

Nagios Core - Performance Graphs Using PNP4Nagios

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Nagios Core - Performance Graphs Using PNP4Nagios

This documentation explains how to configure Nagios Core to use the PNP4Nagios program to generate performance graphs.

When Nagios Core receives check results from Host and Service checks, the check result can include performance data. This performance data needs to be specifically formatted as

[Nagios Plugins Development Guidelines - Performance Data](#)

Nagios Core does not have it's own performance data engine built in to process this performance data, instead it provides functionality to pass this performance data to an external |

PNP4Nagios is one such external program. PNP4Nagios provides the following functionality:

- Process and store the received performance data in Round Robin Database (RRD) files
- A GUI to display the data in the RRD files from within the Nagios Core interface

IMPORTANT

DO NOT follow this guide if you are using Nagios XI. Nagios XI includes a specific version and configuration of PNP4Nagios and following this guide will result in breaking your Nagios XI ins

This guide is broken up into several sections and covers different Linux distributions and operating systems (OS). If your Linux Distribution or operating system is not included in this gu

PNP4Nagios 0.6.26 running on Nagios Core 4.4.3 is what this guide instructs you to install, however future versions should also work fine with these steps.

Note: This guide is based on Nagios Core being installed using the following KB article:

[Documentation - Installing Nagios Core From Source](#)

Because this guide is based on Nagios Core already being installed, prerequisites like Apache and PHP will already be installed on the Nagios Core server, they will only be re-install

Please select your OS:

- [Red Hat Enterprise Linux \(RHEL\)](#)
- [CentOS](#)
- [Oracle Linux](#)
- [Ubuntu](#)
- [SUSE SLES | openSUSE Leap](#)
- [Debian](#)
- [Raspbian](#)
- [Fedora](#)
- [Arch Linux](#)
- [Gentoo](#)
- [FreeBSD](#)

RHEL | CentOS | Oracle Linux

Prerequisites

Perform these steps to install the pre-requisite packages.

===== RHEL 5 | CentOS 5 | Oracle Linux 5 =====

```
yum install -y rrdtool perl-rrdtool php-gd
cpan -f -i Time::HiRes
```

If CPAN has not been run before you will need to answer a series of questions, usually accepting the default choice using **Enter** will suffice.

===== RHEL 6/7 | CentOS 6/7 | Oracle Linux 6/7 =====

```
yum install -y rrdtool perl-rrdtool perl-Time-HiRes php-gd
```

===== RHEL 8 =====

```
dnf install -y rrdtool perl-rrdtool perl-Time-HiRes php-gd php-xml
dnf update -y
```

Downloading the Source

```
cd /tmp
wget -O pnp4nagios.tar.gz https://github.com/linge/pnp4nagios/archive/0.6.26.tar.gz
tar xzf pnp4nagios.tar.gz
```

Compile & Install

```
cd pnp4nagios-0.6.26
./configure
make all
make install
make install-webconf
make install-config
make install-init
```

Configure & Start Service / Daemon

The `npcd` service needs to be configured to start on boot, it also needs to be started. The Apache `httpd` service is also restarted at this point.

==== RHEL 5/6 | CentOS 5/6 | Oracle Linux 5/6 ====

```
chkconfig --add npcd
service npcd start
service httpd restart
```

==== RHEL 7/8 | CentOS 7 | Oracle Linux 7 ====

```
systemctl daemon-reload
systemctl enable npcd.service
systemctl start npcd.service
systemctl restart httpd.service
```

Please proceed to the [Nagios Command Configuration](#) section for the next step.

Ubuntu

Prerequisites

Perform these steps to install the pre-requisite packages.

