

Here in the document nagios host machine (interchangibly also referred as exp9 machine or host machine) refers to the instance which was connected to the terminal in previous experiment.

(so if the previous instance was closed do connect with that instance and run the httpd status command to check whether the apache server was closed. if its closed run the start httpd command (google it or use ctrl+f to search for the key word in previous doc).)

And the client machine refers to the machine created just for this experiment.

Steps

1) Launch an instance

Launch an ec2 instance.

Select Ubuntu as the os give a meaningful name of the instance.

The screenshot shows the AWS Management Console interface for launching an EC2 instance. The main heading is "Launch an instance". Below it, there's a brief description: "Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below."

The "Name and tags" section has a text input field for the instance name, which is "exp10client". There's a link "Add additional tags" next to it.

The "Application and OS Images (Amazon Machine Image)" section is expanded. It contains a search bar with the placeholder text "Search our full catalog including 1000s of application and OS images". Below the search bar, there are two tabs: "Recents" and "Quick Start". Under the "Quick Start" tab, there's a grid of AMIs. The "Ubuntu" AMI is highlighted with a blue border. Other AMIs visible include "Amazon Linux", "macOS", "Windows", "Red Hat", and "SUSE Linux".

On the right side, there's a "Summary" section. It shows the following details:

- Number of instances: 1
- Software Image (AMI): Canonical, Ubuntu, 24.04, ami-0e86e20dae9224db8
- Virtual server type (instance type): t2.micro
- Firewall (security group): launch-wizard-5
- Storage (volumes): 1 volume(s) - 8 GiB

At the bottom of the summary section, there's a "Free tier" notice: "Free tier: In your first 750 hours of t2.micro in the Regions in which unavailable) instance tier AMIs per month, public IPv4 address 1 month, 30 GiB of EBS, 1 million I/Os, 1 GB of S3, 100 GB of bandwidth internet."

At the bottom right of the console, there's a "Cancel" button.

Select the same security group as given to the exp9 machine.

▼ Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Search our full catalog including 1000s of application and OS images

Recents

Quick Start

Amazon Linux

aws

macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SUSE Linux

SUSE

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type
ami-0e86e20dae9224db8 (64-bit (x86)) / ami-096ea6a12ea24a797 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Description

Ubuntu Server 24.04 LTS (HVM),EBS General Purpose (SSD) Volume Type. Support available from Canonical (<http://www.ubuntu.com/cloud/services>).

Architecture

AMI ID

Username

64-bit (x86)

ami-0e86e20dae9224db8

ubuntu

Verified provider

▼ Summary

Number of instances
1

Software Image
Canonical, Ubuntu
ami-0e86e20dae9224db8

Virtual server type
t2.micro

Firewall (security group)
launch-wizard-1

Storage (volumes)
1 volume(s) - 8 GB

Free tier

750 hours per month
the Region
unavailable
tier AMI
public if
month,
million
100 GB
internet

Cancel

Make sure to select the same key-pair login used in the exp9 machine.

▼ Key pair (login) Info

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

nagios_exp_9

Create new key pair

▼ Network settings Info

Edit

Network

Info

vpc-07b6966cbfba88ee3

Subnet

Info

No preference (Default subnet in any availability zone)

Auto-assign public IP

Info

Enable

Additional charges apply when outside of free tier allowance

Firewall (security groups)

Info

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

Create security group

Select existing security group

Common security groups

Info

Select security groups

Software Image
Canonical, Ubuntu
ami-0e86e20dae9224db8

Virtual server type
t2.micro

Firewall (security group)
launch-wizard-1

Storage (volumes)
1 volume(s)

Free tier

750 hours per month
the Region
unavailable
tier AMI
public if
month,
million
100 GB
internet

Cancel

click on launch instance.

Now connect with this client machine using the ssh through your terminal(open a new terminal in your local machine and we will need both of the terminals open)

The screenshot shows the AWS Management Console. The top section displays a list of EC2 instances. The bottom section shows the 'Connect to instance' page for the instance with ID `i-0994ca5a178801a54` (named `exp10client`).

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
Master	i-0ab175e9c60cc3a23	Running	t2.micro	2/2 checks passed	View alarms	us-east-1b	ec2-3-82-156-160.com...
node-1	i-08ad30b7114767ca2	Running	t2.micro	2/2 checks passed	View alarms	us-east-1b	ec2-3-85-110-80.comp...
node-2	i-03c70d364fb762af5	Running	t2.micro	2/2 checks passed	View alarms	us-east-1b	ec2-54-226-209-38.co...
nagios_host_e...	i-0820376be204a7fcb	Running	t2.micro	2/2 checks passed	View alarms	us-east-1b	ec2-54-224-175-95.co...
exp10client	i-0994ca5a178801a54	Running	t2.micro	Initializing	View alarms	us-east-1b	ec2-54-173-58-143.co...

Connect to instance

Connect to your instance `i-0994ca5a178801a54` (`exp10client`) using any of these options

- EC2 Instance Connect
- Session Manager
- SSH client**
- EC2 serial console

Instance ID
`i-0994ca5a178801a54` (`exp10client`)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is `nagios_exp_9.pem`
3. Run this command, if necessary, to ensure your key is not publicly viewable.
`chmod 400 "nagios_exp_9.pem"`
4. Connect to your instance using its Public DNS:
`ec2-54-173-58-143.compute-1.amazonaws.com`

✓ Command copied

`ssh -i "nagios_exp_9.pem" ubuntu@ec2-54-173-58-143.compute-1.amazonaws.com`

Note: In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel

Note to change the path of the .pem file.

```

Host Client
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.

Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\Lenovo> ssh -i "C:\Users\Lenovo\Downloads\nagios_exp_9.pem" ubuntu@ec2-54-173-58-143.compute-1.amazonaws.com

The authenticity of host 'ec2-54-173-58-143.compute-1.amazonaws.com (54.173.58.143)' can't be established.
ED25519 key fingerprint is SHA256:IA3XH7f011spK084wDcZFmqRgNn0iJZ7itI2pBMmHP4.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-173-58-143.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.8.0-1012-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/pro

System information as of Sat Sep 28 10:43:28 UTC 2024

System load: 0.01          Processes:              107
Usage of / : 22.8% of 6.71GB Users logged in:                0
Memory usage: 19%         IPv4 address for enX0: 172.31.82.77

```

2) Go to nagios host machine (Host machine)

Perform the following commands

`ps -ef | grep nagios`

```

Host Client
[ec2-user@ip-172-31-80-137 ~]$ ps -ef | grep nagios
nagios      3152      1   0 08:36 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
nagios      3153    3152   0 08:36 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios      3154    3152   0 08:36 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios      3155    3152   0 08:36 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios      3156    3152   0 08:36 ?        00:00:00 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
nagios      3160    3152   0 08:36 ?        00:00:00 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
ec2-user    11528   2972   0 10:44 pts/0    00:00:00 grep --color=auto nagios
[ec2-user@ip-172-31-80-137 ~]$

```

`sudo su`

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

```

[root@ip-172-31-80-137 ec2-user]# mkdir -p /usr/local/nagios/etc/objects/monitorhosts/linuxhosts
[root@ip-172-31-80-137 ec2-user]# ls

```

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

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

```

[root@ip-172-31-80-137 ec2-user]# 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`

