
Nagios Webmin Module

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Cited, Inc

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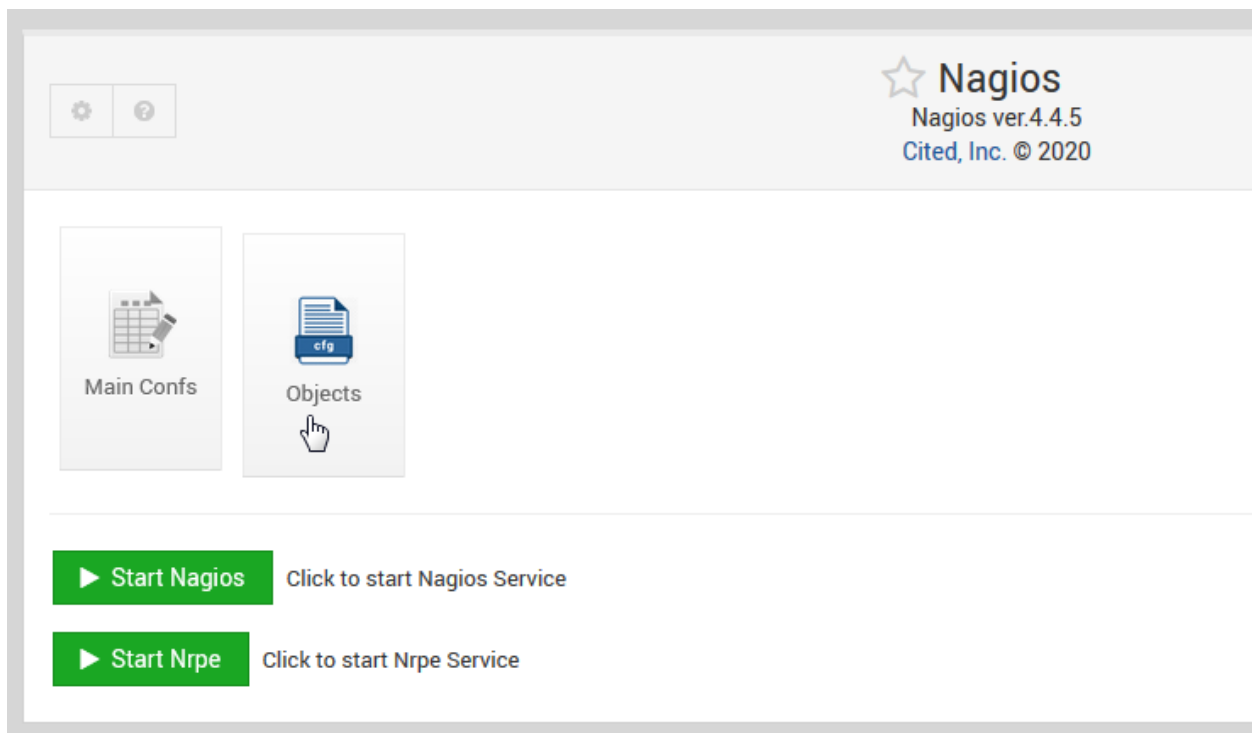
1.1 Overview

The Nagios Webmin Module that allows you to install and manage Nagios Core.

The UI panel allows you start and stop Nagios and Nrpe, as well as edit and create cfg files

The module has been tested on CentOS 7 and Ubuntu 18.

All installed components are non-forked and un-modified and installed via the projects archive.



1.2 System Requirements

- CentOS 8 or
- Ubuntu 18
- Webmin
- 1 GB Ram
- 10 GB SSD

1.3 Authors

- David Ghedini
- Kaloyan Petrov

1.4 Components

Nagios Core

Nagios Remote Plugin Executor

Apache Tomcat

1.5 Open Source

This module is Free, Open Source Software.

GNU GENERAL PUBLIC LICENSE v3

Installation can be done using the pre-installer.sh script or via GIT.

