Vivekanand Education Society's

Institute of Technology

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Hashu Advani Memorial Complex, Collector Colony, Chembur East, Mumbai - 400074.

Department of Information Technology

A.Y. 2024-25

Advance DevOps Lab
Experiment 09

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

Roll No.	42
Name	NAIKWADI YASH SHIVDAS
Class	D15B
Subject	Advance DevOps Lab
LO Mapped	LO1: To understand the fundamentals of Cloud Computing and be fully proficient with Cloud based DevOps solution deployment options to meet your business requirements. LO5: To use Continuous Monitoring Tools to resolve any system errors (low memory, unreachable server etc.) before they have any negative impact on the business productivity.
Grade:	

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.

Why Use Nagios?

Key reasons to use Nagios include:

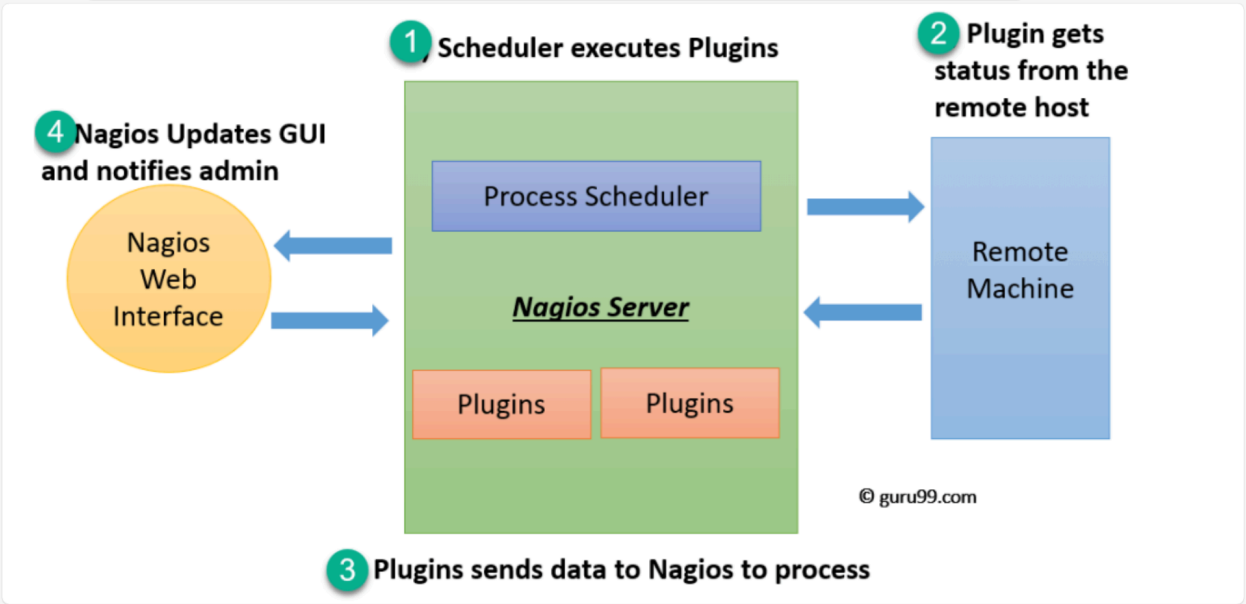
- Detecting network or server issues early
- Identifying the root cause for permanent fixes
- Active monitoring of your infrastructure and processes
- Troubleshooting server performance problems
- Planning upgrades to prevent failures
- Maintaining security and service availability
- Automating problem resolution in critical situations

Features of Nagios:

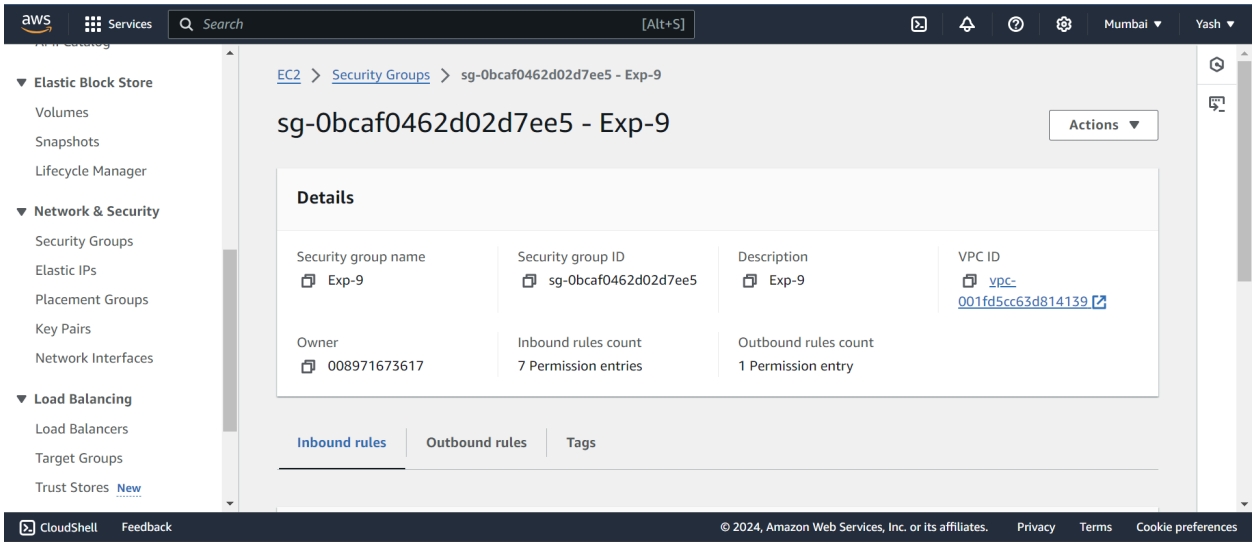
- Scalable, secure, and manageable
- Attractive web interface
- Automatic alerts for changing conditions
- Ability to monitor network services like HTTP, FTP, SMTP, SSH, and more
- Detecting server crashes and performance issues
- Easy plugin integration
- Monitors entire business processes with a single tool
- Event handlers for proactive issue resolution

Nagios Architecture

Nagios is a client-server architecture. Usually, on a network, a Nagios server is running on a host, and plugins are running on all the remote hosts which should be monitored.



1. The scheduler is a component of the server part of Nagios. It sends a signal to execute the plugins at the remote host.
2. The plugin gets the status from the remote host
3. The plugin sends the data to the process scheduler
4. The process scheduler updates the GUI and notifications are sent to admins.


Services
Search
[Alt+S]
Mumbai
Yash
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores New
EC2 > Security Groups > sg-0bcaf0462d02d7ee5 - Exp-9
sg-0bcaf0462d02d7ee5 - Exp-9
Actions
Details
Security group name
Exp-9
Security group ID
sg-0bcaf0462d02d7ee5
Description
Exp-9
VPC ID
vpc-001fd5cc63d814139
Owner
008971673617
Inbound rules count
7 Permission entries
Outbound rules count
1 Permission entry
Inbound rules
Outbound rules
Tags
CloudShell
Feedback
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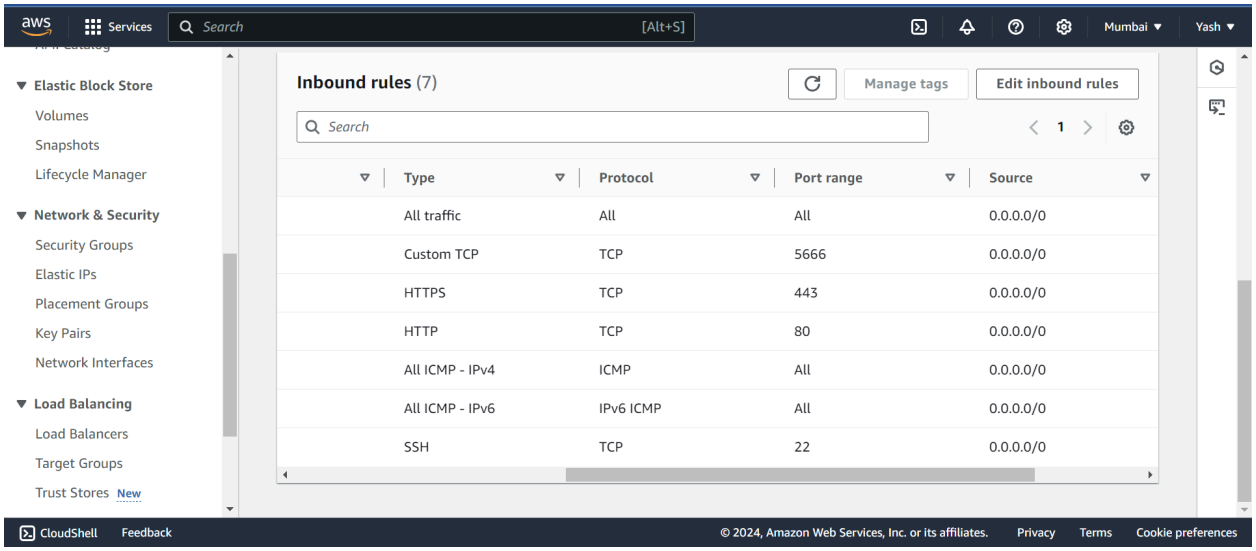
Services
Search
[Alt+S]
Mumbai
Yash
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores New
Inbound rules (7)
Manage tags
Edit inbound rules
Search
1
Type
Protocol
Port range
Source
All traffic All All 0.0.0.0/0
Custom TCP TCP 5666 0.0.0.0/0
HTTPS TCP 443 0.0.0.0/0
HTTP TCP 80 0.0.0.0/0
All ICMP - IPv4 ICMP All 0.0.0.0/0
All ICMP - IPv6 IPv6 ICMP All 0.0.0.0/0
SSH TCP 22 0.0.0.0/0
CloudShell
Feedback
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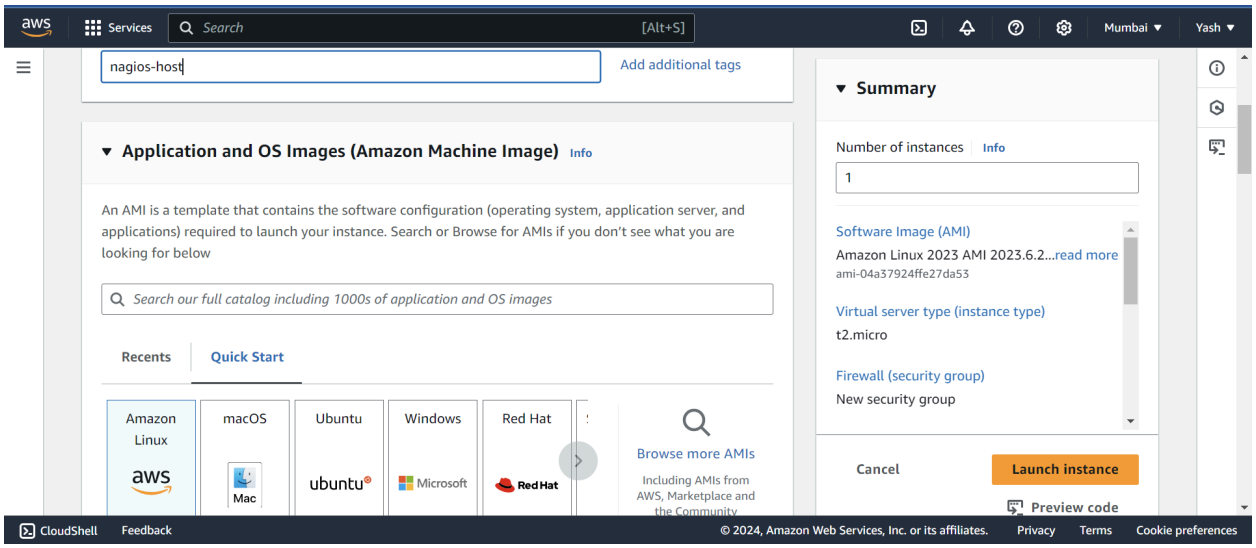
Services
Search
[Alt+S]
Mumbai
Yash
nagios-host
Add additional tags
Application and OS Images (Amazon Machine Image) Info
An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs 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
macOS
Ubuntu
Windows
Red Hat
Browse more AMIs
Including AMIs from AWS, Marketplace and the Community
Summary
Number of instances Info
1
Software Image (AMI)
Amazon Linux 2023 AMI 2023.6.2...read more
ami-04a37924ffe27da53
Virtual server type (instance type)
t2.micro
Firewall (security group)
New security group
Cancel
Launch instance
Preview code
CloudShell
Feedback
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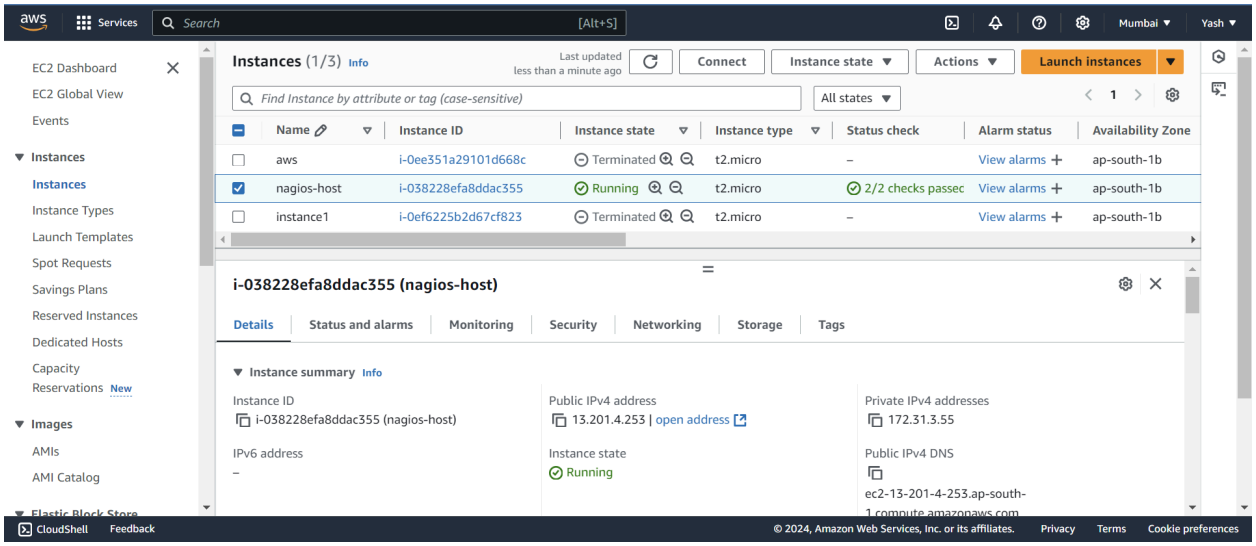
aws
Services
Search
[Alt+S]
Mumbai
Yash
EC2 Dashboard
EC2 Global View
Events
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations New
Images
AMIs
AMI Catalog
Instances (1/3) Info
Last updated less than a minute ago
Connect
Instance state
Actions
Launch instances
Find Instance by attribute or tag (case-sensitive)
All states
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
aws
i-0ee351a29101d668c
Terminated
t2.micro
–
View alarms
ap-south-1b
nagios-host
i-038228efa8ddac355
Running
t2.micro
2/2 checks passec
View alarms
ap-south-1b
instance1
i-0ef6225b2d67cf823
Terminated
t2.micro
–
View alarms
ap-south-1b
i-038228efa8ddac355 (nagios-host)
Details
Status and alarms
Monitoring
Security
Networking
Storage
Tags
Instance summary Info
Instance ID
i-038228efa8ddac355 (nagios-host)
Public IPv4 address
13.201.4.253 | open address
Private IPv4 addresses
172.31.3.55
IPv6 address
–
Instance state
Running
Public IPv4 DNS
ec2-13-201-4-253.ap-south-1.compute.amazonaws.com
CloudShell
Feedback
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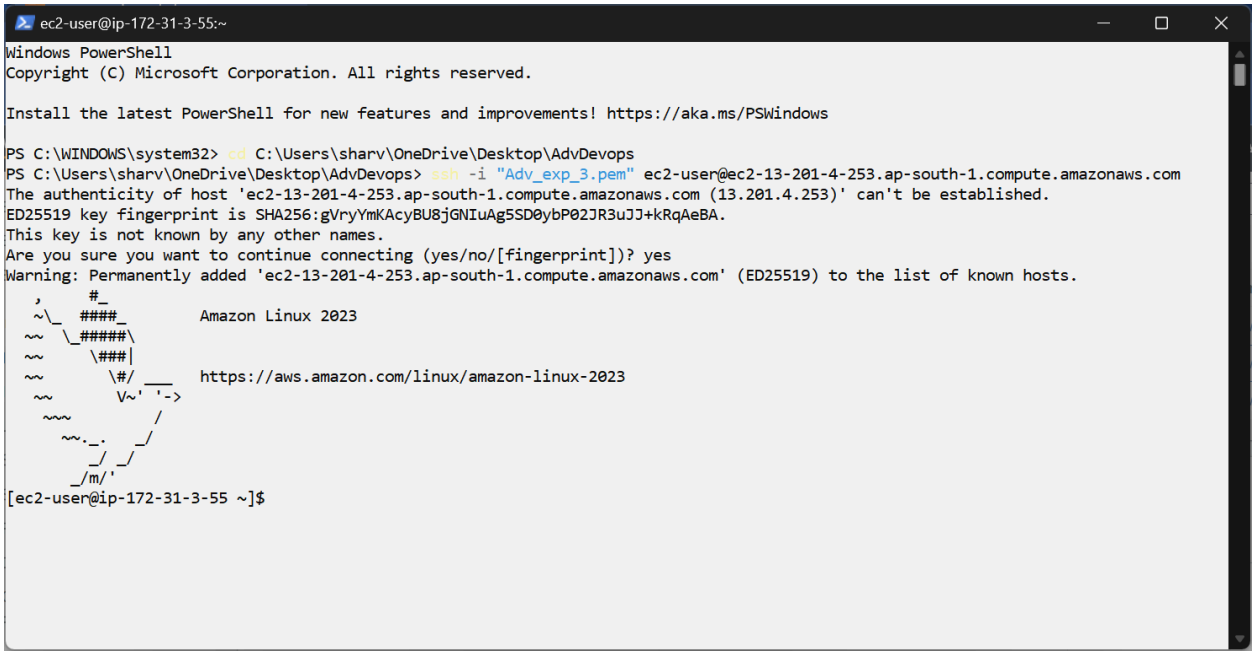

