



PARSHVANATH CHARITABLE TRUST'S

A. P. SHAH INSTITUTE OF TECHNOLOGY

Department of Information Technology

(NBA Accredited)



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Class / Branch: TE IT

Subject: Advanced Devops Lab (ADL)

Name of Instructor: Prof. Manjusha K.

Name of Student:

Student ID:

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>
```



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

<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 follocdwing 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 –

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: Write your own findings.