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Roll No.: 19

Subject: Advanced DevOps

Experiment No.: 9

Experiment 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 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.

- What is 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. Components are:

a. The scheduler is a component of the server part of Nagios. It sends a signal to execute the plugins at remote ~~lost.~~ host.

b. The plugin gets the status from the remote host.

c. The plugin sends the data to the process scheduler.

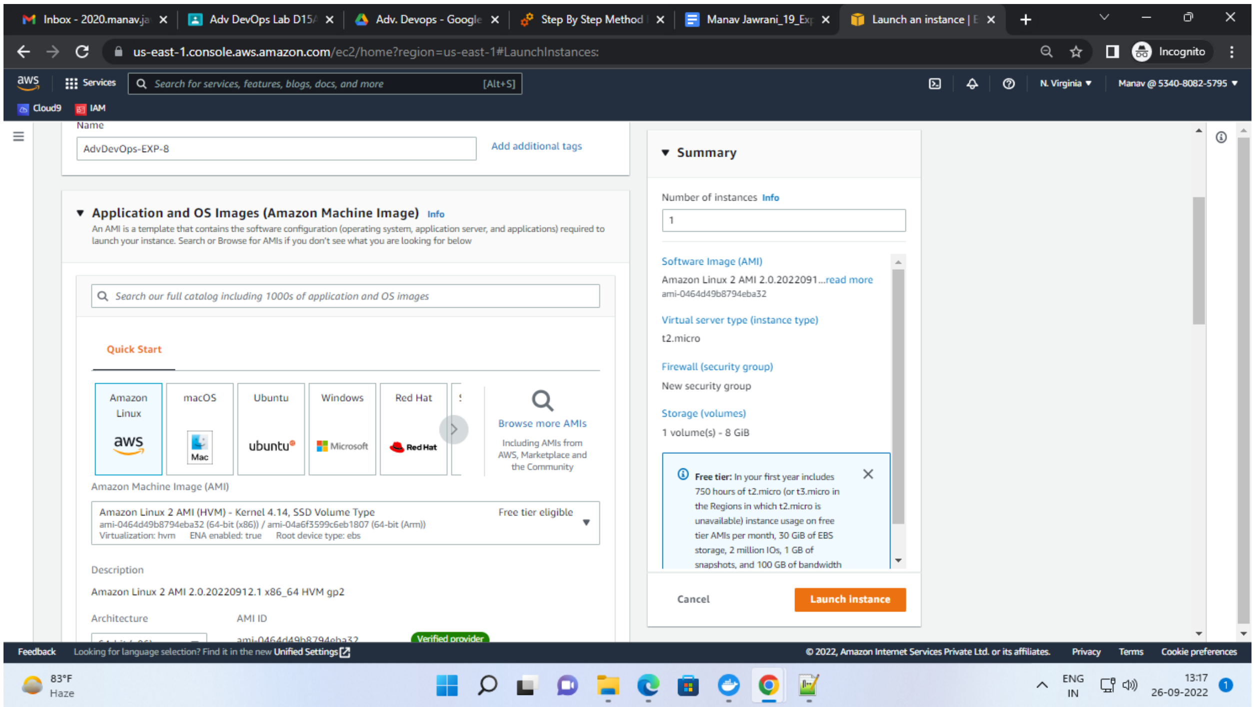
d. The process scheduler updates the GUI and notifications are sent to admins.

- main features of Nagios.

1. Increased server, services, process and application availability.
2. Fast detection of networks and server outages and protocol failures
3. Fast detection of failed servers, services and processes.

Implementation:

Step 1: Create a Linux EC2 instance on AWS.



Name

AdvDevOps-EXP-8

Application and OS Images (Amazon Machine Image)

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

Amazon Machine Image (AMI)

Amazon Linux 2 AMI (HVM) - Kernel 4.14, SSD Volume Type — Free tier eligible
ami-0464d49b8794eba32 (64-bit (x86)) / ami-04a6f3599c6eb1807 (64-bit (Arm))
Virtualization: hvm   ENA enabled: true   Root device type: ebs

Description

Amazon Linux 2 AMI 2.0.20220912.1 x86_64 HVM gp2

Summary

Number of instances: 1

Software Image (AMI): Amazon Linux 2 AMI 2.0.2022091...read more
ami-0464d49b8794eba32

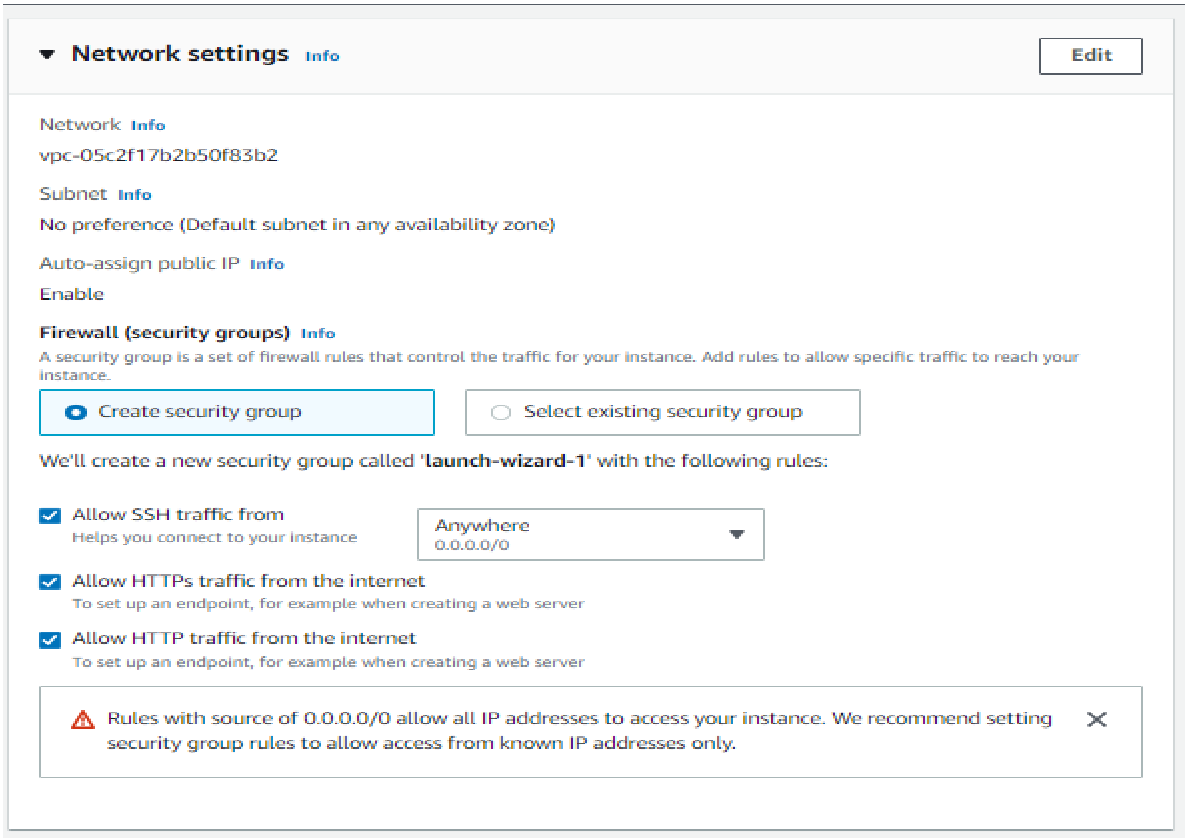
Virtual server type (instance type): t2.micro

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 t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million IOs, 1 GB of snapshots, and 100 GB of bandwidth

Create a new security group and Allow SSH , HTTP , HTTPS.



Network settings Info Edit

Network Info
vpc-05c2f17b2b50f83b2

Subnet Info
No preference (Default subnet in any availability zone)

Auto-assign public IP Info
Enable

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

We'll create a new security group called '**launch-wizard-1**' with the following rules:

☑ Allow SSH traffic from — Anywhere 0.0.0.0/0
Helps you connect to your instance

☑ 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.

