INSTALL NAGIOS

I. Install Apache2 to Configure HTTP Server.

1. Install Apache2

```
apt-get -y install apache2
```

2. Configure Apache2

vi /etc/apache2/conf-enabled/security.conf

```
# line 25: change to ServerTokens Prod
```

vi /etc/apache2/mods-enabled/dir.conf

```
# line 2: add file name that it can access only with directory's name
DirectoryIndex
index.html index.htm
```

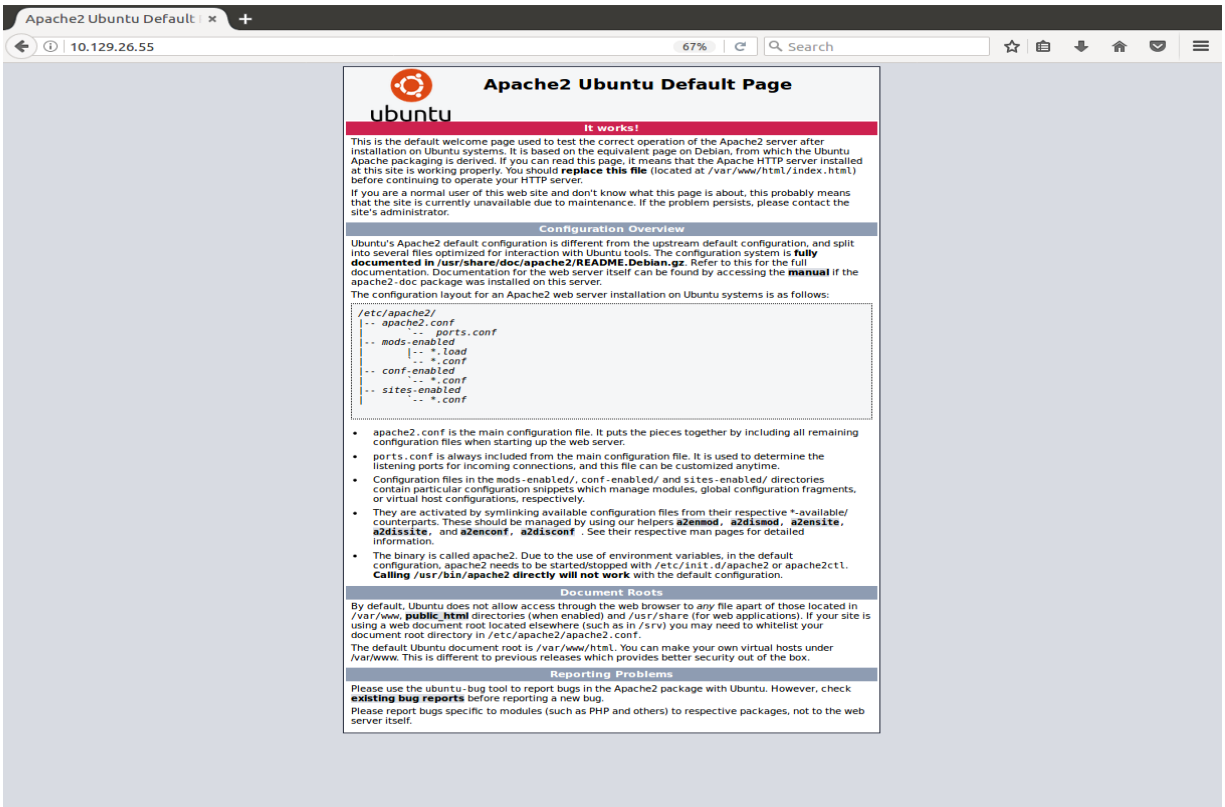
vi /etc/apache2/apache2.conf

```
# line 70: add to specify server name
ServerName www.srv.world
```

vi /etc/apache2/sites-enabled/000-default.conf

```
# line 11: change to webmaster's email
ServerAdmin
webmaster@srv.world
systemctl restart apache2
```