==== Ubuntu 14.x / 15.x ====

```
sudo apt-get update
sudo apt-get install -y rrdtool librrd-simple-perl php-gd
```

==== Ubuntu 16.x / 17.x / 18.x ====

```
sudo apt-get update
sudo apt-get install -y rrdtool librrd-simple-perl php-gd php-xml
```

Downloading the Source

```
cd /tmp
wget -O pnp4nagios.tar.gz https://github.com/linge/pnp4nagios/archive/0.6.26.tar.gz
tar xzf pnp4nagios.tar.gz
```

Compile & Install

```
cd pnp4nagios-0.6.26
sudo ./configure --with-httpd-conf=/etc/apache2/sites-enabled
sudo make all
sudo make install
sudo make install-webconf
sudo make install-config
sudo make install-init
```

Configure & Start Service / Daemon

The `npcd` service needs to be configured to start on boot, it also needs to be started. The `apache2` service is also restarted at this point.

==== Ubuntu 14.x ====

```
sudo update-rc.d npcd defaults
sudo service npcd start
sudo service apache2 restart
```

==== Ubuntu 15.x / 16.x / 17.x / 18.x =====

```
sudo systemctl daemon-reload
sudo systemctl enable npcd.service
sudo systemctl start npcd.service
sudo systemctl restart apache2.service
```

Please proceed to the [Nagios Command Configuration](#) section for the next step.

SUSE SLES | openSUSE Leap

Prerequisites

Perform these steps to install the pre-requisite packages.

==== SUSE SLES 11.x =====

```
sudo zypper --non-interactive install rrdtool php-gd php-zlib php53-sockets
```

==== SUSE SLES 12.x | openSUSE =====

```
sudo zypper --non-interactive install rrdtool php5-gd php5-zlib php5-sockets
```

Downloading the Source

```
cd /tmp
wget -O pnp4nagios.tar.gz https://github.com/linge/pnp4nagios/archive/0.6.26.tar.gz
tar xzf pnp4nagios.tar.gz
```

Compile & Install

In the following commands an updated version of `httpd.conf.in` is downloaded so it works with the newer versions of Apache.

```
cd pnp4nagios-0.6.26
wget -O sample-config/httpd.conf.in https://raw.githubusercontent.com/linge/pnp4nagios/master/sample-config/httpd.conf.in
sudo ./configure --with-httpd-conf=/etc/apache2/vhosts.d
sudo make all
sudo make install
sudo make install-webconf
sudo make install-config
sudo make install-init
```

Configure & Start Service / Daemon

The `npcd` service needs to be configured to start on boot, it also needs to be started. The `apache2` service requires a module to be enabled and restarted at this point.

==== SUSE SLES 11.x =====

```
sudo /sbin/chkconfig --set npcd on
sudo /sbin/service npcd start
sudo /sbin/service apache2 restart
```

==== SUSE SLES 12.x | openSUSE =====

```
sudo systemctl daemon-reload
sudo systemctl enable npcd.service
sudo systemctl start npcd.service
sudo systemctl restart apache2.service
```

Please proceed to the [Nagios Command Configuration](#) section for the next step.

Debian | Raspbian

All steps on Debian require to run as root. To become root simply run:

Debian:

```
su
```

Raspbian:

```
sudo -i
```

All commands from this point onwards will be as root.

Prerequisites

Perform these steps to install the pre-requisite packages.

==== 7.x / 8.x ====

```
apt-get update
apt-get install -y rrdtool librrds-perl php5-gd
```

==== 9.x ====

```
apt-get update
apt-get install -y rrdtool librrds-perl php-gd php-xml
```

Downloading the Source

```
cd /tmp
wget -O pnp4nagios.tar.gz https://github.com/linge/pnp4nagios/archive/0.6.26.tar.gz
tar xzf pnp4nagios.tar.gz
```

Compile & Install

```
cd pnp4nagios-0.6.26
./configure --with-httpd-conf=/etc/apache2/sites-enabled
make all
make install
make install-webconf
make install-config
make install-init
```

Configure & Start Service / Daemon

The `npcd` service needs to be configured to start on boot, it also needs to be started. The `apache2` service is also restarted at this point.