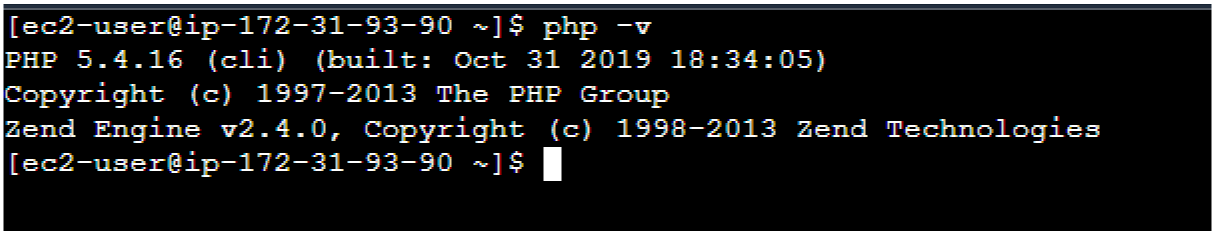
Step 2: Install Prerequisite Software

Nagios requires the following packages are installed on your server prior to installing Nagios:

* Apache
* PHP
* GCC compiler
* GD development libraries

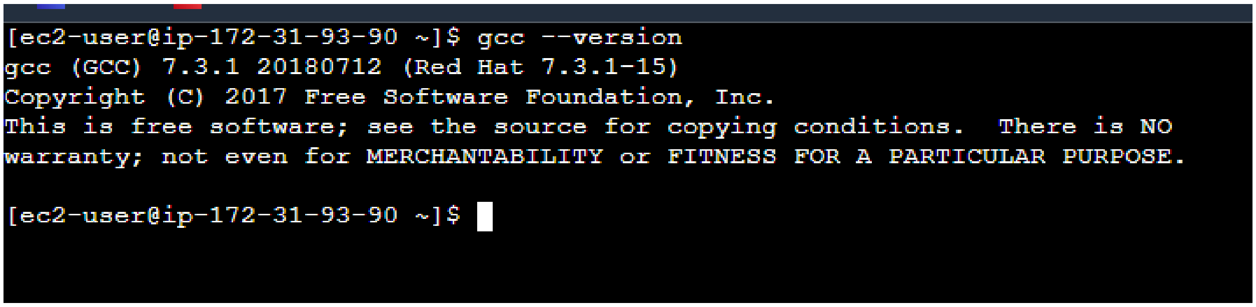
You can use yum to install these packages by running the following commands (as ec2-user):

sudo yum install httpd php



```
[ec2-user@ip-172-31-93-90 ~]$ php -v
PHP 5.4.16 (cli) (built: Oct 31 2019 18:34:05)
Copyright (c) 1997-2013 The PHP Group
Zend Engine v2.4.0, Copyright (c) 1998-2013 Zend Technologies
[ec2-user@ip-172-31-93-90 ~]$
```

sudo yum install gcc glibc glibc-common



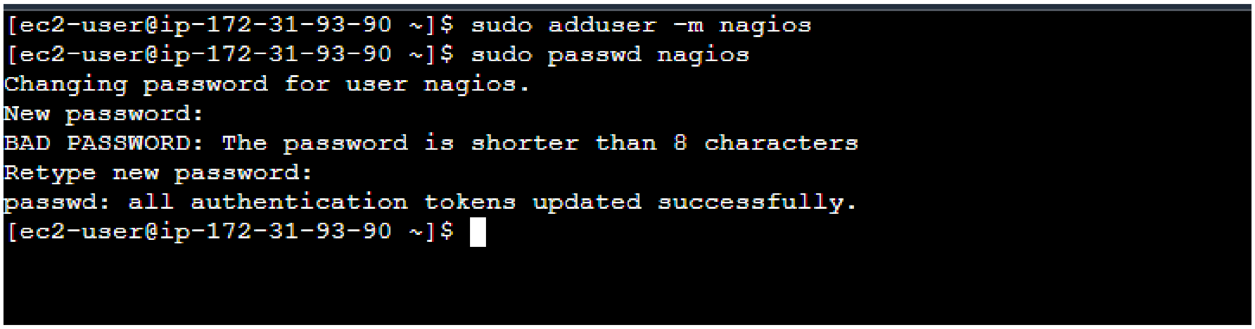
```
[ec2-user@ip-172-31-93-90 ~]$ gcc --version
gcc (GCC) 7.3.1 20180712 (Red Hat 7.3.1-15)
Copyright (C) 2017 Free Software Foundation, Inc.
This is free software; see the source for copying conditions.  There is NO
warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

[ec2-user@ip-172-31-93-90 ~]$
```

sudo yum install gd gd-devel

Step 3: Create Account Information

You need to set up a Nagios user. Run the following commands:

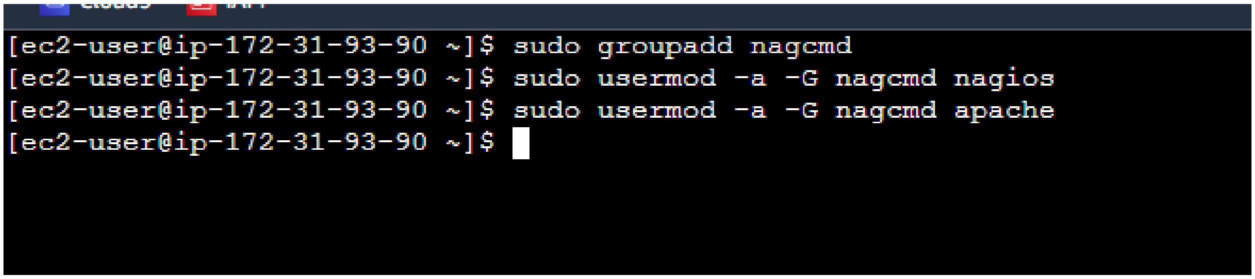
sudo adduser -m nagios
sudo passwd nagios



```
[ec2-user@ip-172-31-93-90 ~]$ sudo adduser -m nagios
[ec2-user@ip-172-31-93-90 ~]$ sudo passwd nagios
Changing password for user nagios.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[ec2-user@ip-172-31-93-90 ~]$
```

Type the new password twice.

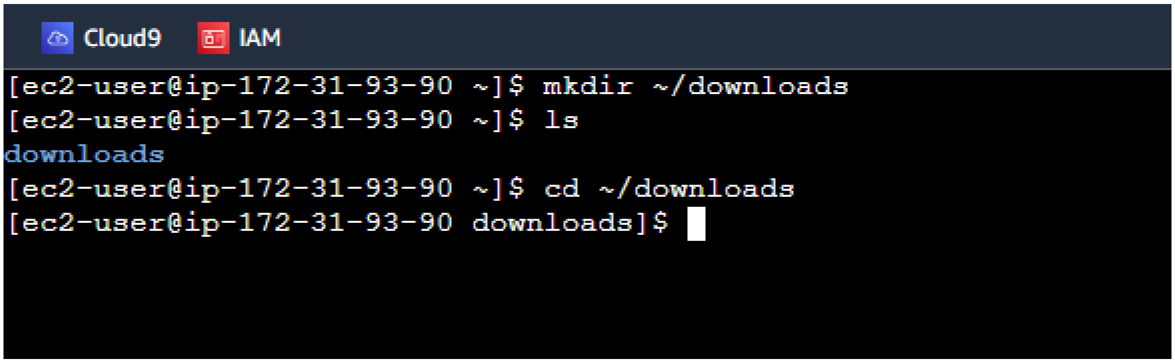
sudo groupadd nagcmd
sudo usermod -a -G nagcmd nagios
sudo usermod -a -G nagcmd www-data



```
[ec2-user@ip-172-31-93-90 ~]$ sudo groupadd nagcmd
[ec2-user@ip-172-31-93-90 ~]$ sudo usermod -a -G nagcmd nagios
[ec2-user@ip-172-31-93-90 ~]$ sudo usermod -a -G nagcmd apache
[ec2-user@ip-172-31-93-90 ~]$
```

Step 4: Download Nagios Core and the Plugins
Create a directory for storing the downloads.

mkdir ~/downloads
cd ~/downloads

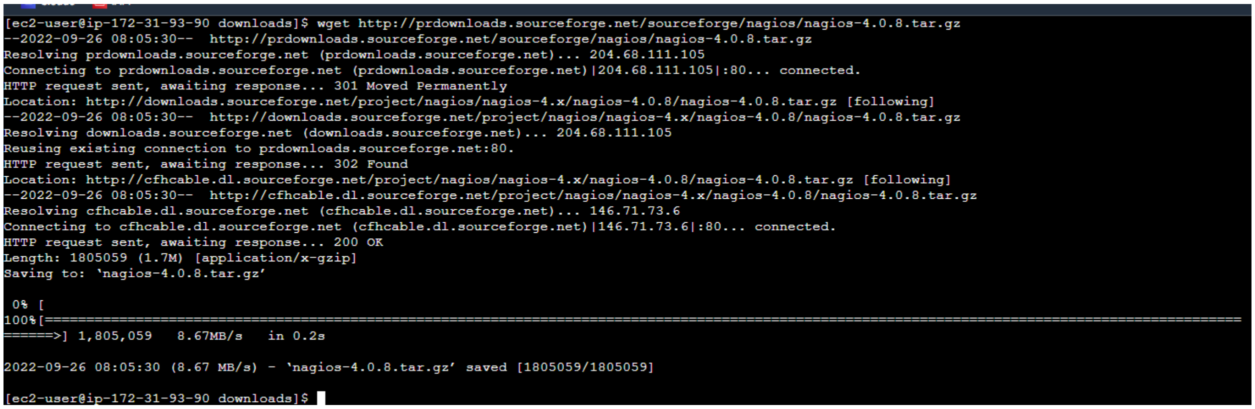


```
[ec2-user@ip-172-31-93-90 ~]$ mkdir ~/downloads
[ec2-user@ip-172-31-93-90 ~]$ ls
downloads
[ec2-user@ip-172-31-93-90 ~]$ cd ~/downloads
[ec2-user@ip-172-31-93-90 downloads]$
```