3. Access to "http://(your server's hostname or IP address)/" with web browser. It's OK if following page is shown.



II. Configure Apache2 to use PHP scripts.

1. Install PHP

```
apt-get -y install php php-cgi libapache2-mod-php php-common php-pear php-mbstring
```

2. Configure Apache2

```
a2enconf php7.0-cgi
        Enabling conf php7.0-cgi.
        To activate the new configuration, you need to run: service apache2 reload

vi /etc/php/7.0/apache2/php.ini
        # line 912: uncomment and add your timezone
        date.timezone = "Asia/Kolkata"

systemctl restart apache2
```

3. Create a PHP test page and access to it from any clients with web browser.

```
vi /var/www/html/index.php
<html>
        <body>
                <?php
                        print Date("Y/m/d");
                ?>
        </body>
</html>
```

III Install Nagios

```
apt-get -y install nagios3 nagios-plugins-basic

# set admin password for Nagios Web admin console
```

IV. Configure Nagios

```
vi /etc/nagios3/nagios.cfg

        # line 145: change
        check_external_commands=1

vi /etc/nagios3/apache2.conf

        # line 40: change access permission
        # Allow From All
        Allow From localhost 10.0.0.0/24

vi /etc/init.d/nagios3

        # line 150: change like follows
        if check_config; then
```

```
        start_daemon -n $NICENESS -p $THEPIDFILE $DAEMON -d $NAGIOSCFG
        chmod o+rw /var/lib/nagios3/rw/nagios.cmd
```

vi /etc/nagios3/conf.d/localhost_nagios2.cfg

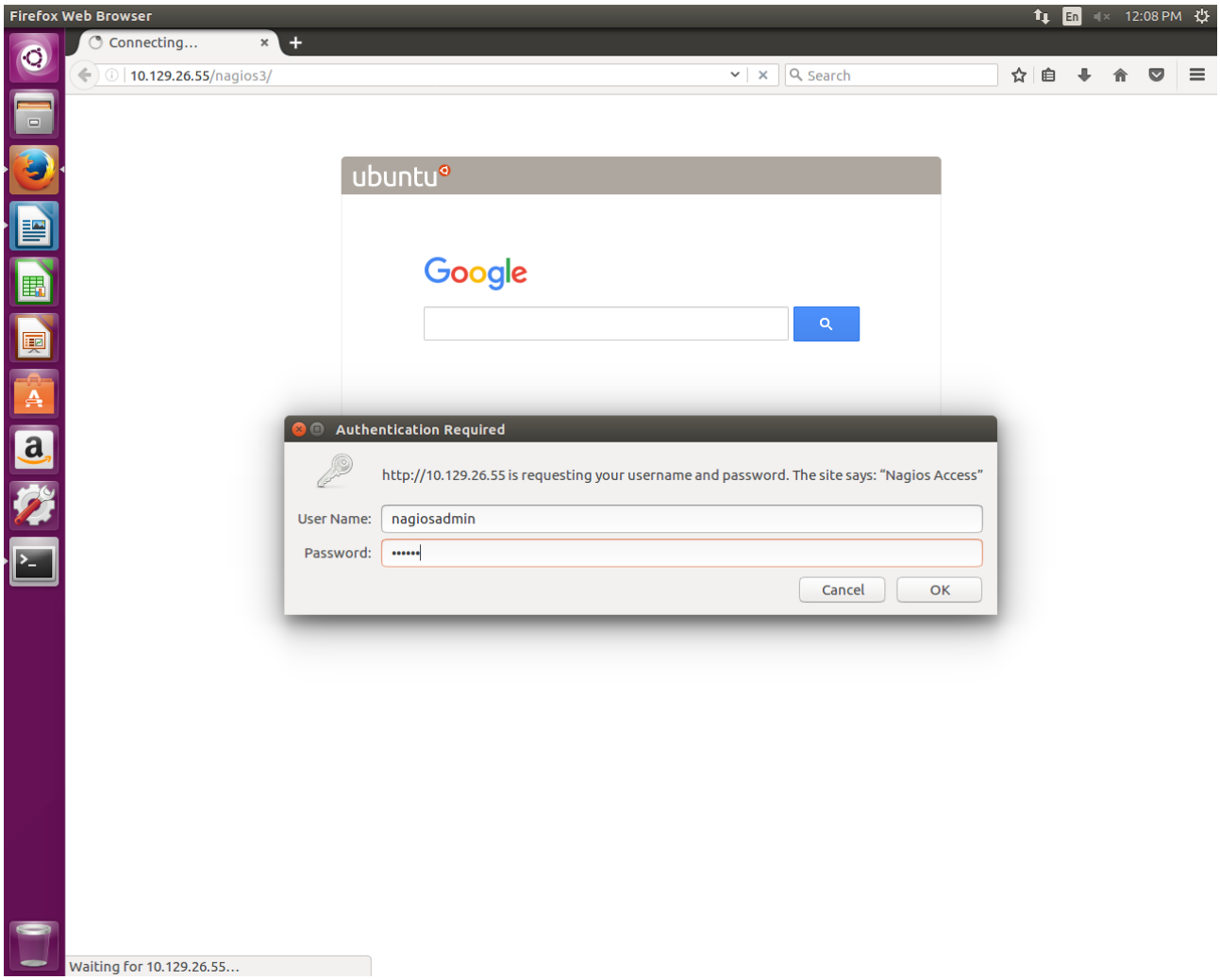
```
        # line 22: comment out and add
        # all partitions are monitored by default but it's unnecessary all,
        # so change to specific pertition to monitor (the example below specify root
        partition)
        # check_command check_all_disks!20%!10%
        check_command check_disk!20%!10%!/
```

chgrp -R www-data /var/lib/nagios3

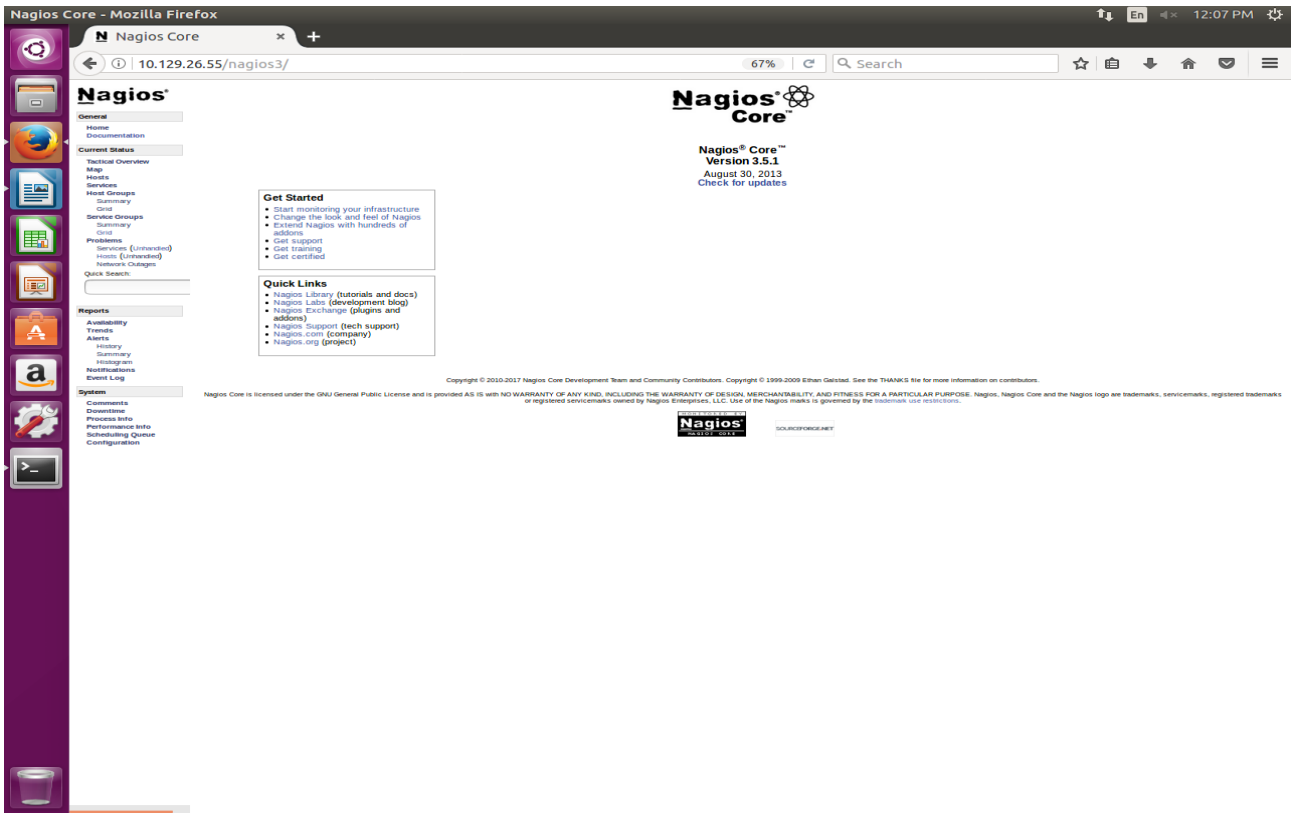
chmod 750 /var/lib/nagios3/rw

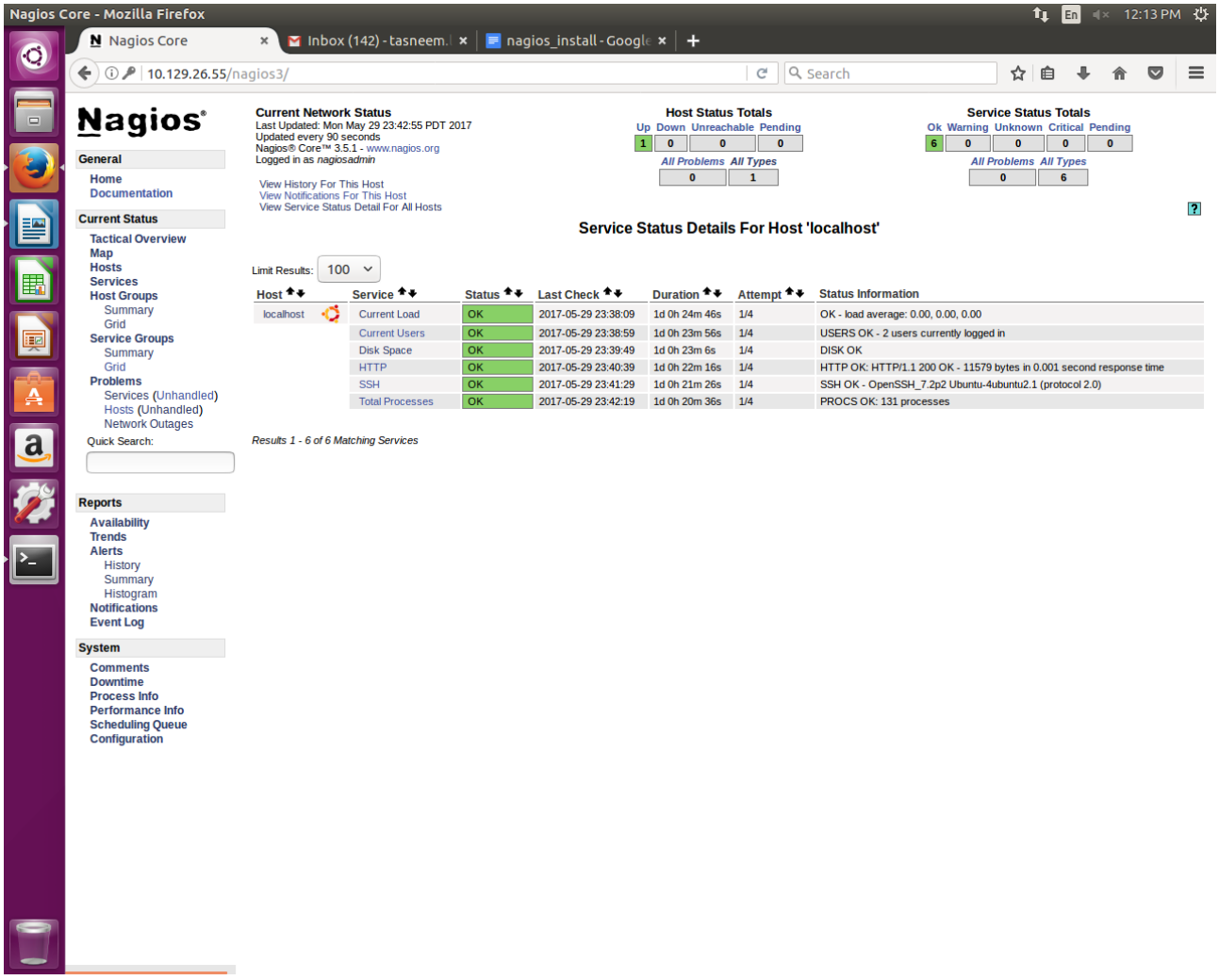
systemctl restart nagios3 apache2

V. Access to http://IP address/nagios3/



VI. After successing authentication, the Nagios admin site is displayed.


Nagios Core - Mozilla Firefox
12:07 PM
Nagios Core
10.129.26.55/nagios3/
Search
Nagios
Nagios Core
Nagios® Core™
Version 3.5.1
August 30, 2013
Check for updates
Get Started
Quick Links


Nagios Core - Mozilla Firefox
12:13 PM
Nagios Core
Inbox (142) - tasneem.
nagios_install - Google
10.129.26.55/nagios3/
Search
Nagios
General
Home
Documentation
Current Status
Tactical Overview
Map
Hosts
Services
Host Groups
Summary
Grid
Service Groups
Summary
Grid
Problems
Services (Unhandled)
Hosts (Unhandled)
Network Outages
Quick Search:
Reports
Availability
Trends
Alerts
History
Summary
Histogram
Notifications
Event Log
System
Comments
Downtime
Process Info
Performance Info
Scheduling Queue
Configuration
Current Network Status
Last Updated: Mon May 29 23:42:55 PDT 2017
Updated every 90 seconds
Nagios® Core™ 3.5.1 - www.nagios.org
Logged in as nagiosadmin
View History For This Host
View Notifications For This Host
View Service Status Detail For All Hosts
Host Status Totals
Up Down Unreachable Pending
1 0 0 0
All Problems All Types
0 1
Service Status Totals
Ok Warning Unknown Critical Pending
6 0 0 0 0
All Problems All Types
0 6
Service Status Details For Host 'localhost'
Limit Results: 100
Host Service Status Last Check Duration Attempt Status Information
localhost Current Load OK 2017-05-29 23:38:09 1d 0h 24m 46s 1/4 OK - load average: 0.00, 0.00, 0.00
Current Users OK 2017-05-29 23:38:59 1d 0h 23m 56s 1/4 USERS OK - 2 users currently logged in
Disk Space OK 2017-05-29 23:39:49 1d 0h 23m 6s 1/4 DISK OK
HTTP OK 2017-05-29 23:40:39 1d 0h 22m 16s 1/4 HTTP OK: HTTP/1.1 200 OK - 11579 bytes in 0.001 second response time
SSH OK 2017-05-29 23:41:29 1d 0h 21m 26s 1/4 SSH OK - OpenSSH_7.2p2 Ubuntu-4ubuntu2.1 (protocol 2.0)
Total Processes OK 2017-05-29 23:42:19 1d 0h 20m 36s 1/4 PROCS OK: 131 processes
Results 1 - 6 of 6 Matching Services

NOTIFICATION SETTINGS

I. Refer Configuration of Postfix to send mails using gmail

https://github.com/fresearchgroup/IP-based-hardware-infrastructure-management-for-cloud/blob/master/Installation/PostfixConfiguration.pdf

II.Set notification recipients. And aldo Nagios sends notifications with mail command, so install it.

```
vi /etc/nagios3/conf.d/contacts_nagios2.cfg
# line 26: set recipient email address
email root@localhost
systemctl restart nagios3
```

III. It's possible to change notification setting on Nagios admin site.

Login to it and click "Services", then services list is displayed. The icons which are displayed near a service name are just the one which notification is disabled.To enable notification on a service, click service name first. Click "Enable notifications for this service". Click “commit” button.

IV. If notification is enabled and a service has some troubles, the notification like follows are sent to the recipients you set.

SET THRESHOLDS

I The thresholds are set in configuration file by default. For example, the item for monitoring disk usage of root partition is set like follows.

```
vi /etc/nagios3/conf.d/localhost_nagios2.cfg
# Define a service to check the disk space of the root partition
# on the local machine.  Warning if > 20% free, critical if
# > 10% free space on partition.
# the thresholds are set as Warning if > 20% free, critical if 10% > 10% free
# change these values if you'd like to change them
define service{
use                     generic-service
 host_name                  localhost
service_description          Disk Space
check_command                check_all_disks!20%!10%
}
```

II For the case you add a new plugin and configure for it all, set like follows.

```
# display options for a plugin
/usr/lib/nagios/plugins/check_ntp_time -h
...
...
 -w, --warning=THRESHOLD
    Offset to result in warning status (seconds)
 -c, --critical=THRESHOLD
```

...
...

add definition of command for a plugin with thresholds' options

vi /etc/nagios3/commands.cfg
# add follows to the end
define command{
command_name check_ntp_time
command_line $USER1$/check_ntp_time -H $ARG1$ -w $ARG2$ -c $ARG3$
}

add definition of service with thresholds' values
vi /etc/nagios3/conf.d/localhost_nagios2.cfg
add follows to the end (Warning if it has 1 sec time difference, Critical if it has 2 sec)

define service{
use generic-service
host_name localhost
service_description NTP_TIME
check_command check_ntp_time!ntp1.jst.mfeed.ad.jp!1!2
}

systemctl restart nagios3

III. The notification is sent if a system value is over the threshold.

ADD MONITORING TARGET ITEM

I.Many plugins are provided with packages like follows.

apt-get search nagios-plugins-

II. For example, add check_ntp plugin to monitor time difference between the system and NTP server.

vi /etc/nagios3/commands.cfg
# add follows to the end
define command{
command_name check_ntp_time
command_line $USER1$/check_ntp_time -H $ARG1$ -w $ARG2$ -c $ARG3$
}

vi /etc/nagios3/conf.d/localhost_nagios2.cfg
# add follows to the end (Warning if it has 1 sec time difference, Critical if it has 2 sec)
define service{
use generic-service
host_name localhost
service_description NTP_TIME
check_command check_ntp_time!ntp1.jst.mfeed.ad.jp!1!2
}

systemctl restart nagios3

III. It's possible to view the status for a new plugin on the admin site.

ADD MONITORING TARGET HOST#1

I Add a server for monitoring target with simply Ping command.

```
vi /etc/nagios3/conf.d/node01.cfg
# create new
define host{
        use                     generic-host
        host_name               node01
        alias                   node01
        address                 10.0.0.51
        }
        define service{
        use                     generic-service
        host_name               node01
        service_description     PING
        check_command           check_ping!100.0,20%!500.0,60%
        }

systemctl restart nagios3
```

II. View the status for a new server on the admin site

Add Monitoring Target Host#2 (Ubuntu)

I. Install nrpe on a target host you'd like to monitor services on it.

```
apt-get -y install nagios-nrpe-server
vi /etc/nagios/nrpe.cfg
# line 81: add access permission (specify Nagios server)
# line 221: comment out and add
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_hda1]=/usr/lib/nagios/plugins/check_disk -w 20% -c 10% -p /dev/hda1
command[check_disk]=/usr/lib/nagios/plugins/check_disk -w 20% -c 10% -p /
command[check_zombie_procs]=/usr/lib/nagios/plugins/check_procs -w 5 -c 10 -s Z
command[check_total_procs]=/usr/lib/nagios/plugins/check_procs -w 150 -c 200
systemctl restart nagios-nrpe-server
```

II. Configure Nagios server.

```
apt-get -y install nagios-nrpe-plugin
vi  /etc/nagios3/conf.d/node01.cfg
systemctl restart nagios3
```

III. View the status for a new server on the admin site.