Nagios Core Installation And Configuration

Step 1: Update Your System

Before installing any new software, update your system packages.

sudo yum update

```
[root@localhost ~]# yum update -y
```

Step 2: Install Required Packages

Nagios Core requires several packages to function correctly. Install them using the following command.

sudo yum install gcc glibc glibc-common wget unzip httpd php gd gd-devel perl postfix

```
[root@localhost ~]#  sudo yum install gcc glibc glibc-common wget unzip httpd php gd gd-devel perl postfix -y
```

dnf -y groupinstall "Development Tools"

```
[root@localhost ~]#  dnf -y groupinstall "Development Tools"
```

Step 3: Download Nagios Source File

Use the following commands to download the Nagios source file.

mkdir /nagios && cd /nagios
wget
https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.6.tar.gz

```
[root@localhost ~]# mkdir /nagios && cd /nagios
[root@localhost nagios]# sudo wget -O nagioscore.tar.gz https://github.com/NagiosEnterprises/nagioscore/archive/nagios-4.4.5.tar.gz
--2024-08-29 08:46:53--  https://github.com/NagiosEnterprises/nagioscore/archive/nagios-4.4.5.tar.gz
Resolving github.com (github.com)... 20.207.73.82
Connecting to github.com (github.com)|20.207.73.82|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://codeload.github.com/NagiosEnterprises/nagioscore/tar.gz/refs/tags/nagios-4.4.5 [following]
--2024-08-29 08:46:59--  https://codeload.github.com/NagiosEnterprises/nagioscore/tar.gz/refs/tags/nagios-4.4.5
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: ‘nagioscore.tar.gz’

nagioscore.tar.gz                       [                                    <=>                                 ]

2024-08-29 08:47:10 (1.12 MB/s) - ‘nagioscore.tar.gz’ saved [11304640]

[root@localhost nagios]# ls
nagioscore.tar.gz
```

sudo tar xzvf nagioscore.tar.gz

```
[root@localhost nagios]# tar zxvf nagioscore.tar.gz
```

Step 4:Compile Nagios

After a successful download of the Nagios source file, you can run the commands below to compile Nagios on Almalinux to make sure all dependencies on your system are available.

cd nagioscore-nagios-4.4.5
./configure

```
[root@localhost nagioscore-nagios-4.4.5]# ./configure
```

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

 General Options:
 -------------------------
        Nagios executable:  nagios
        Nagios user/group:  nagios,nagios
       Command user/group:  nagios,nagios
             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/sbin/sendmail
                  Host OS:  linux-gnu
          IOBroker Method:  epoll

 Web Interface Options:
 ------------------------
                 HTML URL:  http://localhost/nagios/
                  CGI URL:  http://localhost/nagios/cgi-bin/
 Traceroute (used by WAP):


Review the options above for accuracy.  If they look okay,
type 'make all' to compile the main program and CGIs.
```

sudo make all

```
[root@localhost nagioscore-nagios-4.4.5]# make all
```

```
*** Support Notes *****************************************

If you have questions about configuring or running Nagios,
please make sure that you:

     - Look at the sample config files
     - Read the documentation on the Nagios Library at:
          https://library.nagios.com

before you post a question to one of the mailing lists.
```

Step 5 :Create Nagios User and Group on Almalinux

sudo make install-groups-users

```
[root@localhost nagios-4.4.6]# make install-groups-users
groupadd -r nagios
useradd -g nagios nagios
[root@localhost nagios-4.4.6]# usermod -a -G nagios apache
```

Step 6: Add Apache User

To the user you created in the previous step, you can add an Apache user by running the command below

sudo usermod -a -G nagios apache

Step 7:Install Nagios Binaries, HTML, and CGIs Files

sudo make install

```
*** Main program, CGIs and HTML files installed ***

You can continue with installing Nagios as follows (type 'make'
without any arguments for a list of all possible options):

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

  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

make[1]: Leaving directory '/nagios/nagios-4.4.6'
```

Step 8:Install Daemon and Enable the Service to Start on Boot, To install Command mode,Install Sample Config File, Install Apache Config Files

sudo make install-daemoninit

```
[root@localhost nagios-4.4.6]#  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
Created symlink /etc/systemd/system/multi-user.target.wants/nagios.service → /usr/lib/systemd/system/nagios.service.

