



User Manual
op5 NRPE 2.7.0

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Introduction

NRPE is an agent software that together with a set of plugins can be used by op5's products to monitor and gather statistics data from Unix / Linux servers. NRPE is short for the very descriptive Nagios Remote Plugin Executor, NRPE lets you execute plugins or scripts from your op5 system on a remote server.

Basic knowledge in Unix / Linux server administration is recommended.

Installation

This part describes how NRPE and plugins can be installed on a monitored server. NRPE and plugins is distributed as source, RPM or SRPM.

Install from source

NRPE

1. Download the nrpe package from op5 support portal, <https://support.op5.se/>
2. put the downloaded file in some directory on your server, for example /root
3. extract the package

```
gunzip nrpe-x.x.x.tar.gz  
tar xvf nrpe-x.x.x.tar
```
4. `cd nrpe-x.x.x`
5. Follow build and install instruction in the file README.op5

Plugins

1. Download the plugins package from op5 support portal, <https://support.op5.se>
2. Put the downloaded file in some directory on your server, for example /root
3. Extract the package

```
gunzip plugins-x.x.x.tar.gz  
tar xvf plugins-x.x.x.tar
```
4. `cd plugins-x.x.x`
5. Follow build and install instructions in the file README.op5

Install from RPM

Prebuild rpm-packages are available for a number of well known Linux distributions. Download the package corresponding to your distribution. To install simply issue the following command:

```
# rpm -Uvh nrpe-x.x.x.rpm
# rpm -Uvh plugins-local-x.x.x.rpm
```

This will install and start the nrpe daemon using default configuration. You do, however, need to edit the configuration as described in the *configuration* section below in order for nrpe to be fully functional. The local plugins are by default installed in `/opt/plugins/`.

Please see the upgrade section below if upgrading an existing installation.

Rebuild a source RPM

To rebuild the source rpm you first need to 'install' the source rpm. Issue the command:

```
# rpm -Uvh nrpe-x.x.x.src.rpm
# rpm -Uvh plugins-local-x.x.x.src.rpm
```

This will install the SPEC and source files according to the rpm configuration on your system. The default location for spec files on CentOS and RHEL is:

```
/usr/src/redhat/SPECS/
```

Source files are on default CentOS/RHEL installed in:

```
/usr/src/redhat/SOURCES/
```

If unsure where the spec and sources are installed on you system use an increased verbosity level when installing the src.rpm:

```
# rpm -Uvvh nrpe-x.x.x.src.rpm
```

Edit the spec-files `nrpe.spec` and `plugins-local.spec` if needed before rebuilding. To rebuild the package issue `rpmbuild -ba <path-to-spec>`. On a default CentOS/RHEL installations that is:

```
# rpmbuild -ba /usr/src/redhat/SPECS/nrpe.spec
# rpmbuild -ba /usr/src/redhat/SPECS/plugins-local.spec
```

This command will compile the source and create new rpm packages as well as a new source rpm's.

Upgrading

Upgrade using rpm package

When upgrading a previous, non-rpm, installation rpm will recognize and preserve the nrpe configuration file if it is named /etc/nrpe.conf. If your previous installation uses a different name for the nrpe configuration (nrpe.cfg for example) You need to copy the old configuration file to /etc/nrpe.conf to continue using your configured settings.

Upgrading the plugins will simply replace the binaries.

To upgrade simply issue the command:

```
# rpm -Uvh nrpe-x.x.x.rpm  
# rpm -Uvh plugins-local-x.x.x.rpm
```

Note that when upgrading a non rpm installation using rpm packages it might be necessary to manually edit nrpe configuration. The plugins-local package installs the plugins in /opt/plugins/. Make sure that your nrpe command-configuration also points to this directory. For details, see the *Configuration* section below.

Upgrade using source

NRPE

Follow the build instructions in the install section above. Only copy the nrpe binary to the /usr/sbin/ directory. The old nrpe configuration file can be reused.

Plugins

Upgrading the plugins simply means installing new ones over the old ones. Follow the installation instructions in the install section above.

Configuration

Main configuration

Nrpe main configuration is, by default, located in `/etc/nrpe.conf`. A number of configuration options are available, see the comments associated to each option. The option most likely in need for configurations are:

```
allowed_hosts=<monitor-server-address1>,<monitor-server-address2>
```

The `allowed_hosts` option lists all servers that are allowed to connect to the nrpe daemon. Several addresses can be configured using comma ',' as separator. When trouble shooting it might be useful to enable debugging (off by default). Simply set the `debug` option to 1.

```
debug=1
```

After any changes in configuration the nrpe daemon need to be restarted. To restart the daemon issue the following command:

```
# service nrpe restart
```

or:

```
# /etc/init.d/nrpe restart
```

Command configuration

The nrpe commands are defined in `/etc/nrpe.d/op5_commands.cfg`. Note that it is possible to define commands in `/etc/nrpe.conf` aswell but any command defined there will be overridden by commands using the same name in `/etc/nrpe.d/op5_commands.cfg`. The format of command definitions is as follow:

```
command[<name>]=<path-to-plugin> <plugin-arguments>
```

For example:

```
command[users]=/opt/plugins/check_users -w 5 -c 10  
command[load]=/opt/plugins/check_load -w 15,10,5 -c 30,25,20  
command[swap]=/opt/plugins/check_swap -w 20% -c 10%  
command[root_disk]=/opt/plugins/check_disk -w 99% -c 98% -p / -m
```

Note that after all configuration changes the nrpe daemon need to be restarted in order for the changes to take affect.

Troubleshooting

Verify that NRPE is running

If you get the message “connect(): Connection refused” it might be the case that the nrpe daemon is not running.

To check this log on to the monitored server and issue the command

```
# ps waux | grep nrpe
```

The output should look something like this

```
server!root:~# ps -ef | grep nrpe
nobody      307      1  0 Oct03 ?        00:00:13 /usr/sbin/nrpe -c
/etc/nrpe.conf -d
server!root:~#
```

Note: the ps syntax can differ depending on system.

SSL or no SSL

NRPE can be compiled with SSL (Secure Socket Layer) support which adds encryption to the communication between the op5 System and the monitored server.

Do we have permission

On the op5 System

CHECK_NRPE: Received 0 bytes from daemon. Check remote server logs for error messages.

On the monitored server

Oct 6 13:14:45 ns2 nrpe: Host 192.168.1.3 is not allowed to talk to us.

Check /etc/nrpe.conf and edit the variable allowed_hosts=

Turn on debugging

Sometimes it can be useful to turn on debugging for the nrpe daemon. Do this by editing the variable debug in /etc/nrpe.conf

```
debug=1
```

1 = debugging is on

0 = debugging is off

Command line checks from the op5 server

Log on to the op5 server using ssh or use standard console access (keyboard/mouse). Execute the following:

```
# /opt/plugins/check_nrpe -H <server-address>
```

The response should be something similar to the following:

```
NRPE v2.7
```

To verify plugin functionality execute the following

```
# /opt/plugins/check_nrpe -H <server-address> -c <nrpe-command>
```

For example:

```
# /opt/plugins/check_nrpe -H <server-address> -c check_users
```

Connectivity

Firewalls blocking the traffic can be a big problem source. If debugging is enabled there will always be entries in the log-file when issuing check commands. If the log file remains empty it is likely that a firewall is blocking the traffic. Verify that the used ports are open between the op5 server and the monitored server (port 5666 for nrpe checks).

Online help

On the op5 support web, <https://support.op5.se>, you will find additional documentation as well as information on how to contact the op5 support team.