ec2-user@ip-172-31-3-55:~
Windows PowerShell
Copyright (C) Microsoft Corporation. All rights reserved.
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows
PS C:\WINDOWS\system32> cd C:\Users\sharv\OneDrive\Desktop\AdvDevops
PS C:\Users\sharv\OneDrive\Desktop\AdvDevops> ssh -i "Adv_exp_3.pem" ec2-user@ec2-13-201-4-253.ap-south-1.compute.amazonaws.com
The authenticity of host 'ec2-13-201-4-253.ap-south-1.compute.amazonaws.com (13.201.4.253)' can't be established.
ED25519 key fingerprint is SHA256:gVryYmKAcyBU8jGNIuAg5SD0ybP02JR3uJJ+kRqAeBA.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-13-201-4-253.ap-south-1.compute.amazonaws.com' (ED25519) to the list of known hosts.
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023
[ec2-user@ip-172-31-3-55 ~]$

ec2-user@ip-172-31-8-148:~

```
[ec2-user@ip-172-31-8-148 ~]$ sudo yum install httpd php
Last metadata expiration check: 0:03:28 ago on Thu Oct 17 08:24:13 2024.
Dependencies resolved.
================================================================================
 Package                 Architecture    Version                 Repository    Size
================================================================================
Installing:
 httpd                   x86_64          2.4.62-1.amzn2023       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
```

