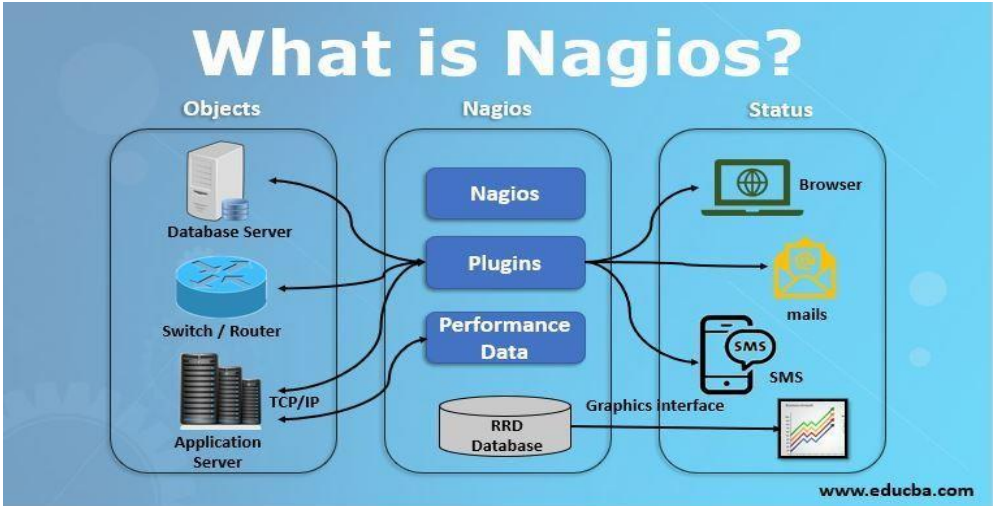


Semester	T.E. Semester V – Information Technology
Subject	Advance DevOps Lab
Subject Professor In-charge	Prof.Indu Anoop
Laboratory	

Student Name	Shreyash Kakde
Roll Number	20101A0049
Grade and Subject Teacher's Signature	

Experiment	9 and 10
Problem Statement	Installation of Nagios and NPPE Plugin.
Resources / Apparatus Required	Hardware: Computer System      Software: Web Browser
Details	<p><b>Theory:</b></p> <p><b>What is Nagios?</b></p> <p>Nagios is used for Continuous monitoring of systems, applications, services, and business processes etc in a DevOps culture. In the event of a failure, Nagios can alert technical staff of the problem, allowing them to begin remediation processes before outages affect business processes, end-users, or customers. With Nagios, you don't have to explain why an unseen infrastructure outage affect your organization's bottom line.</p>  <p>www.educba.com</p>

## **Working of Nagios**

Nagios runs on a server, usually as a daemon or a service.

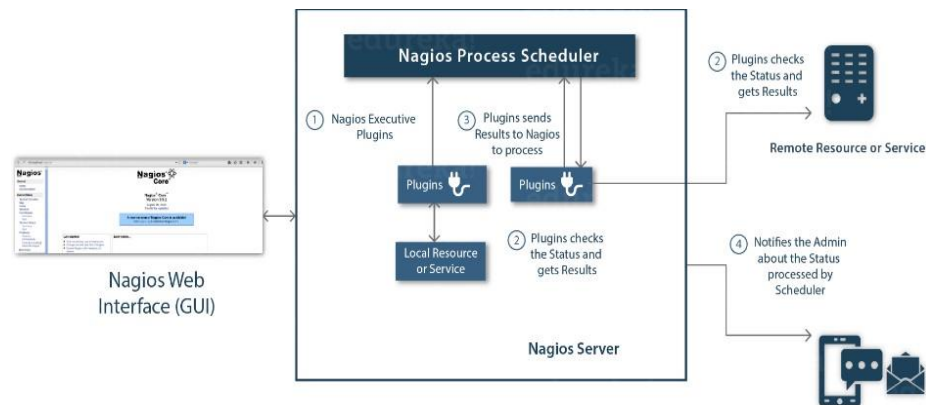
It periodically runs plugins residing on the same server, they contact hosts or servers on your network or on the internet. One can view the status information using the web interface. You can also receive email or SMS notifications if something happens.

The Nagios daemon behaves like a scheduler that runs certain scripts at certain moments. It stores the results of those scripts and will run other scripts if these results change.

Plugins: These are compiled executables or scripts (Perl scripts, shell scripts, etc.) that can be run from a command line to check the status of a host or service. Nagios uses the results from the plugins to determine the current status of the hosts and services on your network.