```

[root@ip-172-31-80-137 ec2-user]# nano /usr/local/nagios/etc/objects/monitorhosts/linuxhosts/linuxserver.cfg

```

Change hostname and alias to linuxserver

Change address to public ip address of client instance (Ubuntu)

instance) you can get the ip address by clicking on the instance id on the instances section there you will get the public ipv4 address

Instance summary for i-0994ca5a178801a54 (exp10client)
Updated less than a minute ago

Instance ID: i-0994ca5a178801a54 (exp10client)

IPv6 address: -

Hostname type: IP name: ip-172-31-82-77.ec2.internal

Answer private resource DNS name: IPv4 (A)

Auto-assigned IP address: -

Public IPv4 address copied

54.173.58.143 | [open address](#)

Instance state: Running

Private IP DNS name (IPv4 only): ip-172-31-82-77.ec2.internal

Instance type: t2.micro

VPC ID: -

Private IPv4 addresses: 172.31.82.77

Public IPv4 DNS: ec2-54-173-58-143.compute-1.amazonaws.com | [open address](#)

Elastic IP addresses: -

AWS Compute Optimizer finding: -

```
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
                                                         ; in (or inherited by) the linuxserver host
    host_name          linuxserver
    alias              linuxserver
    address            54.173.58.143
}
```

Change hostgroup_name to linux-servers1

```
# 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           localhost                    ; Comma separated list of hosts
}
|
```

Change the occurrences of hostname further in the document from localhost to linuxserver
example like:

```
host_name          localhost
service_description
```

changed to

```
define service {  
    use                local-service           ; Name of service template  
    host_name          linuxserver  
    service_description PING  
    check_command       check_ping!100.0,20%!500.0,60%  
}
```

This is the last one

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

now ctrl+O and enter to save and then ctrl+X for exiting.

Open nagios configuration file and add the line shown below
nano /usr/local/nagios/etc/nagios.cfg

```
[root@ip-172-31-80-137 ec2-user]# nano /usr/local/nagios/etc/nagios.cfg
```

##Add this line below the opened nano interface where similar lines are commented.
cfg_dir=/usr/local/nagios/etc/objects/monitorhosts/

```
GNU nano 5.8 /usr/local/nagios/etc/nagios.cfg
# These are the object configuration files in which you define hosts,
# host groups, contacts, contact groups, services, etc.
# You can split your object definitions across several config files
# if you wish (as shown below), or keep them all in a single config file.

# You can specify individual object config files as shown below:
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/

# OBJECT CACHE FILE
# This option determines where object definitions are cached when
# Nagios starts/restarts. The CGIs read object definitions from
```

ctrl+o and enter for saving and ctrl+x to exit nano editor.

Verify configuration files

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

```
[root@ip-172-31-80-137 ec2-user]# /usr/local/nagios/bin/nagios -v /usr/local/nagios
/etc/nagios.cfg

Nagios Core 4.5.5
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Copyright (c) 1999-2009 Ethan Galstad
Last Modified: 2024-09-17
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 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-172-31-80-137 ec2-user]# |
```

Restart nagios service.

service nagios restart

```
Things look okay - No serious problems were detected during the pre-flight check
[root@ip-172-31-80-137 ec2-user]# service nagios restart
Redirecting to /bin/systemctl restart nagios.service
[root@ip-172-31-80-137 ec2-user]# |
```

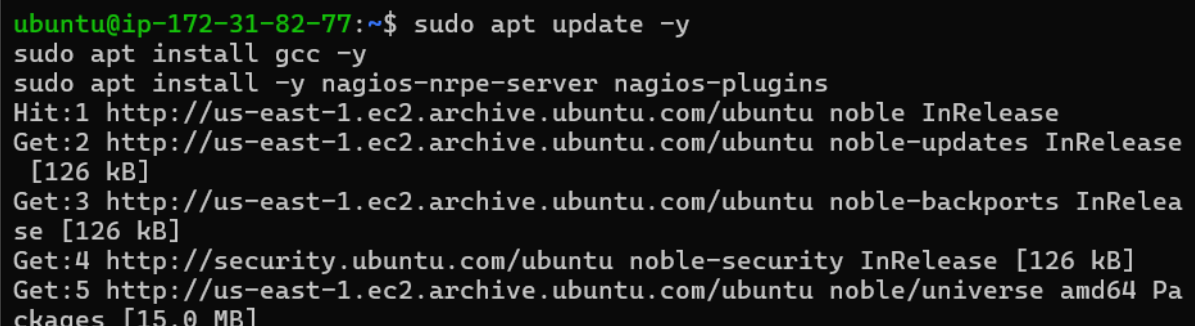
3) Go to client machine (ubuntu machine)

Perform the following commands

sudo apt update -y

sudo apt install gcc -y

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



```
Host Client
ubuntu@ip-172-31-82-77:~$ sudo apt update -y
sudo apt install gcc -y
sudo apt install -y nagios-nrpe-server nagios-plugins
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]
```



```
Running kernel seems to be up-to-date.

Restarting services...

Service restarts being deferred:
/etc/needrestart/restart.d/dbus.service
systemctl restart getty@tty1.service
systemctl restart networkd-dispatcher.service
systemctl restart serial-getty@ttyS0.service
systemctl restart systemd-logind.service
systemctl restart unattended-upgrades.service

No containers need to be restarted.

User sessions running outdated binaries:
ubuntu @ session #1: sshd[990,1101]
ubuntu @ user manager service: systemd[996]

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-82-77:~$ |
```

Open the nrpe.cfg file in nano editor
sudo nano /etc/nagios/nrpe.cfg

Under allowed_hosts, add the nagios host ip address (public)

```
# You can either supply a username or a UID.
#
# NOTE: This option is ignored if NRPE is running under either inetd or xinetd.
nrpe_user=nagios

# NRPE GROUP
# This determines the effective group that the NRPE daemon should run as.
# You can either supply a group name or a GID.
#
# NOTE: This option is ignored if NRPE is running under either inetd or xinetd.
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
# (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=127.0.0.1,54.224.175.95

