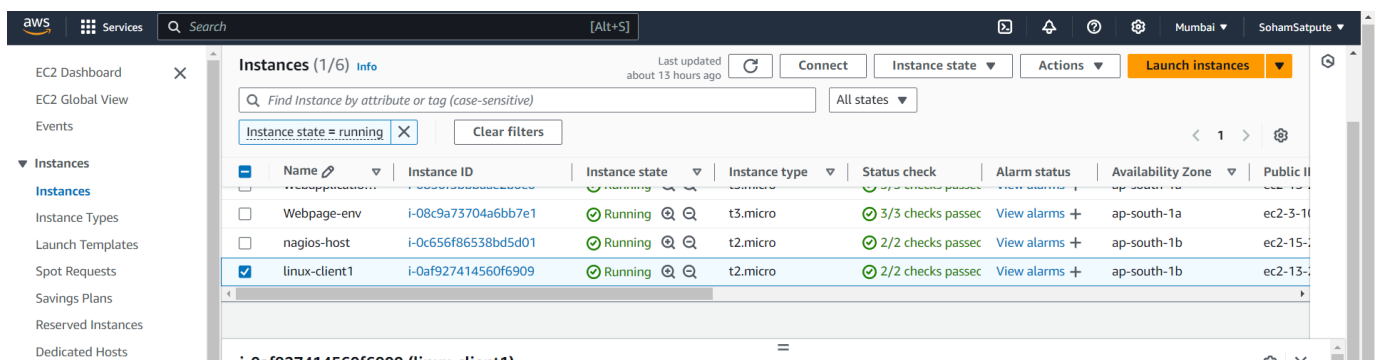# ADVANCE DEVOPS EXP 9

**Name :- Soham Satpute**

Roll_no :- 52

Aim :- To Understand Continuous monitoring and Installation and configuration of Nagios Core, Nagios Plugins and NRPE (Nagios Remote Plugin Executor) on Linux Machine.
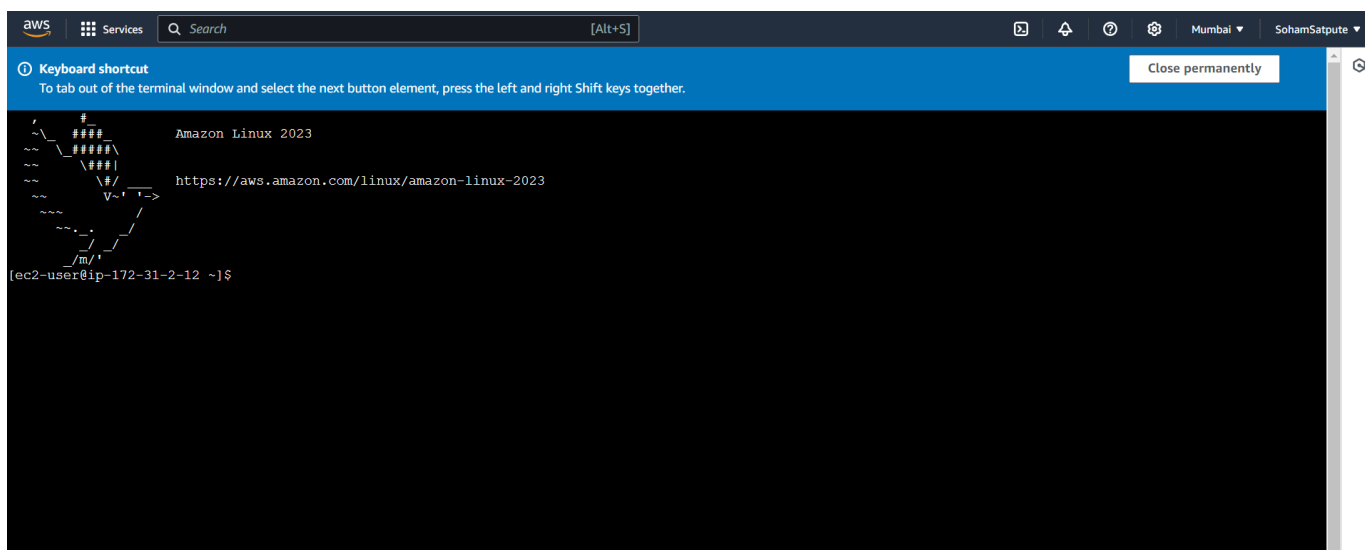
1. Create an Amazon Linux EC2 Instance

