

EXPERIMENT NO. 09

DATE –

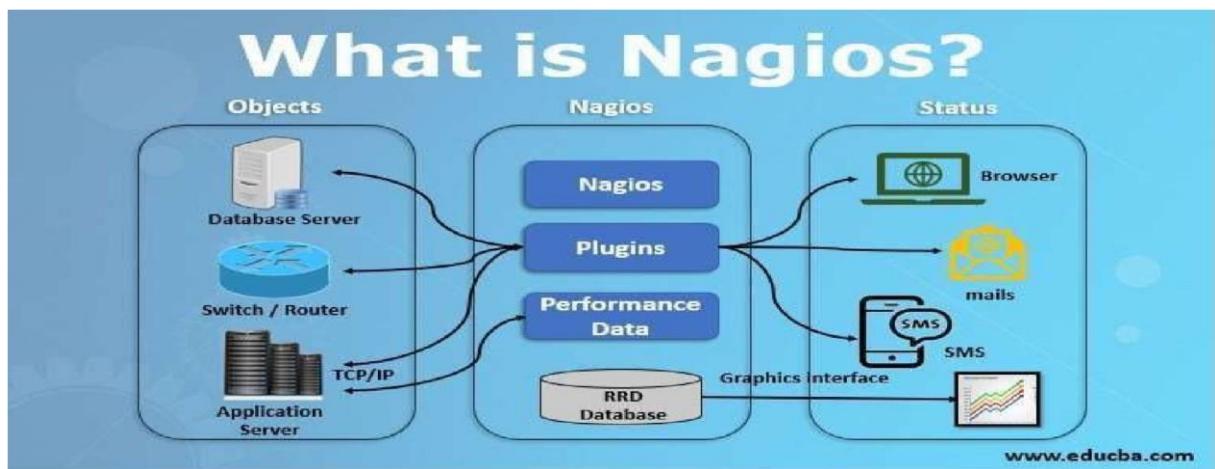
Aim -

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

Theory -

Nagios XI provides a monitoring, alerting, graphing, and reporting platform for your entire infrastructure, including servers, operating systems, applications, network devices, websites, hypervisors, cloud servers, and much more. Thousands of community plugins and the ability to write your own custom plugins enable you to monitor virtually anything.

- The Nagios Core 4 engine provides the powerful, flexible foundation, which Nagios XI makes faster and easier to leverage than ever before.
- Dashboards empower you to create custom visualizations for an at-a-glance view of the data most important to you.
- Alerts can be sent via email or text, in addition to the ability to send an SNMP trap or execute a custom script when problems are found.
- Reports and Graphs enable you to leverage the performance and state history data Nagios XI collects, and can be exported and shared. Reports such as Capacity Planning empower you to project future usage based on historical performance.



Advantages

Implementing effective server monitoring with Nagios offers the following benefits:

- Increased server, services, process, and application availability
- Fast detection of network and server outages and protocol failures
- Fast detection of failed servers, services, processes and batch jobs

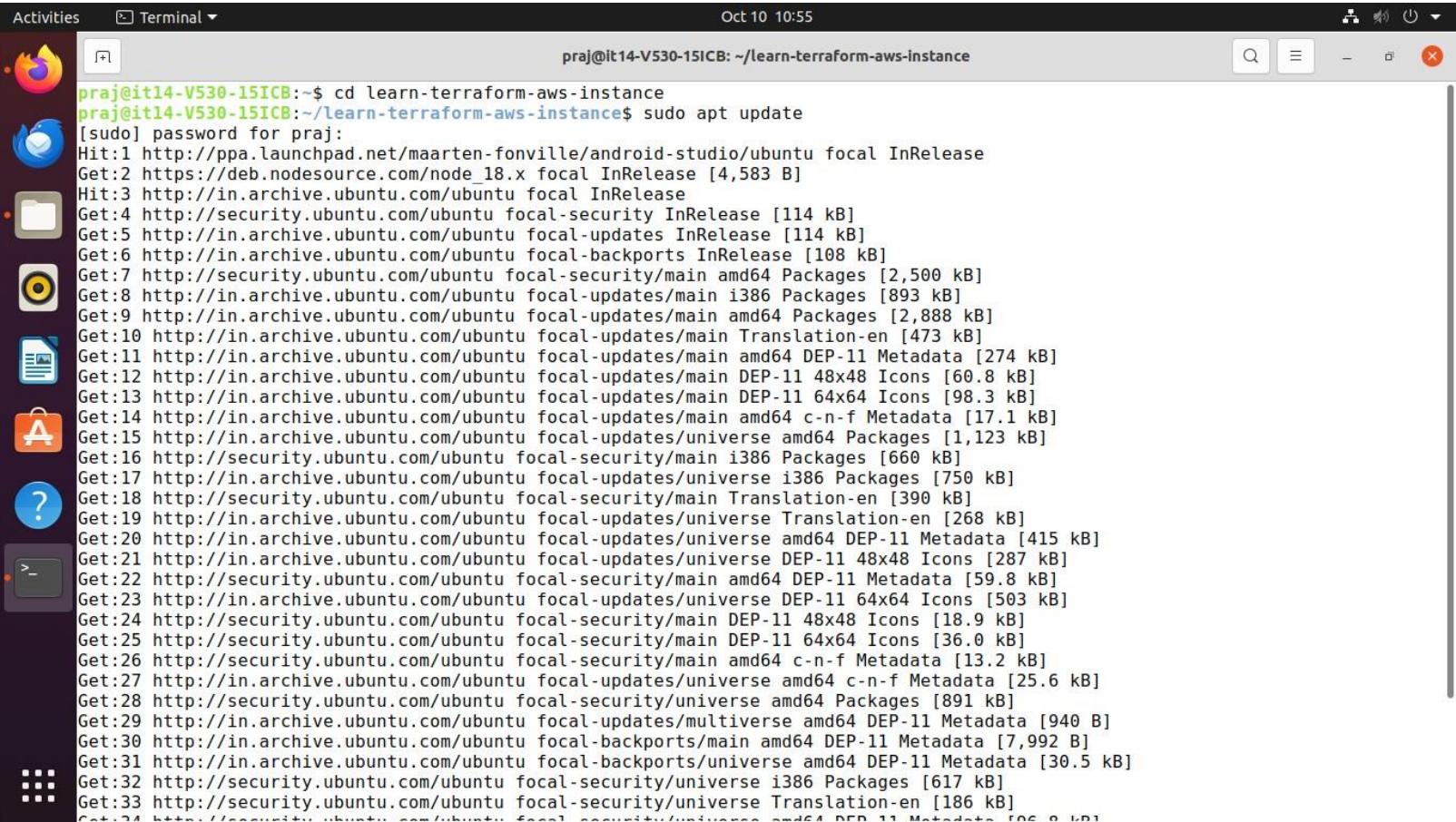
Steps:

Step 1 - Install Packages Dependencies

First, we will update the Ubuntu repository and install some packages dependencies for the Nagios installation.

Update the Ubuntu repository using the apt command below.

```
$ sudo apt update
```

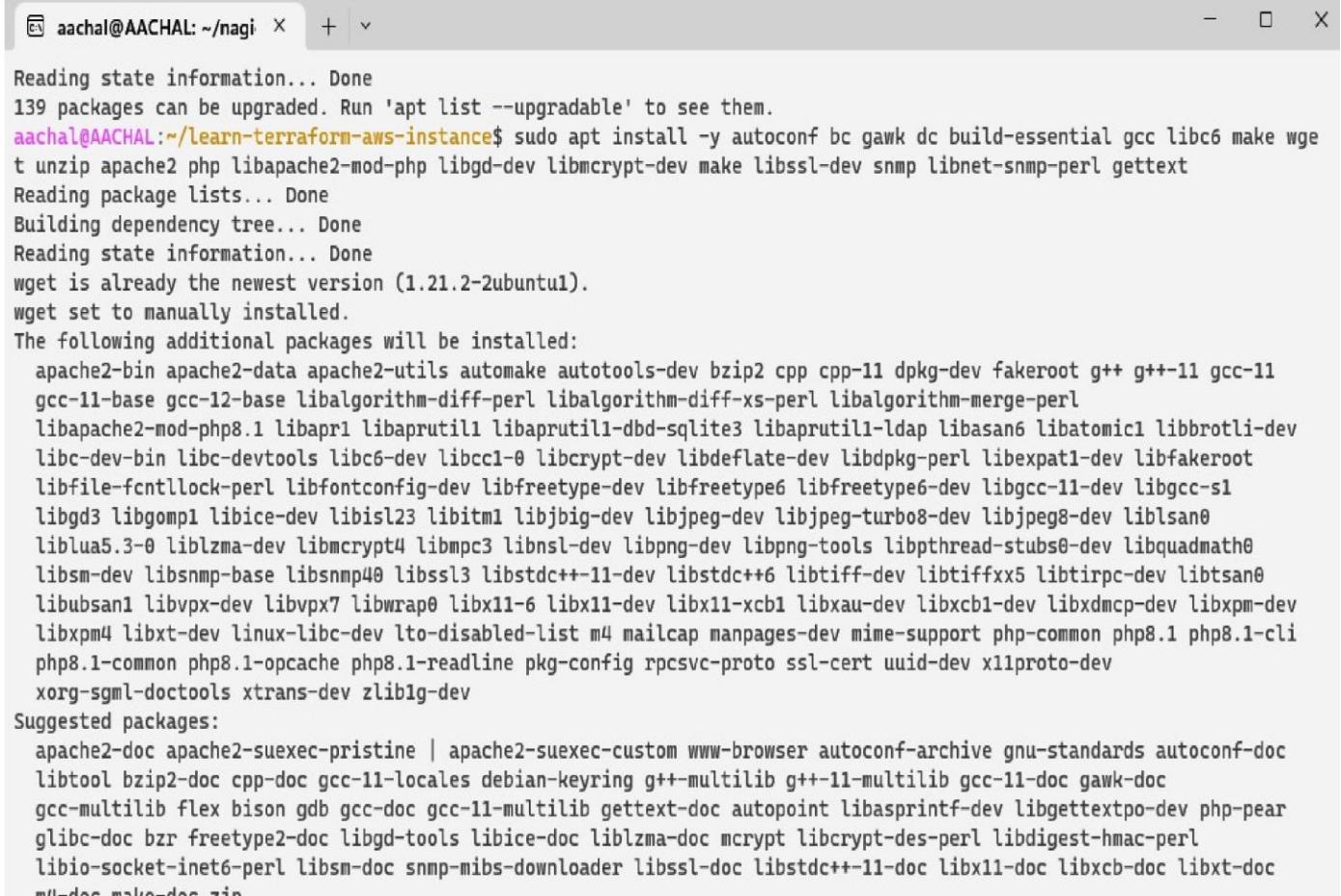


A screenshot of a Linux desktop environment, likely Ubuntu, showing a terminal window titled "Terminal". The terminal window displays the command "sudo apt update" being run and its output. The output shows the download of various packages from the Ubuntu repositories, including focal, focal-security, and focal-updates. The terminal window is located in the top right corner of the screen, and the desktop interface includes icons for the Dash, Home, and other applications.

```
pra@it14-V530-15ICB:~$ cd learn-terraform-aws-instance
pra@it14-V530-15ICB:~/learn-terraform-aws-instance$ sudo apt update
[sudo] password for praj:
Hit:1 http://ppa.launchpad.net/maarten-fonville/android-studio/ubuntu focal InRelease
Get:2 https://deb.nodesource.com/node_18.x focal InRelease [4,583 B]
Hit:3 http://in.archive.ubuntu.com/ubuntu focal InRelease
Get:4 http://security.ubuntu.com/ubuntu focal-security InRelease [114 kB]
Get:5 http://in.archive.ubuntu.com/ubuntu focal-updates InRelease [114 kB]
Get:6 http://in.archive.ubuntu.com/ubuntu focal-backports InRelease [108 kB]
Get:7 http://security.ubuntu.com/ubuntu focal-security/main amd64 Packages [2,500 kB]
Get:8 http://in.archive.ubuntu.com/ubuntu focal-updates/main i386 Packages [893 kB]
Get:9 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 Packages [2,888 kB]
Get:10 http://in.archive.ubuntu.com/ubuntu focal-updates/main Translation-en [473 kB]
Get:11 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 DEP-11 Metadata [274 kB]
Get:12 http://in.archive.ubuntu.com/ubuntu focal-updates/main DEP-11 48x48 Icons [60.8 kB]
Get:13 http://in.archive.ubuntu.com/ubuntu focal-updates/main DEP-11 64x64 Icons [98.3 kB]
Get:14 http://in.archive.ubuntu.com/ubuntu focal-updates/main amd64 c-n-f Metadata [17.1 kB]