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

#sudo make install-commandmode

```
[root@localhost nagios-4.4.6]# make install-commandmode
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/var/rw
chmod g+s /usr/local/nagios/var/rw
```

#sudo make install-config

```
[root@localhost nagios-4.4.6]# 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/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 ***
```

sudo make install-webconf

```
[root@localhost nagios-4.4.6]# make install-webconf
/usr/bin/install -c -m 644 sample-config/httpd.conf /etc/httpd/conf.d/nagios.conf
if [ 0 -eq 1 ]; then \
        ln -s /etc/httpd/conf.d/nagios.conf /etc/apache2/sites-enabled/nagios.conf; \
fi

*** Nagios/Apache conf file installed ***
```

Step 9: Configure Firewall

In this step, you are ready to configure the firewall and open port 80 for inbound traffic.

sudo firewall-cmd --zone=public --add-port=80/tcp
sudo firewall-cmd --zone=public --add-port=80/tcp --permanent
sudo firewall-cmd --reload

```
[root@localhost nagios-4.4.6]# sudo firewall-cmd --zone=public --add-port=80/tcp
success
[root@localhost nagios-4.4.6]# sudo firewall-cmd --zone=public --add-port=80/tcp --permanent
success
[root@localhost nagios-4.4.6]# sudo firewall-cmd --reload
success
```

Step 10: Create Nagios Web login user

The command below lets you create a Nagios web login user.

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

```
[root@localhost nagios-4.4.6]# sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin
New password:
Re-type new password:
Adding password for user nagiosadmin
```

