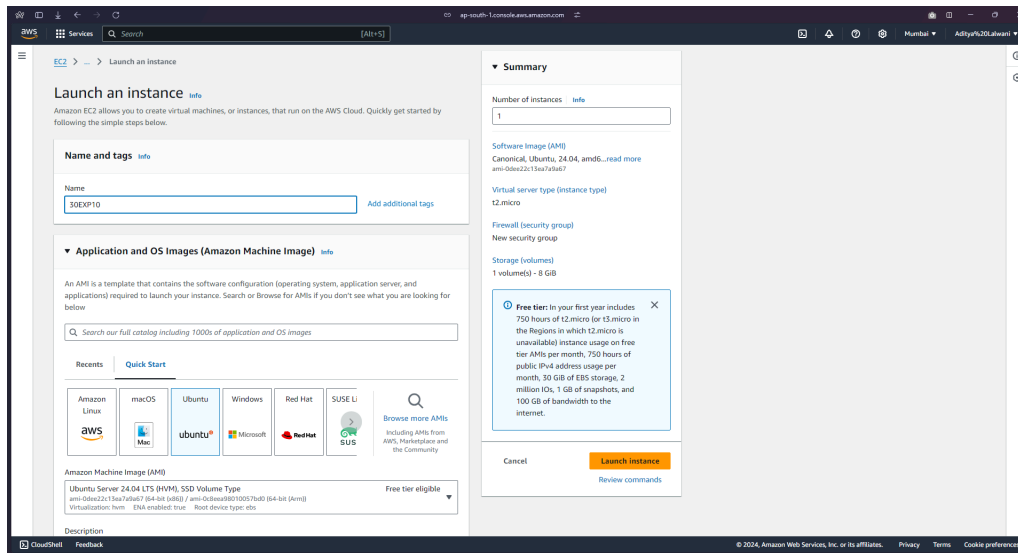


Aim: To perform Port, Service monitoring, Windows/Linux server monitoring using Nagios.

Prerequisites: An Amazon Linux instance with nagios already set up.

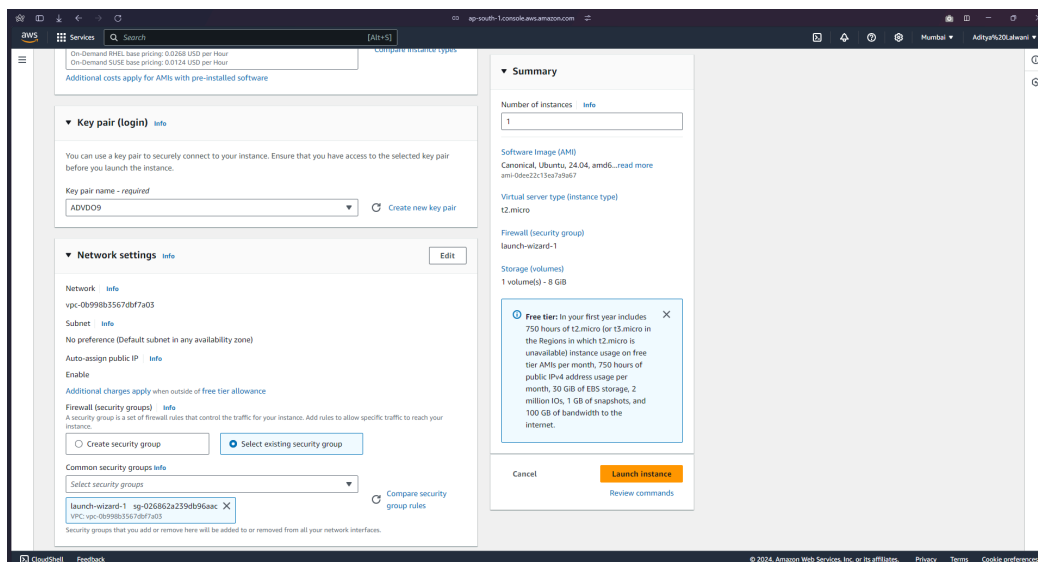
Set up ubuntu instance

Login to your AWS account. Search for EC2 on services. Open the interface and click on Create Instance.



Select The OS Image as Ubuntu.

Make sure to select the same private key that you created for the Amazon Linux instance. Also select the same security group as you created for the Linux instance.



Execute the following on Nagios Host machine (Linux)

We need to verify whether the nagios service is running or not. For that, run this command.

