

ADVANCE DEVOPS - 10

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Check if the nagios service is running by executing following command

```
sudo systemctl status nagios
```

```
ubuntu@ip-172-31-89-161:~$ sudo systemctl status nagios
● nagios.service - Nagios Core 4.4.6
   Loaded: loaded (/usr/lib/systemd/system/nagios.service; enabled; preset: enabled)
   Active: active (running) since Sat 2024-09-28 16:08:58 UTC; 1min 2s ago
     Docs: https://www.nagios.org/documentation
   Process: 15743 ExecStartPre=/usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg (code=exited, status=0/SUCCESS)
   Process: 15753 ExecStart=/usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg (code=exited, status=0/SUCCESS)
   Main PID: 15764 (nagios)
      Tasks: 6 (limit: 1130)
     Memory: 2.4M (peak: 3.2M)
        CPU: 29ms
    CGroup: /system.slice/nagios.service
            └─15764 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
              └─15765 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                └─15766 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                  └─15767 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                    └─15768 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                      └─15769 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg

Sep 28 16:08:58 ip-172-31-89-161 nagios[15764]: qh: Socket '/usr/local/nagios/var/rw/nagios.qh' successfully initialized
Sep 28 16:08:58 ip-172-31-89-161 nagios[15764]: qh: core query handler registered
Sep 28 16:08:58 ip-172-31-89-161 nagios[15764]: qh: echo service query handler registered
Sep 28 16:08:58 ip-172-31-89-161 nagios[15764]: qh: help for the query handler registered
Sep 28 16:08:58 ip-172-31-89-161 nagios[15764]: wproc: Successfully registered manager as @wproc with query handler
Sep 28 16:08:58 ip-172-31-89-161 nagios[15764]: wproc: Registry request: name=Core Worker 15765;pid=15765
Sep 28 16:08:58 ip-172-31-89-161 nagios[15764]: wproc: Registry request: name=Core Worker 15766;pid=15766
Sep 28 16:08:58 ip-172-31-89-161 nagios[15764]: wproc: Registry request: name=Core Worker 15767;pid=15767
```

Now, create a new EC2 instance on AWS

Instances (2) Info

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

Find Instance by attribute or tag (case-sensitive)

All states

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<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input type="checkbox"/>	nagios-host	i-09e8ea019f24f4be2	Running	t2.micro	2/2 checks passed	View alarms	us-east-1c
<input type="checkbox"/>	linux-client	i-0ad38836f030e3784	Running	t2.micro	Initializing	View alarms	us-east-1c

Now perform the following commands on nagios-host EC2 instance.

On the server, run this command

```
ps -ef | grep nagios
```

```
ubuntu@ip-172-31-89-161:~$ ps -ef | grep nagios
nagios    15764      1    0 16:08 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
nagios    15765    15764    0 16:08 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios    15766    15764    0 16:08 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios    15767    15764    0 16:08 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios    15768    15764    0 16:08 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios    15769    15764    0 16:08 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
ubuntu    15957    1342    0 16:13 pts/0    00:00:00 grep --color=auto nagios
ubuntu@ip-172-31-89-161:~$
```

Become a root user and create 2 folders

```
sudo su
```

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

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

```
ubuntu@ip-172-31-89-161:~$ sudo su
mkdir /usr/local/nagios/etc/objects/monitorhosts
mkdir /usr/local/nagios/etc/objects/monitorhosts/linuxhosts
root@ip-172-31-89-161:/home/ubuntu#
```

Copy localhost.cfg file to the mentioned location

```
cp /usr/local/nagios/etc/objects/localhost.cfg
/usr/local/nagios/etc/objects/monitorhosts/linuxhosts
```

```
root@ip-172-31-89-161:/usr/local/nagios/etc/objects# cp /usr/local/nagios/etc/objects/localhost.cfg /usr/local/nagios/etc/objects/monitorhosts/linuxhosts
cp: cannot create regular file '/usr/local/nagios/etc/objects/monitorhosts/linuxhosts': No such file or directory
root@ip-172-31-89-161:/usr/local/nagios/etc/objects# sudo mkdir -p /usr/local/nagios/etc/objects/monitorhosts/linuxhosts
root@ip-172-31-89-161:/usr/local/nagios/etc/objects# cp /usr/local/nagios/etc/objects/localhost.cfg /usr/local/nagios/etc/objects/monitorhosts/linuxhosts
root@ip-172-31-89-161:/usr/local/nagios/etc/objects#
```

Open the nano editor for localhost.cfg file and make these changes. Add the Ip address of the linux-client for the address field.

nano

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

```
GNU nano 7.2 /usr/local/nagios/etc/monitorhosts/linuxhosts/localhost.cfg
#####
#
# HOST DEFINITION
#
#####
# Define a host for the local machine

define host {

    use                linux-server                ; Name of host template
                ; This host definition inherits from the
                ; in (or inherits from) the host definition
    host_name          linuxserver
    alias              linuxserver
    address             52.207.253.18
}

#####
#
# HOST GROUP DEFINITION
#####
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Exit
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Jump
```

Note - Here replace hostname with linuxserver

```
nano /usr/local/nagios/etc/nagios.cfg
```

Add the following line to the nagios.cfg file

```
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/
```

After making the changes in nagios.cfg file now check validate the file by typing the following command in the terminal.

