How to install nagios for Ubuntu 16.04 LTS

```
$ sudo apt-get install wget build-essential apache2 php apache2-mod-php7.0 php-gd libgd-dev
sendmail unzip
```

User and group configuration

For Nagios to run, you have to create a new user for Nagios. We will name the user "nagios" and additionally create a group named "nagcmd".

We add the new user to the group as shown below:

```
sudo useradd nagios
sudo groupadd nagcmd
sudo usermod -a -G nagcmd nagios
sudo usermod -a -G nagios,nagcmd www-data
```

Installing Nagios

Step 1 - Download and extract the Nagios core

```
cd ~
#wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.2.0.tar.gz
wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.3.2.tar.gz
tar -xzf nagios*.tar.gz
cd nagios-4.3.2
```

Step 2 - Compile Nagios

Before you build Nagios, you will have to configure it with the user and the group you have created earlier.

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

How to install Nagios

```
make all
sudo make install
sudo make install-commandmode
sudo make install-init
sudo make install-config
sudo /usr/bin/install -c -m 644 sample-config/httpd.conf /etc/apache2/sites-
available/nagios.conf
```

Copy eventhandler directory to the nagios directory:

```
sudo cp -R contrib/eventhandlers/ /usr/local/nagios/libexec/
sudo chown -R nagios:nagios /usr/local/nagios/libexec/eventhandlers
```

Step 3 - Install the Nagios Plugins

Download and extract the Nagios plugins:

```
cd ~
wget https://nagios-plugins.org/download/nagios-plugins-2.2.1.tar.gz
#wget https://nagios-plugins.org/download/nagios-plugins-2.1.2.tar.gz
tar -xzf nagios-plugins*.tar.gz
cd nagios-plugin-2.2.1/
```

Install the Nagios plugin's with the commands below:

```
./configure --with-nagios-user=nagios --with-nagios-group=nagios --with-openssl
make
sudo make install
```

Step 4 - Configure Nagios

After the installation phase is complete, you can find the default configuration of Nagios in /usr/local/nagios/.

We will configure Nagios and Nagios contact.

Edit default nagios configuration with vim:

```
vim /usr/local/nagios/etc/nagios.cfg

uncomment line 51 for the host monitor configuration.
cfg_dir=/usr/local/nagios/etc/servers
Save and exit.
```

Add a new folder named servers:

```
sudo mkdir -p /usr/local/nagios/etc/servers
```

The Nagios contact can be configured in the contact.cfg file.

Replace the default email with your own email.

```
sudo vi /usr/local/nagios/etc/objects/contacts.cfg
```

Configuring Apache

Step 1 - enable Apache modules

```
sudo a2enmod rewrite
sudo a2enmod cgi
```

You can use the htpasswd command to configure a user nagiosadmin for the nagios web interface

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

and type your password.

Step 2 - enable the Nagios virtualhost

```
sudo ln -s /etc/apache2/sites-available/nagios.conf /etc/apache2/sites-enabled/
```

Step 3 - Start Apache and Nagios

```
service apache2 restart
service nagios start
```

When Nagios starts, you may see the following error :

```
Starting nagios (via systemctl): nagios.serviceFailed
```

And this is how to fix it:

```
cd /etc/init.d/
cp /etc/init.d/skeleton /etc/init.d/nagios
```

Now edit the Nagios file:

```
sudo vi /etc/init.d/nagios
```

... and add the following code:

```
DESC="Nagios"
NAME=nagios
DAEMON=/usr/local/nagios/bin/$NAME
DAEMON_ARGS="-d /usr/local/nagios/etc/nagios.cfg"
PIDFILE=/usr/local/nagios/var/$NAME.lock
```

Make it executable and start Nagios:

