

Nagios

From SME Server

 Languages:	English
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Not reviewed:

This howto or contrib has **not** been reviewed and might contain code that could harm your installation. For more information on the review process have a look at the [Development Review page](#).

Note:

This contrib was only applied and used on fresh SME (server only mode) install. Conflicts with other installed packages were not examined. The author strongly recommend to install this monitoring system on a dedicated server. It is entirely possible to run it on a virtualized system, which monitors the host itself. In this case you should set up a second Nagios server (acting as a watchdog) on an independent hardware (physically or virtualized) to monitor the main Nagios system

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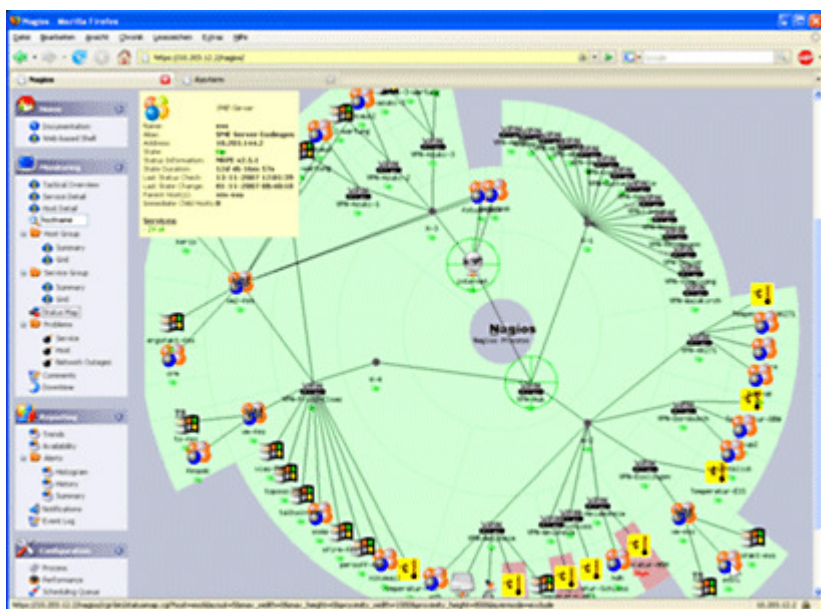
Maintainer

Michael Weinberger

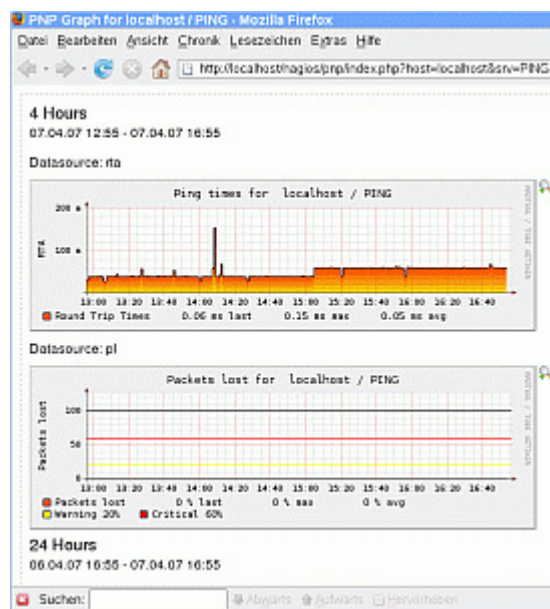
Introduction

Nagios is a host and service monitor designed to inform you of network problems before your clients, end-users or managers do. Read more... (<http://www.nagios.org/about/>)

This **Nagios contrib** installs Nagios Version 3 and was tested on fresh installed SME Server 7.3 It provides all packages needed to setup a SME Server as a central Nagios monitoring server including the graphical performance data analyser PNP4Nagios (<http://www.pnp4nagios.org/start>) .



Statusmap screenshot of a sample Nagios configuration



PNP Screenshot (Source: www.pnp4nagios.org)

These packages are provided by the contrib. All other dependend packages will be installed via yum from the Centos and DAG repositories.

