Install Nagios Server on RHEL8 and add a remote linux host (ubuntu18.04) in Nagios server for monitoring

Below steps run on RHEL 8 OS to install Nagios

Disable SELINUX:

setenforce 0

dnf install nano -y
nano /etc/selinux/config
change enforcing -> disabled, save and close.

Reboot the machine

INSTALL PRE-REQS:

Install pre requisite software

dnf install httpd php php-cli gcc glibc glibc-common gd gd-devel net-snmp openssl-devel wget unzip -y

Add user & groud

useradd nagios
groupadd nagcmd

Add nagios and apache under group nagcmd

usermod -a -G nagcmd nagios
usermod -a -G nagcmd apache

DOWNLOAD & INSTALL NAGIOS:

cd /tmp
wget https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.1.1.tar.gz
wget http://www.nagios-plugins.org/download/nagios-plugins-2.1.1.tar.gz
tar zxf nagios-4.1.1.tar.gz
tar zxf nagios-plugins-2.1.1.tar.gz
cd nagios-4.1.1
./configure --with-command-group=nagcmd

dnf install make -y
make all
make install
make install-init
make install-config
make install-commandmode

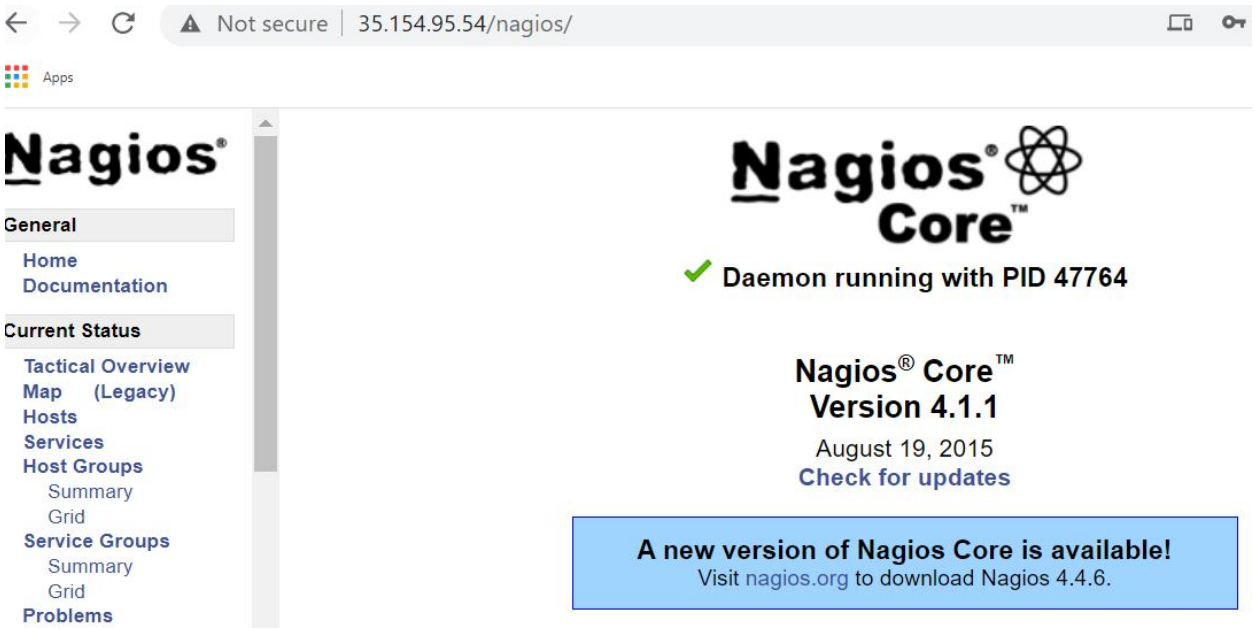
make install-webconf
htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin
service httpd start
service nagios start

install PLUGINS:
cd /tmp/nagios-plugins-2.1.1
./configure --with-nagios-user=nagios --with-nagios-group=nagios --with-openssl
make all
make install
service nagios restart

Allow port 80 on security group or add below command for firewall approval if necessary
firewall-cmd --zone=public --add-port=80/tcp --permanent
firewall-cmd –reload

Login to Nagios web page
http://Server_IP/nagios/

Nagios login page is showing below



Troubleshoot :

Check below command to check whether nagios has cfg file has any error or not

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

Nagios Core 4.1.1

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Last Modified: 08-19-2015

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

Check nagios server version

```
/usr/local/nagios/bin/nagios -v
```

Nagios Core 4.1.1

Last Modified: 08-19-2015

License: GPL

Below steps to add remote ubuntu server (18.04) to nagios server

Use the following command to install NRPE Add-on and Nagios plugins.

```
sudo apt update

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

Configure NRPE Add-on

`/etc/nagios/nrpe.cfg`

```
### Ubuntu / Debian ###

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

Add the Nagios servers IP address, separated by comma like below.

```
allowed_hosts=192.168.0.10
```

Configure Nagios Checks

Ubuntu / Debian

```
sudo nano /etc/nagios/nrpe.cfg
# COMMAND DEFINITIONS

...
...

command[check_users]=/usr/lib/nagios/plugins/check_users -w 5 -c 10
command[check_load]=/usr/lib/nagios/plugins/check_load -w 15,10,5 -c 30,25,20
command[check_root]=/usr/lib/nagios/plugins/check_disk -w 20% -c 10% -p /
command[check_swap]=/usr/lib/nagios/plugins/check_swap -w 20% -c 10%
command[check_total_procs]=/usr/lib/nagios/plugins/check_procs -w 150 -c 200
```

