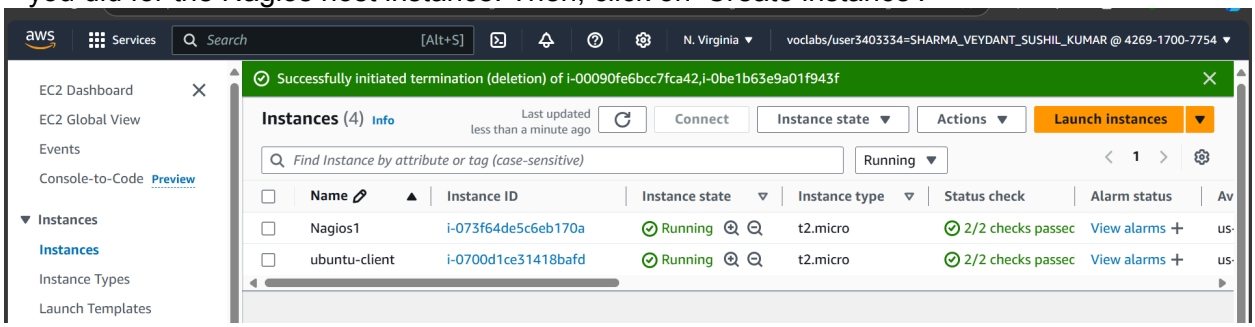
Veydant Sharma D15C 50 AdvDevop Experiment 10

Aim: To perform Port, Service monitoring, Windows/Linux server monitoring using Nagios.

Step 1: Navigate to EC2 on the AWS console using the ‘Services’ section and click on ‘Create instance’. Give your instance a name and choose ‘Ubuntu’ as the instance type.

Ensure that you choose the same key pair and security group for the Ubuntu client instance as you did for the Nagios host instance. Then, click on ‘Create instance’.



Step 2: Click on the instance ID of your nagios-server instance and click on ‘Connect’. Then, click on ‘SSH client’ and copy the command under ‘Example’. Then, open the terminal in the folder where the .pem file for your instance’s key pair is located and paste the SSH command that you just copied. This connects your instance to your local terminal using SSH.

Step 3: ps -ef | grep nagios Run the above command on the nagios-host instance. This verifies whether the nagios service is running or not.

```
[ec2-user@ip-172-31-35-21 ~]$ ps -ef | grep nagios
nagios     21102       1  0 05:55 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
nagios     21103   21102  0 05:55 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagi
s.qh
nagios     21104   21102  0 05:55 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagi
s.qh
nagios     21105   21102  0 05:55 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagi
s.qh
nagios     21106   21102  0 05:55 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagi
s.qh
nagios     21107   21102  0 05:55 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
root       21110    2900  0 05:55 pts/0    00:00:00 sudo systemctl status nagios
root       21112   21110  0 05:55 pts/1    00:00:00 sudo systemctl status nagios
root       21113   21112  0 05:55 pts/1    00:00:00 systemctl status nagios
ec2-user   22304   22272  0 06:15 pts/2    00:00:00 grep --color=auto nagios
```

Step 4: sudo su mkdir -p /usr/local/nagios/etc/objects/monitorhosts mkdir -p /usr/local/nagios/etc/objects/monitorhosts/linuxhosts This makes you the root user and creates two folders with the above paths.

```
[ec2-user@ip-172-31-35-21 ~]$ sudo su
mkdir -p /usr/local/nagios/etc/objects/monitorhosts
mkdir -p /usr/local/nagios/etc/objects/monitorhosts/linuxhosts
[root@ip-172-31-35-21 ec2-user]#
```

Step 5: We need to create a config file in this folder. So, copy the contents of the existing localhost config to the new file ‘linuxserver.cfg’. cp /usr/local/nagios/etc/objects/localhost.cfg /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg

```
root@ip-172-31-35-21 ec2-user]# sudo mkdir -p /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/
root@ip-172-31-35-21 ec2-user]# sudo cp /usr/local/nagios/etc/objects/localhost.cfg /usr/local/nagios/etc/objects/monit
rhosts/linuxhosts/linuxserver.cf
```

Step 6: We need to make some changes in this config file. Open it using nano editor:- nano /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg 1. Change hostname and alias from ‘hostname’ to ‘linuxserver’. 2. Change address to the public ip address of the ubuntu-client instance.

Step 7: Once the files are verified and it is confirmed that there are no errors, we must restart the server. service nagios restart

```
[root@ip-172-31-35-21 ec2-user]# /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

Nagios Core 4.5.5
Copyright (c) 2009-present Nagios Core Development Team and Community Contributors
Copyright (c) 1999-2009 Ethan Galstad
Last Modified: 2024-09-17
License: GPL

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

Step 8: systemctl status nagios Using the above command, we check the status of the nagios server and ensure that it is active (running).