`ps -ef | grep nagios`

```
[ec2-user@ip-172-31-11-56 nagios-plugins-2.4.11]$ ps -ef | grep nagios
nagios    64624      1    0 15:48 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
nagios    64625    64624    0 15:48 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios    64626    64624    0 15:48 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios    64627    64624    0 15:48 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios    64628    64624    0 15:48 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios    64629    64624    0 15:48 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
ec2-user  65821    2337    0 16:09 pts/0    00:00:00 grep --color=auto nagios
[ec2-user@ip-172-31-11-56 nagios-plugins-2.4.11]$
```

Now, make yourself as the root user, and create a folder with the path

`/usr/local/nagios/etc/objects/monitorhosts/linuxhosts`

`sudo su`

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

```
[ec2-user@ip-172-31-11-56 nagios-plugins-2.4.11]$ sudo su
[root@ip-172-31-11-56 nagios-plugins-2.4.11]# mkdir -p /usr/local/nagios/etc/objects/monitorhosts/linuxhosts
[root@ip-172-31-11-56 nagios-plugins-2.4.11]#
```

`cp`

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

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

`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)

```
define host {
    use                linux-server          ; Name of host template to use
                                     ; This host definition will inherit all variables that are defined
                                     ; in (or inherited by) the linux-server host template definition.

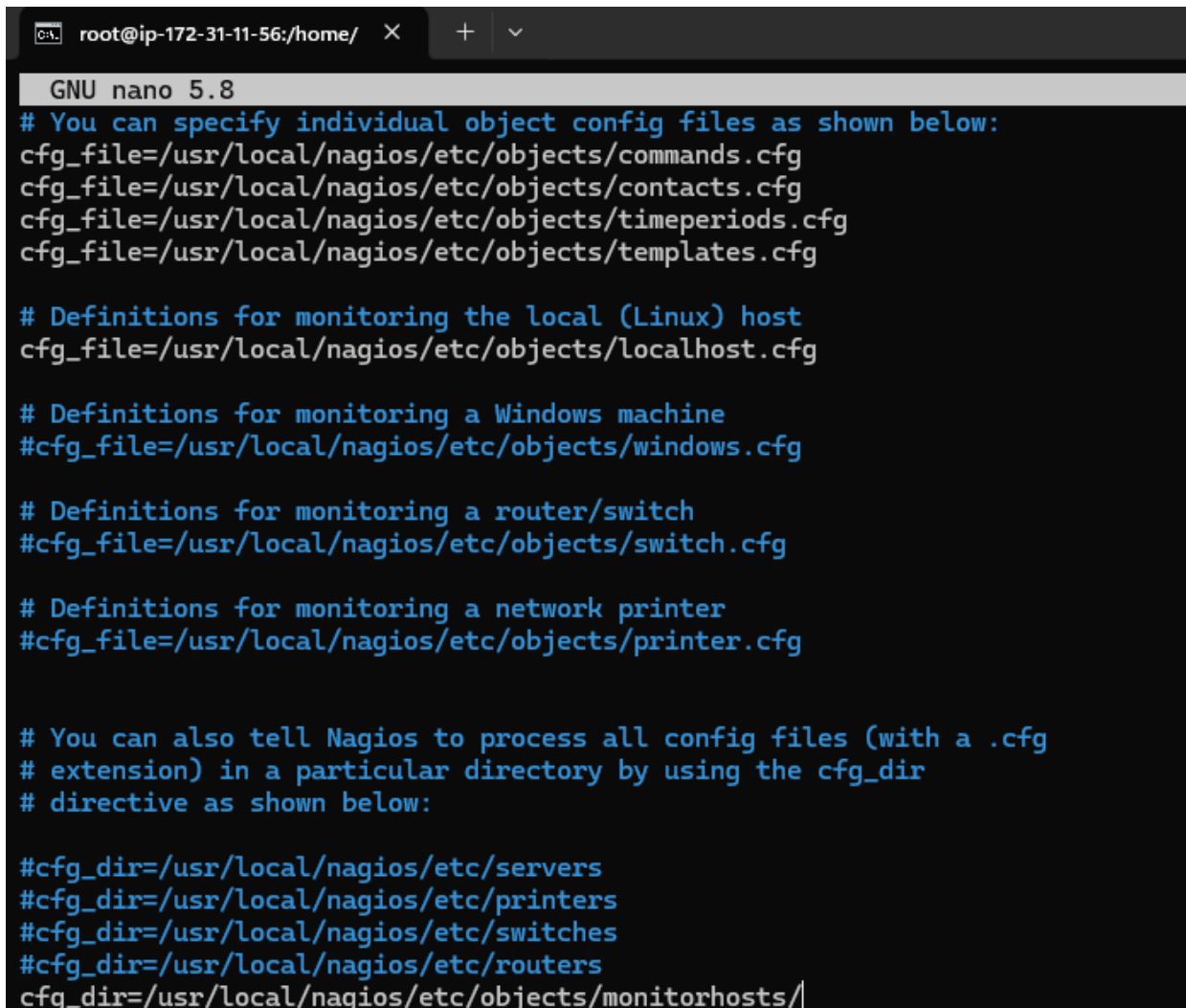
    host_name          linuxserver
    alias               linuxserver
    address             127.0.0.1
}
```

