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Department of Information Technology

Experiment 9: Nagios

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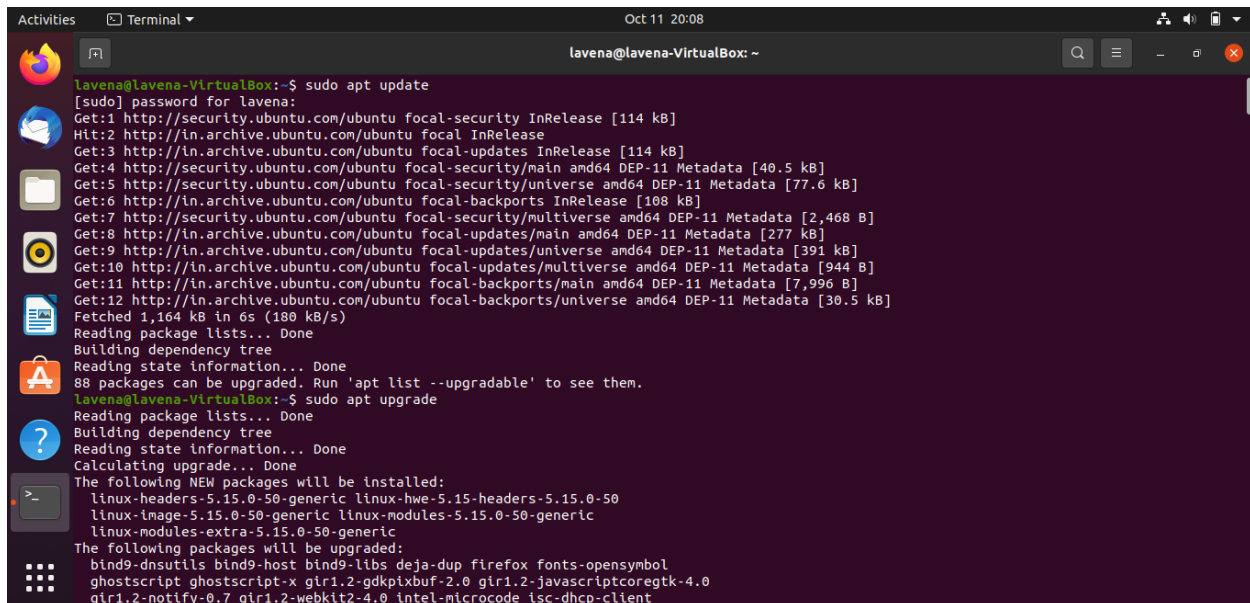
Roll No.:29

Aim: To Understand Continuous monitoring and Installation and configuration of Nagios Core, Nagios Plugins and NRPE (Nagios Remote Plugin Executor) on Linux Machine

1. Install and Configure Nagios Core

Step 1: Update the system packages.

Sudo apt update and sudo apt upgrade:



```
lavena@lavena-VirtualBox:~$ sudo apt update
[sudo] password for lavena:
Get:1 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Hit:2 http://in.archive.ubuntu.com/ubuntu focal InRelease
Get:3 http://in.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:4 http://security.ubuntu.com/ubuntu focal-security/main amd64 DEP-11 Metadata [40.5 kB]
Get:5 http://security.ubuntu.com/ubuntu focal-security/universe amd64 DEP-11 Metadata [77.6 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:7 http://security.ubuntu.com/ubuntu focal-security/multiverse amd64 DEP-11 Metadata [2,468 B]
Get:8 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 DEP-11 Metadata [277 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu focal-updates/universe amd64 DEP-11 Metadata [391 kB]
Get:10 http://in.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 DEP-11 Metadata [944 B]
Get:11 http://in.archive.ubuntu.com/ubuntu focal-backports/main amd64 DEP-11 Metadata [7,996 B]
Get:12 http://in.archive.ubuntu.com/ubuntu focal-backports/universe amd64 DEP-11 Metadata [30.5 kB]
Fetched 1,164 kB in 6s (180 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
88 packages can be upgraded. Run 'apt list --upgradable' to see them.
lavena@lavena-VirtualBox:~$ sudo apt upgrade
Reading package lists... Done
Building dependency tree
Reading state information... Done
Calculating upgrade... Done
The following NEW packages will be installed:
  linux-headers-5.15.0-50-generic linux-hwe-5.15-headers-5.15.0-50
  linux-image-5.15.0-50-generic linux-modules-5.15.0-50-generic
  linux-modules-extra-5.15.0-50-generic
The following packages will be upgraded:
  bind9-dnswtills bind9-host bind9-libs deja-dup firefox fonts-opensymbol
  ghostscript ghostscript-x gir1.2-gdkpixbuf-2.0 gir1.2-javascriptcoregtk-4.0
  gir1.2-notify-0.7 gir1.2-webkit2-4.0 intel-microcode isc-dhcp-client
```

Step 2: Install all the required packages

```

done
lavena@lavena-VirtualBox:~$ sudo apt install wget unzip curl openssl build-essential libgd-dev libssl-dev libapache2-mod-php php-gd php apach
e2 -y
[sudo] password for lavena:
Reading package lists... Done
Building dependency tree
Reading state information... Done
unzip is already the newest version (6.0-25ubuntu1).
unzip set to manually installed.
openssl is already the newest version (1.1.1f-1ubuntu2.16).
openssl set to manually installed.
wget is already the newest version (1.20.3-1ubuntu2).
wget set to manually installed.
The following packages were automatically installed and are no longer required:
  linux-headers-5.15.0-46-generic linux-hwe-5.15.0-headers-5.15.0-46 linux-image-5.15.0-46-generic linux-modules-5.15.0-46-generic
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils binutils binutils-common binutils-x86-64-linux-gnu dpkg-dev fakeroot g++ g++-9 gcc gcc-9
  libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl libapache2-mod-php7.4 libapr1 libaprutil1
  libaprutil1-dbd-sqlite3 libaprutil1-ldap libasan5 libatomic1 libbinutils libc-dev-bin libc6-dev libcrypt-dev libctf-nobfd0 libctf0
  libexpat1-dev libfakeroot libfontconfig1-dev libfontconfig1-dev libfontconfig1-dev libfontconfig1-dev libfontconfig1-dev libfontconfig1-dev
  libjpeg-turbo8-dev libjpeg8-dev liblsan0 liblua5.2-0 liblzma-dev libpng-dev libpng-tools libpthread-stubs0-dev libquadmath0 libsm-dev
  libstdc++-9-dev libtiff-dev libtiffxx5 libtsan0 libubsan1 libvpx-dev libx11-dev libxau-dev libxcb1-dev libxdmcp-dev libxpm-dev libxt-dev
  linux-libc-dev make manpages-dev php-common php7.4 php7.4-cli php7.4-common php7.4-gd php7.4-json php7.4-opcache php7.4-readline uuid-dev
  x11proto-core-dev x11proto-dev xorg-sgml-doctools xtrans-dev zlib1g-dev
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom binutils-doc debian-keyring g++-multilib g++-9-multilib gcc-9-doc
  gcc-multilib autoconf automake libtool flex bison gcc-doc gcc-9-multilib gcc-9-locales php-pear glibc-doc freetype2-doc libice-doc
  liblzma-doc libsm-doc libssl-doc libstdc++-9-doc libx11-doc libxcb-doc libxt-doc make-doc
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils binutils binutils-common binutils-x86-64-linux-gnu build-essential curl dpkg-dev fakeroot

```

Step 3: Download Nagios Core Setup files

```

Setting up libfontconfig1-dev:amd64 (2.13.1-2ubuntu3) ...
Processing triggers for libc-bin (2.31-0ubuntu9.9) ...
Processing triggers for ufw (0.36-6ubuntu1) ...
Processing triggers for systemd (245.4-4ubuntu3.18) ...
Processing triggers for man-db (2.9.1-1) ...
Processing triggers for sgml-base (1.29.1) ...
Setting up x11proto-dev (2019.2-1ubuntu1) ...
Setting up libxau-dev:amd64 (1:1.0.9-0ubuntu1) ...
Setting up libice-dev:amd64 (2:1.0.10-0ubuntu1) ...
Setting up libsm-dev:amd64 (2:1.2.3-1) ...
Setting up libxdmcp-dev:amd64 (1:1.1.3-0ubuntu1) ...
Setting up x11proto-core-dev (2019.2-1ubuntu1) ...
Setting up libxcb1-dev:amd64 (1.14-2) ...
Setting up libx11-dev:amd64 (2:1.6.9-2ubuntu1.2) ...
Setting up libxt-dev:amd64 (1:1.1.5-1) ...
Setting up libxpm-dev:amd64 (1:3.5.12-1) ...
Setting up libgd-dev:amd64 (2.2.5-5.2ubuntu2.1) ...
Processing triggers for php7.4-cli (7.4.3-4ubuntu2.13) ...
Processing triggers for libapache2-mod-php7.4 (7.4.3-4ubuntu2.13) ...
lavena@lavena-VirtualBox:~$ wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.6.tar.gz
--2022-10-11 20:22:06-- https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.6.tar.gz
Resolving assets.nagios.com (assets.nagios.com)... 45.79.49.120, 2600:3c00:f03c:92ff:fe77:45ce
Connecting to assets.nagios.com (assets.nagios.com)|45.79.49.120|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 11333414 (11M) [application/x-gzip]
Saving to: 'nagios-4.4.6.tar.gz'

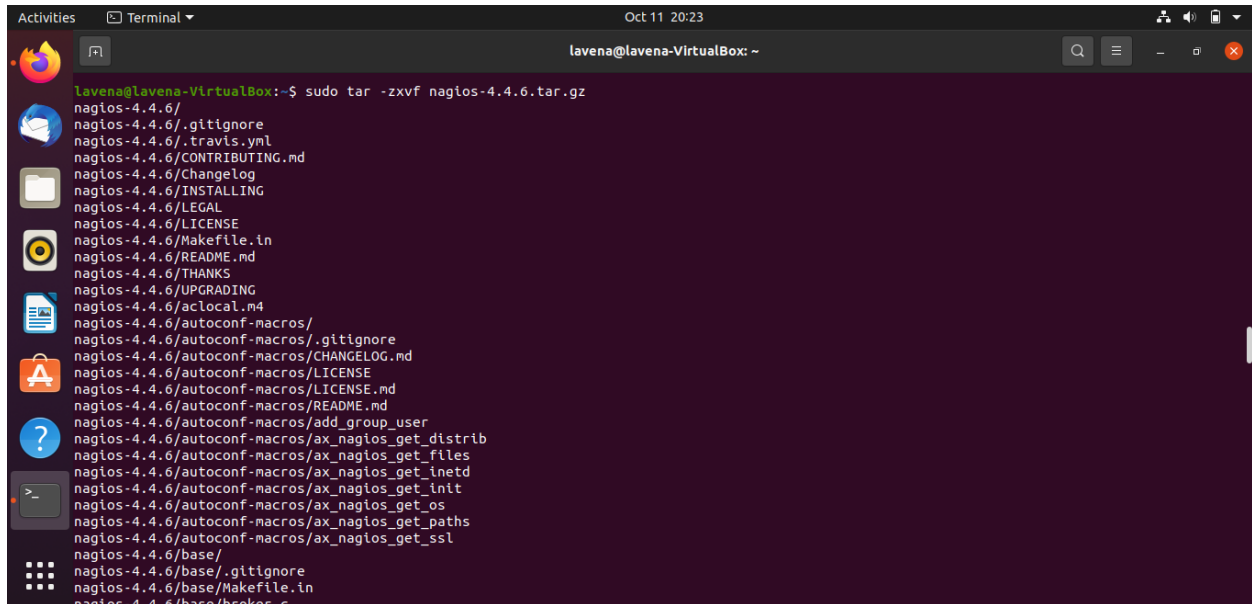
nagios-4.4.6.tar.gz          100%[=====] 10.81M  635KB/s  in 29s

2022-10-11 20:22:36 (380 KB/s) - 'nagios-4.4.6.tar.gz' saved [11333414/11333414]

lavena@lavena-VirtualBox:~$

```

Step 4: Extract the downloaded files.

