

Nagios Cluster mit SuSE 10.2, DRBD und Heartbeat

Alle Schritte ab hier auf beiden Nodes identisch!!!

- Installation SuSE 10.2 (Textmodus)
- Partitionierung

hda1	500 MB	Swap
hda2	3 GB	/ ext3

bei allen DRBD Devices fstap Option nicht beim Systemstart Mouneten und Mountpoint leer lassen

hda3	6GB	drbd0 für Nagios
hda4	rest	extended
hda5	3Gb	drbd1 für mysql
hda6	rest	drbd2 für web und apache

Software Pakete

Suchen im Yast

- apache2
- apache2-doc
- apache2-mod-fcgid
- apache2_mod_perl
- apache2_mod_php5

- glibc-info

- php5
- php5-bcmath
- php5-bz2
- php5-devel
- php5-exif
- php5-fastcgi
- php5-ftp
- php5-gd
- php5-gettext
- php5-gmp
- php5-ldap
- php5-mbstring
- php5-mcrypt
- php5-mhash
- php5-mysql
- php5-ncurses
- php5-snmp

- php5-zlib
- php5-zip
- php5-xmlrpc
- php5-xls

- mysql
- mysql-devel

- mc
- syslogd

- perl-CG
- perl-GDGraph
- perl-GDTextutil

- latex2html
- libpng-devel
- libgda (alles bis odbc, postgres, sqlite)
- libgdiplus (alles)
- jpeg
- libjpeg-devel
- gd-devel
- gd-debuginfo
- giflib
- giflib-devel

- gcc (alles)
- fping
- automake
- make
- make-dev
- mrtg
- snmp (alles)
- net-snmp
- net-snmp-debuginfo
- net-snmp-devel
- vsftp
- locate
- samba
- drbd-kmp-default
- kernel-source
- heartbeat (alles)
- rcs (alles)

Nach dem die Installation durch ist.

- Internet Verbindung Testen (Achtung das richtige Netzwerkkarte eingestellt ist)
- Online Quellen hinzufügen
- Autoyast erstellen ist Optional

Nach dem die Installation abgeschlossen ist, Yast aufrufen und zu aller erst die Installations Quellen Wechseln. CD Deaktivieren und die Online Quellen aktivieren.

Danach via YAST heartbeat installieren

Installation via Autoyast

- SuSE 10.2 DVD auf einen FTP Server Kopieren
- autoinst.xml auch auf einen FTP Server kopieren
- mit SuSE 10.2 DVD Booten
- mit F4 FTP auswählen und den FTP Server angeben
- bei Bootoptionen folgendes eingeben
- autoyast=ftp://<FTPSERVER>/<PFAD zur autinst Datei>/autoinst.xml

Nach der Installation die Netzwerkeinstellung und den Namen ändern!

Installationsquellen hinzufügen

Servername: download.opensuse.org

Verzeichnis(e): distribution/10.2/repo/oss/
 distribution/10.2/repo/non-oss/
 distribution/10.2/repo/debug

Nach aktualisierung der Quellen drbd und heartbeat über yast neu installieren.

DRBD Konfigurieren:

Ordner wo DRBD gemounted werden soll auf beiden Nodes anlegen

```
mkdir -p /cluster/nagios
mkdir -p /cluster/mysql
mkdir -p /cluster/config     (Configdateien für apache, php und Webverzeichnis)
```

/etc/drbd.conf

```
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;
    }
}

resource r1 {
    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/drbd1;
        disk /dev/hda5;
        address 10.0.0.1:7789;
        meta-disk internal;
    }
}
```

```
}

on nagiosc2 {
device /dev/drbd1;
disk /dev/hda5;
address 10.0.0.2:7789;
meta-disk internal;
}
}

resource r2 {
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/drbd2;
disk /dev/hda6;
address 10.0.0.1:7790;
meta-disk internal;
}

on nagiosc2 {
device /dev/drbd2;
disk /dev/hda6;
address 10.0.0.2:7790;
meta-disk internal;
}
}
```

am besten mit scp diese Datei auf den zweiten Node kopieren.

jetzt drbd starten

```
rcdrbd start
```

```
mit cat /proc/drbd
```

überprüfen ob alles läuft

```
drbd driver loaded OK; device status:
version: 0.7.22 (api:79/proto:74)
SVN Revision: 2554 build by lmb@dale, 2006-10-30 22:52:11
0: cs:SyncTarget st:Secondary/ Secondary Id:Inconsistent
  ns:0 nr:1421312 dw:1421312 dr:0 al:0 bm:86 lo:65 pe:2466 ua:65 ap:0
  [=====>.....] sync'ed: 23.2% (4634/6021)M
  finish: 0:16:28 speed: 4,644 (3,912) K/sec
1: cs:SyncTarget st:Secondary/ Secondary Id:Inconsistent
  ns:0 nr:1362228 dw:1362228 dr:0 al:0 bm:83 lo:80 pe:2500 ua:80 ap:0
  [=====>.....] sync'ed: 45.2% (1655728/3017636)K
  finish: 0:06:36 speed: 4,144 (3,804) K/sec
2: cs:SyncTarget st:Secondary/ Secondary Id:Inconsistent
  ns:0 nr:1346444 dw:1346444 dr:0 al:0 bm:854 lo:104 pe:2544 ua:104 ap:0
  [=====>.....] sync'ed: 21.4% (4848/6163)M
  finish: 0:21:46 speed: 3,756 (3,788) K/sec
```

```
mit drbdsetup /dev/drbd(0-2) primary --do-what-I-say
```