==== 7.x ====

```
update-rc.d npcd defaults
service npcd start
service apache2 restart
```

==== 8.x / 9.x ====

```
systemctl daemon-reload
systemctl enable npcd.service
systemctl start npcd.service
systemctl restart apache2.service
```

Please proceed to the [Nagios Command Configuration](#) section for the next step.

Fedora

Prerequisites

Perform these steps to install the pre-requisite packages.

```
dnf install -y rrdtool perl-rrdtool perl-Time-HiRes php-gd php-xml
dnf update -y
```

Downloading the Source

```
cd /tmp
wget -O pnp4nagios.tar.gz https://github.com/linge/pnp4nagios/archive/0.6.26.tar.gz
tar xzf pnp4nagios.tar.gz
```

Compile & Install

```
cd pnp4nagios-0.6.26
./configure
make all
make install
make install-webconf
make install-config
make install-init
```

Configure & Start Service / Daemon

The `npcd` service needs to be configured to start on boot, it also needs to be started. The Apache `httpd` service is also restarted at this point.

```
systemctl daemon-reload
systemctl enable npcd.service
systemctl start npcd.service
systemctl restart httpd.service
```

Please proceed to the [Nagios Command Configuration](#) section for the next step.

Arch Linux

Prerequisites

Perform these steps to install the pre-requisite packages.

```
pacman --noconfirm -Syyu
pacman --noconfirm -S rrdtool php-gd
```

Downloading the Source

```
cd /tmp
wget -O pnp4nagios.zip https://github.com/linge/pnp4nagios/archive/master.zip
unzip pnp4nagios.zip
```

Compile & Install

```
cd pnp4nagios-master
./configure --with-httpd-conf=/etc/httpd/conf/extra
make all
make install
make install-webconf
make install-config
wget -O /usr/lib/systemd/system/npcd.service https://aur.archlinux.org/cgit/aur.git/plain/npcd.service?h=pnp4nagios
sed -i 's/^ExecStart.*$/ExecStart=/usr/local/pnp4nagios/bin/npcd -d -f /usr/local/pnp4nagios/etc/npcd.cfg/g' /usr/lib/systemd/
echo 'Include "conf/extra/pnp4nagios.conf"' >> /etc/httpd/conf/httpd.conf
sed -i 's/^#LoadModule rewrite_module/LoadModule rewrite_module/g' /etc/httpd/conf/httpd.conf
sed -i 's/^;extension=gd/extension=gd/g' /etc/php/php.ini
sed -i 's/^;extension=iconv/extension=iconv/g' /etc/php/php.ini
sed -i 's/^;extension=sockets/extension=sockets/g' /etc/php/php.ini
```

Configure & Start Service / Daemon

The `npcd` service needs to be configured to start on boot, it also needs to be started. The Apache `httpd` service is also restarted at this point.

```
systemctl daemon-reload
systemctl enable npcd.service
systemctl start npcd.service
systemctl restart httpd.service
```

Please proceed to the [Nagios Command Configuration](#) section for the next step.

Gentoo

Prerequisites

Perform these steps to install the pre-requisite packages.

```
emerge --sync
echo "net-analyzer/rrdtool perl_graph" >> /etc/portage/package.use/rrdtool
echo ">=perl-core/Time-HiRes-1.972.600-r1 **" >> /etc/portage/package.accept_keywords
echo ">=dev-perl/RRD-Simple-1.440.0-r2 **" >> /etc/portage/package.accept_keywords
emerge --noreplace net-analyzer/rrdtool dev-perl/RRD-Simple perl-core/Time-HiRes media-libs/gd
sed -i '/dev-lang/php/s/$/ gd sockets/' /etc/portage/package.use/php
emerge -av dev-lang/php
```

Downloading the Source

```
cd /tmp
wget -O pnp4nagios.zip https://github.com/linge/pnp4nagios/archive/master.zip
unzip pnp4nagios.zip
```

