Parshvanath Charitable Trust's

A. P. SHAH INSTITUTE OF TECHNOLOGY

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(Religious Jain Minority)

Department of Information Technology

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Date of Performance:
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Experiment No. 9

Aim: To Install and Configure Nagios tool for enterprise infrastructure monitoring.

Pre-requisite

sudo apt-get install wget build-essential unzip openssl libssldev

```
Reading package lists... Done
Building dependency tree
Reading state information... Done
build-essential is already the newest version (12.4ubuntu1).
build-essential set to manually installed.
unzip is already the newest version (6.0-21ubuntu1).
openssl is already the newest version (1.1.1-1ubuntu2.1~18.04.5).
wget is already the newest version (1.19.4-1ubuntu2.2).
The following packages were automatically installed and are no longer required:
  libdbusmenu-qt2 libmng2 libmysqlclient20 libphonon4 libpyside1.2 libqt4-dbus libqt4-declarative libqt4-help libqt4-network
  libqt4-svg libqt4-test libqt4-xml libqt4-xmlpatterns libqtcore4 libqtdbus4 libqtgui4 libqtwebkit4 libshiboken1.2v5 mysql-co
  python-pyside python-pyside.phonon python-pyside.qtcore python-pyside.qtdeclarative python-pyside.qtgui python-pyside.qthel
  python-pyside.qtsql python-pyside.qtsvg python-pyside.qttest python-pyside.qtuitools python-pyside.qtwebkit python-pyside.q
Use 'sudo apt autoremove' to remove them.
Suggested packages:
  libssl-doc
The following NEW packages will be installed:
  libssl-dev
0 upgraded, 1 newly installed, 0 to remove and 148 not upgraded.
Need to get 1,566 kB of archives.
After this operation, 7,846 kB of additional disk space will be used.
Do you want to continue? [Y/n] yes
Get:1 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libssl-dev amd64 1.1.1-1ubuntu2.1~18.04.5 [1,566 kB]
Fetched 1,566 kB in 1s (1,826 kB/s)
Selecting previously unselected package libssl-dev:amd64.
(Reading database ... 191301 files and directories currently installed.)
Preparing to unpack .../libssl-dev_1.1.1-1ubuntu2.1~18.04.5_amd64.deb ...
Unpacking libssl-dev:amd64 (1.1.1-1ubuntu2.1~18.04.5) ...
Setting up libssl-dev:amd64 (1.1.1-1ubuntu2.1~18.04.5) ...
```

apt-get install apache2 php libapache2-mod-php php-gd libgd-dev

```
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libdbusmenu-qt2 libnng2 libmysqlclient20 libphonon4 libpyside1.2 libqt4-dbus libqt4-declarative libqt4-help libqt4-network libqt4-opengl libqt
  libqt4-svg libqt4-test libqt4-xml libqt4-xmlpatterns libqtcore4 libqtdbus4 libqtgui4 libqtwebkit4 libshiboken1.2v5 mysql-common phonon phonon-
  python-pyside python-pyside.phonon python-pyside.qtcore python-pyside.qtdeclarative python-pyside.qtgui python-pyside.qthelp python-pyside.qtn
  python-pyside.qtsql python-pyside.qtsvg python-pyside.qttest python-pyside.qtuitools python-pyside.qtwebkit python-pyside.qtxml qdbus qt-at-sp
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapache2-mod-php7.2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap php-common php7.2 ph
  php7.2-opcache php7.2-readline
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom php-pear
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapache2-mod-php libapache2-mod-php7.2 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil
  php7.2-common php7.2-gd php7.2-json php7.2-opcache php7.2-readline
0 upgraded, 20 newly installed, 0 to remove and 148 not upgraded.
Need to get 5,505 kB of archives.
After this operation, 23.8 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
Get:1 http://in.archive.ubuntu.com/ubuntu bionic/main amd64 libapr1 amd64 1.6.3-2 [90.9 kB]
Get:2 http://in.archive.ubuntu.com/ubuntu bionic/main amd64 libaprutil1 amd64 1.6.1-2 [84.4 kB]
Get:3 http://in.archive.ubuntu.com/ubuntu bionic/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.1-2 [10.6 kB]
Get:4 http://in.archive.ubuntu.com/ubuntu bionic/main amd64 libaprutil1-ldap amd64 1.6.1-2 [8,764 B]
Get:5 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2-bin amd64 2.4.29-1ubuntu4.13 [1,070 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2-utils amd64 2.4.29-1ubuntu4.13 [83.8 kB]
Get:7 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2-data all 2.4.29-1ubuntu4.13 [160 kB]
Get:8 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 apache2 amd64 2.4.29-1ubuntu4.13 [95.1 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu bionic/main amd64 php-common all 1:60ubuntu1 [12.1 kB]
Get:10 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-common amd64 7.2.24-0ubuntu0.18.04.3 [887 kB]
Get:11 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-json amd64 7.2.24-0ubuntu0.18.04.3 [18.9 kB]
Get:12 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-opcache amd64 7.2.24-0ubuntu0.18.04.3 [165 kB]
Get:13 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-readline amd64 7.2.24-0ubuntu0.18.04.3 [12.2 kB]
Get:14 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 php7.2-cli amd64 7.2.24-0ubuntu0.18.04.3 [1,409 kB]
Get:15 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libapache2-mod-php7.2 amd64 7.2.24-0ubuntu0.18.04.3 [1,352 kB]
```

