ADVANCE DEVOPS EXPERIMENT 10

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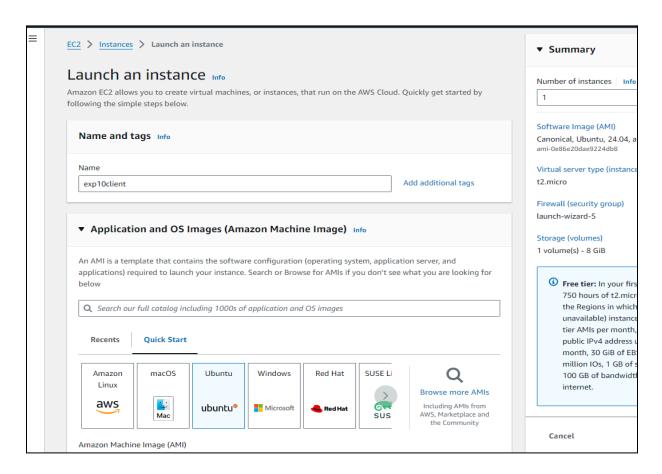
Class:D15A Roll No:27

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

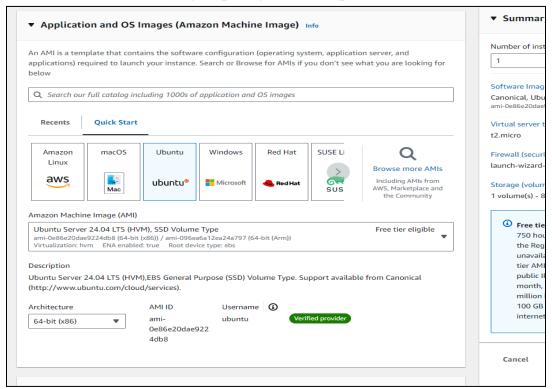
1) Launch an instance

Launch an ec2 instance.

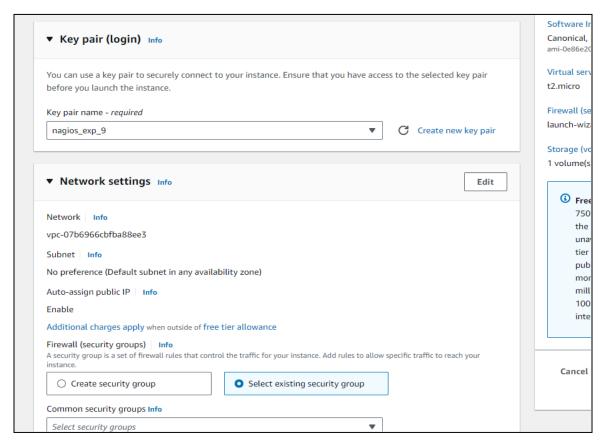
Select Ubuntu as the os give a meaningful name of the instance.



Select the same security group as given in exp9.

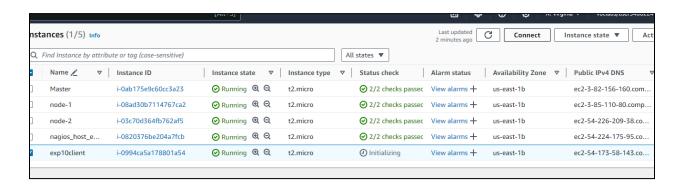


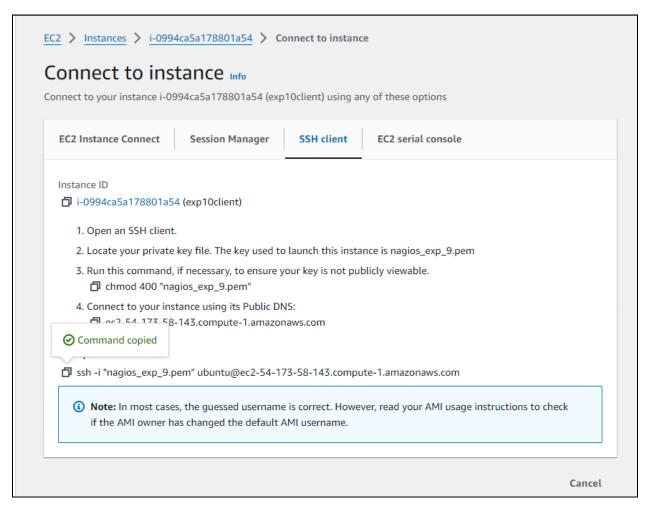
Make sure to select the same key-pair login used in the exp9 machine.



click on launch instance.

