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My Nagios Deployment History

This page collects a bunch of information created for personal use. This is NOT an official document on Nagios or Nagios installation at CERN

Installation and configuration

For the installation I used a single virtual machine, and followed the instruction at [GridMonitoringNcgYaim](#). YAIM terminated successfully. Some of the link to the repo files are broken, it is advisable to use `yaimgen` to install the UI and then separately Nagios.

Issues

- The `yaim` function `config_nrpe_share` fails when `NCG_NRPE_OUTPUT_DIR` is not set.
- *Nagios is not started when configuring it with Yaim.*
- *The web interface is not active or does not allow the authentication at <https://vtb-generic-80.cern.ch/nagios>.*

The `httpd` and `nagios` service are correctly running.

The file `/var/log/httpd/error_log` has:

```
[Tue Apr 07 09:31:53 2009] [error] [client 127.0.0.1] Directory index forbidden by rule: /var/www/html/
```

The `httpd` server answers correctly to `http` requests but there are problems with `https`:

```
[root@vtb-generic-80 yum.repos.d]# curl http://localhost/
HELLO GIANNI!
[root@vtb-generic-80 yum.repos.d]# curl https://localhost/
curl: (60) SSL certificate problem, verify that the CA cert is OK. Details:
error:14090086:SSL routines:SSL3_GET_SERVER_CERTIFICATE:certificate verify failed
More details here: http://curl.haxx.se/docs/sslcerts.html
```

This problem has been solved appending the BitFace CA certificate to the file `/usr/share/ssl/certs/ca-bundle.crt` and adding the line

```
SSLCAertificateFile /usr/share/ssl/certs/ca-bundle.crt
```

to the file `/etc/httpd/conf.d/ssl.conf`. This line was removed from that file by YAIM during the `nagios` configuration. Yet, the `curl https://localhost/` test gives the same error. At this point one should be able to see the Nagios web interface at: `https://SERVER_NAME/nagios/`.

Monitoring a Linux machine with native checks

Using NRPE

For installing and using NRPE the following document has been used [NRPE2.0](#). Thanks to Ethan Galstad for writing such a clear introduction!

Issues

- NRPE configuration: on a SLC4 machine, where the FTS service was installed, the configuration failed because the C compiler was missing. It has been installed with 'yum install gcc'. Then the configuration script failed for missing SSL headers, they have been installed with 'yum install openssl-devel'.
- iptables configuration: if you get the following error when inserting a rule in the iptables chain:

```
[root@lxbra2310 nrpe-2.12]# iptables -I INPUT -p tcp -m tcp --dport 5666 -j accept
iptables v1.2.11: Couldn't load target `accept':/lib/iptables/libipt_accept.so: cannot open shared object file: No such file or directory
Try `iptables -h' or 'iptables --help' for more information.
```

you need to change '-j accept' into '-j ACCEPT'.

- iptables: the Nagios host cannot execute the check_nrpe on the remote host:

```
[root@vtb-generic-69 nrpe-2.12]# /usr/local/nagios/libexec/check_nrpe -H 128.142.182.87
Connection refused by host
```

After re-executing the previous iptables -I command, the problem disappeared, now the remote host is correctly contacted:

```
[root@vtb-generic-69 nrpe-2.12]# /usr/local/nagios/libexec/check_nrpe -H 128.142.182.87
NRPE v2.12
```

I found out that on the monitored machine there is cron job that runs hourly with the purpose of maintaining a certain configuration of the firewall, the right setup for a production environment has to be clarified.

After this, the check_nrpe!check_load service has been added to the object definition for the remote host and it worked fine. The service details window in Nagios looks like the following picture: Screenshot-1.png

Using specific tests without proxy

For this test we used the *FTS-basic* tests available from the certification tests repository. The bash script *FTS-basic* check the host, the Tomcat server and the LDAP server. For this test the test script has been copied to the */tmp* directory and owned by the group *nagioscmd*.

At this point, the object created to manage the FTS host checks is *fts32.cfg*

Using specific tests that require a proxy

Most of the tests used to monitor grid services need a VOMS proxy in order to execute command from a UI. As a first test, I used the *FTS-service* script which check some FTS properties using the CLI, for which you need a valid proxy. The proxy file has been created using the nagios account (*test_user* key/cert owned by nagios):

```
[root@vtb-generic-69 ~]# ls -ltr /tmp/x509up_u100
-rw----- 1 nagios nagios 6415 May 28 10:55 /tmp/x509up_u100
```

The test script is in */tmp*. After testing the script from the nagios account manually, I updated the object file *fts32.cgf* to include:

```
define command{
    command_name    FTS-services
    command_line    /tmp/FTS-services --site cert-tb-cern --fts $HOSTADDRESS$ --bdii lxbra23
}
```

```
define service{
    use generic-service
    host_name      lxbra2310.cern.ch
    service_description    FTS service checks
    check_command  FTS-services
}
```

The following screenshot shows the successful execution of the check: Screenshot-3.png

In a production installation, the proxy used by nagios has to be periodically renewed. NCG (see below) provides a script to do this using the MyProxy server.

Using NCG

NCG is the Nagios configuration generator. It reads site specific information from a BDII and produces Nagios configuration files to monitor the resources published in the BDII for that site. The NCG installation is specified here: GridMonitoringNcgYaim. The NCG installation has been tried on a new virtual machine, vtb-generic-95.

Issues

- The yaim function `config_nrpe_share` fails when `NCG_NRPE_OUTPUT_DIR` is not set.
- The default `ncg.conf` works, but to automatically add hosts found in the BDII you have to set `ADD_HOST=1` in the `NCG::SiteInfo::LDAP` module, restart `ncg.pl` and the Nagios daemon.

At this point Nagios shows in the web interface all the hosts found in the BDII with the CERN site name: Screenshot-2.png

Tech Corner

This section collects some technical notes/tips about Nagios collected while reading various docs.

- A *service*, in Nagios language, is always a host,service pair. Therefore, you can have two service definition with the same name and different hosts.
- The file `resource.cfg`, readable only by nagios, is a good place to store passwords defined as macro.

-- GianniPucciani - 07 Apr 2009

This topic: Main > MyNagiosDeployment

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