Change hostgroup_name to linux-servers1

```
define hostgroup {
    hostgroup_name      linux-servers1       ; The name of the hostgroup
    alias               Linux Servers         ; Long name of the group
    members              localhost           ; Comma separated list of hosts that belong to this group
}
```

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

nano /usr/local/nagios/etc/nagios.cfg
add the following line
cfg_dir=/usr/local/nagios/etc/objects/monitorhosts/



```
root@ip-172-31-11-56:/home/ GNU nano 5.8
# You can specify individual object config files as shown below:
cfg_file=/usr/local/nagios/etc/objects/commands.cfg
cfg_file=/usr/local/nagios/etc/objects/contacts.cfg
cfg_file=/usr/local/nagios/etc/objects/timeperiods.cfg
cfg_file=/usr/local/nagios/etc/objects/templates.cfg

# Definitions for monitoring the local (Linux) host
cfg_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:

#cfg_dir=/usr/local/nagios/etc/servers
#cfg_dir=/usr/local/nagios/etc/printers
#cfg_dir=/usr/local/nagios/etc/switches
#cfg_dir=/usr/local/nagios/etc/routers
cfg_dir=/usr/local/nagios/etc/objects/monitorhosts/
```

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

```
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...

Checking objects...
  Checked 16 services.
  Checked 2 hosts.
  Checked 2 host groups.
  Checked 0 service groups.
  Checked 1 contacts.
  Checked 1 contact groups.
  Checked 24 commands.
  Checked 5 time periods.
  Checked 0 host escalations.
  Checked 0 service escalations.
Checking for circular paths...
  Checked 2 hosts
  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:   0

Things look okay - No serious problems were detected during the pre-flight check
[root@ip-172-31-11-56 nagios-plugins-2.4.11]# |
```

service nagios restart

```
[root@ip-172-31-83-159 nagios-plugins-2.0.3]# service nagios restart
Restarting nagios (via systemctl): [ OK ]
[root@ip-172-31-83-159 nagios-plugins-2.0.3]# |
```

Execute the following on Nagios Client machine (Ubuntu)

```
sudo apt update -y
```

```
sudo apt install gcc -y
```

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

```
Creating config file /etc/nagios-plugins/config/snmp.cfg with new version
Setting up monitoring-plugins (2.3.5-1ubuntu3) ...
Setting up libldb2:amd64 (2:2.8.0+samba4.19.5+dfsg-4ubuntu9) ...
Setting up libavahi-client3:amd64 (0.8-13ubuntu6) ...
Setting up samba-ls:amd64 (2:4.19.5+dfsg-4ubuntu9) ...
Setting up python3-ldb (2:2.8.0+samba4.19.5+dfsg-4ubuntu9) ...
Setting up samba-dsdb-modules:amd64 (2:4.19.5+dfsg-4ubuntu9) ...
Setting up libsmbclient0:amd64 (2:4.19.5+dfsg-4ubuntu9) ...
Setting up libcups2t64:amd64 (2.4.7-1.2ubuntu7.3) ...
Setting up python3-samba (2:4.19.5+dfsg-4ubuntu9) ...
Setting up smbclient (2:4.19.5+dfsg-4ubuntu9) ...
Setting up samba-common-bin (2:4.19.5+dfsg-4ubuntu9) ...
Processing triggers for man-db (2.12.0-4build2) ...
Processing triggers for libc-bin (2.39-0ubuntu8.3) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-0-17:~$
```

```
sudo nano /etc/nagios/nrpe.cfg
```

```
allowed_hosts=127.0.0.1,:::1,35.154.231.184|
```

Go to Nagios dashboard, click on hosts.
the linuxserver is also added as a host.

Nagios® Current Network Status
Last Updated: Sat Sep 28 04:42:59 UTC 2024
Updated every 50 seconds
Nagios® Core™ 4.5.5 - www.nagios.org
Logged in as nagiosadmin

Host Status Totals
Up: 2, Down: 0, Unreachable: 0, Pending: 0
All Problems: All Types

Service Status Totals
Ok: 3, Warning: 1, Unknown: 0, Critical: 2, Pending: 5
All Problems: All Types

Host Status Details For All Host Groups

Limit Results: 100

Host	Status	Last Check	Duration	Status Information
linuxserver	UP	09-28-2024 04:42:16	0d 0h 2m 35s	PING OK - Packet loss = 0%, RTA = 1.15 ms
localhost	UP	09-28-2024 04:38:21	0d 0h 24m 0s	PING OK - Packet loss = 0%, RTA = 0.93 ms

