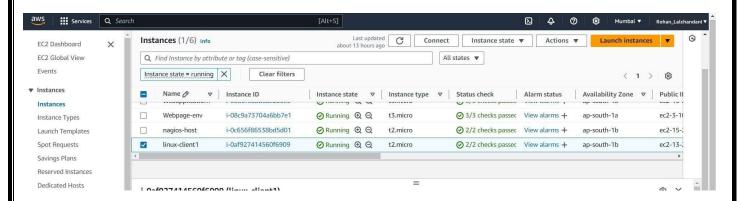
ADVANCE DEVOPS EXP 9

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Class: D15A Roll no: 25

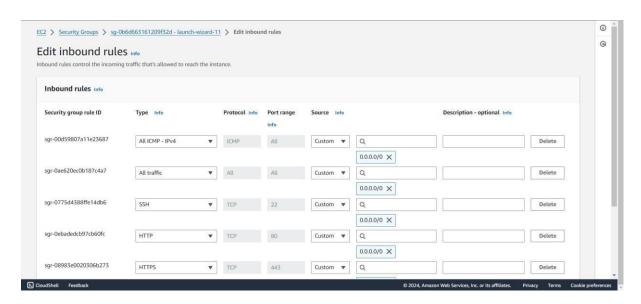
Aim :- To Understand Continuous monitoring and Installation and configuration of Nagios Core, Nagios Plugins and NRPE (Nagios Remote Plugin Executor) on Linux Machine.

1. Create an Amazon Linux EC2 Instance



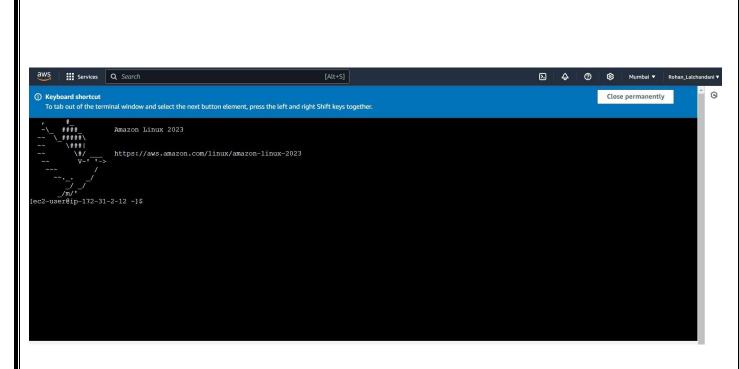
2. Configure Security Group

- 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.

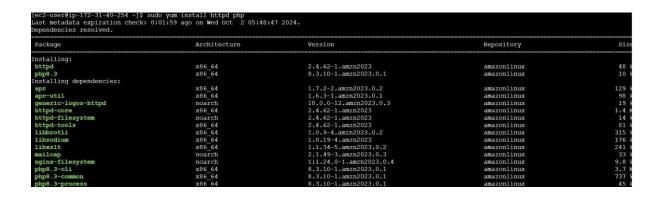
3. SSH into Your EC2 instance or simply use EC2 Instance Connect from the browser.



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



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-1/2-31-40-254 ~]$ 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

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-4.6.tar.gz

Resolving assets.nagios.com (assets.nagios.com) | 45.79.49.120, 2600:3600:1703c:92ff:fef7:45ce

Connecting to assets.nagios.com (assets.nagios.com) | 45.79.49.120, 2600:3600:1703c:92ff:fef7:45ce

Connecting to assets.nagios.com | 45.79.49.120, 2443... connected.

HTTP request sent, avaiting 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 | 495.62K 2.40MB/s | 495.62K 2.40MB/s | 13.26M 7.99MB/s | 13.26M 7
```

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

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

```
user@ip-172-31-40-254 downloads]$ tar zxvf nagios-4.4.6.tar.gz
-4.4.6/.dritignore
-4.4.6/.travis.yml
-4.4.6/.travis.yml
-4.4.6/Changelog
-4.4.6/EGAI
-4.4.6/INFAILING
-4.4.6/INFAILING
-4.4.6/INFAILING
-4.4.6/INFAILING
-4.4.6/INFAILING
-4.4.6/INFAILING
-4.4.6/INFAILING
-4.4.6/INFAILING
-4.4.6/INFAILING
-4.4.6/INFAING
-4.4
```

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

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