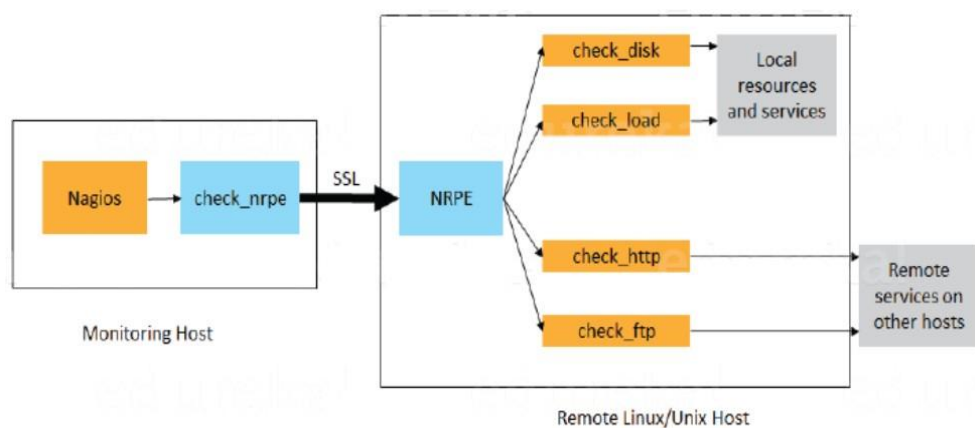
## Nagios Architecture:

- Nagios is built on a server/agents architecture.
- Usually, on a network, a Nagios server is running on a host, and Plugins interact with local and all the remote hosts that need to be monitored.
- These plugins will send information to the Scheduler, which displays that in a GUI.



## What is Nagios Remote Plugin Executor(NRPE)?

The NRPE add-on is designed to allow you to execute Nagios plugins on remote Linux/Unix machines. The main reason for doing this is to allow Nagios to monitor "local" resources (like CPU load, memory usage, etc.) on remote machines. Since these public resources are not usually exposed to external machines, an agent like NRPE must be installed on the remote Linux/Unix machines.

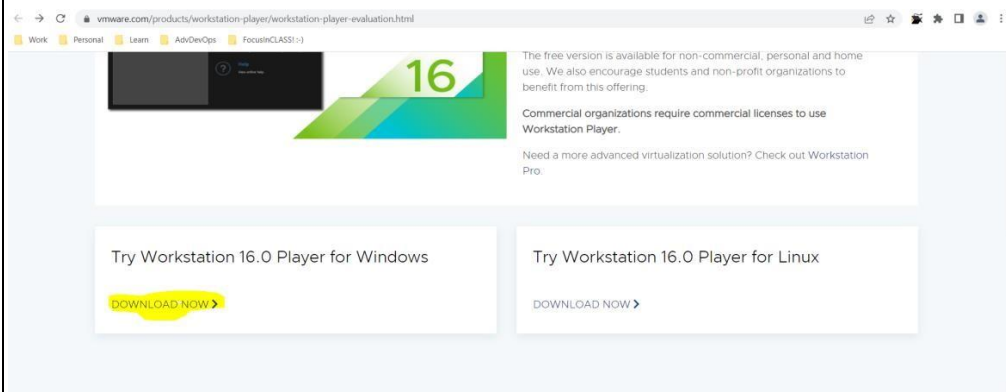
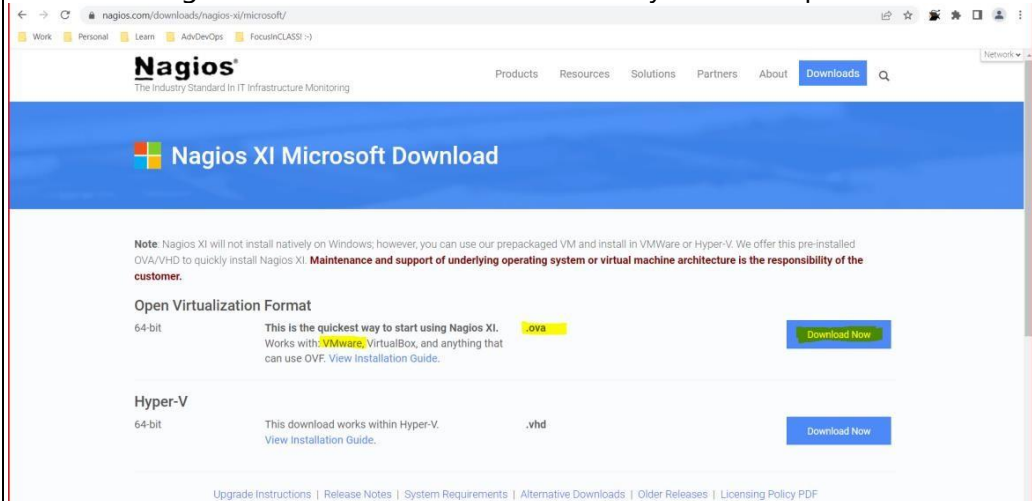