Package	Version	Build date	
smeserver-nagios	2.0.0-1	17 Nov 2008	Integrates Nagios service into the SME Server
smeserver-nagios-nrpe	2.0.0-1	17 Nov 2008	Integrates NRPE service into the SME Server
smeserver-nagios-nsca	2.0.0-1	17 Nov 2008	Integrates NSCA service into the SME Server (needed
smeserver-nagios-plugins-mysql	2.0.0-1	18 Nov 2008	Plugin that checks the mysqld service on a SME Server
smeserver-nagios-backup	2.0.0-1	17 Nov 2008	Nagios backup integration. Includes Nagios configurati
nagios-plugins-temptrax	2.0.1-1	18 Nov 2008	Plugins for the Sensatronics Ethernet Temperature Dev
nagios-plugins-esx3i	1.0.3-0	16 Nov 2008	Plugins to monitor ESXi servers that support the "Com
perl-Nagios-Plugin	0.17-1	19 Oct 2007	A family of perl modules to streamline writing Nagios p
nagios-of-plugins	0.9.4-1	08 Jul 2007	Additional plugins written by Gavin Carr of Open Fusio
nagios-plugins-generic	1.0.0	01 Nov 2007	A generic plugin. Read more... (http://www.my-plugin .
nagios-nuvola-1.0.3.tar.gz	1.0.3	28 Oct 2007	Nuvola GUI theme
nagios-icons-nx-1.0.0.tar.gz	1.0.0	04 Nov 2007	Additional useful icons, including the SME logo

Download

Download the packages and files from <http://mirror.contribs.org/smeserver/contribs/michaelw/sme7/Nagios3/packages/> manually or run the the script wgetall (<http://mirror.contribs.org/smeserver/contribs/michaelw/sme7/Nagios3/packages/wgetall>) to download all in one go.

```
bash < wgetall
```

Installation



Note:

If you have the Nagios 2 contrib installed, follow the update instructions below

Configure the dag repository

The following command will configure the dag repository on SME Server.

```
/sbin/e-smith/db yum_repositories set dag repository \  
Name 'Dag - EL4' \  
BaseURL 'http://apt.sw.be/redhat/el4/en/$basearch/dag' \  
EnableGroups no \  
GPGCheck yes \  
GPGKey http://dag.wieers.com/packages/RPM-GPG-KEY.dag.txt \  
Visible no \  
Exclude freetype,htop,iptraf,rsync,syslinux \  
status disabled
```

After adding it to the database we have to update the changes to the configuration file:

```
signal-event yum-modify
```

Installation of a central Nagios server

Intstalling the packages

```
/usr/bin/yum --enablerepo=dag install \  
nagios-plugins-setuid \  
perl-Config-Tiny
```

```
/usr/bin/yum --enablerepo=dag localinstall \  
smeserver-nagios-*.noarch.rpm \  
pnp-*.i386.rpm \  
smeserver-nagios-backup-*.noarch.rpm \  
perl-Nagios-Plugin-*.noarch.rpm \  
smeserver-nagios-plugins-mysql-*.noarch.rpm \  
nagios-plugins-generic-*.noarch.rpm \  
nagios-of-plugins-*.noarch.rpm \  
nagios-plugins-temptrax-*.el4.rf.i386.rpm \  
nagios-plugins-esx3i-*.el4.noarch.rpm
```

Use the configuration files from the smeserver-nagios package as a starting point. This provides a working configuration.

```
/bin/cp -ba /etc/nagios/nagios.cfg-smeserver /etc/nagios/nagios.cfg  
/bin/cp -ba /etc/nagios/cgi.cfg-smeserver /etc/nagios/cgi.cfg
```

Configuring global access with password required

```
config set nagios service Name Nagios PublicAccess global-pw
expand-template /etc/httpd/conf/httpd.conf
service httpd-e-smith restart
service nagios restart
```

Test the installation by pointing your browser to *https://IPADDRESS/nagios/*

Browser login in as admin. After 10 minutes the performance data graphes are available. Click on on the 'star' icon next to the service name to view the graphes on a new page.

Install the VMware ESXi Server CIM Hardware Monitoring (optional)

If you plan to monitor an ESx3i server with CIM compliant hardware, you can configure the ESXi plugin

```
/usr/bin/yum --enable=dag install openssl-devel perl-XML-SAX
```

Download and install the VMware Infrastructure (VI) Perl Toolkit (<http://www.vmware.com/support/developer/viperltoolkit/>)

Ignore this warning: *The following Perl modules were found on the system but may be too old to work with VIPerl: URI XML::NamespaceSupport*

It does not affect the proper function of the nagios plugins.

