

Adv DevOps Practical 9

Aim: To Understand Continuous monitoring and Installation and configuration of Nagios Core, Nagios Plugins and NRPE (Nagios Remote Plugin Executor) on Linux Machine.

Theory:

What is Nagios?

Nagios is an open-source software for continuous monitoring of systems, networks, and infrastructures. It runs plugins stored on a server that is connected with a host or another server on your network or the Internet. In case of any failure, Nagios alerts about the issues so that the technical team can perform the recovery process immediately.

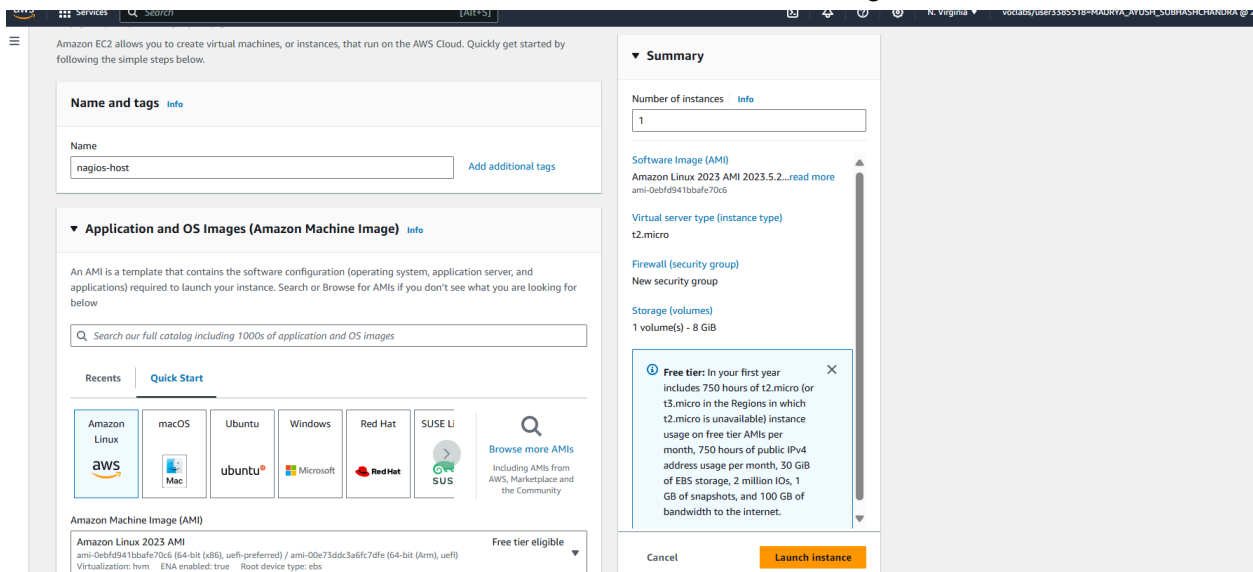
Nagios is used for continuous monitoring of systems, applications, service and business processes in a DevOps culture

Installation of Nagios

Prerequisites: AWS Free Tier

Steps:

1. Create an Amazon Linux EC2 Instance in AWS and name it - nagios-host



Instance type

t2.micro

Family: t2 1 vCPU 1 GiB Memory Current generation: true
On-Demand Windows base pricing: 0.0162 USD per Hour
On-Demand SUSE base pricing: 0.0116 USD per Hour
On-Demand RHEL base pricing: 0.026 USD per Hour
On-Demand Linux base pricing: 0.0116 USD per Hour

Free tier eligible

All generations

Compare instance types

Additional costs apply for AMIs with pre-installed software

Key pair (login)

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

exp_09

Create new key pair

Number of instances

1

Info

Software Image (AMI)

Amazon Linux 2023 AMI 2023.5.2...read more
ami-0ebfd941bbafc70c6

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or

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

We'll create a new security group called 'launch-wizard-3' with the following rules:

Allow SSH traffic from

Helps you connect to your instance

Anywhere

0.0.0.0/0

Allow HTTPS traffic from the internet

To set up an endpoint, for example when creating a web server

Allow HTTP traffic from the internet

To set up an endpoint, for example when creating a web server

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 750 hours of public IPv4 address usage per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of

EC2 Dashboard

EC2 Global View

Events

Console-to-Code

Instances

Instance Types

Launch Templates

Spot Requests

Savings Plans

Reserved Instances

Dedicated Hosts

Capacity Reservations

Images

AMIs

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Life cycle Manager

Successfully initiated stopping of i-0c67658f4d6ee88fc,i-0414d4f92af63c03e,i-0d57570c061c25ae1,i-075644ff15b74f611

Instances (1/5)

Find Instance by attribute or tag (case-sensitive)

All states

Last updated less than a minute ago

Connect

Instance state

Actions

Launch instances

	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4
<input checked="" type="checkbox"/>	nagios-host	i-0011127bfbdb2f467	Running	t2.micro	Initializing	View alarms	us-east-1d	ec2-44-204-11-28.compute-1.amazonaws.com	44.204.11...
<input type="checkbox"/>	Master	i-0c67658f4d6ee88fc	Stopped	t2.micro	2/2 checks passed	View alarms	us-east-1d	-	-
<input type="checkbox"/>	node1	i-0414d4f92af63c03e	Stopping	t2.micro	2/2 checks passed	View alarms	us-east-1d	ec2-54-159-206-1.compute-1.amazonaws.com	54.159.206...
<input type="checkbox"/>	node2	i-0d57570c061c25ae1	Stopping	t2.micro	2/2 checks passed	View alarms	us-east-1d	ec2-44-202-235-83.compute-1.amazonaws.com	44.202.235...
<input type="checkbox"/>	exp_4	i-075644ff15b74f611	Stopped	t2.micro	2/2 checks passed	View alarms	us-east-1d	-	-

i-0011127bfbdb2f467 (nagios-host)

Security groups

sg-09d51590eb1851b46 (launch-wizard-3)

IAM Role

-

Owner ID

217253764927

Launch time

Sun Sep 29 2024 12:25:44 GMT+0530 (India Standard Time)

2. Under Security Group, make sure HTTP, HTTPS, SSH, ICMP are open from everywhere.

Security Groups (6)

