

## Nagios Cluster

BS: Ubuntu Server 6.06.2 LTS

### Vserver Installation:

```
wget -O - http://bronson.rinspin.com/u32-package-key.gpg | sudo apt-key add -
```

```
vi /etc/apt/source.list
```

```
deb http://dpkg.u32.net/ubuntu edgy vservers
deb-src http://dpkg.u32.net/ubuntu edgy vservers
```

### apt-get update

```
apt-get install util-vserver vservers-debiantools
apt-get install linux-vserver-image-2.6.17-11-vserver-generic
```

```
reboot
```

```
uname -r
2.6.17-11-vserver-generic
```

### DRBD Installation:

```
apt-get install apt-get install drbd0.7*
```

```
apt-get install linux-vserver-headers-2.6.17-11-vserver-generic
```

```
resource r0 {
    protocol C;
    incon-degr-cmd "echo '!DRBD! pri on incon-degr' | wall ; sleep 60 ; halt -f";

    startup {
        degr-wfc-timeout 60;
        wfc-timeout 60;
    }

    disk {
        on-io-error detach;
    }

    net {
        max-buffers 2048;
    }

    syncer {
        rate 100M;
        group 1;
        al-extents 257;
    }
}
```

```

on nagiosc1 {
device /dev/drbd0;
disk /dev/hda3;
address 10.0.0.1:7788;
meta-disk internal;
}

on nagiosc2 {
device /dev/drbd0;
disk /dev/hda3;
address 10.0.0.2:7788;
meta-disk internal;
}
}

```

Debian 4

apt-get install ssh mc vim bwm-ng automake

Mail Konfiguration

dpkg-reconfigure exim4-config

**Option**

- Internet-Server; E-Mails werden direkt über SMTP verschickt und empfangen
- nagiosc2.dresden-it.de

der Rest bleibt leer

```

vi /etc/hosts
127.0.0.1    localhost
#127.0.1.1  nagiosc2.dresden-it.de nagiosc2

10.0.0.2    nagiosc2.dresden-it.de nagiosc2
#10.247.0.246 nagiosc2.dresden-it.de nagiosc2
10.0.0.1    nagiosc1.dresden-it.de nagiosc1
#10.247.0.245 nagiosc1.dresden-it.de nagiosc1

```

VSERVER Teil 1 installation:

apt-get install linux-headers-2.6.18-4-vserver-686 linux-image-2.6.18-4-vserver-686

```

uname -a
Linux nagiosc1 2.6.18-5-686 #1 SMP Mon Dec 24 16:41:07 UTC 2007 i686 GNU/Linux

```

```

uname -a
Linux nagiosc1 2.6.18-4-vserver-686 #1 SMP Thu May 10 01:37:59 UTC 2007 i686 GNU/Linux