ec2-user@ip-172-31-8-148:~

```
[ec2-user@ip-172-31-8-148 ~]$ sudo yum install gcc glibc glibc-common
Last metadata expiration check: 0:05:23 ago on Thu Oct 17 08:24:13 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          6.1.112-122.189.amzn2023 amazonlinux 1.4 M
 libmpc                  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       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 size: 168 M
Is this ok [y/N]: y
Downloading Packages:
```

```
ec2-user@ip-172-31-8-148:~
[ec2-user@ip-172-31-8-148 ~]$ sudo yum install gd gd-devel
Last metadata expiration check: 0:08:48 ago on Thu Oct 17 08:24:13 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
 fontconfig-devel        x86_64        2.13.94-2.amzn2023.0.2     amazonlinux 128 k
 fonts-filesystem        noarch        1:2.0.5-12.amzn2023.0.2    amazonlinux 9.5 k
 freetype                x86_64        2.13.2-5.amzn2023.0.1      amazonlinux 423 k
 freetype-devel          x86_64        2.13.2-5.amzn2023.0.1      amazonlinux 912 k
 glib2-devel             x86_64        2.74.7-689.amzn2023.0.2    amazonlinux 486 k
 google-noto-fonts-common noarch       20201206-2.amzn2023.0.2    amazonlinux  15 k
 google-noto-sans-vf-fonts noarch      20201206-2.amzn2023.0.2    amazonlinux 492 k
 graphite2               x86_64        1.3.14-7.amzn2023.0.2      amazonlinux  97 k
 graphite2-devel         x86_64        1.3.14-7.amzn2023.0.2      amazonlinux  21 k
 harfbuzz                x86_64        7.0.0-2.amzn2023.0.1       amazonlinux 868 k
 harfbuzz-devel          x86_64        7.0.0-2.amzn2023.0.1       amazonlinux 404 k
 harfbuzz-icu            x86_64        7.0.0-2.amzn2023.0.1       amazonlinux  18 k
 jbigkit-libs            x86_64        2.1-21.amzn2023.0.2        amazonlinux  54 k
 langpacks-core-font-en  noarch        3.0-21.amzn2023.0.4        amazonlinux  10 k
 libICE                  x86_64        1.1.1-3.amzn2023.0.1       amazonlinux  76 k
 libSM                   x86_64        1.2.4-3.amzn2023.0.1       amazonlinux  45 k
```

```
[ec2-user@ip-172-31-8-148 ~]$ sudo adduser -m nagios
```

```
[ec2-user@ip-172-31-8-148 ~]$ sudo passwd nagios
Changing password for user nagios.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[ec2-user@ip-172-31-8-148 ~]$
```

```
[ec2-user@ip-172-31-8-148 downloads]$ wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.9.tar.gz
--2024-10-17 08:40:59--  https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.9.tar.gz
Resolving assets.nagios.com (assets.nagios.com)... 45.79.49.120, 2600:3c00::f03c:92ff:fef7:45ce
Connecting to assets.nagios.com (assets.nagios.com)|45.79.49.120|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 11339450 (11M) [application/x-gzip]
Saving to: ‘nagios-4.4.9.tar.gz’

nagios-4.4.9.tar.gz          100%[=================================================>]  10.81M  2.36MB/s    in 6.0s

2024-10-17 08:41:06 (1.79 MB/s) - ‘nagios-4.4.9.tar.gz’ saved [11339450/11339450]

[ec2-user@ip-172-31-8-148 downloads]$
```

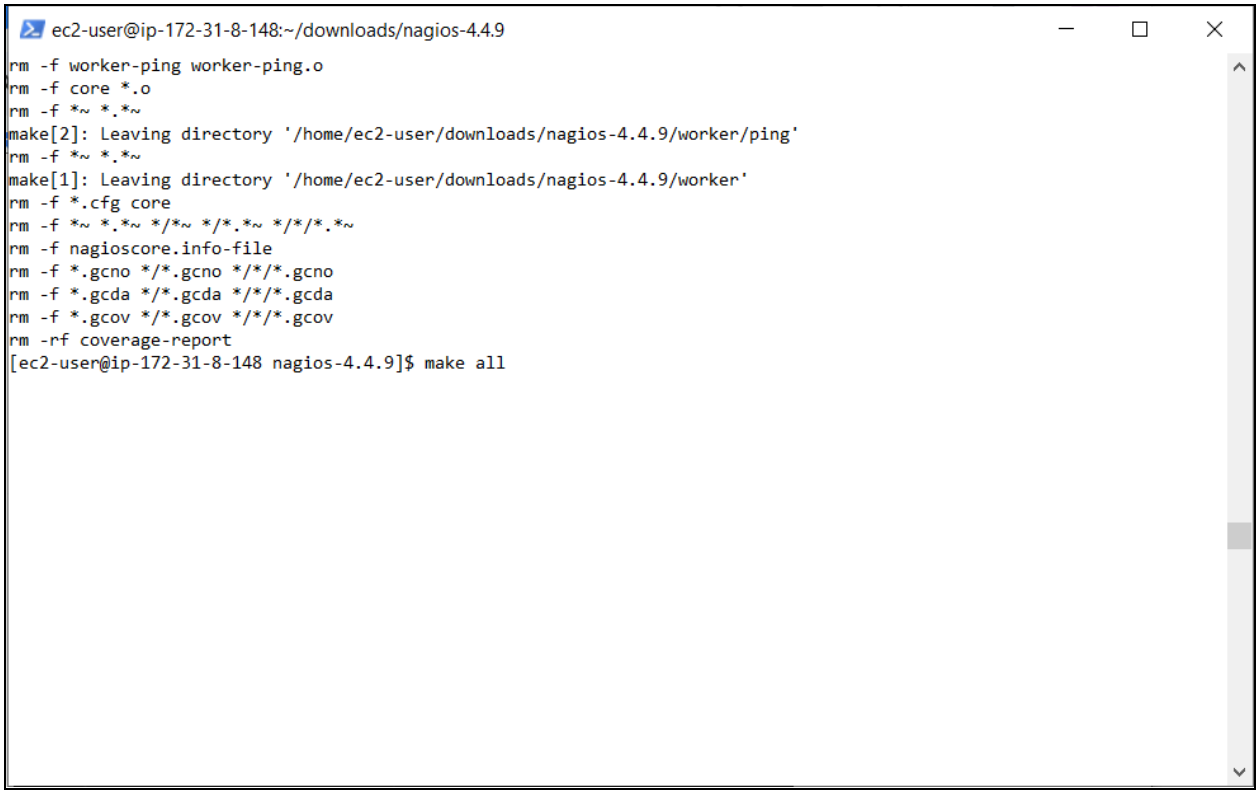
```
[ec2-user@ip-172-31-8-148 downloads]$ wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.9.tar.gz
--2024-10-17 08:40:59--  https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.9.tar.gz
Resolving assets.nagios.com (assets.nagios.com)... 45.79.49.120, 2600:3c00::f03c:92ff:fef7:45ce
Connecting to assets.nagios.com (assets.nagios.com)|45.79.49.120|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 11339450 (11M) [application/x-gzip]
Saving to: ‘nagios-4.4.9.tar.gz’

nagios-4.4.9.tar.gz          100%[=================================================>]  10.81M  2.36MB/s    in 6.0s

2024-10-17 08:41:06 (1.79 MB/s) - ‘nagios-4.4.9.tar.gz’ saved [11339450/11339450]

[ec2-user@ip-172-31-8-148 downloads]$ wget http://nagios-plugins.org/download/nagios-plugins-2.0.3.tar.gz
--2024-10-17 08:48:36--  http://nagios-plugins.org/download/nagios-plugins-2.0.3.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|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2659772 (2.5M) [application/x-gzip]
Saving to: ‘nagios-plugins-2.0.3.tar.gz’

nagios-plugins-2.0.3.tar.gz  100%[=================================================>]   2.54M   844KB/s    in 3.1s

2024-10-17 08:48:40 (844 KB/s) - ‘nagios-plugins-2.0.3.tar.gz’ saved [2659772/2659772]

[ec2-user@ip-172-31-8-148 downloads]$
```

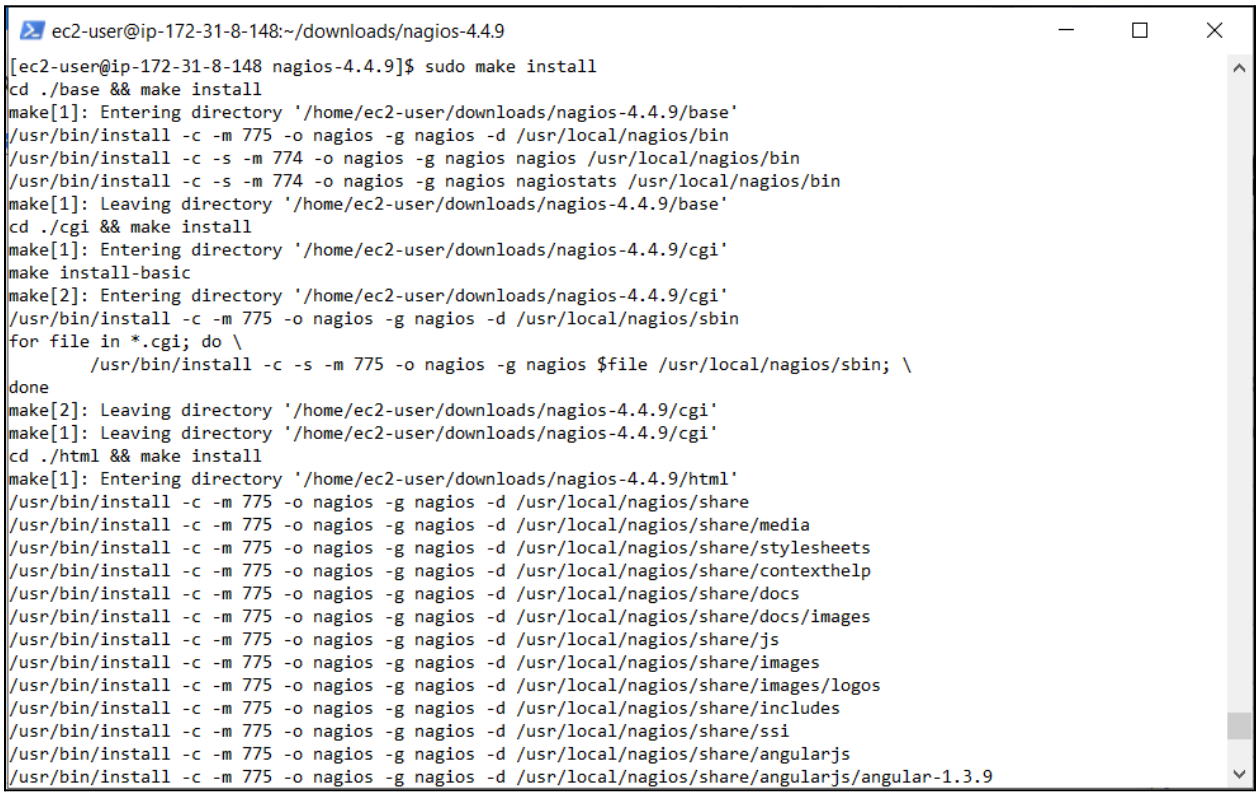
```
ec2-user@ip-172-31-8-148:~/downloads

[ec2-user@ip-172-31-8-148 downloads]$ tar zxvf nagios-4.4.9.tar.gz
nagios-4.4.9/
nagios-4.4.9/.gitignore
nagios-4.4.9/.travis.yml
nagios-4.4.9/CONTRIBUTING.md
nagios-4.4.9/Changelog
nagios-4.4.9/INSTALLING
nagios-4.4.9/LEGAL
nagios-4.4.9/LICENSE
nagios-4.4.9/Makefile.in
nagios-4.4.9/README.md
nagios-4.4.9/THANKS
nagios-4.4.9/UPGRADING
nagios-4.4.9/aclocal.m4
nagios-4.4.9/autoconf-macros/
nagios-4.4.9/autoconf-macros/.gitignore
nagios-4.4.9/autoconf-macros/CHANGELOG.md
nagios-4.4.9/autoconf-macros/LICENSE
nagios-4.4.9/autoconf-macros/LICENSE.md
nagios-4.4.9/autoconf-macros/README.md
nagios-4.4.9/autoconf-macros/add_group_user
nagios-4.4.9/autoconf-macros/ax_nagios_get_distrib
nagios-4.4.9/autoconf-macros/ax_nagios_get_files
nagios-4.4.9/autoconf-macros/ax_nagios_get_inetd
nagios-4.4.9/autoconf-macros/ax_nagios_get_init
nagios-4.4.9/autoconf-macros/ax_nagios_get_os
nagios-4.4.9/autoconf-macros/ax_nagios_get_paths
nagios-4.4.9/autoconf-macros/ax_nagios_get_ssl
nagios-4.4.9/base/
nagios-4.4.9/base/.gitignore
nagios-4.4.9/base/Makefile.in
```

```
[ec2-user@ip-172-31-8-148 downloads]$ ls
nagios-4.4.9  nagios-4.4.9.tar.gz  nagios-plugins-2.0.3.tar.gz
[ec2-user@ip-172-31-8-148 downloads]$ cd nagios-4.4.9
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ sudo yum install openssl-devel
Last metadata expiration check: 0:28:36 ago on Thu Oct 17 08:24:13 2024.
Dependencies resolved.
================================================================================================================================
 Package                    Architecture        Version                              Repository                Size
================================================================================================================================
Installing:
 openssl-devel              x86_64              1:3.0.8-1.amzn2023.0.16              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]:
```

```
ec2-user@ip-172-31-8-148:~/downloads/nagios-4.4.9
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ ./configure --with-command-group=nagcmd
checking for a BSD-compatible install... /usr/bin/install -c
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 make sets $(MAKE)... yes
checking whether ln -s works... yes
checking for strip... /usr/bin/strip
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 ANSI C header files... yes
checking whether time.h and sys/time.h may both be included... yes
checking for sys/wait.h that is POSIX.1 compatible... yes
checking for sys/types.h... yes
checking for sys/stat.h... yes
checking for stdlib.h... yes
checking for string.h... yes
checking for memory.h... yes
checking for strings.h... yes
checking for inttypes.h... yes
checking for stdint.h... yes
checking for unistd.h... yes
checking arpa/inet.h usability... yes
```

```
ec2-user@ip-172-31-8-148:~/downloads/nagios-4.4.9
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ make clean
cd ./lib && make clean
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/lib'
rm -f untested *.gcov *.gcda *.gcno gmon.out
rm -f test-squeue test-kvvec test-iocache test-iobroker test-bitmap test-dkhash test-runcmd test-nsutils test-fanout
rm -f core.* *.o *~ wproc *.a
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/lib'
cd ./base && make clean
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/base'
rm -f nagios nagiostats core *.o gmon.out
rm -f *~ *.*~
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/base'
cd ./cgi && make clean
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/cgi'
rm -f archivejson.cgi avail.cgi cmd.cgi config.cgi extinfo.cgi history.cgi notifications.cgi objectjson.cgi outages.cgi
showlog.cgi status.cgi statusjson.cgi statuswml.cgi summary.cgi tac.cgi statuswrl.cgi statusmap.cgi trends.cgi histogram
.cgi
rm -f *.o core gmon.out
rm -f *~ *.*~
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/cgi'
cd ./common && make clean
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/common'
rm -f core *.o
rm -f *~
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/common'
cd ./xdata && make clean
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/xdata'
rm -f *.o
rm -f *~
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/xdata'
cd ./html && make clean
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/html'
```


ec2-user@ip-172-31-8-148:~/downloads/nagios-4.4.9
rm -f worker-ping worker-ping.o
rm -f core *.o
rm -f *~ *.*~
make[2]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/worker/ping'
rm -f *~ *.*~
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/worker'
rm -f *.cfg core
rm -f *~ *.*~ */*~ */*.*~ */*/*.*~
rm -f nagioscore.info-file
rm -f *.gcno */*.gcno */*/*.gcno
rm -f *.gcda */*.gcda */*/*.gcda
rm -f *.gcov */*.gcov */*/*.gcov
rm -rf coverage-report
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ make all


ec2-user@ip-172-31-8-148:~/downloads/nagios-4.4.9
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ sudo make install
cd ./base && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/base'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/bin
/usr/bin/install -c -s -m 774 -o nagios -g nagios nagios /usr/local/nagios/bin
/usr/bin/install -c -s -m 774 -o nagios -g nagios nagiostats /usr/local/nagios/bin
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/base'
cd ./cgi && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/cgi'
make install-basic
make[2]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/cgi'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/sbin
for file in *.cgi; do \
/usr/bin/install -c -s -m 775 -o nagios -g nagios $file /usr/local/nagios/sbin; \
done
make[2]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/cgi'
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.4.9/cgi'
cd ./html && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.4.9/html'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/media
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/stylesheets
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/contexthelp
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/docs
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/docs/images
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/js
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/images
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/images/logos
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/includes
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/ssi
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/angularjs
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/angularjs/angular-1.3.9

```
ec2-user@ip-172-31-8-148:~/downloads/nagios-4.4.9
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ sudo make install-init
/usr/bin/install -c -m 755 -d -o root -g root /lib/systemd/system
/usr/bin/install -c -m 755 -o root -g root startup/default-service /lib/systemd/system/nagios.service
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ sudo make install-config
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/etc
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/etc/objects
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/nagios.cfg /usr/local/nagios/etc/nagios.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/cgi.cfg /usr/local/nagios/etc/cgi.cfg
/usr/bin/install -c -b -m 660 -o nagios -g nagios sample-config/resource.cfg /usr/local/nagios/etc/resource.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/templates.cfg /usr/local/nagios/etc/obje
cts/templates.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/commands.cfg /usr/local/nagios/etc/objec
ts/commands.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/contacts.cfg /usr/local/nagios/etc/objec
ts/contacts.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/timeperiods.cfg /usr/local/nagios/etc/ob
jects/timeperiods.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/localhost.cfg /usr/local/nagios/etc/obje
cts/localhost.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/windows.cfg /usr/local/nagios/etc/object
s/windows.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/printer.cfg /usr/local/nagios/etc/object
s/printer.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/switch.cfg /usr/local/nagios/etc/objects
/switch.cfg

*** Config files installed ***

Remember, these are *SAMPLE* config files.  You'll need to read
the documentation for more information on how to actually define
services, hosts, etc. to fit your particular needs.
```

```
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ sudo make install-commandmode
/usr/bin/install -c -m 775 -o nagios -g nagcmd -d /usr/local/nagios/var/rw
chmod g+s /usr/local/nagios/var/rw

*** External command directory configured ***

[ec2-user@ip-172-31-8-148 nagios-4.4.9]$
```

```
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ sudo nano /usr/local/nagios/etc/objects/contacts.cfg
```

```
ec2-user@ip-172-31-8-148:~/downloads/nagios-4.4.9
  GNU nano 5.8                    /usr/local/nagios/etc/objects/contacts.cfg                    Modified
#        You don't need to keep these definitions in a separate file from your
#        other object definitions.  This has been done just to make things
#        easier to understand.
#
###############################################################################



###############################################################################
#
# 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 abo>
    alias                   Nagios Admin            ; Full name of user
    email                   ves@gmail.com ; <<***** CHANGE THIS TO YOUR EMAIL ADDRESS ******
}



^G Help      ^O Write Out   ^W Where Is    ^K Cut         ^T Execute     ^C Location    M-U Undo      M-A Set Mark
^X Exit      ^R Read File   ^\ Replace     ^U Paste       ^J Justify     ^/ Go To Line  M-E Redo      M-6 Copy
```

```
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ 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.conf; \
fi

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

[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin
New password:
Re-type new password:
Adding password for user nagiosadmin
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$
```