2.1 Using the Pre-Installer

On a fresh CentOS 7 or Ubuntu 18 installation, the fastest method is to use the pre-installer script:

```
1 wget wget https://raw.githubusercontent.com/cited/nagios-webmin-module/master/scripts/  
  ↪pre-install.sh  
2 chmod +x pre-install.sh  
3 ./pre-install.sh
```

The above will install Webmin, Apache HTTPD Server, and the Nagios module, as well as our (optional) Certbot Module for SSL.

When the script completes, you will see the message below:

```
1 ~  
2 /opt ~  
3 Installed Nagios Module in /usr/share/webmin/certbot (336 kb)  
4 ~  
5 Nagios is now installed. Go to Servers > Nagios to complete installation
```

Note: Following above, you will need to log in to Webmin to complete installation using the install *Wizard*.

2.2 Via Git or Download

You can use Git to build module for an existing Webmin installation:

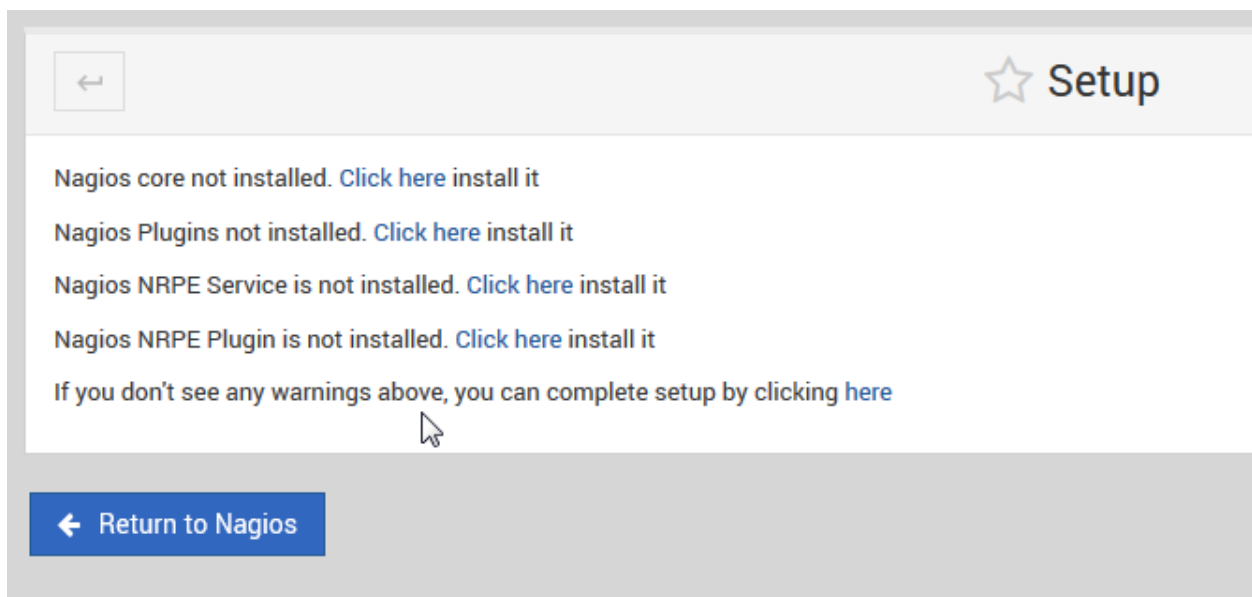
```
1 git clone https://github.com/cited/nagios-webmin-module/  
2 mv nagios-webmin-module-master nagios  
3 tar -cvzf nagios.wbm.gz nagios/
```

Note: Following above, you will need to log in to Webmin to complete installation using the install *Wizard*.

Once the module is installed, the Wizard is used to configure the components.

Go to Servers > Nagios:

The main Wizard screen contains a link for completing each step.