das Device Primär machen

```
version: 0.7.22 (api:79/proto:74)
SVN Revision: 2554 build by lmb@dale, 2006-10-30 22:52:11
0: cs:SyncTarget st:Secondary/Primary Id:Inconsistent
  ns:0 nr:1421312 dw:1421312 dr:0 al:0 bm:86 lo:65 pe:2466 ua:65 ap:0
  [=====>.....] sync'ed: 23.2% (4634/6021)M
  finish: 0:16:28 speed: 4,644 (3,912) K/sec
1: cs:SyncTarget st:Secondary/Primary Id:Inconsistent
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  [=====>.....] sync'ed: 45.2% (1655728/3017636)K
  finish: 0:06:36 speed: 4,144 (3,804) K/sec
2: cs:SyncTarget st:Secondary/Primary Id:Inconsistent
  ns:0 nr:1346444 dw:1346444 dr:0 al:0 bm:854 lo:104 pe:2544 ua:104 ap:0
  [=====>.....] sync'ed: 21.4% (4848/6163)M
  finish: 0:21:46 speed: 3,756 (3,788) K/sec
```

Devices Mounten und Dateien kopieren

```
mount /dev/drbd0 /cluster/nagios
mount /dev/drbd1 /cluster/mysql
mount /dev/drbd2 /cluster/config
```

```
cp -a /var/lib/mysql /cluster/mysql/.
rm -rf /var/lib/mysql
ln -s /cluster/mysql/mysql /var/lib/mysql
chown -R mysql:mysql /cluster/mysql
```

```
rcmysql start
rcmysql restart
mysql -u root --password -h localhost
```

FTP Server Einstellungen (auf beiden Nodes)

```
vi /etc/vsftpd.conf

write_enable=YES
local_enable=YES
```

alles was mit Anonymus zu tun hat disablen

HA anpassen

mit YAST heartbeat gegebenenfalls nach installieren (alle Pakete)

auf beiden Nodes die Startscripte in resources.d Kopieren

```
nagiosc1:/etc/ha.d/resource.d # cp -a /etc/init.d/apache2 .
nagiosc1:/etc/ha.d/resource.d # cp -a /etc/init.d/mysql .
nagiosc1:/etc/ha.d/resource.d # cp -a /etc/init.d/mysql .
nagiosc1:/etc/ha.d/resource.d # cp -a /etc/init.d/nagios .
nagiosc1:/etc/ha.d/resource.d # cp -a /etc/init.d/vsftpd .
nagiosc1:/etc/ha.d/resources.d # vi mountall
```

```
#!/bin/sh
DEV[1]=/dev/drbd0
DEV[2]=/dev/drbd1
DEV[3]=/dev/drbd2
MP[1]=/cluster/nagios
MP[2]=/cluster/mysql
MP[3]=/cluster/config

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 2 3
    do
        if ismounted ${DEV[$i]} ${MP[i]}; then
            true
        else
            echo "Ich mounte ${MP[i]}"
            #drbdsetup /dev/drbd0 primary --do-what-I-say
            mount -t ext3 ${DEV[$i]} ${MP[i]}
        fi
    done
    ;;
xstop)
    cd /
    for i in 1 2 3
    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
fi
done
;;
xstatus)
    cd /
    for i in 1 2 3
    do
        if ismounted ${DEV[$i]} ${MP[$i]}; then
            STATUS="running"
        fi
    done
    echo $STATUS
done
;;
esac

```

```
nagiosc1:/etc/ha.d # vi haresources
```

```
nagiosc1 drbddisk mountall IPaddr2::10.247.0.76/24/eth1:nagios mysql apache2 nagios vsftpd mon
MailTo::tobias.kaul@dresden-it.de::Nagios_Failover
```

```
nagiosc1:/etc/ha.d # vi ha.cf
```

```
logfile /var/log/ha-log
logfacility local0
keepalive 2
deadtime 15
warntime 10
initdead 60
udpport 694
bcast eth0
node nagiosc1 nagiosc2
auto_failback off
ping 10.247.0.1
```

```
nagiosc1:/etc/ha.d # vi authkeys
```

```
auth 2
2 crc
```

```
nagiosc1:/etc/ha.d # chmod 600 authkeys
```

Dateien auf die andere Node Kopieren

```
nagiosc1:/etc/ha.d # scp -r * root@10.247.0.246:/etc/ha.d/.
```