Find resources by attribute or tag

Actions

Export security groups to CSV

Create security group

	Name	Security group ID	Security group name	VPC ID	Description	Owner
<input type="checkbox"/>	-	sg-070583550d576c53e	launch-wizard-2	vpc-0d4c0d8f48c2e4508	launch-wizard-2 created 2024-09-27T...	217253764927
<input type="checkbox"/>	-	sg-030c0a1b62a1e9894	NodeGroup	vpc-0d4c0d8f48c2e4508		217253764927
<input type="checkbox"/>	-	sg-03f412e8ec9ec5946	launch-wizard-1	vpc-0d4c0d8f48c2e4508	launch-wizard-1 created 2024-09-27T...	217253764927
<input type="checkbox"/>	-	sg-000c20590a5551206	default	vpc-0d4c0d8f48c2e4508	default VPC security group	217253764927
<input type="checkbox"/>	-	sg-097fc30a345c1a537	MasterGroup	vpc-0d4c0d8f48c2e4508	Master	217253764927
<input type="checkbox"/>	-	sg-09d51590eb1851b46	launch-wizard-3	vpc-0d4c0d8f48c2e4508	launch-wizard-3 created 2024-09-29T...	217253764927

EC2 > Security Groups > sg-09d51590eb1851b46

sg-09d51590eb1851b46 - launch-wizard-3

Actions

Details

Security group name

launch-wizard-3

Security group ID

sg-09d51590eb1851b46

Description

launch-wizard-3 created 2024-09-29T06:49:51.498Z

VPC ID

vpc-0d4c0d8f48c2e4508

Owner

217253764927

Inbound rules count

1 Permission entry

Outbound rules count

1 Permission entry

Inbound rules

Outbound rules

Tags

Inbound rules (1)

Manage tags

Edit inbound rules

Search

Name

Security group rule...

IP version

Type

Protocol

Port range

Source

Description

-

sg-r0ec19557ab93305...

IPv4

SSH

TCP

22

0.0.0.0/0

-

Edit inbound rules

Inbound rules control the incoming traffic that's allowed to reach the instance.

Inbound rules

Security group rule ID

sg-r0ec19557ab9330565

Type

SSH

Protocol

TCP

Port range

22

Source

Custom

Description - optional

Delete

-

HTTP

TCP

80

Anywhere-I...

0.0.0.0/0

0.0.0.0/0

Delete

-

All ICMP - IPv6

IPv6 ICMP

All

Anywhere-I...

0.0.0.0/0

0.0.0.0/0

Delete

-

HTTPS

TCP

443

Anywhere-I...

0.0.0.0/0

0.0.0.0/0

Delete

-

All traffic

All

All

Anywhere-I...

0.0.0.0/0

0.0.0.0/0

Delete

-

Custom TCP

TCP

5666

Anywhere-I...

0.0.0.0/0

0.0.0.0/0

Delete

-

All ICMP - IPv4

ICMP

All

Anywhere-I...

0.0.0.0/0

0.0.0.0/0

Delete

Add rule

Security group name

launch-wizard-3

Security group ID

sg-09d51590eb1851b46

Description

launch-wizard-3 created 2024-09-29T06:49:51.498Z

VPC ID

vpc-0d4c0d8f48c2e4508

Owner

217253764927

Inbound rules count

7 Permission entries

Outbound rules count

1 Permission entry

Inbound rules

Outbound rules

Tags

Inbound rules (7)

Manage tags

Edit inbound rules

Search

Name

Security group rule...

IP version

Type

Protocol

Port range

Source

Description

-

sg-r034c50eeff5e5fa00

IPv4

All ICMP - IPv6

IPv6 ICMP

All

0.0.0.0/0

-

-

sg-r038d0d3791dfcc60e

IPv4

HTTPS

TCP

443

0.0.0.0/0

-

-

sg-r0e8ad1dd008b14...

IPv4

All ICMP - IPv4

ICMP

All

0.0.0.0/0

-

-

sg-r0ec19557ab93305...

IPv4

SSH

TCP

22

0.0.0.0/0

-

-

sg-r00a0e56d560959f45

IPv4

HTTP

TCP

80

0.0.0.0/0

-

-

sg-r064c062d69916fa84

IPv4

Custom TCP

TCP

5666

0.0.0.0/0

-

-

sg-r0613b7b6aa9d30def

IPv4

All traffic

All

All

0.0.0.0/0

-

You have to edit the inbound rules of the specified Security Group for this.

3. SSH into Your EC2 instance or simply use EC2 Instance Connect from the browser.

Connect to instance [Info](#)

Connect to your instance i-0011127bbfdb2f467 (nagios-host) using any of these options


EC2 Instance Connect



Session Manager

SSH client


EC2 serial console


Instance ID

 i-0011127bbfdb2f467 (nagios-host)

1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is exp_09.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.
 `chmod 400 "exp_09.pem"`
4. Connect to your instance using its Public DNS:
 `ec2-44-204-11-28.compute-1.amazonaws.com`

Example:

 `ssh -i "exp_09.pem" ec2-user@ec2-44-204-11-28.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.

Or open command prompt and paste ssh command.

```
Microsoft Windows [Version 10.0.22631.4169]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Ayush Maurya>ssh -i "Downloads/exp_09.pem" ec2-user@ec2-44-204-11-28.compute-1.amazonaws.com
The authenticity of host 'ec2-44-204-11-28.compute-1.amazonaws.com (44.204.11.28)' can't be established.
ED25519 key fingerprint is SHA256:v20KH/ezL9iu7/RT6m8LWkgWzEJnnQIqrG9gKWzc14.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-44-204-11-28.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
```

```
#
~_#####      Amazon Linux 2023
~~_#####
~~_###|
~~_\#/
~~~~V~'->      https://aws.amazon.com/linux/amazon-linux-2023
~~~~
~~~~_-'
~~~~_-/_
~~~~_/m/'
```

```
Last login: Sun Sep 29 07:11:40 2024 from 18.206.107.27
[ec2-user@ip-172-31-91-91 ~]$
```

```
sudo yum update
```

```
[ec2-user@ip-172-31-91-91 ~]$ sudo yum update
Last metadata expiration check: 0:19:03 ago on Sun Sep 29 06:56:15 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-91-91 ~]$
```

sudo yum install httpd php

```
[ec2-user@ip-172-31-91-91 ~]$ sudo yum install httpd php
Last metadata expiration check: 0:19:29 ago on Sun Sep 29 06:56:15 2024.
Dependencies resolved.
=====
Package                               Architecture      Version           Repository        Size
=====
Installing:
httpd                                x86_64            2.4.62-1.amzn2023.0.1    amazonlinux        48 k
php8.3                              x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        10 k
Installing dependencies:
apr                                x86_64            1.7.2-2.amzn2023.0.2     amazonlinux        129 k
apr-util                            x86_64            1.6.3-1.amzn2023.0.1     amazonlinux        98 k
generic-logos-httpd                 noarch            18.0.0-12.amzn2023.0.3   amazonlinux        19 k
httpd-core                           x86_64            2.4.62-1.amzn2023        amazonlinux        1.4 M
httpd-filesystem                     noarch            2.4.62-1.amzn2023        amazonlinux        14 k
httpd-tools                          x86_64            2.4.62-1.amzn2023        amazonlinux        81 k
libbrotli                            x86_64            1.0.9-4.amzn2023.0.2     amazonlinux        315 k
libsodium                           x86_64            1.0.19-4.amzn2023        amazonlinux        176 k
libxslt                              x86_64            1.1.34-5.amzn2023.0.2    amazonlinux        241 k
mailcap                              noarch            2.1.49-3.amzn2023.0.3    amazonlinux        33 k
nginx-filesystem                     noarch            1:1.24.0-1.amzn2023.0.4   amazonlinux        9.8 k
php8.3-cli                           x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        3.7 M
php8.3-common                        x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        737 k
php8.3-process                       x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        45 k
php8.3-xml                           x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        154 k
Installing weak dependencies:
apr-util-openssl                     x86_64            1.6.3-1.amzn2023.0.1     amazonlinux        17 k
mod_http2                           x86_64            2.0.27-1.amzn2023.0.3     amazonlinux        166 k
mod_lua                             x86_64            2.4.62-1.amzn2023        amazonlinux        61 k
php8.3-fpm                          x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        1.9 M
php8.3-mbstring                     x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        528 k
php8.3-opcache                       x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        379 k
php8.3-pdo                           x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        89 k
php8.3-sodium                       x86_64            8.3.10-1.amzn2023.0.1    amazonlinux        41 k
Transaction Summary
=====
Total                                                                    22 MB/s | 10 MB    00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      : php8.3-common-8.3.10-1.amzn2023.0.1.x86_64                1/1
  Installing     : httpd-2.4.62-1.amzn2023.0.1.x86_64                      1/25
  Installing     : apr-1.7.2-2.amzn2023.0.2.x86_64                        2/25
  Installing     : apr-util-openssl-1.6.3-1.amzn2023.0.1.x86_64            3/25
  Installing     : apr-util-1.6.3-1.amzn2023.0.1.x86_64                    4/25
  Installing     : mailcap-2.1.49-3.amzn2023.0.3.noarch                     5/25
  Running scriptlet: httpd-filesystem-2.4.62-1.amzn2023.noarch              6/25
```

sudo yum install gcc glibc glibc-common

```
[ec2-user@ip-172-31-91-91 ~]$ sudo yum install gcc glibc glibc-common
Last metadata expiration check: 0:20:41 ago on Sun Sep 29 06:56:15 2024.
Package glibc-2.34-52.amzn2023.0.11.x86_64 is already installed.
Package glibc-common-2.34-52.amzn2023.0.11.x86_64 is already installed.
Dependencies resolved.
=====
Package                               Architecture      Version           Repository        Size
=====
Installing:
gcc                                x86_64            11.4.1-2.amzn2023.0.2     amazonlinux        32 M
Installing dependencies:
annobin-docs                       noarch            10.93-1.amzn2023.0.1       amazonlinux        92 k
annobin-plugin-gcc                  x86_64            10.93-1.amzn2023.0.1       amazonlinux        887 k
cpp                                x86_64            11.4.1-2.amzn2023.0.2     amazonlinux        10 M
gc                                   x86_64            8.0.4-5.amzn2023.0.2      amazonlinux        105 k
glibc-devel                          x86_64            2.34-52.amzn2023.0.11     amazonlinux        27 k
glibc-headers-x86                   noarch            2.34-52.amzn2023.0.11     amazonlinux        427 k
guile22                             x86_64            2.2.7-2.amzn2023.0.3      amazonlinux        6.4 M
kernel-headers                       x86_64            6.1.109-118.189.amzn2023  amazonlinux        1.4 M
libbpc                              x86_64            1.2.1-2.amzn2023.0.2      amazonlinux        62 k
libtool-ltdl                         x86_64            2.4.7-1.amzn2023.0.3      amazonlinux        38 k
libxcrypt-devel                     x86_64            4.4.33-7.amzn2023.0.4     amazonlinux        32 k
make                                 x86_64            1:4.3-5.amzn2023.0.2      amazonlinux        534 k
Transaction Summary
=====
Install 13 Packages
Total download size: 52 M

Installed:
  annobin-docs-10.93-1.amzn2023.0.1.noarch
  gcc-11.4.1-2.amzn2023.0.2.x86_64
  glibc-headers-x86-2.34-52.amzn2023.0.11.noarch
  libbpc-1.2.1-2.amzn2023.0.2.x86_64
  make-1:4.3-5.amzn2023.0.2.x86_64
  annobin-plugin-gcc-10.93-1.amzn2023.0.1.x86_64
  gcc-11.4.1-2.amzn2023.0.2.x86_64
  guile22-2.2.7-2.amzn2023.0.3.x86_64
  libtool-ltdl-2.4.7-1.amzn2023.0.3.x86_64
  libxcrypt-devel-4.4.33-7.amzn2023.x86_64
  cpp-11.4.1-2.amzn2023.0.2.x86_64
  glibc-devel-2.34-52.amzn2023.0.11.x86_64
  kernel-headers-6.1.109-118.189.amzn2023.x86_64
  libxcrypt-devel-4.4.33-7.amzn2023.x86_64
Complete!
```

sudo yum install gd gd-devel

```
[ec2-user@ip-172-31-91-91 ~]$ sudo yum install gd gd-devel
Last metadata expiration check: 0:21:30 ago on Sun Sep 29 06:56:15 2024.
Dependencies resolved.
=====
Package                               Architecture      Version           Repository        Size
=====
Installing:
gd                                x86_64            2.3.3-5.amzn2023.0.3       amazonlinux        139 k
gd-devel                           x86_64            2.3.3-5.amzn2023.0.3       amazonlinux        38 k
Installing dependencies:
brotli                             x86_64            1.0.9-4.amzn2023.0.2       amazonlinux        314 k
brotli-devel                       x86_64            1.0.9-4.amzn2023.0.2       amazonlinux        31 k
bzip2-devel                         x86_64            1.0.8-6.amzn2023.0.2       amazonlinux        214 k
cairo                              x86_64            1.17.6-2.amzn2023.0.1      amazonlinux        684 k
cmake-filesystem                    x86_64            3.22-2-1.amzn2023.0.4      amazonlinux        16 k
fontconfig                          x86_64            2.13.94-2.amzn2023.0.2     amazonlinux        273 k
```

```

Installed:
  brotli-1.0.9-4.amzn2023.0.2.x86_64
  cairo-1.17.6-2.amzn2023.0.1.x86_64
  fontconfig-devel-2.13.94-2.amzn2023.0.2.x86_64
  freetype-devel-2.13.2-5.amzn2023.0.1.x86_64
  glib2-devel-2.74.7-689.amzn2023.0.2.x86_64
  graphite2-1.3.14-7.amzn2023.0.2.x86_64
  harfbuzz-devel-7.0.0-2.amzn2023.0.1.x86_64
  langpacks-core-font-en-3.0-21.amzn2023.0.4.noarch
  libX11-1.7.2-3.amzn2023.0.4.x86_64
  libX11-xcb-1.7.2-3.amzn2023.0.4.x86_64
  libXext-1.3.4-6.amzn2023.0.2.x86_64
  libXrender-0.9.10-14.amzn2023.0.2.x86_64
  libffi-devel-3.4.4-1.amzn2023.0.1.x86_64
  libjpeg-turbo-2.1.4-2.amzn2023.0.5.x86_64
  libpng-2:1.6.37-10.amzn2023.0.6.x86_64
  libsepol-devel-3.4-3.amzn2023.0.3.x86_64
  libwebp-1.2.4-1.amzn2023.0.6.x86_64
  libxcb-devel-1.13.1-7.amzn2023.0.2.x86_64
  pcre2-utf16-10.40-1.amzn2023.0.3.x86_64
  sysprof-capture-devel-3.40.1-2.amzn2023.0.2.x86_64
  xz-devel-5.2.5-9.amzn2023.0.2.x86_64

  brotli-devel-1.0.9-4.amzn2023.0.2.x86_64
  cmake-filesystem-3.22.2-1.amzn2023.0.4.x86_64
  fonts-filesystem-1:2.0.5-12.amzn2023.0.2.noarch
  gd-2.3.3-5.amzn2023.0.3.x86_64
  google-noto-fonts-common-2021086-2.amzn2023.0.2.noarch
  graphite2-devel-1.3.14-7.amzn2023.0.2.x86_64
  harfbuzz-icu-7.0.0-2.amzn2023.0.1.x86_64
  libICE-1.0.10-6.amzn2023.0.2.x86_64
  libX11-common-1.7.2-3.amzn2023.0.4.noarch
  libXau-1.0.9-6.amzn2023.0.2.x86_64
  libXpm-3.5.15-2.amzn2023.0.3.x86_64
  libXt-1.2.0-4.amzn2023.0.2.x86_64
  libicu-67.1-7.amzn2023.0.3.x86_64
  libjpeg-turbo-devel-2.1.4-2.amzn2023.0.5.x86_64
  libpng-devel-2:1.6.37-10.amzn2023.0.6.x86_64
  libtiff-4.4.0-4.amzn2023.0.18.x86_64
  libwebp-devel-1.2.4-1.amzn2023.0.6.x86_64
  libxml2-devel-2.10.4-1.amzn2023.0.6.x86_64
  pcre2-utf32-10.40-1.amzn2023.0.3.x86_64
  xsl-common-0.6.3-56.amzn2023.0.2.noarch
  zlib-devel-1.2.11-33.amzn2023.0.5.x86_64

  bzip2-devel-1.0.8-6.amzn2023.0.2.x86_64
  fontconfig-2.13.94-2.amzn2023.0.2.x86_64
  freetype-2.13.2-5.amzn2023.0.1.x86_64
  gd-devel-2.3.3-5.amzn2023.0.3.x86_64
  google-noto-sans-vf-fonts-2021086-2.amzn2023.0.2.noarch
  harfbuzz-7.0.0-2.amzn2023.0.1.x86_64
  jbigkit-libs-2.1-21.amzn2023.0.2.x86_64
  libSM-1.2.3-8.amzn2023.0.2.x86_64
  libX11-devel-1.7.2-3.amzn2023.0.4.x86_64
  libXau-devel-1.0.9-6.amzn2023.0.2.x86_64
  libXpm-devel-3.5.15-2.amzn2023.0.3.x86_64
  libblkid-devel-2.37.4-1.amzn2023.0.4.x86_64
  libicu-devel-67.1-7.amzn2023.0.3.x86_64
  libmount-devel-2.37.4-1.amzn2023.0.4.x86_64
  libselinux-devel-3.4-5.amzn2023.0.2.x86_64
  libtiff-devel-4.4.0-4.amzn2023.0.18.x86_64
  libxcb-1.13.1-7.amzn2023.0.2.x86_64
  pcre2-devel-10.40-1.amzn2023.0.3.x86_64
  pixman-0.40.0-3.amzn2023.0.3.x86_64
  xorg-x11-proto-devel-2021.4-1.amzn2023.0.2.noarch

Complete!

```

5. Create a new Nagios User with its password. You'll have to enter the password twice for confirmation.

```

sudo adduser -m nagios
sudo passwd nagios
(password : ayushmau)

```

```

Complete!
[ec2-user@ip-172-31-91-91 ~]$ sudo adduser -m nagios
sudo passwd nagios
Changing password for user nagios.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
Sorry, passwords do not match.
New password:
BAD PASSWORD: The password contains the user name in some form
Retype new password:
Sorry, passwords do not match.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[ec2-user@ip-172-31-91-91 ~]$

```

6. Create a new user group

```

sudo groupadd nagcmd

```

```

[ec2-user@ip-172-31-91-91 ~]$ sudo groupadd nagcmd
[ec2-user@ip-172-31-91-91 ~]$

```

7. Use these commands so that you don't have to use sudo for Apache and Nagios

```

sudo usermod -a -G nagcmd nagios
sudo usermod -a -G nagcmd apache

```

```

[ec2-user@ip-172-31-91-91 ~]$ sudo usermod -a -G nagcmd nagios
sudo usermod -a -G nagcmd apache
[ec2-user@ip-172-31-91-91 ~]$

```

8. Create a new directory for Nagios downloads

```

mkdir ~/downloads
cd ~/downloads

```

```

[ec2-user@ip-172-31-91-91 ~]$ mkdir ~/downloads
cd ~/downloads

```

9. Use wget to download the source zip files.

wget <https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.5.5.tar.gz>