Get:15 http://in.archive.ubuntu.com/ubuntu focal-updates/universe amd64 Packages [1,123 kB]
Get:16 http://security.ubuntu.com/ubuntu focal-security/main i386 Packages [660 kB]
Get:17 http://in.archive.ubuntu.com/ubuntu focal-updates/universe i386 Packages [750 kB]
Get:18 http://security.ubuntu.com/ubuntu focal-security/main Translation-en [390 kB]
Get:19 http://in.archive.ubuntu.com/ubuntu focal-updates/universe Translation-en [268 kB]
Get:20 http://in.archive.ubuntu.com/ubuntu focal-updates/universe amd64 DEP-11 Metadata [415 kB]
Get:21 http://in.archive.ubuntu.com/ubuntu focal-updates/universe DEP-11 48x48 Icons [287 kB]
Get:22 http://security.ubuntu.com/ubuntu focal-security/main amd64 DEP-11 Metadata [59.8 kB]
Get:23 http://in.archive.ubuntu.com/ubuntu focal-updates/universe DEP-11 64x64 Icons [503 kB]
Get:24 http://security.ubuntu.com/ubuntu focal-security/main DEP-11 48x48 Icons [18.9 kB]
Get:25 http://security.ubuntu.com/ubuntu focal-security/main DEP-11 64x64 Icons [36.0 kB]
Get:26 http://security.ubuntu.com/ubuntu focal-security/main amd64 c-n-f Metadata [13.2 kB]
Get:27 http://in.archive.ubuntu.com/ubuntu focal-updates/universe amd64 c-n-f Metadata [25.6 kB]
Get:28 http://security.ubuntu.com/ubuntu focal-security/universe amd64 Packages [891 kB]
Get:29 http://in.archive.ubuntu.com/ubuntu focal-updates/multiverse amd64 DEP-11 Metadata [940 B]
Get:30 http://in.archive.ubuntu.com/ubuntu focal-backports/main amd64 DEP-11 Metadata [7,992 B]
Get:31 http://in.archive.ubuntu.com/ubuntu focal-backports/universe amd64 DEP-11 Metadata [30.5 kB]
Get:32 http://security.ubuntu.com/ubuntu focal-security/universe i386 Packages [617 kB]
Get:33 http://security.ubuntu.com/ubuntu focal-security/universe Translation-en [186 kB]
Get:34 http://security.ubuntu.com/ubuntu focal-security/universe amd64 DEP-11 Metadata [668 kB]
```

After this, install packages dependencies for Nagios installation.

```
$ sudo apt install -y autoconf bc gawk dc build-essential gcc libc6 make wget unzip apache2 php libapache2mod-php libgd-dev libmcrypt-dev make libssl-dev snmp libnet-snmp-perl gettext
```