```
ure --with-command-group=nagemd

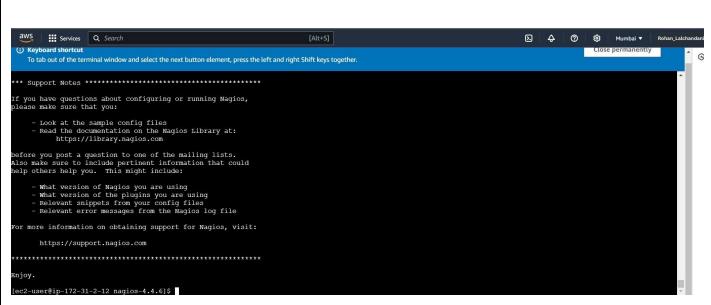
tec2-userFip-172-31-40-254 nagios-4.4.6|$ ./configure --with-command-thecking for a BSD-compatible install... /usr/bin/install -c
thecking for a BSD-compatible install... /usr/bin/install -c
thecking host system type... x86_64-pc-linux-gnu
thecking of orgc... qcc
thecking whether the C compiler works... yes
thecking for compiler default output file name... a.out
thecking for compiler default output file name... a.out
thecking for suffix of executables...
thecking for suffix of object files... o
thecking whether we are cross compiling... no
thecking whether we are using the GNU C compiler... yes
thecking for gcc option to accept 150 C69... none needed
thether in the sets $ (MARK)... yes
thecking whether nake sets $ (MARK)... yes
thecking whether nake sets $ (MARK)... yes
thecking how to run the C preprocessor... gcc -E
thecking for strip... /usr/bin/grep -E
thecking for grep that handles long lines and -e.. /usr/bin/grep
thecking for ansit C header files... yes
thecking for NASI C header files... yes
thecking for sys/vait.h that is POSIX.1 compatible... yes
thecking for sys/stat.h... yes
thecking for sys/stat.h... yes
thecking for stdillb.h... yes
thecking for stdillb.h... yes
thecking for stdillb.h... yes
thecking for strings.h... yes
thecking for strings.h... yes
thecking for to mistd.h... yes
thecking for apa/inet.h usability... yes
thecking for apa/inet.h usability... yes
thecking for apa/inet.h. yes
thecking for apa/inet.h. yes
thecking for apa/inet.h. yes
thecking for apa/inet.h... yes
thecking for apa/inet.h... yes
thecking for apa/inet.h... yes
thecking for apa/inet.h... yes
```

12. Compile the source code. make all

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

d ./base && make
ake[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.6/base'
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o nagios.o nagios.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o broker.o broker.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o nebmods.o nebmods.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o nebmods.o nebmods.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o ./common/shared.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o ./common/shared.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o .owrkers.ow workers.c
n function 'get wproc list',
inlined from 'get worker' at workers.c:277:12:
orkers.c:253:17: warning: '%' directive argument is null [-Wformat-overflow=]
253 | log debug info(DEBUGL CHECKS, 1, "Found specialized worker(s) for '%s'", (slash 66 *slash != '/') ? slash : cmd name);

cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o config.c config.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o config.c config.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o config.c config.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o commands.o commands.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o comfig.c config.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o commands.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o commands.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagping.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagping.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagping.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagping.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagping.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagping.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagping.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagping.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagping.c
cc -wall -1... -g -02 -DBAWE CONFIG H -DNSCORE -c -o flagp
    stutils.c:50:46: note: directive argument in the range [-2147483648, 65535]
50 | snprintf(port_str, sizeof(port_str), "&d", port);
etutils.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);
cc -Wall -I.. -g -O2 -DHAVE CONFIG H -DNSCORE -c -o notifications o notifications
```



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 installconfig sudo make installcommandmode

```
[ec2-user&ip-172-31-40-254 nagios-4.4.6]$ ./sudo make install
sudo make install-config
sudo make install-commandmode
-bash: ./sudo: No such file or directory
//sur/bin/install -c -m 755 -d -o root -g root /lib/systemd/system
//sur/bin/install -c -m 755 -d -o root -g root startup/default-service /lib/systemd/system/nagios.service
//sur/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/etc
//sur/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/etc/objects
//sur/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/etc/objects
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/requole.cfg /usr/local/nagios/etc/resource.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/remplates.cfg /usr/local/nagios/etc/objects/templates.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/remplates.cfg /usr/local/nagios/etc/objects/commands.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/remplates.cfg /usr/local/nagios/etc/objects/commands.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/remplates.cfg /usr/local/nagios/etc/objects/commands.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/romtacts.cfg /usr/local/nagios/etc/objects/contacts.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/romtacts.cfg /usr/local/nagios/etc/objects/contacts.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/romtacts.cfg /usr/local/nagios/etc/objects/romtacts.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/romtacts.cfg /usr/local/nagios/etc/objects/pinter.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/romtacts.cfg /usr/local/nagios/etc/objects/pinter.cfg
//sur/bin/install -c -b -m 664 -o nagios -g nagios sample-config/remplate-object/switch.cfg /usr/local/nagios/etc/objects/pinter.cfg
/
```

14. Edit the config file and change the email address. sudo nano

/usr/local/nagios/etc/objects/contacts.cfg

```
GNU nano 5.8

/ust/local/naqios/etc/cbjects/contacts.cfg

Modified

Finis contact definition inherits a lot of default values from the

'quencic-contact' template which is defined elsewhere.

Gefine contact (

contact name nagiosadmin ; Short name of user
use generic-contact ; Inherit default values from generic-contact template (defined above)
alias Nagios Admin ; Full name of user
email bhagyeshpatil07028gmail.com; CHANGE THIS TO YOUR EMAIL ADDRESS *****

CONTACT GROUPS

*We only have one contact in this simple configuration file, so there is
no need to treate more than one contact group.

define contactgroup (

Gelp We write out We where is Scott Security Yellow Seal Undo Med Seal Set Mark Seal To Bracket Seal Previous

Exit Med Sead File Seplace Med Paste Justify Yellow To Line Med Red Copy Yellow Near Was Next
```