```
[ec2-user@ip-172-31-91-91 downloads]$ cd ..
[ec2-user@ip-172-31-91-91 ~]$ cd ~/downloads
[ec2-user@ip-172-31-91-91 downloads]$ wget https://assets.nagios.com/downlo
ds/nagioscore/releases/nagios-4.5.5.tar.gz
--2024-09-29 09:11:59-- https://assets.nagios.com/downloads/nagioscore/rele
ases/nagios-4.5.5.tar.gz
Resolving assets.nagios.com (assets.nagios.com)... 45.79.49.120, 2600:3c00::
f03c:92ff:fe7:45ce
Connecting to assets.nagios.com (assets.nagios.com)|45.79.49.120|:443... con
nected.
HTTP request sent, awaiting response... 200 OK
Length: 2065473 (2.0M) [application/x-gzip]
Saving to: 'nagios-4.5.5.tar.gz'

nagios-4.5.5.tar.g 100%[=====>] 1.97M 5.07MB/s in 0.4s

2024-09-29 09:11:59 (5.07 MB/s) - 'nagios-4.5.5.tar.gz' saved [2065473/20654
73]

[ec2-user@ip-172-31-91-91 downloads]$ |
```

wget <https://nagios-plugins.org/download/nagios-plugins-2.4.11.tar.gz>

```
[ec2-user@ip-172-31-91-91 nagios-4.5.5]$ cd ..
[ec2-user@ip-172-31-91-91 downloads]$ wget https://nagios-plugins.org/downlo
ad/nagios-plugins-2.4.11.tar.gz
--2024-09-29 09:14:28-- https://nagios-plugins.org/download/nagios-plugins-
2.4.11.tar.gz
Resolving nagios-plugins.org (nagios-plugins.org)... 45.56.123.251
Connecting to nagios-plugins.org (nagios-plugins.org)|45.56.123.251|:443...
connected.
HTTP request sent, awaiting response... 200 OK
Length: 2753049 (2.6M) [application/x-gzip]
Saving to: 'nagios-plugins-2.4.11.tar.gz'

nagios-plugins-2.4 100%[=====>] 2.62M 6.92MB/s in 0.4s
```

10. Use tar to unzip and change to that directory.

`tar zxvf nagios-4.5.5.tar.gz`

```
[ec2-user@ip-172-31-91-91 downloads]$ tar zxvf nagios-4.0.8.tar.gz
nagios-4.0.8/
nagios-4.0.8/.gitignore
nagios-4.0.8/Changelog
nagios-4.0.8/INSTALLING
nagios-4.0.8/LLEGAL
nagios-4.0.8/LICENSE
nagios-4.0.8/Makefile.in
nagios-4.0.8/README
nagios-4.0.8/README.asciidoc
nagios-4.0.8/THANKS
nagios-4.0.8/UPGRADING
nagios-4.0.8/base/
nagios-4.0.8/base/.gitignore
```

11. Run the configuration script with the same group name you previously created.

`./configure --with-command-group=nagcmd`

Here we go an error

```
[ec2-user@ip-172-31-91-91 downloads]$ ./configure --with-command-group=nagcmd
-bash: ./configure: No such file or directory
[ec2-user@ip-172-31-91-91 downloads]$ |
```

Solution

Navigate to nagios folder in downloads

```
[ec2-user@ip-172-31-91-91 downloads]$ ls
nagios-4.0.8  nagios-4.0.8.tar.gz  nagios-plugins-2.0.3.tar.gz
[ec2-user@ip-172-31-91-91 downloads]$ cd nagios-4.0.8
[ec2-user@ip-172-31-91-91 nagios-4.0.8]$ |
```

Error 2: Cannot find SSL headers.

Solution: Install openssl dev library

Steps:

sudo yum install openssl-devel

```
[ec2-user@ip-172-31-91-91 nagios-4.5.5]$ sudo yum install openssl-devel
Last metadata expiration check: 2:24:05 ago on Sun Sep 29 06:56:15 2024.
Dependencies resolved.
=====
Package                Arch      Version                               Repository      Size
=====
Installing:
openssl-devel          x86_64    1:3.0.8-1.amzn2023.0.14             amazonlinux     3.0 M

Transaction Summary
=====
Install 1 Package

Total download size: 3.0 M
Installed size: 4.7 M
Is this ok [y/N]: y
Downloading Packages:
```

Now run

./configure --with-command-group=nagcmd

```
Event Broker: yes
Install ${prefix}: /usr/local/nagios
Install ${includedir}: /usr/local/nagios/include/nagios
Lock file: /run/nagios.lock
Check result directory: /usr/local/nagios/var/spool/checkresults
Init directory: /lib/systemd/system
Apache conf.d directory: /etc/httpd/conf.d
Mail program: /bin/mail
Host OS: linux-gnu
IOBroker Method: epoll

Web Interface Options:
-----
HTML URL: http://localhost/nagios/
CGI URL: http://localhost/nagios/cgi-bin/
Traceroute (used by WAP): /usr/bin/traceroute

Review the options above for accuracy. If they look okay,
type 'make all' to compile the main program and CGIs.

[ec2-user@ip-172-31-91-91 nagios-4.5.5]$ |
```


12. Compile the source code.

make all

```
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/base'
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o nagios.o ./nagios.c
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o broker.o broker.c
```

13. Install binaries, init script and sample config files. Lastly, set permissions on the external command directory.

sudo make install

sudo make install-init

sudo make install-config

sudo make install-commandmode

```
[ec2-user@ip-172-31-91-91 nagios-4.5.5]$ make all

sudo make install
sudo make install-init
sudo make install-config
sudo make install-commandmode
cd ./base && make
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/base'
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o nagios.o ./nagios.c
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o broker.o broker.c
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o nebmods.o nebmods.c
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o ../common/shared.o ../common/shared.c
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o query-handler.o query-handler.c
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o workers.o workers.c
In function 'get_wproc_list',
    inlined from 'get_worker' at workers.c:277:12:
workers.c:253:17: warning: '%s' directive argument is null [-Wformat-overflo
w=]
   253 |         log_debug_info(DEBUGL_CHECKS, 1, "Found specialized
worker(s) for '%s'", (slash && *slash != '/') ? slash : cmd_name);
       |         ^ ~~~~~~
~~~~~
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o checks.o checks.c
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
CONFIG_H -DNSCORE -c -o config.o config.c
gcc -Wall -I.. -I. -I../lib -I../include -I../include -I.. -g -O2 -DHAVE_
```