Step 11: Chekck the nagios installation and configuration command

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

```
[root@localhost nagios-4.4.6]# /usr/local/nagios/bin/nagios -v /usr/local/nagios/etc/nagios.cfg

Nagios Core 4.4.6
Copyright (c) 2009-present Nagios Core Development Team and Community Contributors
Copyright (c) 1999-2009 Ethan Galstad
Last Modified: 2020-04-28
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 12: Install Nagios Core Plugins

The next step is to install Nagios plugins. These are standalone extensions that process command-line arguments and monitor just about anything in Nagios Core.

wget https://nagios-plugins.org/download/nagios-plugins-2.4.11.tar.gz
tar zxvf nagios-plugins-2.4.11.tar.gz
./configure
make
make install
chown -R nagios:nagios /usr/local/nagios/libexec/
chmod -R 755 /usr/local/nagios/libexec/

Step 13: Disable selinux

First, you need to disable SELinux On CentOS. To do this temporarily, run.However, you can disable SELinux permanently. Simply run.

setenforce 0

sudo sed -i 's/SELINUX=.*/SELINUX=disabled/g' /etc/selinux/config

Step 14: Restart the Apache & nagios services

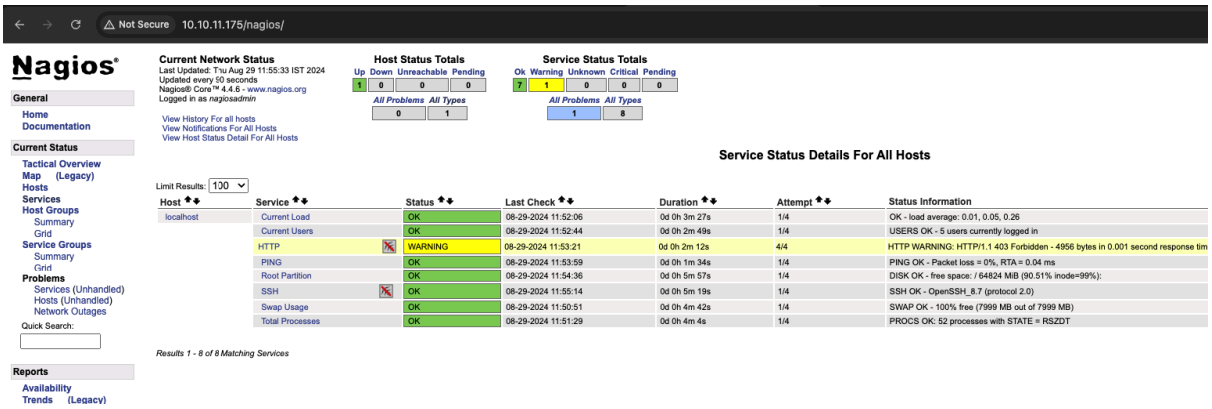
systemctl restart httpd

systemctl restart nagios

Step 15: Nagios configuration file path

/usr/local/nagios/etc → Config File path

/usr/local/nagios/var → Log File path

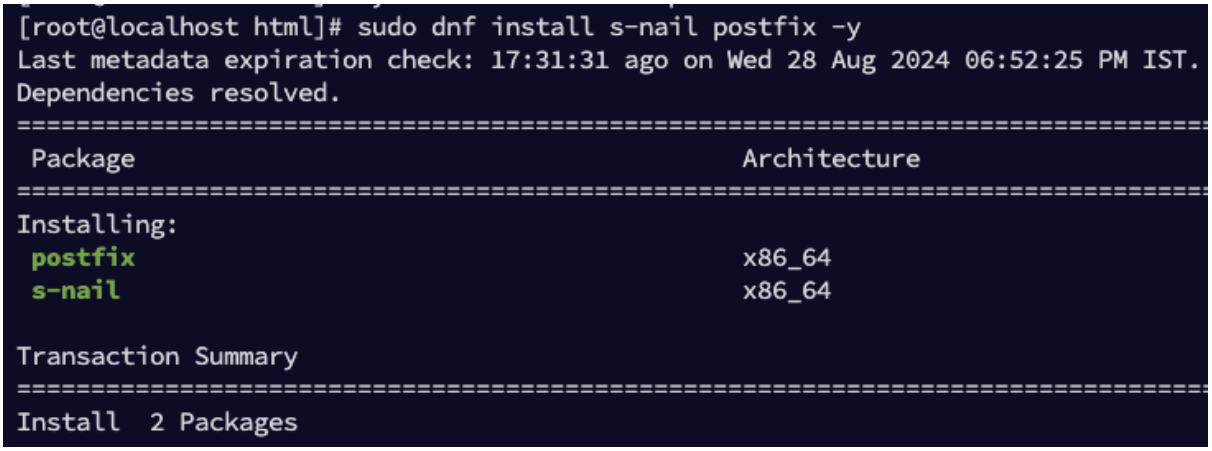


Nagios Email Installation And Configuration

Step 1: Install Postfix & s-nail

You need an MTA like Postfix or Sendmail to send email notifications. For this example, we'll use Postfix & s-nail.

sudo dnf install s-nail postfix -y



sudo systemctl start postfix

sudo systemctl enable postfix

Step 2: Configure Postfix

If you need to send emails through an external SMTP server, you'll need to configure Postfix accordingly. Edit the Postfix configuration.

sudo nano /etc/postfix/main.cf

1. **Add the following lines.**

relayhost = [smtp.gmail.com]:587
smtp_sasl_auth_enable = yes
smtp_sasl_security_options = noanonymous
smtp_sasl_password_maps = hash:/etc/postfix/sasl/sasl_passwd
smtp_tls_security_level = verify
smtp_tls_CAfile = /etc/ssl/certs/ca-bundle.crt

```
#
#smtp_tls_CAfile = /etc/pki/tls/certs/ca-bundle.crt

# Use TLS if this is supported by the remote SMTP server, otherwise use
# plaintext (opportunistic TLS outbound).
#
relayhost = [smtp.gmail.com]:587
smtp_sasl_auth_enable = yes
smtp_sasl_security_options = noanonymous
smtp_sasl_password_maps = hash:/etc/postfix/sasl_passwd
smtp_tls_security_level = verify
smtp_tls_CAfile = /etc/ssl/certs/ca-bundle.crt
```

2. **Create the sasl_passwd file with your SMTP credentials**

sudo nano /etc/postfix/sasl_passwd
[smtp.gmail.com]:587 ranjithsrivi1998@gmail.com:ltjspwhnefneekfa

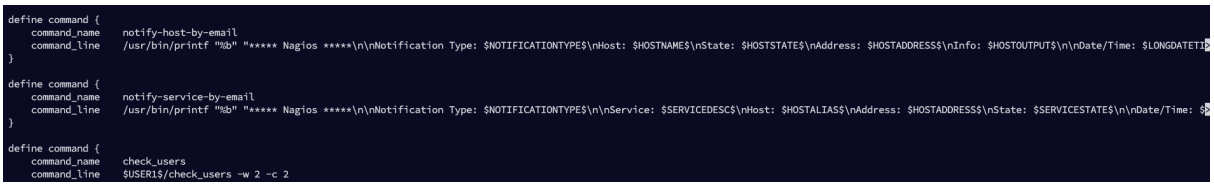
Step 3: Configure Nagios for Email Notifications

Open And add the file where Nagios commands.cfg

nano /usr/local/nagios/etc/objects/commands.cfg