```

apt-get install util-vserver

DRBD und HA:

```
apt-get install drbd* modconf build-essential debootstrap heartbeat-2
heartbeat-2-dev
```

```
cd /usr/src
```

```
tar xzf drbd0.7.tar.gz
```

```
cd /usr/src/modules/drbd/drbd/
```

```
make KDIR=/usr/src/linux-headers-2.6.18-4-vserver-686/
```

```
make install
```

```
fdisk /dev/hda3
```

```
mkfs.ext3 /dev/hda3
```

```
auf Master Node (nagiosc1)
```

```
/etc/init.d/drbd start
```

```
drbdsetup /dev/drbd0 primary --do-what-I-say
```

```
auf Slave Node (nagiosc2):
```

```
/etc/init.d/drbd start
```

```
Überprüfen ob alles läuft
```

```
cat /proc/drbd
```

```
version: 0.7.21 (api:79/proto:74)
```

```
SVN Revision: 2326 build by root@nagiosc2, 2008-02-05 14:10:35
```

```
0: cs:SyncTarget st:Secondary/Primary ld:Inconsistent
```

```
ns:0 nr:790412 dw:790412 dr:0 al:0 bm:1168 lo:3 pe:2461 ua:3 ap:0
```

```
[=>.....] sync'ed: 8.7% (8175/8947)M
```

```
finish: 0:11:05 speed: 12,544 (11,452) K/sec
```

```
HA:
```

```
Konfiguration muss auf beiden Nodes identisch sein
```

```
cd /etc/ha.d/
```

```
mkdir -p /var/log/heartbeat
```

```
vi ha.cf
```

```
debugfile /var/log/heartbeat/ha-debug
```

```
logfile /var/log/heartbeat/ha-log
```

```
keepalive 2
```

```
deadtime 5
```

```
warntime 5
```

```
initdead 50
```

```
auto_failback off
```

```
udpport 696
```

```
bcast      eth1
node       nagiosc1
node       nagiosc2
respawn    hacluster /usr/lib/heartbeat/ipfail
respawn    root /etc/ha.d/resource.d/drbd.sh
ping_group 10.0.0.1 10.0.0.2
ping       10.247.0.1
```

```
vi /etc/ha.d/resources.d/mountall
```

```
DEV[1]=/dev/drbd0
MP[1]=vserver
```

```
ismounted() {
    if mount | grep "^$1 on $2" > /dev/null 2>&1; then
        true
    else
        false
    fi
}
```

```
case x$1 in
xstart)
    cd /
    for i in 1
    do
        if ismounted ${DEV[$i]} ${MP[$i]}; then
            true
        else
            echo "Ich mounte ${DEV[$i]} ${MP[$i]}"
            mount ${DEV[$i]} ${MP[$i]}
        fi
    done
    ;;
```

```
xstop)
    cd /
    for i in 1
    do
        if ismounted ${DEV[$i]} ${MP[$i]}; then
            umount ${MP[$i]} > /dev/null 2>&1
        fi
        if ismounted ${DEV[$i]} ${MP[$i]}; then
            fuser -k -TERM -s -m ${MP[$i]}
            fuser -k -HUP -s -m ${MP[$i]}
            umount ${MP[$i]} > /dev/null 2>&1
        fi
        if ismounted ${DEV[$i]} ${MP[$i]}; then
            sleep 5
            fuser -k -s -m ${MP[$i]}
            sleep 5
            umount ${MP[$i]} > /dev/null 2>&1
        fi
    done
    ;;
```

```
xstatus)
    cd /
    for i in 1
```

```

do
if ismounted ${DEV[$i]} ${MP[i]}; then
    STATUS="running"
fi
done
echo $STATUS
;;
esac

```

vi /etc/ha.d/resource.d/vserver

```
VSERVER="/usr/sbin/vserver"
```

```
case "$2" in
```

```

start)
    $VSERVER $1 start
    ;;

stop)
    $VSERVER $1 stop
    ;;

status)
    $VSERVER $1 status
    ;;

```

```
esac
```

vi /etc/ha.d/resource.d/drbd.sh

```
#!/bin/bash
```

```
drbd=r0
```

```
while :
```

```
do
```

```
state=`cat /proc/drbd |tail -2 |head -1 |awk '{print $2}' |sed s:/:/g |awk '{print $2}'`
```

```

if [ $state = "StandAlone" ]
then
    echo "starte Reconnect fuer $drbd";
    drbdadm connect $drbd
    sleep 10
else
    echo "alles OK"
    sleep 10
fi

```

```
done
```

```
nagiosc2:/etc/ha.d# chmod 777 resource.d/*
```

```
vi /etc/ha.d/haresources (nagiosc1)
```

```
nagiosc1 drbddisk mountall IPaddr2::10.247.0.76/16/eth0:nagios2 AudibleAlarm
```

```
SendArp::10.247.0.76/eth0 vserver::Nagios2
```

```
vi /etc/ha.d/haresources (nagiosc2)
```

```
nagios2 drbddisk mountall IPAddr2::10.247.0.76/16/eth0:nagios2 AudibleAlarm SendArp::10.247.0.76/eth0
vserver::Nagios2
```

```
vi /etc/ha.d/authkeys
```

```
auth 2
```

```
2 crc
```

```
chmod 600 /etc/ha.d/authkeys
```

**VSERVER Teil 2 Einrichtung:**  
auf beiden Nodes ausführen

```
nagiosc1:/etc# mkdir /vserver
nagiosc1:/etc# cd /etc/vservers/
nagiosc1:/etc/vservers/# mv * /vserver
nagiosc1:/# cd /
nagiosc1:/#rm -rf /etc/vservers
nagiosc1:/# ln -s /vserver /etc/vservers
```