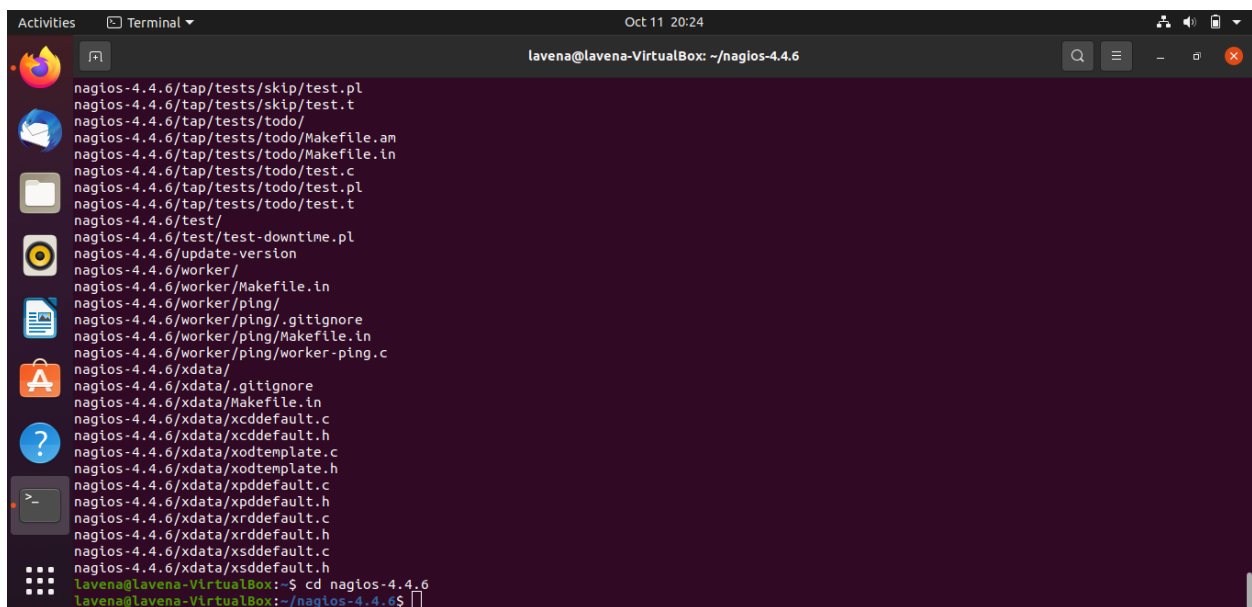


```

lavena@lavena-VirtualBox:~$ sudo tar -zxvf nagios-4.4.6.tar.gz
nagios-4.4.6/
nagios-4.4.6/.gitignore
nagios-4.4.6/.travis.yml
nagios-4.4.6/CONTRIBUTING.md
nagios-4.4.6/Changelog
nagios-4.4.6/INSTALLING
nagios-4.4.6/LICENSE
nagios-4.4.6/Makefile.in
nagios-4.4.6/README.md
nagios-4.4.6/THANKS
nagios-4.4.6/UPGRADING
nagios-4.4.6/aclocal.m4
nagios-4.4.6/autoconf-macros/
nagios-4.4.6/autoconf-macros/.gitignore
nagios-4.4.6/autoconf-macros/CHANGELOG.md
nagios-4.4.6/autoconf-macros/LICENSE
nagios-4.4.6/autoconf-macros/LICENSE.md
nagios-4.4.6/autoconf-macros/README.md
nagios-4.4.6/autoconf-macros/add_group_user
nagios-4.4.6/autoconf-macros/ax_nagios_get_distrib
nagios-4.4.6/autoconf-macros/ax_nagios_get_files
nagios-4.4.6/autoconf-macros/ax_nagios_get_inetd
nagios-4.4.6/autoconf-macros/ax_nagios_get_init
nagios-4.4.6/autoconf-macros/ax_nagios_get_os
nagios-4.4.6/autoconf-macros/ax_nagios_get_paths
nagios-4.4.6/autoconf-macros/ax_nagios_get_ssl
nagios-4.4.6/base/
nagios-4.4.6/base/.gitignore
nagios-4.4.6/base/Makefile.in
nagios-4.4.6/base/broker.c
  
```

Step 5: Navigate to the setup directory and Run the Nagios Core configure script using

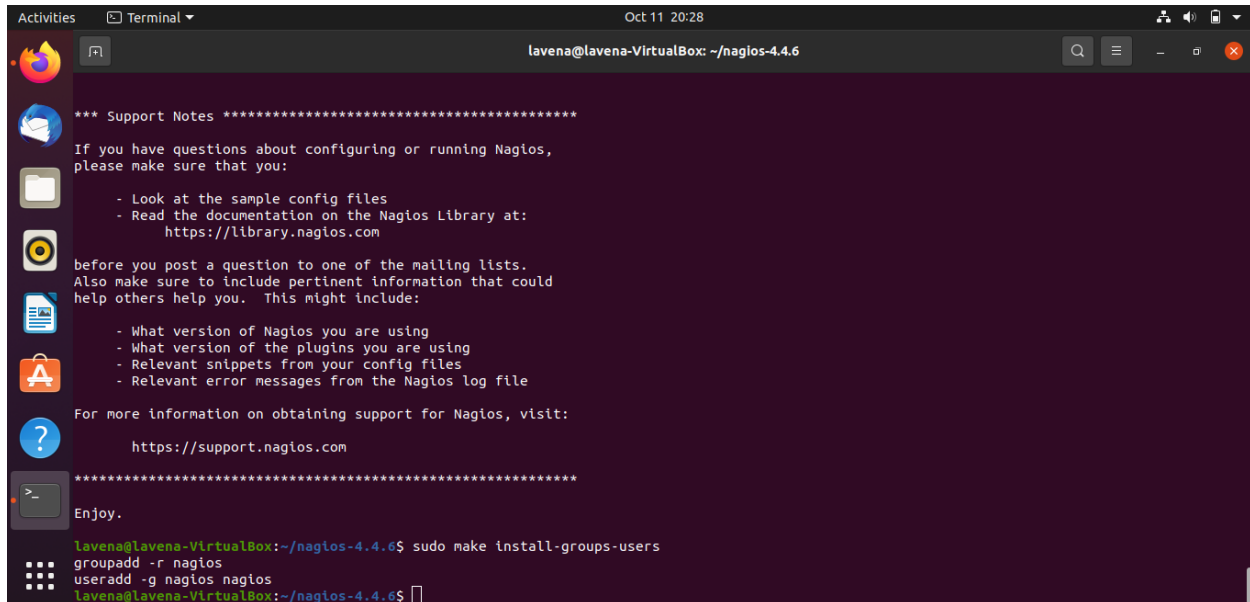
```
sudo ./configure
```



```

lavena@lavena-VirtualBox:~/nagios-4.4.6$
nagios-4.4.6/tap/tests/skip/test.pl
nagios-4.4.6/tap/tests/skip/test.t
nagios-4.4.6/tap/tests/todo/
nagios-4.4.6/tap/tests/todo/Makefile.am
nagios-4.4.6/tap/tests/todo/Makefile.in
nagios-4.4.6/tap/tests/todo/test.c
nagios-4.4.6/tap/tests/todo/test.pl
nagios-4.4.6/tap/tests/todo/test.t
nagios-4.4.6/test/
nagios-4.4.6/test/test-downtime.pl
nagios-4.4.6/update-version
nagios-4.4.6/worker/
nagios-4.4.6/worker/Makefile.in
nagios-4.4.6/worker/ping/
nagios-4.4.6/worker/ping/.gitignore
nagios-4.4.6/worker/ping/Makefile.in
nagios-4.4.6/worker/ping/worker-ping.c
nagios-4.4.6/xdata/
nagios-4.4.6/xdata/.gitignore
nagios-4.4.6/xdata/Makefile.in
nagios-4.4.6/xdata/xcddefault.c
nagios-4.4.6/xdata/xcddefault.h
nagios-4.4.6/xdata/xodtemplate.c
nagios-4.4.6/xdata/xodtemplate.h
nagios-4.4.6/xdata/xpddefault.c
nagios-4.4.6/xdata/xpddefault.h
nagios-4.4.6/xdata/xrddefault.c
nagios-4.4.6/xdata/xrddefault.h
nagios-4.4.6/xdata/xsddefault.c
nagios-4.4.6/xdata/xsddefault.h
lavena@lavena-VirtualBox:~$ cd nagios-4.4.6
lavena@lavena-VirtualBox:~/nagios-4.4.6$
  