1. Create Nagios User

sudo adduser nagios

```
Adding user `nagios' ...
Adding new group `nagios' (1002) ...
Adding new user `nagios' (1002) with group `nagios' ...
Creating home directory `/home/nagios' ...
Copying files from `/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for nagios
Enter the new value, or press ENTER for the default
        Full Name []:
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] y
```

```
sudo groupadd nagcmd
sudo usermod -a -G nagcmd nagios
$sudo usermod -a -G nagcmd www-data
```

2. Install Nagios Core Service

```
--2020-04-02 11:06:54--  https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.3.tar.gz
Resolving assets.nagios.com (assets.nagios.com)... 72.14.181.71, 2600:3c00::f03c:91ff:fedf:b821
Connecting to assets.nagios.com (assets.nagios.com)|72.14.181.71|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 11302228 (11M) [application/x-gzip]
Saving to: 'nagios-4.4.3.tar.gz'

nagios-4.4.3.tar.gz                 100%[=====================================================>] 10.78M  1.32MB/s    in 18s

2020-04-02 11:07:13 (613 KB/s) - 'nagios-4.4.3.tar.gz' saved [11302228/11302228]
```

```
*** Configuration summary for nagios 4.4.3 2019-01-15 ***:

 General Options:
 -------------------------
        Nagios executable:  nagios
        Nagios user/group:  nagios,nagios
       Command user/group:  nagios,nagcmd
             Event Broker:  yes
        Install ${prefix}:  /usr/local/nagios
    Install ${includedir}:  /usr/local/nagios/include/nagios
                Lock file:  /run/nagios.lock
   Check result directory:  /usr/local/nagios/var/spool/checkresults
           Init directory:  /lib/systemd/system
  Apache conf.d directory:  /etc/apache2/sites-available
             Mail program:  /bin/mail
                  Host OS:  linux-gnu
          IOBroker Method:  epoll

 Web Interface Options:
 ------------------------
                 HTML URL:  http://localhost/nagios/
                  CGI URL:  http://localhost/nagios/cgi-bin/
 Traceroute (used by WAP):


Review the options above for accuracy.  If they look okay,
type 'make all' to compile the main program and CGIs.
```