14. Edit the config file and change the email address.

sudo nano /usr/local/nagios/etc/objects/contacts.cfg

```

# CONTACTS
#
#####
# Just one contact defined by default - the Nagios admin (that's you)
# This contact definition inherits a lot of default values from the
# 'generic-contact' template which is defined elsewhere.

define contact {
    contact_name      nagiosadmin      ; Short name of user
    use               generic-contact  ; Inherit default values from generic-contact template (defined above)
    alias             Nagios Admin     ; Full name of user
    email             2022.ayush.maurya@ves.ac.in ; <***** CHANGE THIS TO YOUR EMAIL ADDRESS *****
}

#####
#
# CONTACT GROUPS
#
#####
# We only have one contact in this simple configuration file, so there is
# no need to create more than one contact group.

define contactgroup {
    contactgroup_name admins
    alias             Nagios Administrators
    members           nagiosadmin
}

```

And change email with your email

15. Configure the web interface.

sudo make install-webconf

```

[ec2-user@ip-172-31-91-91 nagios-4.5.5]$ sudo make install-webconf
/usr/bin/install -c -m 644 sample-config/httpd.conf /etc/httpd/conf.d/nagios
.conf
if [ 0 -eq 1 ]; then \
    ln -s /etc/httpd/conf.d/nagios.conf /etc/apache2/sites-enabled/nagios
s.conf; \
fi

*** Nagios/Apache conf file installed ***

[ec2-user@ip-172-31-91-91 nagios-4.5.5]$

```

16. Create a nagiosadmin account for nagios login along with password. You'll have to specify the password twice.

sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin

```

[ec2-user@ip-172-31-91-91 nagios-4.5.5]$ sudo htpasswd -c /usr/local/nagios/
etc/htpasswd.users nagiosadmin
New password:
Re-type new password:
Adding password for user nagiosadmin
[ec2-user@ip-172-31-91-91 nagios-4.5.5]$ |

```

Password: Ayushmau

17. Restart Apache

sudo service httpd restart

```
Adding password for user nagiosadmin
[ec2-user@ip-172-31-91-91 nagios-4.5.5]$ sudo service httpd restart
Redirecting to /bin/systemctl restart httpd.service
[ec2-user@ip-172-31-91-91 nagios-4.5.5]$
```

18. Go back to the downloads folder and unzip the plugins zip file.

cd ~/downloads

tar xzvf nagios-plugins-2.4.11.tar.gz

```
[ec2-user@ip-172-31-91-91 downloads]$ cd ~/downloads
[ec2-user@ip-172-31-91-91 downloads]$ tar xzvf nagios-plugins-2.4.11.tar.gz
nagios-plugins-2.4.11/
nagios-plugins-2.4.11/build-aux/
nagios-plugins-2.4.11/build-aux/compile
nagios-plugins-2.4.11/build-aux/config.guess
nagios-plugins-2.4.11/build-aux/config.rpath
nagios-plugins-2.4.11/build-aux/config.sub
nagios-plugins-2.4.11/build-aux/install-sh
nagios-plugins-2.4.11/build-aux/ltmain.sh
nagios-plugins-2.4.11/build-aux/missing
nagios-plugins-2.4.11/build-aux/mkinstalldirs
nagios-plugins-2.4.11/build-aux/depcomp
nagios-plugins-2.4.11/build-aux/snippet/
nagios-plugins-2.4.11/build-aux/snippet/_Noreturn.h
nagios-plugins-2.4.11/build-aux/snippet/arg-nonnull.h
nagios-plugins-2.4.11/build-aux/snippet/c++defs.h
nagios-plugins-2.4.11/build-aux/snippet/warn-on-use.h
nagios-plugins-2.4.11/build-aux/test-driver
nagios-plugins-2.4.11/config_test/
```

19. Compile and install plugins

cd nagios-plugins-2.4.11

./configure --with-nagios-user=nagios --with-nagios-group=nagios

```
[ec2-user@ip-172-31-91-91 downloads]$ cd nagios-plugins-2.4.11
./configure --with-nagios-user=nagios --with-nagios-group=nagios
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /usr/bin/mkdir -p
checking for gawk... gawk
checking whether make sets $(MAKE)... yes
checking whether make supports nested variables... yes
checking whether to enable maintainer-specific portions of Makefiles... yes
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... o
checking whether we are using the GNU C compiler... yes
checking whether gcc accepts -g... yes
checking for gcc option to accept ISO C89... none needed
checking whether gcc understands -c and -o together... yes
checking whether make supports the include directive... yes (GNU style)
checking dependency style of gcc... gcc3
checking how to run the C preprocessor... gcc -E
checking for grep that handles long lines and -e... /usr/bin/grep
checking for egrep... /usr/bin/grep -E
checking for Minix Amsterdam compiler... no
checking for ar... ar
checking for ranlib... ranlib
```

make

sudo make install

```
[ec2-user@ip-172-31-91-91 nagios-plugins-2.4.11]$ make
sudo make install
make all-recursive
make[1]: Entering directory '/home/ec2-user/downloads/nagios-plugins-2.4.11'
Making all in gl
make[2]: Entering directory '/home/ec2-user/downloads/nagios-plugins-2.4.11/gl'
rm -f alloca.h-t alloca.h && \
{ echo '/* DO NOT EDIT! GENERATED AUTOMATICALLY! */'; \
  cat ./alloca.in.h; \
} > alloca.h-t && \
mv -f alloca.h-t alloca.h
rm -f c++defs.h-t c++defs.h && \
sed -n -e '/_GL_CXXDEFS/, $p' \
  < ../build-aux/snippet/c++defs.h \
  > c++defs.h-t && \
mv c++defs.h-t c++defs.h
rm -f warn-on-use.h-t warn-on-use.h && \
sed -n -e '/^\.ifndef/, $p' \
  < ../build-aux/snippet/warn-on-use.h \
  > warn-on-use.h-t && \
mv warn-on-use.h-t warn-on-use.h
rm -f arg-nonnull.h-t arg-nonnull.h && \
sed -n -e '/GL_ARG_NONNULL/, $p' \
  < ../build-aux/snippet/arg-nonnull.h \
  > arg-nonnull.h-t && \
mv arg-nonnull.h-t arg-nonnull.h
/usr/bin/mkdir -p arpa
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-plugins-2.4.11'
make[1]: Entering directory '/home/ec2-user/downloads/nagios-plugins-2.4.11'
make[2]: Entering directory '/home/ec2-user/downloads/nagios-plugins-2.4.11'
make[2]: Nothing to be done for 'install-exec-am'.
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/ec2-user/downloads/nagios-plugins-2.4.11'
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-plugins-2.4.11'
[ec2-user@ip-172-31-91-91 nagios-plugins-2.4.11]$
```