Now install nagios:
Command:

wget http://prdownloads.sourceforge.net/sourceforge/nagios/nagios-4.0.8.tar.gz

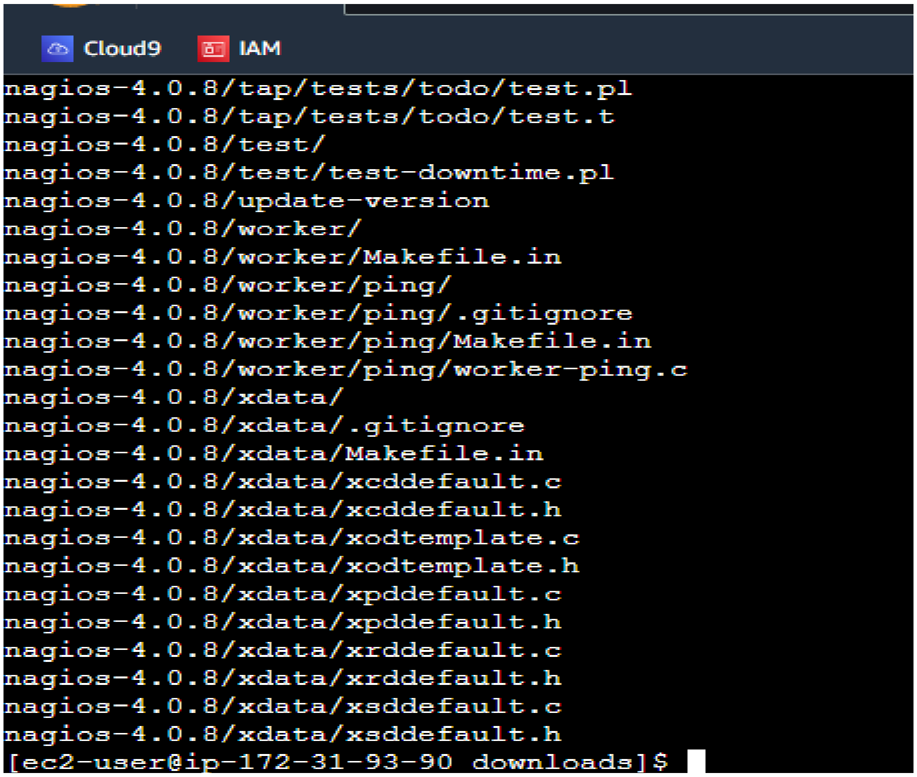
wget http://nagios-plugins.org/download/nagios-plugins-2.0.3.tar.gz



```
[ec2-user@ip-172-31-93-90 downloads]$ wget http://prdownloads.sourceforge.net/sourceforge/nagios/nagios-4.0.8.tar.gz
--2022-09-26 08:05:30--  http://prdownloads.sourceforge.net/sourceforge/nagios/nagios-4.0.8.tar.gz
Resolving prdownloads.sourceforge.net (prdownloads.sourceforge.net)... 204.68.111.105
Connecting to prdownloads.sourceforge.net (prdownloads.sourceforge.net)|204.68.111.105|:80... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: http://downloads.sourceforge.net/project/nagios/nagios-4.x/nagios-4.0.8/nagios-4.0.8.tar.gz [following]
--2022-09-26 08:05:30--  http://downloads.sourceforge.net/project/nagios/nagios-4.x/nagios-4.0.8/nagios-4.0.8.tar.gz
Resolving downloads.sourceforge.net (downloads.sourceforge.net)... 204.68.111.105
Reusing existing connection to prdownloads.sourceforge.net:80.
HTTP request sent, awaiting response... 302 Found
Location: http://cfhcable.dl.sourceforge.net/project/nagios/nagios-4.x/nagios-4.0.8/nagios-4.0.8.tar.gz [following]
--2022-09-26 08:05:30--  http://cfhcable.dl.sourceforge.net/project/nagios/nagios-4.x/nagios-4.0.8/nagios-4.0.8.tar.gz
Resolving cfhcable.dl.sourceforge.net (cfhcable.dl.sourceforge.net)... 146.71.73.6
Connecting to cfhcable.dl.sourceforge.net (cfhcable.dl.sourceforge.net)|146.71.73.6|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 1805059 (1.7M) [application/x-gzip]
Saving to: 'nagios-4.0.8.tar.gz'

 0% [
100%[==================================================================================================================================================
======>] 1,805,059   8.67MB/s   in 0.2s

2022-09-26 08:05:30 (8.67 MB/s) - 'nagios-4.0.8.tar.gz' saved [1805059/1805059]

[ec2-user@ip-172-31-93-90 downloads]$ 
```

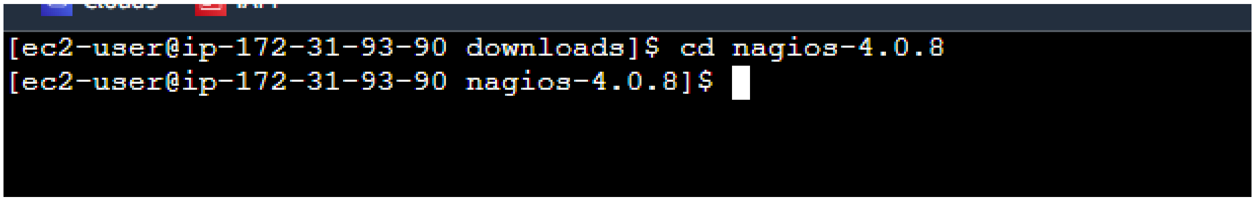
Step 5: Compile and Install Nagios
Use the following command:

tar zxvf nagios-4.0.8.tar.gz



```
nagios-4.0.8/tap/tests/todo/test.pl
nagios-4.0.8/tap/tests/todo/test.t
nagios-4.0.8/test/
nagios-4.0.8/test/test-downtime.pl
nagios-4.0.8/update-version
nagios-4.0.8/worker/
nagios-4.0.8/worker/Makefile.in
nagios-4.0.8/worker/ping/
nagios-4.0.8/worker/ping/.gitignore
nagios-4.0.8/worker/ping/Makefile.in
nagios-4.0.8/worker/ping/worker-ping.c
nagios-4.0.8/xdata/
nagios-4.0.8/xdata/.gitignore
nagios-4.0.8/xdata/Makefile.in
nagios-4.0.8/xdata/xcddefault.c
nagios-4.0.8/xdata/xcddefault.h
nagios-4.0.8/xdata/xodtemplate.c
nagios-4.0.8/xdata/xodtemplate.h
nagios-4.0.8/xdata/xpddefault.c
nagios-4.0.8/xdata/xpddefault.h
nagios-4.0.8/xdata/xrddefault.c
nagios-4.0.8/xdata/xrddefault.h
nagios-4.0.8/xdata/xsddefault.c
nagios-4.0.8/xdata/xsddefault.h
[ec2-user@ip-172-31-93-90 downloads]$ 
```

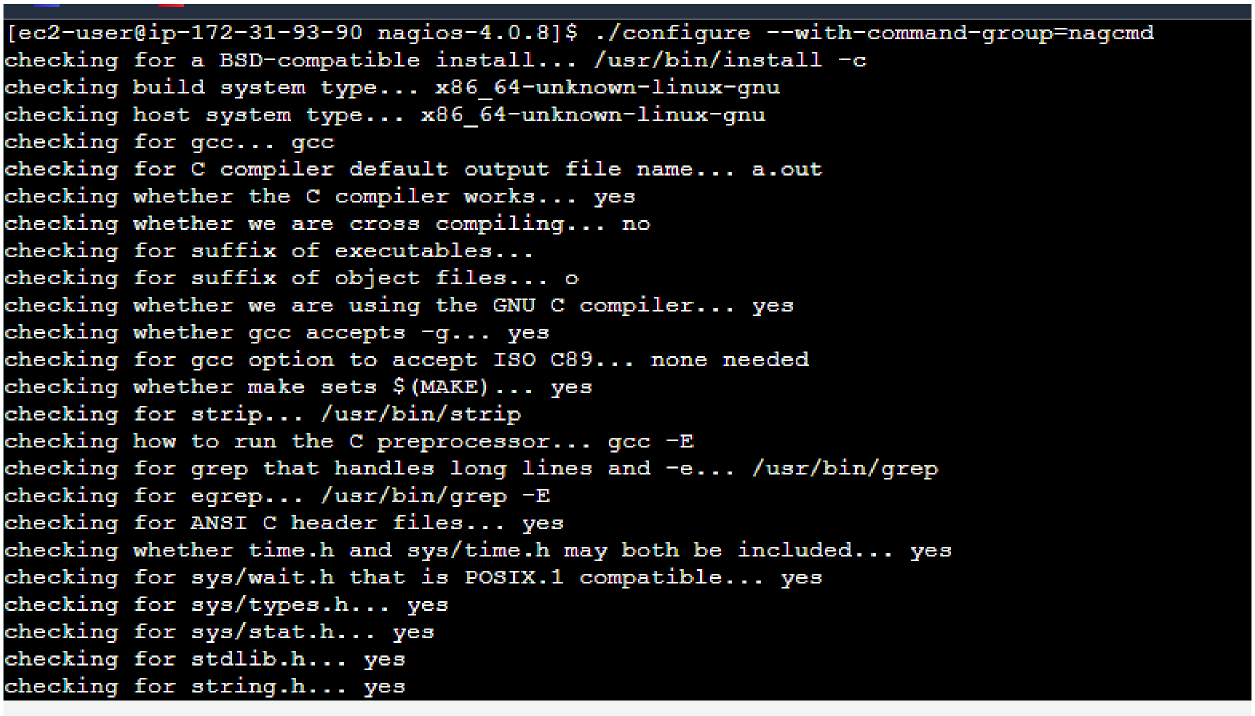
cd nagios-plugins-2.3.3



```
[ec2-user@ip-172-31-93-90 downloads]$ cd nagios-4.0.8
[ec2-user@ip-172-31-93-90 nagios-4.0.8]$ 
```

