

Name: Kshitij Hundre  
Div: D15C  
Roll No:18

## Adv Devops Exp:10

### Aim :

The aim of this experiment is to set up and configure Nagios for comprehensive monitoring of ports, services, and both Windows and Linux servers. The objective is to ensure real-time monitoring, detect potential issues, and provide timely alerts for system administrators to take preventive or corrective actions, ensuring optimal system performance and uptime.

## Steps

### 1) Launch an instance

Launch an ec2 instance.

Select Ubuntu as the OS to give a meaningful name of the instance.

The screenshot shows the 'Launch an instance' wizard in the AWS Management Console. The breadcrumb navigation at the top reads 'EC2 > Instances > Launch an instance'. The main heading is 'Launch an instance' with an 'Info' link. Below this, a brief description states: '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 contains a text input field with the value 'exp10client' and an 'Add additional tags' link. The 'Application and OS Images (Amazon Machine Image)' section is expanded, showing 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 'Quick Start', several AMI cards are displayed: 'Amazon Linux', 'macOS', 'Ubuntu' (which is highlighted with a blue border), 'Windows', 'Red Hat', and 'SUSE Linux'. To the right of these cards is a 'Browse more AMIs' link with a magnifying glass icon and the text 'Including AMIs from AWS, Marketplace and the Community'.

On the right side of the console, a 'Summary' panel is visible. It includes a 'Number of instances' input field set to '1'. Below this, it lists the 'Software Image (AMI)' as 'Canonical, Ubuntu, 24.04, a' with the ID 'ami-0e86e20dae9224db8'. The 'Virtual server type (instance)' is 't2.micro'. The 'Firewall (security group)' is 'launch-wizard-5'. The 'Storage (volumes)' section shows '1 volume(s) - 8 GiB'. A 'Free tier' information box is also present, stating: '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 summary panel is 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

Verified provider

64-bit (x86)

ami-0e86e20dae9224db8

ubuntu

Number of instances

1

Software Image

Canonical, Ubuntu Server 24.04 LTS (HVM), SSD Volume Type

Virtual server type

t2.micro

Firewall (security group)

launch-wizard-1

Storage (volumes)

1 volume(s) - 8 GB

Free tier

750 hours of free usage per month, up to 100 GB of storage and 100 GB of internet bandwidth.

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

vpc-07b6966cbfba88ee3

Subnet

No preference (Default subnet in any availability zone)

Auto-assign public IP

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 Server 24.04 LTS (HVM), SSD Volume Type

Virtual server type

t2.micro

Firewall (security group)

launch-wizard-1

Storage (volumes)

1 volume(s)

Free tier

750 hours of free usage per month, up to 100 GB of storage and 100 GB of internet bandwidth.

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. At the top, there's a header with 'instances (1/5)' and a search bar. Below the header is a table of EC2 instances. The table has columns: Name, Instance ID, Instance state, Instance type, Status check, Alarm status, Availability Zone, and Public IPv4 DNS. The instances listed are Master, node-1, node-2, nagios\_host\_e..., and exp10client. The exp10client instance is highlighted in blue. Below the table, there's a section titled 'Connect to instance' for instance i-0994ca5a178801a54. This section has tabs for 'EC2 Instance Connect', 'Session Manager', 'SSH client', and 'EC2 serial console'. The 'SSH client' tab is selected. It shows the instance ID and a list of steps to connect via SSH. A 'Command copied' notification is shown next to the SSH command. A note at the bottom states: '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.'