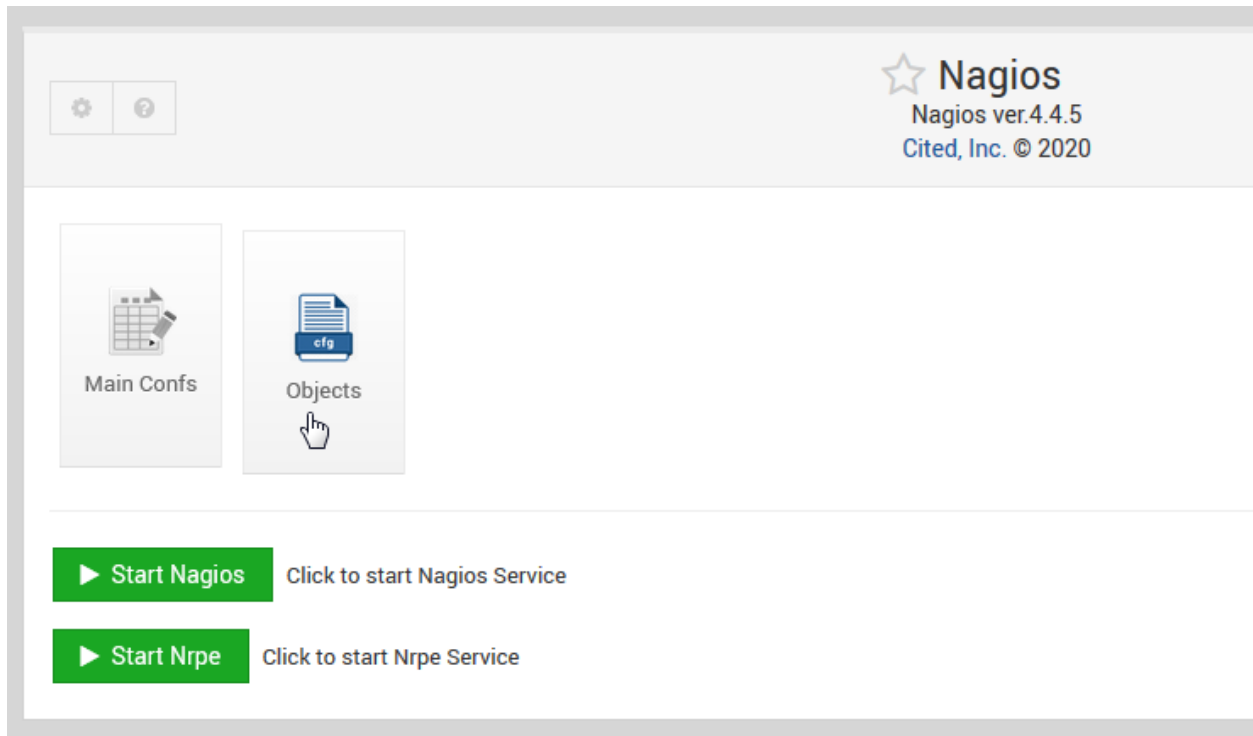
The steps are self-explanatory, and you simply need to click through each step.

Note: Due to compiling of components, completion of the Wizard may take up to 10 minutes to complete.

Nrpe

Installation of nrpe service is optional.

Once installation is completed, the page will appear as below:



3.1 About nrpe

NRPE allows you to remotely execute Nagios plugins on on compatible servers.

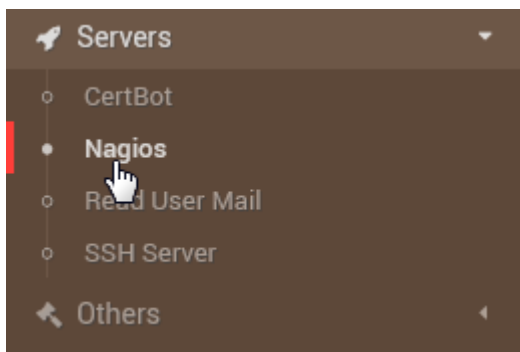
CHAPTER 4

Webmin

Webmin can be accessed via:

```
https://yourdomain.com:10000
```

The Nagios module is found under Servers > Nagios as shown below:



On completion, you can access your nagios instance at:

<https://yourdomain.com/nagios>

5.1 Default User and Password

The default user name is:

```
nagiosmin
```

A unique password for HTTP access is created and saved to:

```
/etc/webmin/nagios/auth.txt
```

Example contents for auth.txt are as below:

```
nagiosmin http pass:sTp0L-dBhQ
```

Note: For security purposes, you change the default admin name as well as the nagios url.