Now connect with this client machine using the ssh through your terminal (open a new terminal in your local machine and we will need both of the terminals open)





Note to change the path of the .pem file.

2) Go to nagios host machine (Host machine)

Perform the following commands

ps -ef | grep nagios

```
[ec2-user@ip-172-31-80-137 ~]$ ps -ef | grep nagios nagios 3152 1 0 08:36 ? 00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg nagios 3153 3152 0 08:36 ? 00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh nagios 3154 3152 0 08:36 ? 00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh nagios 3155 3152 0 08:36 ? 00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh nagios 3156 3152 0 08:36 ? 00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh nagios 3160 3152 0 08:36 ? 00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh nagios 3160 3152 0 08:36 ? 00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg ec2-user 11528 2972 0 10:44 pts/0 00:00:00 grep --color=auto nagios
```

sudo su

mkdir -p /usr/local/nagios/etc/objects/monitorhosts/linuxhosts

```
[root@ip-172-31-80-137 ec2-user]# mkdir -p /usr/local/nagios/etc/objects/monitorhosts/linuxhosts
[root@ip-172-31-80-137 ec2-user]# ls
```

cp /usr/local/nagios/etc/objects/localhost.cfg

/usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg

```
root@ip-172-31-80-137 ec2-user]# cp /usr/local/nagios/etc/objects/localhost.cfg /usr/local/nagios/etc/objects/monitorhosts/linuxho
ts/linuxserver.cfg
```

nano /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg

```
[root@ip-172-31-80-137 ec2-user]# nano /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg|
```

Change hostname and alias to linuxserver

Change address to public ip address of client instance (Ubuntu instance) you can get the ip address by clicking on the instance id on the instances section there you will get the public ipv4 address



```
t HOST DEFINITION

t HUST DEFINITION

t Define a host for the local machine

define host {

use linux-server ; Name of host template to use ; This host definition will in ; in (or inherited by) the line host_name linuxserver alias linuxserver address 54.173.58.143
```

Change hostgroup name to linux-servers1

Change the occurrences of hostname further in the document from localhost to linuxserver example like:

```
host_name localhost
```

changed to

```
define service {

use local-service ; Name of service templat host_name linuxserver service_description PING check_command check_ping!100.0,20%!500.0,60%
}
```

This is the last one

```
define service {

use local-service ; Name of service template to ≥ host_name linuxserver service_description HTTP check_command check_http notifications enabled 0
```

now ctrl+O and enter to save and then ctrl+X for exiting. Open nagios configuration file and add the line shown below nano /usr/local/nagios/etc/nagios.cfg

```
root@ip-172-31-80-137 ec2-user]# nano /usr/local/nagios/etc/nagios.cfg
```

##Add this line below the opened nano interface where similar lines are commented.

cfg_dir=/usr/local/nagios/etc/objects/monitorhosts/

```
/usr/local/nagios/etc/nagios.cfg
  These are the object configuration files in which you define hosts,
  host groups, contacts, contact groups, services, etc.
You can split your object definitions across several config files
  if you wish (as shown below), or keep them all in a single config file.
f You can specify individual object config files as shown below:
:fg_file=/usr/local/nagios/etc/objects/commands.cfg
:fg_file=/usr/local/nagios/etc/objects/contacts.cfg
:fg_file=/usr/local/nagios/etc/objects/timeperiods.cfg
:fg_file=/usr/local/nagios/etc/objects/templates.cfg
 Definitions for monitoring the local (Linux) host
fg_file=/usr/local/nagios/etc/objects/localhost.cfg
# Definitions for monitoring a Windows machine
#cfg_file=/usr/local/nagios/etc/objects/windows.cfg
 Definitions for monitoring a router/switch
 cfg_file=/usr/local/nagios/etc/objects/switch.cfg
  Definitions for monitoring a network printer
 cfg_file=/usr/local/nagios/etc/objects/printer.cfg
  You can also tell Nagios to process all config files (with a .cfg
  extension) in a particular directory by using the cfg_dir
 directive as shown below:
tcfg_dir=/usr/local/nagios/etc/switches
tcfg_dir=/usr/local/nagios/etc/routers
fg_dir=/usr/local/nagios/etc/objects/monitorhosts/
 OBJECT CACHE FILE
```

ctrl+o and enter for saving and ctrl+x to exit nano editor.