2. Configure Security Group
● Ensure HTTP, HTTPS, SSH, and ICMP are open from everywhere.
● Edit the inbound rules of the specified Security Group
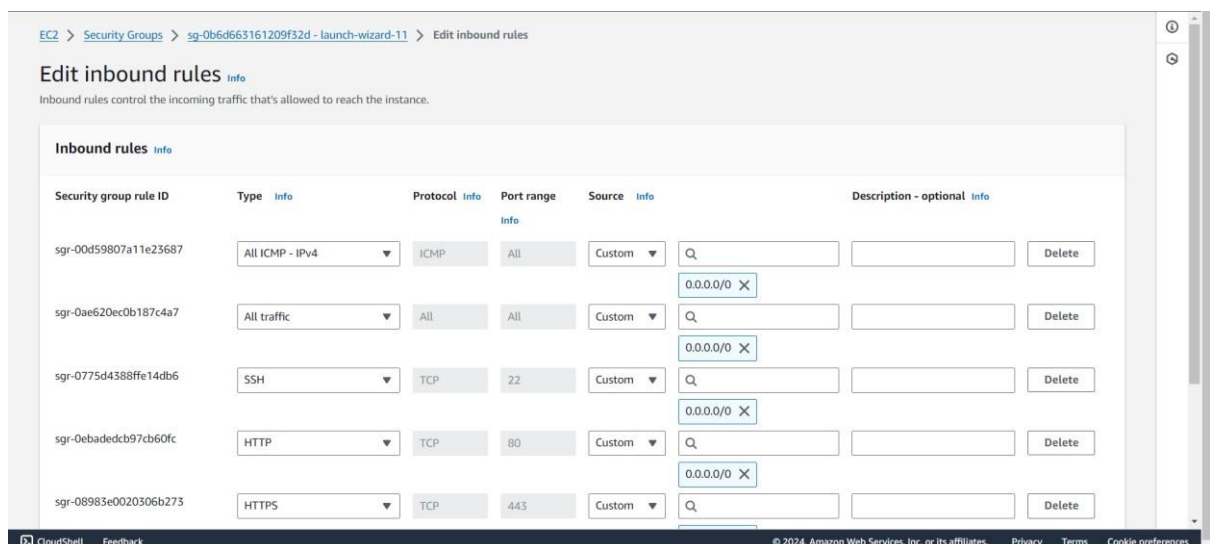
You have to edit the inbound rules of the specified Security Group for this.

3. SSH into Your EC2 instance or simply use EC2 Instance Connect from the browser.

4. Update the package indices and install the following packages using yum sudo yum update


```
[ec2-user@ip-172-31-40-254 ~]$ sudo yum update
Last metadata expiration check: 0:01:31 ago on Wed Oct  2 05:48:47 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-40-254 ~]$
```

sudo yum install httpd php


```
[ec2-user@ip-172-31-40-254 ~]$ sudo yum install httpd php
Last metadata expiration check: 0:01:59 ago on Wed Oct  2 05:48:47 2024.
Dependencies resolved.
=================================================================================
 Package                 Architecture        Version                   Repository        Size
=================================================================================
Installing:
 httpd                   x86_64              2.4.62-1.amzn2023          amazonlinux        48 k
 php8.3                  x86_64              8.3.10-1.amzn2023.0.1      amazonlinux        10 k
Installing dependencies:
 apr                     x86_64              1.7.2-2.amzn2023.0.2       amazonlinux       129 k
 apr-util               x86_64              1.6.3-1.amzn2023.0.1       amazonlinux        98 k
 generic-logos-httpd     noarch              18.0.0-12.amzn2023.0.3     amazonlinux        19 k
 httpd-core             x86_64              2.4.62-1.amzn2023          amazonlinux       1.4 M
 httpd-filesystem        noarch              2.4.62-1.amzn2023          amazonlinux        14 k
 httpd-tools             x86_64              2.4.62-1.amzn2023          amazonlinux        81 k
 libbrotli              x86_64              1.0.9-4.amzn2023.0.2       amazonlinux       315 k
 libsodium              x86_64              1.0.19-4.amzn2023          amazonlinux       176 k
 libxslt                x86_64              1.1.34-5.amzn2023.0.2      amazonlinux       241 k
 mailcap                noarch              2.1.49-3.amzn2023.0.3      amazonlinux        33 k
 nginx-filesystem        noarch              1:1.24.0-1.amzn2023.0.4    amazonlinux       9.8 k
 php8.3-cli             x86_64              8.3.10-1.amzn2023.0.1      amazonlinux       3.7 M
 php8.3-common          x86_64              8.3.10-1.amzn2023.0.1      amazonlinux       737 k
 php8.3-process         x86_64              8.3.10-1.amzn2023.0.1      amazonlinux        45 k
```

sudo yum install gcc glibc glibc-common

sudo yum install gd gd-devel

5. **Create a new Nagios User with its password. You'll have to enter the password twice for confirmation.** sudo adduser -m nagios sudo passwd nagios

```
[ec2-user@ip-172-31-40-254 ~]$ sudo adduser -m nagios
[ec2-user@ip-172-31-40-254 ~]$ sudo passwd nagios
Changing password for user nagios.
New password:
BAD PASSWORD: The password is a palindrome
Retype new password:
Sorry, passwords do not match.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[ec2-user@ip-172-31-40-254 ~]$
```

