ADVANCE DEVOPS EXPERIMENT - 10

Prajjwal Pandey D15A / 33

Prerequisites

- AWS Free Tier
- Nagios Server running on an Amazon Linux Machine

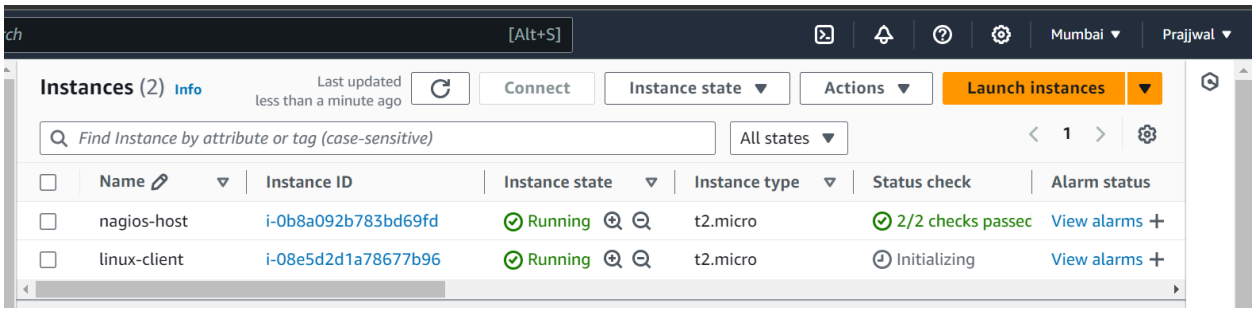
Steps

1. Confirm Nagios is Running
   sudo systemctl status nagios

```
● nagios.service - Nagios Core 4.4.6
     Loaded: loaded (/usr/lib/systemd/system/nagios.service; enabled; preset: disabled)
     Active: active (running) since Tue 2024-10-01 16:21:57 UTC; 8s ago
       Docs: https://www.nagios.org/documentation
    Process: 67457 ExecStartPre=/usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg
    Process: 67458 ExecStart=/usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg (c
   Main PID: 67459 (nagios)
      Tasks: 6 (limit: 1112)
     Memory: 2.0M
        CPU: 17ms
     CGroup: /system.slice/nagios.service
             ├─67459 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
             ├─67460 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             ├─67461 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             ├─67462 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             ├─67463 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             └─67464 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
```

2. Create a Linux Client

   - Create an Ubuntu 20.04 server EC2 instance in AWS.
   - Assign it the same security group as the Nagios Host.
   - Name it `linux-client`.



3. Verify Nagios Process
ps -ef | grep nagios

```
[ec2-user@ip-172-31-37-184 nagios-plugins-2.3.3]$ ps -ef | grep nagios
nagios     67459       1  0 16:21 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
nagios     67460   67459  0 16:21 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios     67461   67459  0 16:21 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios     67462   67459  0 16:21 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios     67463   67459  0 16:21 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios     67464   67459  0 16:21 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
ec2-user   68320    2728  0 16:37 pts/0    00:00:00 grep --color=auto nagios
[ec2-user@ip-172-31-37-184 nagios-plugins-2.3.3]$
```

4. Create Directories for Monitoring Hosts
sudo su
mkdir -p /usr/local/nagios/etc/objects/monitorhosts/linuxhosts

5. Copy and Modify Configuration File
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` to `linuxserver` everywhere in the file.
- Change `address` to the public IP address of your `linux-client`.
- Change `hostgroup_name` under hostgroup to `linux-servers1`.

6. Update Nagios Configuration
Add the following line: cfg_dir=/usr/local/nagios/etc/objects/monitorhosts/

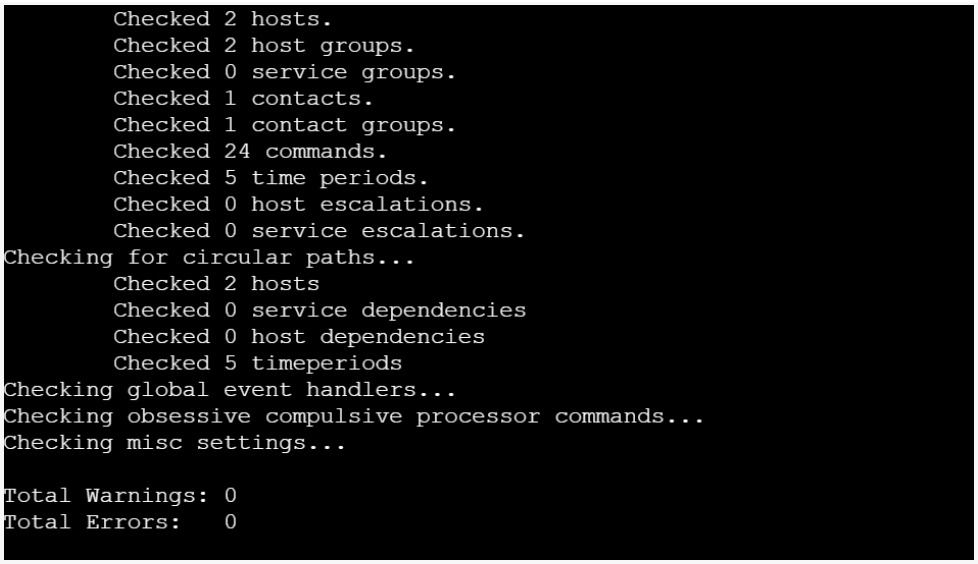
```
# Definitions for monitoring a router/switch
#cfg_file=/usr/local/nagios/etc/objects/switch.cfg

# 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/
```

