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EXPERIMENT 10

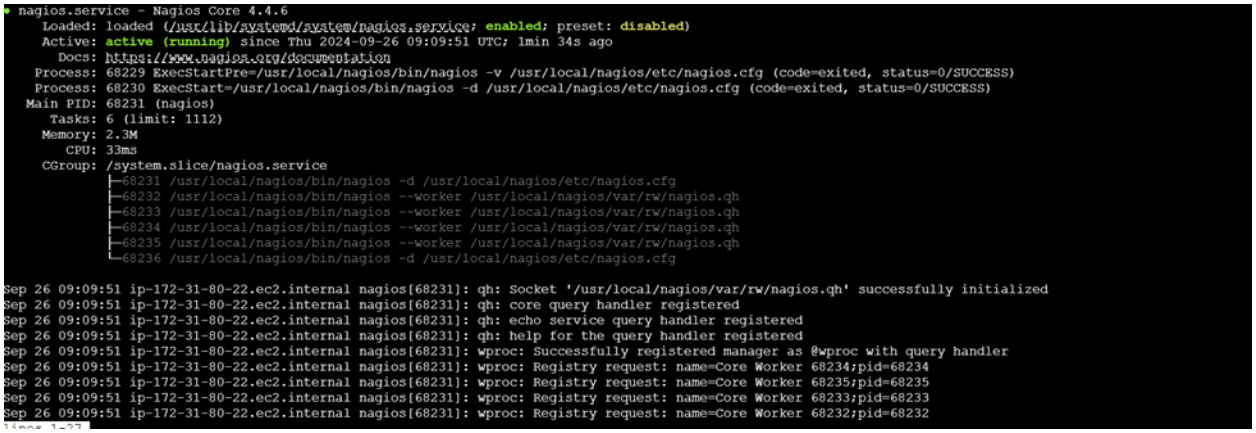
Aim: Exp 10 To perform Port, Service monitoring, Windows/Linux server monitoring using Nagios.

1. Confirm Nagios is Running on the Server

Commands -

sudo systemctl status nagios

- Proceed if you see that Nagios is active and running.

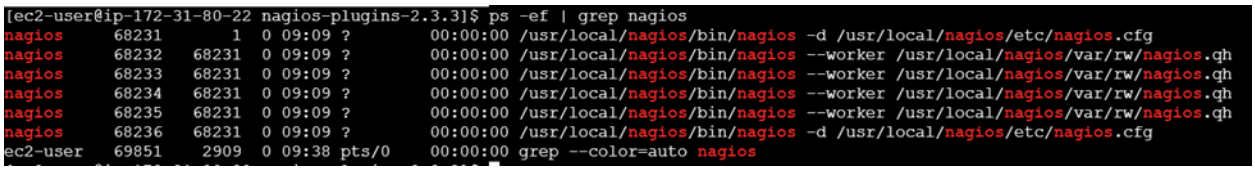


2. Create an Ubuntu 20.04 Server EC2 Instance

- Name it `linux-client`.
- Use the same security group as the Nagios Host.

3. Verify Nagios Process on the Server

Commands - ps -ef | grep nagios



4. Become Root User and Create Directories

Commands -

sudo su

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

5. Copy Sample Configuration File

Commands -

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

```
[root@ip-172-31-80-22 ec2-user]# cp /usr/local/nagios/etc/objects/localhost.cfg /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg
[root@ip-172-31-80-22 ec2-user]# sudo nano /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg
```

6. Edit the Configuration File

Commands -
sudo 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`.

```
# HOST DEFINITION
#
###############################################################################

# Define a host for the local machine

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                 3.85.25.81
}
```