Verify configuration files

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

```
[root@ip-172-31-80-137 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...
Running pre-flight check on configuration data...
        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:
Things look okay - No serious problems were detected during the pre-flight check
[root@ip-172-31-80-137 ec2-user]#
```

Restart nagios service. service nagios restart

```
Things look okay - No serious problems were detected during the pre-flight check
[root@ip-172-31-80-137 ec2-user]# service nagios restart
Redirecting to /bin/systemctl restart nagios.service
「root@ip-172-31-80-137 ec2-user]#
```

3) Go to client machine (ubuntu machine)

Perform the following commands sudo apt update -y sudo apt install gcc -y

sudo apt install -y nagios-nrpe-server nagios-plugins

```
CLient
   ubuntu@ip-172-31-82-77:~$ 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 InRelea
   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 Pa
?unning kernel seems to be up-to-date.
Restarting services...
Service restarts being deferred:
/etc/needrestart/restart.d/dbus.service
systemctl restart getty@tty1.service
systemctl restart networkd-dispatcher.service
systemctl restart serial-getty@ttyS0.service
systemctl restart systemd-logind.service
systemctl restart unattended-upgrades.service
lo containers need to be restarted.
Jser sessions running outdated binaries:
ubuntu @ session #1: sshd[990,1101]
ubuntu @ user manager service: systemd[996]
to VM guests are running outdated hypervisor (qemu) binaries on this host.
ıbuntu@ip-172-31-82-77:~$
```

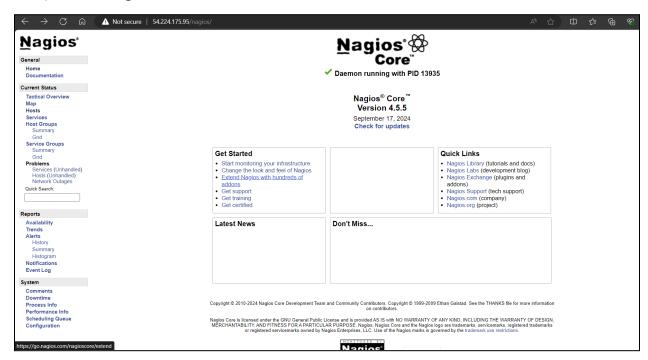
Open the nrpe.cfg file in nano editor sudo nano /etc/nagios/nrpe.cfg

Under allowed_hosts, add the nagios host ip address (public)

```
You can either supply a username or a UID.
 NOTE: This option is ignored if NRPE is running under either inetd or xin>
nrpe_user=nagios
 NRPE GROUP
This determines the effective group that the NRPE daemon should run as.
 You can either supply a group name or a GID.
 NOTE: This option is ignored if NRPE is running under either inetd or xin>
nrpe_group=nagios
# ALLOWED HOST ADDRESSES
 This is an optional comma-delimited list of IP address or hostnames
 that are allowed to talk to the NRPE daemon. Network addresses with a bit
 (i.e. 192.168.1.0/24) are also supported. Hostname wildcards are not curr>
 supported.
 Note: The daemon only does rudimentary checking of the client's IP
 address. I would highly recommend adding entries in your /etc/hosts.allow
 file to allow only the specified host to connect to the port
 you are running this daemon on.
NOTE: This option is ignored if NRPE is running under either inetd or xin>
allowed_hosts=127.0.0.1,54.224.175.95
# COMMAND ARGUMENT PROCESSING
This option determines whether or not the NRPE daemon will allow clients
```

again save and exit the nano editor.

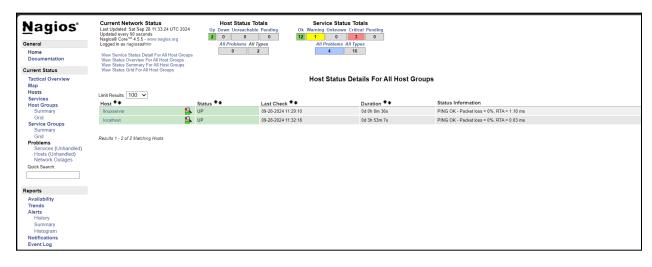
4) Go to nagios dashboard and click on hosts

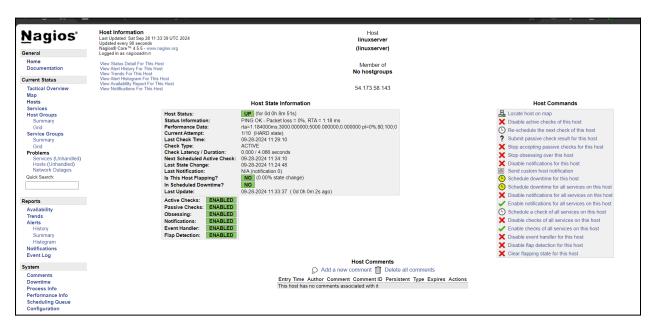


Click on hosts



5) Click on linux server





6) Click on nagios services