# COMMAND ARGUMENT PROCESSING
# This option determines whether or not the NRPE daemon will allow clients
```

again save and exit the nano editor.

4) Go to nagios dashboard and click on hosts

Nagios®

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Nagios® Core™
✓ Daemon running with PID 13935

Nagios® Core™
Version 4.5.5
September 17, 2024
[Check for updates](#)

Get Started

- Start monitoring your infrastructure
- Change the look and feel of Nagios
- [Extend Nagios with hundreds of add-ons](#)
- Get support
- Get training
- Get certified

Quick Links

- [Nagios Library](#) (tutorials and docs)
- [Nagios Labs](#) (development blog)
- [Nagios Exchange](#) (plugins and add-ons)
- [Nagios Support](#) (tech support)
- [Nagios.com](#) (company)
- [Nagios.org](#) (project)

Latest News

Don't Miss...

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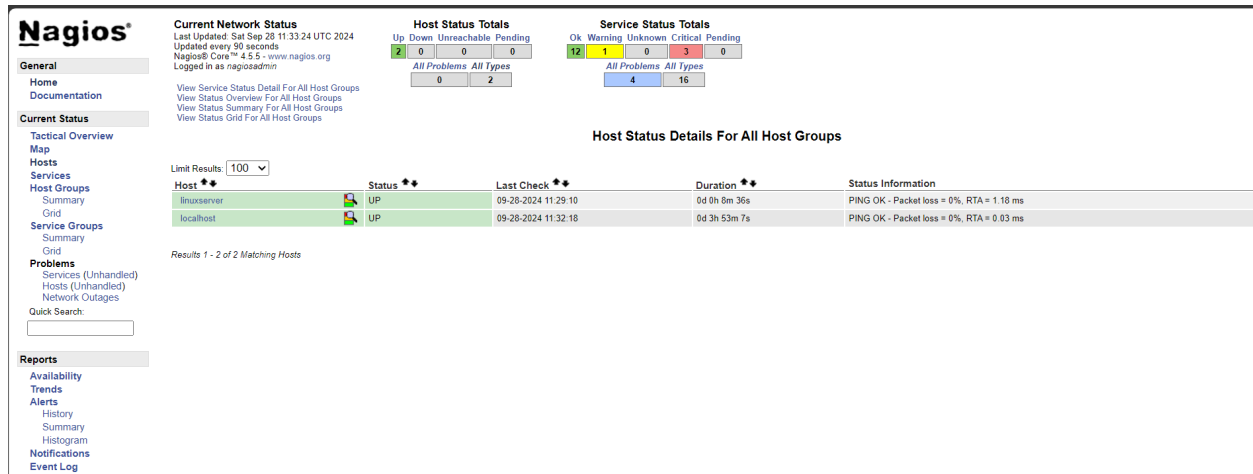
<https://go.nagios.com/nagioscore/extend>

Click on hosts

Current Status

Tactical Overview
Map
Hosts
Services
Host Groups

5) Click on linux server



Nagios®

Current Network Status
Last Updated: Sat Sep 28 11:33:24 UTC 2024
Updated every 90 seconds
Nagios® Core™ 4.5.5 - www.nagios.org
Logged in as nagiosadmin

Host Status Totals
Up: 2, Down: 0, Unreachable: 0, Pending: 0
All Problems: 0, All Types: 2

Service Status Totals
Ok: 12, Warning: 1, Unknown: 0, Critical: 3, Pending: 0
All Problems: 4, All Types: 16

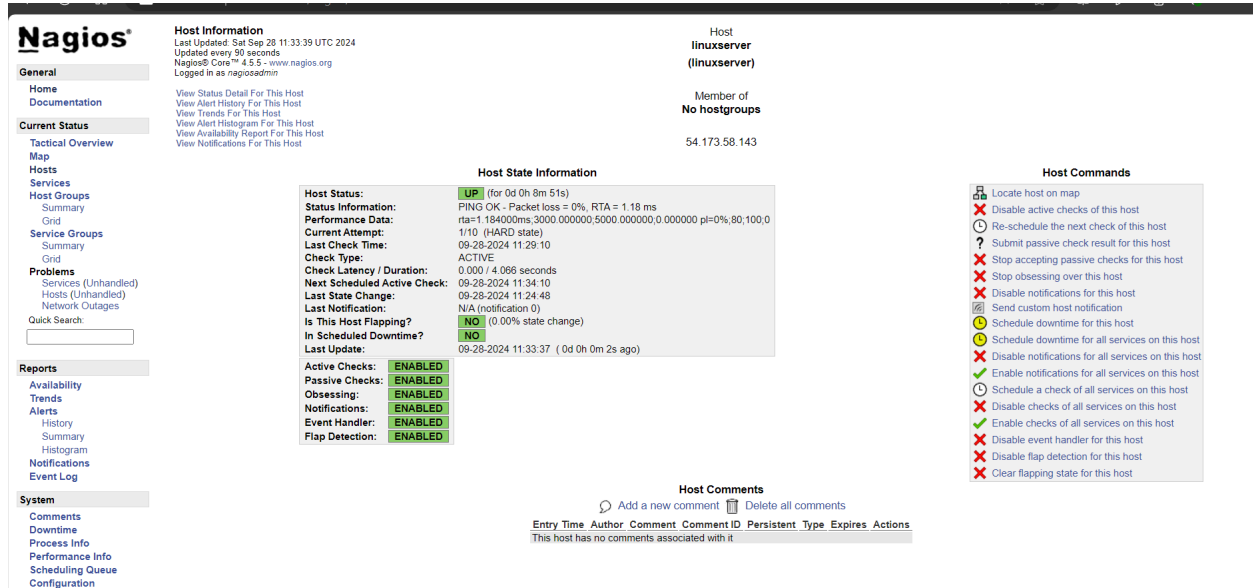
Host Status Details For All Host Groups

Host	Status	Last Check	Duration	Status Information
linuxserver	UP	09-28-2024 11:29:10	0d 0h 8m 36s	PING OK - Packet loss = 0%, RTA = 1.18 ms
localhost	UP	09-28-2024 11:32:18	0d 3h 53m 7s	PING OK - Packet loss = 0%, RTA = 0.03 ms

Results 1 - 2 of 2 Matching Hosts

Problems
Services (Unhandled)
Hosts (Unhandled)
Network Outages

Reports
Availability
Trends
Alerts
History
Summary
Histogram
Notifications
Event Log



Nagios®

Host Information
Last Updated: Sat Sep 28 11:33:39 UTC 2024
Updated every 90 seconds
Nagios® Core™ 4.5.5 - www.nagios.org
Logged in as nagiosadmin

Host
linuxserver
(linuxserver)

Member of
No hostgroups

54.173.58.143

Host State Information

Host Status: UP (for 0d 0h 8m 51s)
Status Information: PING OK - Packet loss = 0%, RTA = 1.18 ms
Performance Data: rta=1.184000ms,3000.000000,5000.000000,0.000000,pl=0%,80,100,0
1/10 (HARD state)
Current Attempt: 09-28-2024 11:29:10
Last Check Time: 09-28-2024 11:29:10
Check Type: ACTIVE
Check Latency / Duration: 0.000 / 4.066 seconds
Next Scheduled Active Check: 09-28-2024 11:34:10
Last State Change: 09-28-2024 11:24:48
Last Notification: N/A (notification 0)
Is This Host Flapping? NO (0.00% state change)
In Scheduled Downtime? NO
Last Update: 09-28-2024 11:33:37 (0d 0h 0m 2s ago)

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

Host Commands

- Locate host on map
- Disable active checks of this host