### **auf dem Master ausführen**

```
nagiosc1:/# mount /dev/drbd0 /vserver/
```

```
nagiosc1:/# vserver nagios build --hostname nagios.dresden-it.de --netdev eth0 --interface
10.247.0.76/16 -m debootstrap -- -d etch -m http://ftp.at.debian.org/debian/
```

```
nagiosc1:/# echo nagios > /etc/vservers/nagios/interfaces/0/name
```

```
nagiosc1:/# vserver Nagios start
```

**Bereinigen des Startvorganges des VServers (optional)**

```
nagiosc1:/vserver/Nagios2/etc/rc0.d# rm K20makedev K25hwclock.sh S30urandom S31umountnfs.sh
S35networking S36ifupdown S40umountfs S90halt K89klogd
```

```
nagiosc1:/vserver/Nagios2/etc/rc6.d# rm K20makedev K25hwclock.sh S30urandom S31umountnfs.sh
S35networking S36ifupdown S40umountfs S90reboot K89klogd
```

```
nagiosc1:/vserver/Nagios2/etc/rcS.d# rm S05keymap.sh S48console-screen.sh S50hwclock.sh
S40networking S45mountnfs.sh S10checkroot.sh S02mountvirtfs S30procps.sh S35mountall.sh
S36mountvirtfs S39ifupdown S30checkfs.sh S18ifupdown-clean S18hwclockfirst.sh
```

```
nagiosc1:/vserver/Nagios2/etc/rc2.d# rm S20makedev S11klogd
```

**Ressourcen festlegen (1GB Virtueller Adress Speicher und 128 MB RAM) (optional)**

```
nagiosc1:/# mkdir /vservers/Nagios2/rlimits
nagiosc1:/# echo 250000 > /vservers/Nagios2/rlimits/as
nagiosc1:/# echo 32000 > /vservers/Nagios2/rlimits/rss
```

**CPU Limitation**

```
nagiosc1:/# echo sched_prio > /vservers/Nagios2/flags
nagiosc1:/# echo 6 > /vservers/Nagios2/schedule
nagiosc1:/# echo 30 >> /vservers/Nagios2/schedule
```

```
nagiosc1:~# echo 1000 >> /vservers/Nagios2/schedule
nagiosc1:~# echo 200 >> /vservers/Nagios2/schedule
nagiosc1:~# echo 3000 >> /vservers/Nagios2/schedule
nagiosc1:~# echo dummy >> /vservers/Nagios2/schedule
```

## **Installation der Services auf dem Vserver nagios:**

```
nagios:~# apt-get install mc vim locales less apache2 perl mysql-server-5.0 mysql-client-5.0 php5 ntp
rsync rsnapshot bwm-ng
```

### **Zeit stellen**

```
nagios:~# date 02081564 (MMDDhhmm)
```

### **Zeitzone Umstellen**

```
nagios:~# tzconfig
```

### **Zeichensatz Konfigurieren**

```
nagios:~# dpkg-reconfigure locales
nagios:~# locale-gen
```

### **Verhalten auf der Console Konfigurieren**

```
nagios:~# vi /root/.bashrc
```

```
# ~/.bashrc: executed by bash(1) for non-login shells.
```

```
export PS1='\h:\w\$ '
umask 022
```

```
# You may uncomment the following lines if you want `ls' to be colorized:
```

```
export LS_OPTIONS='--color=auto'
```

```
eval "`dircolors`"
```

```
alias ls='ls $LS_OPTIONS'
```

```
alias ll='ls $LS_OPTIONS -lah'
```

```
alias l='ls $LS_OPTIONS -lA'
```

```
#
```

```
# Some more alias to avoid making mistakes:
```

```
alias rm='rm -rf'
```

```
alias cp='cp -a'
```

```
alias mv='mv'
```

### **aktivieren der bash**

```
nagios:~# cd /root
nagios:~# . .bashrc
```

### **Konsolen Suche aktivieren**

```
nagios:~# vi /etc/inputrc
```

```
"\e[5~": history-search-backward
```

```
"\e[6~": history-search-forward
```

## Apache Einstellungen

```
nagios:/etc/apache2/# vi ports.conf
```

```
Listen 10.247.0.76:80
```

```
nagios:/etc/# vi hosts
```

```
10.247.0.76 nagios.dresden-it.de nagios
```