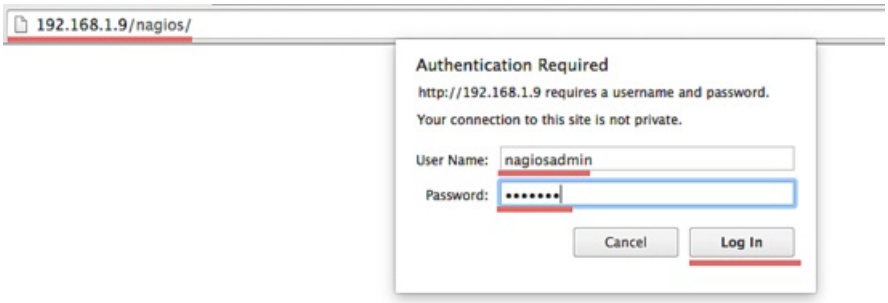
```
sudo chmod +x /etc/init.d/nagios
sudo chown root:root /etc/init.d/nagios
sudo service apache2 restart
service nagios start
sudo service nagios start

sudo update-rc.d nagios defaults
sudo update-rc.d nagios enable
```

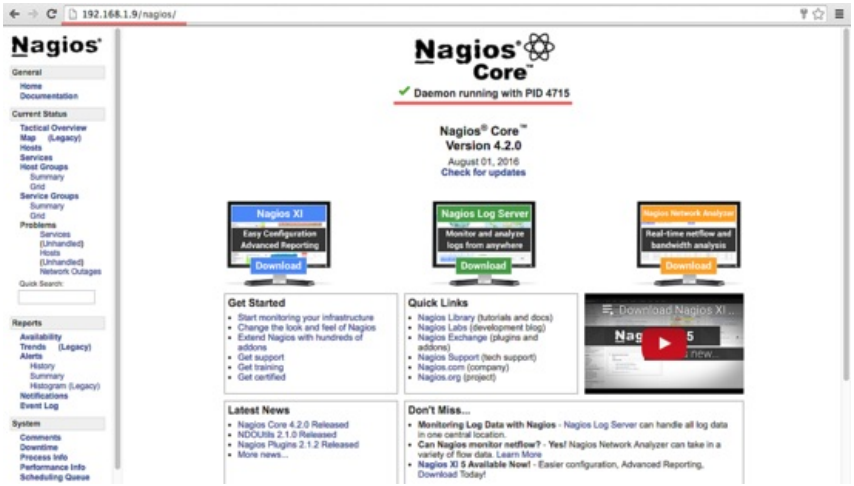
Testing the Nagios Server

Please open your browser and access the Nagios server ip, in my case: http://127.0.0.1/nagios

Nagios Login with apache htpasswd.



Nagios Admin Dashboard



Adding a Host to Monitor

In this tutorial, I will add an Ubuntu host to monitor to the Nagios server we have made above.

Nagios Server IP : 10.100.x.x Ubuntu Host IP : 192.168.1.10

Step 1 - Connect to ubuntu host

```
ssh root@192.168.1.10
```

Step 2 - Install NRPE Service

```
sudo apt-get install nagios-nrpe-server nagios-plugins
```

Step 3 - Configure NRPE

After the installation is complete, edit the nrpe file /etc/nagios/nrpe.cfg:

```
sudo vi /etc/nagios/nrpe.cfg
```

... and add Nagios Server IP 192.168.1.9 to the server_address.

```
server_address=10.100.x.x
```

Step 4 - Restart NRPE

```
sudo service nagios-nrpe-server restart
```

Step 5 - Add Ubuntu Host to Nagios Server

Please connect to the Nagios server: ssh root@10.100.x.x

Then create a new file for the host configuration in /usr/local/nagios/etc/servers/. sudo vi /usr/local/nagios/etc/servers/ubuntu_host.cfg