6. **Create a new user group** sudo groupadd nagcmd

```
[ec2-user@ip-172-31-40-254 ~]$ sudo groupadd nagcmd
[ec2-user@ip-172-31-40-254 ~]$
```

7. **Use these commands so that you don't have to use sudo for Apache and Nagios**

sudo usermod -a -G nagcmd nagios sudo
usermod -a -G nagcmd apache

```
[ec2-user@ip-172-31-40-254 ~]$ sudo groupadd nagcmd
[ec2-user@ip-172-31-40-254 ~]$ sudo usermod -a -G nagcmd nagios
sudo usermod -a -G nagcmd apache
[ec2-user@ip-172-31-40-254 ~]$
```

8. Create a new directory for Nagios downloads mkdir ~/downloads cd ~/downloads

```
[ec2-user@ip-172-31-40-254 ~]$ mkdir ~/downloads
cd ~/downloads
[ec2-user@ip-172-31-40-254 downloads]$
```

9. Use wget to download the source zip files.

 Wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.6.tar.gz wget

```
[ec2-user@ip-172-31-40-254 downloads]$ Wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.6.tar.gz
wget https://nagios-plugins.org/download/nagios-plugins-2.3.3.tar.gz
-bash: Wget: command not found
--2024-10-02 06:15:45--  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        0%[                              ]       0  --.-KB/s
nagios-plugins-2.3.3.tar.gz       23%[=================>            ] 632.00K  3.02MB/s
nagios-plugins-2.3.3.tar.gz      100%[=============================>]   2.65M  8.10MB/s    in 0.3s

2024-10-02 06:15:46 (8.10 MB/s) - 'nagios-plugins-2.3.3.tar.gz' saved [2782610/2782610]

[ec2-user@ip-172-31-40-254 downloads]$
```

https://nagios-plugins.org/download/nagios-plugins-2.3.3.tar.gz

```
[ec2-user@ip-172-31-40-254 downloads]$ wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.6.tar.gz
--2024-10-02 06:17:24--  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:fef7:45ce
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        0%[                              ]       0  --.-KB/s
nagios-4.4.6.tar.gz        4%[==>                           ] 495.62K  2.40MB/s
nagios-4.4.6.tar.gz       30%[====================>         ]   3.26M  7.99MB/s
nagios-4.4.6.tar.gz       63%[=========================>    ]   6.91M  11.0MB/s
nagios-4.4.6.tar.gz       96%[============================> ]  10.46M  12.6MB/s
nagios-4.4.6.tar.gz      100%[=============================>]  10.81M  12.9MB/s    in 0.8s

2024-10-02 06:17:25 (12.9 MB/s) - 'nagios-4.4.6.tar.gz' saved [11333414/11333414]

[ec2-user@ip-172-31-40-254 downloads]$
```

10. Use tar to unzip and change to that directory.

tar zxvf nagios-4.4.6.tar.gz cd
nagios-4.4.6

```
[ec2-user@ip-172-31-40-254 downloads]$ 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/LEGAL
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
```

11. Run the configuration script with the same group name you previously created.

./configure --with-command-group=nagcmd

```
ec2-user@ip-172-31-40-254 nagios-4.4.6]$ ./configure --with-command-group=nagcmd
checking for a BSD-compatible install... /usr/bin/install -c
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
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 whether make sets $(MAKE)... yes
checking whether ln -s works... yes
checking for strip... /usr/bin/strip
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 ANSI C header files... yes
checking whether time.h and sys/time.h may both be included... yes
checking for sys/wait.h that is POSIX.1 compatible... yes
checking for sys/types.h... yes
checking for sys/stat.h... yes
checking for stdlib.h... yes
checking for string.h... yes
checking for memory.h... yes
checking for strings.h... yes
checking for inttypes.h... yes
checking for stdint.h... yes
checking for unistd.h... yes
checking arpa/inet.h usability... yes
checking arpa/inet.h presence... yes
checking for arpa/inet.h... yes
```