Demo

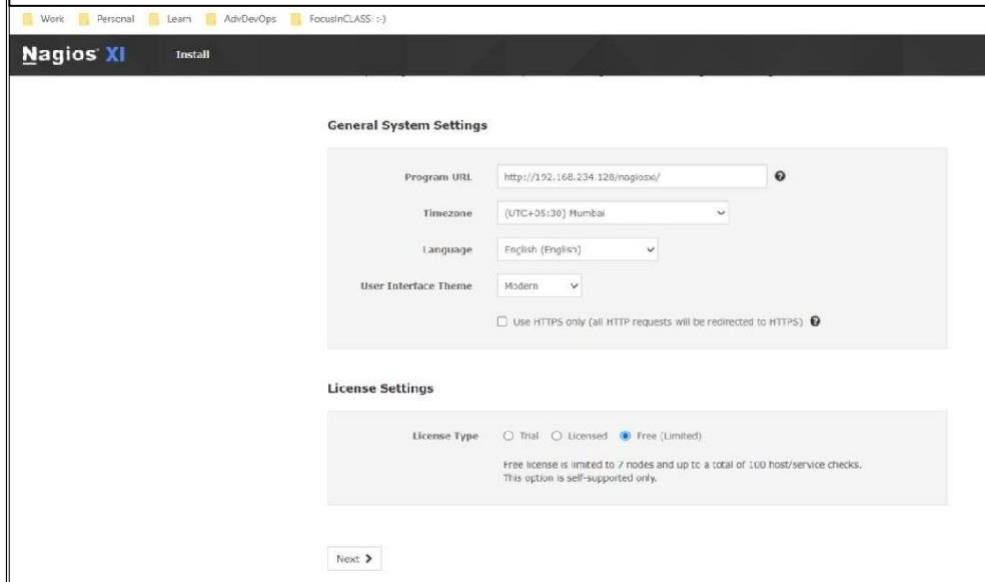
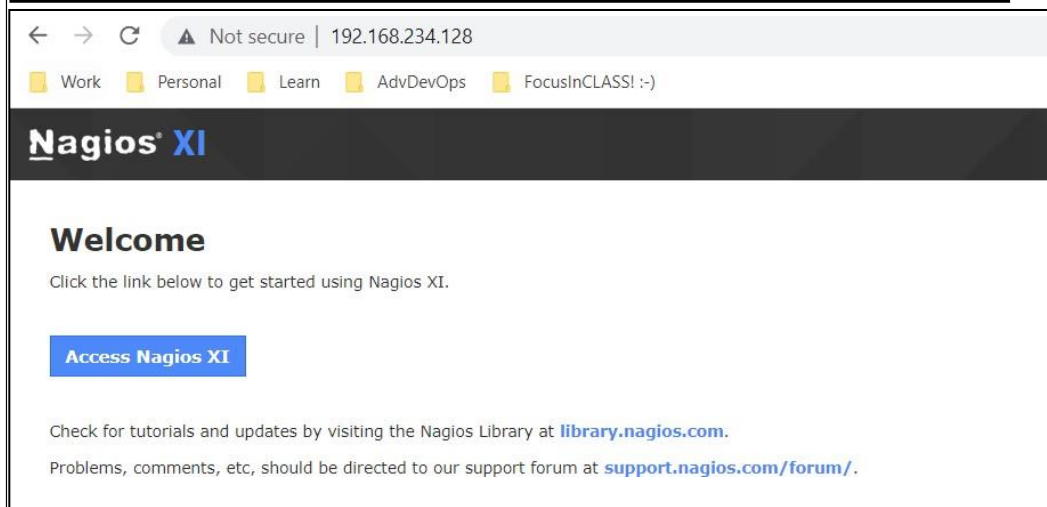
<https://nagiosxi.demos.nagios.com/>

## **PART A: Steps: Actual Installation of Nagios on Host PC**

Download Nagios .ova file and Install VMWare Player 16 to import the .ova file



- Right click on nagios in vmware startup and check setting in hardware , go to network adapter
- in network connecton, change it to NAT : used to share the host's IP address
- Click ok and start you vm, ip address should appear