- Re-schedule the next check of this host
- Submit passive check result for this host
- Stop accepting passive checks for this host
- Stop obsessing over this host
- Disable notifications for this host
- Send custom host notification
- Schedule downtime for this host
- Schedule downtime for all services on this host
- Disable notifications for all services on this host
- Enable notifications for all services on this host
- Schedule a check of all services on this host
- Disable checks of all services on this host
- Enable checks of all services on this host
- Disable event handler for this host
- Disable flap detection for this host
- Clear flapping state for this host

Host Comments
Add a new comment Delete all comments

Entry Time	Author	Comment	Comment ID	Persistent	Type	Expires	Actions
This host has no comments associated with it							

System
Comments
Downtime
Process Info
Performance Info
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Configuration

6) Click on nagios services

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Current Network Status

Last Updated: Sat Sep 28 11:33:58 UTC 2024
Updated every 90 seconds
Nagios® Core™ 4.5.5 - www.nagios.org
Logged in as nagiosadmin

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

Service Status Details For All Hosts

Limit Results: 100

Host	Service	Status	Last Check	Duration	Attempt	Status Information
linuxserver	Current Load	OK	09-28-2024 11:30:25	0d 0h 8m 33s	1/4	OK - load average: 0.01, 0.00, 0.00
	Current Users	OK	09-28-2024 11:31:03	0d 0h 7m 55s	1/4	USERS OK - 2 users currently logged in
	HTTP	CRITICAL	09-28-2024 11:29:40	0d 0h 4m 18s	4/4	connect to address 54.173.58.143 and port 80: Connection refused
	PING	OK	09-28-2024 11:32:18	0d 0h 6m 40s	1/4	PING OK - Packet loss = 0%, RTA = 1.03 ms
	Root Partition	OK	09-28-2024 11:32:55	0d 0h 6m 3s	1/4	DISK OK - free space: / 6105 MiB (75.23% inode=98%)
	SSH	OK	09-28-2024 11:33:33	0d 0h 5m 25s	1/4	SSH OK - OpenSSH_9.6p1 Ubuntu-3ubuntu13.4 (protocol 2.0)
	Swap Usage	CRITICAL	09-28-2024 11:32:10	0d 0h 1m 48s	4/4	SWAP CRITICAL - 0% free (0 MB out of 0 MB) - Swap is either disabled, not present, or of zero size.
localhost	Total Processes	OK	09-28-2024 11:29:48	0d 0h 9m 10s+	1/4	PROCS OK: 37 processes with STATE = RSZDT
	Current Load	OK	09-28-2024 11:29:39	0d 3h 53m 5s	1/4	OK - load average: 0.02, 0.01, 0.00
	Current Users	OK	09-28-2024 11:30:17	0d 3h 52m 27s	1/4	USERS OK - 2 users currently logged in
	HTTP	WARNING	09-28-2024 11:29:46	0d 2h 49m 12s	4/4	HTTP WARNING: HTTP/1.1 403 Forbidden - 319 bytes in 0.001 second response time
	PING	OK	09-28-2024 11:31:32	0d 3h 51m 12s	1/4	PING OK - Packet loss = 0%, RTA = 0.03 ms
	Root Partition	OK	09-28-2024 11:32:09	0d 3h 50m 35s	1/4	DISK OK - free space: / 6105 MiB (75.23% inode=98%)
	SSH	OK	09-28-2024 11:32:47	0d 3h 49m 57s	1/4	SSH OK - OpenSSH_8.7 (protocol 2.0)