## zusätzliche Libs installieren für Nagios

```
nagios:/# apt-get install libgd-dev libgd-tools autoconf automake make libssl-dev openssl libc6 libc6-dev ntpdate php5-snmp snmp snmpd mrtg libsnmp-base smbclient smbfs libsmbclient libsmbclient-dev libldap2 libldap2-dev php5-gd perl-tk libg2-dev libg20-perl libg20 libglpng libglpng-dev libimage-info-perl libimage-size-perl libpng12-0 libpng12-dev libpng3 gif2png libphp-jpgraph libphp-jpgraph-examples libjpeg-progs imageindex libanydata-perl jpeginfo libgraphicsmagick1 libgraphicsmagick1-dev libgraphicsmagick++1 libgraphicsmagick++1-dev libgraphics-magick-perl gcc
```

```
nagios:/# apt-get install libgd-perl
```

## Anpassen der Apache Konfig

```
nagios:/# apt-get remove php4
```

```
nagios:/# apt-get install php5
```

```
nagios:/# cd /etc/apache2/mods-enabled/
```

```
nagios: /etc/apache2/mods-enabled/# ln -s ../mods-available/php5.load php5.load
```

## Nagios Installation

```
nagios:/# groupadd -g 9000 nagios
```

```
nagios:/# groupadd -g 9001 nagcmd
```

```
nagios:/# useradd -u 9000 -g nagios -G nagcmd -d /usr/local/nagios -c "Nagios Admin" nagios
```

(bei Debian)

```
nagios:/# grep "^User" /etc/apache2/apache2.conf
```

```
User www-data
```

```
nagios:/# usermod -G nagcmd www-data
```

```
nagios:/# mkdir -p /usr/local/nagios /var/nagios /etc/nagios
```

```
nagios:/# chown nagios.nagios /etc/nagios /var/nagios /usr/local/nagios
```

## Sources:

```
nagios:/download/# wget http://surfnet.dl.sourceforge.net/sourceforge/nagios/nagios-3.0rc2.tar.gz
```

```
nagios:/# cd /download/nagios-3.0rc2/
```

```
nagios:/download/nagios-3.0rc2# ./configure --sysconfdir=/etc/nagios --localstatedir=/var/nagios --with-command-group=nagcmd
```

**bei Fehler(Warnung)** apt-get install gcc libgd-dev pkg-config

```
nagios:/download/nagios-3.0rc2# make all
```

```
nagios:/download/nagios-3.0rc2# make install
```

```
nagios:/download/nagios-3.0rc2# make install-init
```

```
nagios:/download/nagios-3.0rc2# make install-commandmode
```

```
nagios:/download/nagios-3.0rc2# make install-config
```

```
nagios:/download/nagios-3.0rc2# make install-webconf
```

```
nagios:/download/nagios-3.0rc2# htpasswd -c /etc/nagios/htpasswd.users kaulto
```

```
nagios:/download/nagios-3.0rc2# ln -s /etc/init.d/nagios /etc/rcS.d/S99nagios
```

```
nagios:/download/nagios-3.0rc2# echo "/usr/local/nagios/bin/nagios -v /etc/nagios/nagios.cfg" > /sbin/rcnagios_test
```

```
nagios:/download/nagios-3.0rc2# ln -s /etc/init.d/nagios /sbin/rcnagios
```

```
nagios:/download/nagios-3.0rc2#rcnagios start
```

```
nagios:/download/nagios-3.0rc2#chmod 775 /sbin/rcnagios_test
```

## Plugins:

```
nagios:/download/# wget http://dfn.dl.sourceforge.net/sourceforge/nagiosplug/nagios-plugins-1.4.11.tar.gz
```

```
nagios:/download/nagios-plugins-1.4.11# perl -MCPAN -e 'install Net::SNMP'
```

```
nagios:/download/nagios-plugins-1.4.11# apt-get install icmpinfo icmpush inetutils-ping fping
```

```
nagios:/download/# cd nagios-plugins-1.4.11/
```

```
nagios:/download/nagios-plugins-1.4.11# ./configure --enable-perl-modules --sysconfdir=/etc/nagios --localstatedir=/var/nagios --with-ping-command=/bin/ping --enable-perl-modules
```

```
nagios:/download/nagios-plugins-1.4.11#make
```

```
nagios:/download/nagios-plugins-1.4.11#make install
```