



PARSHVANATH CHARITABLE TRUST'S

# A. P. SHAH INSTITUTE OF TECHNOLOGY

Department of Information Technology

(NBA Accredited)



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Class / Branch: TE IT C

Subject: Advanced Devops Lab (ADL)

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## EXPERIMENT NO. 09

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

### Theory:

#### 1 - Pre-requisite

First requirement is to install Apache and PHP first. Use the following commands to complete it. And use commands to install required packages for Nagios.

```
manjusha@apsit:~$ sudo apt-get update
manjusha@apsit:~$ sudo apt-get install wget build-essential unzip openssl
libssl-dev
manjusha@apsit:~$ sudo apt-get install apache2 php libapache2-mod-php php-gd
libgd-dev
```

```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo apt-get update
[sudo] password for apsit:
Hit:1 https://deb.nodesource.com/node_20.x nodistro InRelease
Get:2 http://security.ubuntu.com/ubuntu bionic-security InRelease [102 kB]
Hit:3 http://in.archive.ubuntu.com/ubuntu bionic InRelease
Get:4 http://in.archive.ubuntu.com/ubuntu bionic-updates InRelease [102 kB]
Hit:5 http://ppa.launchpad.net/deadsnakes/ppa/ubuntu bionic InRelease
Hit:6 http://ppa.launchpad.net/gencfsn/ppa/ubuntu bionic InRelease
Get:7 http://security.ubuntu.com/ubuntu bionic-security/main amd64 DEP-11 Metadata [76.8 kB]
Get:8 http://in.archive.ubuntu.com/ubuntu bionic-backports InRelease [102 kB]
Get:9 http://security.ubuntu.com/ubuntu bionic-security/restricted amd64 DEP-11 Metadata [212 B]
Get:10 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 DEP-11 Metadata [61.8 kB]
Get:11 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 DEP-11 Metadata [297 kB]
Get:12 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 DEP-11 Metadata [2,464 B]
Get:13 http://in.archive.ubuntu.com/ubuntu bionic-updates/restricted amd64 DEP-11 Metadata [212 B]
Get:14 https://dl.google.com/linux/chrome/deb stable InRelease [1,825 B]
Get:15 http://in.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 DEP-11 Metadata [303 kB]
Get:16 https://dl.google.com/linux/chrome/deb stable/main amd64 Packages [1,215 B]
Get:17 http://in.archive.ubuntu.com/ubuntu bionic-updates/multiverse amd64 DEP-11 Metadata [2,468 B]
Get:18 http://in.archive.ubuntu.com/ubuntu bionic-backports/main amd64 DEP-11 Metadata [8,116 B]
Get:19 http://in.archive.ubuntu.com/ubuntu bionic-backports/restricted amd64 DEP-11 Metadata [216 B]
Get:20 http://in.archive.ubuntu.com/ubuntu bionic-backports/universe amd64 DEP-11 Metadata [10.0 kB]
Get:21 http://in.archive.ubuntu.com/ubuntu bionic-backports/multiverse amd64 DEP-11 Metadata [216 B]
Ign:22 https://pkg.jenkins.io/debian stable InRelease
Err:23 https://pkg.jenkins.io/debian stable Release
 404 Not Found [IP: 151.101.130.133 443]
Hit:24 https://download.sublimetext.com apt/stable/ InRelease
Reading package lists... Done
E: The repository 'http://pkg.jenkins.io/debian stable Release' does not have a Release file.
N: Updating from such a repository can't be done securely, and is therefore disabled by default.
N: See apt-secure(8) manpage for repository creation and user configuration details.
```



