

ADVANCE DEVOPS EXPERIMENT - 10

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Prerequisites

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

Steps

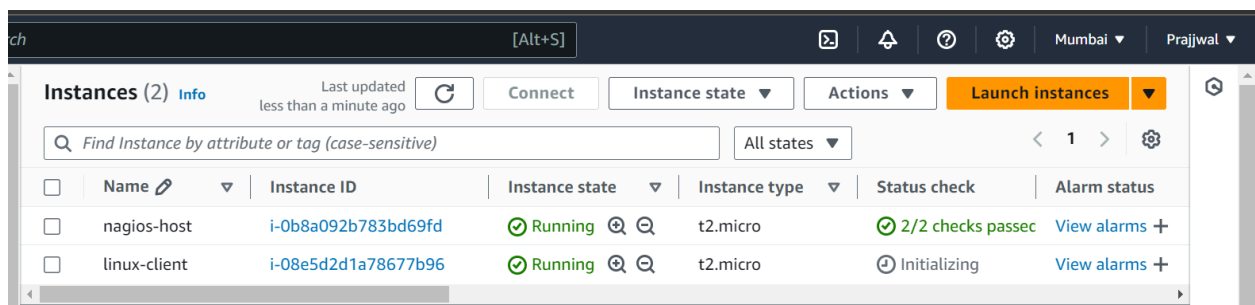
1. Confirm Nagios is Running

`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`.



Instances (2) Info						
Find Instance by attribute or tag (case-sensitive)						
All states						
<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status
<input type="checkbox"/>	nagios-host	i-0b8a092b783bd69fd	Running	t2.micro	2/2 checks passed	View alarms +
<input type="checkbox"/>	linux-client	i-08e5d2d1a78677b96	Running	t2.micro	Initializing	View alarms +

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
```

```
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
```

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.

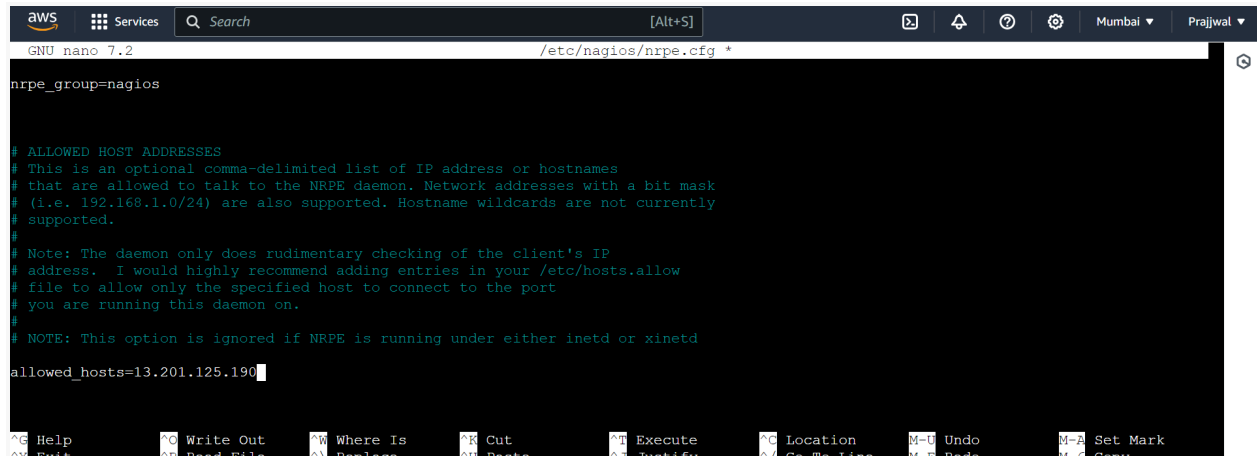
10. Install Required Packages on Client.

```
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.



```
aws Services [Alt+S] Mumbai Prajwal
GNU nano 7.2 /etc/nagios/nrpe.cfg *
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 mask
# (i.e. 192.168.1.0/24) are also supported. Hostname wildcards are not currently
# 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 xinetd
allowed_hosts=13.201.125.190
```

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