Compile & Install

```
cd pnp4nagios-master
wget -O sample-config/httpd.conf.in https://raw.githubusercontent.com/linge/pnp4nagios/master/sample-config/httpd.conf.in
./configure --with-httpd-conf=/etc/apache2/vhosts.d
make all
make install
make install-webconf
make install-config
wget -O /etc/init.d/npcd https://gitweb.gentoo.org/repos/gentoo.git/plain/net-analyzer/pnp4nagios/files/npcd.initd
sed -i 's/^command=.*command="\usr/local/pnp4nagios/bin/npcd"/g' /etc/init.d/npcd
sed -i 's/^command_args=.*command_args="-f \usr/local/pnp4nagios/etc/npcd.cfg -d"/g' /etc/init.d/npcd
chmod +x /etc/init.d/npcd
```

Configure & Start Service / Daemon

The `npcd` service needs to be configured to start on boot, it also needs to be started. The Apache `apache2` service is also restarted at this point.

```
rc-update add npcd default
rc-service npcd start
rc-service apache2 restart
```

Please proceed to the [Nagios Command Configuration](#) section for the next step.

FreeBSD

Prerequisites

Perform these steps to install the pre-requisite packages.

```
pkg install -y rrdtool p5-RRD-Simple p5-Time-HiRes php70-gd php70-zlib php70-sockets
```

Downloading the Source

```
cd /tmp
wget -O pnp4nagios.tar.gz https://github.com/linge/pnp4nagios/archive/0.6.26.tar.gz
tar xzf pnp4nagios.tar.gz
```

Compile & Install

```
cd pnp4nagios-0.6.26
sed -i '' 's/g root/g wheel/g' scripts/Makefile.in
./configure --with-httpd-conf=/usr/local/etc/apache24/Includes
gmake all
gmake install
gmake install-webconf
gmake install-config
gmake install-init
```

Configure & Start Service / Daemon

The `npcd` service needs to be configured to start on boot, it also needs to be started. The Apache `apache24` service is also restarted at this point.

```
echo '/usr/local/etc/rc.d/npcd start' >> /etc/rc.local
service npcd start
sed -i '' 's/^#LoadModule rewrite_module/LoadModule rewrite_module/g' /usr/local/etc/apache24/httpd.conf
service apache24 restart
```

Please proceed to the [Nagios Command Configuration](#) section for the next step.

Nagios Command Configuration

Once PNP4Nagios is running as the `npcd` service, the next step is to configure Nagios Core to send the performance data to PNP4Nagios.

This guide is configuring Nagios Core and PNP4Nagios in **Bulk Mode**. This documentation will not explain in detail how it all works, basically a bunch of temporary files are created ar

https://docs.pnp4nagios.org/pnp-0.6/config#bulk_mode_with_npcd

The following configuration changes are required to the `/usr/local/nagios/etc/nagios.cfg` file:

```
process_performance_data=1

host_perfdata_file=/usr/local/pnp4nagios/var/host-perfdata
host_perfdata_file_template=DATATYPE::HOSTPERFDATA\tTIMET::$TIMET\t$HOSTNAME::$HOSTNAME\t$HOSTPERFDATA::$HOSTPERFDATA\t$HOSTCHECKCOMMAN
host_perfdata_file_mode=a
host_perfdata_file_processing_interval=15
host_perfdata_file_processing_command=process-host-perfdata-file-bulk-npcd
```



```
echo '    command_line    /bin/mv /usr/local/pnp4nagios/var/service-perfdata /usr/local/pnp4nagios/var/spool/service-perfdata.$TIMETS'
echo '    }' >> /usr/local/nagios/etc/objects/commands.cfg
echo '' >> /usr/local/nagios/etc/objects/commands.cfg
```