Results 1 - 2 of 2 Matching Hosts

Host Information
Last Updated: Sat Sep 28 04:43:37 UTC 2024
Updated every 50 seconds
Nagios® Core™ 4.5.5 - www.nagios.org
Logged in as nagiosadmin

Host Status Details For This Host
View Alert History For This Host
View Trends For This Host
View Alert Histogram For This Host
View Availability Report For This Host
View Notifications For This Host

Host State Information

Host Status: **UP** (for 0d 0h 3m 13s)
Status Information: PING OK - Packet loss = 0%, RTA = 1.15 ms
Performance Data: rta:1.151000ms;3000.000000;5000.000000;0.000000 pl:0%;80;100.0
Current Attempt: 1/10 (HARD state)
Last Check Time: 09-28-2024 04:42:16
Check Type: ACTIVE
Check Latency / Duration: 0.000 / 4.033 seconds
Next Scheduled Active Check: 09-28-2024 04:47:16
Last State Change: 09-28-2024 04:40:24
Last Notification: N/A (notification 0)
Is This Host Flapping? **NO** (0.00% state change)
In Scheduled Downtime? **NO**
Last Update: 09-28-2024 04:43:33 (0d 0h 0m 4s ago)

Active Checks: **ENABLED**
Passive Checks: **ENABLED**
Obsessing: **ENABLED**
Notifications: **ENABLED**
Event Handler: **ENABLED**
Flap Detection: **ENABLED**

Host Commands

- Locate host on map
- Disable active checks of this host
- Re-schedule the next check of this host
- Submit passive check result for this host
- Stop accepting passive checks for this host
- Stop obsessing over this host
- Disable notifications for this host
- Send custom host notification
- Schedule downtime for this host
- Schedule downtime for all services on this host
- Disable notifications for all services on this host
- Enable notifications for all services on this host
- Schedule a check of all services on this host
- Disable checks of all services on this host
- Enable checks of all services on this host
- Disable event handler for this host
- Disable flap detection for this host
- Clear flapping state for this host

Host Comments
Add a new comment Delete all comments

Entry Time	Author	Comment	Comment ID	Persistent	Type	Expires	Actions
This host has no comments associated with it							

Click on linuxserver. Here, we can check all the information about linuxserver host.

Nagios® Host Information
Last Updated: Sat Sep 28 04:43:37 UTC 2024
Updated every 50 seconds
Nagios® Core™ 4.5.5 - www.nagios.org
Logged in as nagiosadmin

Host Status Details For This Host
View Alert History For This Host
View Trends For This Host
View Alert Histogram For This Host
View Availability Report For This Host
View Notifications For This Host

Host State Information

Host Status: **UP** (for 0d 0h 3m 13s)
Status Information: PING OK - Packet loss = 0%, RTA = 1.15 ms
Performance Data: rta:1.151000ms;3000.000000;5000.000000;0.000000 pl:0%;80;100.0
Current Attempt: 1/10 (HARD state)
Last Check Time: 09-28-2024 04:42:16
Check Type: ACTIVE
Check Latency / Duration: 0.000 / 4.033 seconds
Next Scheduled Active Check: 09-28-2024 04:47:16
Last State Change: 09-28-2024 04:40:24
Last Notification: N/A (notification 0)
Is This Host Flapping? **NO** (0.00% state change)
In Scheduled Downtime? **NO**
Last Update: 09-28-2024 04:43:33 (0d 0h 0m 4s ago)

Active Checks: **ENABLED**
Passive Checks: **ENABLED**
Obsessing: **ENABLED**
Notifications: **ENABLED**
Event Handler: **ENABLED**
Flap Detection: **ENABLED**

Host Commands

- Locate host on map
- Disable active checks of this host
- Re-schedule the next check of this host
- Submit passive check result for this host
- Stop accepting passive checks for this host
- Stop obsessing over this host
- Disable notifications for this host
- Send custom host notification
- Schedule downtime for this host
- Schedule downtime for all services on this host
- Disable notifications for all services on this host
- Enable notifications for all services on this host
- Schedule a check of all services on this host
- Disable checks of all services on this host
- Enable checks of all services on this host
- Disable event handler for this host
- Disable flap detection for this host
- Clear flapping state for this host

Host Comments
Add a new comment Delete all comments

Entry Time	Author	Comment	Comment ID	Persistent	Type	Expires	Actions
This host has no comments associated with it							

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

Page Tour

Processes: User status, Current load, total processes, root partition, etc.

In this experiment, we learned how to monitor port services and servers using Nagios. To do this, we used a Linux instance to host the Nagios dashboard and a separate Ubuntu instance as the second host. The process involved configuring the Linux instance and adding the IP address of the Ubuntu instance. We then replicated the initial setup on the Ubuntu instance, ensuring the IP address of the Linux instance was included in the allowed hosts. After restarting the NRPE server, we confirmed that the 'linuxserver' host had been successfully added.