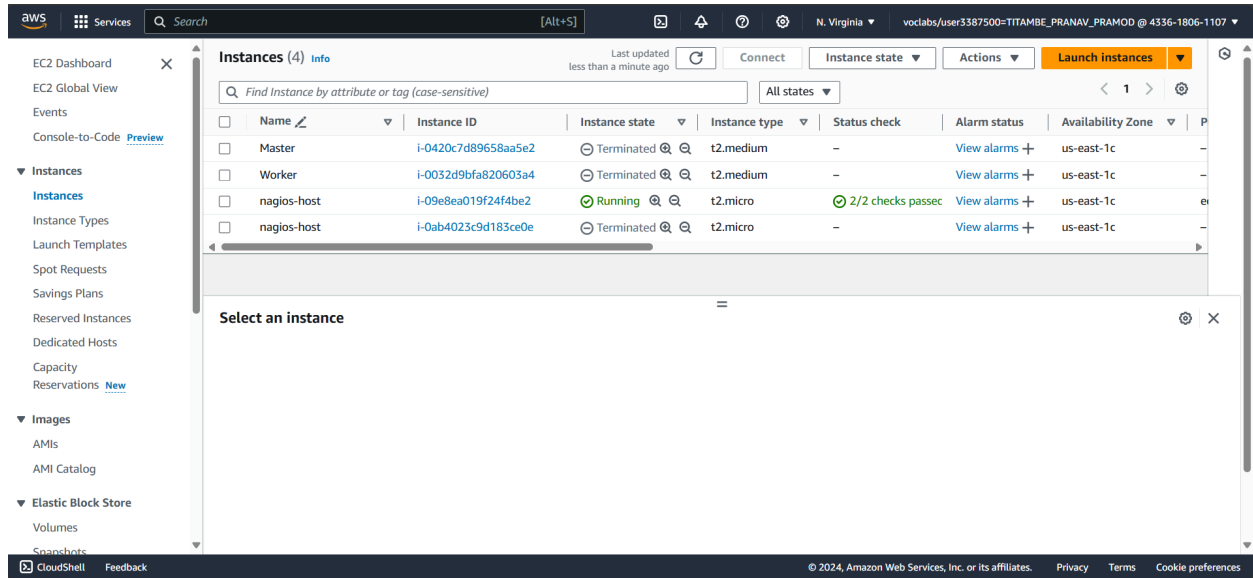## Create an EC2 instance at AWS

After this install following commands:-

```
sudo apt install apache2 libapache2-mod-php php php-gd libgd-dev gcc
make autoconf libssl-dev wget unzip bc gawk dc build-essential snmp
libnet-snmp-perl gettext -y
```

```
ubuntu@ip-172-31-89-161:~$ sudo apt install apache2 php
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapache2-mod-php8.3 libapr1t64 libaprutil1-dbd-sqlite3 libaprutil1-ldap
  libaprutil1t64 liblua5.4-0 php-common php8.3 php8.3-cli php8.3-common php8.3-opcache php8.3-readline ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser php-pear
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapache2-mod-php8.3 libapr1t64 libaprutil1-dbd-sqlite3
  libaprutil1-ldap libaprutil1t64 liblua5.4-0 php php-common php8.3 php8.3-cli php8.3-common php8.3-opcache
  php8.3-readline ssl-cert
0 upgraded, 18 newly installed, 0 to remove and 143 not upgraded.
Need to get 6998 kB of archives.
After this operation, 30.5 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 libapr1t64 amd64 1.7.2-3.1ubuntu0.1 [108 k
B]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1t64 amd64 1.6.3-1.1ubuntu7 [91.9 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.3-1.1ubuntu7 [11
.2 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 libaprutil1-ldap amd64 1.6.3-1.1ubuntu7 [9116 B]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble/main amd64 liblua5.4-0 amd64 5.4.6-3build2 [166 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-bin amd64 2.4.58-1ubuntu8.4 [1329
kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-data all 2.4.58-1ubuntu8.4 [163 kB
]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 apache2-utils amd64 2.4.58-1ubuntu8.4 [97.
1 kB]
```

```
ubuntu@ip-172-31-89-161:~$ sudo apt install gcc build-essential
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  binutils binutils-common binutils-x86-64-linux-gnu bzip2 cpp cpp-13 cpp-13-x86-64-linux-gnu cpp-x86-64-linux-gnu
  dpkg dpkg-dev fakeroot fontconfig-config fonts-dejavu-core fonts-dejavu-mono g++ g++-13 g++-13-x86-64-linux-gnu
  g++-x86-64-linux-gnu gcc-13 gcc-13-base gcc-13-x86-64-linux-gnu gcc-x86-64-linux-gnu libalgorithm-diff-perl
  libalgorithm-diff-xs-perl libalgorithm-merge-perl libaom3 libasan8 libatomic1 libbinutils libbz2-1.0 libc-bin
  libc-dev-bin libc-devtools libc6 libc6-dev libcc1-0 libcrypt-dev libctf-nobfd0 libctf0 libde265-0 libdeflate0
  libdpkg-perl libfakeroot libfile-fcntllock-perl libfontconfig1 libgcc-13-dev libgd3 libgomp1 libgprofng0
  libheif-plugin-aomdec libheif-plugin-aomenc libheif-plugin-libde265 libheif1 libhwasan0 libisl23 libitm1 libjbig0