Test Nagios Checks

Ubuntu 18.04:

```
/usr/lib/nagios/plugins/check_procs -w 150 -c 200
```

Output:

```
PROCS WARNING: 190 processes | procs=190;150;200;0;
```

Change warning to 200 and critical to 250 for testing purposes. Now you will see an OK message.

```
/usr/lib/nagios/plugins/check_procs -w 200 -c 250
```

Output:

```
PROCS OK: 189 processes | procs=189;200;250;0;
```

Restart the NRPE service.

```
### Ubuntu / Debian ###

sudo systemctl restart nagios-nrpe-server
```

Allow port 5666 at security group or firewall

On Nagios Server

CentOS / RHEL

Nagios NRPE plugin is available in the EPEL repository for CentOS / RHEL. So, configure the EPEL repository your CentOS / RHEL system.

```
rpm -ivh https://dl.fedoraproject.org/pub/epel/epel-release-latest-8.noarch.rpm
```

Use the following command to install the NRPE plugin on your machine.

```
yum -y install nagios-plugins-nrpe
```

Edit Configuration

```
### CentOS / RHEL ###

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

Add or uncomment the following line.

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

Create a configuration directory.

```
### CentOS / RHEL ###

mkdir /usr/local/nagios/etc/servers
```

Add Command Definition

Now it's time to configure the Nagios server to monitor the remote client machine, and You'll need to create a command definition in Nagios object configuration file to use the check_nrpe plugin.

Open the `commands.cfg` file.

CentOS / RHEL

```
vi /usr/local/nagios/etc/objects/commands.cfg
```

Add the following Nagios command definition to the file.

```
# .check_nrpe. command definition
define command{
command_name check_nrpe
command_line /usr/lib64/nagios/plugins/check_nrpe -H $HOSTADDRESS$ -t 30 -c $ARG1
$
}
```

Add a Linux host to Nagios server

Create a client configuration file `/usr/local/nagios/etc/servers/ubuntu.cfg` to define the host and service definitions of remote Linux host.

```
### CentOS / RHEL ###

vi /usr/local/nagios/etc/servers/ubuntu.cfg
```

Copy the below content to the above file.

You can also use the following template and modify it according to your requirements. The following template is for monitoring logged in users, system load, disk usage (/ – partition), swap, and total process.

```
define host{

            use                     linux-server
            host_name               ubuntu_machine
            alias                   ubuntu_machine
            address                 10.0.0.38
```

```
}

define hostgroup{

            hostgroup_name          linux-server
            alias                   ubuntu_machine
            members                 ubuntu_machine
}

define service{

            use                     local-service
            host_name               ubuntu_machine
            service_description     SWAP Uasge
            check_command           check_nrpe!check_swap

}

define service{

            use                     local-service
            host_name               ubuntu_machine
            service_description     Root / Partition
            check_command           check_nrpe!check_root

}

define service{

            use                     local-service
            host_name               ubuntu_machine
            service_description     Current Users
            check_command           check_nrpe!check_users

}

define service{

            use                     local-service
            host_name               ubuntu_machine
            service_description     Total Processes
            check_command           check_nrpe!check_total_procs

}

define service{

            use                     local-service
            host_name               ubuntu_machine
            service_description     Current Load
            check_command           check_nrpe!check_load
```

```
}
```

Verify Nagios for any errors.

```
### CentOS / RHEL ###

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

Restart the Nagios server.

```
### CentOS / RHEL ###

systemctl restart nagios
```

Results:

At Nagios Web GUI new ubutu host has added , from nagios GUI hosts and services section we can display ubuntu_machine and corresponding services as showing below

Limit Results: 100

Host	Status	Last Check	Duration	Status Information
localhost	UP	11-05-2020 17:16:15	0d 2h 32m 20s	PING OK - Packet loss = 0%, RTA = 0.04 ms
ubuntu_machine	UP	11-05-2020 17:17:18	0d 0h 3m 1s	PING OK - Packet loss = 0%, RTA = 0.04 ms

Nagios

General
- Home
- Documentation

Current Status
- Tactical Overview
- Map (Legacy)
- Hosts
- Services
- Host Groups
  - Summary
  - Grid
- Service Groups
  - Summary
  - Grid
- Problems
  - Services (Unhandled)

	Partition	OK	11-05-2020 17:17:00	0d 2h 31m 7s	1/4	inode=98%):
	SSH	OK	11-05-2020 17:17:38	0d 2h 30m 29s	1/4	SSH OK - OpenSSH_8.0 (protocol 2.0)
	Swap Usage	CRITICAL	11-05-2020 17:16:15	0d 2h 29m 52s	4/4	SWAP CRITICAL - 0% free (0 MB out of 0 MB) - Swap is either disabled, not present, or of zero size.
	Total Processes	OK	11-05-2020 17:13:53	0d 2h 29m 14s	1/4	PROCS OK: 37 processes with STATE = RSZDT
ubuntu_machine	Current Load	CRITICAL	11-05-2020 17:17:32	0d 0h 3m 35s	4/4	(No output on stdout) stderr: connect to address 10.0.0.38 port 5666: Connection refused
	Current Users	CRITICAL	11-05-2020 17:17:18	0d 0h 2m 49s	3/4	(No output on stdout) stderr: connect to address 10.0.0.38 port 5666: Connection refused
	Root / Partition	CRITICAL	11-05-2020 17:18:04	0d 0h 2m 3s	3/4	(No output on stdout) stderr: connect to address 10.0.0.38 port 5666: Connection refused
	SWAP Uasge	CRITICAL	11-05-2020 17:17:50	0d 0h 1m 17s	2/4	(No output on stdout) stderr: connect to address 10.0.0.38 port 5666: Connection refused
	Total Processes	CRITICAL	11-05-2020 17:17:36	0d 0h 0m 31s	1/4	(No output on stdout) stderr: connect to address 10.0.0.38 port 5666: Connection refused