Add the following lines:

```
# Ubuntu Host configuration file

define host {
        use                             linux-server
        host_name                       ubuntu_host
        alias                           Ubuntu Host
        address                         192.168.1.10
        register                        1
}

define service {
      host_name                         ubuntu_host
      service_description               PING
      check_command                     check_ping!100.0,20%!500.0,60%
      max_check_attempts                2
      check_interval                    2
      retry_interval                    2
      check_period                      24x7
      check_freshness                   1
      contact_groups                    admins
      notification_interval             2
      notification_period               24x7
      notifications_enabled             1
      register                          1
}

define service {
      host_name                         ubuntu_host
      service_description               Check Users
      check_command           check_local_users!20!50
      max_check_attempts                2
      check_interval                    2
      retry_interval                    2
      check_period                      24x7
      check_freshness                   1
      contact_groups                    admins
      notification_interval             2
      notification_period               24x7
      notifications_enabled             1
      register                          1
}

define service {
      host_name                         ubuntu_host
      service_description               Local Disk
      check_command                     check_local_disk!20%!10%!/
      max_check_attempts                2
      check_interval                    2
      retry_interval                    2
      check_period                      24x7
      check_freshness                   1
      contact_groups                    admins
      notification_interval             2
```

```
        notification_period             24x7
        notifications_enabled           1
        register                        1
    }

    define service {
        host_name                       ubuntu_host
        service_description             Check SSH
        check_command                   check_ssh
        max_check_attempts              2
        check_interval                  2
        retry_interval                  2
        check_period                    24x7
        check_freshness                 1
        contact_groups                  admins
        notification_interval           2
        notification_period             24x7
        notifications_enabled           1
        register                        1
    }

    define service {
        host_name                       ubuntu_host
        service_description             Total Process
        check_command                   check_local_procs!250!400!RSZDT
        max_check_attempts              2
        check_interval                  2
        retry_interval                  2
        check_period                    24x7
        check_freshness                 1
        contact_groups                  admins
        notification_interval           2
        notification_period             24x7
        notifications_enabled           1
        register                        1
    }
```

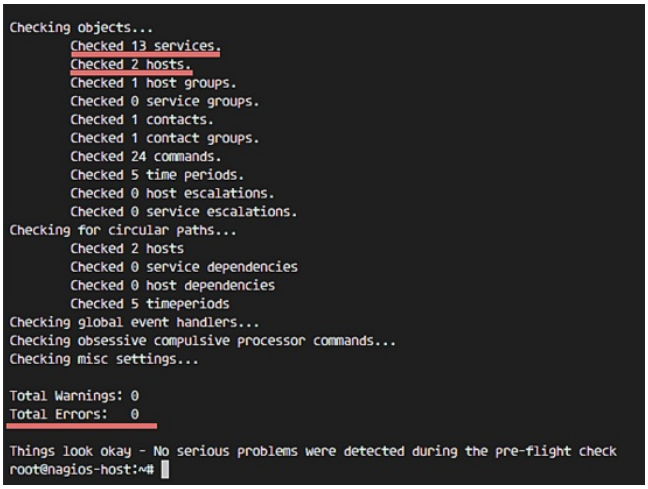
You can find many check_command in /usr/local/nagios/etc/objects/commands.cfg file.

See there if you want to add more services like DHCP, POP etc.

And now check the configuration:

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

... to see if the configuration is correct.



Step 6 - Restart all services

On the Ubuntu Host start NRPE Service:

```
sudo service nagios-nrpe-server restart
```

... and on the Nagios server, start Apache and Nagios:

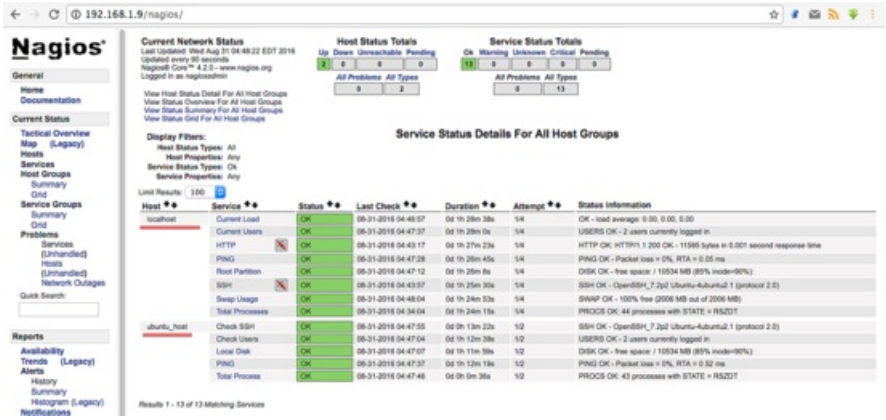
```
sudo service apache2 restart
sudo service nagios restart
```

Step 7 - Testing the Ubuntu Host

Open the Nagios server from the browser and see the ubuntu_host being monitored.

The Ubuntu host is available on monitored host.

All services monitored without error.



Conclusion Nagios is an open source application for monitoring a system. Nagios has been widely used because of the ease of configuration. Nagios in support by various plugins, and you can even create your own plugins.

Look here for more information: https://nagios-plugins.org/doc/guidelines.html