Installation von MON (Überwachung von Cluster Diensten)

auf beide Nodes ausführen

```
wget ftp://ftp.kernel.org/pub/software/admin/mon/mon-1.2.0.tar.gz
wget ftp://ftp.kernel.org/pub/software/admin/mon/mon-client-1.2.0.tar.gz
```

```
visudo
```

```
nagios ALL=(ALL) NOPASSWD: ALL
```

entpacken und in mon-1.2.0 wechseln

```
cd /usr/include
h2ph -r -l . ausführen
```

```
perl -MCPAN -e 'install Time::Period'
perl -MCPAN -e 'install Time::HiRes'
```

```
mkdir /cluster/nagios/mon/etc
ln -s /cluster/nagios/mon/etc /etc/mon
```

```
mkdir -p /etc/mon/alert.d
mkdir -p /etc/mon/mon.d
mkdir -p /etc/mon/var
mkdir -p /etc/mon/log
mkdir /etc/mon/moncf
```

```
nagioscl:/cluster/nagios/download/mon-1.2.0 # cp mon.d/* /etc/mon/mon.d/.
nagioscl:/cluster/nagios/download/mon-1.2.0 # cp etc/auth.cf /etc/mon/moncf/.
nagioscl:/cluster/nagios/download/mon-1.2.0/alert.d # cp -a * /etc/mon/alert.d/.
```

vi /etc/mon/mon.cf

```
# global options
#
cfbasedir = /etc/mon/moncf
alertdir = /etc/mon/alert.d
mondir = /etc/mon/mon.d
statedir = /etc/mon/var
logdir = /etc/mon/log
maxprocs = 20
histlength = 100
historicfile=mon_history.log
randstart = 60s

#
# authentication types:
# getpwnam standard Unix passwd, NOT for shadow passwords
# shadow Unix shadow passwords (not implemented)
# userfile "mon" user file
#
authtype = getpwnam

#
# group definitions (hostnames or IP addresses)
#
dtlogging=yes

hostgroup nagios 10.247.0.76

watch nagios
    service ping
    description ping off virtuell IP
```

```
interval 5m
monitor fping.monitor
period wd {Mon-Sun}
  alert mail.alert tobias.kaul@dresden-it.de
  alert page.alert tobias.kaul@dresden-it.de
  alertevery 1h
service http
interval 4m
monitor http.monitor
allow_empty_group
period wd {Mon-Sun}
  alert mail.alert tobias.kaul@dresden-it.de
  upalert mail.alert -S "web server is back up" tobias.kaul@dresden-it.de
  alertevery 45m
```

Apache+PHP Config

```
cd /cluster/config
mkdir apache2share
cd
mv /usr/share/apache2/* apache2share/.
rm -rf /usr/share/apache2/

cp -a /etc/apache2/* /cluster/config/apache2/.
rm -rf /etc/apache2

ln -s /cluster/config/apache2share /usr/share/apache2
ln -s /cluster/config/apache2 /etc/apache2
ln -s /etc/mime.types /cluster/config/apache2/mime.types

cp -a /etc/php5 /cluster/config/.
rm -rf /etc/php5
ln -s /cluster/config/php5 /etc/php5
```

```
nagiosc1:/cluster/config/apache2 # rcapache2 start
Starting httpd2 (prefork)
```

done

```
vi /srv/www/htdocs/index.php
```

```
<?php
phpinfo();
?>
```

<http://<serverip>>

```
vi /etc/apache2/default-server.conf
```

```
:%s/\srv/www/cluster/nagios/www/g
```

RRDTOOL Installation

```
cd /cluster/nagios/download
```

```
wget http://oss.oetiker.ch/rrdtool/pub/rrdtool-1.2.27.tar.gz
tar xzf rrdtool-1.2.27.tar.gz
cd rrdtool-1.2.27/src
```

```
vi rrd_graph.c
```

in Zeile 2224

```
„RRDTOOL / TOBI OETIKER“
ersetzen oder löschen
```

jetzt auf dem Primary Node

```
mkdir /cluster/nagios/rrdtool
```

danach

```
./configure --prefix=/cluster/nagios/rrdtool
```

make && make install

auf beiden Nodes müssen jetzt noch folgende Links gesetzt werden
gegebenenfalls müssen die Original Dateien aus /bin gelöscht oder umbenannt
werden

```
cd /usr/bin
mv rrdtool rrdtool_org
mv rrdcgi rrdcgi_org
mv rrdupdate rrdupdate_org
```

```
ln -s /cluster/nagios/rrdtool/bin/rrdtool /usr/bin/rrdtool
ln -s /cluster/nagios/rrdtool/bin/rrdcgi /usr/bin/rrdcgi
ln -s /cluster/nagios/rrdtool/bin/rrdupdate /usr/bin/rrdupdate
```

Nagios Installation

GD, PNG, and/or JPEG libraries
script user.sh anlagen mit folgendem Inhalt

```
#!/bin/sh
groupadd -g 9000 nagios
groupadd -g 9001 nagcmd
useradd -u 9000 -g nagios -G nagcmd -d /cluster/nagios/nagios -c "Nagios
Admin" nagios
usermod -G nagcmd wwwrun
usermod -G nagios wwwrun
ln -s /cluster/nagios/nagios /usr/local/nagios
```

und auf beiden Nodes ausführen.

```
./configure --with-command-group=nagcmd
make all
make install
make install-init
make install-commandmode
make install-config
make install-webconf
```