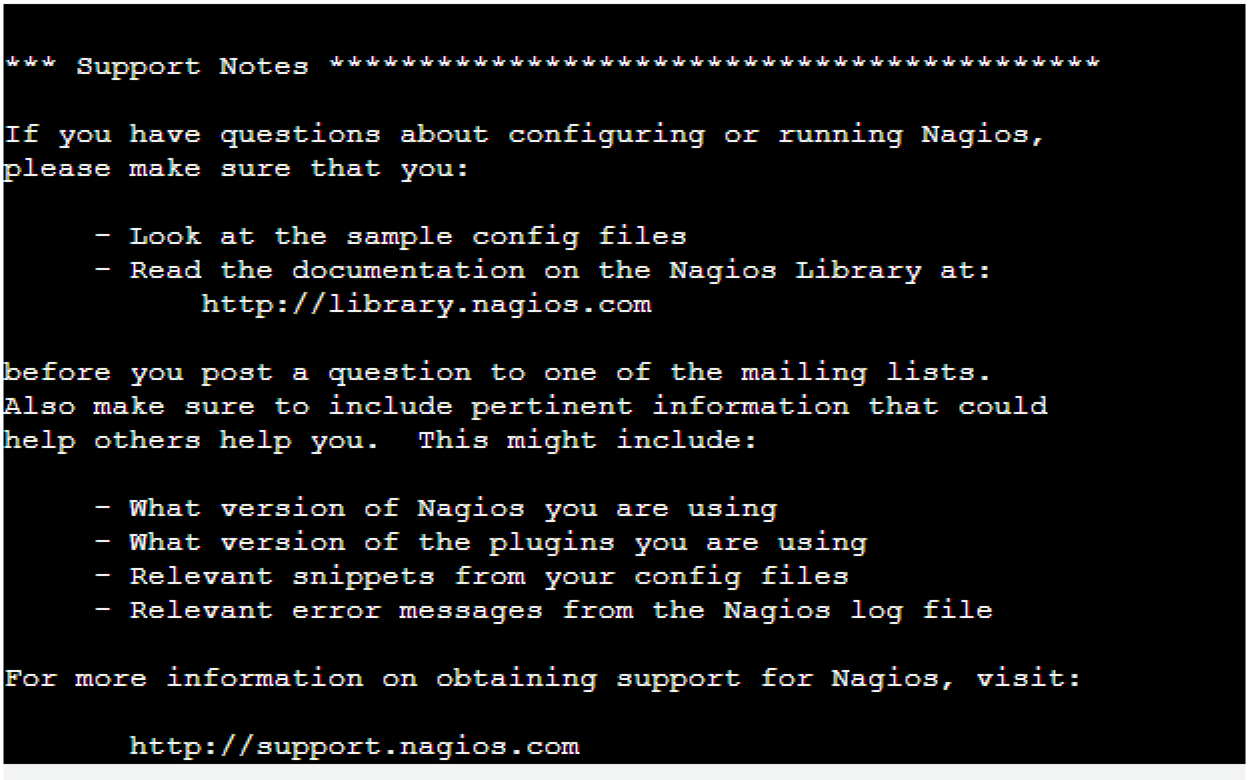
Run the configuration script with the name of the group which you have created in the above step.

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



```
[ec2-user@ip-172-31-93-90 nagios-4.0.8]$ ./configure --with-command-group=nagcmd
checking for a BSD-compatible install... /usr/bin/install -c
checking build system type... x86_64-unknown-linux-gnu
checking host system type... x86_64-unknown-linux-gnu
checking for gcc... gcc
checking for C compiler default output file name... a.out
checking whether the C compiler works... yes
checking whether we are cross compiling... no
checking for suffix of executables...
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 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
```

Compile the Nagios source code.
make all



```
*** Support Notes *******************************************

If you have questions about configuring or running Nagios,
please make sure that you:

     - Look at the sample config files
     - Read the documentation on the Nagios Library at:
           http://library.nagios.com

before you post a question to one of the mailing lists.
Also make sure to include pertinent information that could
help others help you.  This might include:

     - What version of Nagios you are using
     - What version of the plugins you are using
     - Relevant snippets from your config files
     - Relevant error messages from the Nagios log file

For more information on obtaining support for Nagios, visit:

       http://support.nagios.com
```

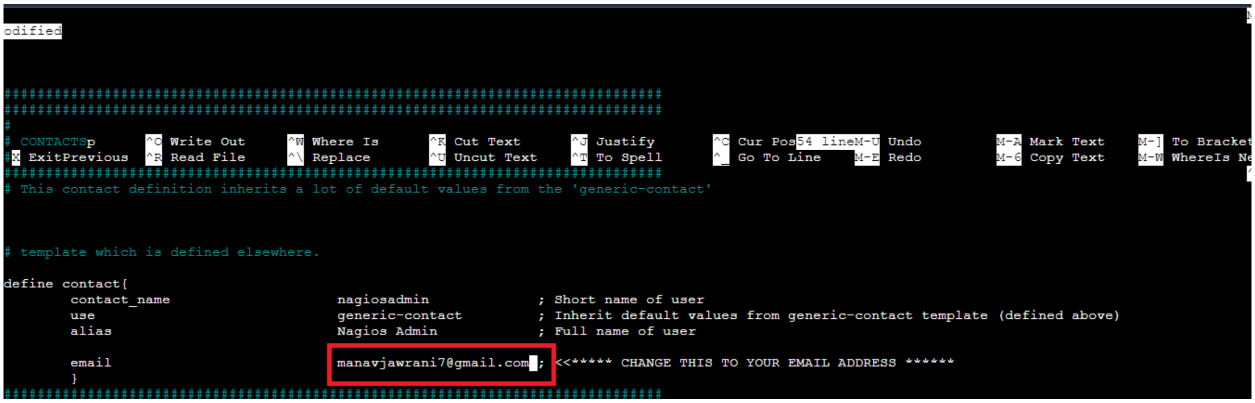
Install binaries, init script, sample config files and set permissions on the external command directory.

sudo make install
sudo make install-init
sudo make install-config
sudo make install-commandmode

Step 6: Customize Configuration

Change EMail address from nagiosadmin to your email address.

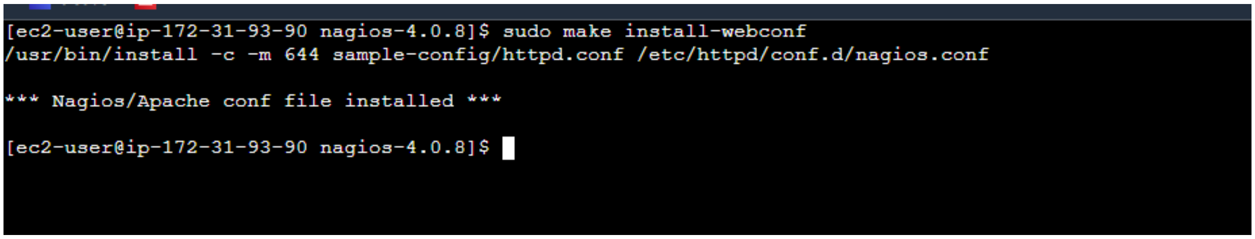
sudo nano /usr/local/nagios/etc/objects/contacts.cfg



```
odified

###############################################################################
###############################################################################
#
# CONTACTSp       ^O Write Out     ^W Where Is      ^K Cut Text      ^J Justify       ^C Cur Pos54 lineM-U Undo          M-A Mark Text     M-] To Bracket
#X ExitPrevious   ^R Read File     ^\ Replace       ^U Uncut Text    ^T To Spell      ^_ Go To Line     M-E Redo          M-6 Copy Text     M-W WhereIs Ne
###############################################################################
# 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                           manavjawrani7@gmail.com ; <<***** CHANGE THIS TO YOUR EMAIL ADDRESS ******
        }
###############################################################################
```

Step 7: Configure the Web Interface

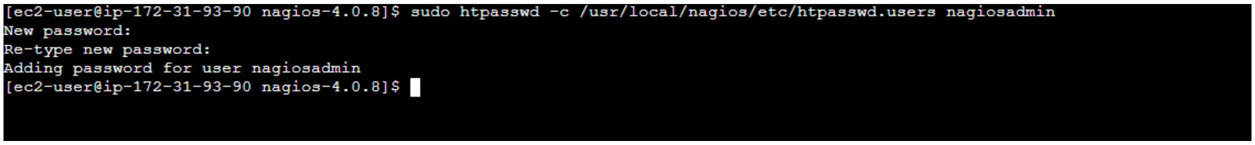
sudo make install-webconf



```
[ec2-user@ip-172-31-93-90 nagios-4.0.8]$ sudo make install-webconf
/usr/bin/install -c -m 644 sample-config/httpd.conf /etc/httpd/conf.d/nagios.conf

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

[ec2-user@ip-172-31-93-90 nagios-4.0.8]$
```

Create a nagiosadmin account for logging into the Nagios web interface. Note the password you need while login to Nagios web console.