```

Step 6: Compile the main program and CGIs using `sudo make all` and `make` and install group and user.



```

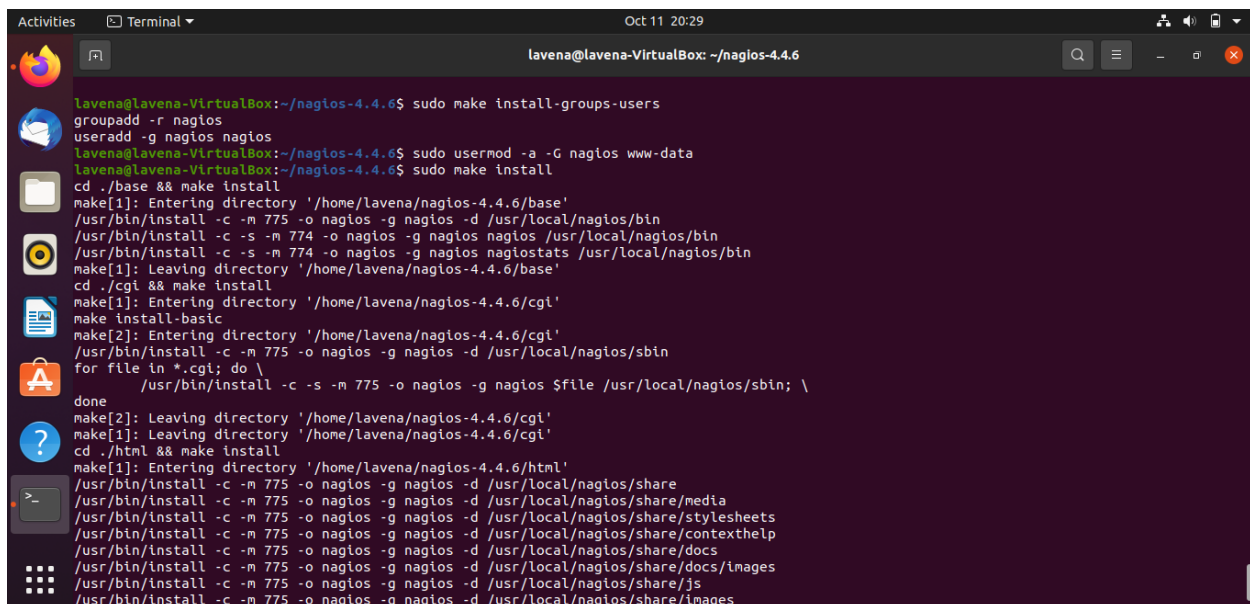
lavena@lavena-VirtualBox: ~/nagios-4.4.6

*** Support Notes ****
If you have questions about configuring or running Nagios,
please make sure that you:
- Look at the sample config files
- Read the documentation on the Nagios Library at:
  https://library.nagios.com
before you post a question to one of the mailing lists.
Also make sure to include pertinent information that could
help others help you. This might include:
- What version of Nagios you are using
- What version of the plugins you are using
- Relevant snippets from your config files
- Relevant error messages from the Nagios log file
For more information on obtaining support for Nagios, visit:
https://support.nagios.com
*****
Enjoy.

lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo make install-groups-users
groupadd -r nagios
useradd -g nagios nagios
lavena@lavena-VirtualBox:~/nagios-4.4.6$

```

Step 7: Add `www-data` directories user to the nagios group and install Nagios



```

lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo make install-groups-users
groupadd -r nagios
useradd -g nagios nagios
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo usermod -a -G nagios www-data
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo make install
cd ./base && make install
make[1]: Entering directory '/home/lavena/nagios-4.4.6/base'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/bin
/usr/bin/install -c -s -m 774 -o nagios -g nagios nagios /usr/local/nagios/bin
/usr/bin/install -c -s -m 774 -o nagios -g nagios nagiosstats /usr/local/nagios/bin
make[1]: Leaving directory '/home/lavena/nagios-4.4.6/base'
cd ./cgi && make install
make[1]: Entering directory '/home/lavena/nagios-4.4.6/cgi'
make install-basic
make[2]: Entering directory '/home/lavena/nagios-4.4.6/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 -s -m 775 -o nagios -g nagios $file /usr/local/nagios/sbin; \
done
make[2]: Leaving directory '/home/lavena/nagios-4.4.6/cgi'
make[1]: Leaving directory '/home/lavena/nagios-4.4.6/cgi'
cd ./html && make install
make[1]: Entering directory '/home/lavena/nagios-4.4.6/html'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/media
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/stylesheets
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/contexthelp
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/docs
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/docs/images
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/js
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/images

```

Step 8: Initialize all the installation configuration scripts.

```

Activities  Terminal  Oct 11 20:29
lavena@lavena-VirtualBox: ~/nagios-4.4.6

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

make[1]: Leaving directory '/home/lavena/nagios-4.4.6'
make install-basic
make[1]: Entering directory '/home/lavena/nagios-4.4.6'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/libexec
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/var
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/var/archives
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/var/spool/checkresults
chmod g+s /usr/local/nagios/var/spool/checkresults

*** Main program, CGIs and HTML files installed ***

You can continue with installing Nagios as follows (type 'make'
without any arguments for a list of all possible options):

make install-init
- This installs the init script in /lib/systemd/system

make install-commandmode
- This installs and configures permissions on the
  directory for holding the external command file

make install-config
- This installs sample config files in /usr/local/nagios/etc

make[1]: Leaving directory '/home/lavena/nagios-4.4.6'
lavena@lavena-VirtualBox:~/nagios-4.4.6$ 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
lavena@lavena-VirtualBox:~/nagios-4.4.6$

```

Step 9: Install and configure permissions on the configs' directory and install sample config files.

```

Activities  Terminal  Oct 11 20:30
lavena@lavena-VirtualBox: ~/nagios-4.4.6

make[1]: Leaving directory '/home/lavena/nagios-4.4.6'
lavena@lavena-VirtualBox:~/nagios-4.4.6$ 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
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo make install-commandmode
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/var/rw
chmod g+s /usr/local/nagios/var/rw

*** External command directory configured ***

lavena@lavena-VirtualBox:~/nagios-4.4.6$ 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.

lavena@lavena-VirtualBox:~/nagios-4.4.6$

```

Step 10: Install apache files. Enable apache rewrite mode and CGI config.

```

Activities  Terminal  Oct 11 20:31
lavena@lavena-VirtualBox: ~/nagios-4.4.6

/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.

lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo make install-webconf
/usr/bin/install -c -m 644 sample-config/httpd.conf /etc/apache2/sites-available/nagios.conf
if [ 1 -eq 1 ]; then \
    ln -s /etc/apache2/sites-available/nagios.conf /etc/apache2/sites-enabled/nagios.conf; \
fi

*** Nagios/Apache conf file installed ***

lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo a2enmod rewrite
Enabling module rewrite.
To activate the new configuration, you need to run:
systemctl restart apache2
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo a2enmod cgi
Enabling module cgi.
To activate the new configuration, you need to run:
systemctl restart apache2
lavena@lavena-VirtualBox:~/nagios-4.4.6$