15. Configure the web interface.

sudo make install-webconf

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 systemetl 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 nagiosplugins-2.3.3.tar.gz cd nagiosplugins-2.3.3

```
[ec2-user#ip-172-31-40-254 nagios-4.4.6]$ sudo systemath 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/config-Tiny-2.14.tar.gz
nagios-plugins-2.3.3/
perlmods/config-Tiny-2.24.tar.gz
nagios-plugins-2.3.3/
perlmods/config-Tiny-2.34.tar.gz
nagios-plugins-2.3.3/
perlmods/rost-Simple-0.98.tar.gz
nagios-plugins-2.3.3/perlmods/warend-0.98.tar.gz
nagios-plugins-2.3.3/perlmods/warend-0.9903.tar.gz
nagios-plugins-2.3.3/perlmods/sworton-0.9903.tar.gz
nagios-plugins-2.3.3/perlmods/sworton-0.9903.tar.gz
nagios-plugins-2.3.3/perlmods/sworton-0.114.tar.gz
nagios-plugins-2.3.3/perlmods/sworton-volidate-1.00014.tar.gz
nagios-plugins-2.3.3/perlmods/sworton-volidate-1.00014.t
```

18. Go back to the downloads folder and unzip the plugins zip file.

./configure --with-nagios-user=nagios --with-nagiosgroup=nagios make sudo make install

```
ec2-user@ip-172-31-80-22 nagios-plugins-2.3.3]$ ./configure --with-nagios-user=nagios --with-nagios-group=nagios
nake
sudo make install
thecking for a BSD-compatible install... /usr/bin/install -c
thecking whether build environment is same... yes
thecking for a thread-safe mkdir -p... /usr/bin/mkdir -p
thecking for gawk... gawk
thecking whether make sets $(MAKE)... yes
thecking whether to disable maintainer-specific portions of Makefiles... yes
thecking build system type... x86_64-unknown-linux-gnu
thecking host system type... x86_64-unknown-linux-gnu
thecking for gcc... gcc
thecking for compiler default output file name... a.out
thecking whether the C compiler works... yes
thecking whether we are cross compiling... no
thecking for suffix of executables...
thecking for suffix of object files... o
thecking whether we are using the GNU C compiler... yes
thecking whether gcc accepts -g... yes
thecking for style of include used by make... GNU
thecking for style of include used by make... GNU
thecking for or the C preprocessor... gcc -E
thecking for greet that handles long lines and -e... /usr/bin/grep
```

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 systemetl start nagios

```
sudo chkconfig nagios on sudo chkconfig nagios on sudo /usr/local/nagios/etc/nagios.cfg sudo systemctl start nagios -v /usr/local/nagios/etc/nagios.cfg sudo systemctl start nagios arror reading information on service nagios: No such file or directory sote: Forwarding request to 'systemctl enable nagios.service'.

Created symlink /etc/systemd/system/multi-user.target.wants/nagios.service → /usr/lib/systemd/system/nagios.service.

Sagios 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 main config file okay...

Read object config files okay...

Checked 8 services.

Checked 1 hosts.

Checked 1 hosts.
```

20. Check the status of Nagios

```
hings look okay - No serious problems were detected during the pre-flight check
ec2-user8ip-172-31-45-178 nagios-plugins-2.3.3]$ sudo systemctl status nagios

nagios.service - Nagios Core 4.4.6

Loaded: loaded (/usr/lib/xystemd/xystem/nagios.serxice; enabled; preset: disabled)
Active: active (running) since Wed 2024-10-02 05:37:36 UTC; 14s ago

Docs: https://www.nagios.org/stocumentation

Process: 67990 ExcestratPres-yusr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg (code=exited, status=0/SUCCESS)

Process: 67991 ExcestratPres/usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg (code=exited, status=0/SUCCESS)

Main PID: 67992 (nagios)

Tasks: 6 (limit: 1112)

Memory: 2.0M

CFU: 16ms

CGroup: /system.slice/nagios.service

-67992 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg

-67993 /usr/local/nagios/bin/nagios -worker /usr/local/nagios/var/rw/nagios.qh

-67994 /usr/local/nagios/bin/nagios -worker /usr/local/nagios/var/rw/nagios.qh

-67995 /usr/local/nagios/bin/nagios -worker /usr/local/nagios/var/rw/nagios.qh

-67995 /usr/local/nagios/bin/nagios -worker /usr/local/nagios/var/rw/nagios.qh

-67997 /usr/local/nagios/bin/nagios -d /usr/local/nagios/var/rw/nagios.qh

-67997 /usr/local/nagios/bin/nagios -d /usr/local/nagios/var/rw/nagios.eh

-67997 /usr/local/nagios/bin/nagios -d /usr/local/nagios/var/rw/nagios
```

23. Open up your browser and look for <a href="http://<your public ip address">http://<your public ip address/nagios