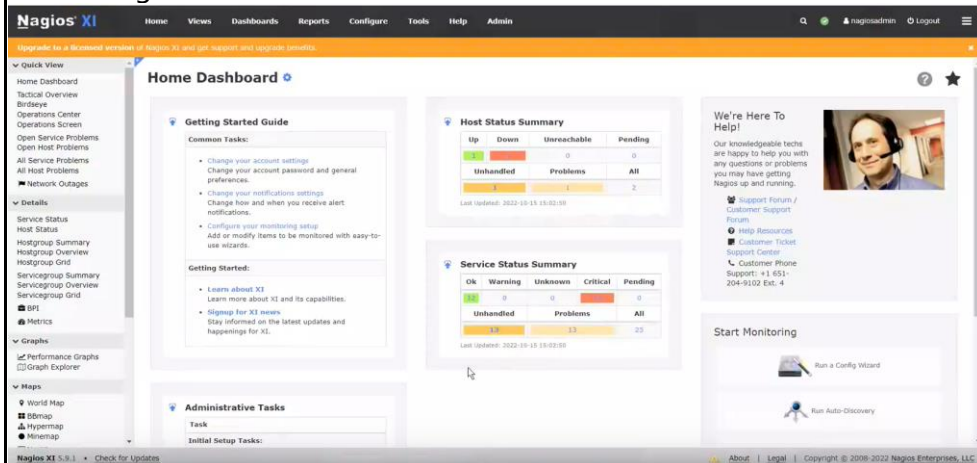
## Login

[Forgot your password?](#)



## PART A Output : Can view localhost PC for status monitoring [Installation of Nagios Done]

### Monitoring of localhost



## PART B: [Setup]Monitor Remote Host/PC using NPPE ( Nagios Remote Plugin Executor)

Install Ubuntu20.iso on a virtual box which will be our Nagios Client to monitor remotely. Type the following commands on the terminal of the Nagios Client.

**ifconfig**

Note down your Nagios Client ipaddress: **192.168.29.13**

The screenshot shows the Nagios XI Configuration Wizard: Linux Server (legacy) - Step 1. The page is titled "Linux Server Information" and contains the following fields:

- IP Address:** 192.168.29.13
- Linux Distribution:** Ubuntu

Below the fields are "Back" and "Next" buttons. The left sidebar shows the configuration wizard steps: Configuration Options, Configuration Tools, Auto-Discovery, Manage Templates, Auto Deployment, Deploy Agent, Manage Deployed Agents, Deployment Settings, Advanced Configuration, Core Config Manager, and More Options.

Installing The Agent Download the Linux NRPE agent to the /tmp directory on the

Linux server you wish to monitor.

```
cd /tmp
```

```
wget https://assets.nagios.com/downloads/nagiosxi/agents/linux-nrpe-agent.tar.gz
```

Unpack the installation archive you just downloaded:

```
sudo tar xzf linux-nrpe-agent.tar.gz
```

Enter the newly created agent subdirectory:

```
cd linux-nrpe-agent
```

```
sudo -i
```

```
cd /tmp
```

```
cd linux-nrpe-agent
```

```
./fullinstall
```

The script will stop to prompt you for the IP address(es) for your monitoring server(s). You will need to type in either a) a single address, b) a list of addresses separated only by spaces, c) a subnet using CIDR notation like 10.25.0.0/16. That will configure the xinetd daemon to allow connections from those locations to the agent process.

```
nagiosclient@nagiosclient-VirtualBox: /tmp/linux-nrpe-agent$ sudo -i
root@nagiosclient-VirtualBox:~# ./fullinstall
-bash: ./fullinstall: No such file or directory
root@nagiosclient-VirtualBox:~# cd /tmp
root@nagiosclient-VirtualBox:/tmp# cd linux-nrpe-agent/
root@nagiosclient-VirtualBox:/tmp/linux-nrpe-agent# ./fullinstall
=====
Nagios Linux Agent Installer
=====

This script will install the Nagios Linux Agent by executing all necessary
sub-scripts.

IMPORTANT: This script should only be used on a clean installed system:

    RedHat Enterprise, CentOS, Fedora, Cloud Linux or Oracle
    OpenSUSE or SUSE Enterprise
    Ubuntu or Debian

Do NOT use this on a system running any other distro or that
does not allow additional package installation.

Do you want to continue? [Y/n]
Activities  Terminal  Oct 15 13:06
root@nagiosclient-VirtualBox: /tmp/linux-nrpe-agent
#
###
#
### If you would like to change this list, enter all IP addresses to allow, ##
#
### separated by SPACES only, and then press Enter.
### (Put the address(es) of your Nagios XI servers(s) here.)
#
###
#
#####
#
Allow from: 192.168.29.13
xinetd.service is not a native service, redirecting to systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable xinetd
Subcomponents installed OK
RESULT=0
#####
###
### Nagios XI Linux Agent Installation Complete!
###
#####

If you experience any problems, please attach the file install.log that was jus
t created to any support requests.
root@nagiosclient-VirtualBox: /tmp/linux-nrpe-agent#
```

Now, go to Nagios Server and check the status of Nagios Client



## PART B: [Output] : Monitor Remote Host/PC using NPRE ( Nagios Remote Plugin Executor)





Conclusion	Learnt Installation of Nagios and NPPE Plugin
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