  libjpeg-turbo8 libjpeg8 liblerc4 liblsan0 libmpc3 libquadmath0 libsframe1 libsharpyuv0 libstdc++-13-dev libtiff6
  libtsan2 libubsan1 libwebp7 libxpm4 linux-libc-dev linux-tools-common locales lto-disabled-list make manpages-dev
  rpcsvc-proto
Suggested packages:
  binutils-doc gprofng-gui bzip2-doc cpp-doc gcc-13-locales cpp-13-doc debsig-verify debian-keyring g++-multilib
  g++-13-multilib gcc-13-doc gcc-multilib autoconf automake libtool flex bison gdb gcc-doc gcc-13-multilib
  gdb-x86-64-linux-gnu glibc-doc libnss-nis libnss-nisplus bzr libgd-tools libheif-plugin-x265
  libheif-plugin-ffmpegdec libheif-plugin-jpegdec libheif-plugin-jpegenc libheif-plugin-j2kdec libheif-plugin-j2kenc
  libheif-plugin-rav1e libheif-plugin-svtenc libstdc++-13-doc make-doc
The following NEW packages will be installed:
  binutils binutils-common binutils-x86-64-linux-gnu build-essential bzip2 cpp cpp-13 cpp-13-x86-64-linux-gnu
  cpp-x86-64-linux-gnu dpkg-dev fakeroot fontconfig-config fonts-dejavu-core fonts-dejavu-mono g++ g++-13
  g++-13-x86-64-linux-gnu g++-x86-64-linux-gnu gcc gcc-13 gcc-13-base gcc-13-x86-64-linux-gnu gcc-x86-64-linux-gnu
  libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl libaom3 libasan8 libatomic1 libbinutils
  libc-dev-bin libc-devtools libc6-dev libcc1-0 libcrypt-dev libctf-nobfd0 libctf0 libde265-0 libdeflate0 libdpkg-perl
  libfakeroot libfile-fcntllock-perl libfontconfig1 libgcc-13-dev libgd3 libgomp1 libgprofng0 libheif-plugin-aomdec
  libheif-plugin-aomenc libheif-plugin-libde265 libheif1 libhwasan0 libisl23 libitm1 libjbig0 libjpeg-turbo8 libjpeg8
  liblerc4 liblsan0 libmpc3 libquadmath0 libsframe1 libsharpyuv0 libstdc++-13-dev libtiff6 libtsan2 libubsan1 libwebp7
```

```
ubuntu@ip-172-31-89-161:~$ sudo apt install libgd-dev
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
libgd-dev is already the newest version (2.3.3-9ubuntu5).
0 upgraded, 0 newly installed, 0 to remove and 119 not upgraded.
ubuntu@ip-172-31-89-161:~$
```

Use this command to setup a new user called as nagios and adding it to nagcmd user group
```
sudo useradd nagios
sudo groupadd nagcmd
sudo usermod -aG nagcmd nagios
sudo usermod -aG nagcmd www-data
```
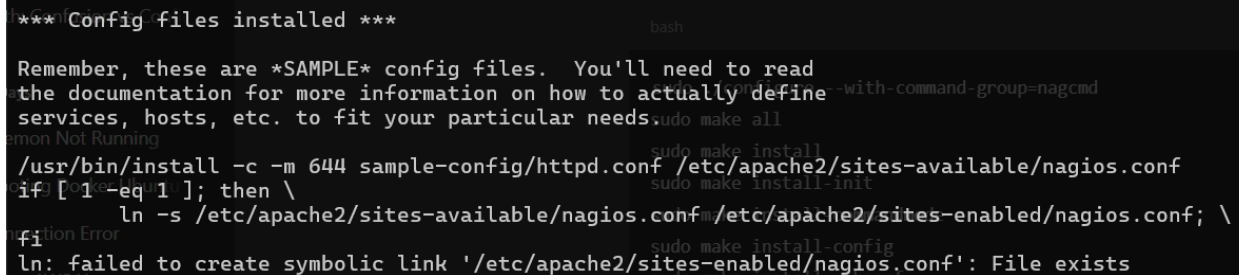
Now download and install nagios core
```
cd /tmp
wget
https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.6.
tar.gz
tar -zxvf nagios-*.tar.gz
cd nagios-4.4.6
```

Now compile and install nagios
```
sudo ./configure --with-command-group=nagcmd
sudo make all
sudo make install
sudo make install-init
sudo make install-commandmode
sudo make install-config
sudo make install-webconf
```