Sudo make all

```
cd ./base && make
make[1]: Entering directory '/opt/nagios-4.4.3/base'
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE -c -o nagios.o nagios.c
nagios.c: In function 'main':
nagios.c:611:4: warning: ignoring return value of 'asprintf', declared with attribute warn_unused_result [-Wunused-result]
    asprintf(&mac->x[MACRO_PROCESSSTARTTIME], "%llu", (unsigned long long)program_start);
    ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
nagios.c:841:4: warning: ignoring return value of 'asprintf', declared with attribute warn_unused_result [-Wunused-result]
    asprintf(&mac->x[MACRO_EVENTSTARTTIME], "%llu", (unsigned long long)event_start);
    ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
nagios.c: In function 'nagios_core_worker':
nagios.c:176:3: warning: ignoring return value of 'read', declared with attribute warn_unused_result [-Wunused-result]
   read(sd, response + 3, sizeof(response) - 4);
   ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
nagios.c: In function 'test_path_access':
nagios.c:122:3: warning: ignoring return value of 'asprintf', declared with attribute warn_unused_result [-Wunused-result]
   asprintf(&path, "%s/%s", p, program);
   ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE   -c -o broker.o broker.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE   -c -o nebmods.o nebmods.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE -c -o ../common/shared.o ../common/shared.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE   -c -o query-handler.o query-handler.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE -c -o workers.o workers.c
workers.c: In function 'handle_worker_result':
workers.c:801:4: warning: ignoring return value of 'asprintf', declared with attribute warn_unused_result [-Wunused-result]
    asprintf(&error_reason, "timed out after %.2fs", tv_delta_f(&wpres.start, &wpres.stop));
    ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
workers.c:804:4: warning: ignoring return value of 'asprintf', declared with attribute warn_unused_result [-Wunused-result]
    asprintf(&error_reason, "died by signal %d%s after %.2f seconds",
    ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
             WTERMSIG(wpres.wait_status),
             ~~~~~~~~~~~~~~~~~~~~~~~~~~~~
             WCOREDUMP(wpres.wait_status) ? " (core dumped)" : "",
             ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
             tv_delta_f(&wpres.start, &wpres.stop));
             ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
workers.c:810:4: warning: ignoring return value of 'asprintf', declared with attribute warn_unused_result [-Wunused-result]
    asprintf(&error_reason, "is a non-check helper but exited with return code %d",
    ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
```

Sudo make install

```
cd ./base && make install
make[1]: Entering directory '/opt/nagios-4.4.3/base'
make install-basic
make[2]: Entering directory '/opt/nagios-4.4.3/base'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/bin
/usr/bin/install -c -m 774 -o nagios -g nagios nagios /usr/local/nagios/bin
/usr/bin/install -c -m 774 -o nagios -g nagios nagiostats /usr/local/nagios/bin
make[2]: Leaving directory '/opt/nagios-4.4.3/base'
make strip-post-install
make[2]: Entering directory '/opt/nagios-4.4.3/base'
/usr/bin/strip /usr/local/nagios/bin/nagios
/usr/bin/strip /usr/local/nagios/bin/nagiostats
make[2]: Leaving directory '/opt/nagios-4.4.3/base'
make[1]: Leaving directory '/opt/nagios-4.4.3/base'
cd ./cgi && make install
make[1]: Entering directory '/opt/nagios-4.4.3/cgi'
make install-basic
make[2]: Entering directory '/opt/nagios-4.4.3/cgi'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/sbin
for file in *.cgi; do \
        /usr/bin/install -c -m 775 -o nagios -g nagios $file /usr/local/nagios/sbin; \
done
make[2]: Leaving directory '/opt/nagios-4.4.3/cgi'
make strip-post-install
make[2]: Entering directory '/opt/nagios-4.4.3/cgi'
for file in *.cgi; do \
        /usr/bin/strip /usr/local/nagios/sbin/$file; \
done
make[2]: Leaving directory '/opt/nagios-4.4.3/cgi'
make[1]: Leaving directory '/opt/nagios-4.4.3/cgi'
cd ./html && make install
```

Sudo make install-init

```
/usr/bin/install -c -m 755 -d -o root -g root /lib/systemd/system
/usr/bin/install -c -m 755 -o root -g root startup/default-service /lib/systemd/system/nagios.service
```

sudo make install-daemoninit

```
/usr/bin/install -c -m 755 -d -o root -g root /lib/systemd/system
/usr/bin/install -c -m 755 -o root -g root startup/default-service /lib/systemd/system/nagios.service
Created symlink /etc/systemd/system/multi-user.target.wants/nagios.service → /lib/systemd/system/nagios.service.

*** Init script installed ***
```