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```
0 upgraded, 0 newly installed, 0 to remove and 1 not upgraded.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo apt-get install unzip -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
unzip is already the newest version (6.0-2ubuntu1.2).
0 upgraded, 0 newly installed, 0 to remove and 1 not upgraded.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo apt-get install openssl -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
openssl is already the newest version (1.1.1-1ubuntu2.1~18.04.23).
0 upgraded, 0 newly installed, 0 to remove and 1 not upgraded.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo apt-get install libssl-dev -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
Suggested packages:
  libssl-doc
The following NEW packages will be installed:
  libssl-dev
0 upgraded, 1 newly installed, 0 to remove and 1 not upgraded.
Need to get 1,568 kB of archives.
After this operation, 7,854 kB of additional disk space will be used.
Get:1 http://in.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libssl-dev amd64 1.1.1-1ubuntu2.1~18.04.23 [1,568 kB]
Fetched 1,568 kB in 2s (673 kB/s)
Selecting previously unselected package libssl-dev:amd64.
(Reading database ... 251234 files and directories currently installed.)
Preparing to unpack .../libssl-dev_1.1.1-1ubuntu2.1~18.04.23_amd64.deb ...
Unpacking libssl-dev:amd64 (1.1.1-1ubuntu2.1~18.04.23) ...
Setting up libssl-dev:amd64 (1.1.1-1ubuntu2.1~18.04.23) ...
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo apt-get install apache2 php libapache2-mod-php php-gd libgd-dev
Reading package lists... Done
Building dependency tree
Reading state information... Done
libapache2-mod-php is already the newest version (1:7.2+60ubuntu1).
php is already the newest version (1:7.2+60ubuntu1).
php-gd is already the newest version (1:7.2+60ubuntu1).
apache2 is already the newest version (2.4.29-1ubuntu4.27).
libgd-dev is already the newest version (2.2.5-4ubuntu0.5).
0 upgraded, 0 newly installed, 0 to remove and 1 not upgraded.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$
```

## 2 – Create Nagios User

Create a new user account for Nagios in your system and assign a password.

```
manjusha@apsit:~$ sudo adduser nagios
```

Now create a group for Nagios setup “nagcmd” and add nagios user to this group. Also, add nagios user in the Apache group.

```
manjusha@apsit:~$ sudo groupadd nagcmd
manjusha@apsit:~$ sudo usermod -a -G nagcmd nagios
manjusha@apsit:~$ sudo usermod -a -G nagcmd www-data
```

```
libgd-dev is already the newest version (2.2.5-4ubuntu0.5).
0 upgraded, 0 newly installed, 0 to remove and 1 not upgraded.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo groupadd nagcmd
groupadd: group 'nagcmd' already exists
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo groupadd pritesh
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo adduser nagios
Adding user 'nagios' ...
Adding new group 'nagios' (1001) ...
Adding new user 'nagios' (1001) with group 'nagios' ...
Creating home directory '/home/nagios' ...
Copying files from '/etc/skel' ...
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
Changing the user information for nagios
Enter the new value, or press ENTER for the default
  Full Name []:
  Room Number []:
  Work Phone []:
  Home Phone []:
  Other []:
Is the information correct? [Y/n] y
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo usermod -a -G pritesh nagios
usermod: Permission denied.
usermod: cannot lock /etc/passwd; try again later.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo usermod -a -G pritesh nagios
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo usermod -a -G nagcmd www-data
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ cd /opt/
apsit@apsit-HP-280-Pro-G6-Microtower-PC:~$ sudo wget https://assets.nagios.com/downloads/nagioscore/releases/nagios4.4.3.tar.gz
--2025-09-24 11:04:03-- https://assets.nagios.com/downloads/nagioscore/releases/nagios4.4.3.tar.gz
Resolving assets.nagios.com (assets.nagios.com)... 45.79.49.120, 2008:3c00:f03c:92ff:fe7f:45ce
Connecting to assets.nagios.com (assets.nagios.com)|45.79.49.120|:443... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://assets.nagios.com/redirects/redirect.php?url=https://assets.nagios.com/downloads/nagioscore/releases/nagios4.4.3.tar.gz [following]
--2025-09-24 11:04:04-- https://assets.nagios.com/redirects/redirect.php?url=https://assets.nagios.com/downloads/nagioscore/releases/nagios4.4.3.tar.gz
Reusing existing connection to assets.nagios.com:443.
HTTP request sent, awaiting response... 404 Not Found
2025-09-24 11:04:04 ERROR 404: Not Found.
```



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### Step 3 – Install Nagios Core Service

After installing required dependencies and adding user accounts and Nagios core installation.  
Download latest Nagios core service from the official site.