Now install Nagios plugins.
```
cd /tmp
wget https://nagios-plugins.org/download/nagios-plugins-2.3.3.tar.gz
tar -zxvf nagios-plugins-*.tar.gz
cd nagios-plugins-2.3.3
sudo ./configure --with-nagios-user=nagios --with-nagios-group=nagios
sudo make
sudo make install
```

```
  GNU nano 7.2                         /usr/local/nagios/etc/objects/contacts.cfg *

# 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                   pranavtitambe04@gmail.com ; <<***** 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 {

^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
```

Here by executing this command you need to set the password for 'nagiosadmin'

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

```
ubuntu@ip-172-31-89-161:/tmp/nagios-plugins-2.3.3$ sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin
New password:
Re-type new password:
Adding password for user nagiosadmin
ubuntu@ip-172-31-89-161:/tmp/nagios-plugins-2.3.3$ sudo a2enmod rewrite
sudo a2enmod cgi
sudo systemctl restart apache2
Module rewrite already enabled
Module cgi already enabled
ubuntu@ip-172-31-89-161:/tmp/nagios-plugins-2.3.3$
```

Set proper permissions for the configuration:

```
sudo a2enmod rewrite
sudo a2enmod cgi
sudo systemctl restart apache2
```

```
ubuntu@ip-172-31-89-161:~$ sudo a2enmod rewrite
sudo a2enmod cgi
sudo systemctl restart apache2
Module rewrite already enabled
Module cgi already enabled
ubuntu@ip-172-31-89-161:~$
```

Ensure your firewall allows HTTP traffic (port 80):

```
sudo ufw allow Apache
sudo ufw reload
```

```
ubuntu@ip-172-31-89-161:~$ sudo ufw allow Apache
sudo ufw reload
Skipping adding existing rule
Skipping adding existing rule (v6)
Firewall not enabled (skipping reload)
ubuntu@ip-172-31-89-161:~$ |
```

Starting the nagios services

```
sudo systemctl enable nagios
sudo systemctl start nagios
sudo systemctl status nagios
```

```
ubuntu@ip-172-31-89-161:~$ sudo systemctl enable nagios
sudo systemctl start nagios
ubuntu@ip-172-31-89-161:~$ sudo systemctl status nagios
● nagios.service - Nagios Core 4.4.6
     Loaded: loaded (/usr/lib/systemd/system/nagios.service; enabled; preset: enabled)
     Active: active (running) since Sat 2024-09-28 13:59:55 UTC; 19min ago
       Docs: https://www.nagios.org/documentation
   Main PID: 103799 (nagios)
      Tasks: 6 (limit: 1130)
     Memory: 2.3M (peak: 4.4M)
        CPU: 341ms
     CGroup: /system.slice/nagios.service
             ├─103799 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
             ├─103800 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             ├─103801 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             ├─103802 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             ├─103803 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/rw/nagios.qh
             └─103805 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg

Sep 28 14:04:17 ip-172-31-89-161 nagios[103799]: SERVICE ALERT: localhost;Swap Usage;CRITICAL;SOFT;1;SWAP CRITICAL - 0%>
Sep 28 14:05:17 ip-172-31-89-161 nagios[103799]: SERVICE ALERT: localhost;Swap Usage;CRITICAL;SOFT;2;SWAP CRITICAL - 0%>
Sep 28 14:06:17 ip-172-31-89-161 nagios[103799]: SERVICE ALERT: localhost;Swap Usage;CRITICAL;SOFT;3;SWAP CRITICAL - 0%>
Sep 28 14:07:17 ip-172-31-89-161 nagios[103799]: SERVICE NOTIFICATION: nagiosadmin;localhost;Swap Usage;CRITICAL;notify>
Sep 28 14:07:17 ip-172-31-89-161 nagios[103799]: SERVICE ALERT: localhost;Swap Usage;CRITICAL;HARD;4;SWAP CRITICAL - 0%>
Sep 28 14:07:17 ip-172-31-89-161 nagios[103799]: wproc: NOTIFY job 4 from worker Core Worker 103800 is a non-check help>
Sep 28 14:07:17 ip-172-31-89-161 nagios[103799]: wproc:   host=localhost; service=Swap Usage; contact=nagiosadmin
Sep 28 14:07:17 ip-172-31-89-161 nagios[103799]: wproc:   early_timeout=0; exited_ok=1; wait_status=32512; error_code=0;
Sep 28 14:07:17 ip-172-31-89-161 nagios[103799]: wproc:   stderr line 01: /bin/sh: 1: /bin/mail: not found
Sep 28 14:07:17 ip-172-31-89-161 nagios[103799]: wproc:   stderr line 02: /usr/bin/printf: write error: Broken pipe
lines 1-26/26 (END)
```

Here it will prompt to enter the username and password provide that we set earlier.
Go to your AWS EC2 dashboard and and copy the public ip address. The url should look like this

```
'http://<public-ip-address>/nagios'
```

Nagios®

Nagios Core™

✓ **Daemon running with PID 103799**

Nagios® Core™
Version 4.4.6
April 28, 2020
Check for updates

A new version of Nagios Core is available!
Visit nagios.org to download Nagios 4.5.5.

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