The terminal window shows the command being run and its output. It includes status messages like 'Reading state information...', dependency tree building, and package lists. It also lists additional packages to be installed and suggested packages.

```
aachal@aACHAL:~/nagi + x
Reading state information... Done
139 packages can be upgraded. Run 'apt list --upgradable' to see them.
aachal@aACHAL:~/learn-terraform-aws-instance$ sudo apt install -y autoconf bc gawk dc build-essential gcc libc6 make wget unzip apache2 php libapache2mod-php libgd-dev libmcrypt-dev make libssl-dev snmp libnet-snmp-perl gettext
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
wget is already the newest version (1.21.2-2ubuntu1).
wget set to manually installed.
The following additional packages will be installed:
apache2-bin apache2-data apache2-utils automake autotools-dev bzip2 cpp cpp-11 dpkg-dev fakeroot g++ g++-11 gcc-11
gcc-11-base gcc-12-base libalgorithm-diff-perl libalgorithm-diff-xs-perl libalgorithm-merge-perl
libapache2-mod-php8.1 libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libasan6 libatomic1 libbrotli-dev
libc-dev-bin libc-devtools libc6-dev libcc1-0 libcrypt-dev libdeflate-dev libdpkg-perl libexpat1-dev libfakeroot
libfile-fcntllock-perl libfontconfig-dev libfreetype-dev libfreetype6 libfreetype6-dev libgcc-11-dev libgcc-s1
libgd3 libgomp1 libice-dev libisl23 libitm1 libjbig-dev libjpeg-dev libjpeg-turbo8-dev libjpeg8-dev liblsan0
liblua5.3-0 liblzma-dev libmcrypt4 libmpc3 libnsl-dev libpng-dev libpng-tools libpthread-stubs0-dev libquadmath0
libsm-dev libsnmp-base libsnmp40 libssl3 libstdc++-11-dev libstdc++6 libtiff-dev libtiffxx5 libtirpc-dev libtsan0
libubsan1 libvpx-dev libvpx7 libwrap0 libx11-6 libx11-dev libx11-xcb1 libxau-dev libxcb1-dev libxdmcp-dev libxpm-dev
libxml2 libxt-dev linux-libc-dev lto-disabled-list m4 mailcap manpages-dev mime-support php-common php8.1 php8.1-cli
php8.1-common php8.1-opcache php8.1-readline pkg-config rpcsvc-proto ssl-cert uuid-dev x11proto-dev
xorg-sgml-doctools xtrans-dev zlib1g-dev
Suggested packages:
apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser autoconf-archive gnu-standards autoconf-doc
libtool bzip2-doc cpp-doc gcc-11-locales debian-keyring g++-multilib g++-11-multilib gcc-11-doc gawk-doc
gcc-multilib flex bison gdb gcc-doc gcc-11-multilib gettext-doc autopoint libasprintf-dev libgettextpo-dev php-pear
glibc-doc bzr freetype2-doc libgd-tools libice-doc liblzma-doc mcrypt libcrypt-des-perl libdigest-hmac-perl
libio-socket-inet6-perl libsm-doc snmp-mibs-downloader libssl-doc libstdc++-11-doc libx11-doc libxcb-doc libxt-doc
m4-doc mailcap-doc zip
```

Step 2 - Install Nagios Core 4.4.6

In this step, we will install the latest stable version Nagios Core 4.4.6. And we will install it manually from the source.

Go to your home directory and download the Nagios Core source code.

```
$ cd ~/
$ wget https://github.com/NagiosEnterprises/nagioscore/archive/nagios-4.4.6.tar.gz
```

```
A praj@it14-V530-15ICB:~/learn-terraform-aws-instance$ cd ~/  
praj@it14-V530-15ICB:~$ wget https://github.com/NagiosEnterprises/nagioscore/archive/nagios-4.4.6.tar.gz  
--2023-10-10 10:59:32-- https://github.com/NagiosEnterprises/nagioscore/archive/nagios-4.4.6.tar.gz  
Resolving github.com (github.com)... 140.82.121.4  
Connecting to github.com (github.com)|140.82.121.4|:443... connected.  
HTTP request sent, awaiting response... 302 Found  
Location: https://codeload.github.com/NagiosEnterprises/nagioscore/tar.gz/refs/tags/nagios-4.4.6 [following]  
--2023-10-10 10:59:34-- https://codeload.github.com/NagiosEnterprises/nagioscore/tar.gz/refs/tags/nagios-4.4.6  
Resolving codeload.github.com (codeload.github.com)... 20.207.73.88  
Connecting to codeload.github.com (codeload.github.com)|20.207.73.88|:443... connected.  
HTTP request sent, awaiting response... 200 OK  
Length: unspecified [application/x-gzip]  
Saving to: 'nagios-4.4.6.tar.gz'  
  
nagios-4.4.6.tar.gz [ <=> ] 10.81M 581KB/s in 54s  
2023-10-10 11:00:29 (204 KB/s) - 'nagios-4.4.6.tar.gz' saved [11333431]  
praj@it14-V530-15ICB:~$ 
```

Extract the Nagios package and go to the extracted Nagios directory.

```
$ tar -xf nagios-4.4.6.tar.gz  
$ cd nagioscore-*/
```

```
praj@it14-V530-15ICB:~$ tar -xf nagios-4.4.6.tar.gz  
praj@it14-V530-15ICB:~$ cd nagioscore-*/  
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo ./configure --with-httpd-conf=/etc/apache2/sitesenabled $ sudo make  
configure: WARNING: you should use --build, --host, --target
```

- Compile and Install Nagios

First, compile Nagios source code and define the Apache virtual host configuration for Nagios.

```
$ sudo ./configure --with-httpd-conf=/etc/apache2/sitesenabled $ sudo make all
```

```
See 'config.log' for more details  
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo ./configure --with-httpd-conf=/etc/apache2/sitesenabled $ sudo  
configure: WARNING: you should use --build, --host, --target  
configure: WARNING: invalid host type: $  
configure: WARNING: you should use --build, --host, --target  
configure: WARNING: you should use --build, --host, --target  
checking for a BSD-compatible install... /usr/bin/install -c  
checking build system type... Invalid configuration '$': machine '$' not recognized  
configure: error: /bin/bash ./config.sub $ failed
```

```
cd ./base && make
make[1]: Entering directory '/home/ubuntu/nagioscore-nagios-4.4.6/base'
gcc -Wall -I.. -g -O2 -DHAVE_CONFIG_H -DNSCORE -c -o nagios.o nagios.c
nagios.c: In function 'main':
nagios.c:611:4: warning: ignoring return value of 'asprintf', declared with attribute warn_unused_result [-Wunused-result]
  611 |     asprintf(&mac->x[MACRO_PROCESSSTARTTIME], "%llu", (unsigned long long)
)program_start);
|
nagios.c:841:4: warning: ignoring return value of 'asprintf', declared with attribute warn_unused_result [-Wunused-result]
  841 |     asprintf(&mac->x[MACRO_EVENTSTARTTIME], "%llu", (unsigned long long)e
vent_start);
|