```
[root@ip-172-31-35-21 ec2-user]# service nagios restart
Redirecting to /bin/systemctl restart nagios.service
[root@ip-172-31-35-21 ec2-user]# systemctl status nagios
● nagios.service - Nagios Core 4.5.5
     Loaded: loaded (/usr/lib/systemd/system/nagios.service; enabled; preset: disabled)
     Active: active (running) since Wed 2024-10-09 06:32:00 UTC; 12s ago
       Docs: https://www.nagios.org/documentation
    Process: 23269 ExecStartPre=/usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg (code=exited, status=0>
    Process: 23270 ExecStart=/usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg (code=exited, status=0/SU>
   Main PID: 23271 (nagios)
      Tasks: 6 (limit: 1112)
     Memory: 5.4M
        CPU: 69ms
     CGroup: /system.slice/nagios.service
             ├─23271 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
             ├─23272 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             ├─23273 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             ├─23274 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             ├─23275 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             └─23276 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
```

Step 9: Connect your ubuntu-client instance to your local terminal using SSH in the same way as you connected the nagios-host instance to your local terminal using SSH

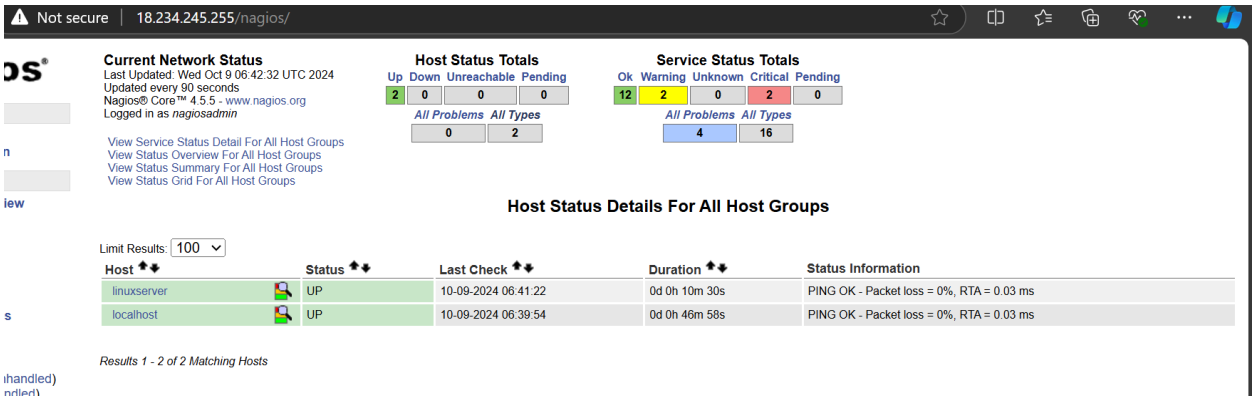
Step 10: On your ubuntu-client instance, run the following commands:- sudo apt update -y sudo apt install gcc -y sudo apt install -y nagios-nrpe-server nagios-plugins The above commands check for any new updates and then install gcc, Nagios NRPE server and Nagios plugins.

```
ubuntu@ip-172-31-94-199:~$ sudo apt update -y
sudo apt install gcc -y
sudo apt install -y nagios-nrpe-server nagios-plugins
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease [126 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease [126 kB]
Get:4 http://security.ubuntu.com/ubuntu noble-security InRelease [126 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Packages [15.0 MB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [380 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 Components [3871 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 c-n-f Metadata [301 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Packages [269 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse Translation-en [118 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 Components [35.0 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/multiverse amd64 c-n-f Metadata [8328 B]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 Packages [535 kB]
Get:15 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [82.9 kB]
```

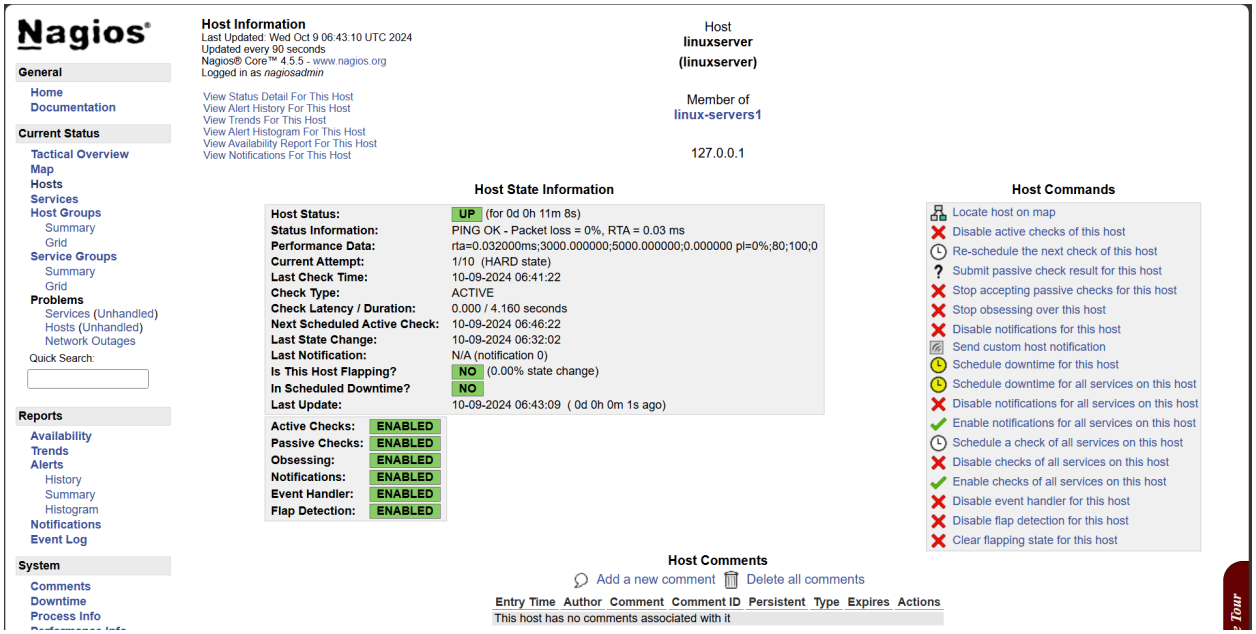
Step 11: Run the following command: sudo nano /etc/nagios/nrpe.cfg The above command opens the NRPE config file. Here, we need to add the public IP address of our host nagios-host instance to the NRPE configuration file. Under allowed_hosts, add the nagios-host public IPv4 address.

