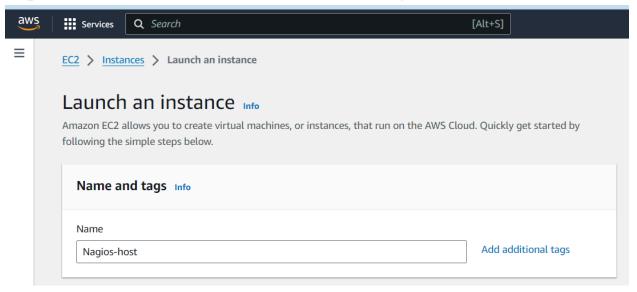
Advanced DevOps Exp-9

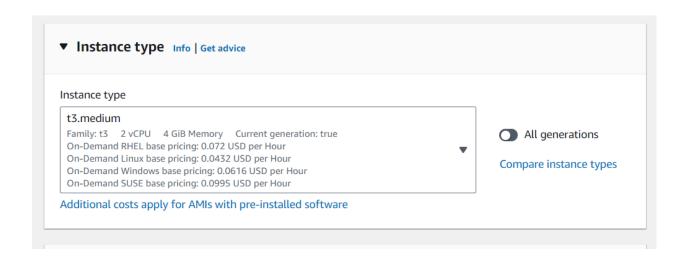
Sanket More D15A 30

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

Procedure:-

Step 1: Create an EC2 Instance and name it as nagios-host





 Create security group 	Select existing security group

We'll create a new security group called 'launch-wizard-12' with the following rules:

✓ Allow SSH traffic from
Helps you connect to your instance

Anywhere

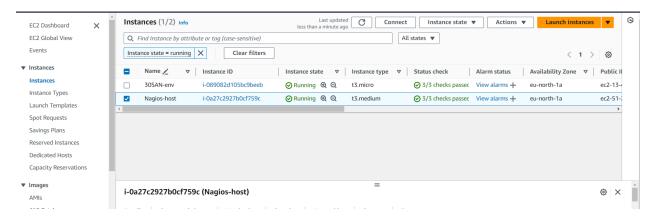
0.0.0.0/0

✓ Allow HTTPS traffic from the internet

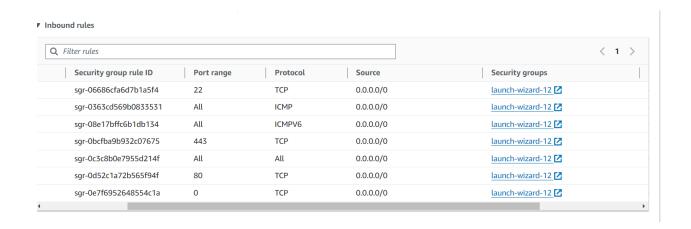
To set up an endpoint, for example when creating a web server

Allow HTTP traffic from the internet

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



Step 2: Under the security groups, click on edit inbound rules and set as shown in the figure below



Step 3: Now, run the following commands - sudo su sudo yum update sudo yum install httpd php sudo yum install gcc glibc glibc-common sudo yum install gd gd-devel

[ec2-user@ip-172-31-16-211 ~]\$ sudo yum install httpd php
Last metadata expiration check: 0:04:23 ago on Sun Sep 29 04:05:53 2024.
Dependencies resolved.

Package	Architecture	Version
Installing:		
httpd	x86 64	2.4.62-1.amzn2023
php8.3	x86 64	8.3.10-1.amzn2023.0.1
Installing dependencies:		
apr	x86_64	1.7.2-2.amzn2023.0.2
apr-util	x86 64	1.6.3-1.amzn2023.0.1

[ec2-user@ip-172-31-16-211 ~]\$ sudo yum install gcc glibc glibc-common Last metadata expiration check: 0:04:54 ago on Sun Sep 29 04:05:53 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
======================================		
gcc	x86 64	11.4.1-2.amzn2023.0.2
Installing dependencies:	_	
annobin-docs	noarch	10.93-1.amzn2023.0.1
annobin-plugin-gcc	x86 64	10.93-1.amzn2023.0.1
CDD	x86 64	11.4.1-2.amzn2023.0.2

[ec2-user@ip-172-31-16-211 ~]\$ sudo yum install gd gd-devel Last metadata expiration check: 0:05:21 ago on Sun Sep 29 04:05:53 2024. Dependencies resolved.

