NAGIOS

Nagios is an open-source software for continuous monitoring of systems, networks and infrastructure. It runs plugins stored on a server which is connected with a host or another servr on your network or the internet. In case of any failure Nagios alerts about the issues so that the technical team can perform recovery process immediately.

History of Nagios:

- In the year 1999, Ethan Galstad developed it as a part of netsaint distribution.
- 2002, ethan renames the project to "Nagios" because of trademark issues with the name "netsaint".
- 2009, Nagios releases its first commercial version, Nagios XI.
- In 2012, Nagios again renamed as Nagios core.
- It uses port number 5666, 5667 and 5668 to monitor its client.

Why Nagios?

- Detect all types of network or server issues.
- Helps to find the root cause of the problem which allow you to get the permanent solution to the problem.
- Reduce downtime.
- Active monitoring of entire infrastructure.
- Allow you to monitor and troubleshoot server performance issues.
- Automatically fix problems.

Features of Nagios:

- Oldest and latest.
- Good log and database system.
- Informative and attractive web interface.
- Automatically send alerts if condition changes.
- Helps you to detect network errors or server crashes.
- You can monitor the entire business process and IT infrastructure with a single pass.
- Monitor network services like http, smtp, snmp, ftp, ssh, pop, DNS, LDAP, IPMI etc.

Phases of Continuous Monitoring:

1. Define: develop a monitoring strategy
2. Establish: how frequently you are going to monitor it.
3. Implement
4. Analyze data and report finding
5. Respond
6. Review and update

Nagios Architecture:

Nagios is a client-server architecture. Usually on a network, a Nagios server is running on a host and plugins are running on all the remote host which should you monitor.

How does Nagios works?

- Mention all details in configuration files.
- Daemon read those details what data to be collected.
- Daemon use NRPE plugins to collect data from nodes and store in its own database.
- Finally shows everything in dashboard.

Pre-requisites:

- Httpd (browser)
- Php (dashboard)
- Gcc and gd (compiler)
- Makefile (to build)
- Perl (script)

Main configuration file: **/usr/local/Nagios/etc.Nagios.cfg**

All monitoring things called as service.

For e.g: 5 servers – 4 checks each

Then you have to monitor 5*4= 20 services

Dashboard overview:

In dashboard you can see

Host: down, unreachable, up, recovery, none

Service: warning, unknown, critical, recovery, pending

Installation of Nagios on Linux:

To start Nagios core installation, you must have your EC2 instance up and run and have already configured SSH access to the instance.

Step-1: install pre-requisites software on your EC2 machine prior to Nagios installation like apache, php, gcc compiler and gd development libraries.

sudo su

yum install httpd php

yum install gcc glibc glibc-common

yum install gd gd-devel

Step-2: create account information you need to setup a Nagios user, run the following commands,

adduser -m Nagios

passwd Nagios

Now it will ask to enter new password give '12345' as password.

groupadd Nagioscmd

usermod -a -G Nagioscmd Nagios

usermod -a -G Nagioscmd apache

Step-3: download Nagios core and the plugins. Create a directory for storing the downloads.

mkdir ~/downloads

cd ~/downloads

Download the source code tarballs of both Nagios and the Nagios plugins.

wget http://prdownloads.sourceforge.net/sourceforge/Nagios/Nagios-4.0.8.tar.gz

#wget http://Nagios-plugins.org/download/Nagios-plugins-2.0.3.tar.gz

Step-4: complete and install Nagios extract the Nagios source code tarball

tar zxvf Nagios-4.0.8.tar.gz

cd Nagios-4.0.8

Run the configuration script with the name of the group which you have create in above step.

./configure –with-command-grouo=Nagioscmd

Compile the Nagios source code

make all

Install binaries, init script, sample config files and set permissions on the external command directly.

make install

make install-init

make install-config

make install-commandmode

Setp-5: configure the web interface

make install-webconf

Step-6: create a 'Nagiosadmin' account for login into Nagios web interface, set password as well.

htpasswd -c /usr/local/Nagios/etc/htpasswd.users Nagiosadmin

Asking for a password, set a new pwd

service httpd restart

Step-7: compile and install the Nagios plugins. Extract the Nagios plugins source code tarball.

cd ~/downloads

tar zxvf Nagios-plugins-2.0.3.tar.gz

cd Nagios-plugins-2.0.3

Compile and install the plugins

../configure --with-Nagios-user=Nagios --with-Nagios-group=Nagios

make

make install

Step-8: start Nagios. Add Nagios to the list of system services and have it automatically start when the system boots.

chkconfig --add Nagios

chkconfig Nagios on

Verify the sample Nagios configuration files

/usr/local/Nagios/bin/Nagios -v

usr/local/Nagios/etc/Nagios.cfg

If there are no errors, start Nagios

service Nagios start

service httpd restart

Step-9: copy public ip of EC2 instance and paste in google chrome, in given way

For e.g 20.1.1.1/Nagios/Nagios

Ask for username- Nagiosadmin

Password-