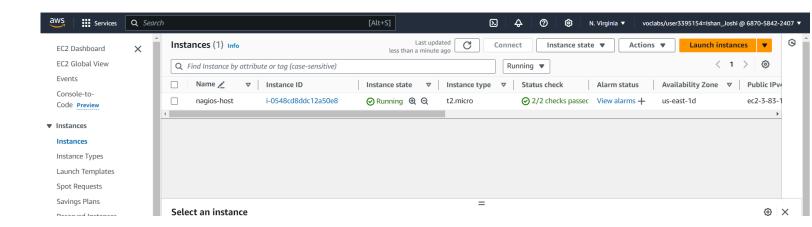
Name-Ishan Kiran Joshi Div-D15C Roll No-21 A.Y.-2024-25

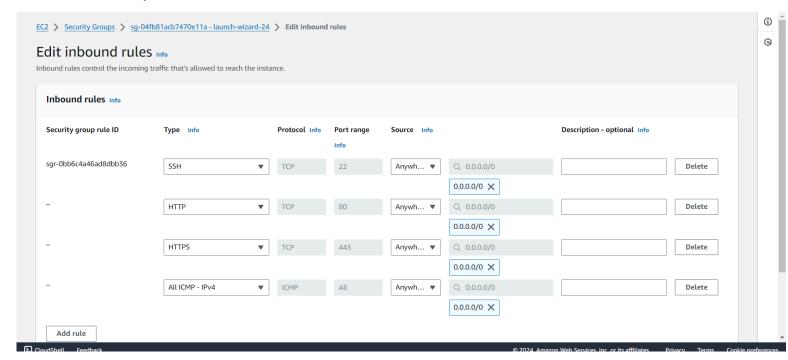
Experiment 9

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 in AWS and name it - nagios-host



2. Under Security Group, make sure HTTP, HTTPS, SSH, ICMP are open from everywhere.

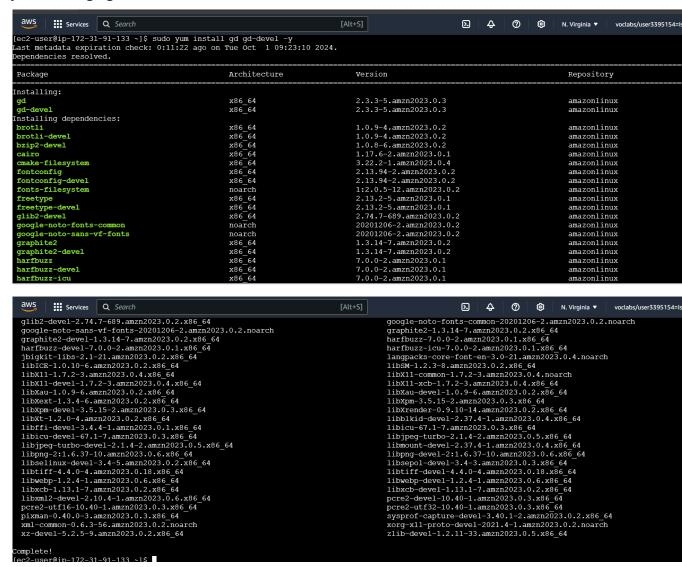


3. SSH into Your EC2 instance.



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

sudo yum install httpd php sudo yum install gec 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-172-31-91-133 ~]$ sudo adduser -m nagios
[ec2-user@ip-172-31-91-133 ~]$ sudo passwd nagios

Changing password for user nagios.

New password:

BAD PASSWORD: The password is shorter than 8 characters

Retype new password:

BAD PASSWORD: The password is shorter than 8 characters

Retype new password:

BAD PASSWORD: The password is shorter than 8 characters

Retype new password:

Sorry, passwords do not match.

New password:

Retype new password:
```

6. Create a new user group

sudo groupadd nagemd

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

8. Create a new directory for Nagios downloads

mkdir ~/downloads

cd ~/downloads

```
[ec2-user@ip-1/2-31-91-133 ~]$ sudo groupadd nagcmd
[ec2-user@ip-172-31-91-133 ~]$ sudo usermod -a -G nagcmd nagios
[ec2-user@ip-172-31-91-133 ~]$ sudo usermod -a -G nagcmd apache
[ec2-user@ip-172-31-91-133 ~]$ downloads mkdir ~/downloads
cd ~/downloads
-bash: downloads: command not found
-bash: cd: /home/ec2-user/downloads: No such file or directory
[ec2-user@ip-172-31-91-133 ~]$ downloads mkdir ~/downloads
-bash: downloads: command not found
[ec2-user@ip-172-31-91-133 ~]$ mkdir ~/downloads
[ec2-user@ip-172-31-91-133 ~]$ mkdir ~/downloads
[ec2-user@ip-172-31-91-133 ~]$ cd ~/downloads
[ec2-user@ip-172-31-91-133 ~]$ cd ~/downloads
[ec2-user@ip-172-31-91-133 downloads]$
```

9. Use wget to download the source zip files. wget https://go.nagios.org/l/975333/2024-09-17/6kqcx

wget https://nagios-plugins.org/download/nagios-plugins-2.4.11.tar.gz

```
| cc2-user@ip-172-31-91-133 downloads|$ wget https://go.nagios.org/1/975333/2024-09-17/6kqcx --2024-10-01 09:42:04-- https://go.nagios.org/1/975333/2024-09-17/6kqcx Resolving go.nagios.org (go.nagios.org).1/975333/2024-09-17/6kqcx Resolving go.nagios.org (go.nagios.org) 134.237.219.119!:443... connected. HTTP request sent, awaiting response... 302 Found Location: http://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5.tar.gz?utm_source=Nagios.org&utm_content=Download+Form&utm_campaign=Core+4.5.5+Download+Gozearation: http://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5 tar.gz?utm_source=Nagios.org&utm_content=Download+Form&utm_campaign=Core+4.5.5+Download+Form&utm_campaign=Core+4.5.5+Download+Gozearation: http://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5 tar.gz?utm_source=Nagios.org&utm_content=Download+Form&utm_campaign=Core+4.5.5+Download+Gozearation: http://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5 tar.gz?utm_source=Nagios.org&utm_content=Download+Form&utm_campaign=Core+4.5.5+Download+Sozearation: https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5.tar.gz?utm_source=Nagios.org&utm_content=Download+Form&utm_campaign=Core+4.5.5+Download+Sozearation: https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5.tar.gz?utm_source=Nagios.org&utm_content=Download+Form&utm_campaign=Core+4.5.5+Download+Sozearation: https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5.tar.gz?utm_source=Nagios.org&utm_content=Download+Form&utm_campaign=Core+4.5.5+Download+Sozearation: https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5.tar.gz?utm_source=Nagios.org&utm_content=Download+Form&utm_campaign=Core+4.5.5+Download+Sozearation: https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5.tar.gz?utm_source=Nagios.org&utm_content=Download+Form&utm_campaign=Core+4.5.5+Download+Sozearation: https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5.tar.gz?utm_source=Nagios.org&utm_content=Downlo
```

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

zxvf nagios-4.5.5.tar.gz

```
[ec2_user@ip-172-31-91-133 downloads]$ tar zxvf nagios-4.5.5.tar.gz
tar (child): nagios-4.5.5.tar.gz: Cannot open: No such file or directory
tar (child): Error is not recoverable: exiting now
tar: Child returned status 2
tar: Error is not recoverable: exiting now
[ec2_user@ip-172-31-91-133 downloads]$ cd nagios-4.5.5
-bash: cd: nagios-4.5.5: No such file or directory
[ec2_user@ip-172-31-91-133 downloads]$ tar zxvf nagios-4.5.5.tar.gz
tar (child): nagios-4.5.5.tar.gz: Cannot open: No such file or directory
tar (child): Error is not recoverable: exiting now
tar: Child returned status 2
tar: Error is not recoverable: exiting now
[ec2_user@ip-172-31-91-133 downloads]$ tar _zxvf 6kqcx
nagios-4.5.5/, gjthub/workflows/
nagios-4.5.5/, gjthub/workflows/
nagios-4.5.5/, gjthub/workflows/test.yml
nagios-4.5.5/, gjthub/workflows/test.yml
nagios-4.5.5/, gjthub/workflows/test.yml
nagios-4.5.5/, gjthub/workflows/test.yml
nagios-4.5.5/, nagios-4.5.5
```

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

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

```
## Services Q. Search [Alt+5] D. & **D S. N. Virginia ** voclabs/user3395154=bham_Joshi@6670-5842-2407 **