20. Start Nagios

Add Nagios to the list of system services

sudo chkconfig --add nagios

sudo chkconfig nagios on

```
[ec2-user@ip-172-31-91-91 nagios-plugins-2.4.11]$ sudo chkconfig --add nagios
s
sudo chkconfig nagios on
Note: Forwarding request to 'systemctl enable nagios.service'.
Synchronizing state of nagios.service with SysV service script with /usr/lib
/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable nagios
Created symlink /etc/systemd/system/multi-user.target.wants/nagios.service →
/usr/lib/systemd/system/nagios.service.
[ec2-user@ip-172-31-91-91 nagios-plugins-2.4.11]$
```

Verify the sample configuration files

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

Error

```
[ec2-user@ip-172-31-91-91 nagios-plugins-2.0.3]$ sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

Nagios Core 4.0.8
Copyright (c) 2009-present Nagios Core Development Team and Community Contributors
Copyright (c) 1999-2009 Ethan Galstad
Last Modified: 08-12-2014
License: GPL

Website: http://www.nagios.org
Reading configuration data...
Error in configuration file '/usr/local/nagios/etc/nagios.cfg' - Line 452 (Check result path '/usr/local/nagios/var/spool/checkresults' is not a valid directory)
Error processing main config file!
```

Solution:

Create the missing directory: If the directory is missing, create it with the necessary permissions:

sudo mkdir -p /usr/local/nagios/var/spool/checkresults

sudo chown nagios:nagios /usr/local/nagios/var/spool/checkresults

sudo chmod 775 /usr/local/nagios/var/spool/checkresults

```
[ec2-user@ip-172-31-91-91 nagios-plugins-2.0.3]$ sudo mkdir -p /usr/local/nagios/var/spool/checkresults
sudo chown nagios:nagios /usr/local/nagios/var/spool/checkresults
sudo chmod 775 /usr/local/nagios/var/spool/checkresults
[ec2-user@ip-172-31-91-91 nagios-plugins-2.0.3]$
```

Now run again

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

```
[ec2-user@ip-172-31-91-91 nagios-plugins-2.4.11]$ sudo /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 8 services.
  Checked 1 hosts.
  Checked 1 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 1 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
```

sudo service nagios start

```
[ec2-user@ip-172-31-91-91 nagios-plugins-2.4.11]$ sudo service nagios start
Starting nagios (via systemctl): [ OK ]
```

21. Check the status of Nagios

sudo systemctl status nagios

```
[ec2-user@ip-172-31-91-91 nagios-plugins-2.0.3]$ sudo systemctl status nagios
● nagios.service - LSB: Starts and stops the Nagios monitoring server
   Loaded: loaded (/etc/rc.d/init.d/nagios; generated)
   Active: active (running) since Sun 2024-09-29 08:04:30 UTC; 37s ago
     Docs: man:systemd-sysv-generator(8)
  Process: 68037 ExecStart=/etc/rc.d/init.d/nagios start (code=exited, status=0/SUCCESS)
    Tasks: 6 (limit: 1112)
   Memory: 2.0M
      CPU: 47ms
   CGroup: /system.slice/nagios.service
           └─68059 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
              └─68061 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                 └─68062 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                    └─68063 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                       └─68064 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
                          └─68065 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg

Sep 29 08:04:30 ip-172-31-91-91.ec2.internal nagios[68059]: wproc: Registry request: name=Core Worker 68063;pid=68063
Sep 29 08:04:30 ip-172-31-91-91.ec2.internal nagios[68059]: wproc: Registry request: name=Core Worker 68062;pid=68062
Sep 29 08:04:30 ip-172-31-91-91.ec2.internal nagios[68059]: wproc: Registry request: name=Core Worker 68064;pid=68064
Sep 29 08:04:30 ip-172-31-91-91.ec2.internal nagios[68059]: wproc: Registry request: name=Core Worker 68061;pid=68061
Sep 29 08:04:30 ip-172-31-91-91.ec2.internal nagios[68059]: Warning: Could not open object cache file '/usr/local/nagios/var/objectcache.tmp'
Sep 29 08:04:30 ip-172-31-91-91.ec2.internal nagios[68059]: Error: Unable to create temp file '/usr/local/nagios/var/nagios.tmpx2N'
Sep 29 08:04:30 ip-172-31-91-91.ec2.internal nagios[68059]: Successfully launched command file worker with pid 68065
Sep 29 08:04:39 ip-172-31-91-91.ec2.internal nagios[68059]: Error: Unable to create temp file '/usr/local/nagios/var/nagios.tmpTmg'
Sep 29 08:04:49 ip-172-31-91-91.ec2.internal nagios[68059]: Error: Unable to create temp file '/usr/local/nagios/var/nagios.tmpAfy'
Sep 29 08:04:59 ip-172-31-91-91.ec2.internal nagios[68059]: Error: Unable to create temp file '/usr/local/nagios/var/nagios.tmpCtQ'
lines 1-26/26 (END)
```

Error:

The log messages suggest that Nagios is unable to create temporary files, particularly in the directory `/usr/local/nagios/var/`. This is typically caused by permission issues, or the directory might not exist.

Solution:

Firstly check whether `/usr/local/nagios/var/` is there or not. If yes.....

```
ls -ld /usr/local/nagios/var/
```

Change ownership: Set the correct ownership for the Nagios user and group:

```
sudo chown -R nagios:nagcmd /usr/local/nagios/var
```

Set permissions: Ensure the directory has the right permissions:

```
sudo chmod -R 775 /usr/local/nagios/var
```

Restart Nagios: After adjusting the ownership and permissions, restart the Nagios service:

```
sudo systemctl restart nagios
```