Package	Architecture	Version
Installing: gd gd-devel	x86_64 x86_64	2.3.3-5.amzn2023.0.3 2.3.3-5.amzn2023.0.3

```
Step 4: Create a new nagios user with its password. sudo adduser -m nagios sudo passwd nagios sudo groupadd nagcmd sudo usermod -a -G nagcmd nagios sudo usermod -a -G nagcmd apache
```

```
[ec2-user@ip-172-31-16-211 ~]$ sudo adduser -m nagios
[ec2-user@ip-172-31-16-211 ~]$ 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-172-31-16-211 ~]$ sudo groupadd nagcmd
[ec2-user@ip-172-31-16-211 ~]$ sudo usermod -a -G nagcmd nagios
[ec2-user@ip-172-31-16-211 ~]$ sudo usermod -a -G nagcmd apache
```

Step 5: Now, run the following commands - mkdir ~/downloads

cd ~/downloads

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 tar zxvf nagios-4.0.8.tar.gz

```
[ec2-user@ip-172-31-16-211 ~]$ mkdir ~/downloads
[ec2-user@ip-172-31-16-211 ~]$ cd ~/downloads
[ec2-user@ip-172-31-16-211 downloads]$
```

[ec2-user@ip-172-31-16-211 downloads]\$ wget http://prdownloads.sourceforge.net/sourceforge/nagios/nagios-4.0.8.tar.gz
--2024-09-29 04:17:09-- 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]
--2024-09-29 04:17:10-- http://downloads.sourceforge.net/project/nagios/nagios-4.x/nagios-4.x/nagios-4.0.8/nagi

```
[ec2-user@ip-172-31-16-211 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/LEGAL
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
nagios-4.0.8/base/Makefile.in
[ec2-user@ip-172-31-16-211 downloads]$ cd nagios-4.0.8
[ec2-user@ip-172-31-16-211 nagios-4.0.8]$
```

Step 6: Now to run the configuration script run the following command. ./configure --with-command-group=nagcmd

```
[ec2-user@ip-172-31-16-211 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
```

Step 7: Now, to compile the source code run the following command - make all sudo make install sudo make install-init sudo make install-config sudo make install-commandmode

```
[cc2-userf6p-172-31-16-211 nagios-4.0.8]$ make all
cd //hase 64 make
make[1]$ Entering directory '/home/ec2-user/downloads/nagios-4.0.8/hase'
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o nagios.o nagios.c
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o nebeods.o nebmods.c
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o nebmods.o nebmods.c
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o net-o.c
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o nerd.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o nerd.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o nerd.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o nerd.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o nerd.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o workers.o workers.c
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o workers.o workers.c
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc -Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc - Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc - Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc - Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc - Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc - Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc - Wall - 1... - 9 - 02 - DHAVE CORFIG H - DNSCORE - c - o config.o
gcc - Wall - 1... - 9 - 02 - DHAVE C
```

```
collect2: error: ld returned 1 exit status
make[1]: *** [Makefile:177: archivejson.cgi] Error 1
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.0.8/cgi'
make: *** [Makefile:72: all] Error 2
[ec2-user@ip-172-31-16-211 nagios-4.0.8]$
```

```
[ec2-user@ip-172-31-16-211 nagios-4.0.8]$ sudo make install
cd ./base && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.0.8/base'
make install-basic
make[2]: Entering directory '/home/ec2-user/downloads/nagios-4.0.8/base'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/bin
/usr/bin/install -c -m 774 -o nagios -g nagios nagios /usr/local/nagios/bin
/usr/bin/install -c -m 774 -o nagios -g nagios nagiostats /usr/local/nagios/bin
make[2]: Leaving directory '/home/ec2-user/downloads/nagios-4.0.8/base'
make strip-post-install
make[2]: Entering directory '/home/ec2-user/downloads/nagios-4.0.8/base'
/usr/bin/strip /usr/local/nagios/bin/nagios
/usr/bin/strip /usr/local/nagios/bin/nagiostats
make[2]: Leaving directory '/home/ec2-user/downloads/nagios-4.0.8/base'
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.0.8/base'
cd ./cgi && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.0.8/cgi'
make install-basic
make[2]: Entering directory '/home/ec2-user/downloads/nagios-4.0.8/cgi'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/sbin
for file in *.cqi; do \
                /usr/bin/install -c -m 775 -o nagios -g nagios $file /usr/local/nagios/sbin; \
done
/usr/bin/install: cannot stat '*.cgi': No such file or directory
make[2]: *** [Makefile:205: install-basic] Error 1
[ec2-user@ip-172-31-16-211 nagios-4.0.8]$ sudo make install-init
/usr/bin/install -c -m 755 -d -o root -g root /etc/rc.d/init.d
/usr/bin/install -c -m 755 -o root -q root daemon-init /etc/rc.d/init.d/naqios
*** Init script installed ***
[ec2-user@ip-172-31-16-211 nagios-4.0.8]$
[ec2-user@ip-172-31-16-211 nagios-4.0.8]$ 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/resource.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/resource.cfg /usr/local/nagios/etc/resource.cfg
/usr/bin/install -c -b -m 660 -o nagios -g nagios sample-config/template-object/templates.cfg /usr/local/nagios/etc/objects/templates.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/commands.cfg /usr/local/nagios/etc/objects/tempnands.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/comtacts.cfg /usr/local/nagios/etc/objects/comtacts.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/timeperiods.cfg /usr/local/nagios/etc/objects/timeperiods.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/timeperiods.cfg /usr/local/nagios/etc/objects/timeperiods.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/vinadows.cfg /usr/local/nagios/etc/objects/vinadows.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/windows.cfg /usr/local/nagios/etc/objects/windows.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/vinadows.cfg /usr/local/nagios/etc/objects/windows.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/vinadows.cfg /usr/local/nagios/etc/objects/printer.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/switch.cfg /usr/local/nagios/etc/objects/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 ***
  member, 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-172-31-16-211 nagios-4.0.81$
[ec2-user@ip-172-31-16-211 nagios-4.0.8]$ sudo make install-commandmode
/usr/bin/install -c -m 775 -o naqios -q naqcmd -d /usr/local/naqios/var/rw
chmod g+s /usr/local/nagios/var/rw
*** External command directory configured ***
[ec2-user@ip-172-31-16-211 nagios-4.0.8]$
```

Step 8: Edit the config file and change the email address. sudo nano /usr/local/nagios/etc/objects/contacts.cfg

Step 9: Now run the following commands — sudo make install-webconf sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin sudo service httpd restart cd ~/downloads tar zxvf nagios-plugins-2.0.3.tar.gz

[ec2-user@ip-172-31-16-211 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-172-31-16-211 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-172-31-16-211 nagios-4.0.8]$
```

[ec2-user@ip-172-31-16-211 nagios-4.0.8]\$ sudo service httpd restart Redirecting to /bin/systemctl restart httpd.service [ec2-user@ip-172-31-16-211 nagios-4.0.8]\$

```
[ec2-user@ip-172-31-16-211 nagios-4.0.8]$ cd ~/downloads
[ec2-user@ip-172-31-16-211 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
```

Step 10: Compile and install plugins

cd nagios-plugins-2.0.3

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

sudo make install

```
[ec2-user@ip-172-31-16-211 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 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
```

[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]\$ sudo make install

```
make install-exec-hook
make[3]: Entering directory '/home/ec2-user/downloads/nagios-plugins-2.0.3/plugins'
cd /usr/local/nagios/libexec && \
for i in check_ftp check_imap check_nntp check_pop check_udp check_clamd ; do rm -f $i; ln -
if [ -x check_ldap ] ; then rm -f check_ldaps ; ln -s check_ldap check_ldaps ; fi
make[3]: Leaving directory '/home/ec2-user/downloads/nagios-plugins-2.0.3/plugins'
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/ec2-user/downloads/nagios-plugins-2.0.3/plugins'
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-plugins-2.0.3/plugins-scripts
make[1]: Entering directory '/home/ec2-user/downloads/nagios-plugins-2.0.3/plugins-scripts'
make[2]: Entering directory '/home/ec2-user/downloads/nagios-plugins-2.0.3/plugins-scripts'
test -z "/usr/local/nagios/libexec" || /usr/bin/mkdir -p "/usr/local/nagios/libexec"
/usr/bin/install -c -o nagios -g nagios check_breeze check_disk_smb check_flexlm check_ircd
tus check_ifoperstatus check_mailq check_file_age_utils.sh_utils.pm '/usr/local/nagios/libexec
make[2]: Nothing to be done for 'install-data-am'.
make[2]: Leaving directory '/home/ec2-user/downloads/nagios-plugins-2.0.3/plugins-scripts'
```

Step 11: To start nagios run the following commands – sudo chkconfig --add nagios sudo chkconfig nagios on Verify using the following command

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

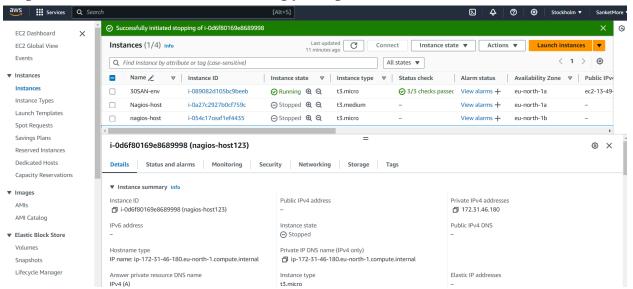
```
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo chkconfig --add nagios
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo chkconfig nagios on
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo chkconfig --add nagios
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo chkconfig nagios on
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo chkconfig nagios on
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo chkconfig nagios on
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo chkconfig on
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo chkconfig nagios on
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo chkconfig on
[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ 

[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ 

[ec2-user@ip-172-31-16-211 nagios-plugins-2.0.3]$ sudo service nagios start
starting nagios (via systemctl):

[OK]
```

Step 12: Go to EC2 instance and copy the public IP address of the instance



Step 13: Now visit http://<your IP address>/nagios Enter correct credentials and then you will see this page