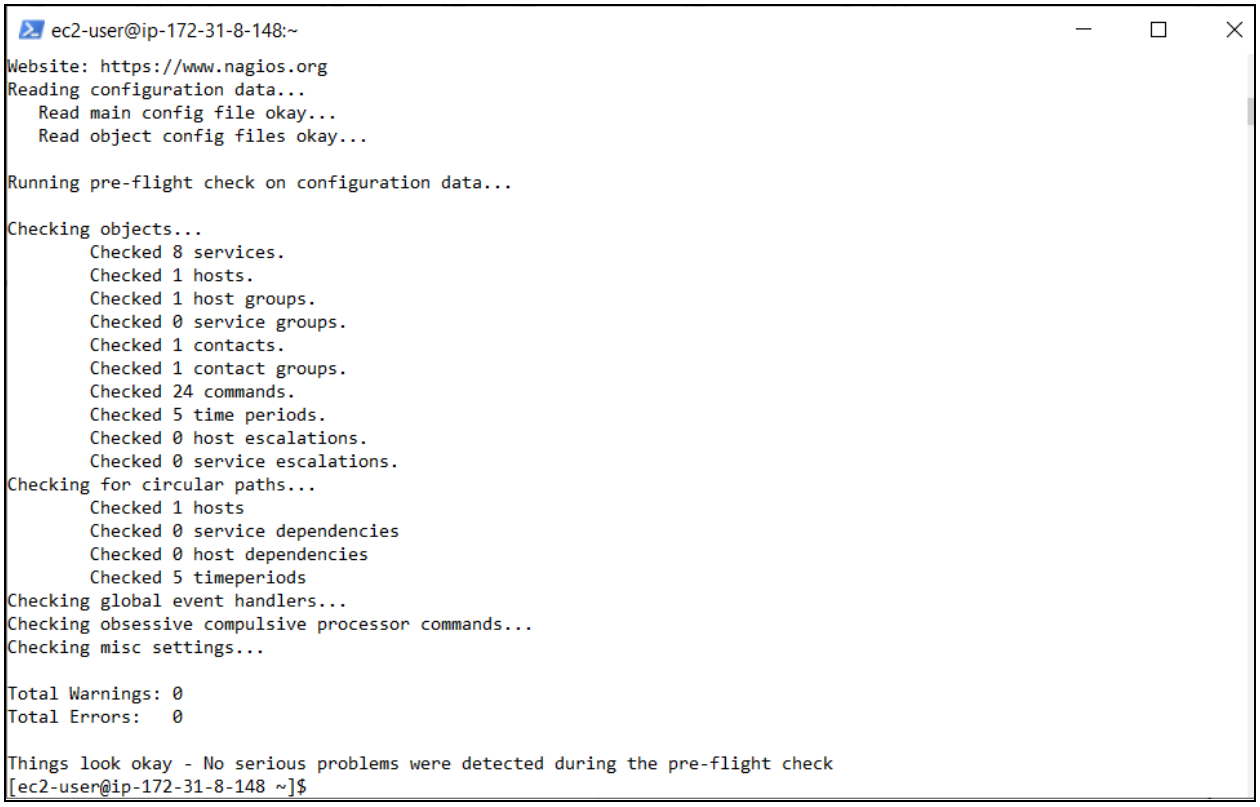
ec2-user@ip-172-31-8-148:~/downloads

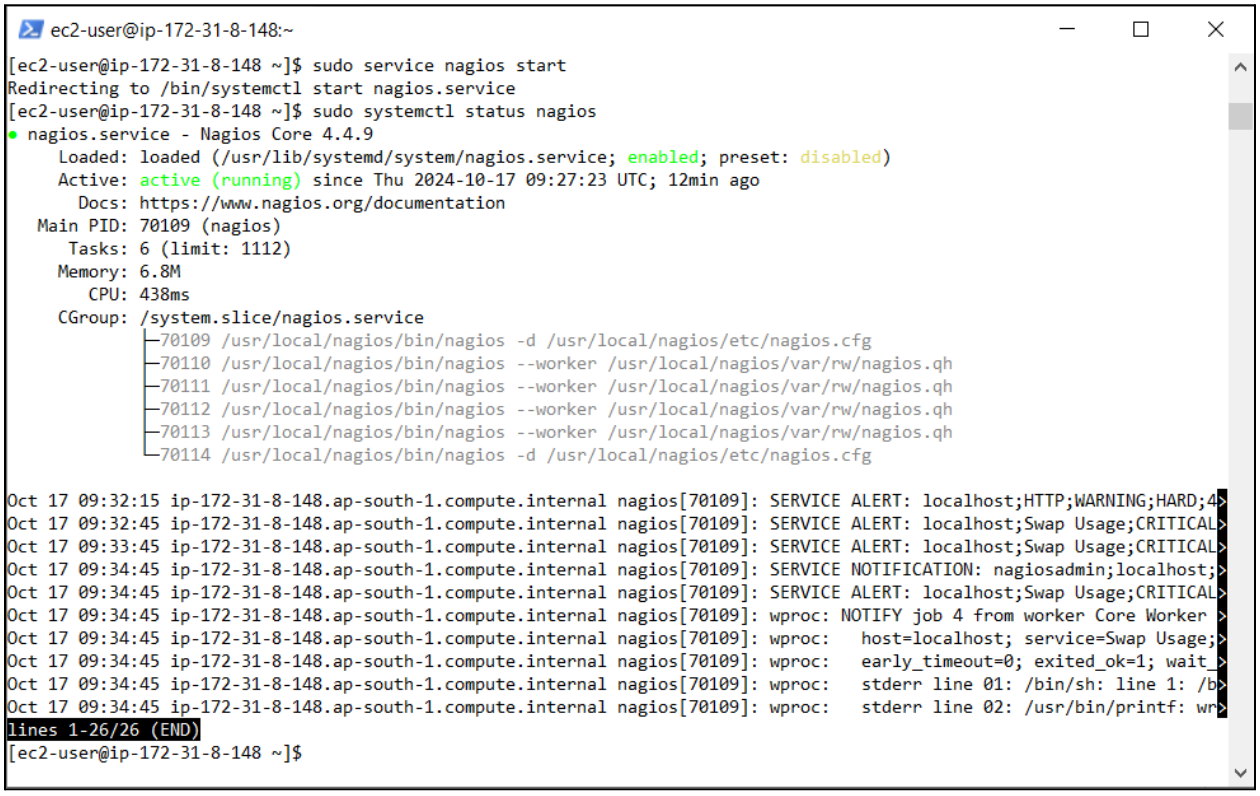
```
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ sudo service httpd restart
Redirecting to /bin/systemctl restart httpd.service
[ec2-user@ip-172-31-8-148 nagios-4.4.9]$ cd ~/downloads
[ec2-user@ip-172-31-8-148 downloads]$ tar zxvf nagios-plugins-2.0.3.tar.gz
nagios-plugins-2.0.3/
nagios-plugins-2.0.3/perlmods/
nagios-plugins-2.0.3/perlmods/Config-Tiny-2.14.tar.gz
nagios-plugins-2.0.3/perlmods/parent-0.226.tar.gz
nagios-plugins-2.0.3/perlmods/Test-Simple-0.98.tar.gz
nagios-plugins-2.0.3/perlmods/Makefile.in
nagios-plugins-2.0.3/perlmods/version-0.9903.tar.gz
nagios-plugins-2.0.3/perlmods/Makefile.am
nagios-plugins-2.0.3/perlmods/Module-Runtime-0.013.tar.gz
nagios-plugins-2.0.3/perlmods/Module-Metadata-1.000014.tar.gz
nagios-plugins-2.0.3/perlmods/Params-Validate-1.08.tar.gz
nagios-plugins-2.0.3/perlmods/Class-Accessor-0.34.tar.gz
nagios-plugins-2.0.3/perlmods/Try-Tiny-0.18.tar.gz
nagios-plugins-2.0.3/perlmods/Module-Implementation-0.07.tar.gz
nagios-plugins-2.0.3/perlmods/Makefile
nagios-plugins-2.0.3/perlmods/Perl-OSType-1.003.tar.gz
nagios-plugins-2.0.3/perlmods/install_order
nagios-plugins-2.0.3/perlmods/Nagios-Plugin-0.36.tar.gz
nagios-plugins-2.0.3/perlmods/Math-Calc-Units-1.07.tar.gz
nagios-plugins-2.0.3/perlmods/Module-Build-0.4007.tar.gz
nagios-plugins-2.0.3/ABOUT-NLS
nagios-plugins-2.0.3/configure.ac
nagios-plugins-2.0.3/Makefile.in
nagios-plugins-2.0.3/config.h.in
nagios-plugins-2.0.3/ChangeLog
nagios-plugins-2.0.3/AUTHORS
nagios-plugins-2.0.3/lib/
nagios-plugins-2.0.3/lib/parse_ini.h
```

