**Nagios:**

nagios basically a tool use for continuous monitoring of system your appliction your services and business process in devops culture.

**Step 1: Install Required Dependencies**

We need to install **Apache**, **PHP** and some libraries like **gcc**, **glibc**, **glibc-common** and **GD** libraries and its development libraries before installing **Nagios 4.4.5** with the source. And to do so, we can use **yum** default package installer.

[root@tecmint]# **yum install -y httpd httpd-tools php gcc glibc glibc-common gd gd-devel make net-snmp**

-------------- **On Fedora** --------------

[root@tecmint]# **dnf install -y httpd httpd-tools php gcc glibc glibc-common gd gd-devel make net-snmp**

**Step 2: Create Nagios User and Group**

Create a new **nagios** user using [useradd command](https://www.tecmint.com/add-users-in-linux/" \t "_blank) and **nagcmd** group account and set a **password**.

[root@tecmint]# useradd nagios

[root@tecmint]# groupadd nagcmd

Next, add both the **nagios** user and the **apache** user to the **nagcmd** group using [usermod command](https://www.tecmint.com/usermod-command-examples/" \t "_blank).

[root@tecmint]# usermod -G nagcmd nagios

[root@tecmint]# usermod -G nagcmd apache

**Step 3: Download Nagios Core 4.4.5 and Nagios Plugin 2.2.1**

Create a directory for your **Nagios** installation and all its future downloads.

[root@tecmint]# mkdir /root/nagios

[root@tecmint]# cd /root/nagios

Now download latest **Nagios Core 4.4.5** and **Nagios plugins 2.2.1** packages with [wget command](https://www.tecmint.com/10-wget-command-examples-in-linux/" \o "Linux wget Command" \t "_blank).

[root@tecmint nagios~]# wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.5.tar.gz

[root@tecmint nagios~]# wget https://nagios-plugins.org/download/nagios-plugins-2.2.1.tar.gz

**Step 4: Extract Nagios Core and its Plugins**

We need to extract downloaded packages with [tar command](https://www.tecmint.com/18-tar-command-examples-in-linux/) as follows.

[root@tecmint nagios~]# tar -xvf nagios-4.4.5.tar.gz

[root@tecmint nagios~]# tar -xvf nagios-plugins-2.2.1.tar.gz

When you extract these tarballs with [tar command](https://www.tecmint.com/18-tar-command-examples-in-linux/), two new folders will appear in that directory.

[root@tecmint nagios ~]# ls -l

total 13520

drwxrwxr-x 18 root root 4096 Aug 20 17:43 **nagios-4.4.5**

-rw-r--r-- 1 root root 11101966 Aug 20 17:48 nagios-4.4.5.tar.gz

drwxr-xr-x 15 root root 4096 Apr 19 12:04 **nagios-plugins-2.2.1**

-rw-r--r-- 1 root root 2728818 Apr 19 12:04 nagios-plugins-2.2.1.tar.gz

**Configure Nagios Core**

Now, first we will configure **Nagios Core** and to do so we need to go to **Nagios** directory and run configure file and if everything goes fine, it will show the output in the end as sample output. Please see below.

[root@tecmint nagios~]# cd nagios-4.4.5/

[root@tecmint nagios-4.4.5 ]# ./configure --with-command-group=nagcmd

**Sample output:**

Creating sample config files in sample-config/ ...

\*\*\* Configuration summary for nagios 4.4.5 2019-08-20 \*\*\*:

General Options:

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Nagios executable: nagios

Nagios user/group: nagios,nagios

Command user/group: nagios,nagcmd

Event Broker: yes

Install ${prefix}: /usr/local/nagios

Install ${includedir}: /usr/local/nagios/include/nagios

Lock file: /run/nagios.lock

Check result directory: /usr/local/nagios/var/spool/checkresults

Init directory: /lib/systemd/system

Apache conf.d directory: /etc/httpd/conf.d

Mail program: /usr/bin/mail

Host OS: linux-gnu

IOBroker Method: epoll

Web Interface Options:

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HTML URL: http://localhost/nagios/

CGI URL: http://localhost/nagios/cgi-bin/

Traceroute (used by WAP): /usr/bin/traceroute

Review the options above for accuracy. If they look okay,

type 'make all' to compile the main program and CGIs.

After configuring, we need to **compile** and **install** all the binaries with **make all** and **make install** command, it will install all the needed libraries in your machine and we can proceed further.