12. Compile the source code.

make all

```
[ec2-user@ip-172-31-40-254 nagios-4.4.6]$ make all
cd ./base && make
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.6/base'
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE -c -o nagios.o nagios.c
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
In function 'get_wproc_list',
    inlined from 'get_worker' at workers.c:277:12:
workers.c:253:17: warning: '%s' directive argument is null [-Wformat-overflow=]
    253 |            log_debug_info(DEBUGL_CHECKS, 1, "Found specialized worker(s) for '%s'", (slash && *slash != '/') ? slash : cmd_name);
        |                           ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE    -c -o checks.o checks.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE    -c -o config.o config.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE    -c -o commands.o commands.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE    -c -o events.o events.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE    -c -o flapping.o flapping.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE    -c -o logging.o logging.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE -c -o macros-base.o ../common/macros.c
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE -c -o netutils.o netutils.c
netutils.c: In function 'my_tcp_connect':
netutils.c:50:47: warning: '%d' directive output may be truncated writing between 1 and 11 bytes into a region of size 6 [-Wformat-truncation=]
    50 |        snprintf(port_str, sizeof(port_str), "%d", port);
       |                                               ^~
netutils.c:50:46: note: directive argument in the range [-2147483648, 65535]
    50 |        snprintf(port_str, sizeof(port_str), "%d", port);
       |                                              ^~~~
netutils.c:50:9: note: 'snprintf' output between 2 and 12 bytes into a destination of size 6
    50 |        snprintf(port_str, sizeof(port_str), "%d", port);
       |        ^~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE    -c -o notifications.o notifications.c
```

```
*** 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.

[ec2-user@ip-172-31-2-12 nagios-4.4.6]$
```

13. Install binaries, init script and sample config files. Lastly, set permissions on the external command directory.

./sudo make install sudo make

install-init sudo make install-

config sudo make install-

commandmode

14. Edit the config file and change the email address.
sudo nano /usr/local/nagios/etc/objects/contacts.cfg

15. Configure the web interface.
sudo make install-webconf

```
[ec2-user@ip-172-31-40-254 nagios-4.4.6]$ sudo make install-webconf
/usr/bin/install -c -m 644 sample-config/httpd.conf /etc/httpd/conf.d/nagios.conf
if [ 0 -eq 1 ]; then \
        ln -s /etc/httpd/conf.d/nagios.conf /etc/apache2/sites-enabled/nagios.conf; \
fi

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

[ec2-user@ip-172-31-40-254 nagios-4.4.6]$
```

16. Create a nagiosadmin account for nagios login along with password. You'll have to specify the password twice. sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin

```
[ec2-user@ip-172-31-40-254 nagios-4.4.6]$ sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin
New password:
Re-type new password:
Adding password for user nagiosadmin
[ec2-user@ip-172-31-40-254 nagios-4.4.6]$
```

17. Restart Apache sudo systemctl restart httpd

```
Adding password for user nagiosadmin
[ec2-user@ip-172-31-40-254 nagios-4.4.6]$ sudo systemctl restart httpd
[ec2-user@ip-172-31-40-254 nagios-4.4.6]$
```

cd ~/downloads tar zxvf nagios-

plugins-2.3.3.tar.gz cd nagios-

plugins-2.3.3

```
[ec2-user@ip-172-31-40-254 nagios-4.4.6]$ sudo systemctl restart httpd
[ec2-user@ip-172-31-40-254 nagios-4.4.6]$ cd ~/downloads
tar zxvf nagios-plugins-2.3.3.tar.gz
 cd nagios-plugins-2.3.3
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
```

18. Go back to the downloads folder and unzip the plugins zip file. ./configure --with-nagios-user=nagios --with-nagios-

group=nagios make sudo make install

19. Compile and install plugins sudo chkconfig --add nagios sudo
chkconfig nagios on

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

systemctl start nagios

20. Check the status of Nagios

23. Open up your browser and look for http://<your_public_ip_address>/nagios

Sign in

http://15.207.88.127

Your connection to this site is not private

Username

Password

Sign in   Cancel

← → C ⚠ Not secure 15.207.88.127/nagios/

Nagios®

General
Home
Documentation

Current Status
Tactical Overview
Map   (Legacy)
Hosts
Services
Host Groups
    Summary
    Grid
Service Groups
    Summary
    Grid
Problems
    Services
    (Unhandled)
    Hosts (Unhandled)
    Network Outages
Quick Search:

Reports
Availability
Trends   (Legacy)
Alerts
    History
    Summary
    Histogram (Legacy)
Notifications
Event Log

System
Comments
Downtime
Process Info
Performance Info
Scheduling Queue
Configuration

Nagios® Core™

✓ Process running with PID 90965

Nagios® Core™
Version 4.4.6
April 28, 2020
Check for updates

A new version of Nagios Core is available!
Visit nagios.org to download Nagios 4.5.5.

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• Nagios.org (project)

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