Passwort für Nagios auf **BEIDEN** Nodes setzen um über FTP Daten aus zu tauschen

```
nagioscl:/passwd nagios
* * * *
* * * *
```

in der Datei /etc/apache2/conf.d/nagios.conf eventuell das Directorylisting einschalten

```
Options Indexes FollowSymLinks MultiViews
```

```
cd /cluster/nagios/nagios/etc oder cd /usr/local/nagios
```

```
htpasswd2 -c htpasswd.users kaulto
```

```
vi /usr/local/nagios/etc/cgi.cfg
```

```
authorized_for_system_information=kaulto
authorized_for_configuration_information=kaulto
authorized_for_system_commands=kaulto
authorized_for_all_services=kaulto
authorized_for_all_hosts=kaulto
authorized_for_all_service_commands=kaulto
authorized_for_all_host_commands=kaulto
```

```
cp -a /etc/init.d/nagios /etc/ha.d/resource.d/nagios
ln -s /etc/ha.d/resource.d/nagios /sbin/rcnagios
```

Kopieren der Configdateien

```
cd /usr/local/nagios/etc
mkdir config printers switches routers server
mkdir -p server/linux
mkdir -p server/windows
mkdir -p server/netapp
mkdir -p server/esx
chown nagios.nagios *
mv objects/* config/
rm -r objects/
```

nagios.cfg anpassen

```
cfg_dir=/usr/local/nagios/etc/config
cfg_dir=/usr/local/nagios/etc/printers
cfg_dir=/usr/local/nagios/etc/switches
cfg_dir=/usr/local/nagios/etc/routers
cfg_dir=/usr/local/nagios/etc/server
```

Nagios Plugins Installieren

```
./configure
make && make install
```

SNMP4Nagios Installation

```
cd nagiosc1:/cluster/nagios/download/SNMP4Nagios-0.4 #
```

```
./configure
make && make install
```

```
chown nagios.nagios /cluster/nagios/nagios
```

```
su - nagios
```

```
nagios@nagiosc1:~>
```

```
mkdir $HOME/.snmp4nagios
chmod 700 $HOME/.snmp4nagios
echo "public" > $HOME/.snmp4nagios/community
```

```
mkdir -p /cluster/nagios/nagios/rrd/snmp4nagios/rrd
ln -s /cluster/nagios/nagios/rrd /usr/local/var
```

```
nagiosc1:/usr/local/bin # cp * /cluster/nagios/nagios/libexec/.
```

PNP Installieren

alles auf dem Primary NODE ausführen

```
cd /cluster/nagios/download
```

```
wget http://puzzle.dl.sourceforge.net/sourceforge/pnp4nagios/pnp-0.4.6.tar.gz  
tar xzf pnp-0.4.6.tar.gz
```

```
cd pnp-0.4.6
```

```
./configure
```

```
make all  
make install  
make install-config
```

das config File befindet sich jetzt in /usr/local/nagios/etc/pnp

```
vi config.php
```

```
$conf['graph_width'] = "700";  
$conf['graph_height'] = "250";  
$conf['graph_opt'] = "--watermark=\"© Tobias Kaul 2008. All rights reserved.\" ";  
  
#Hintergrund der PDF Dokumente ändern  
$conf['background_pdf'] = '/usr/local/nagios/etc/pnp/ddit_background.pdf' ;  
  
$views[0]["title"] = "4 Stunden";  
$views[0]["start"] = ( 60*60*4 );  
  
$views[1]["title"] = "24 Stunden";  
$views[1]["start"] = ( 60*60*24 );  
  
$views[2]["title"] = "Eine Woche";  
$views[2]["start"] = ( 60*60*24*7 );  
  
$views[3]["title"] = "Ein Monat";  
$views[3]["start"] = ( 60*60*24*30 );  
  
$views[4]["title"] = "Ein Jahr";  
$views[4]["start"] = ( 60*60*24*365 );
```

Einstellungen in der nagios.cfg

```
process_performance_data=1

#
# Service Performancedaten
#
service_perfdata_file=/usr/local/nagios/var/service-perfdata
service_perfdata_file_template=DATATYPE::SERVICEPERFDATA\tTIMET::$TIMET\tHOSTNAME::$HOSTNAME\tSERVICEDESC::$SERVICEDESC\tSERVICEPERFDATA::$SERVICEPERFDATA\tSERVICECHECKCOMMAND::$SERVICECHECKCOMMAND\tHOSTSTATE::$HOSTSTATE\tHOSTSTATETYPE::$HOSTSTATETYPE\tSERVICESTATE::$SERVICESTATE\tSERVICESTATETYPE::$SERVICESTATETYPE$
service_perfdata_file_mode=a
service_perfdata_file_processing_interval=15
service_perfdata_file_processing_command=process-service-perfdata-file

#
# Host Performancedaten ab Nagios 3.x
#
host_perfdata_file=/usr/local/nagios/var/host-perfdata
host_perfdata_file_template=DATATYPE::HOSTPERFDATA\tTIMET::$TIMET\tHOSTNAME::$HOSTNAME\tHOSTPERFDATA::$HOSTPERFDATA\tHOSTCHECKCOMMAND::$HOSTCHECKCOMMAND\tHOSTSTATE::$HOSTSTATE\tHOSTSTATETYPE::$HOSTSTATETYPE$
host_perfdata_file_mode=a
host_perfdata_file_processing_interval=15
host_perfdata_file_processing_command=process-host-perfdata-file
```

in der Datei check_commands.cfg oder nur commands.cfg folgendes einfügen und eventuell schon vorhandene Einträge auskommentieren

```
define command{
    command_name    process-service-perfdata-file
    command_line    $USER1$/process_perfdata.pl --
bulk=/usr/local/nagios/var/service-perfdata
}

define command{
    command_name    process-host-perfdata-file
    command_line    $USER1$/process_perfdata.pl --
bulk=/usr/local/nagios/var/host-perfdata
}
```

für jeden Host muss im Servicetemplate

```
define service {
    ...
    process_perf_data 1
    ...
}
```

Perf_date auf 1 stehen

jetzt testen (rcnagios restart)

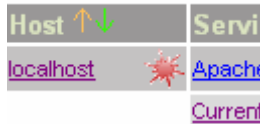
<http://10.247.0.76/nagios/pnp/>

gilt nur für Nagios 2.x ab hier

in die entsprechende Hostconfigdatei z.B. backup007.cfg folgendes einfügen

```
action_url /nagios/pnp/index.php?host=$HOSTNAME$
```

danach ist im Nagios folgendes Icon zu sehen



über das Script ***makeserviceextinfo.pl*** im Ordner /cluster/nagios/download/pnp-0.4.6/contrib

kann eine so genannte pnp-extinfo.cfg erzeugt werden diese befindet sich dann im Ordner /cluster/nagios/nagios/etc/

Damit diese Datei verwendet werden kann muss die nagios.cfg folgendermassen angepasst werden.

```
cfg_file=/cluster/nagios/nagios/etc/pnp-extinfo.cfg
```

in der Datei ***makeserviceextinfo.pl*** sollte über dies noch folgendes abgeändert werden.

```
next SERVICEBEGIN unless /define service /;
```

geändert zu

```
next SERVICEBEGIN unless /define host /;
```

und

```
print SERVICEEXT <<EOT;

define serviceextinfo {
host_name $host_name
service_description $service_description
notes View PNP graphic
action_url /nagios/pnp/index.php?host=\$HOSTNAME\$&srv=\$SERVICEDESC\$
}

```

zu

```
define hostextinfo{
host_name          $host_name
notes              <table
style="color:#000000"><tr><td><strong>Ort:</strong></td><td><strong>Rechenz
entrum
TR40</strong></td></tr><tr><td><strong>Raum:</strong></td><td><strong>
</strong></td></tr><tr><td><strong>Verantwortlich:</strong></td><td><strong>
> </strong></td></tr><tr><td><strong>Telefon:</strong></td><td><strong>
```

```
</strong></td></tr><tr><td><strong>Bemerkung:</strong></td><td>
</td></tr></table>
```

```
#icon_image windows_server.jpg
icon_image_alt $host_name
#vrmf_image windows_server.jpg
#statusmap_image windows_server.jpg
#gd2_image windows_server.jpg
action_url /nagios/pnp/index.php?host=\$HOSTNAME\$
register 1
}
```

EOT

ab Nagios 3.x

kann ein Templet erstellt werden welches automatisch ein Icon bei dem jeweiligen Host erstellt. In die Datei templet.cfg im Ordner /cluster/nagios/nagios/etc/templets folgendes hinzufügen

```
define host {
    name          host-pnp

    register      0
    action_url    /nagios/pnp/index.php?host=$HOSTNAME$
}

define service {
    name          srv-pnp
    register      0
    action_url    /nagios/pnp/index.php?host=$HOSTNAME$&srv=$SERVICEDESC$
}

define host{
    name          generic-host
    use           host-pnp
    notifications_enabled 1
    event_handler_enabled 1
    flap_detection_enabled 1
    failure_prediction_enabled 1
    process_perf_data      1
    retain_status_information 1
    retain_nonstatus_information 1
    notification_period    24x7
    register               0
}
```

um diese Templates nutzen zu können muss die Nagios.cfg wie folgt angepasst werden.

```
cfg_dir=/cluster/nagios/nagios/etc/templets
```