- Change `hostgroup_name` under hostgroup to `linux-servers1`

```
###############################################################################
#
# HOST GROUP DEFINITION
#
###############################################################################

# Define an optional hostgroup for Linux machines

define hostgroup {

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

7. Update Nagios Configuration

Commands -
sudo nano /usr/local/nagios/etc/nagios.cfg

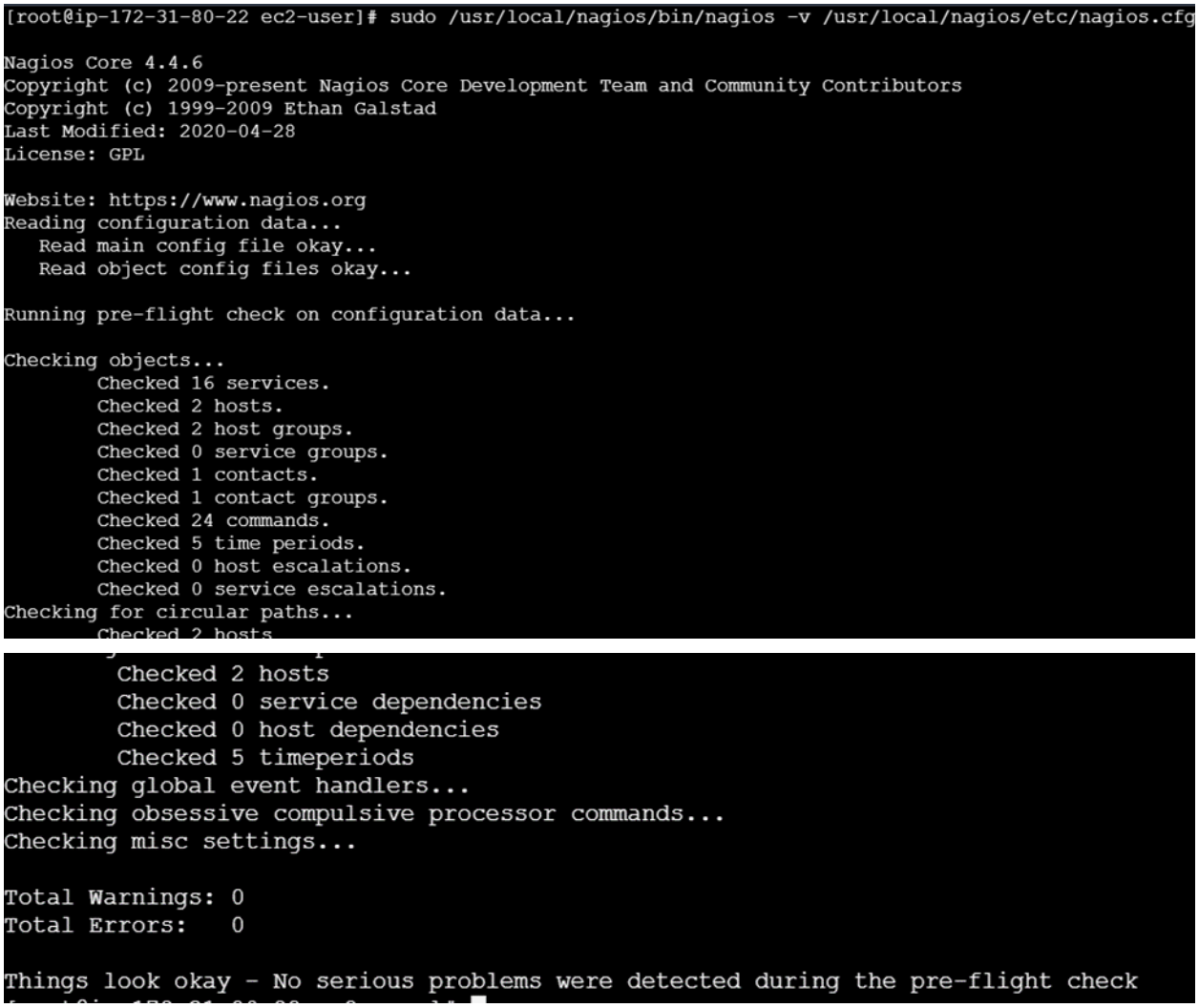
- Add the following line:
  cfg_dir=/usr/local/nagios/etc/objects/monitorhosts/

```
# 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/
```

8. Verify Configuration Files

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

- Ensure there are no errors.



9. Restart Nagios Service

Commands - sudo systemctl restart nagios

10. SSH into the Client Machine

- Use SSH or EC2 Instance Connect to access the `linux-client`.

11. Update Package Index and Install Required Packages

Commands -

sudo apt update -y

sudo apt install gcc -y

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