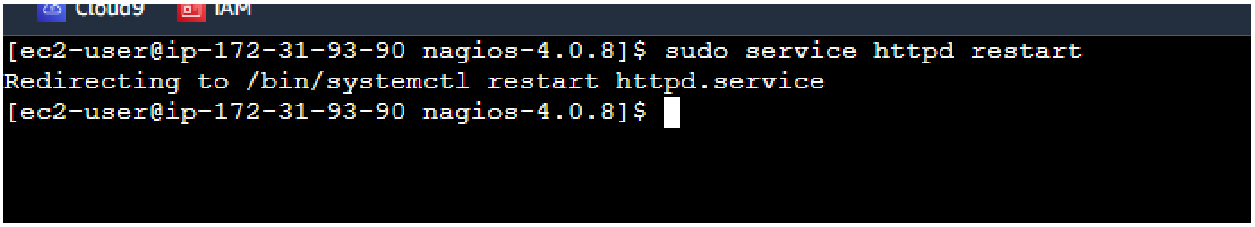
sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin



```
[ec2-user@ip-172-31-93-90 nagios-4.0.8]$ sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin
New password:
Re-type new password:
Adding password for user nagiosadmin
[ec2-user@ip-172-31-93-90 nagios-4.0.8]$
```

Now Restart the Apache

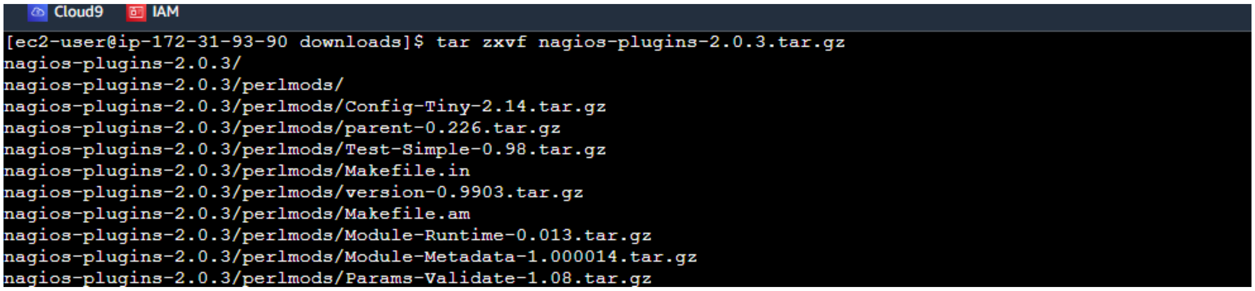
sudo service httpd restart



```
[ec2-user@ip-172-31-93-90 nagios-4.0.8]$ sudo service httpd restart
Redirecting to /bin/systemctl restart httpd.service
[ec2-user@ip-172-31-93-90 nagios-4.0.8]$
```

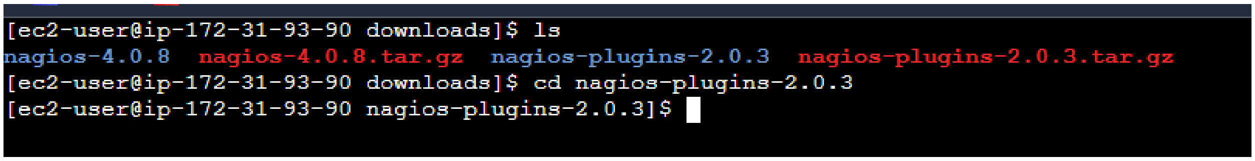
Step 8: Compile and Install the Nagios Plugins
Extract the Nagios plugins source code tarball.

cd ~/downloads
tar zxvf nagios-plugins-2.0.3.tar.gz



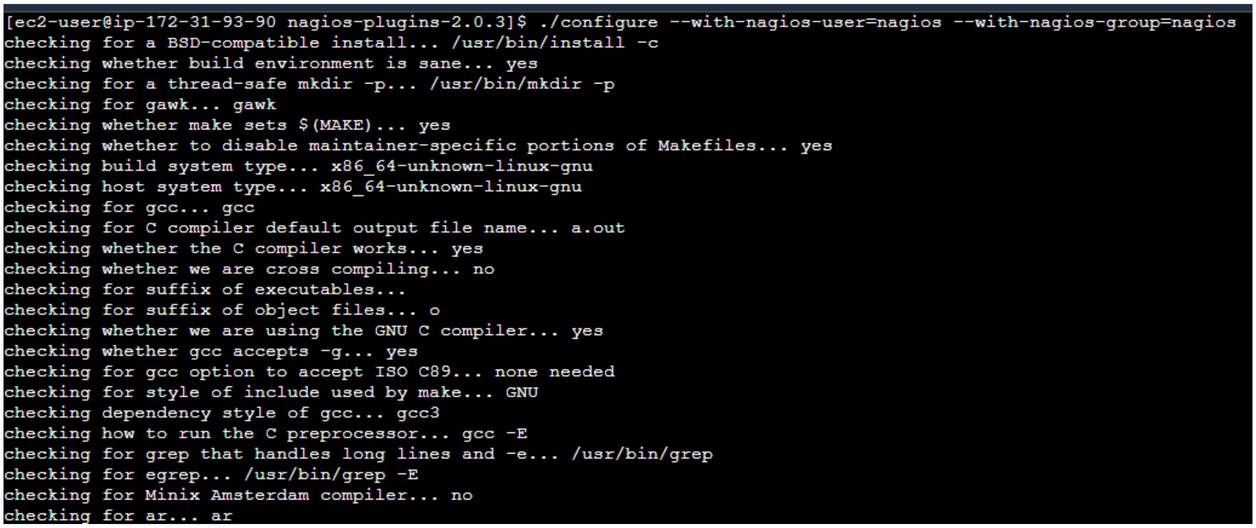
```
[ec2-user@ip-172-31-93-90 downloads]$ tar zxvf nagios-plugins-2.0.3.tar.gz
nagios-plugins-2.0.3/
nagios-plugins-2.0.3/perlmods/
nagios-plugins-2.0.3/perlmods/Config-Tiny-2.14.tar.gz
nagios-plugins-2.0.3/perlmods/parent-0.226.tar.gz
nagios-plugins-2.0.3/perlmods/Test-Simple-0.98.tar.gz
nagios-plugins-2.0.3/perlmods/Makefile.in
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
```

cd nagios-plugins-2.0.3



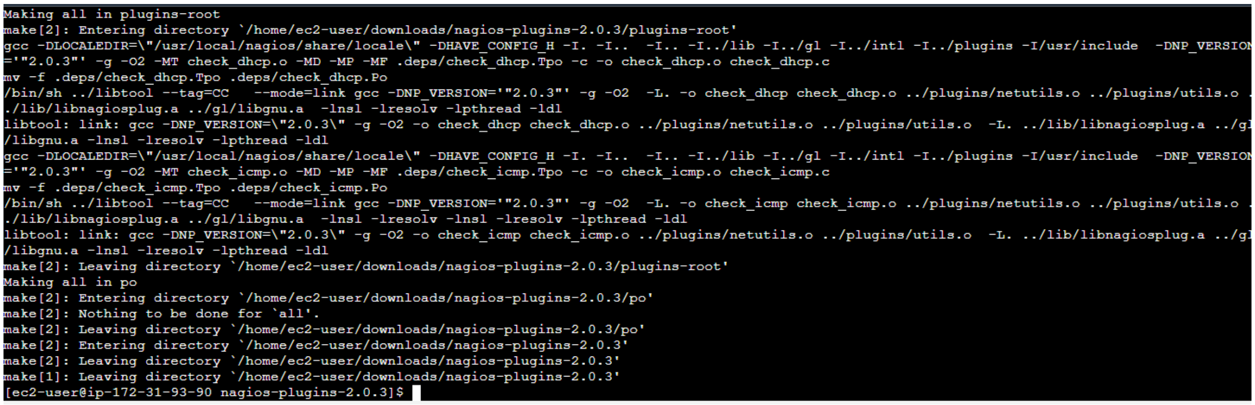
```
[ec2-user@ip-172-31-93-90 downloads]$ ls
nagios-4.0.8  nagios-4.0.8.tar.gz  nagios-plugins-2.0.3  nagios-plugins-2.0.3.tar.gz
[ec2-user@ip-172-31-93-90 downloads]$ cd nagios-plugins-2.0.3
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$
```

