

Experiment 10

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

Step 1: Initially confirm that Nagios is running on the server side. For this run the following command - `sudo systemctl status nagios` on the nagios-host instance.

```
root@ip-172-31-93-157 nagios-plugins-2.0.3# sudo systemctl status nagios
● nagios.service - LSB: Starts and stops the Nagios monitoring Server
   Loaded: loaded (/usr/lib/systemd/system/nagios.service; generated)
   Active: active (running) since Mon 2024-09-30 18:02:27 UTC; 42s ago
     Docs: man:systemd-sysv-generator(8).
  Process: 79969 ExecStart=/etc/rc.d/init.d/nagios start (code=exited, status=0/SUCCESS)
    Tasks: 6 (limit: 1112)
   Memory: 2.2M
      CPU: 52ms
  CGroup: /system.slice/nagios.service
          └─80009 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
             └─80011 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                └─80012 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                   └─80013 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                      └─80014 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                         └─80037 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg

Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: wproc: Successfully registered manager as @wproc with query handler
Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: wproc: Registry request: name=Core Worker 80011:pid=80011
Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: wproc: Registry request: name=Core Worker 80014:pid=80014
Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: wproc: Registry request: name=Core Worker 80013:pid=80013
Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: wproc: Registry request: name=Core Worker 80012:pid=80012
Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: WARNING: The normal_check_interval attribute is deprecated and will be removed in future versions. Please see the documentation for details.
Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: WARNING: The retry_check_interval attribute is deprecated and will be removed in future versions. Please see the documentation for details.
Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: WARNING: The retry_check_interval attribute is deprecated and will be removed in future versions. Please see the documentation for details.
Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: Successfully launched command file worker with pid 80037
lines 1-26/26 (END)
```

i-025f1d18f7c8a8cda (nagios-host)

PublicIPs: 3.86.198.73 PrivateIPs: 172.31.93.157

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Step 2: Once confirmed, make another instance with the same security group as that of nagios-host. **For now, leave this machine as it is, and go back to your nagios-host machine.**

EC2 Dashboard
EC2 Global View
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Console-to-Code [Preview](#)

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Lifecycle Manager

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Security Groups
Elastic IPs

Security group name
launch-wizard-14

Security group ID
sg-0455135daa934e321

Description
launch-wizard-14 created 2024-09-30T18:26:54.458Z

VPC ID
vpc-0ec7dea564d6f7acf

Owner
856746069793

Inbound rules count
7 Permission entries

Outbound rules count
1 Permission entry

Inbound rules Outbound rules Tags

Inbound rules (7)

Search

< 1 > ⌕

<input type="checkbox"/>	Name	Security group rule...	IP version	Type	Protocol	Port range
<input type="checkbox"/>	-	sg-01439baf13aca75fa	IPv6	All ICMP - IPv6	IPv6 ICMP	All
<input type="checkbox"/>	-	sg-07d8ce2ac9f5e6a92	IPv4	All traffic	All	All
<input type="checkbox"/>	-	sg-071fd6724622dd2...	IPv4	HTTPS	TCP	443
<input type="checkbox"/>	-	sg-0e47c6681768287...	IPv4	SSH	TCP	22
<input type="checkbox"/>	-	sg-0f594249495210d...	IPv4	Custom TCP	TCP	5666
<input type="checkbox"/>	-	sg-07b7ba4fe03f14614	IPv4	HTTP	TCP	80
<input type="checkbox"/>	-	sg-0fcb4849f80ee0409	IPv4	All ICMP - IPv4	ICMP	All

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Step 3: Now run the following command - `ps -ef | grep nagios`

```
Active: active (running) since Mon 2024-09-30 18:02:27 UTC; 42s ago
Docs: man:sysd-sysv-generator(8)
Process: 79969 ExecStart=/etc/rc.d/init.d/nagios start (code=exited, status=0/SUCCESS)
Tasks: 6 (limit: 1112)
Memory: 2.2M
CPU: 52ms
CGroup: /system.slice/nagios.service
└─80009 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
└─80011 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
└─80012 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
└─80013 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
└─80014 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
└─80037 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg

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Sep 30 18:02:27 ip-172-31-93-157.ec2.internal nagios[80009]: Successfully launched command file worker with pid 80037

[root@ip-172-31-93-157 nagios-plugins-2.0.3]# ps -ef | grep nagios
nagios 80009 1 0 18:02 ? 00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
nagios 80011 80009 0 18:02 ? 00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios 80012 80009 0 18:02 ? 00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios 80013 80009 0 18:02 ? 00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios 80014 80009 0 18:02 ? 00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios 80037 80009 0 18:02 ? 00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
root 81960 3110 0 18:35 pts/1 00:00:00 grep --color=auto nagios

[root@ip-172-31-93-157 nagios-plugins-2.0.3]#
```

Step 4: Now, run the following commands -

`sudo su`

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

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

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

```
root@ip-172-31-93-157 nagios-plugins-2.0.3# sudo su
root@ip-172-31-93-157 nagios-plugins-2.0.3# mkdir /usr/local/nagios/etc/objects/monitorhosts
root@ip-172-31-93-157 nagios-plugins-2.0.3# mkdir /usr/local/nagios/etc/objects/monitorhosts/linuxhosts
root@ip-172-31-93-157 nagios-plugins-2.0.3# cp /usr/local/nagios/etc/objects/localhost.cfg
/usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg
cp: missing destination file operand after '/usr/local/nagios/etc/objects/localhost.cfg'
Try 'cp --help' for more information.
bash: /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg: No such file or directory
root@ip-172-31-93-157 nagios-plugins-2.0.3# nano
/usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg
bash: /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg: No such file or directory
root@ip-172-31-93-157 nagios-plugins-2.0.3# cp /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg
/usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg
cp: missing destination file operand after '/usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg'
Try 'cp --help' for more information.
root@ip-172-31-93-157 nagios-plugins-2.0.3# cp /usr/local/nagios/etc/objects/localhost.cfg /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg
root@ip-172-31-93-157 nagios-plugins-2.0.3#
```

Step 5: Open linuxserver.cfg using the the following command -

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

Change the hostname to linuxserver (EVERYWHERE ON THE FILE)

Change address to the public IP address of your LINUX CLIENT.

Change hostgroup_name under hostgroup to linux-servers1

```
GNU nano 5.8 /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg Modified
# Example of how you can create configuration entries to monitor
# the local (Linux) machine.
#
#####
#
# 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          linux-server
    alias              linux-server
    address             3.95.202.23
}

#####

Help      Write Out  Where Is  Cut       Execute   Location  M-U Undo   M-J Set Mark  M-L To Bracket  M-; Previous
Exit      Read File  Replace   Paste     Justify   Go To Line M-R Redo   M-C Copy   M-W Where Was  M-N Next

i-025f1d18f7c8a8cda (nagios-host)
PublicIPs: 3.86.198.73 PrivateIPs: 172.31.93.157

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```

```
GNU nano 5.8 /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg Modified
check_command      check_local_swap!20!10
}

# Define a service to check SSH on the local machine.
# Disable notifications for this service by default, as not all users may have SSH enabled.

define service{
    use                local-service      ; Name of service template to use
    host_name          linuxserver
    service_description SSH
    check_command       check_ssh
    notifications_enabled 0
}

# Define a service to check HTTP on the local machine.
# Disable notifications for this service by default, as not all users may have HTTP enabled.

define service{
    use                local-service      ; Name of service template to use
    host_name          linuxserver
    service_description HTTP
    check_command       check_http
    notifications_enabled 0
}

}

Help      Write Out  Where Is  Cut       Execute   Location  M-U Undo   M-J Set Mark  M-L To Bracket  M-; Previous
Exit      Read File  Replace   Paste     Justify   Go To Line M-R Redo   M-C Copy   M-W Where Was  M-N Next

i-025f1d18f7c8a8cda (nagios-host)
PublicIPs: 3.86.198.73 PrivateIPs: 172.31.93.157

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```

Step 6: Open Nagios config file and add the following line -
nano /usr/local/nagios/etc/nagios.cfg

Then add this line -
cfg_dir=/usr/local/nagios/etc/objects/monitorhosts/

```
GNU nano 5.8 /usr/local/nagios/etc/nagios.cfg Modified
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/[]

Help Write Out Where Is Cut Execute Location M-U Undo M-T Set Mark M-] To Bracket M-; Previous
Exit Read File Replace Paste Justify Go To Line M-B Redo M-C Copy M-^ Where Was M-~ Next

i-025f1d18f7c8a8cda (nagios-host)
PublicIPs: 3.86.198.73 PrivateIPs: 172.31.93.157

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```

Step 8: Verify configuration files using the following command -
`sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg`

If there are no errors, run the following command -
`sudo service nagios start`

```
[root@ip-172-31-93-157 nagios-plugins-2.0.3]# nano /usr/local/nagios/etc/nagios.cfg
[root@ip-172-31-93-157 nagios-plugins-2.0.3]# nano /usr/local/nagios/etc/nagios.cfg
[root@ip-172-31-93-157 nagios-plugins-2.0.3]# /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

Nagios Core 4.4.6
Copyright (c) 2009-present Nagios Core Development Team and Community Contributors
Copyright (c) 1999-2009 Ethan Galstad
Last Modified: 2020-04-28
License: GPL

Website: https://www.nagios.org
Reading configuration data...
  Read main config file okay...
WARNING: The normal_check_interval attribute is deprecated and will be removed in future versions. Please use check_interval instead.
WARNING: The retry_check_interval attribute is deprecated and will be removed in future versions. Please use retry_interval instead.
WARNING: The normal_check_interval attribute is deprecated and will be removed in future versions. Please use check_interval instead.
WARNING: The retry_check_interval attribute is deprecated and will be removed in future versions. Please use retry_interval instead.
Error: Could not find any host matching 'linuxserver' (config file '/usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg', starting on line 45)
Error: Could not expand members specified in hostgroup (config file '/usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg', starting on line 45)
  Error processing object config files!

***> One or more problems was encountered while processing the config files...

  Check your configuration file(s) to ensure that they contain valid
  directives and data definitions.  If you are upgrading from a previous
  version of Nagios, you should be aware that some variables/definitions
  may have been removed or modified in this version.  Make sure to read
  the HTML documentation regarding the config files, as well as the
  'Whats New' section to find out what has changed.

[root@ip-172-31-93-157 nagios-plugins-2.0.3]# []

i-025f1d18f7c8a8cda (nagios-host)
PublicIPs: 3.86.198.73 PrivateIPs: 172.31.93.157

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```

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Instances (1/1) info Last updated about 1 hour ago [Refresh](#) [Connect](#) [Instance state ▾](#) [Actions ▾](#) [Launch instances ▾](#)

Q Find Instance by attribute or tag (case-sensitive) All states ▾

Instance state = running X Clear filters

<input checked="" type="checkbox"/>	Name ↗	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
<input checked="" type="checkbox"/>	nagios-host	i-025f1d18f7c8a8cda	● Running 🔍	t2.micro	✔️ 2/2 checks passed	View alarms +	us-east-1c	ec2-3-86-

i-025f1d18f7c8a8cda (nagios-host)

[Details](#) | [Status and alarms](#) | [Monitoring](#) | [Security](#) | [Networking](#) | [Storage](#) | [Tags](#)

Instance summary info

Instance ID
 i-025f1d18f7c8a8cda (nagios-host)

IPv6 address
-

Hostname type
IP name: ip-172-31-93-157.ec2.internal

Answer private resource DNS name

✔️ Public IPv4 address copied

3.86.198.73 | [open address 🔗](#)

Instance state
● Running

Private IP DNS name (IPv4 only)
 ip-172-31-93-157.ec2.internal

Instance type

Private IPv4 addresses
 172.31.93.157

Public IPv4 DNS
 ec2-3-86-198-73.compute-1.amazonaws.com | [open address 🔗](#)

Elastic IP addresses

← ↻ ⚠ Not secure 3.86.198.73/nagios/ ☆ [4] 🔄 📄 ⭐ 🗂 🛡 ⌵ 🌐

Nagios®

General

Home

Documentation

Current Status

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Summary

Grid

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Current Network Status

Last Updated: Mon Sep 30 19:13:49 UTC 2024

Updated every 30 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

6 1 0 1 8

All Problems All Types

2 16

Host Status Details For All Host Groups

Limit Results: 100 ▾

Host ★★

Status ★★

Last Check ★★

Duration ★★

Status Information

linuxserver 🖥 UP 09-30-2024 19:13:16 0d 0h 0m 33s+ PING OK - Packet loss = 0%, RTA = 1.82 ms

localhost 🖥 UP 09-30-2024 19:01:49 0d 1h 11m 22s PING OK - Packet loss = 0%, RTA = 0.04 ms

Results 1 - 2 of 2 Matching Hosts

Page Timer