Nagios Configs und Skripte

Plugins zur Anzeige des Aktiven Clusterknotens und zur Überwachung lebenswichtiger Dienste für Nagios und für das Cluster

```
vi /usr/local/nagios/libexec/clusterfailover.sh
```

```
#!/bin/sh
HOST=`hostname`
DATUM=`date`
if [ $1 == "CRITICAL" ] && [ $4 -eq 2 ]
then
#echo test > /tmp/clusterfailover
echo "----- $HOST Clusterfailover am $DATUM -----" >>
/tmp/clusterfailover
echo "Status: $1" >> /tmp/clusterfailover
echo "Service: $2" >> /tmp/clusterfailover
echo "Typ: $3" >> /tmp/clusterfailover
echo "Versuche: $4" >> /tmp/clusterfailover
echo "----- Shutdown folgender Dienste -----"
-----" >> /tmp/clusterfailover
/usr/bin/sudo rcnagios stop >> /tmp/clusterfailover
/usr/bin/sudo rcapache2 stop >> /tmp/clusterfailover
/usr/bin/sudo rcmysql stop >> /tmp/clusterfailover
/usr/bin/sudo rcvsftpd stop >> /tmp/clusterfailover
/usr/bin/sudo /etc/init.d/heartbeat standby >> /tmp/clusterfailover
echo "----- Fertig -----"
-----" >> /tmp/clusterfailover
exit 0
fi

if [ $1 == "CRITICAL" ] && [ $3 == "SOFT" ]
then
echo "=====$HOST Service $2 restart am $DATUM =====" >>
/tmp/clusterfailover
echo "Status: $1" >> /tmp/clusterfailover
echo " Service: $2" >> /tmp/clusterfailover
echo " Typ: $3" >> /tmp/clusterfailover
echo " Versuche: $4 " >> /tmp/clusterfailover
echo "=====$HOST Ergebnis
===== " >> /tmp/clusterfailover
/usr/bin/sudo $2 restart >> /tmp/clusterfailover
echo
"=====$HOST =====" >>
/tmp/clusterfailover
exit 0
fi
```

Eventhandler Skript zur Clusterumschaltung

```
vi /usr/local/nagios/libexec/check_node.sh
```

```
#!/bin/sh

STATUS=`cat /proc/drbd | grep 0 | tail -4 | head -1 | awk '{print $3}' |
sed -e 's/st://g' | sed -e 's/\\// /g' | awk '{print $1}'`
HOST=`hostname`
echo "$HOST ist momentan der $STATUS NODE im Custer"
exit 0
```

Aufrufe in Nagios über:

```
vi checkcommands.cfg
```

```
define command{
    command_name    check_local_procs
    command_line    $USER1$/check_procs -w $ARG1$ -c $ARG2$ -C $ARG3$
}
```

```
define command{
    command_name    clusterfailover
    command_line    $USER1$/clusterfailover.sh $SERVICESTATE$ $ARG1$
$SERVICESTATETYPE$ $SERVICEATTEMPT$
}
```

```
define command{
    command_name    node_status
    command_line    $USER1$/check_node.sh
}
```

```
in nagios-tr40.cfg
```

```
vi nagios-tr40.cfg
```

```
#Bei Auftreten des ersten Fehlers wird versucht den Service neu zu starten
#sollte das fehlschlagen, wird das Cluster umgeschaltet
```

```
#Apache2 Service mit Eventhandler
```

```
define service{
    use                local-service
    host_name          nagios
    service_description Apache
    check_command      check_local_procs!1:20!1:30!httpd2-prefork
    event_handler      clusterfailover!rcapache2
    check_period       24x7
    notification_period 24x7
    contact_groups     linux-admins
}
```

```
#mysql Dienst mit Eventhandler
```

```
define service{
    use                local-service
    host_name          nagios
    service_description MySQL
    check_command      check_local_procs!1:1!1:2!mysqld
    event_handler      clusterfailover!rcmysql
    check_period       24x7
    notification_period 24x7
    contact_groups     linux-admins
}
```

```
#FTP Dienst mit Eventhandler
```

```
define service{
    use                local-service
    host_name          nagios
    service_description FTP Server
    check_command      check_local_procs!1:1!1:2!vsftpd
    event_handler      clusterfailover!rcvsftpd
    check_period       24x7
    notification_period 24x7
    contact_groups     linux-admins
}
```

```

#Cluster Node Status anzeigen
define service{
    use                local-service
    host_name          nagios
    service_description Node Status
    check_command      node_status
    check_period       24x7
    notification_period 24x7
    contact_groups     linux-admins
}