```
define command {
   command_name    notify-host-by-email
   command_line    /usr/bin/printf "%b" "***** Nagios *****\n\nNotification Type:
$NOTIFICATIONTYPE$\nHost: $HOSTNAME$\nState:
$HOSTSTATE$\nAddress: $HOSTADDRESS$\nInfo:
$HOSTOUTPUT$\n\nDate/Time: $LONGDATETI>
}

define command {
   command_name    notify-service-by-email
   command_line    /usr/bin/printf "%b" "***** Nagios *****\n\nNotification Type:
$NOTIFICATIONTYPE$\n\nService: $SERVICEDESC$\nHost:
$HOSTALIAS$\nAddress: $HOSTADDRESS$\nState:
$SERVICESTATE$\n\nDate/Time: $>
}
```



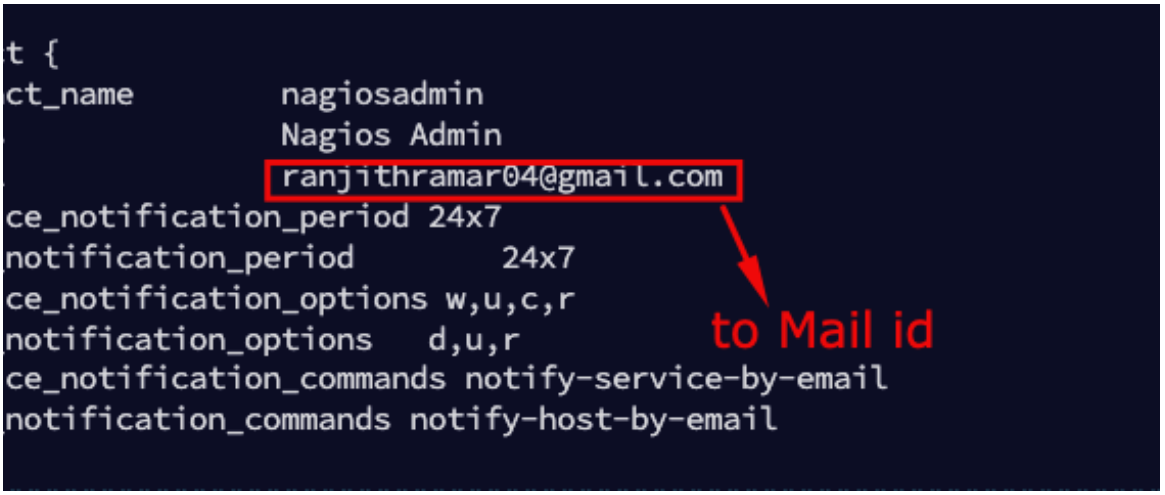
Step 4: Configure Contacts

Edit the contacts configuration file

sudo nano /usr/local/nagios/etc/objects/contacts.cfg

```
define contact {
        contact_name        nagiosadmin
        alias               Nagios Admin
        email               ranjithramar04@gmail.com
        service_notification_period 24x7
        host_notification_period        24x7
        service_notification_options w,u,c,r
        host_notification_options   d,u,r
```

service_notification_commands notify-service-by-email
host_notification_commands notify-host-by-email
}



Step 5: Nagios configuration file check and restart the service

Restart the Nagios service to apply the changes

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

Step 6: Manually mail check and conformation

echo -e "To: sysad@trioangle.com\nSubject: Test Email\n\nThis is the loose of the email" | /usr/sbin/sendmail -t