To get some configuration hints run

```
rpm -qi nagios-plugins-esx3i
```

Install the Nuvola theme (optional)

The Nuvola theme provides a nice and modern GUI. The screenshot above was made with the Nuvola theme installed.

```
cd /usr/share/nagios
rm -rf config.js images index.html main.html side side.html stylesheets
cd -
tar --strip-path=1 -C /usr/share/nagios -xzf nagios-nuvola-*.tar.gz
chmod a+r -R /usr/share/nagios
```

Empty your browser cache and reload the Nagios page.

Integrate Ajaxterm in the Nuvola theme Home menu (optional)

Install the Ajaxterm contrib and run

```
patch -p0 /usr/share/nagios/side/dtree_data.js < dtree_data.js.patch
```

Empty your browser cache and reload the Nagios page.

Install additional logo icons (optional)

This installs a set of icons, including the SME server logo. The logos can be used in the *hostextinfo{}* sections. A preview of the logos can be found here (<http://wiki.contribs.org/images/d/d0/Nagios-logos.jpg>) .

```
tar --strip-path 1 -C /usr/share/nagios/images/logos -xzf nagios-icons-nx-*.tar.gz
chown nagios.root /usr/share/nagios/images/logos/*
chmod 644 /usr/share/nagios/images/logos/*
```

Hints

- Place all your configuration files in `/etc/nagios/` in the sub-directories `templates`, `host`, `services`, etc.
- Do not change the default pathes of log files, rrd files, etc.. The *smeserver-nagios-backup* RPM requires these settings to work properly.
- Nagios 3 runs host checks that provides performance data. Add this `action_url` option to each host definiton:

```
action_url /nagios/pnp/index.php?host=$HOSTNAME$
```

- Add this `action_url` option to service checks with performance data output

```
action_url /nagios/pnp/index.php?host=$HOSTNAME$&srv=$SERVICEDESC$
```

- You can permit other users to access Nagios. Add them separated by a comma to the lines

```
authorized_for_system_information=admin
authorized_for_system_commands=admin
authorized_for_configuration_information=admin
authorized_for_all_hosts=admin
authorized_for_all_host_commands=admin
authorized_for_all_services=admin
authorized_for_all_service_commands=admin
```

- It is a good idea to make your Nagios server as independent as possible from the infrastructure it monitors, i.e., use a dedicated hardware, network, mail- and pager system, firewall and internet connection if possible.
- Consider to setup a second Nagios somewhere on your network, which monitors your central Nagios server. Then you need to install the NRPE also on the central server.

Update from Nagios 2 to Nagios 3

Before installing this contrib based on Nagios 3, remove all packages of the previous Nagios 2 installation

```
service nagios stop
service nagiosgrapher stop
```

```
/usr/bin/yum erase \
nagios-plugins-esx3i \
nagios-nrpe \
nagios-plugins-temptrax \
nagios-plugins \
nagios-of-plugins \
nagios-plugins-generic \
nagios smeserver-nagios-nrpe \
smeserver-nagios \
smeserver-nagios-plugins-mysql \
nagios-plugins-nrpe \
nagios-plugins-setuid \
smeserver-nagiosgrapher \
smeserver-nagios-backup
```

Remove all NagiosGrapher rrd data. It is not possible to tranfer the existing NagiosGrapher data to PNP.

```
rm -rf /var/lib/nagios/*
```

Backup your Nagios configuration data

```
cp -a /etc/nagios /etc/nagios.v2
```

Delete Nagios configuration data

```
rm -rf /etc/nagios
```

Move the retention data to the new Nagios 3 location

```
mkdir -p /var/nagios/  
mv /var/log/nagios/retention.dat /var/nagios/
```

Now install this contrib following the instructions in chapter 'Installation'

```
service nagios stop
```

Delete the default configuration files

```
cd /etc/nagios  
rm -rf commands/default.cfg \  
objects \  
contacts/contacts.cfg \  
hostgroups/default.cfg \  
hosts/localhost.cfg \  
servicegroups/default.cfg \  
services/localhost.cfg \  
templates/default.cfg \  
timeperiods/default.cfg
```

Copy your saved configuration files to /etc/nagios. When you place them into the pre-defined directories contacts, services, hostgroups, templates, commands, hosts, servicegroups, and timeperiods you don't need to adjust nagios.cfg.

