



PARSHVANATH CHARITABLE TRUST'S

A. P. SHAH INSTITUTE OF TECHNOLOGY

Department of Information Technology

(NBA Accredited)



Semester: V

Academic Year: 2024-25

Class / Branch: TE IT

Subject: Advanced Devops Lab (ADL)

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EXPERIMENT NO. 09

Aim: To Understand Continuous monitoring and Installation and configuration of Nagios Core, Nagios Plugins and NRPE (Nagios Remote Plugin Executor) on Linux Machine.

Theory:

1 - Pre-requisite

First requirement is to install Apache and PHP first. Use the following commands to complete it. And use commands to install required packages for Nagios.

```
manjusha@apsit:~$ sudo apt-get update
manjusha@apsit:~$ sudo apt-get install wget build-essential unzip openssl
libssl-dev
manjusha@apsit:~$ sudo apt-get install apache2 php libapache2-mod-php php-gd
libgd-dev
```

2 – Create Nagios User

Create a new user account for Nagios in your system and assign a password.

```
manjusha@apsit:~$ sudo adduser nagios
```

Now create a group for Nagios setup “nagcmd” and add nagios user to this group. Also, add nagios user in the Apache group.

```
manjusha@apsit:~$ sudo groupadd nagcmd
manjusha@apsit:~$ sudo usermod -a -G nagcmd nagios
manjusha@apsit:~$ sudo usermod -a -G nagcmd www-data
```

Step 3 – Install Nagios Core Service

After installing required dependencies and adding user accounts and Nagios core installation. Download latest Nagios core service from the official site.

```
manjusha@apsit:~$ cd /opt/
```



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```
manjusha@apsit:~$sudo wget
https://assets.nagios.com/downloads/nagioscore/releases/nagios-4.4.3.tar.gz
manjusha@apsit:~$sudo tar xzf nagios-4.4.3.tar.gz
```

After extracting navigate to nagios source directory and install using make command.

```
manjusha@apsit:~$cd nagios-4.4.3
```

```
manjusha@apsit:~$sudo ./configure --with-command-group=nagcmd
manjusha@apsit:~$sudo make all
manjusha@apsit:~$sudo make install
manjusha@apsit:~$sudo make install-init
manjusha@apsit:~$sudo make install-daemoninit
manjusha@apsit:~$sudo make install-config
manjusha@apsit:~$sudo make install-commandmode
manjusha@apsit:~$sudo make install-exfoliation
```

Now copy event handlers scripts under libexec directory. These binaries provides multiple events triggers for your Nagios web interface.

```
manjusha@apsit:~$sudo cp -R contrib/eventhandlers/ /usr/local/nagios/libexec/
```

```
manjusha@apsit:~$sudo chown -R nagios:nagios
/usr/local/nagios/libexec/eventhandlers
```

Step 4 – Setup Apache with Authentication

Now create an Apache configuration file for your Nagios server as below:

```
manjusha@apsit:~$sudo nano /etc/apache2/conf-available/nagios.conf
```

Add below lines to nagios.conf file.

```
ScriptAlias /nagios/cgi-bin "/usr/local/nagios/sbin"
```

```
<Directory "/usr/local/nagios/sbin">
```

```
Options ExecCGI
AllowOverride None
Order allow,deny
Allow from all
AuthName "Restricted Area"
AuthType Basic
AuthUserFile /usr/local/nagios/etc/htpasswd.users
Require valid-user
</Directory>
```

```
Alias /nagios "/usr/local/nagios/share"
```



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```
<Directory "/usr/local/nagios/share">
  Options None
  AllowOverride None
  Order allow,deny
  Allow from all
  AuthName "Restricted Area"
  AuthType Basic
  AuthUserFile /usr/local/nagios/etc/htpasswd.users
  Require valid-user
</Directory>
```

To setup apache authentication for user **nagiosadmin**

```
manjusha@apsit:~$sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users
nagiosadmin
```

Enable Apache configuration and restart Apache service to make the new settings take effect.cd

```
manjusha@apsit:~$sudo a2enconf nagios
manjusha@apsit:~$sudo a2enmod cgi rewrite
manjusha@apsit:~$sudo service apache2 restart
```

Step 5 – Installing Nagios Plugins

After installing and configuring Nagios core service, Download latest nagios-plugins source and install using folloclodwing commands.

```
manjusha@apsit:~$cd /opt
manjusha@apsit:~$sudo wget http://www.nagios-plugins.org/download/nagios-
plugins-2.2.1.tar.gz
manjusha@apsit:~$sudo tar xzf nagios-plugins-2.2.1.tar.gznagios
manjusha@apsit:~$cd nagios-plugins-2.2.1
```

Now compile and install Nagios plugins

```
manjusha@apsit:~$sudo ./configure --with-nagios-user=nagios --with-nagios-
group=nagios --with-openssl
manjusha@apsit:~$sudo make
manjusha@apsit:~$sudo make install
```

Step 6 – Verify Settings

Use the Nagios commands to verify the Nagios installation and configuration file. After successfully verify start the Nagios core service.

```
manjusha@apsit:~$/usr/local/nagios/bin/nagios -v
/usr/local/nagios/etc/nagios.cfg
manjusha@apsit:~$ sudo service nagios start
```



Also configure Nagios to auto start on system boot.

Step 7 – Access Nagios Web Interface

Access your nagios setup by access nagios server using hostname or ip address followed by /nagios.

<http://127.0.0.1/nagios/>

Prompting for Apache Authentication Password –

username: nagiosadmin

Password : 123456 (which you enter while configuration)

Nagios After login screen –

Assignments x Major - Google Drive x Standard Output - Goog x Nagios: 127.0.0.1 x +

← → ↻ 127.0.0.1/nagios/ < ☆ ⬇ 🗑 Relaunch to update ⋮

Nagios®

General
Home
Documentation

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

Problems
Services (Unhandled)
Hosts (Unhandled)
Network Outages

Quick Search:

Reports
Availability
Trends (Legacy)
Alerts
History
Summary
Histogram (Legacy)
Notifications
Event Log

System
Comments
Downtime
Process Info
Performance Info
Scheduling Queue
Configuration

Nagios® Core™

✓ Daemon running with PID 1475

Nagios® Core™
Version 4.4.3
January 15, 2019
[Check for updates](#)

Get Started

- Start monitoring your infrastructure
- Change the look and feel of Nagios
- Extend Nagios with hundreds of addons
- 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)

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Nagios
NAGIOS CORE

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Page Four

We have successfully installed and configured Nagios Monitoring Server core service in our system now we need to install NRPE on all remote Linux systems to monitor with Nagios.

Conclusion: In brief, setting up Nagios Core involves installing required packages, creating a user, compiling Nagios, configuring Apache, and installing plugins. This enables monitoring through the web interface and prepares for NRPE integration for remote system monitoring.



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