Ubuntu | SLES | openSUSE

```
sudo sh -c "echo '' >> /usr/local/nagios/etc/objects/commands.cfg"
sudo sh -c "echo 'define command {' >> /usr/local/nagios/etc/objects/commands.cfg"
sudo sh -c "echo '    command_name    process-host-perfdata-file-bulk-npcd' >> /usr/local/nagios/etc/objects/commands.cfg"
sudo sh -c "echo '    command_line    /bin/mv /usr/local/pnp4nagios/var/host-perfdata /usr/local/pnp4nagios/var/spool/host-perfdata.\$T"
sudo sh -c "echo '    }' >> /usr/local/nagios/etc/objects/commands.cfg"
sudo sh -c "echo '' >> /usr/local/nagios/etc/objects/commands.cfg"
sudo sh -c "echo 'define command {' >> /usr/local/nagios/etc/objects/commands.cfg"
sudo sh -c "echo '    command_name    process-service-perfdata-file-bulk-npcd' >> /usr/local/nagios/etc/objects/commands.cfg"
sudo sh -c "echo '    command_line    /bin/mv /usr/local/pnp4nagios/var/service-perfdata /usr/local/pnp4nagios/var/spool/service-perfda"
sudo sh -c "echo '    }' >> /usr/local/nagios/etc/objects/commands.cfg"
sudo sh -c "echo '' >> /usr/local/nagios/etc/objects/commands.cfg"
```

Once those changes have been performed you will need to verify the Nagios Core configuration with the following command:

RHEL | CentOS | Oracle Linux | Debian | Raspbian | Fedora | FreeBSD | Arch Linux | Gentoo

```
/usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg
```

Ubuntu | SLES | openSUSE

```
sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg
```

If the verification was successful then you can restart the **nagios** service:

RHEL | CentOS | Oracle Linux

==== 5/6 =====

```
service nagios restart
```

==== 7/8 =====

```
systemctl restart nagios.service
```

Ubuntu

==== 14 =====

```
sudo service nagios restart
```

==== 15/16/17/18 =====

```
sudo systemctl restart nagios.service
```

SLES | openSUSE

==== SUSE SLES 11 =====

```
sudo /sbin/service nagios restart
```

==== SUSE SLES 12 | openSUSE =====

```
sudo systemctl restart nagios.service
```

Debian | Raspbian

==== 7 =====

```
service nagios restart
```

==== 8/9 =====

```
systemctl restart nagios.service
```

Fedora | Arch Linux

```
systemctl restart nagios.service
```

FreeBSD

```
service nagios restart
```


Gentoo

```
rc-service nagios restart
```

The next step is to [verify that PNP4Nagios is working](#).

Verify PNP4Nagios Is Working

The first step in verifying that PNP4Nagios is working is to look at the RRD files that should now exist. By following this guide they should exist in `/usr/local/pnp4nagios/var/perf`

```
ls -la /usr/local/pnp4nagios/var/perfdata/localhost/
```

The output from that command should resemble (it might take up to 5 minutes for files to appear here):

```
total 5308
drwxrwxr-x. 2 nagios nagios 4096 Feb 27 16:18 .
drwxr-xr-x. 4 nagios nagios 4096 Feb 27 14:41 ..
-rw-rw-r--. 1 nagios nagios 1151280 Feb 27 16:17 Current_Load.rrd
-rw-rw-r--. 1 nagios nagios 3428 Feb 27 16:17 Current_Load.xml
-rw-rw-r--. 1 nagios nagios 384736 Feb 27 16:18 Current_Users.rrd
-rw-rw-r--. 1 nagios nagios 1976 Feb 27 16:18 Current_Users.xml
-rw-rw-r--. 1 nagios nagios 768008 Feb 27 16:18 _HOST_.rrd
-rw-rw-r--. 1 nagios nagios 2555 Feb 27 16:18 _HOST_.xml
-rw-rw-r--. 1 nagios nagios 768008 Feb 27 16:18 HTTP.rrd
-rw-rw-r--. 1 nagios nagios 2565 Feb 27 16:18 HTTP.xml
-rw-rw-r--. 1 nagios nagios 768008 Feb 27 16:14 PING.rrd
-rw-rw-r--. 1 nagios nagios 2655 Feb 27 16:14 PING.xml
-rw-rw-r--. 1 nagios nagios 384736 Feb 27 16:15 Root_Partition.rrd
-rw-rw-r--. 1 nagios nagios 2021 Feb 27 16:15 Root_Partition.xml
-rw-rw-r--. 1 nagios nagios 384736 Feb 27 16:15 SSH.rrd
-rw-rw-r--. 1 nagios nagios 1938 Feb 27 16:15 SSH.xml
-rw-rw-r--. 1 nagios nagios 384736 Feb 27 16:16 Swap_Usage.rrd
-rw-rw-r--. 1 nagios nagios 1974 Feb 27 16:16 Swap_Usage.xml
-rw-rw-r--. 1 nagios nagios 384736 Feb 27 16:17 Total_Processes.rrd
-rw-rw-r--. 1 nagios nagios 2015 Feb 27 16:17 Total_Processes.xml
```