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
                                                ; in (or inherited by) the lin>

    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
    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:
:fg_file=/usr/local/nagios/etc/objects/commands.cfg
:fg_file=/usr/local/nagios/etc/objects/contacts.cfg
:fg_file=/usr/local/nagios/etc/objects/timeperiods.cfg
:fg_file=/usr/local/nagios/etc/objects/templates.cfg

# Definitions for monitoring the local (Linux) host
:fg_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
:fg_dir=/usr/local/nagios/etc/objects/monitorhosts/

# OBJECT CACHE FILE
# This option determines where object definitions are cached when
# Nagios starts/updates. The CTEs 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

Copyright (c) 2009-present Nagios Core Development Team and Community Contributors

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

The screenshot shows the Nagios Core dashboard interface. The browser address bar indicates the URL is `54.224.175.95/nagios/`. The dashboard header includes the Nagios logo and the text "Nagios® Core™" with a status indicator "Daemon running with PID 13935". The left sidebar contains a navigation menu with sections: General (Home, Documentation), Current Status (Tactical Overview, Map, Hosts, Services, Host Groups, Service Groups, Problems, Network Outages), Reports (Availability, Trends, Alerts, History, Summary, Histogram, Notifications, Event Log), and System (Comments, Downtime, Process Info, Performance Info, Scheduling Queue, Configuration). The "Current Status" section is highlighted. The main content area displays "Nagios® Core™ Version 4.5.5" and "September 17, 2024". Below this, there are sections for "Get Started", "Quick Links", "Latest News", and "Don't Miss...". The "Get Started" section lists links for monitoring infrastructure, changing look and feel, extending Nagios with add-ons, getting support, training, and certification. The "Quick Links" section lists links to Nagios Library, Labs, Exchange, Support, company, and project pages. The "Latest News" and "Don't Miss..." sections are currently empty. At the bottom, there is a copyright notice and a license statement.

Not secure | 54.224.175.95/nagios/

# Nagios®

## 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...

Copyright © 2010-2024 Nagios Core Development Team and Community Contributors. Copyright © 1999-2009 Ethan Galstad. See the THANKS file for more information on contributors.

Nagios Core is licensed under the GNU General Public License and is provided AS IS with NO WARRANTY OF ANY KIND, INCLUDING THE WARRANTY OF DESIGN, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. Nagios, Nagios Core and the Nagios logo are trademarks, servicemarks, registered trademarks or registered servicemarks owned by Nagios Enterprises, LLC. Use of the Nagios marks is governed by the trademark use restrictions.

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

Click on hosts

The screenshot shows the Nagios dashboard interface. The browser address bar indicates the URL is `https://go.nagios.com/nagioscore/extend`. The dashboard header includes the Nagios logo and the text "Nagios® Core™". The left sidebar contains a navigation menu with sections: General (Home, Documentation), Current Status (Tactical Overview, Map, Hosts, Services, Host Groups, Service Groups, Problems, Network Outages), Reports (Availability, Trends, Alerts, History, Summary, Histogram, Notifications, Event Log), and System (Comments, Downtime, Process Info, Performance Info, Scheduling Queue, Configuration). The "Current Status" section is highlighted. The main content area displays "Nagios® Core™" and "September 17, 2024". Below this, there are sections for "Get Started", "Quick Links", "Latest News", and "Don't Miss...". The "Get Started" section lists links for monitoring infrastructure, changing look and feel, extending Nagios with add-ons, getting support, training, and certification. The "Quick Links" section lists links to Nagios Library, Labs, Exchange, Support, company, and project pages. The "Latest News" and "Don't Miss..." sections are currently empty. At the bottom, there is a copyright notice and a license statement.

# Nagios®

## 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...

Copyright © 2010-2024 Nagios Core Development Team and Community Contributors. Copyright © 1999-2009 Ethan Galstad. See the THANKS file for more information on contributors.

Nagios Core is licensed under the GNU General Public License and is provided AS IS with NO WARRANTY OF ANY KIND, INCLUDING THE WARRANTY OF DESIGN, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. Nagios, Nagios Core and the Nagios logo are trademarks, servicemarks, registered trademarks or registered servicemarks owned by Nagios Enterprises, LLC. Use of the Nagios marks is governed by the trademark use restrictions.