```

Step 11: Restart the Apache service and then create a user and set the password when prompted.

```

Activities  Terminal  Oct 11 20:31
lavena@lavena-VirtualBox: ~/nagios-4.4.6

/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.

lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo make install-webconf
/usr/bin/install -c -m 644 sample-config/httpd.conf /etc/apache2/sites-available/nagios.conf
if [ 1 -eq 1 ]; then \
    ln -s /etc/apache2/sites-available/nagios.conf /etc/apache2/sites-enabled/nagios.conf; \
fi

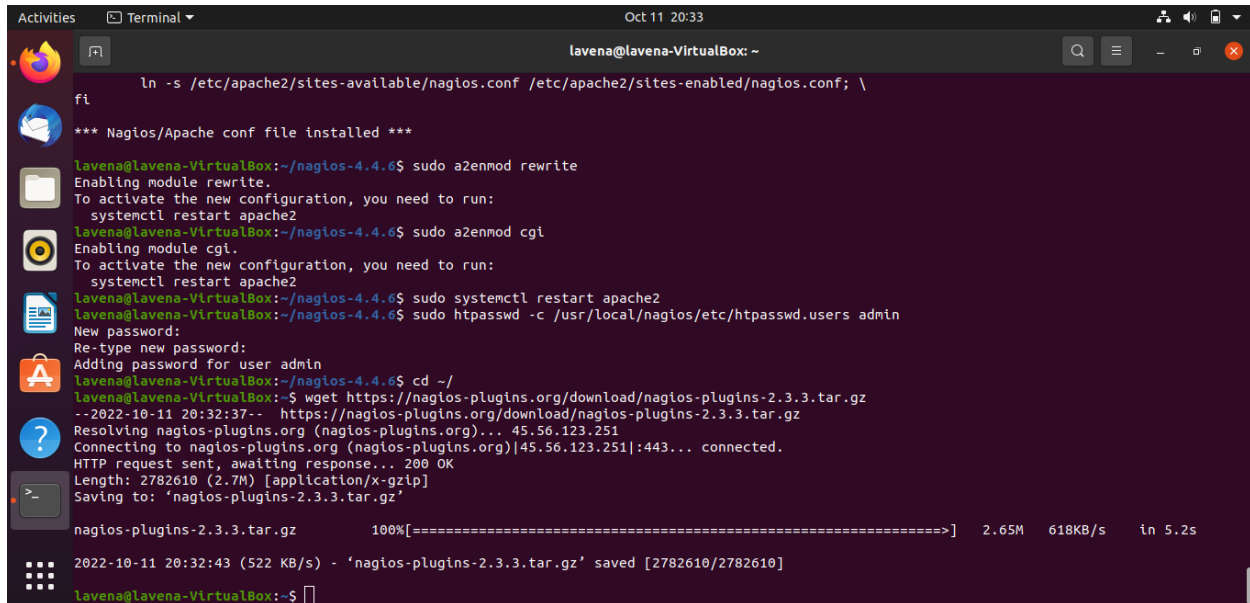
*** Nagios/Apache conf file installed ***

lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo a2enmod rewrite
Enabling module rewrite.
To activate the new configuration, you need to run:
systemctl restart apache2
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo a2enmod cgi
Enabling module cgi.
To activate the new configuration, you need to run:
systemctl restart apache2
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo systemctl restart apache2
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users admin
New password:
Re-type new password:
Adding password for user admin
lavena@lavena-VirtualBox:~/nagios-4.4.6$

```


2. Install Nagios Plugins

Step 1: Download the Nagios Core plugin.



```

lavena@lavena-VirtualBox: ~
ln -s /etc/apache2/sites-available/nagios.conf /etc/apache2/sites-enabled/nagios.conf; \
fi
*** Nagios/Apache conf file installed ***
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo a2enmod rewrite
Enabling module rewrite.
To activate the new configuration, you need to run:
systemctl restart apache2
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo a2enmod cgi
Enabling module cgi.
To activate the new configuration, you need to run:
systemctl restart apache2
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo systemctl restart apache2
lavena@lavena-VirtualBox:~/nagios-4.4.6$ sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users admin
New password:
Re-type new password:
Adding password for user admin
lavena@lavena-VirtualBox:~/nagios-4.4.6$ cd ~/
lavena@lavena-VirtualBox:~$ wget https://nagios-plugins.org/download/nagios-plugins-2.3.3.tar.gz
--2022-10-11 20:32:37-- https://nagios-plugins.org/download/nagios-plugins-2.3.3.tar.gz
Resolving nagios-plugins.org (nagios-plugins.org)... 45.56.123.251
Connecting to nagios-plugins.org (nagios-plugins.org)|45.56.123.251|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2782610 (2.7M) [application/x-gzip]
Saving to: 'nagios-plugins-2.3.3.tar.gz'

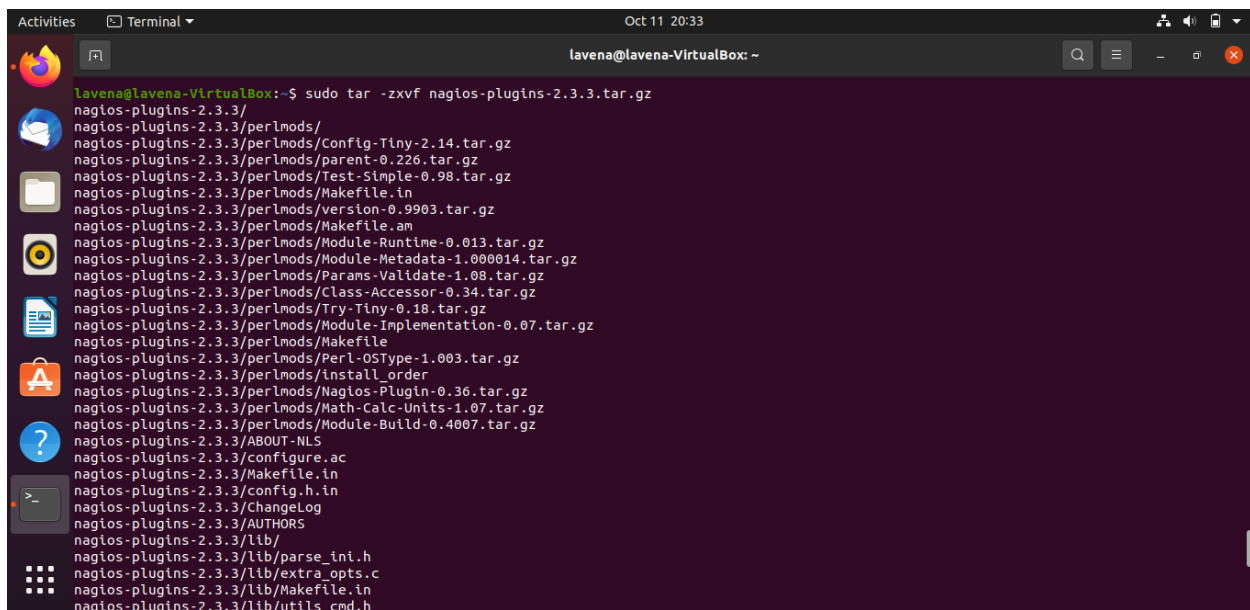
nagios-plugins-2.3.3.tar.gz 100%[=====] 2.65M 618KB/s in 5.2s

2022-10-11 20:32:43 (522 KB/s) - 'nagios-plugins-2.3.3.tar.gz' saved [2782610/2782610]

lavena@lavena-VirtualBox:~$