```
manjusha@apsit:~$cd /opt/
```

```
manjusha@apsit:~$sudo wget
```

```
https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.3.tar.gz
```

```
manjusha@apsit:~$sudo tar xzf nagios-4.4.3.tar.gz
```

```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt$ sudo wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.3.tar.gz
--2025-09-24 11:04:48-- https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.3.tar.gz
Resolving assets.nagios.com (assets.nagios.com)... 45.79.49.120, 2600:3c00::f03c:92ff:fe7f:45ce
Connecting to assets.nagios.com (assets.nagios.com)[45.79.49.120]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 11302228 (11M) [application/x-gzip]
Saving to: 'nagios-4.4.3.tar.gz.2'

nagios-4.4.3.tar.gz.2          100%[=====] 10.78M  2.88MB/s   in 3.7s

2025-09-24 11:04:53 (2.88 MB/s) - 'nagios-4.4.3.tar.gz.2' saved [11302228/11302228]

apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt$ sudo tar xzf nagios-4.4.3.tar.gz
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt$ ls
containerd  google  nagios-4.4.3.tar.gz  nagios-4.4.3.tar.gz.2  nagios-plugins-2.2.1  nagios-plugins-2.2.1.tar.gz.1  tomcat
dockerhub  nagios-4.4.3  nagios-4.4.3.tar.gz.1  nagios-plugins-
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt$ cd nagios-4.4.3
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ ls
aclocal.m4  common  configure  doxy.conf  indent.sh  LICENSE  module  README.md  t  update-version
autoconf-macros  config.guess  configure.ac  functions  INSTALLING  Makefile  nagios.spec  sample-config  tap  UPGRADING
base  config.log  contrib  html  install-sh  Makefile.in  nagios.sysconfig  startup  test  worker
cgi  config.status  CONTRIBUTING.md  include  LEGAL  make-tarball  pkginfo  subst  THANKS  xdata
Changelog  config.sub  docs  indent-all.sh  lib  mkpackage  pkginfo.in  subst.in  t-tap

apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo ./configure
./configure: error: cannot find config.guess
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo ./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
```

After extracting navigate to nagios source directory and install using make command.