Compile and install the plugins.
./configure --with-nagios-user=nagios --with-nagios-group=nagios



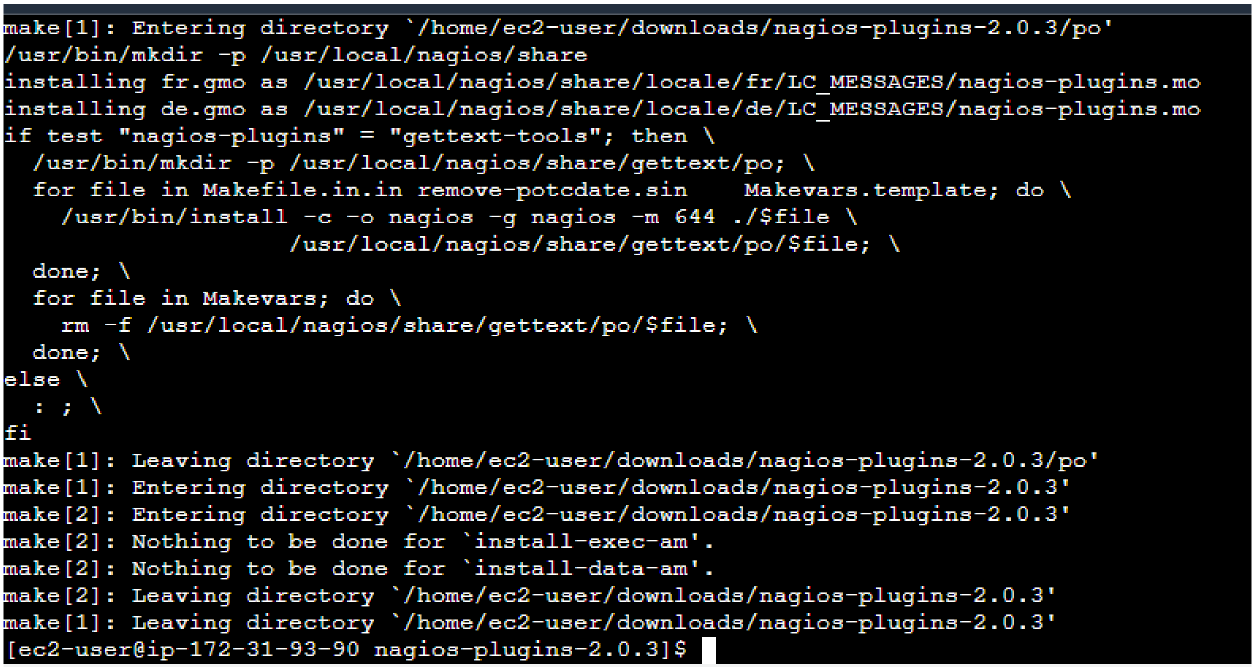
```
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$ ./configure --with-nagios-user=nagios --with-nagios-group=nagios
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /usr/bin/mkdir -p
checking for gawk... gawk
checking whether make sets $(MAKE)... yes
checking whether to disable maintainer-specific portions of Makefiles... yes
checking build system type... x86_64-unknown-linux-gnu
checking host system type... x86_64-unknown-linux-gnu
checking for gcc... gcc
checking for C compiler default output file name... a.out
checking whether the C compiler works... yes
checking whether we are cross compiling... no
checking for suffix of executables...
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 for style of include used by make... GNU
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
```

make



```
Making all in plugins-root
make[2]: Entering directory `/home/ec2-user/downloads/nagios-plugins-2.0.3/plugins-root'
gcc -DLOCALEDIR=\"/usr/local/nagios/share/locale\" -DHAVE_CONFIG_H -I. -I..  -I.. -I../lib -I../gl -I../intl -I../plugins -I/usr/include  -DNP_VERSION
='"2.0.3"' -g -O2 -MT check_dhcp.o -MD -MP -MF .deps/check_dhcp.Tpo -c -o check_dhcp.o check_dhcp.c
mv -f .deps/check_dhcp.Tpo .deps/check_dhcp.Po
/bin/sh ../libtool --tag=CC   --mode=link gcc -DNP_VERSION='"2.0.3"' -g -O2  -L. -o check_dhcp check_dhcp.o ../plugins/netutils.o ../plugins/utils.o .
./lib/libnagiosplug.a ../gl/libgnu.a  -lnsl -lresolv -lpthread -ldl
libtool: link: gcc -DNP_VERSION=\"2.0.3\" -g -O2 -o check_dhcp check_dhcp.o ../plugins/netutils.o ../plugins/utils.o  -L. ../lib/libnagiosplug.a ../gl
/libgnu.a -lnsl -lresolv -lpthread -ldl
gcc -DLOCALEDIR=\"/usr/local/nagios/share/locale\" -DHAVE_CONFIG_H -I. -I..  -I.. -I../lib -I../gl -I../intl -I../plugins -I/usr/include  -DNP_VERSION
='"2.0.3"' -g -O2 -MT check_icmp.o -MD -MP -MF .deps/check_icmp.Tpo -c -o check_icmp.o check_icmp.c
mv -f .deps/check_icmp.Tpo .deps/check_icmp.Po
/bin/sh ../libtool --tag=CC   --mode=link gcc -DNP_VERSION='"2.0.3"' -g -O2  -L. -o check_icmp check_icmp.o ../plugins/netutils.o ../plugins/utils.o .
./lib/libnagiosplug.a ../gl/libgnu.a  -lnsl -lresolv -lnsl -lresolv -lpthread -ldl
libtool: link: gcc -DNP_VERSION=\"2.0.3\" -g -O2 -o check_icmp check_icmp.o ../plugins/netutils.o ../plugins/utils.o  -L. ../lib/libnagiosplug.a ../gl
/libgnu.a -lnsl -lresolv -lpthread -ldl
make[2]: Leaving directory `/home/ec2-user/downloads/nagios-plugins-2.0.3/plugins-root'
Making all in po
make[2]: Entering directory `/home/ec2-user/downloads/nagios-plugins-2.0.3/po'
make[2]: Nothing to be done for `all'.
make[2]: Leaving directory `/home/ec2-user/downloads/nagios-plugins-2.0.3/po'
make[2]: Entering directory `/home/ec2-user/downloads/nagios-plugins-2.0.3'
make[2]: Leaving directory `/home/ec2-user/downloads/nagios-plugins-2.0.3'
make[1]: Leaving directory `/home/ec2-user/downloads/nagios-plugins-2.0.3'
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$ 
```

sudo make install

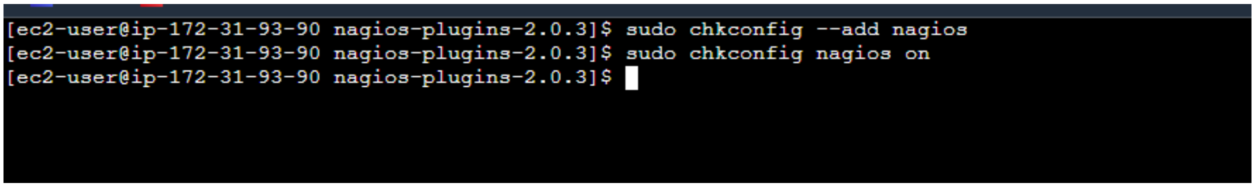


```
make[1]: Entering directory `/home/ec2-user/downloads/nagios-plugins-2.0.3/po'
/usr/bin/mkdir -p /usr/local/nagios/share
installing fr.gmo as /usr/local/nagios/share/locale/fr/LC_MESSAGES/nagios-plugins.mo
installing de.gmo as /usr/local/nagios/share/locale/de/LC_MESSAGES/nagios-plugins.mo
if test "nagios-plugins" = "gettext-tools"; then \
  /usr/bin/mkdir -p /usr/local/nagios/share/gettext/po; \
  for file in Makefile.in.in remove-potcdate.sin    Makevars.template; do \
    /usr/bin/install -c -o nagios -g nagios -m 644 ./$file \
                    /usr/local/nagios/share/gettext/po/$file; \
  done; \
  for file in Makevars; do \
    rm -f /usr/local/nagios/share/gettext/po/$file; \
  done; \
else \
  : ; \
fi
make[1]: Leaving directory `/home/ec2-user/downloads/nagios-plugins-2.0.3/po'
make[1]: Entering directory `/home/ec2-user/downloads/nagios-plugins-2.0.3'
make[2]: Entering directory `/home/ec2-user/downloads/nagios-plugins-2.0.3'
make[2]: Nothing to be done for `install-exec-am'.
make[2]: Nothing to be done for `install-data-am'.
make[2]: Leaving directory `/home/ec2-user/downloads/nagios-plugins-2.0.3'
make[1]: Leaving directory `/home/ec2-user/downloads/nagios-plugins-2.0.3'
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$ 
```

Step 9: Start Nagios

Add Nagios to the list of system services and have it automatically start when the system boots.