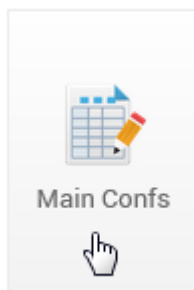
Main Configuration Files

Table of Contents

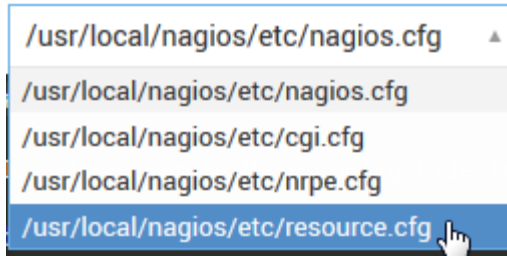
- *Main Configuration Files*
 - *Editing Files*
 - *Adding New File*
 - *Restart Nagios*
 - *Conf Location*

6.1 Editing Files

To access the Main Conf file editor, click the Objects icon as show below.



From here you can edit any existing file within the `/usr/local/nagios/etc` directory.



Once you have completed any edits, click the Save and Close button and restart Nagios.

6.2 Adding New File

Any new file added to the directory will appear in the editor drop-down.

6.3 Restart Nagios

For the edits to register, you must restart Nagios.

This can be done via Servers > Nagios in your control panel.

It can also be done via command line using:

```
systemctl restart nagios.service
```

6.4 Conf Location

By default, all main conf files are saved to /usr/local/nagios/etc

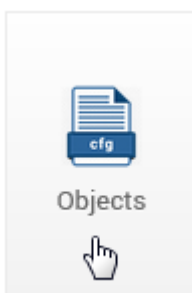
Objects Configuration Files

Table of Contents

- *Objects Configuration Files*
 - *Editing Files*
 - *Creating a New File*
 - *Template File*
 - *Restart Nagios*
 - *Edit Conf*
 - *Conf Location*

7.1 Editing Files

To access the Objects file editor, click the Objects icon as show below.



From here you can edit any existing file within the NAGIOS/objects directory.



Once you have completed any edits, click the Save and Close button and restart Nagios.

7.2 Creating a New File

You can create a new service file from a template via the editor.

Enter a new filename.cfg and click the Create button.

Give your file a name that will make it easy to identify, such as myconf.cfg

New Filename:

Edit config file:

```

1 # Host configuration file
2
3 define host {
4     use                linux-server
5     host_name          <HOST>
6     alias              <HOST>
7     address            <IP>
8     register           1
9 }
10
11 define service {
12     host_name          <HOST>
13     service_description PING
14     check_command      check_ping!100.0,20%!500.0,60%
15     max_check_attempts 2
16     check_interval     2
17     retry_interval     2
18     check_period       24x7
19     check_freshness    1
20     contact_groups     admins,slackmins
21     notification_interval 2
22     notification_period 24x7
23     notifications_enabled 1
24     register           1
25 }
26

```

Click the Create button.

The Create button will load the template below.

New Filename:

Edit config file:

The template is commented.