sudo make install-config

```
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/etc
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/etc/objects
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/nagios.cfg /usr/local/nagios/etc/nagios.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/cgi.cfg /usr/local/nagios/etc/cgi.cfg
/usr/bin/install -c -b -m 660 -o nagios -g nagios sample-config/resource.cfg /usr/local/nagios/etc/resource.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/templates.cfg /usr/local/nagios/etc/objects/templates.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/commands.cfg /usr/local/nagios/etc/objects/commands.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/contacts.cfg /usr/local/nagios/etc/objects/contacts.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/timeperiods.cfg /usr/local/nagios/etc/objects/timeperiods.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/localhost.cfg /usr/local/nagios/etc/objects/localhost.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/windows.cfg /usr/local/nagios/etc/objects/windows.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/printer.cfg /usr/local/nagios/etc/objects/printer.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/switch.cfg /usr/local/nagios/etc/objects/switch.cfg

*** Config files installed ***

Remember, these are *SAMPLE* config files.  You'll need to read
the documentation for more information on how to actually define
services, hosts, etc. to fit your particular needs.
```

sudo make install-commandmode

```
/usr/bin/install -c -m 775 -o nagios -g nagcmd -d /usr/local/nagios/var/rw
chmod g+s /usr/local/nagios/var/rw

*** External command directory configured ***
```

sudo make install-exfoliation

```
*** Exfoliation theme installed ***
NOTE: Use 'make install-classicui' to revert to classic Nagios theme
```

3. Setup Apache with Authentication

sudo nano /etc/apache2/conf-available/nagios.conf

Open ▾ nagios.conf /etc/apache2/conf-available Save

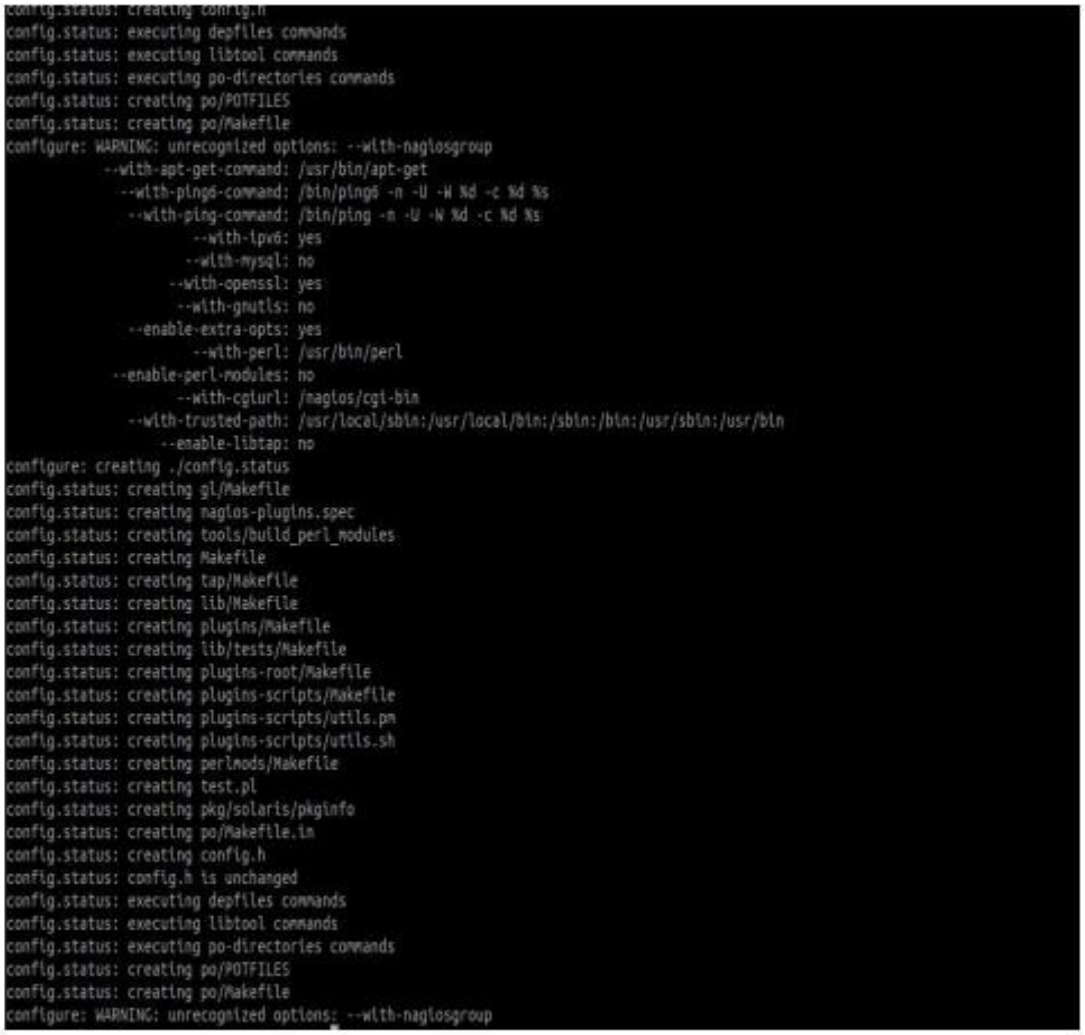
```
ScriptAlias /nagios/cgi-bin "/usr/local/nagios/sbin"

<Directory "/usr/local/nagios/sbin">
         Options ExecCGI
         AllowOverride None
         Order allow,deny
         Allow from all
         AuthName "Restricted Area"
         AuthType Basic
         AuthUserFile /usr/local/nagios/etc/htpasswd.users
         Require valid-user
</Directory>

Alias /nagios "/usr/local/nagios/share"

<Directory "/usr/local/nagios/share">
         Options None
         AllowOverride None
         Order allow,deny
         Allow from all
         AuthName "Restricted Area"
         AuthType Basic
         AuthUserFile /usr/local/nagios/etc/htpasswd.users
         Require valid-user
</Directory>
```

```
root@starboi:/opt/nagios-4.4.3# sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin
New password:
Re-type new password:
Adding password for user nagiosadmin
root@starboi:/opt/nagios-4.4.3# sudo a2enconf nagios
Enabling conf nagios.
To activate the new configuration, you need to run:
  systemctl reload apache2
root@starboi:/opt/nagios-4.4.3# sudo a2enmod cgi rewrite
Enabling module cgi.
Enabling module rewrite.
To activate the new configuration, you need to run:
  systemctl restart apache2
root@starboi:/opt/nagios-4.4.3# sudo service apache2 restart
```