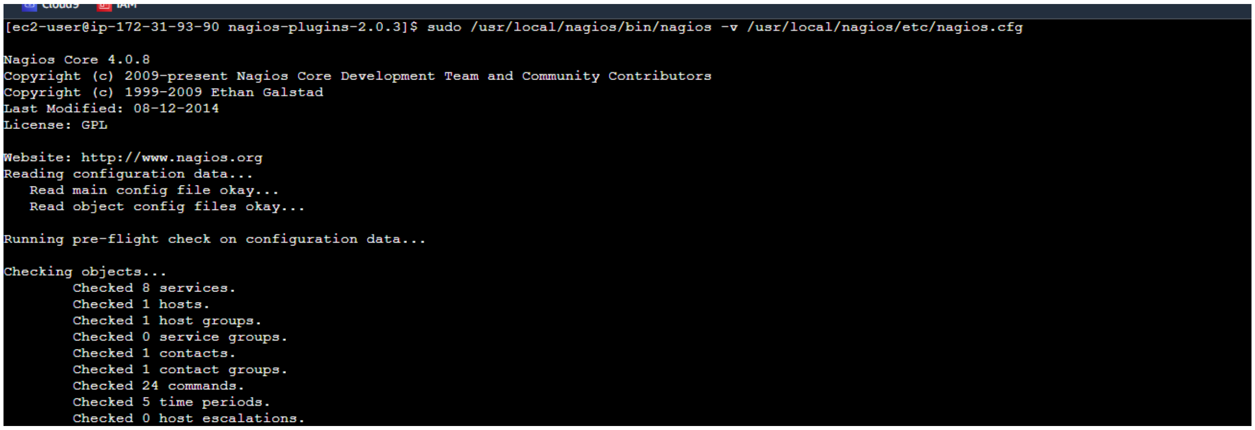
sudo chkconfig --add nagios
sudo chkconfig nagios on



```
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$ sudo chkconfig --add nagios
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$ sudo chkconfig nagios on
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$ 
```

Verify the sample Nagios configuration files.

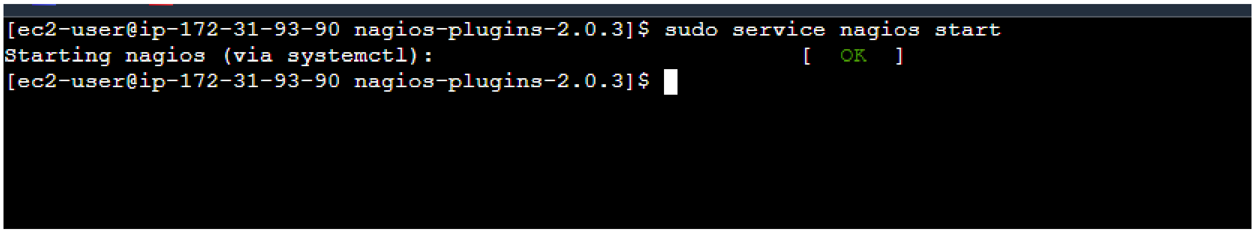
sudo /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg



```
[ec2-user@ip-172-31-93-90 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...
   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.
```

If there are no errors, start Nagios.

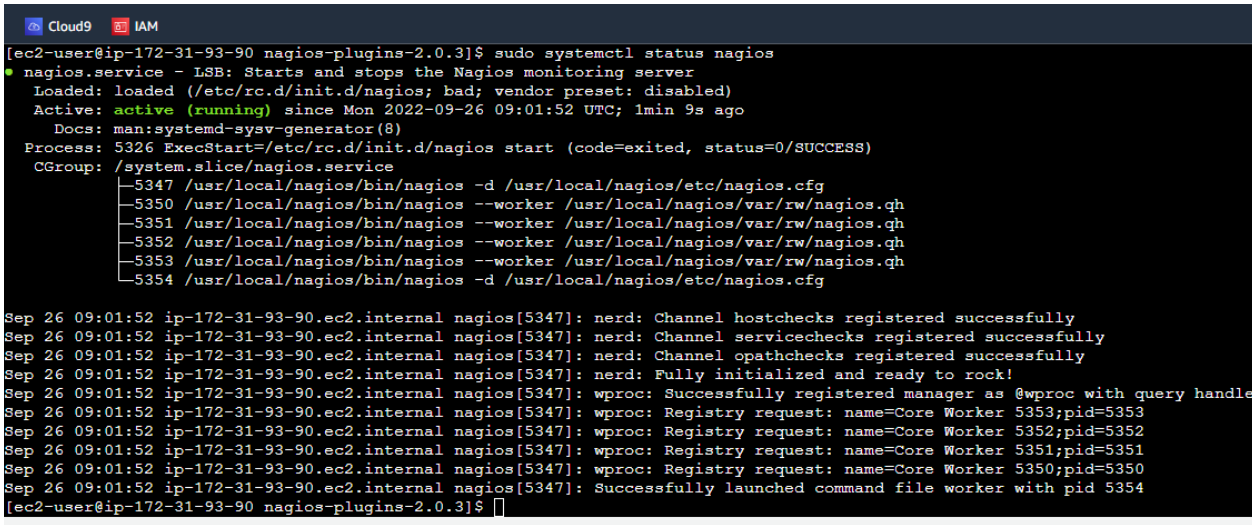
sudo service nagios start



```
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$ sudo service nagios start
Starting nagios (via systemctl):                           [  OK  ]
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$ 
```

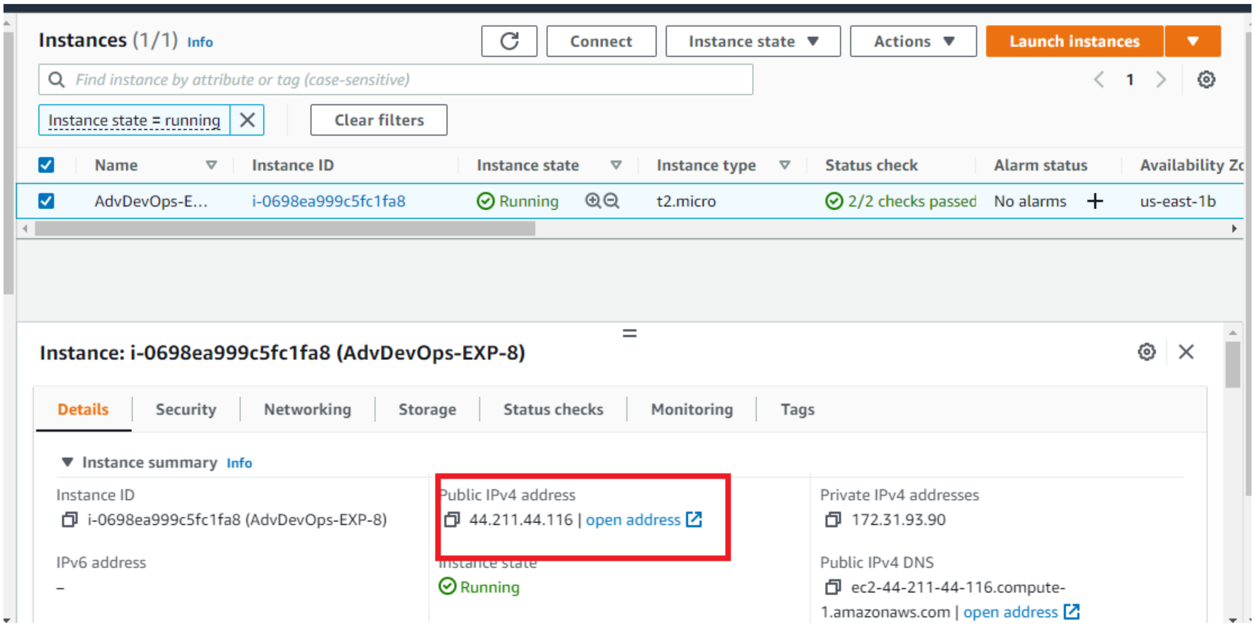
Check the status of Nagios

sudo systemctl status nagios



```
[ec2-user@ip-172-31-93-90 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; bad; vendor preset: disabled)
   Active: active (running) since Mon 2022-09-26 09:01:52 UTC; 1min 9s ago
     Docs: man:systemd-sysv-generator(8)
  Process: 5326 ExecStart=/etc/rc.d/init.d/nagios start (code=exited, status=0/SUCCESS)
   CGroup: /system.slice/nagios.service
           ├─5347 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
           ├─5350 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
           ├─5351 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
           ├─5352 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
           ├─5353 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
           └─5354 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg

Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: nerd: Channel hostchecks registered successfully
Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: nerd: Channel servicechecks registered successfully
Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: nerd: Channel opathchecks registered successfully
Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: nerd: Fully initialized and ready to rock!
Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: wproc: Successfully registered manager as @wproc with query handle
Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: wproc: Registry request: name=Core Worker 5353;pid=5353
Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: wproc: Registry request: name=Core Worker 5352;pid=5352
Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: wproc: Registry request: name=Core Worker 5351;pid=5351
Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: wproc: Registry request: name=Core Worker 5350;pid=5350
Sep 26 09:01:52 ip-172-31-93-90.ec2.internal nagios[5347]: Successfully launched command file worker with pid 5354
[ec2-user@ip-172-31-93-90 nagios-plugins-2.0.3]$ 
```

Step 10: Go back to the EC2 console and copy the Public IP address of your instance.



Instances (1/1) Info

☑	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zc
☑	AdvDevOps-E...	i-0698ea999c5fc1fa8	✓ Running	t2.micro	✓ 2/2 checks passed	No alarms +	us-east-1b

Instance: i-0698ea999c5fc1fa8 (AdvDevOps-EXP-8)

▼ Instance summary Info

Instance ID
i-0698ea999c5fc1fa8 (AdvDevOps-EXP-8)

Public IPv4 address
44.211.44.116 | open address

Private IPv4 addresses
172.31.93.90

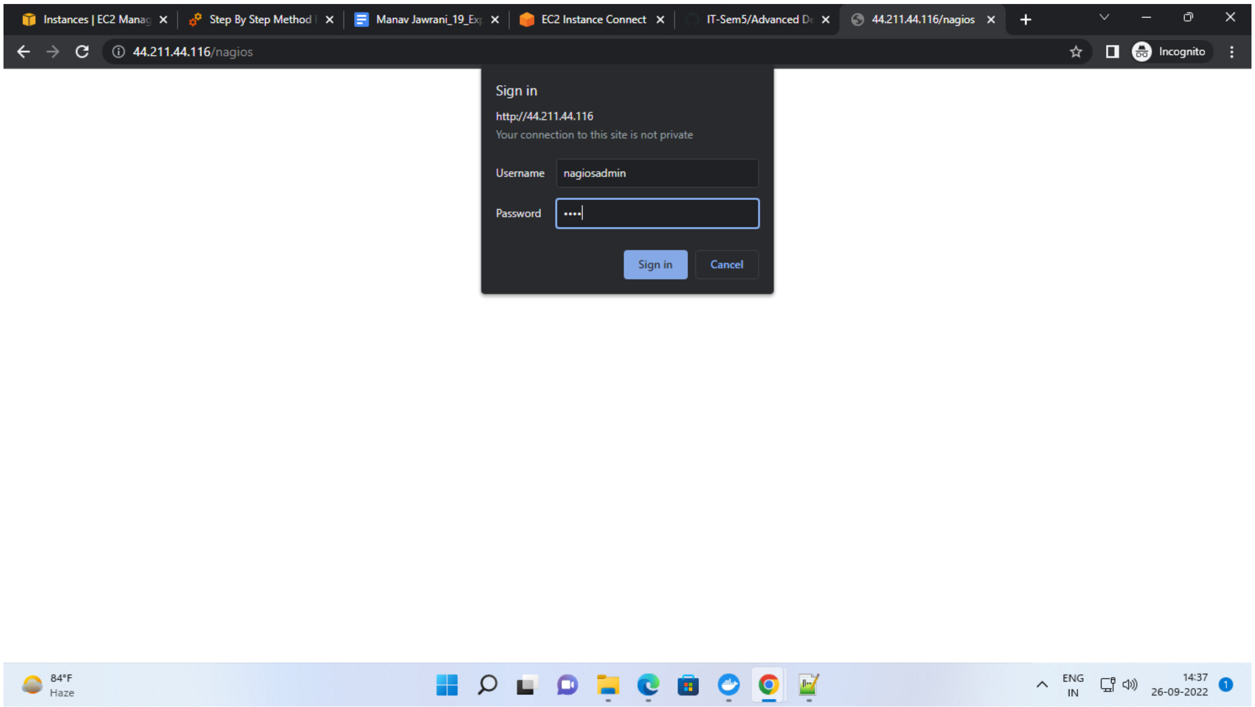
IPv6 address
–

Instance state
✓ Running

Public IPv4 DNS
ec2-44-211-44-116.compute-1.amazonaws.com | open address

Step 11: Open your browser and look for http://*your public ip address*/nagios

http://44.211.44.116/nagios/



44.211.44.116/nagios

Sign in

http://44.211.44.116

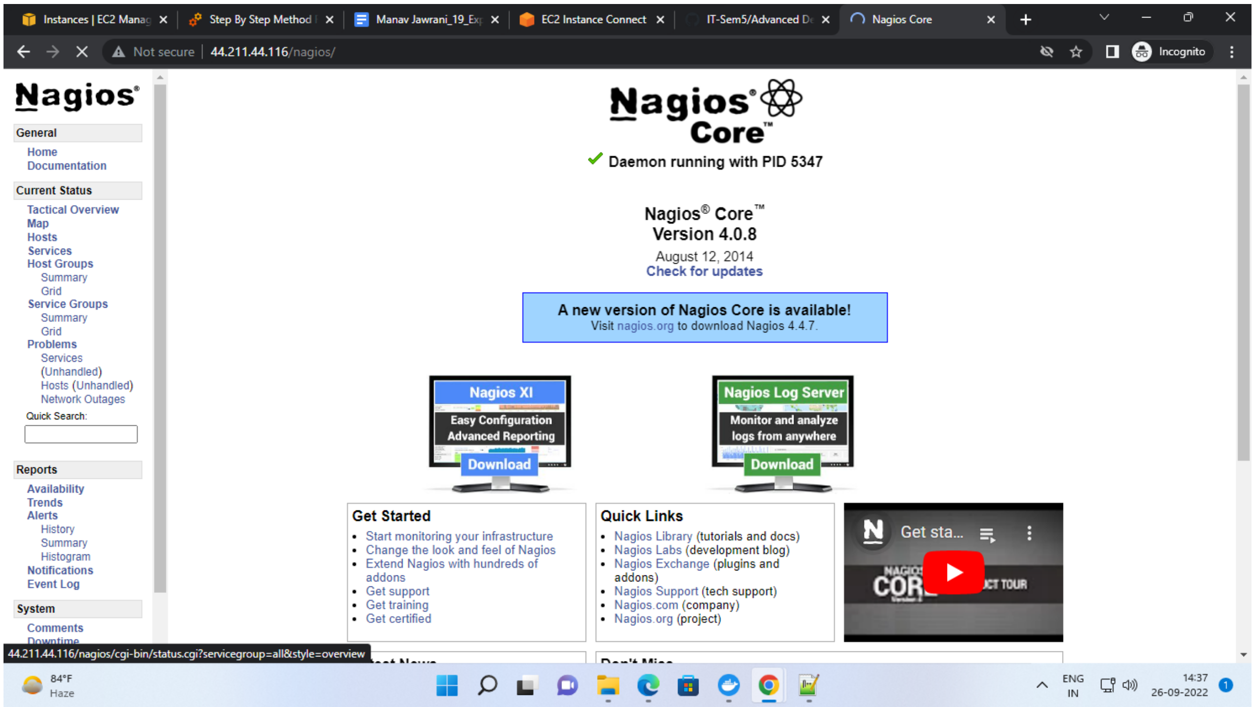
Your connection to this site is not private

Username: nagiosadmin

Password: ••••

Enter username as **“nagiosadmin”** and password which you set in **Step 7.**

If all the things are perfect including the credentials , plugin installation then you will be able to see this page.



✓ Daemon running with PID 5347

Nagios® Core™
Version 4.0.8
August 12, 2014
Check for updates

A new version of Nagios Core is available!
Visit nagios.org to download Nagios 4.4.7.

Get Started

- Start monitoring your infrastructure
- Change the look and feel of Nagios
- Extend Nagios with hundreds of addons
- Get support
- Get training
- Get certified

Quick Links

- Nagios Library (tutorials and docs)
- Nagios Labs (development blog)
- Nagios Exchange (plugins and addons)
- Nagios Support (tech support)
- Nagios.com (company)
- Nagios.org (project)

Conclusion:

In this experiment, we got exposure to tool of network monitoring, Nagios, it also helps in monitoring of different systems and infrastructure. Here we set-up the nagios software on a AWS Linux machine. We can monitor different services of HTTP, SSH, PING etc. We can send alerts regarding a specific service. Nagios also shows which system up or DOWN so that necessary actions can be taken. It can monitor 'n' numbers of clients connelted to a single host.