



Purpose

This document describes how to enable rrdcached with Nagios XI as a step to improve performance and reduce disk I/O on large installations.

Target Audience

This document is intended for use by Nagios XI Administrators.

What is rrdcached?

The full documentation on rrdcached is located at the following URL:

<https://oss.oetiker.ch/rrdtool/doc/rrdcached.en.html>

`rrdcached` is a daemon that receives updates to existing RRD files, accumulates them and, if enough have been received or a defined time has passed, writes the updates to the RRD file. A *flush* command may be used to force writing of values to disk, so that graphing facilities and similar can work with up-to-date data.

On a Nagios XI server, `rrdcached` collects host and service performance data and then flushes it to the appropriate rrd files at a specified interval. This reduces the amount of disk activity needed to keep a large number of rrd files current for performance graphs. This configuration is useful for large monitoring environments where there are more than 1000 check results returning performance data every minute, or from systems suffering from a performance loss due to I/O Wait.

Terminal Access

The steps in this document require you to establish a terminal session to your Nagios XI server as a user with root privileges.

rrdcached Installation

Establish a terminal session to your Nagios XI server and execute the following commands:

```
cd /tmp
wget https://assets.nagios.com/downloads/nagiosxi/scripts/xi-rrdcached.sh
chmod +x xi-rrdcached.sh
./xi-rrdcached.sh
```

Verifying The Setup

The rrdcached configuration options are defined in the `/etc/sysconfig/rrdcached` file on RHEL, CentOS, and Oracle Linux systems. On Debian and Ubuntu, they are defined in the `/etc/default/rrdcached` file.

To verify that the daemon is working correctly, run the following command from the command line:

```
ps aux | grep rrd
```

The output will be similar to the following:

```
nagios      5392  0.0  0.0 528468  1444 ?          Ssl  13:44   0:00
/usr/bin/rrdcached -p /var/rrdtool/rrdcached/rrdcached.pid -s nagios -m 0660
-l unix:/var/rrdtool/rrdcached/rrdcached.sock -F -w 900 -z 90 -j
/var/rrdtool/rrdcached -b /var/rrdtool/rrdcached
```

The PNP changes can be verified by looking at any performance graph in the interface after the number of seconds specified by the `-w` directive in the configuration file. In the example above, a user would need to wait for at least 15 minutes before verifying that new performance data was correctly being written to the rrdfiles. The journaling directory is `/var/rrdtool/rrdcached` on CentOS, RHEL, Oracle Linux, and Ubuntu 14, and `/var/lib/rrdcached/journal` - on Debian 9, Ubuntu 16.04, and Ubuntu 18.04.

There should be an `rrd.journal` file in that location with a recent timestamp matching the last time the `rrdcached` service was restarted.

Execute one of the following commands (depending on your operating system) to check for the journal file:

```
ls -la /var/rrdtool/rrdcached/rrd.journal.*
ls -la /var/lib/rrdcached/journal/rrd.journal.*
```

The output will be similar the following:

```
-rw-r--r-- 1 nagios nagios 16384 Jan 31 09:38
/var/rrdtool/rrdcached/rrd.journal.1580483825.651862
```

or

```
-rw-r--r-- 1 root root      0 Jan 31 09:38
/var/lib/rrdcached/journal/rrd.journal.1580483616.453911
```

Note: `rrdcached` can be disabled at any time by commenting out the `RRD_DAEMON_OPTS` in the `/usr/local/nagios/etc/pnp/process_perfdata.cfg` file.

Finishing Up

This completes the documentation on using `rrdcached` in Nagios XI.

If you have additional questions or other support related questions, please visit us at our Nagios Support Forums:

<https://support.nagios.com/forum>

The Nagios Support Knowledgebase is also a great support resource:

<https://support.nagios.com/kb>