//Usr/Phin/which: no sendmail in (/home/ec2-user/local/bin:/home/ec2-user/bin:/usr/local/bin:/usr/local/sbin:/usr/sbin)

checking for RLIMIT PROC.. yes

checking for glibc at least version 2.4... checking how to run the C preprocessor... gcc -E

yes

checking for sys/epoll.h... yes

checking for main in -liconv... no

checking for gdilmagePrig in -lqd (order 1)... no

checking for gdilmagePrig in -lqd (order 2)... yes

checking for gdilmagePrig in -lqd... yes

checking for Itdl.h... no

checking for dlopen in -lql... yes

checking for dlopen in -lql... yes

checking for linker flags for loadable modules... -shared

checking for traceroute... /usr/pin/traceroute

checking for pril... /usr/bin/perl

checking for pril... /usr/bin/unzip

configu-status: creating html/index.php

configu-status: creating html/index.php

config.status: creating ham/index.php

config.status: creating common/Makefile

config.status: creating common/Makefile

config.status: creating common/Makefile

config.status: creating contrib/Makefile
```

12. Compile the source code.

make all



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

```
sudo make install-init
sudo make install-config
sudo make install-commandmode
cd ./base && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/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 nagiostats /usr/local/nagios/bin
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.5.5/base'
cd ./cgi && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/cgi'
make install-basic
make[2]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/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/ec2-user/downloads/nagios-4.5.5/cgi'
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.5.5/cgi'
cd ./html && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/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
```

14. Configure the web interface.

sudo make install-webconf

15. 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

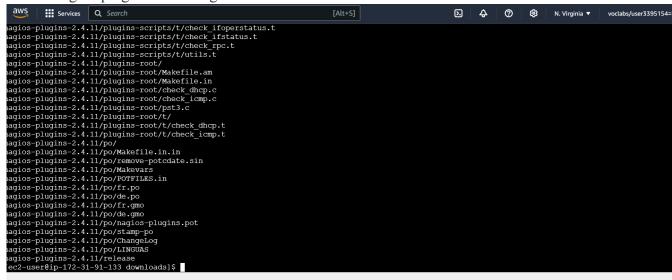
16. Restart Apache

sudo service httpd restart

```
[ec2-user@ip-172-31-91-133 nagios-4.5.5]$ sudo service httpd restart
Redirecting to /bin/systemctl restart httpd.service
```

17. Go back to the downloads folder and unzip the plugins zip file. cd ~/downloads

tar zxvf nagios-plugins-2.0.3.tar.gz



18. Compile and install

./configure --with-nagios-user=nagios --with-nagios-group=nagios

sudo make install

19. Start Nagios

Add Nagios to the list of system services sudo

chkconfig --add nagios

sudo chkconfig nagios on

```
[ec2-user@ip-172-31-91-133 nagios-plugins-2.4.11]$ sudo chkconfig —add nagios sudo chkconfig nagios on error reading information on service nagios: No such file or directory Note: Forwarding request to 'systemctl enable nagios.service'.

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

[ec2-user@ip-172-31-91-133 nagios-plugins-2.4.11]$ s
```

Verify the sample configuration files

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

20. Check the status of Nagios

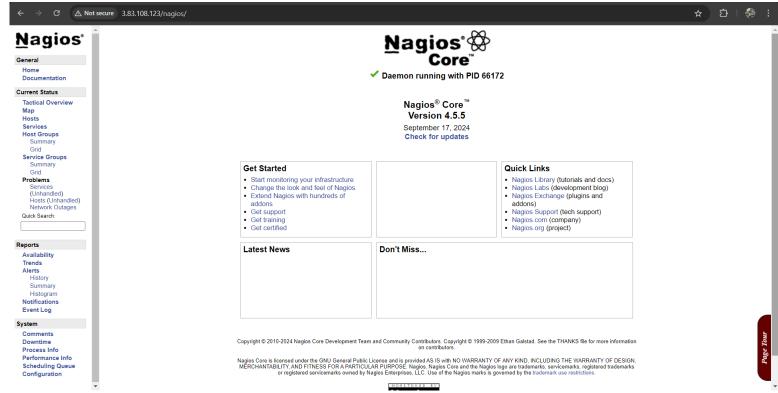
sudo systemctl status nagios

21. Go back to EC2 Console and copy the Public IP address of this instance. Open up your browser and look for http://<your public ip address>/nagios.



Enter username as **nagiosadmin** and password as **ishanjoshi** (which you set in Step 15)

22. After entering the correct credentials, you will see this page.



Conclusion: We have successfully installed and configured Nagios Core, Nagios Plugins, and NRPE on a Linux machine. This powerful setup allows us to efficiently monitor system performance and gain real-time visibility into critical metrics. By leveraging Nagios, we can proactively identify and address potential issues before they escalate, ensuring optimal reliability. The integration of NRPE extends our monitoring capabilities to remote systems, enhancing our oversight. Overall, this configuration empowers us to maintain high-performance standards and streamline incident response. Consequently, we can minimize downtime and improve service delivery across our infrastructure.