```

Create the Nagios user and group, and add the 'www-data' Apache user to the 'nagios' group.

```
$ sudo make install-groups-users
[sudo apt install mono-devel
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo make install-groups-users
```

```
Group nagios already exists
User nagios already exists
```

```
$ sudo usermod -a -G nagios www-data
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo usermod -a -G nagios www-data
usermod: group 'nagios' does not exist
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo make install
```

Install Nagios binaries, service daemon script, and the command mode \$ sudo
make install

```
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo usermod -a -G nagios www-data
usermod: group 'nagios' does not exist
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo make install
```

```
cd ./base && make install
make[1]: Entering directory '/home/ubuntu/nagioscore-nagios-4.4.6/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/b
in
make[1]: Leaving directory '/home/ubuntu/nagioscore-nagios-4.4.6/base'
cd ./cgi && make install
make[1]: Entering directory '/home/ubuntu/nagioscore-nagios-4.4.6/cgi'
make install-basic
make[2]: Entering directory '/home/ubuntu/nagioscore-nagios-4.4.6/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/nagio
s/sbin; \
```

```
$ sudo make install-daemoninit
```

```
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo make install
sudo: make: command not found
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo make install-daemoninit
```

```
/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
*** Init script installed ***
```

```
$ sudo make install-commandmode
```

```
sudo: make: command not found
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo make install-commandmode
sudo: make: command not found
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo make install-config
```

```
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/var/rw
chmod g+s /usr/local/nagios/var/rw
*** External command directory configured ***
```

After that, install the sample script configuration.

```
$ sudo make install-config
```

```
sudo: make: command not found
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo make install-commandmode
sudo: make: command not found
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ 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/loc  
al/nagios/etc/cgi.cfg  
/usr/bin/install -c -b -m 660 -o nagios -g nagios sample-config/resource.cfg /us  
r/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/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/commands.cfg
```

Then install the Apache configuration for Nagios and activate the mod_rewrite and mode_cgi modules.

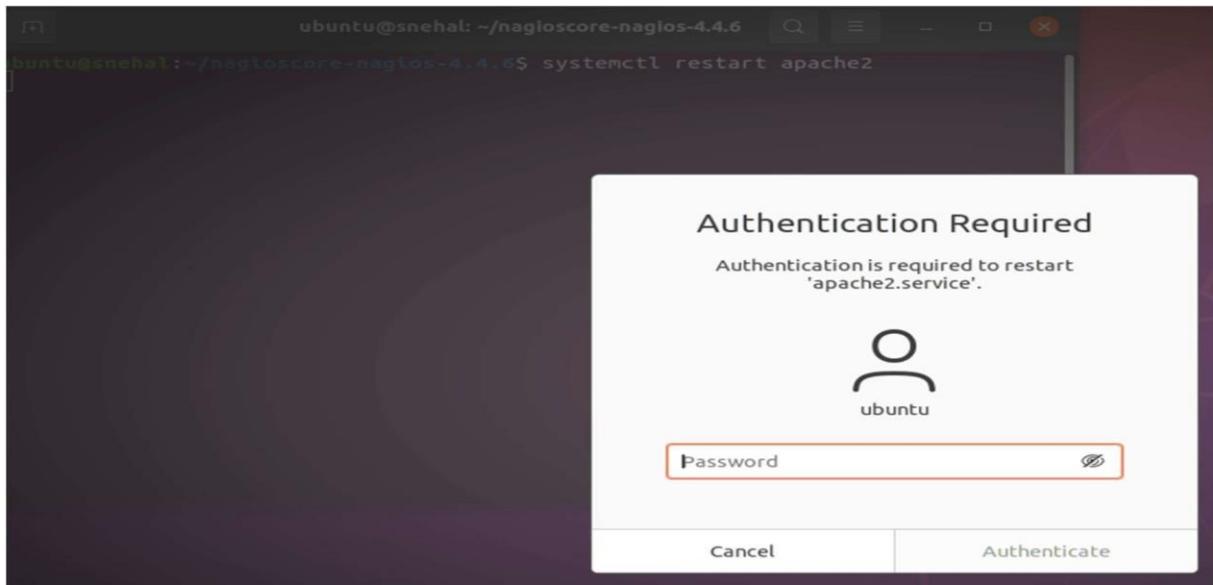
```
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo make install-webcon  
sudo: make: command not found  
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ for svc in Apache ssh  
` do  
$ sudo make install-webconf
```

```
/usr/bin/install -c -m 644 sample-config/httpd.conf /etc/apache2/sites-enabled/n  
agios.conf  
if [ 0 -eq 1 ]; then \  
    ln -s /etc/apache2/sites-enabled/nagios.conf /etc/apache2/sites-enabled/  
nagios.conf; \  
fi  
  
*** Nagios/Apache conf file installed ***
```

```
$ sudo a2enmod rewrite cgi
```

Now restart the Apache service.

```
$ systemctl restart apache2
```



And we have installed the Nagios Core 4.4.6.