```

Anzeige für Netzwerk Traffic über das check_snmp_int.pl Plugging (PNP)

```
vi /usr/local/nagios/share/pnp/templates.dist/fc_switch.php
```

```

<?php
#
# Plugin: check_iftraffic.pl (COUNTER)
# $Id: check_snmp_int.php 196 2007-01-27 13:15:15Z lingej $
#
#

$opt[1] = "--vertical-label \"Traffic\" -b 1000 --title \"Interface Traffic
for $hostname / $servicedesc\" ";
$def[1] = "DEF:var1=$rrdfile:$DS[1]:AVERAGE " ;
$def[1] .= "DEF:var2=$rrdfile:$DS[2]:AVERAGE " ;
$def[1] .= "CDEF:neg_var2=var2,-1,* " ;
$def[1] .= "LINE1:var1#EACC00:\"in \" " ;
$def[1] .= "GPRINT:var1:LAST:\"%7.2lf %Sb/s last\" " ;
$def[1] .= "GPRINT:var1:AVERAGE:\"%7.2lf %Sb/s avg\" " ;
$def[1] .= "GPRINT:var1:MAX:\"%7.2lf %Sb/s max\\n\" " ;
$def[1] .= "LINE1:neg_var2#ff0000:\"out \" " ;
$def[1] .= "GPRINT:var2:LAST:\"%7.2lf %Sb/s last\" " ;
$def[1] .= "GPRINT:var2:AVERAGE:\"%7.2lf %Sb/s avg\" " ;
$def[1] .= "GPRINT:var2:MAX:\"%7.2lf %Sb/s max\\n\" " ;
$def[1] .= "AREA:var1#EACC00: " ;
$def[1] .= "AREA:neg_var2#ff0000: " ;
#$def[1] .= "COMMENT:\"TEST\"";
if($NAGIOS_TIMET != ""){
    $def[1] .= "VRULE:$.NAGIOS_TIMET.#00ff00:\"Last Service Check \\n\"
";
}
if($NAGIOS_LASTHOSTDOWN != ""){
    $def[1] .= "VRULE:$.NAGIOS_LASTHOSTDOWN.#FF0000:\"Last Host
Down\\n\" " ;
}

$def[1] .= "HRULE:$MAX[1]#003300:\"$CRIT[1] \\n\" " ;
#$def[1] .= "HRULE:$WARN[1]#ffff00";
#$def[1] .= "HRULE:$CRIT[1]#ff0000";
$def[1] .= "GPRINT:var1:LAST:\"Bandbreite IN %7.2lf %Sb/s von 200 MB/s zur
Zeit genutzt \\n\" " ;
$def[1] .= "GPRINT:var2:LAST:\"Bandbreite OUT %7.2lf %Sb/s von 200 MB/s zur
Zeit genutzt \\n\" " ;

?>

```

```

vi checkcommands.cfg

define command{
    command_name    check_snmp_int
    command_line    $USER1$/check_snmp_int.pl -H $HOSTADDRESS$ $ARG1$
#./check_snmp_int.pl -H 127.0.0.1 -C public -n eth0 -k -w 4000,4000 -c 8000,8000 --label
}

vi <hostname>.cfg (hier am Beispiel vom Filer)

define service{
.
.
.
check_command      check_snmp_int!-C public -k -fY -n vif-iscsi -w
60000,60000 -c 80000,80000
.
.
.
}

```

Installation NDO Utils (auf Primary Node)

```

cd /cluster/nagios/download/
wget http://garr.dl.sourceforge.net/sourceforge/nagios/ndoutils-1.4b7.tar.gz
cd ndoutils
./configure && make

```

Dateien Kopieren (für nagios 2.x die Dateien mit *-2x und Nagios 3.x *-3x)

```

cd src

cp -a ndo2db-3x /usr/local/nagios/bin/ndo2db
cp -a ndomod-3x.o /usr/local/nagios/ndo

cd ../config/

cp -a ndo2db.cfg /usr/local/nagios/etc/.
cp -a ndomod.cfg /usr/local/nagios/etc/.

```

Datenbank anlagen

```
mysqladmin -u root -p create nagios
```

```
cd ../db
```

```
mysql -u root -p nagios < mysql.sql
mysql -u root -p nagios < mysql-mods-1.4b7.sql

```

Datenbank User nagios anlagen

```
mysql -u root -p
```

```
mysql>use nagios;
```

```
mysql> GRANT USAGE ON * . * TO 'nagios'@'localhost' IDENTIFIED BY '<PASSWORD>'
WITH MAX_QUERIES_PER_HOUR 0
MAX_CONNECTIONS_PER_HOUR 0
MAX_UPDATES_PER_HOUR 0 ;

```

```
mysql> GRANT SELECT , INSERT , UPDATE , DELETE ON `nagios`.* TO
'nagios'@'localhost';
mysql> FLUSH PRIVILEGES;

```

DB Nutzer und Passwort den NDOUTILS bekanntgeben

```
vi /usr/local/nagios/etc/ndo2db.cfg
```

ACHTUNG: Alles weiteren Befehle nur noch als nagios User ausführen. Nicht als root !

```
su nagios
```

```
/usr/local/nagios/bin/ndo2db -c /usr/local/nagios/etc/ndo2db.cfg
```

Nagios Config anpassen (dies Zeile hinzufügen WICHTIG es ist nur eine Zeile also hintereinander scgreiben)

```
vi /usr/local/nagios/etc/nagios.cfg
```

```
broker_module=/usr/local/nagios/ndo config_file=/usr/local/nagios/etc/ndomod.cfg
```

jetzt sollten zwei prozesse laufen

```
/usr/local/nagios/bin/ndo2db -c /usr/local/nagios/etc/ndo2db.cfg
```

```
/usr/local/nagios/bin/ndo2db -c /usr/local/nagios/etc/ndo2db.cfg
```