Review your config files and do the following

- add **use host-pnp** to your generic host definition to add an action url for PNP to all hosts.
- for all services that output performance data add **action_url /nagios /pnp/index.php?host=\$HOSTNAME\$&srv=\$SERVICEDESC\$** to your service template definitions
- move all options from **hostextinfo** definition (except **host_name** and **action_url**) to **host** definition. Delete the **hostextinfo** definition.
- do the same for **serviceextinfo** definitions

When done check your config

```
nagios -v /etc/nagios/nagios.cfg
```

and finally start the service

```
service nagios start
```

Backup and Restore

With the smeserver-nagios-backup RPM installed all Nagios and PNP configuration data, status data and archives are included in the SME Server standard backup. In the pre-backup event those data are copied to the `/home/e-smith/db/nagios/` directory. As the nagios service is stopped during copying it is recommended to configure Nagios to save its scheduling info (next check time) for hosts and services in a file and use this at startup. Otherwise Nagios would re-schedule all checks spreaded over the timeframe defined by `max_service_check_spread` and `max_host_check_spread` (default 30 min). As a result you would have gaps in checking and visible gaps in the PNP graphes.

in `/etc/nagios/nagios.cfg` set:

```
retain_state_information=1
state_retention_file=/var/nagios/retention.dat
use_retained_program_state=1
use_retained_scheduling_info=1
```

When doing a restore, the data from `/home/e-smith/db/nagios/` are copied back to their original locations in the bootstrap-console-save event.

Uninstall

This removes the installed Nagios packages.

```
service nagios stop
```

```
rpm -e \
nagios-of-plugins \
nagios-plugins-esx3i \
nagios-plugins-generic \
nagios-plugins-temptrax \
perl-Nagios-Plugin \
pnp \
smeserver-nagios \
smeserver-nagios-backup \
smeserver-nagios-nrpe \
smeserver-nagios-nsca \
smeserver-nagios-plugins-mysql \
nagios-plugins-setuid \
perl-Config-Tiny
```

Remove the dependencies if not needed by other contribs

```
rpm -e \
fping \
gd \
libart_lgpl \
libmcrypt \
nagios \
nagios-nrpe \
nagios-nsca \
nagios-nsca-client \
nagios-plugins \
nagios-plugins-nrpe \
perl-Class-Accessor \
perl-Crypt-DES \
perl-Math-Calc-Units \
perl-Net-SNMP \
perl-Params-Validate \
perl-rrdtool \
rrdtool \
xinetd
```

Ignore the warnings about non-existing user nagios and group nagios.

```
expand-template /etc/httpd/conf/httpd.conf
service httpd-e-smith restart
```

References

- Nagios NRPE Contrib: Nagios NRPE
- Nagios NSCA Contrib: Nagios NSCA
- Nagios: <http://www.nagios.org/>
- perl-Nagios-Plugin: <http://members.financial.com/~cmr/rpmforge/perl-Nagios-Plugin/>
- nagios-of-plugins: http://www.nagiosexchange.org/Plugin_Packages.52.0.html?&tx_netnagext_pi1%5Bp_view%5D=323
- Nuvola theme: http://www.nagiosexchange.org/Image_Packs.75.0.html?&tx_netnagext_pi1%5Bp_view%5D=252&tx_netnagext_pi1%5Bpage%5D=10%3A10
- Temptrax Plugin: <http://www.nagiosexchange.org/cgi-bin/page.cgi?g=1716.html>
- Nagios books: "*Nagios : system and network monitoring* / Wolfgang Barth / ISBN 1-59327-070-4", "*Building a Monitoring Infrastructure with Nagios* / David Josephsen / ISBN 0-13-223693-1"
- Nagios in a German Computer Magazine: <http://www.heise.de/netze/artikel/81238>
- PNP4Nagios: <http://www.pnp4nagios.org/pnp/start>

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