- Create nagiosadmin user

After installing the Nagios Core, we will add the basic authentication for accessing the Nagios dashboard. And we will be using the basic Apache authentication.

Create a new apache basic authentication for the user the "nagiosadmin". \$

```
sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin Type your  
strong password.
```

```
htpasswd.users nagiosadmin  
New password:  
Re-type new password:  
Adding password for user nagiosadmin
```

And we have created a new user 'nagiosadmin' for the Nagios dashboard authentication.

- Setup UFW Firewall

For the firewall configuration, you will need to add the Apache service and the Nagios server port to the UFW firewall.

Add the SSH and Apache HTTP port using the ufw command below.

```
$ for svc in Apache ssh do  
sudo ufw allow $svc done
```

```
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ for svc in Apache ssh  
> do  
> sudo ufw allow $svc  
> done  
ERROR: Could not find a profile matching 'Apache'  
Rules updated  
Rules updated (v6)
```

Next, start the UFW firewall service and add it to the system boot.

```
$ sudo ufw enable
```

```
Rules updated (v6)  
praj@it14-V530-15ICB:~/nagioscore-nagios-4.4.6$ sudo ufw enable  
Firewall is active and enabled on system startup
```

Type 'y' and the UFW firewall service will be activate.

Now check all available rules using the command below.

```
$ sudo ufw status numbered
```

Now we will get both the SSH and Apache services added to the UFW firewall.

Status: active			
To	Action	From	
--	-----	-----	
[1] Apache	ALLOW IN	Anywhere	
[2] 22/tcp	ALLOW IN	Anywhere	
[3] Apache (v6)	ALLOW IN	Anywhere (v6)	
[4] 22/tcp (v6)	ALLOW IN	Anywhere (v6)	

And finally, you've completed the Nagios Core installation on the Ubuntu 20.04 server.

Step 3 - Install Nagios Plugins and NRPE Plugin

After installing the Nagios Core, we will install the Nagios Plugins and NRPE Plugins.

Both Nagios and NRPE plugins are available by default on the Ubuntu repository. You can install those packages using the apt command below.

```
$ sudo apt install monitoring-plugins nagios-nrpe-plugin
```

Activities Terminal Oct 10 11:17

```
praj@it14-V530-15ICB:~$ sudo apt install monitoring-plugins nagios-nrpe-plugin
[sudo] password for praj:
Reading package lists... Done
Building dependency tree
```

Once the installation is complete, go to the nagios installation directory "/usr/local/nagios/etc" and create a new directory for storing all server hosts configuration. \$ cd /usr/local/nagios/etc

```
PROCESSING triggers for lldp-dm (2.51-0ubuntu9.9) ...
praj@it14-V530-15ICB:~$ cd /usr/local/nagios/etc
```

```
$ mkdir -p /usr/local/nagios/etc/servers
bash: cd: /usr/local/nagios/etc: No such file or directory
praj@it14-V530-15ICB:~$ mkdir -p /usr/local/nagios/etc/servers
mkdir: cannot create directory '/usr/local/nagios': Permission denied
```

Next, edit the Nagios configuration 'nagios.cfg' using vim editor. \$

```
sudo nano nagios.cfg
```

Activities Terminal Oct 10 11:21

```
praj@it14-V530-15ICB:~$ sudo nano nagios.cfg
```

Uncomment the 'cfg_dir' option that will be used for storing all server hosts configurations.

```
cfg_dir=/usr/local/nagios/etc/servers \
```

```
# Definitions for monitoring the local (Linux) host
cfg_file=/usr/local/nagios/etc/objects/localhost.cfg

# Definitions for monitoring a Windows machine
#cfg_file=/usr/local/nagios/etc/objects/windows.cfg

# Definitions for monitoring a router/switch
#cfg_file=/usr/local/nagios/etc/objects/switch.cfg

# Definitions for monitoring a network printer
#cfg_file=/usr/local/nagios/etc/objects/printer.cfg

# You can also tell Nagios to process all config files (with a .cfg
# extension) in a particular directory by using the cfg_dir
# directive as shown below:

cfg_dir=/usr/local/nagios/etc/servers
#cfg_dir=/usr/local/nagios/etc/printers
```

**^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^ Go To Line**

Save and close.

Next edit the configuration file "resource.cfg" and define the path binary files of Nagios Monitoring Plugins.

```
$ sudo nano resource.cfg
```



A screenshot of a terminal window titled 'praj@it14-V530-15ICB: ~'. The window shows the command '\$ sudo nano resource.cfg' being typed into the input field. The terminal interface includes standard window controls (minimize, maximize, close) and a menu bar with options like 'File', 'Edit', 'View', 'Search', 'Help', and 'Exit'.

Define the Nagios Monitoring Plugins path by changing the default configuration as below.

```
$USER1$=/usr/lib/nagios/plugins
```

```
GNU nano 4.8                                     resource.cfg
# event handlers - if you decide to move the plugins or event handlers to
# a different directory in the future, you can just update one or two
# $USERx$ macros, instead of modifying a lot of command definitions.
#
# The CGIs will not attempt to read the contents of resource files, so
# you can set restrictive permissions (600 or 660) on them.
#
# Nagios supports up to 256 $USERx$ macros ($USER1$ through $USER256$)
#
# Resource files may also be used to store configuration directives for
# external data sources like MySQL...
#
#####
#
# Sets $USER1$ to be the path to the plugins
$USER1$=/usr/lib/nagios/plugins

# Sets $USER2$ to be the path to event handlers
#$USER2$=/usr/local/nagios/libexec/eventhandlers

#
#^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify   ^C Cur Pos
#^X Exit      ^R Read File  ^L Replace    ^U Paste Text  ^T To Spell   ^_ Go To Line
```

Save and close.