There is also a web interface for PNP4Nagios. Open your web browser to the following URL:

```
http://nagios_server/pnp4nagios/
```

Replace `nagios_server` with the DNS record or ip address of your Nagios Core server.

This will display a page of test results, they should all be passed, most importantly is this statement at the bottom of the page:

```
Your environment passed all requirements. Remove or rename the /usr/local/pnp4nagios/share/install.php file now.
```

PHP 7 Depreciation Messages

PNP4Nagios requires updating for the PHP/web component to correctly work. This does not affect the data collection and storing in RRD files however none of the web functionality works. Du

To remove the `install.php` file execute the following command:


RHEL | CentOS | Oracle Linux | Debian | Raspbian | Fedora | FreeBSD | Arch Linux | Gentoo

```
rm -f /usr/local/pnp4nagios/share/install.php
```

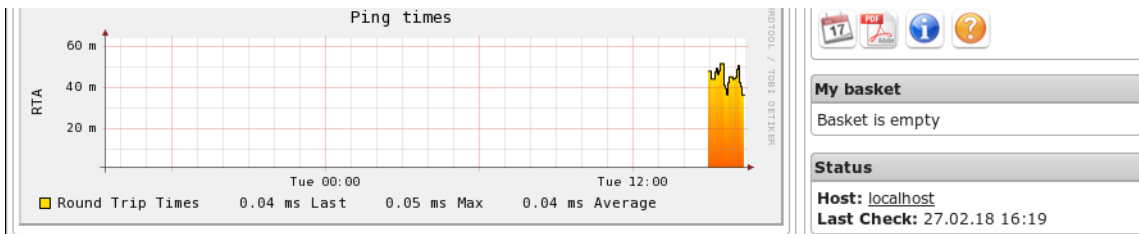
Ubuntu | SLES | openSUSE

```
sudo rm -f /usr/local/pnp4nagios/share/install.php
```

After executing the command you need to refresh your web browser and you will start to see the Nagios graphs.

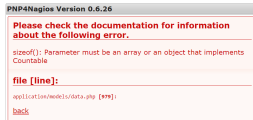


The screenshot shows the Nagios web interface for the service 'localhost'. It displays the host name as 'localhost' and the service as 'Host Perfdata'. The uptime is shown as '25 Hours 26.02.18 15:23 - 27.02.18 16:23'. The datasource is 'Round Trip Times'. There are search and action buttons on the right side of the interface.



If you are seeing the graphs then everything appears to be functioning correctly. Your next step is to configure Nagios Core Web Interface Integration.

NOTE: If you receive an error when attempting to validate http://nagios_server/pnp4nagios/ like the below (sizeof() parameter must be an array or an object that implements Count



Open the `/usr/local/pnp4nagios/share/application/models/data.php` file for editing.

Replace `if(sizeof($pages)>0)` with `if(is_array($pages) && sizeof($pages)>0)` in both places it exists in the file.