Installation nagios-business-process-addon-0.9

wget <http://puzzle.dl.sourceforge.net/sourceforge/nagiosbp/nagios-business-process-addon-0.9.1.tar.gz>

```
cp -a nagios-ext /usr/local/nagios/.
```

```
chown -R nagios.nagios /usr/local/nagios/nagios-ext
```

Links setzten auf **beiden Nodes**

```
cd /usr/lib/perl5/site_perl/5.8.8
```

```
ln -s /cluster/nagios/nagios/nagios-ext/sbin/nagiosBp.pm .
```

```
ln -s /cluster/nagios/nagios/nagios-ext/sbin/ndodb.pm .
```

```
ln -s /cluster/nagios/nagios/nagios-ext/sbin/bsutils.pm .
```

testen mit `perl -e 'use nagiosBp'` wenn keine Fehlermeldung kommen ist alles ok
installieren von CGI::Simple für Perl

```
perl -MCPAN -e 'install CGI::Simple'
```

auf beiden NODES

```
ln -s /cluster/nagios/nagios/nagios-ext /usr/local/nagios-ext
```

```
vi /cluster/nagios/nagios/nagios-ext/etc/ndo_db_readonly.cfg
```

```
ndodb_prefix=nagios_
```

Apache Config anpassen (auf dem aktiven NODE)

```
vi /etc/apache2/default-server.conf
```

```
%s/\usr/share/apache2/cluster/config/apache2share/g  
%s/etc/apache2/cluster/config/apache2/g
```

```
vi /etc/apache2/conf.d/apache2-manual.conf
```

```
%s/\usr/share/apache2/cluster/config/apache2share/g
```

```
vi /etc/apache2/extra/httpd-autoindex.conf
```

```
%s/\usr/share/apache2/cluster/config/apache2share/g
```

```
vi /etc/apache2/extra/httpd-manual.conf
```

```
%s/\usr/share/apache2/cluster/config/apache2share/g
```

```
vi /cluster/config/apache2share/get_includes
```

```
: ${sysconfdir:=/cluster/config/$pname}  
: ${sysconfig_apache:=/cluster/config/sysconfig/$pname}  
apache_bin=$(/cluster/config/apache2share/find_mpm 2>/dev/null)  
%s/\usr/share/apache2/cluster/config/apache2share/g
```

```
vi errors.conf
```

```
%s/\usr/share/apache2/cluster/config/apache2share/g
```

in Apache Startscript

```
vi /etc/init.d/apache2
```

```
: ${sysconfdir:=/cluster/config/$pname}  
: ${sysconfig_apache:=/cluster/config/apache2/sysconfig/$pname}
```

```
%s/\usr/share/apache2/cluster/config/apache2share/g
```

```
%s/etc/apache2/cluster/config/apache2/g
```

```
vi /etc/apache2/conf.d/nagios.conf
```

```
ScriptAlias /nagios-ext/cgi-bin /cluster/nagios/nagios/nagios-ext/sbin
```

```
<Directory /cluster/nagios/nagios/nagios-ext/sbin>  
Options ExecCGI  
AllowOverride None  
Order allow,deny  
Allow from all  
AuthName "Nagios Access"  
AuthType Basic  
AuthUserFile /cluster/nagios/nagios/etc/htpasswd.users  
Require valid-user  
</Directory>
```

```
Alias /nagios-ext /cluster/nagios/nagios/nagios-ext/share
```

```
<Directory "/cluster/nagios/nagios/nagios-ext/share">  
Options None  
AllowOverride None  
Order allow,deny  
Allow from all  
AuthName "Nagios Access"  
AuthType Basic  
AuthUserFile /cluster/nagios/nagios/etc/htpasswd.users  
Require valid-user  
</Directory>
```

Links löschen

```
rm /etch/apache2
rm /usr/share/apache2
```

Editieren der Nagios Startseite

```
vi /usr/local/nagios/share/side.html
```

```
<tr>
    <td width=13></td>
    <td nowrap><a href="/nagios/cgi-
bin/statuswrl.cgi?host=all" target="main"
onMouseOver="switchdot('statuswrl-dot',1)" onMouseOut="s
witchdot('statuswrl-dot',0)" class="NavBarItem">3-D Status Map</a></td>
</tr>
    You insert the following lines:
    <tr>
        <td width=13></td>
        <td nowrap><a href="/nagios-ext/cgi-bin/nagios-
bp.cgi" target="main" onMouseOver="switchdot('statuswrl-dot',1)"
onMouseOut="switch
dot('statuswrl-dot',0)" class="NavBarItem">Business Process View</a></td>
</tr>
    <tr>
        <td width=13></td>
        <td nowrap><a href="/nagios-ext/cgi-bin/nagios-
bp.cgi?mode=bi" target="main" onMouseOver="switchdot('statuswrl-dot',1)"
onMouseOut
="switchdot('statuswrl-dot',0)" class="NavBarItem">Business Impact</a></td>
</tr>
```