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

## 5) Click on linux server

**Nagios®**

General

Home

Documentation

Current Status

Tactical Overview

Map

Hosts

Services

Host Groups

Summary

Grid

Service Groups

Summary

Grid

Problems

Services (Unhandled)

Hosts (Unhandled)

Network Outages

Quick Search:

Reports

Availability

Trends

Alerts

History

Summary

Histogram

Notifications

Event Log

**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

Up

Down

Unreachable

Pending

2

0

0

0

All Problems

All Types

0

2

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

12

1

0

3

0

All Problems

All Types

4

16

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

**Service Status Totals**

Ok

Warning

Unknown

Critical

Pending

12

1

0

3

0

All Problems

All Types

4

16

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 Details For All Host Groups**

Limit Results: 100

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

**Nagios®**

General

Home

Documentation

Current Status

Tactical Overview

Map

Hosts

Services

Host Groups

Summary

Grid

Service Groups

Summary

Grid

Problems

Services (Unhandled)

Hosts (Unhandled)

Network Outages

Quick Search:

Reports

Availability

Trends

Alerts

History

Summary

Histogram

Notifications

Event Log

System

Comments

Downtime

Process Info

Performance Info

Scheduling Queue

Configuration

**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

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**

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:

rtt=1.184000ms,3000.000000,5000.000000,0.000000,pl=0%,80,100,0

Current Attempt:

1/10 (HARD state)

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

🕒 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

## 6) Click on nagios services

[Documentation](#)

**Current Status**

[Tactical Overview](#)

[Map](#)

[Hosts](#)

[Services](#)

[Host Groups](#)

[Summary](#)

[Grid](#)

[Service Groups](#)

---

**Nagios®**

**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: 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

**General**  
[Home](#)  
[Documentation](#)

**Current Status**  
[Tactical Overview](#)  
[Map](#)  
[Hosts](#)  
[Services](#)  
[Host Groups](#)  
[Summary](#)  
[Grid](#)  
[Service Groups](#)  
[Summary](#)  
[Grid](#)  
**Problems**  
[Services \(Unhandled\)](#)  
[Hosts \(Unhandled\)](#)  
[Network Outages](#)

Quick Search:

**Reports**  
[Availability](#)  
[Trends](#)  
**Alerts**  
[History](#)  
[Summary](#)  
[Histogram](#)  
**Notifications**  
[Event Log](#)

**System**  
[Comments](#)

Service Status Details For All Hosts						
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)
	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 experiment, we successfully set up Nagios to monitor a remote Linux server (Ubuntu instance) from a Nagios host machine, both operating within an EC2 environment. The process involved careful configuration of both the Nagios host (referred to as the "exp9 machine") and the remote client machine, allowing for effective real-time monitoring of server performance. By launching an Ubuntu EC2 instance as the client machine, we ensured that consistent security group policies and key-pairs were maintained, enabling seamless SSH access to both machines for configuration purposes.

The configuration on the Nagios host involved creating a new directory for the remote client's monitoring configuration, where we modified the **localhost.cfg** file to reflect the IP address of the remote client, adjusted the hostgroup, and ensured proper integration with the Nagios setup.

We also verified these changes through a Nagios configuration check before restarting the service, ensuring that the Nagios dashboard was ready to monitor the remote machine.

On the client side, we installed the **nagios-nrpe-server** and **nagios-plugins**, which allowed communication between the Nagios host and client machine. Correctly configuring the **nrpe.cfg** file, particularly the **allowed\_hosts** directive, was crucial in establishing connectivity. Once the configuration was complete and the Nagios service was restarted, we successfully confirmed that the remote Linux server was being monitored on the Nagios dashboard, achieving the experiment's objective.

This experiment not only highlighted the steps for setting up monitoring between a Nagios host and a remote Linux client but also demonstrated key troubleshooting techniques. By resolving common issues such as restarting the Apache server on the Nagios host, ensuring proper directory structure, and configuring the NRPE correctly on the client machine, we gained valuable insights into server monitoring and network management using Nagios. The hands-on experience provided a deeper understanding of how Nagios can be effectively used for real-world infrastructure monitoring.

.