```
manjusha@apsit:~$cd nagios-4.4.3
```

```
manjusha@apsit:~$sudo ./configure --with-command-group=nagcmd
```

```
manjusha@apsit:~$sudo make all
```

```
manjusha@apsit:~$sudo make install
```



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```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo make install
cd ./base && make install
make[1]: Entering directory '/opt/nagios-4.4.3/base'
make install-basic
make[2]: Entering directory '/opt/nagios-4.4.3/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 /usr/local/nagios/bin
/usr/bin/install -c -m 774 -o nagios -g nagios nagiosstats /usr/local/nagios/bin
make[2]: Leaving directory '/opt/nagios-4.4.3/base'
make strip-post-install
make[2]: Entering directory '/opt/nagios-4.4.3/base'
/usr/bin/strip /usr/local/nagios/bin/nagios
/usr/bin/strip /usr/local/nagios/bin/nagiosstats
make[2]: Leaving directory '/opt/nagios-4.4.3/base'
make[1]: Leaving directory '/opt/nagios-4.4.3/base'
cd ./cgi && make install
make[1]: Entering directory '/opt/nagios-4.4.3/cgi'
make install-basic
make[2]: Entering directory '/opt/nagios-4.4.3/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 -m 775 -o nagios -g nagios $file /usr/local/nagios/sbin; \
done
make[2]: Leaving directory '/opt/nagios-4.4.3/cgi'
make strip-post-install
make[2]: Entering directory '/opt/nagios-4.4.3/cgi'
for file in *.cgi; do \
    /usr/bin/strip /usr/local/nagios/sbin/$file; \
done
make[2]: Leaving directory '/opt/nagios-4.4.3/cgi'
make[1]: Leaving directory '/opt/nagios-4.4.3/cgi'
cd ./html && make install
make[1]: Entering directory '/opt/nagios-4.4.3/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/locales
```

```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo make all
cd ./base && make
make[1]: Entering directory '/opt/nagios-4.4.3/base'
make -C ../lib
make[2]: Entering directory '/opt/nagios-4.4.3/lib'
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c squeue.c -o squeue.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c kqueue.c -o kqueue.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c iocache.c -o iocache.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c iobroker.c -o iobroker.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c bitmap.c -o bitmap.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c dhash.c -o dhash.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c runcmd.c -o runcmd.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c nsutils.c -o nsutils.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c fanout.c -o fanout.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c pqueue.c -o pqueue.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c worker.c -o worker.o
In function '...',
warning: ignoring return value of '...', declared with attribute warn_unused_result [-Wunused-result]
(void)chdir("/tmp");
~~~~~
warning: ignoring return value of '...', declared with attribute warn_unused_result [-Wunused-result]
(void)chdir("nagios-workers");
~~~~~
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c skiplist.c -o skiplist.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c nsock.c -o nsock.o
gcc -Wall -g -O2 -DHAVE_CONFIG_H -c nspath.c -o nspath.o
ar cr libnagios.a squeue.o kqueue.o iocache.o iobroker.o bitmap.o dhash.o runcmd.o nsutils.o fanout.o pqueue.o worker.o skiplist.o nsock.o nspath.o
make[2]: Leaving directory '/opt/nagios-4.4.3/lib'
gcc -Wall -I. -g -O2 -DHAVE_CONFIG_H -DNSCORE -o nagios nagios.o broker.o nebmodes.o ../common/shared.o query-handler.o workers.o checks.o config.o commands.o events.o
flapping.o logging.o macros-base.o netutils.o notifications.o sehndlers.o utils.o retention-base.o xretention-base.o comments-base.o xcomments-base.o objects-base.o x
objects-base.o statusdata-base.o xstatusdata-base.o perfdata-base.o xperfdata-base.o downtime-base.o -Wl,-export-dynamic -ln ../lib/libnagios.a
gcc -Wall -I. -g -O2 -DHAVE_CONFIG_H -DNSCORE -o nagiosstats nagiosstats.c -ln ../lib/libnagios.a
make[1]: Leaving directory '/opt/nagios-4.4.3/base'
cd ./cgi && make
make[1]: Entering directory '/opt/nagios-4.4.3/cgi'
gcc -Wall -I. -g -O2 -DHAVE_CONFIG_H -DNSCGI -c -o ../common/shared.o ../common/shared.c
gcc -Wall -I. -g -O2 -DHAVE_CONFIG_H -DNSCGI -c -o getcgi.o getcgi.c
gcc -Wall -I. -g -O2 -DHAVE_CONFIG_H -DNSCGI -c -o cgiutils.o cgiutils.c
gcc -Wall -I. -g -O2 -DHAVE_CONFIG_H -DNSCGI -c -o cgiauth.o cgiauth.c
gcc -Wall -I. -g -O2 -DHAVE_CONFIG_H -DNSCGI -c -o macros-cgi.o ../common/macros.c
gcc -Wall -I. -g -O2 -DHAVE_CONFIG_H -DNSCGI -c -o objects-cgi.o ../common/objects.c
```

```
manjusha@apsit:~$sudo make install-init
manjusha@apsit:~$sudo make install-daemoninit
manjusha@apsit:~$sudo make install-config
manjusha@apsit:~$sudo make install-commandmode
manjusha@apsit:~$sudo make install-exfoliation
```

Now copy event handlers scripts under libexec directory. These binaries provides multiple events triggers for your Nagios web interface.

```
manjusha@apsit:~$sudo cp -R contrib/eventhandlers/ /usr/local/nagios/libexec/
```

```
manjusha@apsit:~$sudo chown -R nagios:nagios
/usr/local/nagios/libexec/eventhandlers
```



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```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ 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
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ 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 ***

apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ 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/cgl.cfg /usr/local/nagios/etc/cgl.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/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
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/contacts.cfg /usr/local/nagios/etc/objects/contacts.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/localhost.cfg /usr/local/nagios/etc/objects/localhost.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/printer.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 ***

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.

apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ 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 ***

apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo make install-exfoliation

*** Exfoliation theme installed ***
NOTE: Use 'make install-classicui' to revert to classic Nagios theme

apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo cp -R contrib/eventhandlers/ /usr/local/nagios/libexec/
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo chown -R nagios:nagios /usr/local/nagios/libexec/eventhandlers
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$
```

## Step 4 – Setup Apache with Authentication

Now create an Apache configuration file for your Nagios server as below:

```
manjusha@apsit:~$ sudo nano /etc/apache2/conf-available/nagios.conf
```

Add below lines to nagios.conf file.

