

Network Management with Nagios



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Agenda

- **What is it? Why use it?**
- **Installing**
- **Configuring**
- **Introduction to the Nagios web interface**
- **Lab & Exercises: Using Nagios - monitor a server/gateway**
- **Lab & Exercises: Using plugins**

Nagios

What is it? Why use it?

- **Nagios is a great network monitoring and management tool.**
- **It provides a valuable management dashboard.**
- **It's open source / free software.**

- **Similar systems and alternatives (partly overlapping with Nagios) include:
Cacti, mrtg / rrdtools, nedi**

Installing Prerequisites

- **Apache 2**
- **GCC compiler and development libraries**
- **GD development libraries**
- **Ubuntu: You can use apt-get to install these packages by running the following commands:**
 - > sudo apt-get install apache**
 - > sudo apt-get install build-essential**

Installing Steps

- **Get sources, currently: nagios-3.0.4.tar.gz**

```
> wget http://osdn dl.sourceforge.net/sourceforge/nagios/nagios-3.0.4.tar.gz
```

```
> wget
```

```
http://osdn dl.sourceforge.net/sourceforge/nagiosplug/nagios-plugins-1.4.12.tar.gz
```

- Depending on where you are, you might want to use a mirror closer to you! Start here: <http://www.nagios.org/download/>
-
- **> tar -xzvf nagios-___.tar.gz**
- **Follow <nagios-dir>/html/docs/quickstart-ubuntu.html ... or the guides for other linux distros, if you are on another one**

Installing

Creating user and group

- **As root, run the following commands to create the nagios user and group:**

```
/usr/sbin/useradd -m nagios
```

```
passwd nagios
```

```
/usr/sbin/groupadd nagios
```

```
/usr/sbin/usermod -G nagios nagios
```

```
/usr/sbin/groupadd nagcmd
```

```
/usr/sbin/usermod -G nagcmd nagios
```

```
/usr/sbin/usermod -G nagcmd www-data
```

Installing Configuring and building

- **Run the Nagios configure script, passing the name of the group you created earlier like so:**
 - > `./configure --with-command-group=nagcmd`
- **Compile the Nagios source code.**
 - > `make all`
- **Install binaries, init script, sample config files and set permissions on the external command directory.**
 - > `make install`
 - > `make install-init`
 - > `make install-config`
 - > `make install-commandmode`
- **View and edit config files in**
`/usr/local/nagios/etc`
- **Install the Nagios web config file in the Apache conf.d directory.**
 - > `make install-webconf`
- **Create a nagiosadmin account for logging into the Nagios web interface. Remember the password you assign to this account - you'll need it later.**
 - > `htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin`
- **Restart Apache to make the new settings take effect.**
 - > `/etc/init.d/apache2 reload`

Web interface

Introduction

- **If everything went well, now go to:**
<http://localhost/nagios>

Using Nagios

Monitoring a server

- **Task: Monitoring your gateway or main server**
- **2 kinds of monitoring:**

Publicly available services

Internal services (via ssh / plugins)

- **Nagios relies on objects (hosts, groups, services, ...) and their configuration**
- **Start by creating a host configuration**
- **Example config files are in**

`/usr/local/nagios/etc/objects/`

Using Nagios

Monitoring a server

- **Example of a host definition**

```
define host{
    use          generic-host      ; Inherit default values from a template
    host_name    wimbo             ; The name we're giving to this host
    alias        my own laptop     ; A longer name associated with the host
    address      127.0.0.1         ; IP address of the host
    hostgroups   allhosts          ; Host groups this host is associated with
}
```

Using Nagios

Monitoring a server

- **Example of a service definition - monitoring ssh on our gateway, using the check_ssh plugin**

```
define service{
    use          generic-service      ; Inherit default values from a template
    host_name    wimbo
    service_description SSH
    check_command check_ssh
}
```

Using Nagios

Monitoring a server

- Whenever you are done adding a host or service, or have made any change, check the config by

```
>/usr/local/nagios/bin/nagios  
-v /usr/local/nagios/etc/nagios.cfg
```

- Remember that your new files need to be enabled in nagios.cfg, by a

cfg_file or cfg_dir directive !

- And restart Nagios like so

```
>/etc/init.d/nagios start
```

Using Nagios

Becoming a Nagios expert

- **The secret to using Nagios at its full potential is:**

Learn to work with

**configuration files (services)
and
plugins.**

- **There are many websites with plugin repositories.**
- **All documentation for Nagios is included in what you have installed on your system, so use it :)**

That was it ...

Thank you!

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Sources: