format:

Format character	Description
d	Day
m	Month
Y	Year
H	Hour
i	Minute
s	Second

#### Action ACL

##### Overview

Object name: **ACLACTION**

##### Show

In order to list available ACL Actions, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLACTION -a show
id;name;description;activate
1;Simple User;Simple User;1
[...]
```

Columns are the following:

Column	Description
ID	
Name	
Description	
Activate	1 when ACL Action is enabled, 0 otherwise

## Add

In order to add an ACL Action, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLACTION -a add -v "ACL Action test;my descrip
```

Required fields:

Column	Description
Name	
Description	

## Del

If you want to remove an ACL Action, use the **DEL** action. The Name is used for identifying the ACL Action to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLACTION -a del -v "ACL Action test"
```

## Setparam

If you want to change a specific parameter of an ACL Action, use the **SETPARAM** action. The Name is used for identifying the ACL Action to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLACTION -a setparam -v "ACL Action test;desc
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL action rule
2	Parameter name
3	Parameter value

Parameters that you may change are the following:

Column	Description
name	
description	
activate	1 when ACL Action is enabled, 0 otherwise

## Getaclgroup

If you want to retrieve the ACL Groups that are linked to a specific ACL Action, use the **GETACLGROUP** command.

Arguments are composed of the following columns:



Order	Column description
1	Name of ACL action rule

Example::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLACTION -a getaclgroup -v "ACL Action test"
id;name
1;ALL
3;Operators
```

## Grant and Revoke

If you want to grant or revoke actions in an ACL Action rule definition, use the following commands: **GRANT**, **REVOKE**.

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL action rule
2	Actions to grant/revoke

Example::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLACTION -a grant -v "ACL Action test;host_ac
```

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLACTION -a revoke -v "ACL Action test;host_s
```

The ‘\*’ wildcard can be used in order to grant or revoke all actions::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLACTION -a grant -v "ACL Action test;*"

```

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLACTION -a revoke -v "ACL Action test;*"

```

Below is the list of actions that you can grant/revoke:

Action	Description
global_event_handler	Permission to globally enable/disable event handlers
global_flap_detection	Permission to globally enable/disable flap detection
global_host_checks	Permission to globally enable/disable host active checks
global_host_obsess	Permission to globally enable/disable obsess over host
global_host_passive_checks	Permission to globally enable/disable host passive checks
global_notifications	Permission to globally enable/disable notifications
global_perf_data	Permission to globally enable/disable performance data
global_restart	Permission to restart the monitoring engine
global_service_checks	Permission to globally enable/disable service active checks
global_service_obsess	Permission to globally enable/disable obsess over service
global_service_passive_checks	Permission to globally enable/disable service passive checks
global_shutdown	Permission to shut down the monitoring engine
host_acknowledgement	Permission to acknowledge hosts
host_checks	Permission to enable/disable host active checks
host_checks_for_services	Permission to enable/disable active checks of a host's services
host_comment	Permission to put comments on hosts
host_event_handler	Permission to enable/disable event handlers on hosts
host_flap_detection	Permission to enable/disable flap detection on hosts
host_notifications	Permission to enable/disable notification on hosts

Continued on next page

Table 13.1 – continued from previous page

Action	Description
host_notifications_for_services	Permission to enable/disable notification on hosts' services
host_schedule_check	Permission to schedule a host check
host_schedule_downtime	Permission to schedule a downtime on a host
host_schedule_forced_check	Permission to schedule a host forced check
host_submit_result	Permission to submit a passive check result to a host
poller_listing	Permission to see the Poller list on the monitoring console
poller_stats	Permission to see the poller statistics (on top screen)
service_acknowledgement	Permission to acknowledge services
service_checks	Permission to enable/disable service active checks
service_comment	Permission to put comments on services
service_event_handler	Permission to enable/disable event handlers on services
service_flap_detection	Permission to enable/disable flap detection on services
service_notifications	Permission to enable/disable notification on services
service_passive_checks	Permission to enable/disable service passive checks
service_schedule_check	Permission to schedule a service check
service_schedule_downtime	Permission to schedule a downtime on a service
service_schedule_forced_check	Permission to schedule a service forced check
service_submit_result	Permission to submit a passive check result to a service
top_counter	Permission to see the quick status overview (top right corner of the screen)

## ACL Groups

### Overview

Object name: **ACLGROUP**

### Show

In order to list available ACL Groups, use the **SHOW** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a show
id;name;alias;activate
1;ALL;ALL;1
[...]
```

Columns are the following :

Column	Description
ID	ID
Name	Name
Alias	Alias
Activate	1 when ACL Group is enabled, 0 otherwise

### Add

In order to add an ACL Group, use the **ADD** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a add -v "ACL Group test;my alias"
```

Required fields are:

Column	Description
Name	Name
Alias	Alias

## Del

If you want to remove an ACL Group, use the **DEL** action. The Name is used for identifying the ACL Group to delete::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a del -v "ACL Group test"
```

## Setparam

If you want to change a specific parameter of an ACL Group, use the **SETPARAM** action. The Name is used for identifying the ACL Group to update::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a setparam -v "ACL Group test;alias;name"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL Group
2	Parameter name
3	Parameter value

Parameters that you may change are:

Column	Description
name	
alias	
activate	1 when ACL Group is enabled, 0 otherwise

## Getmenu

If you want to retrieve the Menu Rules that are linked to a specific ACL Group, use the **GETMENU** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a getmenu -v "ACL Group test"
id;name
1;Configuration
3;Reporting
4;Graphs
2;Monitoring + Home
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group

## Getaction

If you want to retrieve the Action Rules that are linked to a specific ACL Group, use the **GETACTION** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a getaction -v "ACL Group test"
id;name
1;Simple action rule
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group

## Getresource

If you want to retrieve the Resource Rules that are linked to a specific ACL Group, use the **GETRESOURCE** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a getresource -v "ACL Group test"
id;name
1;All Resources
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group

## Getcontact and Getcontactgroup

If you want to retrieve the Contacts that are linked to a specific ACL Group, use the **GETCONTACT** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a getcontact -v "ACL Group test"
id;name
1;user1
```

If you want to retrieve the Contact Groups that are linked to a specific ACL Group, use the **GETCONTACTGROUP** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a getcontactgroup -v "ACL Group test"
id;name
1;usergroup1
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group

## Setmenu, Setaction, Setresource, Addmenu, Addaction, Addresource

If you want to link rules to a specific ACL Group, use the following actions: **SETMENU**, **SETACTION**, **SETRESOURCE**, **ADDMENU**, **ADDACTION**, **ADDRESOURCE**:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a setmenu -v "ACL Group test;Menu rule"

[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a addresource -v "ACL Group test;All Resources"
```

Command type	Description
set*	Overwrites previous definitions. Use the delimiter   to set multiple rules
add*	Appends new rules to the previous definitions. Use the delimiter   to add multiple rules

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group
2	Name of the ACL rule to link

### Delmenu, Delaction, Delresource

If you want to remove rules from a specific ACL Group, use the following actions: **DELMENU**, **DELACTION**, **DELRESOURCE**:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a delaction -v "ACL Group test;Ack r
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group
2	Name of the ACL rule to remove

### Setcontact, Setcontactgroup, Addcontact, Addcontactgroup

If you want to link contacts or contact groups to a specific ACL Group, use the following actions: **SETCONTACT**, **SETCONTACTGROUP**, **ADDCONTACT**, **ADDCONTACTGROUP**:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a setcontact -v "ACL Group test;user
```

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a addcontactgroup -v "ACL Group test,
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group
2	Contact/Contact group to add/set

Command type	Description
set*	Overwrites previous definitions. Use the delimiter   to set multiple contacts/contact groups
add*	Appends new contacts/contact groups to the previous definitions. Use the delimiter   to add multiple rules

### Delcontact, Delcontactgroup

If you want to remove rules from a specific ACL Group, use the following actions: **DELCONTACT**, **DELCONTACTGROUP**:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLGROUP -a delcontact -v "ACL Group test;user
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group
2	Contact/Contact group to remove from ACL group

## Menu ACL

### Overview

Object name: **ACLMENU**

### Show

In order to list available ACL Menus, use the **SHOW** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLMENU -a show
id;name;alias;comment;activate
1;Configuration;Configuration;;1
2;Monitoring + Home;Monitoring + Home;;1
3;Reporting;Reporting;;1
4;Graphs;Graphs;just a comment;1
[...]
```

Columns are the following :

Column	Description
ID	ID
Name	Name
Alias	Alias
Comment	Comment
Activate	1 when ACL Menu is enabled, 0 otherwise

### Add

In order to add an ACL Menu, use the **ADD** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLMENU -a add -v "ACL Menu test;my alias"
```

Required fields are:

Column	Description
Name	Name
Alias	Alias

### Del

If you want to remove an ACL Menu, use the **DEL** action. The Name is used for identifying the ACL Menu to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLMENU -a del -v "ACL Menu test"
```

### Setparam

If you want to change a specific parameter of an ACL Menu, use the **SETPARAM** action. The Name is used for identifying the ACL Menu to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLMENU -a setparam -v "ACL Menu test;alias;my"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL menu rule
2	Parameter name
3	Parameter value

Parameters that you may change are:

Column	Description
name	Name
alias	Alias
activate	1 when ACL Menu is enabled, 0 otherwise

## Getaclgroup

If you want to retrieve the ACL Groups that are linked to a specific ACL Menu, use the **GETACLGROUP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLMENU -a getaclgroup -v "ACL Menu test"
id;name
1;ALL
3;Operators
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL menu rule

## Grant and Revoke

If you want to grant or revoke menus in an ACL Menu rule definition, use the following actions: **GRANT**, **REVOKE**

Let's assume that you would like to grant full access to the [Monitoring] menu in your ACL Menu rule::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLMENU -a grant -v "ACL Menu test;Monitoring"
```

Then, you would like to grant access to the [Home] > [Nagios statistics] menu::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLMENU -a grant -v "ACL Menu test;Home;Nagios"
```

Then, you decide to revoke access from [Monitoring] > [Event Logs]::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLMENU -a revoke -v "ACL Menu test;Monitoring;Event Logs"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL menu rule
2	Menu name to grant/revoke
n	Possible sub menu name

## Resource ACL

### Overview

Object name: **ACLRESOURCE**

## Show

In order to list available ACL Resources, use the **SHOW** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLRESOURCE -a show
id;name;alias;comment;activate
1;All Resources;All Resources;;1
[...]
```

Columns are the following :

Column	Description
ID	ID
Name	Name
Alias	Alias
Comment	Comment
Activate	1 when ACL Resource is enabled, 0 otherwise

## Add

In order to add an ACL Resource, use the **ADD** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLRESOURCE -a add -v "ACL Resource test;my al
```

Required fields are:

Column	Description
Name	Name
Alias	Alias

## Del

If you want to remove an ACL Resource, use the **DEL** action. The Name is used for identifying the ACL Resource to delete::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLRESOURCE -a del -v "ACL Resource test"
```

## Setparam

If you want to change a specific parameter of an ACL Resource, use the **SETPARAM** action. The Name is used for identifying the ACL Resource to update::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLRESOURCE -a setparam -v "ACL Resource test;a
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL resource rule
2	Parameter name
3	Parameter value

Parameters that you may change are:



Column	Description
name	Name
alias	Alias
activate	1 when ACL Resource is enabled, 0 otherwise

### Getaclgroup

If you want to retrieve the ACL Groups that are linked to a specific ACL Resource, use the **GETACLGROUP** action::

```
[root@centreon ~]# ./centreon -u admin -p centreon -o ACLRESOURCE -a getaclgroup -v "ACL Resource test"
id;name
1;ALL
3;Operators
```

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group

### Grant and revoke

Arguments are composed of the following columns:

Order	Column description
1	Name of ACL group
2	Name of resource

If you want to grant or revoke resources in an ACL Resource rule definition, use the following commands:

Command	Description	Example	Wildcard '*' supported
grant_host	Put host name(s)	[...] -a grant_host -v "ACL Resource Test;srv-esx"	Yes
grant_hostgroup	Put hostgroup name(s)	[...] -a grant_hostgroup -v "ACL Resource Test;Linux servers"	Yes
grant_servicegroup	Put servicegroup name(s)	[...] -a grant_servicegroup -v "ACL Resource Test;Ping"	Yes
grant_metaservice	Put metaservice name(s)	[...] -a grant_metaservice -v "ACL Resource Test;Traffic Average"	No
addhostexclusion	Put host name(s)	[...] -a addhostexclusion -v "ACL Resource Test;srv-test srv-test2"	No
revoke_host	Put host name(s)	[...] -a revoke_host -v "ACL Resource Test;srv-esx"	Yes
revoke_hostgroup	Put hostgroup name(s)	[...] -a revoke_hostgroup -v "ACL Resource Test;Linux servers"	Yes
re-voke_servicegroup	Put servicegroup name(s)	[...] -a revoke_servicegroup -v "ACL Resource Test;Ping"	Yes
re-voke_metaservice	Put metaservice name(s)	[...] -a revoke_metaservice -v "ACL Resource Test;Traffic Average"	Yes
addfilter_instance	Put instance name(s)	[...] -a addfilter_instance -v "ACL Resource Test;Monitoring-2"	No
addfilter_hostcategory	Put host category name(s)	[...] -a addfilter_hostcategory -v "ACL Resource Test;Customer-1"	No
addfilter_servicecategory	Put service category name(s)	[...] -a addfilter_servicecategory -v "ACL Resource Test;System"	No
delfilter_instance	Put instance name(s)	[...] -a delfilter_instance -v "ACL Resource Test;Monitoring-2"	Yes
delfilter_hostcategory	Put host category name(s)	[...] -a delfilter_hostcategory -v "ACL Resource Test;Customer-1"	Yes
delfilter_servicecategory	Put service category name(s)	[...] -a delfilter_servicecategory -v "ACL Resource Test;System"	Yes

**Note:** Use delimiter "|" for defining multiple resources.

## Centreon broker

### Overview

Object name: **CENTBROKERCFG**

### Show

In order to list available Centreon Broker CFG, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a show
config id;config name;instance
1;Central CFG;Central
2;Sattelite CFG;Sattelite
[...]
```

Columns are the following:

Order	Description
1	ID
2	Name of configuration
3	Instance that is linked to broker cfg

## Add

In order to add a Centreon Broker CFG, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a add -v "broker cfg for poller"
```

Required fields are:

Order	Description
1	Name of configuration
2	Instance that is linked to broker cfg

## Del

If you want to remove a Centreon Broker CFG, use the **DEL** action. The Name is used for identifying the configuration to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a del -v "broker cfg for poller"
```

## Setparam

If you want to change a specific parameter of a Centreon Broker configuration, use the **SETPARAM** action. The configuration name is used for identifying the configuration to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a setparam -v "broker cfg for poller"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of Centreon Broker configuration
2	Parameter name
3	Parameter value

Parameters that you may change are:

Column	Description
filename	Filename of configuration (.xml extension)
name	Name of configuration
instance	Instance that is linked to Centreon Broker CFG
event_queue_max_size	Event queue max size (when number is reached, temporary output will be used).
retention_path	Path for retention and temporary files
stats_activate	Enable statistics (0 or 1)
correlation_activate	Enable correlation (0 or 1)

## Listinput, Listoutput, Listlogger, Listcorrelation, Listtemporary and Liststats

If you want to list specific input output types of Centreon Broker, use one of the following commands: listinput listoutput listlogger listcorrelation liststats

Example:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a listoutput -v "broker cfg for p
id;name
1;Storage
2;RRD
3;PerfData
```

Columns are the following :

Column	Description
ID	I/O ID
Name	I/O Name

### Getinput, Getoutput, Getlogger, Getcorrelation, Gettemporary and Getstats

In order to get parameters of a specific I/O object, use one of the following commands:

- getinput
- getoutput
- getlogger
- getcorrelation
- getstats

Example:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a getoutput -v "broker cfg for p
parameter key;parameter value
db_host;localhost
db_name;centreon_storage
db_password;centreon
db_port;3306
db_type;mysql
db_user;centreon
failover;15552000
interval;60
length;
name;PerfData
type;storage
```

The ID is used for identifying the I/O to get.

Columns are the following :

Order	Description
1	Parameter key of the I/O
2	Parameter value of the I/O

### Addinput, Addoutput, Addlogger, Addcorrelation, Addtemporary and Addstats

In order to add a new I/O object, use one of the following commands:

- ADDINPUT
- ADDOUTPUT

- **ADDLOGGER**
- **ADDCORRELATION**
- **ADDTEMPORARY**
- **ADDSTATS**

Example:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a addlogger -v "broker cfg for p
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a listlogger -v "broker cfg for
id;name
1;/var/log/centreon-broker/central-module.log
```

Arguments are composed of the following columns:

Order	Column description
1	Name of Centreon Broker CFG
2	Name of the I/O object
3	Nature of I/O object

#### **Delinput, Deloutput, Dellogger, Delcorrelation, Deltemporary and Delstats**

In order to remove an I/O object from the Centreon Broker configuration, use one of the following commands:

- **DELINPUT**
- **DELOUTPUT**
- **DELLOGGER**
- **DELCORRELATION**
- **DELTEMPORARY**
- **DELSTATS**

Example:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a dellogger -v "broker cfg for p
```

The I/O ID is used for identifying the object to delete.

#### **Setinput, Setoutput, Setlogger, Setcorrelation, Settemporary and Setstats**

In order to set parameters of an I/O object, use one of the following commands:

- **SETINPUT**
- **SETOUTPUT**
- **SETLOGGER**
- **SETCORRELATION**
- **SETTEMPORARY**
- **SETSTATS**

Example:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a setcorrelation -v "broker cfg"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of Centreon Broker CFG
2	ID of I/O object
3	Parameter name
4	Parameter value, for multiple values, use the "," delimiter

You may get help with the following CLAPI commands:

- **GETTYPELIST**
- **GETFIELDLIST**
- **GETVALUELIST**

Example:

```
[root@localhost core]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a gettypelist -v "output"
type id;short name;name
16;sql;Broker SQL Database
11;file;File
3;ipv4;IPv4
10;ipv6;IPv6
15;local_client;Local Client Socket
12;local_server;Local Server Socket
14;storage;Perfdata Generator (Centreon Storage)
13;rrd;RRD File Generator
```

```
[root@localhost core]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a getfieldlist -v "ipv4"
field id;short name;name
3;ca_certificate;Trusted CA's certificate;text
2;host;Host to connect to;text
46;negociation;Enable negociation;radio
48;one_peer_retention_mode;One peer retention;radio
1;port;Connection port;int
4;private_key;Private key file.;text
12;protocol*;Serialization Protocol;select
5;public_cert;Public certificate;text
6;tls;Enable TLS encryption;radio
```

---

**Note:** Note that the “protocol” entry is followed by a star. This means that you have to use one of the possible values.

---

This is how you get the list of possible values of a given field:

```
[root@localhost core]# ./centreon -u admin -p centreon -o CENTBROKERCFG -a getvaluelist -v "protocol"
possible values
ndo
```

The following chapters describes the parameters of each Object type

**correlation** correlation:

ID	Label	Description	Possible values
file	Correlation file	Path to the correlation file which holds host, services, dependencies and parenting definitions.	•
retention	Retention file	File where correlation state will be stored during correlation engine restart	•

**input** ipv4:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
category	Filter category	Category filter for flux in input	•
ca_certificate	Trusted CA's certificate	Trusted CA's certificate.	•
host	Host to connect to	IP address or hostname of the host to connect to (leave blank for listening mode).	•
one_peer_retention_mode	One peer retention	This allows the retention to work even if the socket is listening	•
port	Connection port	Port to listen on (empty host) or to connect to (with host filled).	•
private_key	Private key file.	Private key file path when TLS encryption is used.	•
protocol	Serialization protocol	Serialization protocol.	•
public_cert	Public certificate	Public certificate file path when TLS encryption is used.	•
tls	Enable TLS encryption	Enable TLS encryption.	•

ipv6:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
category	Filter category	Category filter for flux in input	•
ca_certificate	Trusted CA's certificate	Trusted CA's certificate.	•
host	Host to connect to	IP address or hostname of the host to connect to (leave blank for listening mode).	•
one_peer_retention_mode	One peer retention	This allows the retention to work even if the socket is listening	•
port	Connection port	Port to listen on (empty host) or to connect to (with host filled).	•
private_key	Private key file.	Private key file path when TLS encryption is used.	•
protocol	Serialization protocol	Serialization protocol.	ndo
public_cert	Public certificate	Public certificate file path when TLS encryption is used.	•
tls	Enable TLS encryption	Enable TLS encryption.	•

file:



ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
max_size	Maximum size of file	Maximum size in bytes.	•
path	File path	Path to the file.	•
protocol	Serialization protocol	Serialization protocol.	ndo

local\_server:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
path	File path	Path to the file.	•
protocol	Serialization protocol	Serialization protocol.	ndo

local\_client:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
path	File path	Path to the file.	•
protocol	Serialization protocol	Serialization protocol.	ndo

**logger** file:

ID	Label	Description	Possible values
config	Configuration messages	Enable or not configuration messages logging.	•
debug	Debug messages	Enable or not debug messages logging.	•
error	Error messages	Enable or not error messages logging.	•
info	Informational messages	Enable or not informational messages logging.	•
level	Logging level	How much messages must be logged.	high,low,medium
max_size	Max file size in bytes	The maximum size of log file.	•
name	Name of the logger	For a file logger this is the path to the file. For a standard logger, one of 'stdout' or 'stderr'.	•

standard:

ID	Label	Description	Possible values
config	Configuration messages	Enable or not configuration messages logging.	•
debug	Debug messages	Enable or not debug messages logging.	•
error	Error messages	Enable or not error messages logging.	•
info	Informational messages	Enable or not informational messages logging.	•
level	Logging level	How much messages must be logged.	high,low,medium
name	Name of the logger	For a file logger this is the path to the file. For a standard logger, one of 'stdout' or 'stderr'.	•

syslog:

ID	Label	Description	Possible values
config	Configuration messages	Enable or not configuration messages logging.	•
debug	Debug messages	Enable or not debug messages logging.	•
error	Error messages	Enable or not error messages logging.	•
info	Informational messages	Enable or not informational messages logging.	•
level	Logging level	How much messages must be logged.	high,low,medium

monitoring:

ID	Label	Description	Possible values
config	Configuration messages	Enable or not configuration messages logging.	•
debug	Debug messages	Enable or not debug messages logging.	•
error	Error messages	Enable or not error messages logging.	•
info	Informational messages	Enable or not informational messages logging.	•
level	Logging level	How much messages must be logged.	high,low,medium
name	Name of the logger	For a file logger this is the path to the file. For a standard logger, one of 'stdout' or 'stderr'.	•

**output** ipv4:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
category	Filter category	Category filter for flux in output	•
ca_certificate	Trusted CA's certificate	Trusted CA's certificate.	•
host	Host to connect to	IP address or hostname of the host to connect to (leave blank for listening mode).	•
one_peer_retention_mode	One peer retention	This allows the retention to work even if the socket is listening	•
port	Connection port	Port to listen on (empty host) or to connect to (with host filled).	•
private_key	Private key file.	Private key file path when TLS encryption is used.	•
protocol	Serialization protocol	Serialization protocol.	ndo
public_cert	Public certificate	Public certificate file path when TLS encryption is used.	•
tls	Enable TLS encryption	Enable TLS encryption.	•

ipv6:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
category	Filter category	Category filter for flux in output	•
ca_certificate	Trusted CA's certificate	Trusted CA's certificate.	•
host	Host to connect to	IP address or hostname of the host to connect to (leave blank for listening mode).	•
one_peer_retention_mode	One peer retention	This allows the retention to work even if the socket is listening	•
port	Connection port	Port to listen on (empty host) or to connect to (with host filled).	•
private_key	Private key file.	Private key file path when TLS encryption is used.	•
protocol	Serialization protocol	Serialization protocol.	ndo
public_cert	Public certificate	Public certificate file path when TLS encryption is used.	•
tls	Enable TLS encryption	Enable TLS encryption.	•

file:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
max_size	Maximum size of file	Maximum size in bytes.	•
path	File path	Path to the file.	•
protocol	Serialization protocol	Serialization protocol.	ndo

local\_server:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
path	File path	Path to the file.	•
protocol	Serialization protocol	Serialization protocol.	ndo

rrd:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
metrics_path	RRD file directory for metrics	RRD file directory, for example /var/lib/centreon/metrics	•
path	Unix socket	The Unix socket used to communicate with rrdcached. This is a global option, go to Administration > Options > RRDTool to modify it.	•
port	TCP port	The TCP port used to communicate with rrdcached. This is a global option, go to Administration > Options > RRDTool to modify it.	•
status_path	RRD file directory for statuses	RRD file directory, for example /var/lib/centreon/status	•

storage:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
check_replication	Replication enabled	When enabled, the broker engine will check whether or not the replication is up to date before attempting to update data.	•
db_host	DB host	IP address or hostname of the database server.	•
db_name	DB name	Database name.	•
db_password	DB password	Password of database user.	•
db_port	DB port	Port on which the DB server listens	•
db_type	DB type	Target DBMS.	db2,ibase,mysql,oci,odbc,postgresql,sqlit
db_user	DB user	Database user.	•
interval	Interval length	Interval length in seconds.	•
length	RRD length	RRD storage duration in seconds.	•
queries_per_transaction	Maximum queries per transaction	The maximum queries per transaction before commit.	•
read_timeout	Transaction commit timeout	The transaction timeout before running commit.	•
rebuild_check_interval	Rebuild check interval in seconds	The interval between check if some metrics must be rebuild. The default value is 300s	•

local\_client:



ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
path	File path	Path to the file.	•
protocol	Serialization protocol	Serialization protocol.	ndo

sql:

ID	Label	Description	Possible values
buffering_timeout	Buffering timeout	Time in seconds to wait before launching failover.	•
failover	Failover name	Name of the input or output object that will act as failover.	•
retry_interval	Retry interval	Time in seconds to wait between each connection attempt.	•
check_replication	Replication enabled	When enabled, the broker engine will check whether or not the replication is up to date before attempting to update data.	•
db_host	DB host	IP address or hostname of the database server.	•
db_name	DB name	Database name.	•
db_password	DB password	Password of database user.	•
db_port	DB port	Port on which the DB server listens	•
db_type	DB type	Target DBMS.	db2,ibase,mysql,oci,odbc,postgresql,sqlit
db_user	DB user	Database user.	•
queries_per_transaction	Maximum queries per transaction	The maximum queries per transaction before commit.	•
read_timeout	Transaction commit timeout	The transaction timeout before running commit.	•

**stats** stats:

ID	Label	Description	Possible values
fifo	File for Centreon Broker statistics	File where Centreon Broker statistics will be stored	•

**temporary** file:

ID	Label	Description	Possible values
compression	Compression (zlib)	Enable or not data stream compression.	•
compression_buffer	Compression buffer size	The higher the buffer size is, the best compression. This however increase data streaming latency. Use with caution.	•
compression_level	Compression level	Ranges from 0 (no compression) to 9 (best compression). Default is -1 (zlib compression)	•
max_size	Maximum size of file	Maximum size in bytes.	•
path	File path	Path to the file.	•
protocol	Serialization protocol	Serialization protocol.	ndo

## Commands

### Overview

Object name: **CMD**

### Show

In order to list available commands, use **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CMD -a show
id;name;type;line
1;check-ping;check;$USER1$/check_ping -H $HOSTADDRESS$ -w $ARG1$ -c $ARG2$
2;check_dummy;check;$USER1$/check_dummy -o $ARG1$ -s $ARG2$
[...]
```

Columns are the following:

Column	Description
Command ID	
Command name	
Command type	<i>check, notif or misc</i>
Command line	System command line that will be run on execution

### Add

In order to add a command use **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CMD -a ADD -v 'check-host-alive;check;$USER1$/'
```

Required columns are the following:

Column	Description
Command name	
Command type	<i>check, notif</i> or <i>misc</i>
Command line	System command line that will be run on execution

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Del

If you want to remove a command use **DEL** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CMD -a del -v 'check-host-alive'
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setparam

If you want to change a specific parameters for a command, use the **SETPARAM** command:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CMD -a setparam -v 'check-host-alive;type;notif'
[root@centreon ~]# ./centreon -u admin -p centreon -o CMD -a setparam -v 'check-host-alive;name;check'
```

Parameters that you can change are the following:

Parameter	Description
name	Name of command
line	Command line
type	<i>check, notif, misc</i>
graph	Graph template applied on command
example	Example of arguments (i.e: !80!90)
comment	Comments regarding the command

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Contacts

### Overview

Object name: **CONTACT**

### Show

In order to list available contacts, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o contact -a show
id;name;alias;email;pager;gui access;admin;activate
4;Guest;guest;guest@localhost;;0;0;0
5;Supervisor;admin;root@localhost;;1;1;1
6;User;user;user@localhost;;0;0;0
```

Columns are the following :

Column	Description
ID	ID of contact
Name	Name of contact
Alias	Alias of contact (also login id)
Email	Email of contact
Pager	Phone number of contact
GUI Access	1 (can access UI) or 0 (cannot access UI)
Admin	1 (admin) or 0 (non admin)
activate	1 (enabled) or 0 (disabled)

## Add

In order to add a contact, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o CONTACT -a ADD -v "user;user;user@mail.com;mypp
```

The required parameters are the following:

Parameter	Description
Name	Name of contact
Alias (login)	Alias of contact (also login id)
Email	Email of contact
Password	Password of contact
Admin	1 (admin) or 0 (non admin)
GUI Access	1 (can access UI) or 0 (cannot access UI)
Language	Language pack has to be installed on Centreon (it can be "browser")
Authentication type	local or ldap

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Del

In order to delete one contact, use the **DEL** action. The contact name is used for identifying the contact you would like to delete:

```
[root@centreon core]# ./centreon -u admin -p centreon -o contact -a del -v "user"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setparam

If you want to change a specific parameter for a contact, use the **SETPARAM** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o contact -a setParam -v "contact alias;hostn  
[root@centreon core]# ./centreon -u admin -p centreon -o contact -a setParam -v "contact alias;svcnot  
[root@centreon core]# ./centreon -u admin -p centreon -o contact -a setParam -v "contact alias;hostn  
[root@centreon core]# ./centreon -u admin -p centreon -o contact -a setparam -v "contact alias;timezo
```

The required parameters are the following:

Parameter	Description
Contact alias	Alias of contact to update
Parameter	Parameter to update
Value	New value of parameter

Parameters that you can change are the following:

Parameter	Description
name	Name
alias	Alias
comment	Comment
email	Email Address
password	User Password
access	Can reach centreon, <i>1</i> if user has access, <i>0</i> otherwise
language	Locale
admin	<i>1</i> if user is admin, <i>0</i> otherwise
authtype	<i>ldap</i> or <i>local</i>
hostnotifcmd	host notification command(s). Multiple commands can be defined with delimiter “ ”
svcnotifcmd	service notification command(s). Multiple commands can be defined with delimiter “ ”
hostnotifperiod	host notification period
svcnotifperiod	service notification period
hostnotifopt	can be d,u,r,f,s,n
servicenotifopt	can be w,u,c,r,f,s,n
address1	Address #1
address2	Address #2
address3	Address #3
address4	Address #4
address5	Address #5
address6	Address #6
ldap_dn	LDAP domain name
enable_notifications	<i>1</i> when notification is enable, <i>0</i> otherwise
autologin_key	Used for auto login
template	Name of the template to apply to the contact
timezone	Timezone

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

## Enable

In order to enable a contact, use the **ENABLE** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o contact -a enable -v "test"
```

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

## Disable

In order to disable a contact, use the **DISABLE** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o contact -a disable -v "test"
```

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

## Contact templates

### Overview

Object name: CONTACTTPL

Refer to the *CONTACT* object

## Contact Groups

### Overview

Object name: **CG**

### Show

In order to list available contact groups, use the **SHOW** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a show
id;name;alias;members
Guest;Guests Group;gest-user1,guest-user2
Supervisors;Centreon supervisors;Admin
```

Columns are the following:

Column	Description
Name	List of contacts that are in the contact group
Alias	
Members	

### Add

In order to add a contact group, use the **ADD** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a ADD -v "Windows;Windows admins"
```

Required fields are the following:

Column	Description
Name	Name
Alias	Alias

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

### Del

In order to delete one contact group, use the **DEL** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a DEL -v "Windows"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setparam

In order to change the name or the alias of a contactgroup, use the **SETPARAM** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a setparam -v "Windows;name;Windows-2K"
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a setparam -v "Cisco;alias;Cisco-Routers"
```

Parameters that you can change are the following:

Parameter	Description
name	Name
alias	Alias

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Enable

In order to enable a contact group, use the **ENABLE** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a enable -v "Guest"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Disable

In order to disable a contact group, use the **DISABLE** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a disable -v "Guest"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Getcontact

In order to view the contact list of a contact group, use the **GETCONTACT** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a getcontact -v "Guest"
id;name
1;User1
2;User2
```

Columns are the following:

Column	Description
ID	Id of contact
Name	Name of contact

## Addcontact and Setcontact

In order to add a contact to a contact group, use the **ADDCONTACT** or **SETCONTACT** action where 'add' will append and 'set' will overwrite previous definitions:



```
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a addcontact -v "Guest;User1"
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a setcontact -v "Guest;User1|User2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delcontact

In order to remove a contact from a contact group, use the **DELCONTACT** action:

```
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a delcontact -v "Guest;User1"
[root@centreon core]# ./centreon -u admin -p centreon -o CG -a delcontact -v "Guest;User2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Dependencies

### Overview

Object name: **DEP**

### Show

In order to list available dependencies, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a show
id;name;description;inherits_parent;execution_failure_criteria;notification_failure_criteria
62;my dependency;a description;1;n;n
```

Columns are the following:

Column	Description
ID	Unique ID of the dependency
Name	Name
Description	Short description of the dependency
inherits_parent	Whether or not dependency inherits higher level dependencies
execution_failure_criteria	Defines which parent states prevent dependent resources from being checked
notification_failure_criteria	Defines which parent states prevent notifications on dependent resources

### Add

In order to add a new dependency, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a ADD \
-v "my new dependency;any description;HOST;dummys-host"
```

The required parameters are the following:

Order	Description
1	Name of the dependency
2	Description of the dependency
3	Dependency type: HOST, HG, SG, SERVICE, META
4	Name of the parent resource(s)

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Del

In order to delete a dependency, use the **DEL** action. The dependency name is used for identifying the dependency you would like to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a DEL -v "my dependency"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setparam

In order to set a specific parameter for a dependency, use the **SETPARAM** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a setparam \
-v "my dependency;name;my new dependency name"
```

You may change the following parameters:

Parameter	Description
name	Name
description	Description
comment	Comment
inherits_parent	0 or 1
execution_failure_criteria	o,w,u,c,p,d,n
notification_failure_criteria	o,w,u,c,p,d,n

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Listdep

If you want to retrieve the dependency definition of a dependency object, use the **LISTDEP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a LISTDEP -v "my dependency"
parents;children
HostParent1|HostParent2;HostChild1|HostChild2,ServiceChild2
```

## Addparent and Addchild

If you want to add a new parent or a new child in a dependency definition, use the **ADDPARENT** or **ADDCHILD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a ADDPARENT \
-v "my dependency;my_parent_host"
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a ADDCHILD \
-v "my dependency;my_child_host"
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a ADDCHILD \
-v "my dependency;my_child_host2,my_child_service2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delparent and Delchild

If you want to add a new parent or a new child in a dependency definition, use the **DELPARENT** or **DELCHILD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a DELPARENT \
-v "my dependency;my_parent_host"
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a DELCHILD \
-v "my dependency;my_child_host"
[root@centreon ~]# ./centreon -u admin -p centreon -o DEP -a DELCHILD \
-v "my dependency;my_child_host2,my_child_service2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Downtimes

### Overview

Object name: **DOWNTIME**

### Show

In order to list available recurring downtimes, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a show
id;name;description;activate
1;mail-backup;sunday backup;1
1;my downtime;a description;1
```

Columns are the following:

Column	Description
ID	Unique ID of the recurring downtime
Name	Name
Description	Short description of the recurring downtime
Activate	Whether or not the downtime is activated

### Add

In order to add a new downtime, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a ADD -v "my new downtime;any descrip
```

The required parameters are the following:

Order	Description
1	Name of the downtime
2	Description of the downtime

## Del

In order to delete a downtime, use the **DEL** action. The downtime name is used for identifying the recurring downtime you would like to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a DEL -v "my downtime"
```

## Setparam

In order to set a specific parameter for a downtime, use the **SETPARAM** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a setparam -v "my downtime;name;my n
```

You may change the following parameters:

Parameter	Description
name	Name
description	Description

## Listperiods

If you want to retrieve the periods set on a recurring downtime, use the **LISTPERIODS** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a LISTPERIODS -v "my downtime"
position;start time;end time;fixed;duration;day of week;day of month;month cycle
1;1;23:00:00;24:00:00;1;;7;;all
2;1;00:00:00;02:00:00;1;;;1,2;none
3;1;13:45:00;14:40:00;1;;5;;first
```

Columns are the following:

Column	Description
Position	Position of the period; used for deleting a period from a recurring downtime
Start time	Start time of the recurring downtime
End time	End time of the recurring downtime
Fixed	Type of downtime (1 = fixed, 0 = flexible)
Duration	Duration of downtime when in flexible mode (seconds)
Day of week	1 - 7 (1 = monday ... 7 = sunday)
Day of month	1 - 31
Month cycle	<b>“all”, “none”, “first” or “last”. Determines when the downtime will be effective on specific weekdays (i.e: all Sundays, last Sunday of the month, first Sunday of the month...)</b>

## Addweeklyperiod

In order to add a weekly period, use the **ADDWEEKLYPERIOD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a ADDWEEKLYPERIOD \  
-v "my downtime;00:00;04:00;0;7200;saturday,sunday"
```

The above example will set a downtime every saturday and sunday between 00:00 and 04:00.

Parameter	Description
Name	Name of the recurring downtime
Start time	Start time of the recurring downtime
End time	End time of the recurring downtime
Fixed	0 for flexible downtime, 1 for fixed
Duration	Duration of downtime when in flexible mode (seconds)
Day of week	Can be written with letters or numbers (1 to 7 or monday to sunday)

## Addmonthlyperiod

In order to add a monthly period, use the **ADDMONTHLYPERIOD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a ADDMONTHLYPERIOD \  
-v "my downtime;19:00;22:00;1;;14,21"
```

The above example will set a downtime on every 14th and 21st day for all months.

Parameter	Description
Name	Name of the recurring downtime
Start time	Start time of the recurring downtime
End time	End time of the recurring downtime
Fixed	0 for flexible downtime, 1 for fixed
Duration	Duration of downtime when in flexible mode (seconds)
Day of month	1 to 31

## Addspecificperiod

In order to add a specific period, use the **ADDSPECIFICPERIOD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a ADDSPECIFICPERIOD \  
-v "my downtime;19:00;22:00;1;;wednesday;first"
```

The above example will set a downtime on every first wednesday for all months.

Parameter	Description
Name	Name of the recurring downtime
Start time	Start time of the recurring downtime
End time	End time of the recurring downtime
Fixed	0 for flexible downtime, 1 for fixed
Duration	Duration of downtime when in flexible mode (seconds)
Day of week	Can be written with letters or numbers (1 to 7 or monday to sunday)
Month cycle	first or last

## Addhost, addhostgroup, addservice, addservicegroup

If you want to associate a host, host group, service or service group to a recurring downtime, use the **ADDHOST**, **ADDHOSTGROUP**, **ADDSERVICE** or **ADDSERVICEGROUP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a ADDHOST -v "my downtime;host_1"
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a ADDSERVICE -v "my downtime;host_1,s
```

Use the “|” delimiter in order to define multiple relationships.

## Delhost, delhostgroup, delservice, delservicegroup

If you want to remove a host, host group, service or service group from a recurring downtime, use the **DELHOST**, **DELHOSTGROUP**, **DELSERVICE** or **DELSERVICEGROUP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a DELHOST -v "my downtime;host_1"
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a DELSERVICE -v "my downtime;host_1,s
```

## Sethost, sethostgroup, setservice, setservicegroup

The **SETHOST**, **SETHOSTGROUP**, **SETSERVICE** AND **SETSERVICEGROUP** actions are similar to their **ADD** counterparts, but they will overwrite the relationship definitions instead of appending them:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a ADDHOST -v "my downtime;host_1|host_2"
[root@centreon ~]# ./centreon -u admin -p centreon -o DOWNTIME -a ADDSERVICE -v "my downtime;host_1,s
```

Use the “|” delimiter in order to define multiple relationships.

## Host templates

### Overview

Object name: **HTPL**

Refer to the *HOST* object

---

**Note:** You cannot use the **APPLYTPL** and **SETINSTANCE** actions on **HTPL** objects.

---

## Hosts

### Overview

Object name: **HOST**

### Show

In order to list available hosts, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a show
id;name;alias;address;activate
82;sri-dev1;dev1;192.168.2.1;1
83;sri-dev2;dev2;192.168.2.2;1
84;sri-dev3;dev3;192.168.2.3;0
85;sri-dev4;dev4;192.168.2.4;1
86;sri-dev5;dev5;192.168.2.5;1
87;sri-dev6;dev6;192.168.2.6;1
94;sri-dev7;dev7;192.168.2.7;1
95;sri-dev8;dev8;192.168.2.8;1
```

Columns are the following :

Column	Description
ID	ID of host
Name	Host name
Alias	Host alias
IP/Address	IP of host
Activate	1 when enabled, 0 when disabled

## Add

In order to add a host, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a ADD -v "test;Test host;127.0.0.1;gener
```

Required parameters:

Order	Description
1	Host name
2	Host alias
3	Host IP address
4	Host templates; for multiple definitions, use delimiter
5	Instance name (poller)
6	Hostgroup; for multiple definitions, use delimiter

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Del

In order to delete one host, use the **DEL** action. You have to list the available hosts in order to identify the one you want to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a DEL -v "test"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setparam

In order to change parameters on a host configuration, use the **SETPARAM** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setparam -v "test;alias;Development tes
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setparam -v "test;address;192.168.1.68
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setparam -v "test;check_period;24x7"
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setparam -v "test;timezone;Europe/Berl
```

You may edit the following parameters:

Parameter	Description
2d_coords	2D coordinates (used by statusmap)
3d_coords	3D coordinates (used by statusmap)
action_url	Action URL
activate	Whether or not host is enabled
active_checks_enabled	Whether or not active checks are enabled
address	Host IP Address
alias	Alias
check_command	Check command
check_command_arguments	Check command arguments
check_interval	Normal check interval
check_freshness	Check freshness (in seconds)
check_period	Check period
checks_enabled	Whether or not checks are enabled
contact_additive_inheritance	Enables contact additive inheritance
cg_additive_inheritance	Enables contactgroup additive inheritance
event_handler	Event handler command
event_handler_arguments	Event handler command arguments
event_handler_enabled	Whether or not event handler is enabled
first_notification_delay	First notification delay (in seconds)
flap_detection_enabled	Whether or not flap detection is enabled
flap_detection_options	Flap detection options
icon_image	Icon image
icon_image_alt	Icon image text
max_check_attempts	Maximum number of attempt before a HARD state is declared
name	Host name
normal_check_interval	value in minutes
notes	Notes
notes_url	Notes URL
notifications_enabled	Whether or not notification is enabled
notification_interval	Notification interval
notification_options	Notification options
notification_period	Notification period
obsess_over_host	Whether or not obsess over host option is enabled
passive_checks_enabled	Whether or not passive checks are enabled
process_perf_data	Process performance data command
retain_nonstatus_information	Whether or not there is non-status retention
retain_status_information	Whether or not there is status retention
retry_check_interval	Retry check interval
snmp_community	Snmp Community
snmp_version	Snmp version
stalking_options	Comma separated options: 'o' for OK, 'd' for Down, 'u' for Unreachable
statusmap_image	Status map image (used by statusmap)
vrml_image	VRML image
host_notification_options	Notification options (d,u,r,f,s)
timezone	Timezone



---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

### Setinstance

In order to set the instance from which a host will be monitored, use the **SETINSTANCE** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setinstance -v "Centreon-Server;Poller"
```

### Getmacro

In order to view the custom macro list of a host, use the **GETMACRO** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a getmacro -v "Centreon-Server"
macro name;macro value;is_password;description
$_HOSTMACADDRESS$;00:08:C7:1B:8C:02;0;description of macro
```

### Setmacro

In order to set a custom host macro, use the **SETMACRO** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setmacro -v "Centreon-Server;warning;8"
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setmacro -v "Centreon-Server;critical;5"
```

---

**Note:** If the macro already exists, this action will only update the macro value. Otherwise, macro will be created.

---

### Delmacro

In order to delete a macro host, use the **DELMACRO** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a delmacro -v "Centreon-Server;warning"
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a delmacro -v "Centreon-Server;critical"
```

### Gettemplate

In order to view the template list of a host, use the **GETTEMPLATE** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a gettemplate -v "Centreon-Server"
id;name
2;generic-host
12;Linux-Servers
```

### Addtemplate and Settemplate

In order to add a host template to an existing host, use the **ADDTEMPLATE** or the **SETTEMPLATE** action, where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a addtemplate -v "Centreon-Server;srv-Linux"
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a settemplate -v "Centreon-Server;hardware"
```

---

**Note:** All service templates linked to the new host template will be automatically deployed on the existing host. (no longer the case with version later than 1.3.0, use the ‘applytpl’ action manually)

---

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Deltemplate

In order to remove a host template to an existing host, use the **DELTEMPLATE** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a deltemplate -v "test;srv-Linux|hardware"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Applytpl

When a template host undergoes modified link-level service template, the change is not automatically reflected in hosts belonging to that template. For the change to take effect, it must then re-apply the template on this host. For this, use the **APPLYTPL** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a applytpl -v "test"
All new services are now created.
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Getparent

In order to view the parents of a host, use the **GETPARENT** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a getparent -v "Centreon-Server"
id;name
43;server-parent1
44;server-parent2
```

## Addparent and Setparent

In order to add a host parent to an host, use the **ADDPARENT** or **SETPARENT** actions where *add* will append and *set* will overwrite the previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a addparent -v "host;hostParent1"
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setparent -v "host;hostParent1|hostParent2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delparent

In order to remove a parent, use the **DELPARENT** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a delparent -v "Centreon-Server;server-pa
```

## Getcontactgroup

In order to view the notification contact groups of a host, use the **GETCONTACTGROUP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a getcontactgroup -v "Centreon-Server"
id;name
17;Administrators
```

## Addcontactgroup and Setcontactgroup

If you want to add notification contactgroups to a host, use the **ADDCONTACTGROUP** or **SETCONTACTGROUP** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a addcontactgroup -v "Centreon-Server;Con
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setcontactgroup -v "Centreon-Server;Con
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delcontactgroup

If you want to remove notification contactgroups from a host, use the **DELCONTACTGROUP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a delcontactgroup -v "Centreon-Server;Con
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Getcontact

In order to view the notification contacts of a host, use the **GETCONTACT** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a getcontact -v "Centreon-Server"
id;name
11;guest
```

## Addcontact and Setcontact

If you want to add notification contacts to a host, use the **ADDCONTACT** or **SETCONTACT** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a addcontact -v "Centreon-Server;Contact
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setcontact -v "Centreon-Server;Contact
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delcontact

If you want to remove a notification contacts from a host, use the **DELCONTACT** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a delcontact -v "Centreon-Server;Contact2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Gethostgroup

In order to view the hostgroups that are tied to a host, use the **GETHOSTGROUP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a gethostgroup -v "Centreon-Server"
id;name
9;Linux-Servers
```

## Addhostgroup and Sethostgroup

If you want to tie hostgroups to a host, use the **ADDHOSTGROUP** or **SETHOSTGROUP** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a addhostgroup -v "Centreon-Server;Hostgroup1"
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a sethostgroup -v "Centreon-Server;Hostgroup1"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delhostgroup

If you want to remove hostgroups from a host, use the **DELHOSTGROUP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a delhostgroup -v "Centreon-Server;Hostgroup1"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setseverity

In order to associate a severity to a host, use the **SETSEVERITY** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a setseverity -v "Centreon-Server;Critical"
```

Required parameters:

Order	Description
1	Host name
2	Severity name

## Unsetseverity

In order to remove the severity from a host, use the **UNSETSEVERITY** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a unsetseverity -v "Centreon-Server"
```

Required parameters:

Order	Description
1	Host name

## Enable

In order to enable an host, use the **ENABLE** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a enable -v "test"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Disable

In order to disable a host, use the **DISABLE** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HOST -a disable -v "test"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Host categories

### Overview

Object name: **HC**

### Show

In order to list available host categories, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a show
id;name;alias;members
1;Linux;Linux Servers;host1
2;Windows;Windows Server;host2
3;AS400;AS400 systems;host3,host4
```

Columns are the following:

Column	Description
Name	Name of host category
Alias	Alias of host category

### Add

In order to add a host category, use the **ADD**:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a add -v "Databases;Databases servers"
```

Required parameters are the following:

Order	Description
1	Name of host category
2	Alias of host category

## Del

In order to delete a host category, use the **DEL** action. The name is used for identifying the host category you want to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a DEL -v "Databases"
```

## Getmember

In order to view the list hosts in a host category, use the **GETMEMBER** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a getmember -v "Linux"
id;name
14;Centreon-Server
15;srv-test
```

## Addmember and Setmember

In order to add a host or a host template into a host category, use the **ADDMEMBER** or **SETMEMBER** action where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a addmember -v "Linux;host7"
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a setmember -v "Windows;host7|host8|host9"
```

The needed parameters are the following:

Order	Description
1	Host category name
2	Host names to add/set. For multiple definitions, use the   delimiter

## Setseverity

In order to turn a host category into a severity, use the **SETSEVERITY** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a setseverity -v "Critical;3;16x16/critical"
```

The needed parameters are the following:

Order	Description
1	Host category name
2	Severity level - must be a number
3	Icon that represents the severity

## Unsetseverity

In order to turn a severity into a regular host category, use the **UNSETSEVERITY** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a unsetseverity -v "Critical"
```

The needed parameters are the following:

Order	Description
1	Host category name

## Delmember

In order to remove a host or a host template from a host category, use the **DELMEMBER** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a delmember -v "Linux;host7"
[root@centreon ~]# ./centreon -u admin -p centreon -o HC -a delmember -v "Windows;host8"
```

The needed parameters are the following:

Order	Description
1	Host category name
2	Host names to remove from host category

## Host groups

### Overview

Object name: **HG**

### Show

In order to list available host groups, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HG -a show
id;name;alias
53;Linux-Servers;All linux servers
54;Windows-Servers;All windows servers
55;Networks;All other equipments
56;Printers;All printers
58;Routers;All routers
59;Switchs;All switches
60;Firewall;All firewalls
61;Unix-Servers;All unix servers
```

Columns are the following:

Column	Description
ID	ID
Name	Name
Alias	Alias

## Add

In order to add a hostgroup, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HG -a add -v "SAP;SAP servers"
```

The required parameters are the following:

Order	Description
1	Name of host group
2	Alias of host group

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Del

In order to delete one hostgroup, use the **DEL** action. The host group name is used for identifying the host group you would like to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HG -a DEL -v "SAP"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setparam

In order to set a specific parameter for a host group, use the **SETPARAM** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HG -a setparam -v "SAP;name;hg1"
[root@centreon ~]# ./centreon -u admin -p centreon -o HG -a setparam -v "SAP;alias;hg2"
```

You may change the following parameters:

Parameter	Description
name	Name
alias	Alias
comment	Comment
activate	1 when enabled, 0 otherwise
notes	Notes
notes_url	Notes URL
action_url	Action URL
icon_image	Icon image
map_icon_image	Map icon image

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Getmember

If you want to retrieve the members of a host group, use the **GETMEMBER** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HG -a getmember -v "Linux-Servers"
id;name
34;Centreon-Server
35;srv-web
```



## Addmember and Setmember

If you want to add members to a specific host group, use the **SETMEMBER** or **ADDMEMBER** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HG -a setmember -v "Linux-Servers;srv-test|srv-new"
[root@centreon ~]# ./centreon -u admin -p centreon -o HG -a addmember -v "Linux-Servers;srv-new"
```

Action	Description
set*	Overwrites previous definitions. Use the delimiter   to set multiple members
add*	Appends new members to the existing ones. Use the delimiter   to add multiple members

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

## Delmember

If you want to remove members from a specific host group, use the **DELMEMBER** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o HG -a delmember -v "Linux-Servers;srv-test"
```

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

## Host group services

### Overview

Object name: **HGSERVICE**

Refer to the *SERVICE* object

**Note:** HGSERVICE works just like SERVICE, you only need to replace the host name with the host group name.

## Instances (Pollers)

### Overview

Object name: **INSTANCE**

### Show

In order to list available instances, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o INSTANCE -a show
id;name;localhost;ip address;activate;status;init script;monitoring engine;bin;stats bin;perfddata;ssl
1;Central;1;127.0.0.1;1;0;/etc/init.d/nagios;NAGIOS;/usr/local/nagios/bin/nagios;/usr/local/nagios/b
[...]
```

Columns are the following:

Column	Description
ID	ID
Name	Name
Localhost	1 if it is the main poller, 0 otherwise
IP Address	IP address of the poller
Activate	1 if poller is enabled, 0 otherwise
Status	1 if poller is running, 0 otherwise
Init script	Init script path
Monitoring Engine	Engine used on poller: <i>NAGIOS, ICINGA, SHINKEN...</i>
Bin	Path of the Scheduler binary
Stats Bin	Path of the Nagios Stats binary
Perfdata	Path of perfdata file
SSH Port	SSH Port

## Add

In order to add an instance you use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o INSTANCE -a add -v "Poller test;10.30.2.55;22;1"
```

Required fields are:

Column	Description
Name	
Address	IP address of the poller
SSH Port	SSH port
Monitoring Engine	Engine used on poller: <i>NAGIOS, ICINGA, SHINKEN</i>

## Del

If you want to remove an instance, use the **DEL** action. The Name is used for identifying the instance to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o INSTANCE -a del -v "Poller test"
```

## Setparam

If you want to change a specific parameter of an instance, use the **SETPARAM** command. The Name is used for identifying the instance to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o INSTANCE -a setparam -v "Poller test;ns_ip_addr"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of instance
2	Parameter name
3	Parameter value

Parameters that you may change are:

Column	Description
name	
localhost	1 if it is the main poller, 0 otherwise
ns_ip_address	IP address of the poller
ns_activate	1 if poller is enabled, 0 otherwise
init_script	Init script path
monitoring_engine	Engine used on poller: <i>NAGIOS, ICINGA, SHINKEN</i>
nagios_bin	Path of the Scheduler binary
nagiosstats_bin	Path of the Nagios Stats binary
nagios_perfdata	Path of perfdata file
ssh_port	SSH Port
centreonbroker_cfg_path	Centreon Broker Configuration path
centreonbroker_module_path	Centreon Broker Module path

## Gethosts

If you want to list all hosts that are monitored by a poller, use the **GETHOSTS** action. The Name is used for identifying the instance to query:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o INSTANCE -a GETHOSTS -v "Poller test"
14;Centreon-Server;127.0.0.1
17;srv-website;10.30.2.1
```

Returned info is the following:

Order	Description
1	Host ID
2	Host name
3	Host address

## LDAP configuration

### Overview

Object name: **LDAP**

### Show

In order to list available LDAP configurations, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o LDAP -a show
id;name;description;status
3;ad;my ad conf;1
2;openldap;my openldap conf;1
[...]
```

Columns are the following:

Order	Description
1	ID
2	Configuration name
3	Configuration description
4	1 when enabled, 0 when disabled

## Add

In order to add an LDAP configuration, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o LDAP -a add -v "my new configuration;my description"
```

Required fields are:

Order	Description
1	Configuration name
2	Configuration description

## Del

If you want to remove an LDAP configuration, use the **DEL** action. The Configuration Name is used for identifying the LDAP configuration to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o LDAP -a del -v "my new configuration"
```

## Setparam

If you want to change a specific parameter of an LDAP configuration, use the **SETPARAM** action. The Configuration Name is used for identifying the LDAP configuration to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o LDAP -a SETPARAM -v "my new configuration;description"
```

Parameters use the following order:

Order	Description
1	Configuration to update
2	Parameter key
3	Parameter value

Parameters that you may change are the following:

Key	Description
name	Configuration name
description	Configuration description
enable	1 when enabled, 0 when disabled
alias	Alias
bind_dn	Bind DN
bind_pass	Bind password
group_base_search	Group base search
group_filter	Group filter
group_member	Group member
group_name	Group name
ldap_auto_import	Enable or disable auto import (0 or 1)
ldap_contact_tmpl	Contact template to use on import
ldap_dns_use_domain	Use domain or not (0 or 1)
ldap_search_limit	Search size limit
ldap_search_timeout	Timeout delay (in seconds)
ldap_srv_dns	DNS server (only used when ldap_dns_use_domain is set to 1)
ldap_store_password	Store password in database or not (0 or 1)
ldap_template	Possible values: Posix, Active Directory
protocol_version	Protocol version (2 or 3)
user_base_search	User base search
user_email	User email
user_filter	User filter
user_firstname	User firstname
user_lastname	User lastname
user_name	User name
user_pager	User phone number
user_group	User group

## Showserver

In order to show the server list of an LDAP configuration, use the **SHOWSERVER** action. The Configuration Name is used for identifying the LDAP configuration to query:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o LDAP -a SHOWSERVER -v "openldap"
id;address;port;ssl;tls;order
2;10.30.2.3;389;0;0;1
```

## Addserver

In order to add a server to an LDAP configuration, use the **ADDSERVER** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o LDAP -a ADDSERVER -v "openldap;10.30.2.15;389;0;0;1"
```

Required parameters are the following:

Order	Description
1	Configuration name
2	Server address
3	Server port
4	Use SSL or not
5	Use TLS or not

## Delservice

In order to remove a service from an LDAP configuration, use the **DELSERVICE** action. The service ID is used for identifying the service to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o LDAP -a DELSERVICE -v 2
```

## Setparamservice

In order to update the service parameters of an LDAP configuration, use the **SETPARAMSERVICE** action. The service ID is used for identifying the service to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o LDAP -a SETPARAMSERVICE -v "2;use_ssl;1"
```

Parameters that you may update are the following:

Key	Description	Possible values
host_address	Address of the service	
host_port	Port of the service	
host_order	Priority order in case of failover	
use_ssl	Use SSL or not	0 or 1
use_tls	Use TLS or not	0 or 1

## Nagios CFG

### Overview

Object name: **NAGIOSCFG**

### Show

In order to list available Nagios conf, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o NAGIOSCFG -a show
nagios id;nagios name;instance;nagios comment
1;Nagios CFG 1;Central;Default Nagios.cfg
[...]
```

Columns are the following :

Order	Description
1	Nagios ID
2	Nagios configuration name
3	Instance that is linked to nagios.cfg
4	Comments regarding the configuration file

### Add

In order to add a Nagios conf, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o NAGIOSCFG -a add -v "Nagios cfg for poller test"
```

Required fields are:

Order	Description
1	Nagios configuration name
2	Instance that is linked to nagios.cfg
3	Comment regarding the configuration file

## Del

If you want to remove a Nagios conf, use the **DEL** action. The name is used for identifying the configuration to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o NAGIOSCFG -a del -v "Nagios cfg for poller test"
```

## Setparam

If you want to change a specific parameter of a Nagios conf, use the **SETPARAM** action. The name is used for identifying the configuration to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o NAGIOSCFG -a setparam -v "Nagios cfg for poller test"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of Nagios configuration
2	Parameter name
3	Parameter value

Parameters that you may change are:

Column	Description
nagios_name	Name
instance	Instance that is linked to nagios.cfg
broker_module	example: [...] -v "Nagios CFG 1;broker_module;/usr/local/nagios/bin/ndomod.o config_file=/usr/local/nagios/etc/ndomod.cfg", you can use a   delimiter for defining multiple broker modules
nagios_activate	1 if activated, 0 otherwise
•	Centreon CLAPI handles pretty much all the options available in a nagios configuration file. Because the list is quite long, it is best to refer to the official documentation of Nagios

## Addbrokermodule

If you want to add new broker module without removing existing modules, use the **ADDBROKERMODULE::**

```
[root@centreon ~]# ./centreon -u admin -p centreon -o NAGIOSCFG -a addbrokermodule -v "Nagios cfg for poller test;/usr/lib64/centreon-engine/externalcmd.so"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of Nagios configuration
2	Module name

To add multiple modules in one line, it will put the separator “|” between the name of the modules

```
[root@centreon ~]# ./centreon -u admin -p centreon -o NAGIOSCFG -a addbrokermodule -v "Nagios  
cfg for poller test;/usr/lib64/centreon-engine/externalcmd.sol/etc/centreon-broker/central-module.xml"
```

## Delbrokermodule

If you want to delete broker module, use the **DELBROKERMODULE::** `[root@centreon ~]# ./centreon -u admin -p centreon -o NAGIOSCFG -a delbrokermodule -v "Nagios cfg for poller test;/usr/lib64/centreon-engine/externalcmd.so"`

Arguments are composed of the following columns:

Order	Column description
1	Name of Nagios configuration
2	Module name

To delete multiple modules in one line, it will put the separator “|” between the name of the modules

```
[root@centreon ~]# ./centreon -u admin -p centreon -o NAGIOSCFG -a delbrokermodule -v "Nagios cfg  
for poller test;/usr/lib64/centreon-engine/externalcmd.sol/etc/centreon-broker/central-module.xml"
```

## Resource CFG

### Overview

Object name: **RESOURCECFG**

### Show

In order to list available Resource variables, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o RESOURCECFG -a show  
id;name;value;comment;activate;instance  
1;$USER1$;/usr/local/nagios/libexec;path to the plugins;1;Central  
[...]
```

Columns are the following :

Column	Description
ID	ID
Name	Name
Value	Value of \$USERn\$ macro
Comment	Comment
Activate	1 when activated, 0 otherwise
Instance	Instances that are tied to the \$USERn\$ macro

### Add

In order to add a resource macro, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o RESOURCECFG -a add -v "USER2;public;Poller test"
```



Required fields are:

Column	Description
Name	Macro name; do not use the \$ symbols
Value	Macro value
Instances	Instances that are tied to \$USERn\$ macro
Comment	Comment

## Del

If you want to remove a Resource variable, use the **DEL** action. The ID is used for identifying the variable to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o RESOURCECFG -a del -v "1"
```

## Setparam

If you want to change a specific parameter of a Resource macro, use the **SETPARAM** action. The ID is used for identifying the macro to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o RESOURCECFG -a setparam -v "1;instance;Poller t
```

Arguments are composed of the following columns:

Order	Column description
1	Name of resource configuration
2	Parameter name
3	Parameter value

Parameters that you may change are:

Column	Description
name	Macro name; do not use the \$ symbols
value	Macro value
activate	1 when activated, 0 otherwise
comment	Comment
instance	Instances that are tied to \$USERn\$ macro Use delimiter   for multiple instance definitions

## Service templates

### Overview

Object name: **STPL**

### Show

In order to list available service, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a show
id;description;check command;check command arg;normal check interval;retry check interval;max check a
1;generic-service;generic-service;;;5;1;3;1;0
3;Ping-LAN;Ping;check_centreon_ping;!3!200,20%!400,50%;;;2;2
4;Ping-WAN;Ping;check_centreon_ping;!3!400,20%!600,50%;;;2;2
5;SNMP-DISK-;/;Disk-;/;check_centreon_remote_storage;!80!90;2;2
```

```
6;SNMP-DISK-/var;Disk-/var;check_centreon_remote_storage;!/var!80!90;;;2;2
7;SNMP-DISK-/usr;Disk-/usr;check_centreon_remote_storage;!/usr!80!90;;;2;2
8;SNMP-DISK-/home;Disk-/home;check_centreon_remote_storage;!/home!80!90;;;2;2
9;SNMP-DISK-/opt;Disk-/opt;check_centreon_remote_storage;!/opt!80!90;;;2;2
```

Columns are the following :

Order	Description
1	Service ID
2	Service Description
3	Check command
4	Check command arguments
5	Normal check interval
6	Retry check interval
7	Maximum check attempts
8	1 when active checks are enabled, 0 otherwise
9	1 when passive checks are enabled, 0 otherwise

## Add

In order to add a service template, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a add -v "MyTemplate;mytemplate;Ping-LAN"
```

The required fields are:

Order	Description
1	Service template description
2	Alias will be used when services are deployed through host templates
3	Service template; Only one service template can be defined

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Del

In order to remove a service template, use the **DEL** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a del -v "MyTemplate"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setparam

In order to set a specific parameter for a service template, use the **SETPARAM** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a setparam -v "MyTemplate;max_check_attempts"
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a setparam -v "MyTemplate;normal_check_interval"
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a setparam -v "MyTemplate;normal_check_interval"
```

The required fields that you have pass in options are:

Order	Description
1	service template description
2	parameter that you want to update
3	new parameter value

Parameters that may be modified:

Parameter	Description
activate	1 when service is enabled, 0 otherwise
description	Service template description
alias	Service template alias
template	Name of the service template
is_volatile	1 when service is volatile, 0 otherwise
check_period	Name of the check period
check_command	Name of the check command
check_command_arguments	Arguments that go along with the check command, prepend each argument with the '!' character
max_check_attempts	Maximum number of attempt before a HARD state is declared
normal_check_interval	value in minutes
retry_check_interval	value in minutes
active_checks_enabled	1 when active checks are enabled, 0 otherwise
passive_checks_enabled	1 when passive checks are enabled, 0 otherwise
contact_additive_inheritance	Enables contact additive inheritance=
cg_additive_inheritance	Enables contactgroup additive inheritance
notification_interval	value in minutes
notification_period	Name of the notification period
notification_options	Status linked to notifications
first_notification_delay	First notification delay in seconds
parallelize_checks	1 when parallelize checks are enabled, 0 otherwise
obsess_over_service	1 when obsess over service is enabled, 0 otherwise
check_freshness	1 when check freshness is enabled, 0 otherwise
freshness_threshold	Service freshness threshold in seconds
event_handler_enabled	1 when event handler is enabled, 0 otherwise
flap_detection_enabled	1 when flap detection is enabled, 0 otherwise
process_perf_data	1 when process performance data is enabled, 0 otherwise
retain_status_information	1 when status information is retained, 0 otherwise
retain_nonstatus_information	1 when non status information is retained, 0 otherwise
stalking_options	Comma separated options: 'o' for OK, 'w' for Warning, 'u' for Unknown and 'c' for Critical
event_handler	Name of the event handler command
event_handler_arguments	Arguments that go along with the event handler, prepend each argument with the '!' character
first_notification_delay	First notification delay in seconds
flap_detection_options	Flap detection options
notes	Notes
notes_url	Notes URL
action_url	Action URL
icon_image	Icon image
icon_image_alt	Icon image alt text
graphtemplate	Graph template name
comment	Comment
service_notification_options	Notification options (w,u,c,r,f,s)

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

## Addhosttemplate and Sethosttemplate

You may want to tie a service template to an extra host template. In order to do so, use the **ADDHOSTTEMPLATE** or **SETHOSTTEMPLATE** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a sethosttemplate -v "MyTemplate;generic"
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a addhosttemplate -v "MyTemplate;Linux-S"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delhosttemplate

In order to remove the relation between a host template and a service template, use the **DELHOSTTEMPLATE** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a delhosttemplate -v "MyTemplate;Linux-S"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Getmacro

In order to view the custom macro list of a service template, use the **GETMACRO** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a getmacro -v "MyTemplate"
macro name;macro value;description
$_SERVICETIME$;80;description of macro1
$_SERVICEPL$;400;description of macro2
```

## Setmacro

In order to set a macro for a specific service template use the **SETMACRO** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a setmacro -v "MyTemplate;time;80"
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a setmacro -v "MyTemplate;pl;400"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delmacro

In order to remove a macro from a specific service template, use the **DELMACRO** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a delmacro -v "MyTemplate;time"
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a delmacro -v "MyTemplate;pl"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Getcontact

In order to view the contact list of a service template, use the **GETCONTACT** action:

```
[root@localhost core]# ./centreon -u admin -p centreon -o STPL -a getcontact -v "MyTemplate"
id;name
28;Contact_1
29;Contact_2
```

## Addcontact and Setcontact

In order to add a new contact to notification contact list, use **ADDCONTACT** or **SETCONTACT** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a addcontact -v "MyTemplate;User1"
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a setcontact -v "MyTemplate;User1|User2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delcontact

In order to remove a contact from the notification contact list, use the **DELCONTACT** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a delcontact -v "MyTemplate;User1"
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a delcontact -v "MyTemplate;User2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Getcontactgroup

In order to view the contactgroup list of a service template, use the **GETCONTACTGROUP** action:

```
[root@localhost core]# ./centreon -u admin -p centreon -o STPL -a getcontactgroup -v "MyTemplate"
id;name
28;ContactGroup_1
29;ContactGroup_2
```

## Setcontactgroup

In order to add a new contactgroup to notification contactgroup list, use the **ADDCONTACTGROUP** or **SETCONTACTGROUP** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a addcontactgroup -v "MyTemplate;Group1"
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a setcontactgroup -v "MyTemplate;Group1|Group2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

**Delcontactgroup**

In order to remove a contactgroup from the notification contactgroup list, use the **DELCONTACTGROUP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a delcontactgroup -v "MyTemplate"
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a delcontactgroup -v "MyTemplate;Group1"
```

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

**Gettrap**

In order to view the trap list of a service template, use the **GETTRAP** action:

```
[root@localhost core]# ./centreon -u admin -p centreon -o "STPL" -a gettrap -v "Ping-LAN"
id;name
48;ciscoConfigManEvent
39;ospfVirtIfTxRetransmit
```

## Settrap

In order to add a trap to a service template, use the **ADDTRAP** or **SETTRAP** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a addtrap -v "Ping-LAN;snOspfVirtIfConfi
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a settrap -v "Ping-LAN;snOspfVirtNbrStat
```

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

## Deltrap

In order to remove a trap from a service template, use the **DELTRAP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o STPL -a deltrap -v "Ping-LAN;snOspfVirtIfConfi
```

## Services

## Overview

Object name: **SERVICE**

## Show

In order to list available service, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a show
host id;host name;id;description;check command;check command arg;normal check interval;retry check i
14;Centreon-Server;19;Disk-//;;;2;2;1
14;Centreon-Server;20;Disk-/home;;;2;2;1
14;Centreon-Server;21;Disk-/opt;;;2;2;1
```

```

14;Centreon-Server;22;Disk-/usr;;;;;2;2;1
14;Centreon-Server;23;Disk-/var;;;;;2;2;1
14;Centreon-Server;151;Load;;;;;2;2;1
14;Centreon-Server;25;Memory;;;;;2;2;1
14;Centreon-Server;26;Ping;;;;;2;2;0
14;Centreon-Server;40;dummy;check_centreon_dummy;!2!critical;;;;2;2;1

```

Columns are the following:

Column	Description
Host ID	Host ID
Host name	Host name
Service ID	Service ID
Service description	Service description
Check Command	Check command
Command arguments	Check command arguments
Normal check interval	Normal check interval
Retry check interval	Retry check interval
Max check attempts	Maximum check attempts
Active check enable	1 when active checks are enabled, 0 otherwise
Passive check enable	1 when passive checks are enabled, 0 otherwise
Activate	1 when enabled, 0 when disabled

## Add

In order to add a service, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a add -v "Host-Test;ping;Ping-LAN"
```

The required fields are:

Order	Description
1	Host name
2	Service description
3	Service template - Only one service template can be defined

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

## Del

In order to remove a service, use the **DEL** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a del -v "test;ping"
```

The required fields are:

Order	Description
1	Host name
2	Service description

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

## Setparam

In order to set a specific parameter for a particular service, use the **SETPARAM** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a setparam -v "test;ping;max_check_at
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a setparam -v "test;ping;normal_check
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a setparam -v "test;ping;normal_check
```

The required fields are:

Order	Description
1	Host name
2	Service description
3	Paramater that you want to update
4	New parameter value

Parameters that may be modified:

Parameter	Description
activate	<i>1</i> when service is enabled, <i>0</i> otherwise
description	Description
template	Name of the service template
is_volatile	<i>1</i> when service is volatile, <i>0</i> otherwise
check_period	Name of the check period
check_command	Name of the check command
check_command_arguments	Arguments that go along with the check command, prepend each argument with the ‘!’ character
max_check_attempts	Maximum number of attempt before a HARD state is declared
normal_check_interval	value in minutes
retry_check_interval	value in minutes
active_checks_enabled	<i>1</i> when active checks are enabled, <i>0</i> otherwise
passive_checks_enabled	<i>1</i> when passive checks are enabled, <i>0</i> otherwise
notifications_enabled	<i>1</i> when notification is enabled, <i>0</i> otherwise
contact_additive_inheritance	Enables contact additive inheritance
cg_additive_inheritance	Enables contactgroup additive inheritance
notification_interval	value in minutes
notification_period	Name of the notification period
notification_options	Status linked to notifications
first_notification_delay	First notification delay in seconds
parallelize_checks	<i>1</i> when parallelize checks are enabled, <i>0</i> otherwise
obsess_over_service	<i>1</i> when obsess over service is enabled, <i>0</i> otherwise
check_freshness	<i>1</i> when check freshness is enabled, <i>0</i> otherwise
freshness_threshold	Value in seconds
event_handler_enabled	<i>1</i> when event handler is enabled, <i>0</i> otherwise
flap_detection_enabled	<i>1</i> when flap detection is enabled, <i>0</i> otherwise
process_perf_data	<i>1</i> when process performance data is enabled, <i>0</i> otherwise
retain_status_information	<i>1</i> when status information is retained, <i>0</i> otherwise
retain_nonstatus_information	<i>1</i> when non status information is retained, <i>0</i> otherwise
event_handler	Name of the event handler command
event_handler_arguments	Arguments that go along with the event handler, prepend each argument with the ‘!’ character
flap_detection_options	Flap detection options
notes	Notes
notes_url	Notes URL
action_url	Action URL
icon_image	Icon image
icon_image_alt	Icon image alt text

Continued on next page



Table 13.4 – continued from previous page

	Parameter	Description
comment	Comment	
service_notification_options	Notification options (w,u,c,r,f,s)	

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

### Addhost and Sethost

You may want to tie a service to an extra host. In order to do so, use the **ADDHOST** or **SETHOST** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a sethost -v "host1;ping;host2"
```

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a addhost -v "host1;ping;host2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

### Delhost

In order to remove the relation between a host and a service, use the **DELHOST** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a delhost -v "host1;ping;host2"
```

The service ping which was originally linked to host1 and host2 is now only linked to host1.

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

### Getmacro

In order to view the custom macro list of a service, use the **GETMACRO** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a getmacro -v "host1;ping"
macro name;macro value;is_password;description
$_SERVICETIME$;80;0;description of macro
$_SERVICEPL$;400;0;description of macro
```

### Setmacro

In order to set a macro for a specific service use the **SETMACRO** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a setmacro -v "test;ping;time;80;0;des
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a setmacro -v "test;ping;pl;400;0;des"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delmacro

In order to remove a macro from a specific service use the **DELMACRO** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a delmacro -v "test;ping;time"
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a delmacro -v "test;ping;pl"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setseverity

In order to associate a severity to a service, use the **SETSEVERITY** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a setseverity -v "Centreon-Server;ping"
```

Required parameters:

Order	Description
1	Host name
2	Service description
3	Severity name

## Unsetseverity

In order to remove the severity from a service, use the **UNSETSEVERITY** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a unsetseverity -v "Centreon-Server;ping"
```

Required parameters:

Order	Description
1	Host name
2	Service description

## Getcontact

In order to view the contact list of a service, use the **GETCONTACT** action:

```
[root@localhost core]# ./centreon -u admin -p centreon -o "SERVICE" -a getcontact -v "Centreon-Server;ping"
id;name
28;Contact_1
29;Contact_2
```

## Addcontact and Setcontact

In order to add a new contact to notification contact list, use the **ADDCONTACT** or **SETCONTACT** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a addcontact -v "test;ping;User1"
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a setcontact -v "test;ping;User1|User2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delcontact

In order to remove a contact from the notification contact list, use the **DELCONTACT** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a delcontact -v "test;ping;User1"
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a delcontact -v "test;ping;User2"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Getcontactgroup

In order to view the contact group list of a service, use the **GETCONTACTGROUP** action:

```
[root@localhost core]# ./centreon -u admin -p centreon -o "SERVICE" -a getcontactgroup -v "Centreon-Server;P
id;name
28;ContactGroup_1
29;ContactGroup_2
```

## Addcontactgroup and Setcontactgroup

In order to add a new contactgroup to notification contactgroup list, use the **ADDCONTACTGROUP** or **SETCONTACTGROUP** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a addcontactgroup -v "test;ping;Group1"
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a setcontactgroup -v "test;ping;Group1"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delcontactgroup

In order to remove a contactgroup from the notification contactgroup list, use **DELCONTACTGROUP** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a delcontactgroup -v "test;ping;Group1"
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a delcontactgroup -v "test;ping;Group1"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Gettrap

In order to view the trap list of a service, use the **GETTRAP** action:

```
[root@localhost core]# ./centreon -u admin -p centreon -o "SERVICE" -a gettrap -v "Centreon-Server;P
id;name
48;ciscoConfigManEvent
39;ospfVirtIfTxRetransmit
```

## Addtrap and Settrap

In order to add a new trap, use the **ADDTRAP** or **SETTRAP** actions where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a addtrap -v "test;ping;snOspfVirtIfC
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a settrap -v "test;ping;snOspfVirtNbrS
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Deltrap

In order to remove a trap from a service, use the **DELTRAP** command:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SERVICE -a deltrap -v "test;ping;snOspfVirtIfC
```

## Service groups

### Overview

Object name: **SG**

### Show

In order to list available servicegroups, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a show
id;name;alias
11;Alfresco;Alfresco Services
```

### Add

In order to add a servicegroup, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a ADD -v "Alfresco;Alfresco Services"
```

Required fields are:

Order	Description
1	Name of service group
2	Alias of service group

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

### Del

In order to remove a servicegroup, use the **DEL** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a del -v "Alfresco"
```

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Setparam

In order to change parameters for a servicegroup, use the **SETPARAM** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a setparam -v "SG1;name;Web Service"
```

You can change the following parameters:

Parameter	Description
activate	1 when service is enabled, 0 otherwise
name	Name of service group
alias	Alias of service group
comment	Comments regarding service group

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Getservice and Gethostgroupservice

In order to view the members of a service group, use the **GETSERVICE** or **GETHOSTGROUPSERVICE** actions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a getservice -v "Web-Access"
host id;host name;service id;service description
14;Centreon-Server;28;http
14;Centreon-Server;29;TCP-80
```

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a gethostgroupservice -v "Web-Access"
hostgroup id;hostgroup name;service id;service description
22;Web group;31;mysql
```

---

**Note:** *hostgroupservice* is a service by hostgroup

---

## Addservice, Setservice, Addhostgroupservice and Sethostgroupservice

In order to add a new element to a specific service group, you can use **ADDSERVICE**, **SETSERVICE**, **ADDDHOSTGROUPSERVICE**, **SETHOSTGROUPSERVICE** where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a addservice -v "Web-Access;www.centreon.com"
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a setservice -v "Web-Access;www.centreon.com"
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a sethostgroupservice -v "Web-Access;web group"
```

---

**Note:** *hostgroupservice* is a service by hostgroup

---

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Delservice and Delhostgroupservice

In order to remove a service from a service group, use the **DELSERVICE** or **DELHOSTGROUPSERVICE** actions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a delservice -v "Web-Access;www.centreon.co
[root@centreon ~]# ./centreon -u admin -p centreon -o SG -a delhostgroupservice -v "Web-Access;Web g
```

---

**Note:** *hostgroupservice* is a service by hostgroup

---

---

**Note:** You need to generate your configuration file and restart monitoring engine in order to apply changes.

---

## Service categories

### Overview

Object name: **SC**

### Show

In order to list available service categories, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a show
id;name;description
1;Ping;ping
2;Traffic;traffic
3;Disk;disk
```

Columns are the following:

Column	Description
Name	Name of service category
Description	Description of service category

### Add

In order to add a service category, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a ADD -v "Alfresco;Alfresco Services"
```

Required parameters are:

Column	Description
Name	Name of service category
Description	Description of service category

### Del

In order to remove a service category, use the **DEL**:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a del -v "Alfresco"
```

## Setparam

In order to change parameters for a service category, use the **SETPARAM** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a setparam -v "SG1;name;Web Service"
```

You can change the following parameters:

Parameter	Description
Name	Name of service category
Description	Description of service category

## Getservice and Getservicetemplate

In order to view the member list of a service category, use the **GETSERVICE** or **GETSERVICETEMPLATE** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a getservice -v "Ping-Category"
host id;host name;service id;service description
14;Centreon-Server;27;Ping
27;srv-web;42;Ping
```

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a getservicetemplate -v "Ping-Category"
template id;service template description
22;Ping-LAN
23;Ping-WAN
```

## Addservice, Setservice, Addservicetemplate and Setservicetemplate

In order to add a new element to a specific service category, you use the following actions: **ADDSERVICE\***, **SETSERVICE**, **ADDSERVICETEMPLATE**, where *add* will append and *set* will overwrite previous definitions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a addservice -v "Ping-Category;my host,my s
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a addservicetemplate -v "Ping-Category;my t
```

## Delservice and Delservicetemplate

In order to remove a service from a specific service category, use the **DELSERVICE** OR **DELSERVICETEMPLATE** actions:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a delservice -v "Ping-Category;my host,my s
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a delservicetemplate -v "Ping-Category;my t
```

## Setseverity

In order to turn a service category into a severity, use the **SETSEVERITY** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a setseverity -v "Critical;3;16x16/critical
```

The needed parameters are the following:

Order	Description
1	Service category name
2	Severity level - must be a number
3	Icon that represents the severity

## Unsetseverity

In order to turn a severity into a regular service category, use the **UNSETSEVERITY** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SC -a unsetseverity -v "Critical"
```

The needed parameters are the following:

Order	Description
1	Service category name

## Settings

### Overview

Object name: **Settings**

### Show

In order to list editable settings, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o SETTINGS -a show
parameter;value
broker;ndo
broker_correlator_script;
centstorage;1
debug_auth;0
debug_ldap_import;0
debug_nagios_import;0
debug_path;/var/log/centreon/
debug_rrdtool;0
enable_autologin;1
enable_gmt;0
enable_logs_sync;1
enable_perfddata_sync;1
gmt;1
interval_length;60
mailer_path_bin;/bin/mail
nagios_path_img;/usr/share/nagios/html/images/logos/
perl_library_path;/usr/local/lib
rrdtool_path_bin;/usr/bin/rrdtool
snmpttconvertmib_path_bin;/usr/share/centreon/bin/snmpttconvertmib
snmptt_unkowntrap_log_file;snmpttrapd.log
```

### Setparam

If you want to change a specific parameter of a Vendor, use the **SETPARAM** action:



```
[root@centreon ~]# ./centreon -u admin -p centreon -o SETTINGS -a setparam -v ";"
```

Arguments are composed of the following columns:

Order	Column description
1	Parameter name
2	Parameter value

Parameters that you may change are:

Column	Description	Possible values and examples
broker	Broker engine	'broker' for Centreon Broker, 'ndo' for NDOUtils i.e: /etc/init.d/cbd
broker_correlator_script	This parameter is misleading (subject to changes) Refers to the Centreon Broker init script	
centstorage	Enable/disable CentStorage	Enable: '1', Disable: '0'
debug_auth	Enable/disable authentication debug	Enable: '1', Disable: '0'
debug_ldap_import	Enable/disable LDAP debug	Enable: '1', Disable: '0'
debug_nagios_import	Enable/disable Nagios configuration import	Enable: '1', Disable: '0'
debug_path	Debug log files directory	i.e: /var/log/centreon/
debug_rrdtool	Enable/disable RRDTool debug	Enable: '1', Disable: '0'
enable_autologin	Enable/disable autologin	Enable: '1', Disable: '0'
enable_gmt	Enable/disable GMT management	Enable: '1', Disable: '0'
enable_logs_sync	Enable/disable CentCore log synchronization (not necessary when using Centreon Broker)	Enable: '1', Disable: '0'
enable_perfdata_sync	Enable/disable Centcore PerfData synchronization (not necessary when using Centreon Broker)	Enable: '1', Disable: '0'
gmt	GMT timezone of monitoring system	i.e: 2 (for GMT+2)
interval_length	Monitoring interval length in seconds (default: 60)	i.e: 120
mailer_path_bin	Mail client bin path	i.e: /bin/mail
nagios_path_img	Nagios image path	i.e: /usr/share/nagios/html/images/logos/
perl_library_path	Perl library path	i.e: /usr/local/lib
rrdtool_path_bin	RRDTool bin path	i.e: /usr/bin/rrdtool
snmpttconvert-mib_path_bin	SNMPTT mib converter bin path	i.e: /usr/share/centreon/bin/snmpttconvertmib
snmptt_unknowntrap_log_file	SNMPTT unknown trap log file	i.e: snmpttrapd.log

## Time periods

### Overview

Object name: **TIMEPERIOD**

### Show

In order to list available time periods, use the **SHOW** action:

Add

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TIMEPERIOD -a add -v "Timeperiod_Test;Timeperiod_
```

Order	Description
1	Name
2	Alias

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TIMEPERIOD -a del -v "Timeperiod_Test"
```

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TIMEPERIOD -a setparam -v "Timeperiod_Test;mon"
```

Order	Column description
1	Name of time period
2	Parameter name
3	Parameter value

Column	Description
name	Name
alias	Alias
sunday	Time Period definition for Sunday
monday	Time Period definition for Monday
tuesday	Time Period definition for Tuesday
wednesday	Time Period definition for Wednesday
thursday	Time Period definition for Thursday
friday	Time Period definition for Friday
saturday	Time Period definition for Saturday
include	example: [...] -v "Timeperiod_Test;include;workhours"; Use delimiter   for multiple inclusion definitions
exclude	example: [...] -v "Timeperiod_Test;exclude;weekend" use delimiter   for multiple exclusion definitions

## Getexception

In order to view the exception list of a time period, use the **GETEXCEPTION** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TIMEPERIOD -a getexception -v "mytimeperiod"
days;timerange
january 1;00:00-00:00
december 25;00:00-00:00
```

## Setexception

In order to set an exception on a timeperiod, use the **SETEXCEPTION** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TIMEPERIOD -a setexception -v "mytimeperiod;jan"
```

---

**Note:** If exception does not exist, it will be created, otherwise it will be overwritten.

---

## Delexception

In order to delete an exception, use the **DELEXCEPTION** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TIMEPERIOD -a delexception -v "mytimeperiod;jan"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of timeperiod
2	Exception to remove from timeperiod

## Traps

### Overview

Object name: **TRAP**

### Show

In order to list available traps, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TRAP -a show
id;name;oid;manufacturer
576;alertSystemUp;.1.3.6.1.4.1.674.10892.1.0.1001;Dell
577;alertThermalShutdown;.1.3.6.1.4.1.674.10892.1.0.1004;Dell
578;alertTemperatureProbeNormal;.1.3.6.1.4.1.674.10892.1.0.1052;Dell
599;alertFanEnclosureInsertion;.1.3.6.1.4.1.674.10892.1.0.1452;Dell
600;alertFanEnclosureRemoval;.1.3.6.1.4.1.674.10892.1.0.1453;Dell
601;alertFanEnclosureExtendedRemoval;.1.3.6.1.4.1.674.10892.1.0.1454;Dell
602;alertLogNormal;.1.3.6.1.4.1.674.10892.1.0.1552;Dell
605;ccmCLIRunningConfigChanged;.1.3.6.1.4.1.9.9.43.2.0.2;Cisco
[...]
```

## Add

In order to add a trap, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TRAP -a add -v "aNewTrap;.1.3.6.1.4.1.11.2.3.9"
```

Required fields are:

Order	Description
1	Trap name
2	OID of the SNMP Trap

## Del

If you want to remove a Trap, use the **DEL** action. The Name is used for identifying the Trap to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TRAP -a del -v "aNewTrap"
```

## Setparam

If you want to change a specific parameter of a Trap, use the **SETPARAM** command. The Name is used for identifying the Trap to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o TRAP -a setparam -v "aNewTrap;vendor;3com"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of Trap
2	Parameter name
3	Parameter value

Parameters that you may change are:

Column	Description	Possible values
name	Name	
comments	Comments	
output	Output	
oid	OID	
status	Status	<i>ok, warning, critical, unknown</i> or <i>0, 1, 2, 3</i>
vendor	Vendor name	A valid vendor name
matching_mode	Advanced regexp matching mode	<i>1</i> to enable, <i>0</i> to disable
resched- ule_svc_enable	Whether or not will reschedule service check when trap is received	<i>1</i> to enable, <i>0</i> to disable
execution_command	Command to be executed when trap is received	A valid Unix command line
execu- tion_command_enable	Whether or not will execute the 'execution_command'	<i>1</i> to enable, <i>0</i> to disable
submit_result_enable	Whether or not will submit result to Service	<i>1</i> to enable, <i>0</i> to disable

## Getmatching

In order to display the list of matching rules defined for a specific trap, use the **GETMATCHING** command:

Column	Description
ID	ID of the matching rule
String	String to match
Regexp	Matching Regular Expression
Status	Status to submit
Order	Priority order of the matching rule

In order to add a matching rule, use the **ADDMATCHING** command:

Required fields are:

## Delmatching

Required fields are:

Column	Description
ID	ID of the matching rule

In order to delete a matching rule, use the **UPDATERMATCHING** command:

Arguments are composed of the following columns:

Order	Column description
1	ID of the matching rule
2	Parameter name
3	Parameter value

Parameters that you may change are:

Column	Description	Possible values
string	String to match	
order	Priority order	
status	Status to submit	<i>ok, warning, critical, unknown</i> or <i>0, 1, 2, 3</i>
regexp	Matching Regular Expression	

## Vendors

### Overview

Object name: **VENDOR**

### Show

In order to list available vendors, use the **SHOW** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o VENDOR -a show
id;name;alias
1;Cisco;Cisco Networks
2;HP;HP Networks
3;3com;3Com
4;Linksys;Linksys
6;Dell;Dell
7;Generic;Generic
9;Zebra;Zebra
11;HP-Compaq;HP and Compaq Systems
```

### Add

In order to add a Vendor, use the **ADD** action:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o VENDOR -a add -v "DLink;DLink routers"
```

Required fields are:

Order	Description
1	Name
2	Alias

### Del

If you want to remove a Vendor, use the **DEL** action. The Name is used for identifying the Vendor to delete:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o VENDOR -a del -v "DLink"
```

### Setparam

If you want to change a specific parameter of a Vendor, use the **SETPARAM** command. The Name is used for identifying the Vendor to update:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o VENDOR -a setparam -v "3com;name;HP"
```

Arguments are composed of the following columns:

Order	Column description
1	Name of Vendor
2	Parameter name
3	Parameter value

Parameters that you may change are:

Column	Description
name	Name
alias	Alias
description	Description

## Generatetraps

It is possible to generate new SNMP traps from a given MIB file. In order to do so, use the **GENERATETRAPS** command:

```
[root@centreon ~]# ./centreon -u admin -p centreon -o VENDOR -a generatetraps -v "3com;/usr/share/myr
[...]
```

```
Done

Total translations:      10
Successful translations: 10
Failed translations:     0
```

---

**Note:** Make sure to put all the mib file dependencies in the `/usr/share/snmp/mibs/` directory before starting the generation. Then, remove them when it is done.

---

Required fields are:

Column	Description
Name	Name of Vendor
Mib file	File path of .mib

## 13.1.4 Import/Export

### Export

At some point, you might need to export all of the object configuration parameters into a plain text file, either for synchronizing or backuping purpose. This export feature is ran like this:

```
[root@centreon ~]# ./centreon -u admin -p centreon -e > /tmp/clapi-export.txt
```

This will generate CLAPI commands and redirect them to the `/tmp/clapi-export.txt` file.

This file can now be read by the import command.

With this, you can also build your own CLAPI command file if you know the straight forward syntax.

For instance::

```
HOST;ADD;Host-Test1;Test host;127.0.0.1;generic-host;Local Poller;Linux
HOST;ADD;Host-Test2;Test host;127.0.0.1;generic-host;Local Poller;Linux
HOST;ADD;Host-Test3;Test host;127.0.0.1;generic-host;Local Poller;Linux
HOST;ADD;Host-Test4;Test host;127.0.0.1;generic-host;Local Poller;Linux
HOST;ADD;Host-Test5;Test host;127.0.0.1;generic-host;Local Poller;Linux
```

### Import

You can import configuration from the exported file `/tmp/clapi-export`

```
[root@centreon ~]# ./centreon -u admin -p centreon -i /tmp/clapi-export.txt
```

In case you have a very large export file, it is advised to redirect the output of the above command to a file. Indeed, when errors occur during the import process, CLAPI will print out an error message along with the line number of the file, you might need to store those output message for troubleshooting later on.

You can build your own CLAPI command file if you know the straight forward syntax. You can use parameter described in Object Management with the syntax you can see in export files

```
OBJECT;AACTION;Parameter1;Parameter2;Parameter3;...
```

## 13.2 Centreon Plugin API

### 13.2.1 Other Resources

If you're looking at writing your own plugins for Centreon Engine, please make sure to visit these other resources:

- The official [Nagios plugin project website](#)

### 13.2.2 Plugin Overview

Scripts and executables must do two things (at a minimum) in order to function as Centreon Engine plugins:

- Exit with one of several possible return values
- Return at least one line of text output to STDOUT

The inner workings of your plugin are unimportant to Centreon Engine. Your plugin could check the status of a TCP port, run a database query, check disk free space, or do whatever else it needs to check something. The details will depend on what needs to be checked - that's up to you.

### 13.2.3 Return Code

Centreon Engine determines the status of a host or service by evaluating the return code from plugins. The following tables shows a list of valid return codes, along with their corresponding service or host states.

Plugin Return Code	Service State	Host State
0	OK	UP
1	WARNING	UP
2	CRITICAL	DOWN/UNREACHABLE
3	UNKNOWN	DOWN/UNREACHABLE

### 13.2.4 Plugin Output Spec

At a minimum, plugins should return at least one of text output. Beginning with Centreon Engine 3, plugins can optionally return multiple lines of output. Plugins may also return optional performance data that can be processed by external applications. The basic format for plugin output is shown below:

```
TEXT OUTPUT | OPTIONAL PERFDATA LONG TEXT LINE 1 LONG TEXT LINE 2 ... LONG TEXT LINE N | PERFDATA LINE
```

The performance data (shown in orange) is optional. If a plugin returns performance data in its output, it must separate the performance data from the other text output using a pipe (|) symbol. Additional lines of long text output (shown in blue) are also optional.



## 13.2.5 Plugin Output Examples

Let's see some examples of possible plugin output...

- Case 1: One line of output (text only) Assume we have a plugin that returns one line of output that looks like this:

```
DISK OK - free space: / 3326 MB (56%);
```

If this plugin was used to perform a service check, the entire line of output will be stored in the *SERVICEOUTPUT* macro.

- Case 2: One line of output (text and perfdata) A plugin can return optional performance data for use by external applications. To do this, the performance data must be separated from the text output with a pipe | symbol like such:

```
DISK OK - free space: / 3326 MB (56%);|/=2643MB;5948;5958;0;5968
```

If this plugin was used to perform a service check, the first portion of output (left of the pipe separator) will be stored in the *SERVICEOUTPUT* macro and the second portion of output (right of the pipe separator) will be stored in the *SERVICEPERFDATA* macro.

- Case 3: Multiple lines of output (text and perfdata) A plugin optionally return multiple lines of both text output and perfdata, like such:

```
DISK OK - free space: / 3326 MB (56%);|/=2643MB;5948;5958;0;5968
/ 15272 MB (77%);
/boot 68 MB (69%);
/home 69357 MB (27%);
/var/log 819 MB (84%);|/boot=68MB;88;93;0;98
/home=69357MB;253404;253409;0;253414
/var/log=818MB;970;975;0;980
```

If this plugin was used to perform a service check, the red portion of first line of output (left of the pipe separator) will be stored in the *SERVICEOUTPUT* macro.

The orange portions of the first and subsequent lines are concatenated (with spaces) are stored in the *SERVICEPERFDATA* macro. The blue portions of the 2nd - 5th lines of output will be concatenated (with escaped newlines) and stored in *LONGSERVICEOUTPUT* the macro.

The final contents of each macro are listed below:

Macro	Value
\$SERVICEOUTPUT\$	DISK OK - free space: / 3326 MB (56%);
\$SERVICEPERFDATA\$	/=2643MB;5948;5958;0;5968 /boot=68MB;88;93;0;98 /home=69357MB;253404;253409;0;253414 /var/log=818MB;970;975;0;980
\$LONGSERVICEOUTPUT\$	/ 15272 MB (77%); /boot 68 MB (69%); \ /var/log 819 MB (84%);

With regards to multiple lines of output, you have the following options for returning performance data:

- You can choose to return no performance data whatsoever
- You can return performance data on the first line only
- You can return performance data only in subsequent lines (after the first)
- You can return performance data in both the first line and subsequent lines (as shown above)

### 13.2.6 Plugin Output Length Restrictions

Centreon Engine will only read the first 4 KB of data that a plugin returns. This is done in order to prevent runaway plugins from dumping megs or gigs of data back to Centreon Engine. This 4 KB output limit is fairly easy to change if you need. Simply edit the value of the `MAX_PLUGIN_OUTPUT_LENGTH` definition in the `include/centengine.h.in` file of the source code distribution and recompile Centreon Engine. There's nothing else you need to change!

### 13.2.7 Examples

If you're looking for some example plugins to study, I would recommend that you download the official Centreon Engine plugins and look through the code for various C, Perl, and shell script plugins. Information on obtaining the official Centreon Engine plugins can be found [here](#).

Additional online resource:

- [Demo](#)
- [Screenshots](#)