Total Processes	Swap Usage	CRITICAL	09-28-2024 11:31:24	0d 3h 12m 34s	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	09-28-2024 11:29:02	0d 3h 14m 56s	1/4	PROCS OK: 37 processes with STATE = RSZDT

Results 1 - 16 of 16 Matching Services

Conclusion:

In this lab, we successfully configured a monitoring setup between a Nagios host machine (referred to as "exp9 machine") and a client machine (created specifically for this experiment). The goal was to set up Nagios to monitor a remote Linux server, which involved configuring both the Nagios host and client machine (Ubuntu instance) in an EC2 environment.

We started by launching an Ubuntu EC2 instance as the client machine, ensuring that we used the same security group and key-pair as the Nagios host machine to maintain consistent access and permissions. After establishing SSH connections to both machines, we worked in parallel, using one terminal for the host and another for the client.

On the Nagios host machine, we created a new directory structure, then copied and modified the `localhost.cfg` file to set up a configuration for monitoring the remote client machine. This included specifying the public IP address of the client machine and updating the `hostgroup` and `hostname`. After editing the Nagios configuration file to recognize the new monitoring host directory, we verified the changes and restarted the Nagios service.

On the client machine, we installed the necessary Nagios packages (`nagios-nrpe-server` and `nagios-plugins`), configured the `nrpe.cfg` file, and allowed communication between the Nagios host and client by updating the `allowed_hosts` configuration.

After these steps, we were able to successfully monitor the remote Linux server from the Nagios dashboard, confirming that our setup was correct. This experiment demonstrated the core concepts of configuring Nagios to monitor a remote machine, providing practical insight into network monitoring and server management in a real-world scenario.

Errors and Solutions

During the setup, a few common issues were encountered:

1. **Apache Server Was Not Running:** When connecting to the Nagios host machine after restarting an instance, the Apache server was found to be inactive. This was resolved by running the `sudo service httpd start` command to restart the server, ensuring that the Nagios web interface was accessible.
2. **Directory Creation Issue:** While copying the configuration files, we initially encountered a "No such file or directory" error. This was resolved by creating the necessary directory structure (`/usr/local/nagios/etc/objects/monitorhosts/linuxhosts`) before proceeding with the file copy.
3. **NRPE Configuration Error:** On the client machine, forgetting to update the `allowed_hosts` field in the `nrpe.cfg` file with the Nagios host's public IP resulted in connectivity issues. This was fixed by editing the file to include the correct IP address.