Refresh the page.

Nagios Core Web Interface Integration

PNP4Nagios can also be integrated into the Nagios Core web interface, this is quite useful however it does require some changes to your Nagios object definitions.

Nagios Core uses the `action_url` directive in object definitions to provide an icon/link when viewing host or service objects in the web interface.

This means that every object in Nagios Core requires the `action_url` directive to be defined. This can be easily achieved by using a template and using that template in your object

In a fresh installation of [Nagios Core](#) the following host and service templates need to be added to `/usr/local/nagios/etc/objects/templates.cfg` file:

```
define host {
    name        host-pnp
    action_url  /pnp4nagios/index.php/graph?host=$HOSTNAME&srv=_HOST_
    register   0
}

define service {
    name        service-pnp
    action_url  /pnp4nagios/index.php/graph?host=$HOSTNAME&srv=$SERVICEDESC$
    register   0
}
```

To make the required changes above you can manually edit the file, or the following commands will add those templates for you:

RHEL | CentOS | Oracle Linux | Debian | Raspbian | Fedora | FreeBSD | Arch Linux | Gentoo

```
echo '' >> /usr/local/nagios/etc/objects/templates.cfg
echo 'define host {' >> /usr/local/nagios/etc/objects/templates.cfg
echo '    name        host-pnp' >> /usr/local/nagios/etc/objects/templates.cfg
echo '    action_url  /pnp4nagios/index.php/graph?host=$HOSTNAME&srv=_HOST_' >> /usr/local/nagios/etc/objects/templates.cfg
echo '    register   0' >> /usr/local/nagios/etc/objects/templates.cfg
echo '}' >> /usr/local/nagios/etc/objects/templates.cfg
echo '' >> /usr/local/nagios/etc/objects/templates.cfg
echo 'define service {' >> /usr/local/nagios/etc/objects/templates.cfg
echo '    name        service-pnp' >> /usr/local/nagios/etc/objects/templates.cfg
echo '    action_url  /pnp4nagios/index.php/graph?host=$HOSTNAME&srv=$SERVICEDESC$' >> /usr/local/nagios/etc/objects/templates.cfg
echo '    register   0' >> /usr/local/nagios/etc/objects/templates.cfg
echo '}' >> /usr/local/nagios/etc/objects/templates.cfg
echo '' >> /usr/local/nagios/etc/objects/templates.cfg
```

Ubuntu | SLES | openSUSE

```
sudo sh -c "echo '' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo 'define host {' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo '    name        host-pnp' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo '    action_url  /pnp4nagios/index.php/graph?host=\$HOSTNAME\&srv=_HOST_' >> /usr/local/nagios/etc/objects/templates.cf"
sudo sh -c "echo '    register   0' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo '}' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo '' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo 'define service {' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo '    name        service-pnp' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo '    action_url  /pnp4nagios/index.php/graph?host=\$HOSTNAME\&srv=\$SERVICEDESC\$' >> /usr/local/nagios/etc/objects/tem"
sudo sh -c "echo '    register   0' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo '}' >> /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "echo '' >> /usr/local/nagios/etc/objects/templates.cfg"
```

Then to use those templates you need to include them in your host and service directives. This example will update the generic-host and generic-service templates to include these t

```
define host{
```

```

define host{
    name                generic-host      ; The name of this host template
    use                 host-pnp
}

define service{
    name                generic-service   ; The 'name' of this service template
    use                 service-pnp
}

```

In the example above the remaining options in the default templates have been omitted, there is no point showing all of those entries.