```
# and you do not want nrpe to bind on all interfaces.
# NOTE: This option is ignored if NRPE is running under either inetd or xinetd
18.234.245.255
#server_address=127.0.0.1



# LISTEN QUEUE SIZE
# Listen queue size (backlog) for serving incoming connections.
# You may want to increase this value under high load.
```

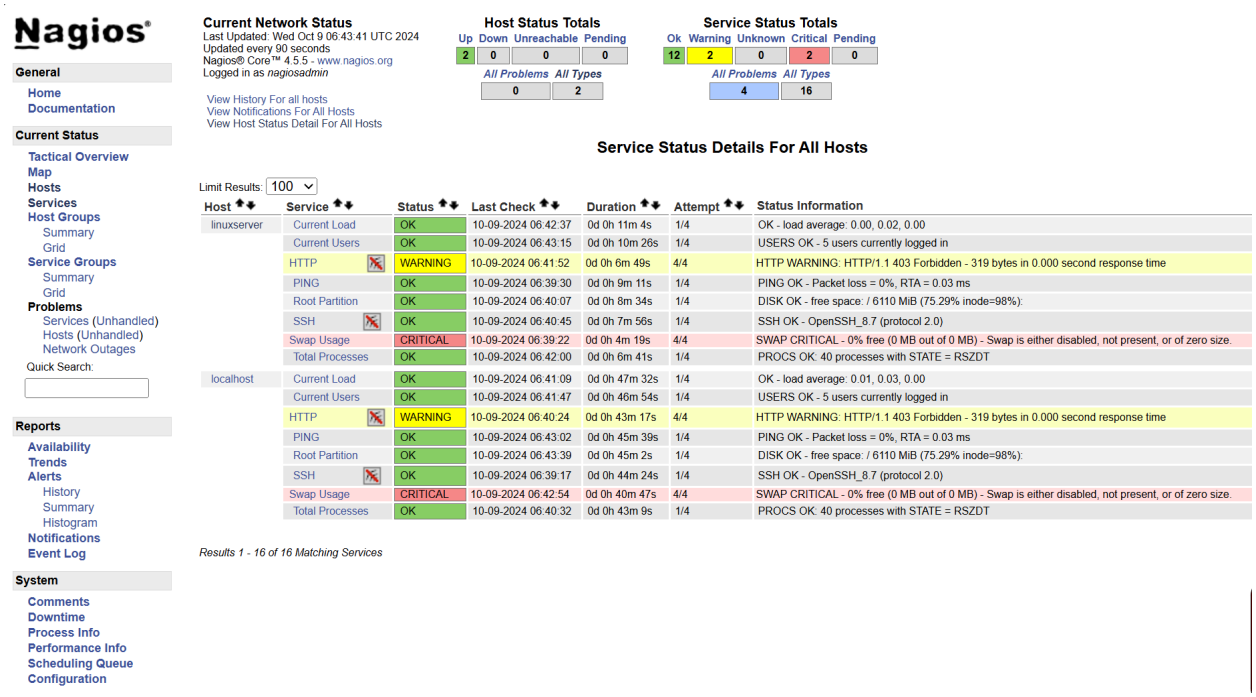
Step 14: Navigate to the Nagios dashboard. Click on ‘hosts’. We see that linuxserver has been added as a host.



Click on ‘linuxserver’. Here, we can access all information about the ‘linuxserver’ host.



Click on ‘Services’. Here, we can see all the services that are being monitored by ‘linuxserver



Conclusion:

- We have learnt how to perform port, service monitoring using nagios.
- We added the linuxserver as host for ubuntu client.
- After restarting the NRPE server, we can see the ‘linuxserver’ host added.