```
ubuntu@ip-172-31-88-112:~$ sudo apt update -y
sudo apt install gcc -y
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 InRelease [126 kB]
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 Packages [15.0 MB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/universe Translation-en [5982 kB]
Get:7 http://security.ubuntu.com/ubuntu noble-security/main amd64 Packages [378 kB]
Get:8 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [82.0 kB]
Get:9 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [4548 B]
Get:10 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [271 kB]
Get:11 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [115 kB]
```

12. Edit NRPE Configuration File

Commands -

sudo nano /etc/nagios/nrpe.cfg

- Add your Nagios host IP address under `allowed_hosts`:

`allowed_hosts=<Nagios_Host_IP>`

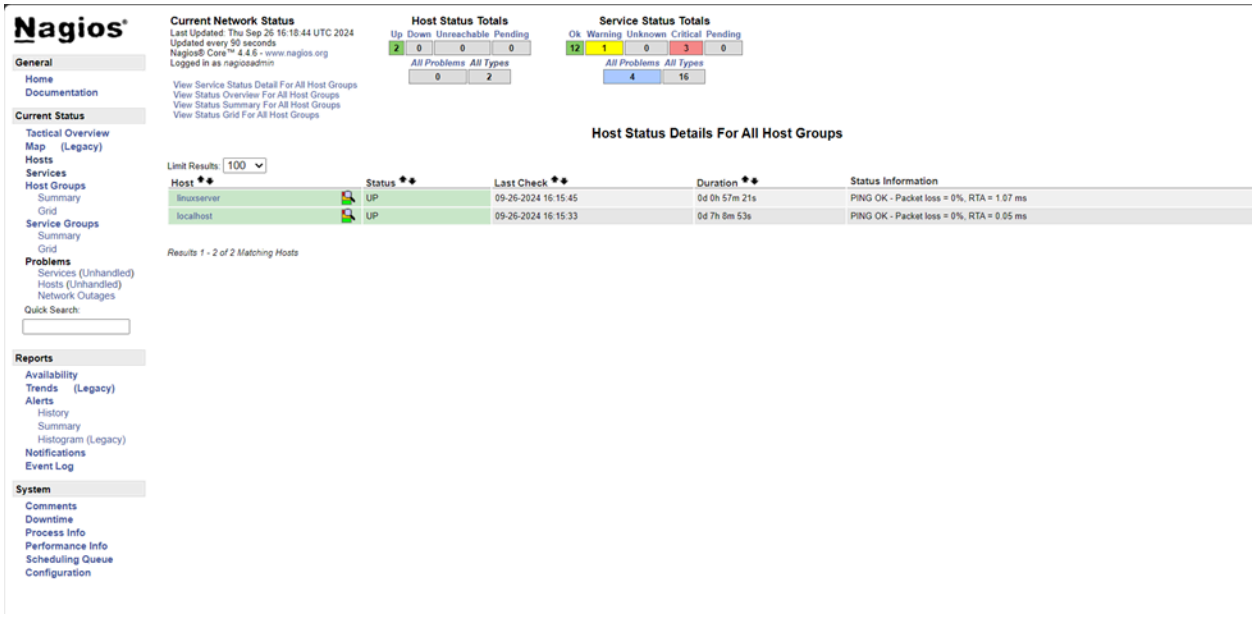
```
  GNU nano 7.2                                                    /etc/nagios/nr
# that are allowed to talk to the NRPE daemon. Network addresses with a bit mask
# (i.e. 192.168.1.0/24) are also supported. Hostname wildcards are not currently
# supported.
#
# Note: The daemon only does rudimentary 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=127.0.0.1,18.208.138.41



# COMMAND ARGUMENT PROCESSING
# This option determines whether or not the NRPE daemon will allow clients
# to specify arguments to commands that are executed.  This option only works
# if the daemon was configured with the --enable-command-args configure script
# option.
#
```

13. Restart NRPE Server

Commands - sudo systemctl restart nagios-nrpe-server

14. Check Nagios Dashboard

- Open your browser and navigate to `http://<Nagios_Host_IP>/nagios`.
- Log in with `nagiosadmin` and the password you set earlier.
- You should see the new host `linuxserver` added.
- Click on `Hosts` to see the host details.
- Click on `Services` to see all services and ports being monitored


Nagios
General
Home
Documentation
Current Status
Tactical Overview
Map (Legacy)
Hosts
Services
Host Groups
Summary
Grid
Service Groups
Summary
Grid
Problems
Services (Unhandled)
Hosts (Unhandled)
Network Outages
Quick Search:
Reports
Availability
Trends (Legacy)
Alerts
History
Summary
Histogram (Legacy)
Notifications
Event Log
System
Comments
Downtime
Process Info
Performance Info
Scheduling Queue
Configuration
Current Network Status
Last Updated: Thu Sep 26 16:18:44 UTC 2024
Updated every 90 seconds
Nagios® Core™ 4.4.6 - www.nagios.org
Logged in as nagiosadmin
View Service Status Detail For All Host Groups
View Status Overview For All Host Groups
View Status Summary For All Host Groups
View Status Grid For All Host Groups
Host Status Totals
Up Down Unreachable Pending
2 0 0 0
All Problems All Types
0 2
Service Status Totals
Ok Warning Unknown Critical Pending
12 1 0 3 0
All Problems All Types
4 16
Host Status Details For All Host Groups
Limit Results: 100
Host
Status
Last Check
Duration
Status Information
linuxserver
UP
09-26-2024 16:15:45
0d 0h 57m 21s
PING OK - Packet loss = 0%, RTA = 1.07 ms
localhost
UP
09-26-2024 16:15:33
0d 7h 8m 53s
PING OK - Packet loss = 0%, RTA = 0.05 ms
Results 1 - 2 of 2 Matching Hosts