To make the required changes above you can manually edit the file, or the **following commands** will update those templates for you:

RHEL | CentOS | Oracle Linux | Debian | Raspbian | Fedora | Arch Linux | Gentoo

```

sed -i '/name.*generic-host/a\      use                 host-pnp' /usr/local/nagios/etc/objects/templates.cfg
sed -i '/name.*generic-service/a\    use                 service-pnp' /usr/local/nagios/etc/objects/templates.cfg

```

Ubuntu | SLES | openSUSE

```

sudo sh -c "sed -i '/name.*generic-host/a\      use                 host-pnp' /usr/local/nagios/etc/objects/templates.cfg"
sudo sh -c "sed -i '/name.*generic-service/a\    use                 service-pnp' /usr/local/nagios/etc/objects/templates.cfg"

```

FreeBSD

```

perl -ni.bak -le 'print; print "      use                 host-pnp" if /name.*generic-host/' /usr/local/nagios/etc/objects/templates.cfg
perl -ni.bak -le 'print; print "    use                 service-pnp" if /name.*generic-service/' /usr/local/nagios/etc/objects/templates.cfg

```

Once those changes have been performed you will need to verify the Nagios Core configuration with the following command:

RHEL | CentOS | Oracle Linux | Debian | Raspbian | Fedora | FreeBSD | Arch Linux | Gentoo

```

/usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

```

Ubuntu | SLES | openSUSE

```

sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

```

If the verification was successful then you can restart the **nagios** service:

RHEL | CentOS | Oracle Linux

==== 5/6 =====

```

service nagios restart

```

==== 7/8 =====

```

systemctl restart nagios.service

```

Ubuntu

==== 14 =====

```

sudo service nagios restart

```

==== 15/16/17 =====

```

sudo systemctl restart nagios.service

```

SLES | openSUSE

==== SUSE SLES 11 =====

```

sudo /sbin/service nagios restart

```

==== SUSE SLES 12 | openSUSE =====

```

sudo systemctl restart nagios.service

```

Debian | Raspbian

==== 7 =====

```

service nagios restart

```

==== 8/9 =====

```

systemctl restart nagios.service

```

Fedora | Arch Linux

```
systemctl restart nagios.service
```

FreeBSD

```
service nagios restart
```

Gentoo

```
rc-service nagios restart
```

Finally open the Nagios Core web interface and navigate to the Services page, you should now see a graph icon for all the hosts and services. Clicking on an icon will open the host o

Host	Service	Status	Last Check	Duration	Attempt	Status Information
localhost	Current Load	OK	02-27-2018 17:02:33	186d 6h 38m 26s	1/4	OK - load average: 0.00, 0.00, 0.00
	Current Users	OK	02-27-2018 17:03:11	186d 6h 38m 36s	1/4	USERS OK - 1 users currently logged in
	HTTP	OK	02-27-2018 17:07:20	0d 0h 0m 4s	1/4	HTTP OK: HTTP/1.1 200 OK - 265 bytes in 0.000 second response time
	PING	OK	02-27-2018 17:04:26	186d 6h 38m 26s	1/4	PING OK - Packet loss = 0%, RTA = 0.04 ms
	Root Partition	OK	02-27-2018 17:05:03	186d 6h 39m 57s	1/4	DISK OK - free space: / 15760 MB (90.13% inode=96%):
	SSH	OK	02-27-2018 17:05:41	186d 6h 38m 48s	1/4	SSH OK - OpenSSH_5.3 (protocol 2.0)
	Swap Usage	OK	02-27-2018 17:06:18	186d 6h 39m 42s	1/4	SWAP OK - 100% free (2147 MB out of 2147 MB)
	Total Processes	OK	02-27-2018 17:06:56	186d 6h 38m 26s	1/4	PROCS OK: 72 processes with STATE = RSZDT

This completes the steps required for integrating PNP4Nagios with Nagios Core.

Additional Reading

This documentation would not have been possible without the official documentation available here:

<https://docs.pnp4nagios.org/>

Final Thoughts

For any support related questions please visit the [Nagios Support Forums](#) at:

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

Posted by: **tlea** - Mon, Feb 26, 2018 at 8:00 PM. This article has been viewed 48253 times.

Online URL: <https://support.nagios.com/kb/article/nagios-core-performance-graphs-using-pnp4nagios-801.html>