```

Step 2: Extract the downloaded plugin and navigate to the plugins' directory using command `$ cd nagios-plugins-2.3.3/`



```

lavena@lavena-VirtualBox:~$ sudo tar -zxvf nagios-plugins-2.3.3.tar.gz
nagios-plugins-2.3.3/
nagios-plugins-2.3.3/perlmods/
nagios-plugins-2.3.3/perlmods/Config-Tiny-2.14.tar.gz
nagios-plugins-2.3.3/perlmods/parent-0.226.tar.gz
nagios-plugins-2.3.3/perlmods/Test-Simple-0.98.tar.gz
nagios-plugins-2.3.3/perlmods/Makefile.in
nagios-plugins-2.3.3/perlmods/version-0.9903.tar.gz
nagios-plugins-2.3.3/perlmods/Makefile.am
nagios-plugins-2.3.3/perlmods/Module-Runtime-0.013.tar.gz
nagios-plugins-2.3.3/perlmods/Module-Metadata-1.000014.tar.gz
nagios-plugins-2.3.3/perlmods/Params-Validate-1.08.tar.gz
nagios-plugins-2.3.3/perlmods/Class-Accessor-0.34.tar.gz
nagios-plugins-2.3.3/perlmods/Try-Tiny-0.18.tar.gz
nagios-plugins-2.3.3/perlmods/Module-Implementation-0.07.tar.gz
nagios-plugins-2.3.3/perlmods/Makefile
nagios-plugins-2.3.3/perlmods/Perl-OSType-1.003.tar.gz
nagios-plugins-2.3.3/perlmods/Install_order
nagios-plugins-2.3.3/perlmods/Nagios-Plugin-0.36.tar.gz
nagios-plugins-2.3.3/perlmods/Math-Calc-Units-1.07.tar.gz
nagios-plugins-2.3.3/perlmods/Module-Build-0.4007.tar.gz
nagios-plugins-2.3.3/ABOUT-NLS
nagios-plugins-2.3.3/configure.ac
nagios-plugins-2.3.3/Makefile.in
nagios-plugins-2.3.3/config.h.in
nagios-plugins-2.3.3/Changelog
nagios-plugins-2.3.3/AUTHORS
nagios-plugins-2.3.3/lib/
nagios-plugins-2.3.3/lib/parse_ini.h
nagios-plugins-2.3.3/lib/extra_opts.c
nagios-plugins-2.3.3/lib/Makefile.in
nagios-plugins-2.3.3/lib/utils.cnd.h

```

Step 3: Run the plugin configure script.

```

Activities  Terminal  Oct 11 20:35
lavena@lavena-VirtualBox: ~/nagios-plugins-2.3.3
nagios-plugins-2.3.3/pkg/redhat/
nagios-plugins-2.3.3/pkg/redhat/requires
lavena@lavena-VirtualBox:~$ cd nagios-plugins-2.3.3/
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$ sudo ./configure --with-nagios-user=nagios --with-nagios-group=nagios
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /usr/bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking whether to disable maintainer-specific portions of Makefiles... yes
checking build system type... x86_64-unknown-linux-gnu
checking host system type... x86_64-unknown-linux-gnu
checking for gcc... gcc
checking for C compiler default output file name... a.out
checking whether the C compiler works... yes
checking whether we are cross compiling... no
checking for suffix of executables...
checking for suffix of object files... o
checking whether we are using the GNU C compiler... yes
checking whether gcc accepts -g... yes
checking for gcc option to accept ISO C89... none needed
checking for style of include used by make... GNU
checking dependency style of gcc... gcc3
checking how to run the C preprocessor... gcc -E
checking for grep that handles long lines and -e... /usr/bin/grep
checking for egrep... /usr/bin/grep -E
checking for Minix Amsterdam compiler... no
checking for ar... ar
checking for ranlib... ranlib
checking whether gcc and cc understand -c and -o together... yes
checking for ANSI C header files... yes

```

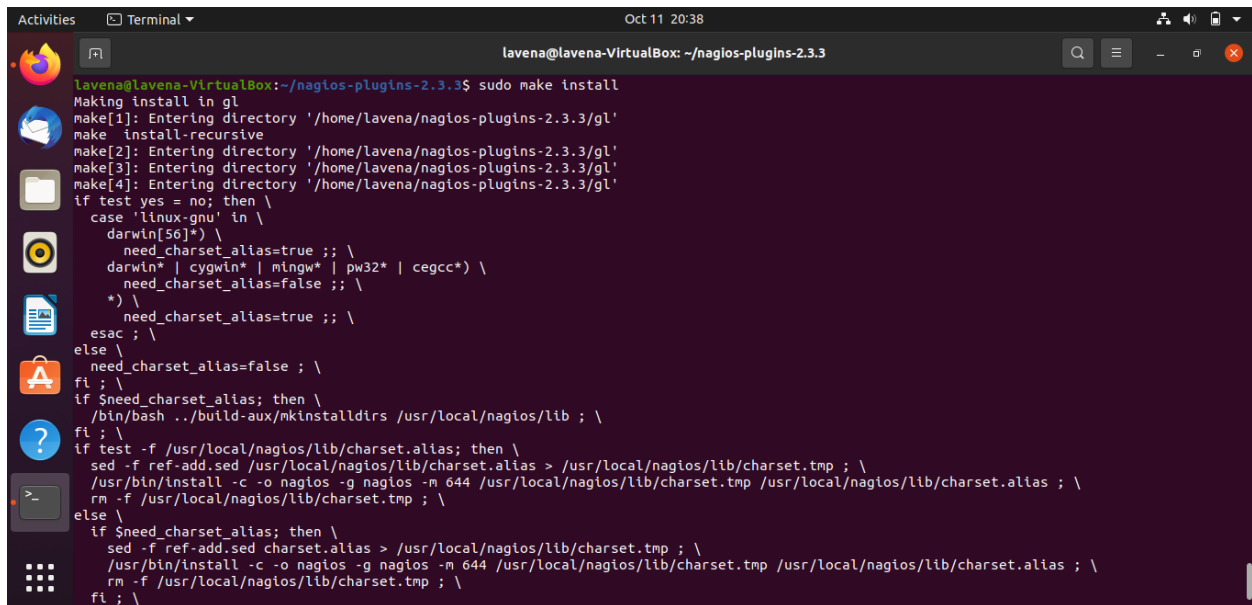
Step 4: Compile Nagios Core plugins.

```

Activities  Terminal  Oct 11 20:37
lavena@lavena-VirtualBox: ~/nagios-plugins-2.3.3
config.status: creating po/Makefile
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$ sudo make
make all-recursive
make[1]: Entering directory '/home/lavena/nagios-plugins-2.3.3'
Making all in gl
make[2]: Entering directory '/home/lavena/nagios-plugins-2.3.3/gl'
rm -f alloca.h-t alloca.h && \
{ echo '/* DO NOT EDIT! GENERATED AUTOMATICALLY! */'; \
cat ./alloca.in.h; \
} > alloca.h-t && \
mv -f alloca.h-t alloca.h
rm -f c++defs.h-t c++defs.h && \
sed -n -e '/_GL_CXXDEFS/, $p' \
< ../build-aux/snippet/c++defs.h \
> c++defs.h-t && \
mv c++defs.h-t c++defs.h
rm -f warn-on-use.h-t warn-on-use.h && \
sed -n -e '/^\.ifndef/, $p' \
< ../build-aux/snippet/warn-on-use.h \
> warn-on-use.h-t && \
mv warn-on-use.h-t warn-on-use.h
rm -f arg-nonnull.h-t arg-nonnull.h && \
sed -n -e '/_GL_ARG_NONNULL/, $p' \
< ../build-aux/snippet/arg-nonnull.h \
> arg-nonnull.h-t && \
mv arg-nonnull.h-t arg-nonnull.h
/usr/bin/mkdir -p arpa
rm -f arpa/inet.h-t arpa/inet.h && \
{ echo '/* DO NOT EDIT! GENERATED AUTOMATICALLY! */'; \
sed -e 's|@'GUARD_PREFIX'@|GL|g' \
-e 's|@'INCLUDE_NEXT'@|include_next|g' \
-e 's|@'PRAGMA_SYSTEM_HEADER'@|#pragma GCC system_header|g' \