4. Installing Nagios Plugins

cd /opt
sudo wget http://www.nagios-plugins.org/download/nagios-plugins-2.2.1.tar.gz
sudo tar xzf nagios-plugins-2.2.1.tar.gz
cd nagios-plugins-2.2.1

sudo ./configure --with-nagios-user=nagios --with-nagiosgroup=nagios --with-openssl



Sudo make

```
make[2]: Leaving directory '/opt/nagios-plugins-2.3.0/plugins-scripts'
Making all in plugins-root
make[2]: Entering directory '/opt/nagios-plugins-2.3.0/plugins-root'
gcc -DLOCALEDIR=\"/usr/local/nagios/share/locale\" -DHAVE_CONFIG_H -I. -I..  -I.. -I../lib -I..
heck_dhcp.Tpo -c -o check_dhcp.o check_dhcp.c
mv -f .deps/check_dhcp.Tpo .deps/check_dhcp.Po
/bin/bash ../libtool --tag=CC   --mode=link gcc -DNP_VERSION='"2.3.0"' -g -O2  -L. -o check_dhc
 -lnsl -lresolv -lpthread -ldl
libtool: link: gcc -DNP_VERSION=\"2.3.0\" -g -O2 -o check_dhcp check_dhcp.o ../plugins/netutils
gcc -DLOCALEDIR=\"/usr/local/nagios/share/locale\" -DHAVE_CONFIG_H -I. -I..  -I.. -I../lib -I..
heck_icmp.Tpo -c -o check_icmp.o check_icmp.c
check_icmp.c: In function 'main':
check_icmp.c:720:3: warning: ignoring return value of 'setuid', declared with attribute warn_un
   setuid(getuid());
   ^~~~~~~~~~~~~~~~
mv -f .deps/check_icmp.Tpo .deps/check_icmp.Po
/bin/bash ../libtool --tag=CC   --mode=link gcc -DNP_VERSION='"2.3.0"' -g -O2  -L. -o check_icm
 -lnsl -lresolv -lnsl -lresolv -lpthread -ldl
libtool: link: gcc -DNP_VERSION=\"2.3.0\" -g -O2 -o check_icmp check_icmp.o ../plugins/netutils
make[2]: Leaving directory '/opt/nagios-plugins-2.3.0/plugins-root'
Making all in po
make[2]: Entering directory '/opt/nagios-plugins-2.3.0/po'
make[2]: Nothing to be done for 'all'.
make[2]: Leaving directory '/opt/nagios-plugins-2.3.0/po'
make[2]: Entering directory '/opt/nagios-plugins-2.3.0'
make[2]: Leaving directory '/opt/nagios-plugins-2.3.0'
make[1]: Leaving directory '/opt/nagios-plugins-2.3.0'
```