```
ScriptAlias /nagios/cgi-bin "/usr/local/nagios/sbin"
```

```
<Directory "/usr/local/nagios/sbin">
```

```
Options ExecCGI
AllowOverride None
Order allow,deny
Allow from all
AuthName "Restricted Area"
AuthType Basic
AuthUserFile /usr/local/nagios/etc/htpasswd.users
Require valid-user
```

```
</Directory>
```

```
Alias /nagios "/usr/local/nagios/share"
```





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```
<Directory "/usr/local/nagios/share">
    Options None
    AllowOverride None
    Order allow,deny
    Allow from all
    AuthName "Restricted Area"
    AuthType Basic
    AuthUserFile /usr/local/nagios/etc/htpasswd.users
    Require valid-user
</Directory>
```

To setup apache authentication for user **nagiosadmin**

```
manjusha@apsit:~$sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users
nagiosadmin
```

Enable Apache configuration and restart Apache service to make the new settings take effect.cd

```
manjusha@apsit:~$sudo a2enconf nagios
manjusha@apsit:~$sudo a2enmod cgi rewrite
manjusha@apsit:~$sudo service apache2 restart
```

```
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo a2enmod cgi rewrite
Module cgi already enabled
Module rewrite already enabled
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo service apache2 restart
Job for apache2.service failed because the control process exited with error code.
See "systemctl status apache2.service" and "journalctl -xe" for details.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ ^C
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo nano /etc/apache2/conf-available/nagios.conf
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo a2enconf nagios
Conf nagios already enabled
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo a2enmod cgi rewrite
Module cgi already enabled
Module rewrite already enabled
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo service apache2 restart
Job for apache2.service failed because the control process exited with error code.
See "systemctl status apache2.service" and "journalctl -xe" for details.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo apache2ctl configtest
[Wed Sep 24 11:29:12.198371 2025] [alias:warn] [pid 11025] AH00671: The ScriptAlias directive in /etc/apache2/conf-enabled/nagios1.conf at line 1 will probably never ma
tch because it overlaps an earlier ScriptAlias.
AH00526: Syntax error on line 2 of /etc/apache2/conf-enabled/nagios1.conf:
Invalid command 'lt;Directory', perhaps misspelled or defined by a module not included in the server configuration
Action 'configtest' failed.
The Apache error log may have more information.
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ ls /etc/apache2/conf-enabled/
charset.conf  javascript-common.conf  nagios1.conf  other-vhosts-access-log.conf  serve-cgi-bin.conf
gitweb.conf  localized-error-pages.conf  nagios.conf  security.conf
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo a2dlsconf nagios1
Conf nagios1 disabled.
To activate the new configuration, you need to run:
systemctl reload apache2
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo apache2ctl configtest
AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.1.1. Set the 'ServerName' directive globally to suppress this messa
ge
Syntax OK
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ sudo systemctl restart apache2
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt/nagios-4.4.3$ cd /opt
apsit@apsit-HP-280-Pro-G6-Microtower-PC:/opt$ sudo wget http://www.nagios-plugins.org/download/nagios-plugins-2.2.1.tar.gz
--2025-09-24 11:31:25-- http://www.nagios-plugins.org/download/nagios-plugins-2.2.1.tar.gz
Resolving www.nagios-plugins.org (www.nagios-plugins.org)... 45.56.123.251
Connecting to www.nagios-plugins.org (www.nagios-plugins.org)|45.56.123.251|:80... connected.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: http://nagios-plugins.org/download/nagios-plugins-2.2.1.tar.gz [following]
--2025-09-24 11:31:29-- http://nagios-plugins.org/download/nagios-plugins-2.2.1.tar.gz
Resolving nagios-plugins.org (nagios-plugins.org)... 45.56.123.251
Reusing existing connection to www.nagios-plugins.org:80.
```