```


Step 5: Install the plugins.



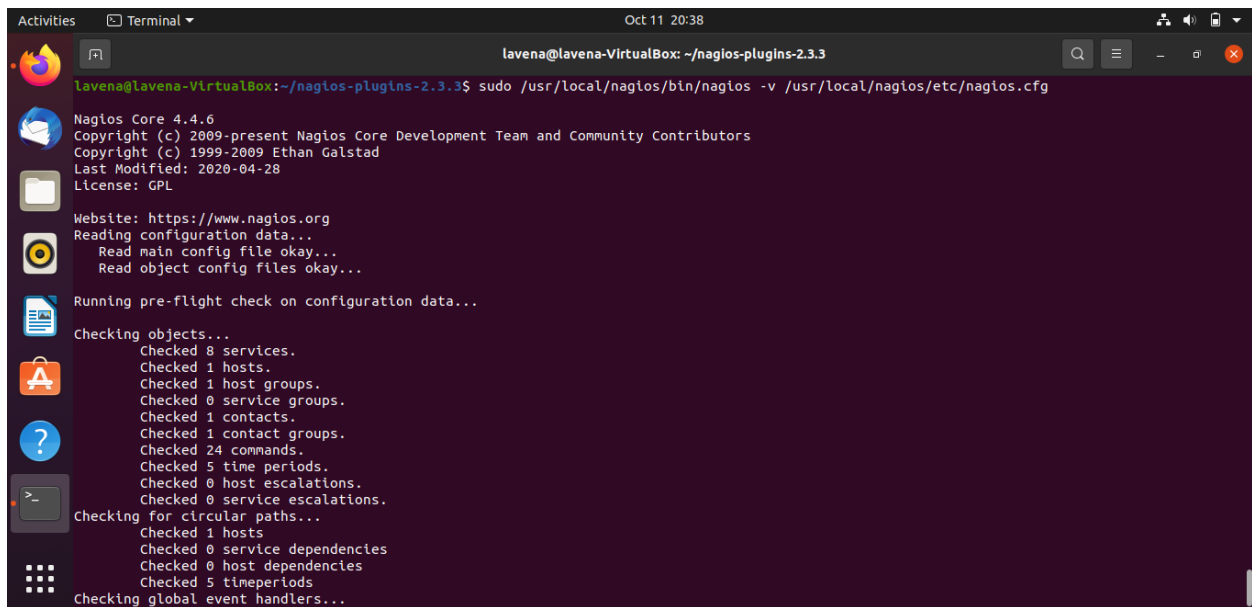
```

lavena@lavena-VirtualBox: ~/nagios-plugins-2.3.3
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$ sudo make install
Making install in gl
make[1]: Entering directory '/home/lavena/nagios-plugins-2.3.3/gl'
make install-recursive
make[2]: Entering directory '/home/lavena/nagios-plugins-2.3.3/gl'
make[3]: Entering directory '/home/lavena/nagios-plugins-2.3.3/gl'
make[4]: Entering directory '/home/lavena/nagios-plugins-2.3.3/gl'
if test yes = no; then \
  case 'linux-gnu' in \
    darwin[56]*) \
      need_charset_alias=true ;; \
    darwin* | cygwin* | mingw* | pw32* | cegcc*) \
      need_charset_alias=false ;; \
    *) \
      need_charset_alias=true ;; \
  esac ; \
else \
  need_charset_alias=false ; \
fi ; \
if $need_charset_alias; then \
  /bin/bash ../build-aux/mkinstalldirs /usr/local/nagios/lib ; \
fi ; \
if test -f /usr/local/nagios/lib/charset.alias; then \
  sed -f ref-add.sed /usr/local/nagios/lib/charset.alias > /usr/local/nagios/lib/charset.tmp ; \
  /usr/bin/install -c -o nagios -g nagios -m 644 /usr/local/nagios/lib/charset.tmp /usr/local/nagios/lib/charset.alias ; \
  rm -f /usr/local/nagios/lib/charset.tmp ; \
else \
  if $need_charset_alias; then \
    sed -f ref-add.sed charset.alias > /usr/local/nagios/lib/charset.tmp ; \
    /usr/bin/install -c -o nagios -g nagios -m 644 /usr/local/nagios/lib/charset.tmp /usr/local/nagios/lib/charset.alias ; \
    rm -f /usr/local/nagios/lib/charset.tmp ; \
  fi ; \