Sudo make install

```
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/opt/nagios-plugins-2.3.0/plugins-root'
make[1]: Leaving directory '/opt/nagios-plugins-2.3.0/plugins-root'
Making install in po
make[1]: Entering directory '/opt/nagios-plugins-2.3.0/po'
/bin/mkdir -p /usr/local/nagios/share
installing fr.gmo as /usr/local/nagios/share/locale/fr/LC_MESSAGES/nagios-plugins.mo
installing de.gmo as /usr/local/nagios/share/locale/de/LC_MESSAGES/nagios-plugins.mo
if test "nagios-plugins" = "gettext-tools"; then \
  /bin/mkdir -p /usr/local/nagios/share/gettext/po; \
  for file in Makefile.in.in remove-potcdate.sin    Makevars.template; do \
    /usr/bin/install -c -o nagios -m 644 ./$file \
                  /usr/local/nagios/share/gettext/po/$file; \
  done; \
  for file in Makevars; do \
    rm -f /usr/local/nagios/share/gettext/po/$file; \
  done; \
else \
  : ; \
fi
make[1]: Leaving directory '/opt/nagios-plugins-2.3.0/po'
make[1]: Entering directory '/opt/nagios-plugins-2.3.0'
make[2]: Entering directory '/opt/nagios-plugins-2.3.0'
```

5. Verify Settings

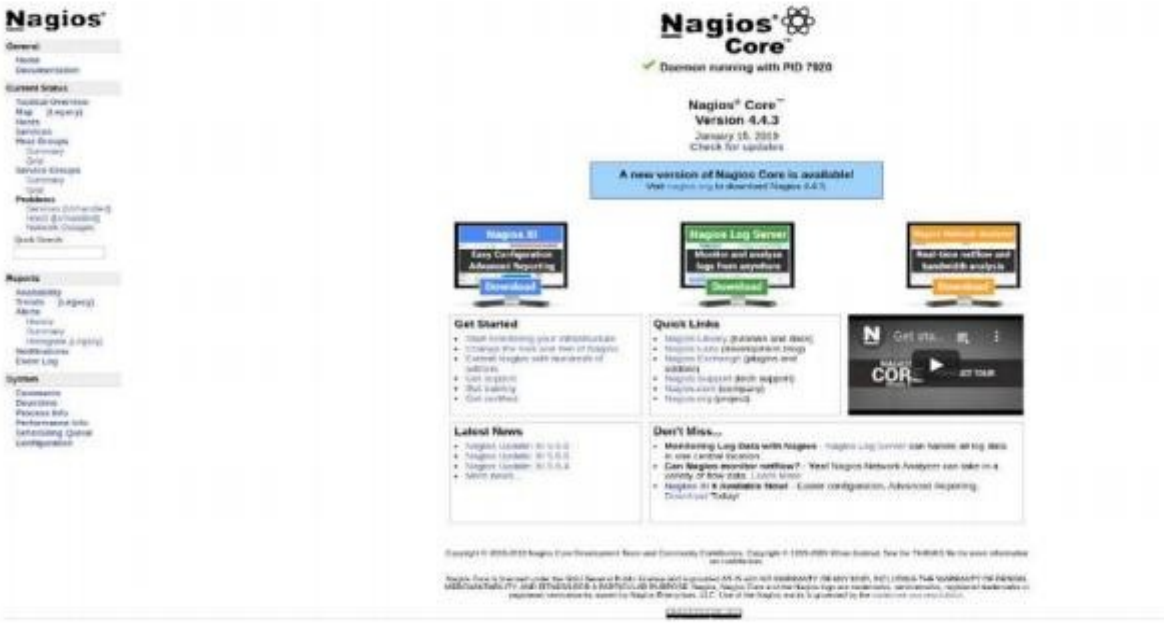
/usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

```
Nagios Core 4.4.3
Copyright (c) 2009-present Nagios Core Development Team and Community Contributors
Copyright (c) 1999-2009 Ethan Galstad
Last Modified: 2019-01-15
License: GPL

Website: https://www.nagios.org
Reading configuration data...
   Read main config file okay...
   Read object config files okay...

Running pre-flight check on configuration data...

Checking objects...
        Checked 8 services.
        Checked 1 hosts.
        Checked 1 host groups.
        Checked 0 service groups.
        Checked 1 contacts.
        Checked 1 contact groups.
        Checked 24 commands.
        Checked 5 time periods.
        Checked 0 host escalations.
        Checked 0 service escalations.
Checking for circular paths...
        Checked 1 hosts
        Checked 0 service dependencies
        Checked 0 host dependencies
        Checked 5 timeperiods
Checking global event handlers...
Checking obsessive compulsive processor commands...
Checking misc settings...

Total Warnings: 0
Total Errors:   0
```