1. Replace all instances of <HOST> with the host you have added.
2. Replace <IP> with the host IP
3. Click Save and Close
4. Restart Nagios for the new cfg to register

7.3 Template File

```
1  # Host configuration file
2
3  define host {
4      use                linux-server
5      host_name          <HOST>
6      alias              <HOST>
7      address            <IP>
8      register           1
9  }
10
11 define service {
12     host_name          <HOST>
13     service_description PING
14     check_command      check_ping!100.0,20%!500.0,60%
15     max_check_attempts 2
16     check_interval     2
17     retry_interval     2
18     check_period       24x7
19     check_freshness    1
20     contact_groups     admins,slackmins
21     notification_interval 2
22     notification_period 24x7
23     notifications_enabled 1
24     register           1
25 }
26
27 define service {
28     host_name          <HOST>
29     service_description Check SSH
30     check_command      check_ssh!-p 3838
31     max_check_attempts 2
32     check_interval     2
33     retry_interval     2
34     check_period       24x7
35     check_freshness    1
36     contact_groups     admins
37     notification_interval 2
38     notification_period 24x7
39     notifications_enabled 1
40     register           1
41 }
42
43 define service {
44     host_name          <HOST>
45     service_description Check HTTP
46     check_command      check_http
47     max_check_attempts 2
48     check_interval     2
49     retry_interval     2
50     check_period       24x7
51     check_freshness    1
52     contact_groups     admins
53     notification_interval 2
54     notification_period 24x7
55     notifications_enabled 1
```

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```
56   register                               1
57   }
```

Note: To create your own template, simply update the template.cfg located at /usr/share/webmin/nagios.

7.4 Restart Nagios

For the new cfg to register, you must restart Nagios.

This can be done via Servers > Nagios in your control panel.

It can also be done via command line using:

```
systemctl restart nagios.service
```

7.5 Edit Conf

To edit a Conf File you have created, simply select the conf file from the drop down.

Make the required edits and click Save.

7.6 Conf Location

By default, all conf files are saved to /usr/local/nagios/objects/

Table of Contents

- *Nagios Service*
 - *Overview*
 - *Start and Stop*

8.1 Overview

Nagios is installed as a service.

The service file is located under:

```
/lib/systemd/system/nagios.service
```

It has the contents below:

```
1 [Unit]
2 Description=Nagios Core 4.4.5
3 Documentation=https://www.nagios.org/documentation
4 After=network.target local-fs.target
5
6 [Service]
7 Type=forking
8 ExecStartPre=/usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg
9 ExecStart=/usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
10 ExecStop=/bin/kill -s TERM ${MAINPID}
11 ExecStopPost=/bin/rm -f /usr/local/nagios/var/rw/nagios.cmd
12 ExecReload=/bin/kill -s HUP ${MAINPID}
13
```

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```
14 [Install]
15 WantedBy=multi-user.target
```

8.2 Start and Stop

The Nagios service can be started and stopped via the module or via command line.

To start and stop via the module, go to Servers > Nagios and click the Start or Stop button:



To start and stop via command line, as root, issue:

```
service nagios stop | start
```


Table of Contents

- *Nrpe Service*
 - *Overview*
 - *Start and Stop*

9.1 Overview

Nrpe is installed as a service.

The service file is located under:

```
/lib/systemd/system/nrpe.service
```

It has the contents below:

```
1 [Unit]
2 Description=Nagios Remote Plugin Executor
3 Documentation=http://www.nagios.org/documentation
4 After=var-run.mount nss-lookup.target network.target local-fs.target time-sync.
→target
5 Before=getty@tty1.service plymouth-quit.service xdm.service
6 Conflicts=nrpe.socket
7
8 [Install]
9 WantedBy=multi-user.target
10
11 [Service]
12 Type=simple
```

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```
13 Restart=on-abort
14 PIDFile=/usr/local/nagios/var/nrpe.pid
15 RuntimeDirectory=nrpe
16 RuntimeDirectoryMode=0755
17 ExecStart=/usr/local/nagios/bin/nrpe -c /usr/local/nagios/etc/nrpe.cfg -f
18 ExecReload=/bin/kill -HUP $MAINPID
19 ExecStopPost=/bin/rm -f /usr/local/nagios/var/nrpe.pid
20 TimeoutStopSec=60
21 User=nagios
22 Group=nagios
23 PrivateTmp=true
24 OOMScoreAdjust=-500
```

9.2 Start and Stop

The Nrpe service can be started and stopped via the module or via command line.

To start and stop via the module, go to Servers > Nagios and click the Start or Stop button:



To start and stop via command line, as root, issue:

```
service nrpe stop | start
```

Table of Contents

- *Nrpe Agent*
 - *Overview*

10.1 Overview

Nrpe is used for monitoring remote hosts.

To install the nrpe client on a remote host, you can use the nrpe.sh file in /script directory.

The script content is below:

```
1  #!/bin/bash
2  #Info: This script installs a NRPE client, following [1]
3  #[1] https://support.nagios.com/kb/article.php?id=515
4
5  #Nagios server, that will monitor this client node
6  NAGIOS_MON_HOST='1.2.3.4'
7  NAGIOS_HOME='/usr/local/nagios/'
8
9  function detect_distro(){
10  if [ -f /etc/centos-release ]; then
11      DISTRO='centos'
12      DISTRO_VER=$(grep VERSION_ID /etc/os-release | tr -d '"' | cut -f2 -d= |
↪cut -f1 -d.)
13
14  #opensuse,debian,slackware, ubuntu
15      elif [ -f /etc/os-release ]; then
16      DISTRO=$(grep -m 1 ID /etc/os-release | cut -f2 -d= | tr -d '"')
```

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```

17         DISTRO_VER=$(grep VERSION_ID /etc/os-release | tr -d '"' | cut -f2 -d= |
↪cut -f1 -d.)
18         else
19             echo "Error: Failed to detect distribution"; exit 1;
20         fi
21     }
22
23     function install_deps() {
24         if [ ${DISTRO} == 'centos' ]; then
25             yum install -y gcc glibc glibc-common openssl openssl-devel perl wget
26         elif [ ${DISTRO} == 'ubuntu' ]; then
27             export DEBIAN_FRONTEND=noninteractive
28             if [ ${DISTRO_VER} -eq 18 ]; then
29                 apt-add-repository universe
30             fi
31             apt-get install -y autoconf automake gcc libc6 libmcrypt-dev make libssl-dev wget
↪openssl make
32         fi
33     }
34
35     function install_nrpe() {
36         NRPE_VER='3.2.1'
37
38         if [ $(grep -m 1 -c '^nagios:' /etc/passwd) -eq 0 ]; then
39             useradd -s /bin/false nagios
40         fi
41
42         pushd ${HOME}
43         if [ ! -f nrpe-${NRPE_VER}.tar.gz ]; then
44             wget --no-check-certificate https://github.com/NagiosEnterprises/nrpe/archive/nrpe-
↪${NRPE_VER}.tar.gz
45         fi
46
47         tar xzf nrpe-${NRPE_VER}.tar.gz
48         rm -f nrpe-${NRPE_VER}.tar.gz
49
50         pushd nrpe-nrpe-${NRPE_VER}/
51
52         if [ $(which systemctl 2>/dev/null | grep -c yum) -eq 1 ]; then
53             ./configure --enable-command-args --with-init-type=systemd
54         else
55             ./configure --enable-command-args
56         fi
57
58         make all install install-groups-users install-plugin install-config install-init
59         popd
60         rm -f nrpe-nrpe-${NRPE_VER}/
61         popd
62     }
63
64     function config_nrpe() {
65         sed -i "/^allowed_hosts=/s/\$/,${NAGIOS_MON_HOST}/" ${NAGIOS_HOME}/etc/nrpe.cfg
66         sed -i 's/^dont_blame_nrpe=.*/dont_blame_nrpe=1/g' ${NAGIOS_HOME}/etc/nrpe.cfg
67
68         #Standard command found in source/package plugins
69         cat >> ${NAGIOS_HOME}/etc/nrpe.cfg <<CMD_EOF
70         command[check_disk_root]=${CUSTOM_PLUGINS_HOME}/check_disk -w 30% -c 10% -p /

```

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```

71  CMD_EOF
72
73  cat >> ${NAGIOS_HOME}/etc/nrpe.cfg <<CMD_EOF
74  command[check_linuxdiskspace]=${CUSTOM_PLUGINS_HOME}/check_linuxdiskspace
75  CMD_EOF
76
77  #Linux S.M.A.R.T Checks
78  #NOTE: we may have /dev/vda1 for virtual disk
79  for sd in $(find /dev -type b -name 'sd[a-z][0-9]' | cut -f3 -d/); do
80  echo "command[check_linux_smart_${sd}]=${CUSTOM_PLUGINS_HOME}/check_ide_smart -d /
↪dev/${sd}" >> ${NAGIOS_HOME}/etc/nrpe.cfg
81  done
82
83
84  if [ $(which systemctl 2>/dev/null | grep -c systemctl) -eq 1 ]; then
85  systemctl enable nrpe.service
86  systemctl start nrpe
87  else
88  chkconfig --set nrpe on
89  service nrpe start
90  fi
91  }
92
93  function install_plugins_source() {
94  PLUG_VER='2.3.1'
95
96  if [ ${DISTRO} == 'centos' ]; then
97  yum install -y gcc glibc glibc-common make gettext automake autoconf wget ↪
↪openssl-devel net-snmp net-snmp-utils epel-release perl-Net-SNMP
98  elif [ ${DISTRO} == 'ubuntu' ]; then
99  apt-get install -y autoconf gcc libc6 libmcrypto-dev make libssl-dev wget bc gawk ↪
↪dc build-essential snmp libnet-snmp-perl gettext
100  fi
101
102  pushd ${HOME}
103  wget --no-check-certificate https://github.com/nagios-plugins/nagios-plugins/
↪archive/release-${PLUG_VER}.tar.gz
104  tar xzf release-${PLUG_VER}.tar.gz
105  rm -f release-${PLUG_VER}.tar.gz
106
107  pushd nagios-plugins-release-${PLUG_VER}/
108  ./tools/setup
109  ./configure
110  make
111  make install
112  popd
113  rm -rf nagios-plugins-release-${PLUG_VER}/
114  popd
115
116  NAGIOS_PLUGINS_HOME='/usr/local/nagios/libexec/'
117  }
118
119
120  function install_plugins() {
121  install_plugins_source
122  }
123

```

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```
124 function test_nrpe(){
125     if [ ! -f ${NAGIOS_HOME}/etc/nrpe.cfg ]; then
126         echo 'Error: nrpe.cfg is missing!'
127         fi
128
129     OUT=${${NAGIOS_HOME}/libexec/check_nrpe -H 127.0.0.1}
130     if [ "${OUT}" == "NRPE v${NRPE_VER}" ]; then
131         echo "NRPE Test OK"
132     else
133         echo "NRPE Test FAILED"
134         exit 1;
135     fi
136 }
137
138 detect_distro;
139 install_deps;
140 install_nrpe;
141 install_plugins;
142 config_nrpe;
143
144 test_nrpe;
```

CHAPTER 11

Nagios

Nagios and nrpe client are produced by [Nagios](#)

[Nagios Exchange](#) provides plugins, addons, docs, extensions and other tools

12.1 Contributing

We welcome all contributors.

12.2 Issues

If you've found a bug, let us know.

12.3 Pull Requests

Create a fork of our repo.

To submit a pull request for a **new feature**:

1. Run the tests. Every pull request for a new feature should have an accompanying unit test and docs changes.
2. Create a new branch off of the *master* branch for your feature.
3. Add a test (or multiple tests) for your feature.
4. Add your new feature.
5. Push to your fork and submit the pull request.

To submit a **bug fix**:

1. Create a new branch off of the *master* branch.
2. Add a test that demonstrates the bug.
3. Make the test pass.
4. Push to your fork and submit the pull request!

To submit a **documentation fix**:

1. Create a new branch off of the *master* branch.
2. Add your documentation fixes (no tests required).
3. Push to your fork and submit the pull request!

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Some devices are designed to deny users access to install or run

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1. Source Code.

The “source code” for a work means the preferred form of the work

for making modifications to it. “Object code” means any non-source form of a work.

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