

Monitoring Availability with Nagios



Module Overview



- Nagios monitoring
- Installing Nagios Core on Ubuntu
- Defining host entries
- Defining service entries
- Monitoring MySQL

Nagios Monitoring

- Monitoring of Network Services
- Monitoring of Host Resources
- Open Source GPL V2
- NSClient++ for Windows

The screenshot displays the Nagios Core web interface. On the left is a navigation sidebar with sections: General (Home, Documentation), Current Status (Tactical Overview, Map, Hosts, Services, Host Groups, Service Groups, Problems), and Reports (Availability). The main content area shows:

- Current Network Status:** Last Updated: Sun Jul 21 04:13:31 UTC 2013. Updated every 90 seconds. Nagios® Core™ 3.2.3 - www.nagios.org. Logged in as nagiosadmin.
- Host Status Totals:** Up: 1, Down: 0, Unreachable: 0, Pending: 0. Summary: All Problems: 0, All Types: 1.
- Service Status Totals:** Ok: 6, Warning: 2, Unknown: 0, Critical: 0, Pending: 0. Summary: All Problems: 2, All Types: 8.
- Service Status Details For All Hosts:** A table listing services for localhost.

Host	Service	Status	Last Check	Duration	Attempt	Status Information
localhost	Current Load	OK	07-21-2013 04:09:04	0d 0h 14m 27s	1/4	OK - load average: 0.00, 0.10, 0.47
	Current Users	OK	07-21-2013 04:09:42	0d 0h 13m 49s	1/4	USERS OK - 4 users currently logged in
	HTTP	WARNING	07-21-2013 04:13:19	0d 0h 13m 12s	4/4	HTTP WARNING: HTTP/1.1 403 Forbidden
	PING	OK	07-21-2013 04:10:57	0d 0h 12m 34s	1/4	PING OK - Packet loss = 0%, RTA = 0.05 ms
	Root Partition	WARNING	07-21-2013 04:09:34	0d 0h 11m 57s	4/4	DISK WARNING - free space: / 1391 MB (17% inode=92%):
	SSH	OK	07-21-2013 04:12:12	0d 0h 11m 19s	1/4	SSH OK - OpenSSH_5.3 (protocol 2.0)
	Swap Usage	OK	07-21-2013 04:12:49	0d 0h 10m 42s	1/4	SWAP OK - 100% free (895 MB out of 895 MB)
	Total Processes	OK	07-21-2013 04:08:27	0d 0h 10m 4s	1/4	PROCS OK: 50 processes with STATE = RSZDT

8 Matching Service Entries Displayed



- NTP Synchronization
- MySQL Servers

```
$ sudo apt-get install tasksel
$ grep Task /usr/share/tasksel/ubuntu-tasks.desc
$ sudo tasksel OR
$ sudo tasksel install lamp-server
```

Nagios will be installed on Ubuntu

First we install the LAMP stack, we may choose to add **tasksel** first to ease the installation of LAMPS

Configure password for MySQL root

```
$ sudo apt-get install nagios3
```

Installing Nagios

The package is part of the default repositories

Prompted to configure SMTP and add password for nagiosadmin

Apache is restarted at the end of the install

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Demo: Installing LAMP and Nagios

Resolving Disk Critical Event

DISK CRITICAL - /home/user/.gvfs is not accessible: Permission denied

The Gnome VFS is not accessible to the nagios user account

This is normal but Danny needs to ignore the error in some way

/etc/nagios-plugins/config/disk.cfg

-A -i'.gvfs'

The Nagios logo consists of the word "Nagios" in a white, bold, sans-serif font, with a registered trademark symbol (®) to its upper right. The text is set against a solid black rectangular background.

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A thin, vertical green line that runs from the top to the bottom of the page, positioned to the left of the main text.

Demo: Post-Installation tasks

Define Host Entries

```
define host{  
    use          generic-host  
    host_name    localhost  
    alias        localhost  
    address      127.0.0.1  
}
```

Define Nagios Host Entries

```
define host {  
    host_name tick  
    alias    tick NTP Server  
    address 192.168.0.3  
    use     generic-host  
}
```

```
$ sudo nagios3 -v /etc/nagios3/nagios.cfg
```

```
$ sudo service nagios3 restart
```

Pre-flight Checks

Before restarting Nagios to implement changes we can test the configuration.

Nagios will report a warning that there are no services associated with the new host

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Demo: Viewing host data

```
$ sudo vi /etc/ntp.conf  
restrict 192.168.0.163
```

AVOIDS: CRITICAL – Socket timeout after 10 seconds

NTP Changes

- We will add a service definition for NTP later.
- But, first we fix the NTP configuration
- The Nagios server will need NTP restrictions removed

Service Entries

NTP OK 2014-12-30 15:57:11 0d 0h 11m 27s 1/4 NTP OK: Offset -0.000682 secs

```
define service {
    host_name tick
    service_description NTP
    check_command check_ntp
    use generic-service
}
$ sudo /usr/lib/nagios/plugins/check_ntp_peer -H tick
```

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Demo: Service entries and monitor NTP

Monitor MySQL

Create MySQL Account

Define Nagios
Hostgroup

Define Nagios Service

```
CREATE USER 'nagios'@'192.168.0.163' IDENTIFIED BY  
'Password1;'  
FLUSH PRIVILEGES;
```

On each MySQL Server

As the MySQL root create a new account limited to access from the Nagios server

```
define hostgroup {  
    hostgroup_name mysql-servers  
    alias MySQL Servers  
    members mysql1,mysql2  
}
```

Create a Hostgroup

As we have more than one MySQL server

The MySQL Service can be associated with the hostgroup

```
define service {  
    hostgroup_name mysql-servers  
    service_description MYSQL  
    check_command check_mysql_cmdlinecred!nagios!Password1  
    use generic-service  
}
```

Define MySQL Service

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Demo: Monitoring MySQL

Additional monitoring tools
include MRTG and Cacti

MRTG

The Multi Router Traffic Grapher - Used to monitor router traffic so long as the device is SNMP enabled

<http://oss.oetiker.ch/mrtg/>

Cacti

In many standard repositories such as Ubuntu and SUSE and provides web access to graphical performance data a little like collectd

Summary



- Monitored availability with Nagios
- Installed Nagios on Ubuntu 14.04
- Created hosts, hostgroups and service entries
- Monitored NTP and MySQL