

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 partition to monitor (the example below specify root
```

partition)

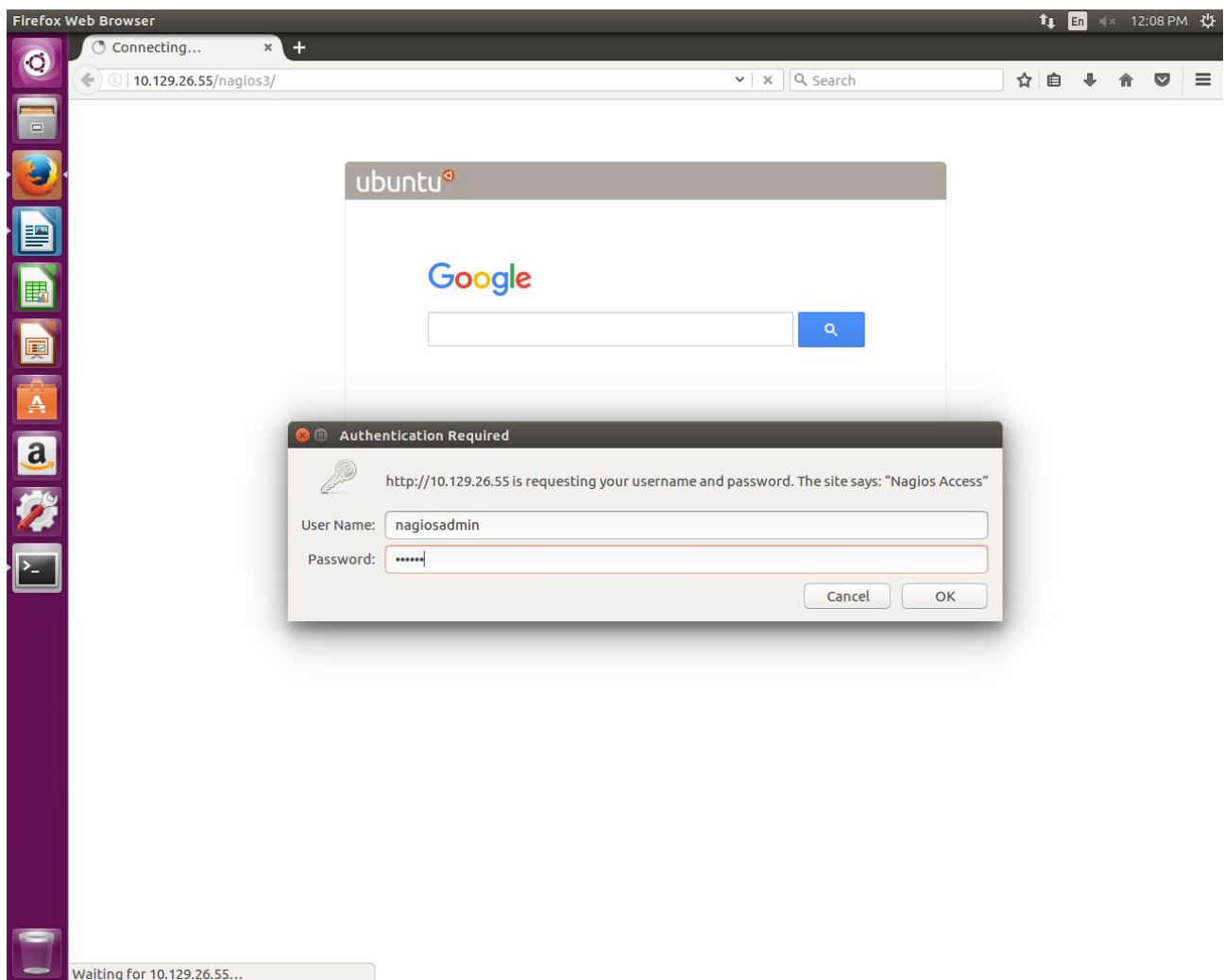
```
# check_command check_all_disks!20%!10%
check_command check_disk!20%!10%!/
```

```
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

Nagios Core

10.129.26.55/nagios3/

67%

Search

Nagios® Core

Nagios® Core™
Version 3.5.1
August 30, 2013
Check for updates

Get Started

- Start monitoring your infrastructure
- Change the look and feel of Nagios
- Extend Nagios with hundreds of add-ons
- Get support
- Get training
- Get certified

Quick Links

- Nagios Library (tutorials and docs)
- Nagios Labs (development blog)
- Nagios Exchange (plugins and addons)
- Nagios Support (tech support)
- Nagios.com (company)
- Nagios.org (project)

Copyright © 2003-2017 Nagios Core Development Team and Community Contributors. Copyright © 1999-2009 Ethan Galstad. See the THANKS file for more information on contributors.

Nagios Core is licensed under the GPL General Public License and is provided AS IS with NO WARRANTY OF ANY KIND, INCLUDING THE WARRANTY OF DESIGN, MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE. Nagios, Nagios Core and the Nagios logo are trademarks, servicemarks, registered trademarks or registered servicemarks owned by Nagios Enterprises, LLC. Use of the Nagios marks is governed by the trademark use restrictions.

Nagios
Nagios Core

Nagios Core - Mozilla Firefox

Nagios Core

10.129.26.55/nagios3/

67%

Search

Nagios®

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 also 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.