sudo service nagios start

6. Access Nagios Web Interface

http://127.0.0.1/nagios/
Prompting for Apache Authentication Password –
username: nagiosadmin
Password : 123456 (which you enter while configuration)



7. Configure NRPE on Linux Host

sudo apt-get install nagios-nrpe-server nagios-plugins

sudo gedit /etc/nagios/nrpe.cfg

Open ▾ nrpe.cfg /etc/nagios Save

```
# This determines the effective group that the NRPE daemon should run as.
# You can either supply a group name or a GID.
#
# NOTE: This option is ignored if NRPE is running under either inetd or xinetd

nrpe_group=nagios


# ALLOWED HOST ADDRESSES
# This is an optional comma-delimited list of IP address or hostnames
# that are allowed to talk to the NRPE daemon. Network addresses with a bit mask
# (i.e. 192.168.1.0/24) are also supported. Hostname wildcards are not currently
# supported.
#
# Note: The daemon only does rudimentary checking of the client's IP
# address.  I would highly recommend adding entries in your /etc/hosts.allow
# file to allow only the specified host to connect to the port
# you are running this daemon on.
#
# NOTE: This option is ignored if NRPE is running under either inetd or xinetd

allowed_hosts=127.0.0.1, 192.168.0.106, 192.168.1.10


# COMMAND ARGUMENT PROCESSING
# This option determines whether or not the NRPE daemon will allow clients
# to specify arguments to commands that are executed.  This option only works
# if the daemon was configured with the --enable-command-args configure script
# option.
#
```

8. Verify Connectivity from Nagios

sudo /usr/local/nagios/libexec/check_nrpe -H 192.168.1.10

9. Add Linux Host in Nagios

sudo gedit /usr/local/nagios/etc/objects/ubuntu_host.cfg

```
define host {
        use                     linux-server
        host_name               ubuntu_host
        alias                   Ubuntu Host
        address                 192.168.1.10
        register                1
}
define service{
        host_name               ubuntu_host
        service_description     PING
        check_command           check_ping!100.0,20%!500.0,60%
        max_check_attempts      2
        check_interval          2
        retry_interval          2
        check_period            24x7
        check_freshness         1
        contact_groups          admins
        notification_interval   2
        notification_period     24x7
        notifications_enabled   1
        register                1
}
```

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

```
Checking objects...
        Checked 13 services.
        Checked 2 hosts.
        Checked 1 host groups.
        Checked 0 service groups.
        Checked 1 contacts.
        Checked 1 contact groups.
        Checked 24 commands.
        Checked 5 time periods.
        Checked 0 host escalations.
        Checked 0 service escalations.
Checking for circular paths...
        Checked 2 hosts
        Checked 0 service dependencies
        Checked 0 host dependencies
        Checked 5 timeperiods
Checking global event handlers...
Checking obsessive compulsive processor commands...
Checking misc settings...

Total Warnings: 0
Total Errors:   0
```

sudo service nagios restart

10.Testing the Ubuntu Host

Conclusion:

Nagios is an open source application for monitoring a system. Nagios has been widely used because of the ease of configuration. Nagios in support by various plugins, and you can even create your own plugins.