```

3. Verify Nagios Configuration

Step 1: Verify the Nagios Core configuration.



```

lavena@lavena-VirtualBox: ~/nagios-plugins-2.3.3
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$ sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

Nagios Core 4.4.6
Copyright (c) 2009-present Nagios Core Development Team and Community Contributors
Copyright (c) 1999-2009 Ethan Galstad
Last Modified: 2020-04-28
License: GPL

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

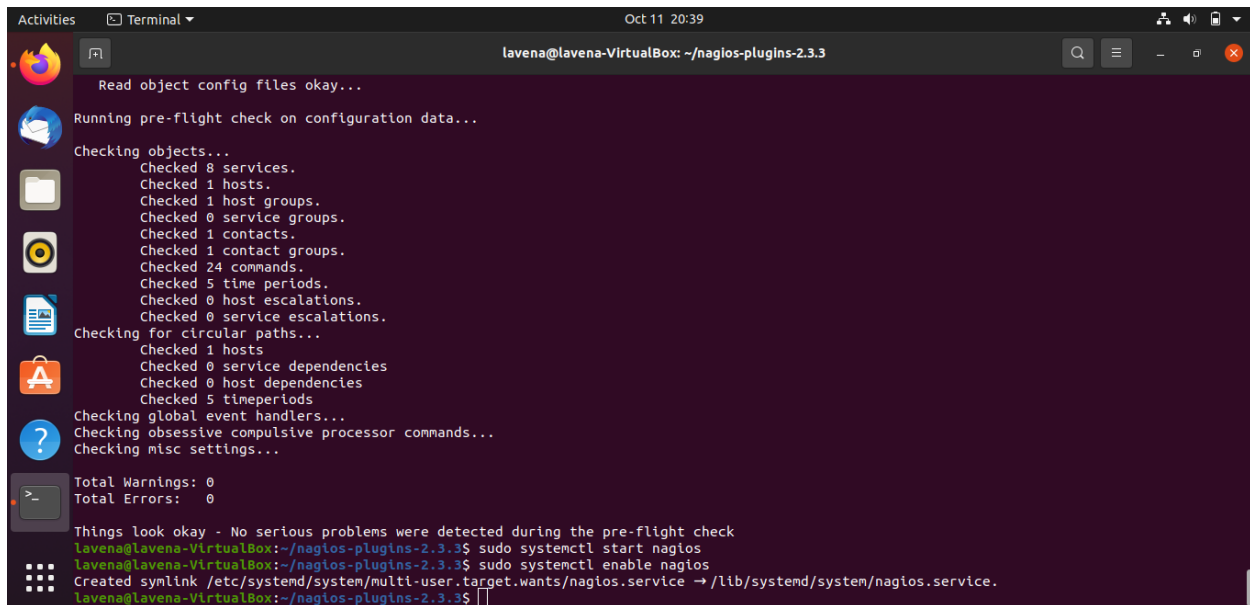
Running pre-flight check on configuration data...

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...

```

Step 2: Start the Nagios service and enable Nagios service to run at system startup.



```

lavena@lavena-VirtualBox: ~/nagios-plugins-2.3.3
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

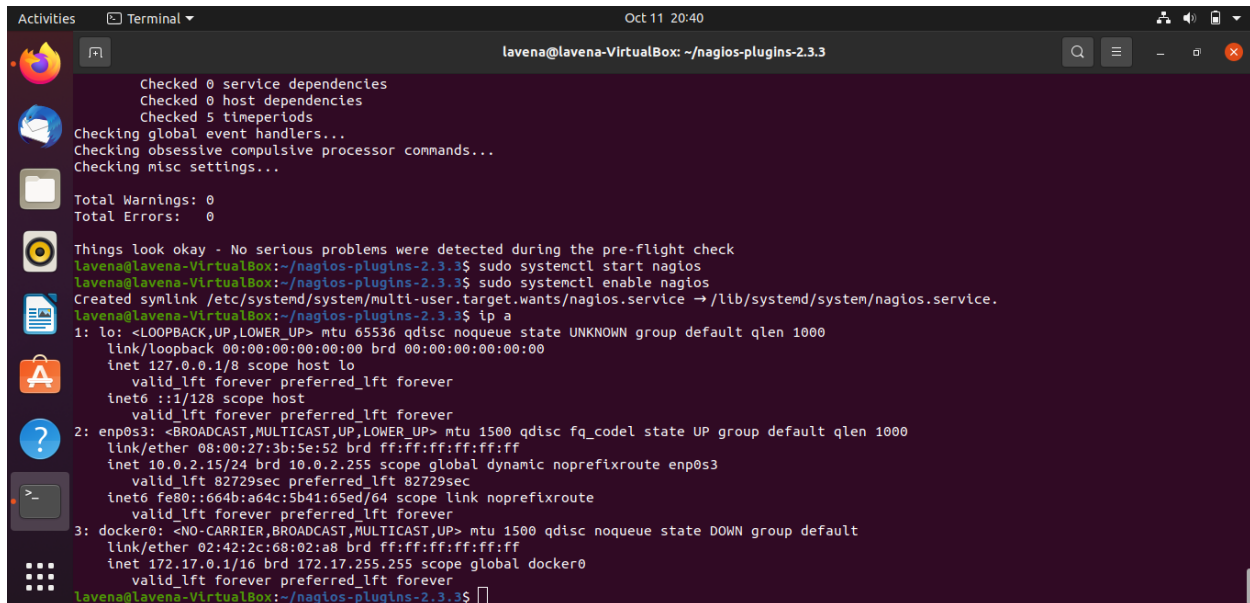
Things look okay - No serious problems were detected during the pre-flight check
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$ sudo systemctl start nagios
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$ sudo systemctl enable nagios
Created symlink /etc/systemd/system/multi-user.target.wants/nagios.service → /lib/systemd/system/nagios.service.
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$

```

4. Access Nagios Web Interface

Open your web browser and access Nagios web interface via the URL <http://ServerIP/nagios>.

To find IP address use command: `ip a`



```

lavena@lavena-VirtualBox: ~/nagios-plugins-2.3.3
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

Things look okay - No serious problems were detected during the pre-flight check
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$ sudo systemctl start nagios
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$ sudo systemctl enable nagios
Created symlink /etc/systemd/system/multi-user.target.wants/nagios.service → /lib/systemd/system/nagios.service.
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
        valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 08:00:27:3b:5e:52 brd ff:ff:ff:ff:ff:ff
    inet 10.0.2.15/24 brd 10.0.2.255 scope global dynamic noprefixroute enp0s3
        valid_lft 82729sec preferred_lft 82729sec
    inet6 fe80::664b:a64c:5b41:65ed/64 scope link noprefixroute
        valid_lft forever preferred_lft forever
3: docker0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN group default
    link/ether 02:42:2c:68:02:a8 brd ff:ff:ff:ff:ff:ff
    inet 172.17.0.1/16 brd 172.17.255.255 scope global docker0
        valid_lft forever preferred_lft forever
lavena@lavena-VirtualBox:~/nagios-plugins-2.3.3$

```



Successfully Installed and Configured Nagios Plugins

Reference:

https://www.vultr.com/de/docs/install-nagios-on-ubuntu-20-04/?lang=de&utm_source=performance-max-apac&utm_medium=paidmedia&utm_campaign=id=16876059738&utm_adgroup=&utm_term=&utm_content=&gclid=Cj0KCQjwyOuYBhCGARIsAIdGQRO6LONSLKjtHIQs1smDa4y-HgeTmA1meVkpAToKqKrekrNzvsNbFiAaAjUMEALw_wcB