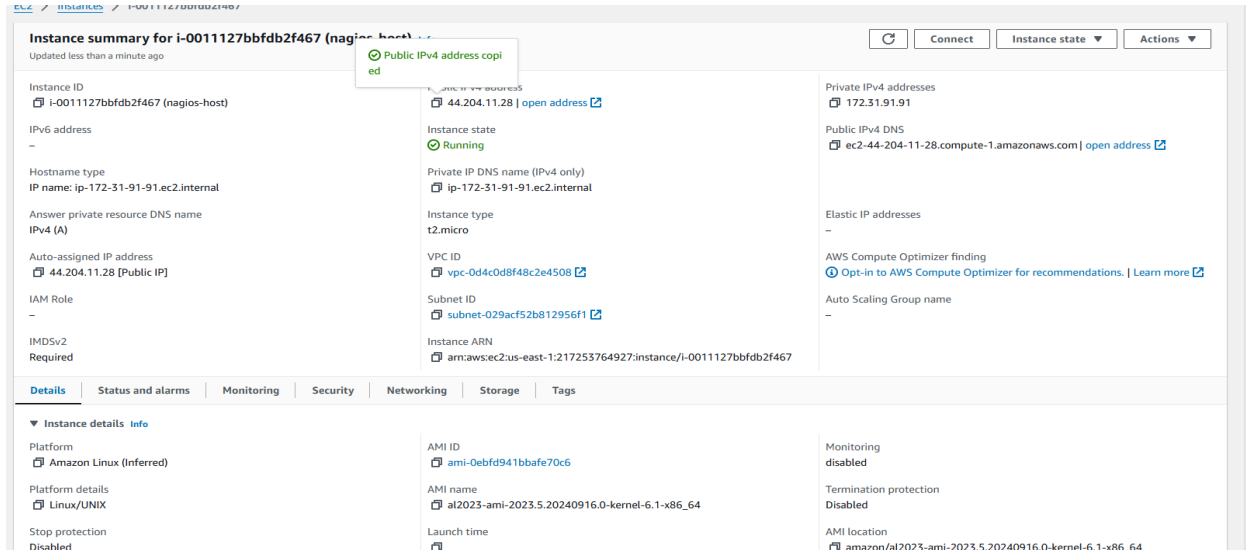
```
drwxr-xr-x. 4 root root 112 Sep 29 08:04 /usr/local/nagios/var/
[ec2-user@ip-172-31-91-91 nagios-plugins-2.0.3]$ sudo chown -R nagios:nagcmd /usr/local/nagios/var
[ec2-user@ip-172-31-91-91 nagios-plugins-2.0.3]$ sudo chmod -R 775 /usr/local/nagios/var
[ec2-user@ip-172-31-91-91 nagios-plugins-2.0.3]$ sudo systemctl restart nagios
[ec2-user@ip-172-31-91-91 nagios-plugins-2.0.3]$
```

Now run again

```
[ec2-user@ip-172-31-91-91 nagios-plugins-2.4.11]$ sudo systemctl status nagios
● nagios.service - Nagios Core 4.5.5
   Loaded: loaded (/usr/lib/systemd/system/nagios.service; enabled; preset: disabled)
   Active: active (running) since Sun 2024-09-29 08:51:47 UTC; 42min ago
     Docs: https://www.nagios.org/documentation
    Tasks: 6 (Limit: 1112)
   Memory: 2.9M
      CPU: 562ms
   CGroup: /system.slice/nagios.service
           └─71188 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
              71190 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
              71191 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
              71192 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
              71193 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
              71194 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg

Sep 29 08:51:47 ip-172-31-91-91.ec2.internal nagios[71188]: wproc: Registry request: name=Core Worker 71191;pid=71191
Sep 29 08:51:47 ip-172-31-91-91.ec2.internal nagios[71188]: wproc: Registry request: name=Core Worker 71190;pid=71190
Sep 29 08:51:47 ip-172-31-91-91.ec2.internal nagios[71188]: Successfully launched command file worker with pid 71194
Sep 29 08:59:22 ip-172-31-91-91.ec2.internal nagios[71188]: SERVICE ALERT: localhost;HTTP;WARNING;HARD;4;HTTP WARNING: HTTP/1.1 403 Forbidden - 319 bytes i
Sep 29 09:11:52 ip-172-31-91-91.ec2.internal nagios[71188]: SERVICE NOTIFICATION: nagiosadmin;localhost;Swap Usage;CRITICAL;notify-service-by-email;SWAP CR
Sep 29 09:11:52 ip-172-31-91-91.ec2.internal nagios[71188]: wproc: NOTIFY job 10 from worker Core Worker 71192 is a non-check helper but exited with return
Sep 29 09:11:52 ip-172-31-91-91.ec2.internal nagios[71188]: wproc: host=localhost; service=Swap Usage; contact=nagiosadmin
Sep 29 09:11:52 ip-172-31-91-91.ec2.internal nagios[71188]: wproc: early_timeout=0; exited_ok=1; wait_status=32512; error_code=0;
Sep 29 09:11:52 ip-172-31-91-91.ec2.internal nagios[71188]: wproc: stderr line 01: /bin/sh: line 1: /bin/mail: No such file or directory
Sep 29 09:11:52 ip-172-31-91-91.ec2.internal nagios[71188]: wproc: stderr line 02: /usr/bin/printf: write error: Broken pipe
lines 1-25/25 (END)
```

22. Go back to EC2 Console and copy the Public IP address of this instance



23. Open up your browser and look for http://<your_public_ip_address>/nagios

Enter username as nagiosadmin and password which you set in Step 16.

24. After entering the correct credentials, you will see this page.

The screenshot shows the Nagios Core web interface in a browser. The browser's address bar shows the URL '44.204.11.28/nagios/'. The page has a blue header with the Nagios Core logo and a green checkmark indicating the daemon is running with PID 71188. Below the header, the version is 'Nagios Core Version 4.5.5' with a date of 'September 17, 2024' and a link to 'Check for updates'. The left sidebar contains a navigation menu with sections: General (Home, Documentation), Current Status (Tactical Overview, Map, Hosts, Services, Host Groups, Service Groups, Grid), Problems (Services, Hosts, Network Outages), Reports (Availability, Trends, Alerts, History, Summary, Histogram, Notifications, Event Log), and System (Comments, Downtime, Process Info, Performance Info). The main content area has four boxes: 'Get Started' with links to start monitoring, change look, extend Nagios, get support, get training, and get certified; 'Quick Links' with links to Nagios Library, Nagios Labs, Nagios Exchange, Nagios Support, Nagios.com, and Nagios.org; 'Latest News' and 'Don't Miss...' which are currently empty. At the bottom, there is a copyright notice for 2010-2024 Nagios Core Development Team and Community Contributors, and a license notice for Nagios Core under the GNU General Public License.

This means that Nagios was correctly installed and configured with its plugins so far.

Conclusion:

In this practical, we successfully installed and configured Nagios Core along with Nagios plugins and NRPE on an Amazon EC2 instance. We created a Nagios user, set up necessary permissions, and resolved common installation errors. Finally, we verified the setup by accessing the Nagios web interface, confirming that our monitoring system was fully operational.