After that, add the nagios admin email contacts by editing the configuration file "objects/contacts.cfg".

```
$ sudo nano objects/contacts.cfg
```

```
pra@it14-V530-15ICB:~$ sudo nano objects/contacts.cfg  
[sudo] password for pra: 
```

Change the email address with your own.

```
GNU nano 4.8          objects/contacts.cfg          Modified

#
#####
# 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 fr>
    alias             Nagios Admin         ; Full name of user
    email             raisnehalonline@gmail.com ; <<***** CHANGE THIS TO >>

}

#####
#
# CONTACT GROUPS

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File   ^\ Replace   ^U Paste Text^T To Spell  ^ Go To Line
```

Save and close.

Now define the nrpe check command by editing the configuration file

"objects/commands.cfg". \$ sudo nano objects/commands.cfg

```
pra@it14-V530-15ICB:~$ sudo nano objects/commands.cfg
```

Add the following configuration to the end of the line.

```
#####
define command {
    command_name      process-host-perfdata
    command_line      /usr/bin/printf "%b" "$LASTHOSTCHECKS\$t$HOSTNAME\$\\t$HOSTSTA"
}

define command {
    command_name      process-service-perfdata
    command_line      /usr/bin/printf "%b" "$LASTSERVICECHECKS\$t$HOSTNAME\$\\t$SERV
}
define command{
    command_name     check_nrpe
    command_line     $USER1$/check_nrpe -H $HOSTADDRESS$ -c $ARG1$
```

Save and close, and the Nagioscore configuration has been completed.

Next, start the Nagios service and add it to the system boot. \$ sudo
systemctl start nagios

A screenshot of a terminal window titled 'praj@it14-V530-15ICB: ~'. The window shows the command 'sudo systemctl start nagios' being typed. The terminal interface includes standard window controls like minimize, maximize, and close buttons.

```
praj@it14-V530-15ICB:~$ sudo systemctl start nagios
```

\$ sudo systemctl enable nagios

\$ sudo systemctl status nagios

A screenshot of a terminal window titled 'praj@it14-V530-15ICB: ~'. The window shows the command 'sudo systemctl enable nagios' being typed. The terminal interface includes standard window controls like minimize, maximize, and close buttons.

```
praj@it14-V530-15ICB:~$ sudo systemctl enable nagios
```

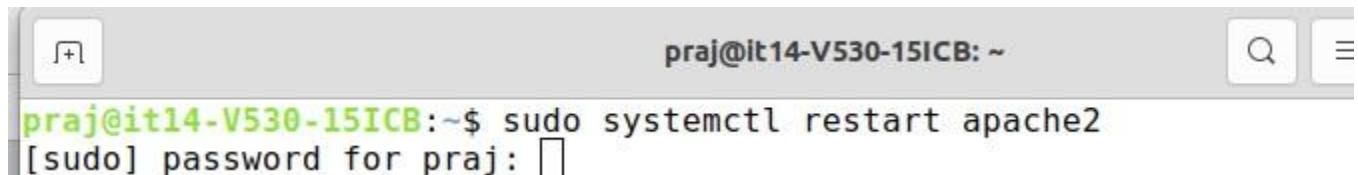
The Nagios service is up and running, check using the following command.

A screenshot of a terminal window titled 'praj@it14-V530-15ICB: ~'. The window displays the output of the 'systemctl status nagios' command. The output shows the service is active and running, with its main PID at 971 and several worker processes listed under its cgroup.

```
* nagios.service - Nagios Core 4.4.6
   Loaded: loaded (/lib/systemd/system/nagios.service; enabled; vendor preset: enabled)
   Active: active (running) since Sat 2021-10-02 18:03:41 IST; 38min ago
     Docs: https://www.nagios.org/documentation
 Main PID: 971 (nagios)
    Tasks: 8 (limit: 4505)
   Memory: 4.9M
      CPU: 0.000 CPU(s) @ 2.40GHz
      CGroup: /system.slice/nagios.service
              └─971 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
                  ├─972 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/...
                  ├─973 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/...
                  ├─974 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/...
                  ├─975 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/...
                  ├─976 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/...
                  ├─977 /usr/local/nagios/bin/nagios --worker /usr/local/nagios/var/...
                  └─983 /usr/local/nagios/bin/nagios -d /usr/local/nagios/etc/nagios.cfg
```

As a result, the Nagios service is up and running. Now we need to restart the Apache service to apply a new Nagios configuration.

```
$ sudo systemctl restart apache2
```