## Step 5 – Installing Nagios Plugins

After installing and configuring Nagios core service, Download latest nagios-plugins source and install using follocdwing commands.

```
manjusha@apsit:~$cd /opt
manjusha@apsit:~$sudo wget http://www.nagios-plugins.org/download/nagios-
plugins-2.2.1.tar.gz
manjusha@apsit:~$sudo tar xzf nagios-plugins-2.2.1.tar.gznagios
```



```
manjusha@apsit:~$cd nagios-plugins-2.2.1
```

## Now compile and install Nagios plugins

```
manjusha@apsit:~$sudo ./configure --with-nagios-user=nagios --with-nagios-  
group=nagios --with-openssl  
manjusha@apsit:~$sudo make  
manjusha@apsit:~$sudo make install
```

```
apsit@apsit-HP-280-Pro-G6-Microtower-PC: /opt/nagios-plugins-2.2.1$ sudo make
make all-recursive
make[1]: Entering directory '/opt/nagios-plugins-2.2.1'
Making all in gl
make[2]: Entering directory '/opt/nagios-plugins-2.2.1/gl'
rm -f alloca.h-t alloca.h && \
{ echo '/* DO NOT EDIT! GENERATED AUTOMATICALLY! */'; \
  cat ./alloca.in.h; \
} > alloca.h-t && \
mv -f alloca.h-t alloca.h
/bin/mkdir -p arpa
rm -f arpa/inet.h-t arpa/inet.h && \
{ echo '/* DO NOT EDIT! GENERATED AUTOMATICALLY! */'; \
  sed -e 's|@|'GUARD_PREFIX'|@|GL|g' \
    -e 's|@|'INCLUDE_NEXT'|@|include_next|g' \
    -e 's|@|'PRAGMA_SYSTEM_HEADER'|@|#pragma GCC system_header|g' \

```

Ste

## p 6 – Verify Settings

Use the Nagios commands to verify the Nagios installation and configuration file. After successfully verify start the Nagios core service.

```
manjusha@apsit:~$ /usr/local/nagios/bin/nagios -v
/usr/local/nagios/etc/nagios.cfg
manjusha@apsit:~$ sudo service nagios start
```

Also configure Nagios to auto start on system boot.

```
make[2]: Leaving directory '/opt/nagios-plugins-2.2.1'
make[1]: Leaving directory '/opt/nagios-plugins-2.2.1'
apst@apst1t-HP-280-Pro-G6-Microtower-PC:/opt/nagios-plugins-2.2.15 /usr/local/nagios/sbin/nagios -v /usr/local/nagios/etc/nagios.cfg
bash: /usr/local/nagios/sbin/nagios: Permission denied
apst@apst1t-HP-280-Pro-G6-Microtower-PC:/opt/nagios-plugins-2.2.15 sudo /usr/local/nagios/sbin/nagios -v /usr/local/nagios/etc/nagios.cfg

Nagios Core 4.4.3
Copyright (c) 2005-present Nagios Core Development Team and Community Contributors
Copyright (c) 1998-2009 Ethan Galstad
Last Modified: 2019-01-15
License: GPL

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
apst@apst1t-HP-280-Pro-G6-Microtower-PC:/opt/nagios-plugins-2.2.15 sudo service nagios start
```



### Step 7 – Access Nagios Web Interface

Access your nagios setup by access nagios server using hostname or ip address followed by /nagios.

<http://127.0.0.1/nagios/>

Prompting for Apache Authentication Password –

**username: nagiosadmin**

**Password : 123456 (which you enter while configuration)**

Nagios After login screen –

We have successfully installed and configured Nagios Monitoring Server core service in our system now we need to install NRPE on all remote Linux systems to monitor with Nagios.

**Conclusion: Successfully established nagios and apache server.**