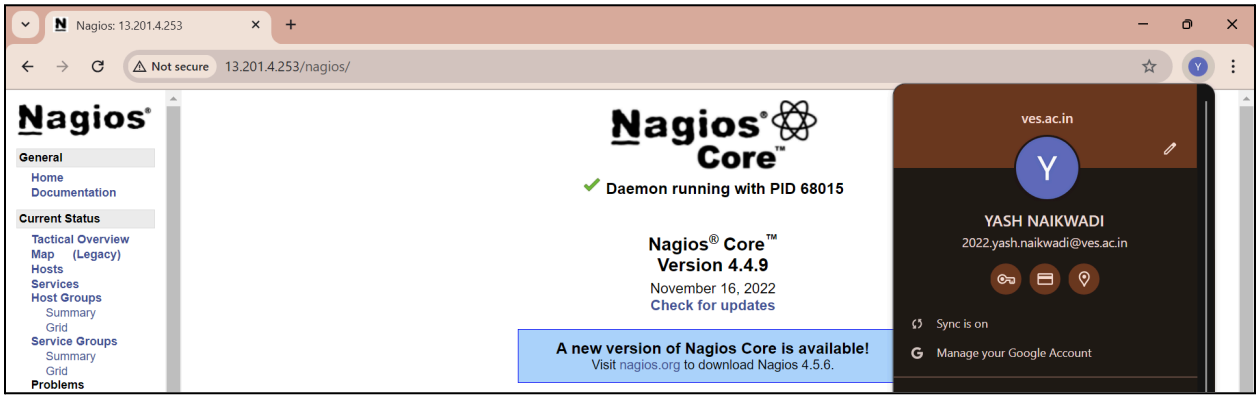
```
[ec2-user@ip-172-31-8-148 nagios-plugins-2.0.3]$ make
```

```
[ec2-user@ip-172-31-8-148 nagios-plugins-2.0.3]$ sudo make install
```

```
[ec2-user@ip-172-31-8-148 ~]$ sudo chkconfig --add nagios
error reading information on service nagios: No such file or directory
[ec2-user@ip-172-31-8-148 ~]$ sudo chkconfig nagios on
Note: Forwarding request to 'systemctl enable nagios.service'.
[ec2-user@ip-172-31-8-148 ~]$ sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg
```


ec2-user@ip-172-31-8-148:~
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
Things look okay - No serious problems were detected during the pre-flight check
[ec2-user@ip-172-31-8-148 ~]$


ec2-user@ip-172-31-8-148:~
[ec2-user@ip-172-31-8-148 ~]$ sudo service nagios start
Redirecting to /bin/systemctl start nagios.service
[ec2-user@ip-172-31-8-148 ~]$ sudo systemctl status nagios
nagios.service - Nagios Core 4.4.9
Loaded: loaded (/usr/lib/systemd/system/nagios.service; enabled; preset: disabled)
Active: active (running) since Thu 2024-10-17 09:27:23 UTC; 12min ago
Docs: https://www.nagios.org/documentation
Main PID: 70109 (nagios)
Tasks: 6 (limit: 1112)
Memory: 6.8M
CPU: 438ms
CGroup: /system.slice/nagios.service
70109 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
70110 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
70111 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
70112 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
70113 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
70114 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
Oct 17 09:32:15 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: SERVICE ALERT: localhost;HTTP;WARNING;HARD;4
Oct 17 09:32:45 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: SERVICE ALERT: localhost;Swap Usage;CRITICAL
Oct 17 09:33:45 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: SERVICE ALERT: localhost;Swap Usage;CRITICAL
Oct 17 09:34:45 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: SERVICE NOTIFICATION: nagiosadmin;localhost;
Oct 17 09:34:45 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: SERVICE ALERT: localhost;Swap Usage;CRITICAL
Oct 17 09:34:45 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: wproc: NOTIFY job 4 from worker Core Worker
Oct 17 09:34:45 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: wproc: host=localhost; service=Swap Usage;
Oct 17 09:34:45 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: wproc: early_timeout=0; exited_ok=1; wait_
Oct 17 09:34:45 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: wproc: stderr line 01: /bin/sh: line 1: /b
Oct 17 09:34:45 ip-172-31-8-148.ap-south-1.compute.internal nagios[70109]: wproc: stderr line 02: /usr/bin/printf: wr
lines 1-26/26 (END)
[ec2-user@ip-172-31-8-148 ~]$



CONCLUSION :

Thus, we learned about Nagios and successfully set it up on our Linux machine. Nagios proves to be an effective tool for continuous monitoring, helping to detect and resolve issues quickly, ensuring system reliability and smooth operations.