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

```
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...

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-172-31-89-161:/usr/local/nagios/etc/objects/monitorhosts/linuxhosts#
```

Now restart the service by using this command

service nagios restart

```
root@ip-172-31-89-161:/usr/local/nagios/etc/objects/monitorhosts/linuxhosts# service nagios restart
root@ip-172-31-89-161:/usr/local/nagios/etc/objects/monitorhosts/linuxhosts# systemctl status nagios
● nagios.service - Nagios Core 4.4.6
   Loaded: loaded (/usr/lib/systemd/system/nagios.service; enabled; preset: enabled)
   Active: active (running) since Sat 2024-09-28 17:36:35 UTC; 19s ago
     Docs: https://www.nagios.org/documentation
  Process: 1870 ExecStartPre=/usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg (code=exited, status=0/SUCCESS)
  Process: 1872 ExecStart=/usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg (code=exited, status=0/SUCCESS)
 Main PID: 1874 (nagios)
    Tasks: 8 (limit: 1130)
   Memory: 3.0M (peak: 3.2M)
      CPU: 24ms
   CGroup: /system.slice/nagios.service
           └─1874 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
           └─1875 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
           └─1876 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
           └─1877 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
           └─1878 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
           └─1879 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
           └─1880 /usr/local/nagios/libexec/check_ping -H 52.207.253.18 -w 3000.0,80% -c 5000.0,100% -p 5
           └─1881 /usr/bin/ping -n -U -w 30 -c 5 52.207.253.18

Sep 28 17:36:35 ip-172-31-89-161 nagios[1874]: qh: Socket '/usr/local/nagios/var/rw/nagios.qh' successfully initialized
Sep 28 17:36:35 ip-172-31-89-161 nagios[1874]: qh: core query handler registered
Sep 28 17:36:35 ip-172-31-89-161 nagios[1874]: qh: echo service query handler registered
Sep 28 17:36:35 ip-172-31-89-161 nagios[1874]: qh: help for the query handler registered
Sep 28 17:36:35 ip-172-31-89-161 nagios[1874]: wproc: Successfully registered manager as @wproc with query handler
Sep 28 17:36:35 ip-172-31-89-161 nagios[1874]: wproc: Registry request: name=Core Worker 1875;pid=1875
lines 1-26
```

Now using this command update the apt repository of ubuntu (linux-client), install gcc, nagios-nrpe-server and nagios-plugin

```
sudo apt update -y
```

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

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

Now open nrpe.cfg file and add the ip address of the nagios host as shown. To open the nrpe.cfg file copy this command.

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

```
# supported.
#
# Note: The daemon only does rudimentary checking
# address. I would highly recommend adding entries
# file to allow only the specified host to connect
# you are running this daemon on.
#
# NOTE: This option is ignored if NRPE is running
allowed_hosts=127.0.0.1,54.167.169.0

# COMMAND ARGUMENT PROCESSING
# This option determines whether or not the NRPE
# to specify arguments to commands that are executed
# if the daemon was configured with the --enable-
# option.
```

Now restart nrpe server by using this command

```
sudo systemctl restart nagios-nrpe-server
```

Now, check nagios dashboard, you should see linuxserver up and running, if not check security groups of the EC2 instances.

The screenshot displays the Nagios web interface. The top section shows 'Current Network Status' with a last update of 'Sat Sep 28 18:47:41 UTC 2024'. Below this, there are two status summary boxes: 'Host Status Totals' showing 2 Up, 0 Down, 0 Unreachable, and 0 Pending; and 'Service Status Totals' showing 12 Ok, 0 Warning, 0 Unknown, 4 Critical, and 0 Pending. The main content area is titled 'Host Status Details For All Host Groups' and features a table with columns for Host, Status, Last Check, Duration, and Status Information. The table lists two hosts: 'linuxserver' and 'localhost', both with a status of 'UP'. The 'linuxserver' host was last checked on '09-28-2024 18:45:20' with a duration of '0d 0h 2m 21s'. The 'localhost' host was last checked on '09-28-2024 18:44:05' with a duration of '0d 4h 47m 45s'. The status information for 'linuxserver' is 'PING OK - Packet loss = 68%, RTA = 0.63 ms', and for 'localhost' it is 'PING OK - Packet loss = 0%, RTA = 0.04 ms'. The left sidebar contains navigation links for General, Current Status, Problems, Reports, and System.

Host	Status	Last Check	Duration	Status Information
linuxserver	UP	09-28-2024 18:45:20	0d 0h 2m 21s	PING OK - Packet loss = 68%, RTA = 0.63 ms
localhost	UP	09-28-2024 18:44:05	0d 4h 47m 45s	PING OK - Packet loss = 0%, RTA = 0.04 ms