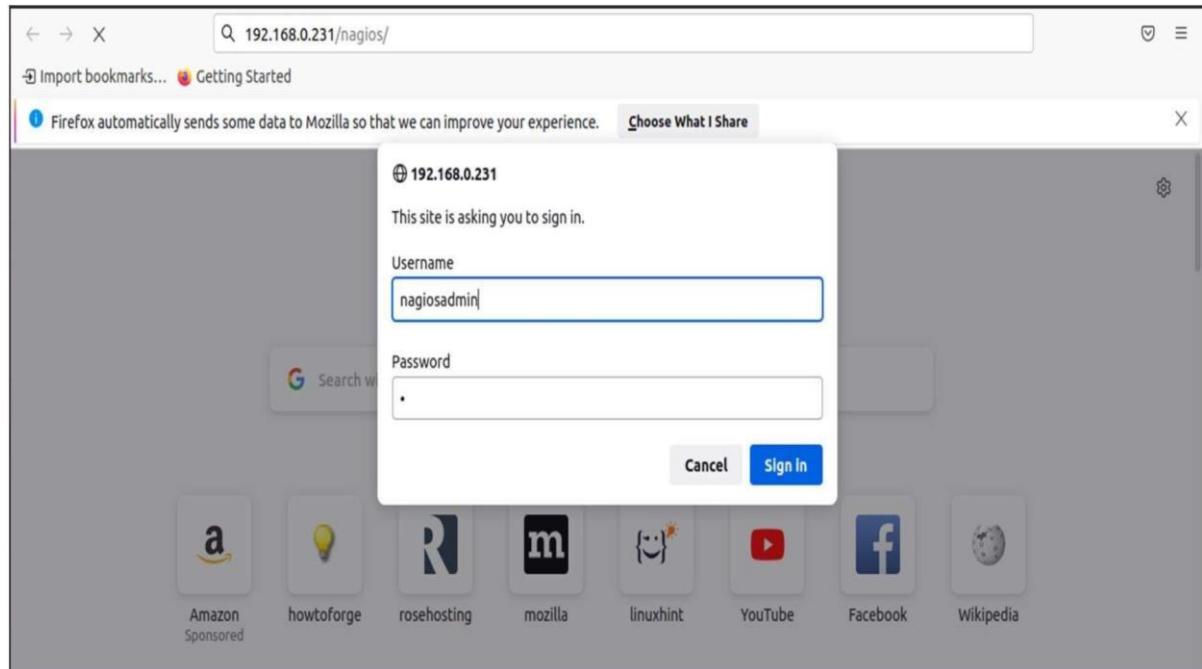
```
praj@it14-V530-15ICB: ~
praj@it14-V530-15ICB:~$ sudo systemctl restart apache2
[sudo] password for praj: [REDACTED]
```

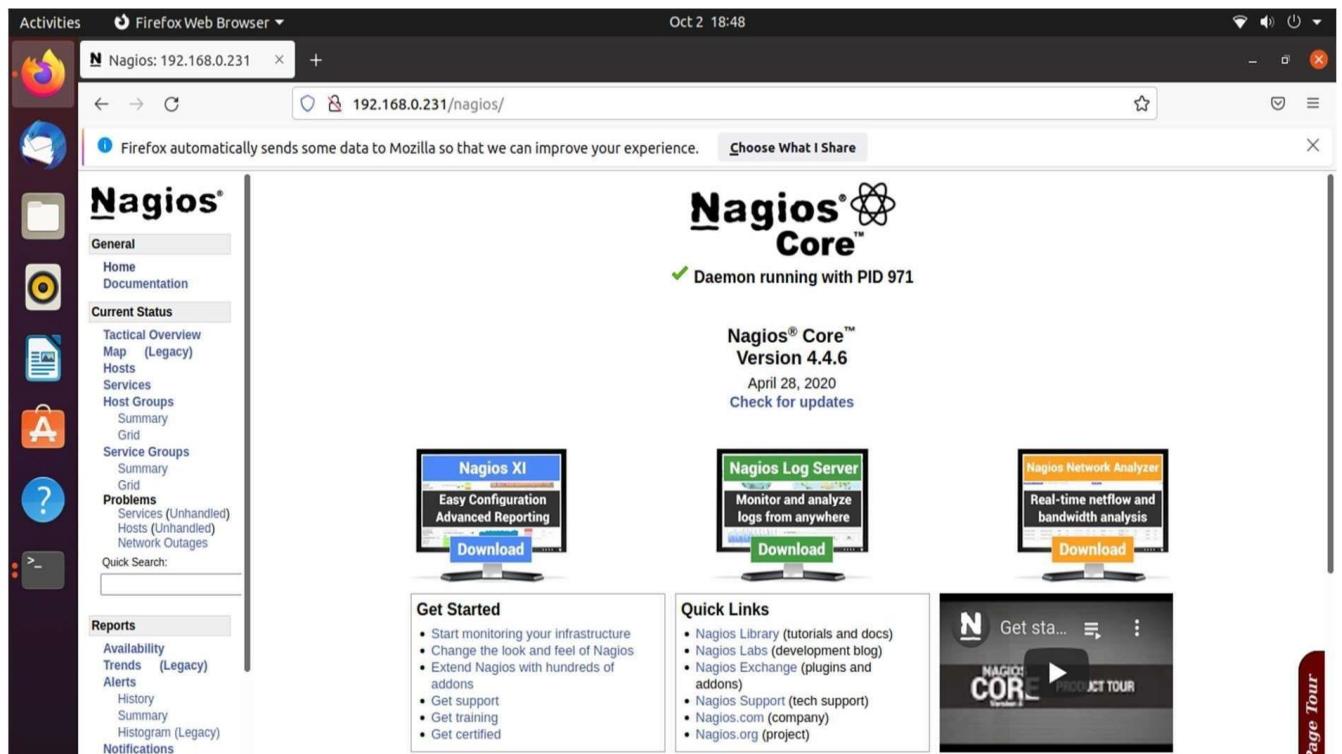
And the Nagios configuration has been completed.

Open your web browser and type the server IP address following the "nagios" URL path.

http://your_ip_address/nagios/

Log in with the user "nagiosadmin" and type your password





Conclusion -

Nagios Log Server greatly simplifies the process of searching your log data. Set up alerts to notify you when potential threats arise, or simply filter your data to quickly audit your system. With Log Server, you get all of your data in one location, with high availability and fail-over built right in. Thus, with all commands we have installed Nagios on Ubuntu servers.