[root@tecmint nagios-4.4.5 ]# make all

[root@tecmint nagios-4.4.5 ]# make install

**Sample output:**

\*\*\* Compile finished \*\*\*

If the main program and CGIs compiled without any errors, you

can continue with testing or installing Nagios as follows (type

'make' without any arguments for a list of all possible options):

make test

- This runs the test suite

make install

- This installs the main program, CGIs, and HTML files

make install-init

- This installs the init script in /lib/systemd/system

make install-daemoninit

- This will initialize the init script

in /lib/systemd/system

make install-groups-users

- This adds the users and groups if they do not exist

make install-commandmode

- This installs and configures permissions on the

directory for holding the external command file

make install-config

- This installs \*SAMPLE\* config files in /usr/local/nagios/etc

You'll have to modify these sample files before you can

use Nagios. Read the HTML documentation for more info

on doing this. Pay particular attention to the docs on

object configuration files, as they determine what/how

things get monitored!

make install-webconf

- This installs the Apache config file for the Nagios

web interface

make install-exfoliation

- This installs the Exfoliation theme for the Nagios

web interface

make install-classicui

- This installs the classic theme for the Nagios

web interface

The following command will install the **init scripts** for Nagios.

[root@tecmint nagios-4.4.5 ]# make install-init

To make Nagios work from command line we need to install **command-mode**.

[root@tecmint nagios-4.4.5 ]# make install-commandmode

Next, install sample Nagios files, please run following command.

[root@tecmint nagios-4.4.5 ]# make install-config

**Sample output:**

/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/local/nagios/etc/cgi.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.

**Step 5: Customizing Nagios Configuration**

Open the “**contacts.cfg**” file with your choice of editor and set the **email address** associated with the nagiosadmin contact definition to receiving email alerts.

# vi /usr/local/nagios/etc/objects/contacts.cfg

**Sample Output**

###############################################################################

###############################################################################

#

# CONTACTS

#

###############################################################################

###############################################################################

# 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 above)

alias Nagios Admin ; Full name of user

email **admin@tecmint.com** ; \*\*\* CHANGE THIS TO YOUR EMAIL ADDRESS \*\*\*\*

}

**Step 6: Install and Configure Web Interface for Nagios**

We are done with all configuration in the backend, now we will configure Web Interface For Nagios with the following command. The below command will Configure Web interface for Nagios and a web admin user will be created “**nagiosadmin**”.

[root@tecmint nagios-4.4.5 ]# make install-webconf

In this step, we will be creating a password for “**nagiosadmin**”. After executing this command, please provide a **password twice** and keep it remember because this password will be used when you login in the Nagios Web interface.

[root@tecmint nagios-4.4.5]# htpasswd -s -c /usr/local/nagios/etc/htpasswd.users nagiosadmin

New password:

Re-type new password:

Adding password for user nagiosadmin

Restart **Apache** to make the new settings take effect.

[root@tecmint nagios-4.4.5]# service httpd start [**On RHEL/CentOS 6**]

[root@tecmint nagios-4.4.5]# systemctl start httpd.service [**On RHEL/CentOS 7/8 and Fedora**]

**Step 7: Compile and Install Nagios Plugin**

We have downloaded Nagios plugins in **/root/nagios**, Go there and configure and install it as directed below.

[root@tecmint nagios-4.4.5]# cd /root/nagios

[root@tecmint nagios]# cd nagios-plugins-2.2.1/

[root@tecmint nagios-plugins-2.2.1]# ./configure --with-nagios-user=nagios --with-nagios-group=nagios

[root@tecmint nagios-plugins-2.2.1]# make

[root@tecmint nagios-plugins-2.2.1]# make install

**Step 8: Verify Nagios Configuration Files**

Now we are all done with **Nagios configuration** and its time to **verify** it and to do so please insert following command. If everything goes smooth it will show up similar to below output.

[root@tecmint nagios]# /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

**Sample Output**

Nagios Core 4.4.5

Copyright (c) 2009-present Nagios Core Development Team and Community Contributors

Copyright (c) 1999-2009 Ethan Galstad

Last Modified: 2019-08-20

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

**Step 9: Add Nagios Services to System Startup**

To make Nagios work across reboots, we need to add **nagios** and **httpd** with **chkconfig** and **systemctl** command.

**On RHEL/CentOS 6**

[root@tecmint ]# chkconfig --add nagios

[root@tecmint ]# chkconfig --level 35 nagios on

[root@tecmint ]# chkconfig --add httpd

[root@tecmint ]# chkconfig --level 35 httpd on

**On RHEL/CentOS 7/8 and Fedora**

[root@tecmint ]# systemctl enable nagios

[root@tecmint ]# systemctl enable httpd

Restart **Nagios** to make the new settings take effect.

[root@tecmint ]# service nagios start [**On RHEL/CentOS 6**]

[root@tecmint ]# systemctl start nagios.service [**On RHEL/CentOS 7/8 and Fedora**]

**Step 10: Login to the Nagios Web Interface**

Your Nagios is ready to work, please open it in your browser with “**http://Your-server-IP-address/nagios**” or “**http://FQDN/nagios**” and Provide the username “**nagiosadmin**” and **password**.

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