7. Verify Configuration Files
sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg



8. Restart Nagios Service
sudo systemctl restart nagios

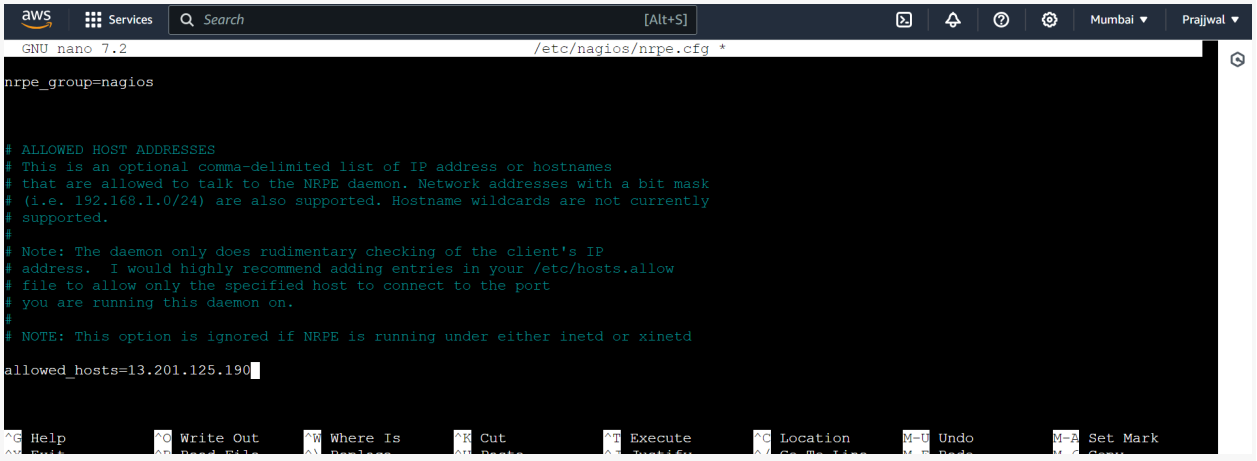
9. Switch to Client Machine

- SSH into the `linux-client` machine or use the EC2 Instance Connect feature.

10. Install Required Packages on Client.
sudo apt update -y
sudo apt install gcc -y
sudo apt install -y nagios-nrpe-server nagios-plugins

11. Configure NRPE
sudo nano /etc/nagios/nrpe.cfg

- Under `allowed_hosts`, add your Nagios host IP address.



12. Restart NRPE Server

`sudo systemctl restart nagios-nrpe-server`

13. Check Nagios Dashboard

- Go to your Nagios dashboard.
- Click on `Hosts` and then on `linuxserver` to see the host details.
- Click on `Services` to see all services and ports being monitored.

Host Information

Last Updated: Tue Oct 1 16:52:19 UTC 2024
Updated every 90 seconds
Nagios® Core™ 4.4.6 - www.nagios.org
Logged in as *nagiosadmin*

View Status Detail 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
localhost
(linuxserver)

Member of
No hostgroups

13.234.202.182

Host State Information

Host Status:	**DOWN** (for 0d 0h 6m 37s)
Status Information:	PING CRITICAL - Packet loss = 100%
Performance Data:	rta=5000.000000ms;3000.000000;5000.000000;0.000000 pl=100%;80;100;0
Current Attempt:	4/10 (SOFT state)
Last Check Time:	10-01-2024 16:50:12
Check Type:	ACTIVE
Check Latency / Duration:	0.000 / 30.003 seconds
Next Scheduled Active Check:	10-01-2024 16:51:42
Last State Change:	10-01-2024 16:45:42
Last Notification:	N/A (notification 0)
Is This Host Flapping?	**NO** (5.86% state change)
In Scheduled Downtime?	**NO**
Last Update:	10-01-2024 16:52:11 (0d 0h 0m 8s ago)

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

Current Network Status

Last Updated: Tue Oct 1 16:53:13 UTC 2024
Updated every 90 seconds
Nagios® Core™ 4.4.6 - www.nagios.org
Logged in as *nagiosadmin*

View History For all hosts
View Notifications For All Hosts
View Host Status Detail For All Hosts

Host Status Totals

Up	Down	Unreachable	Pending
1	1	0	0

All Problems	All Types
1	2

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
6	1	0	1	0

All Problems	All Types
2	8

Service Status Details For All Hosts

Limit Results: 100

Host	Service	Status	Last Check	Duration	Attempt	Status Information
localhost	Current Load	OK	10-01-2024 16:52:34	0d 0h 30m 39s	1/4	OK - load average: 0.00, 0.00, 0.00
	Current Users	OK	10-01-2024 16:48:12	0d 0h 30m 1s	1/4	USERS OK - 2 users currently logged in
	HTTP	WARNING	10-01-2024 16:51:49	0d 0h 26m 24s	4/4	HTTP WARNING: HTTP/1.1 403 Forbidden - 319 bytes in 0.001 second response time
	PING	OK	10-01-2024 16:49:27	0d 0h 28m 46s	1/4	PING OK - Packet loss = 0%, RTA = 0.05 ms
	Root Partition	OK	10-01-2024 16:50:04	0d 0h 28m 9s	1/4	DISK OK - free space: / 6080 MiB (74.92% inode=98%):
	SSH	OK	10-01-2024 16:51:57	0d 0h 27m 31s	1/4	SSH OK - OpenSSH_8.7 (protocol 2.0)
	Swap Usage	CRITICAL	10-01-2024 16:49:19	0d 0h 23m 54s	4/4	SWAP CRITICAL - 0% free (0 MB out of 0 MB) - Swap is either disabled, not present, or of zero size.
	Total Processes	OK	10-01-2024 16:51:57	0d 0h 26m 16s	1/4	PROCS OK: 39 processes with STATE = RSZDT

Results 1 - 8 of 8 Matching Services