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Exadata Database Machine and Exadata Storage Server Supported Versions (Doc ID 888828.1)

5 composants à patcher :

- KVM host & VM → Nodes
- Storage Cell - > Cells
- RoCE switches → Sw
- dbnu
- GI

Exemple (09/2023) :

```
### Nodes ### p35667496_221000_Linux-x86-64.zip
### Cells ### p35767204_221000_Linux-x86-64.zip
### Sw    ### p35468771_221000_Linux-x86-64.zip
### dbnu  ### p21634633_231500_Linux-x86-64.zip
### GI    ### p35755646_1920000DBRU_Linux-x86-64.zip + p35319490_190000_Linux-x86-64.zip + p35656840_1920000DBRU_Linux-x86-64.zip
```

00_prepare

```
cp /mnt/patches/repository/patch.conf.no2yy86.2207 /mnt/patches/repository/patch.conf.no2yy86.2207.backup
cp /mnt/patches/repository/patch.conf.pc2yy55.2207 /mnt/patches/repository/patch.conf.pc2yy55.2207.backup

cp /mnt/patches/repository/patch.conf.no2yy86.2207 /mnt/patches/repository/patch.conf.no2yy86.2310
cp /mnt/patches/repository/patch.conf.pc2yy55.2207 /mnt/patches/repository/patch.conf.pc2yy55.2310

sed -i "s/22.1.2/22.1.15/g" /mnt/patches/repository/patch.conf.no2yy86.2310
sed -i "s/220816/230901/g" /mnt/patches/repository/patch.conf.no2yy86.2310
sed -i "s/7.0(3)I7(9)/10.2(4)/g" /mnt/patches/repository/patch.conf.no2yy86.2310
sed -i "s/p34388153_221000_Linux-x86-64.zip/p35667496_221000_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.no2yy86.2310
sed -i "s/FILES_PATCHBASE=p20629338_212000_Linux-x86-64.zip/FILES_PATCHBASE=p20629338_231300_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.no2yy86.2310
sed -i "s/FILES_CELL=p34483757_221000_Linux-x86-64.zip/FILES_CELL=p35767204_221000_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.no2yy86.2310
sed -i "s/FILES_OPATCH=p6880880_122010_Linux-x86-64.zip/FILES_OPATCH=p6880880_190000_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.no2yy86.2310
sed -i "s/FILES_SWITCH=p34388152_221000_Linux-x86-64.zip/FILES_SWITCH=p35468771_221000_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.no2yy86.2310

sed -i "s/22.1.2/22.1.15/g" /mnt/patches/repository/patch.conf.pc2yy55.2310
sed -i "s/220816/230901/g" /mnt/patches/repository/patch.conf.pc2yy55.2310
sed -i "s/7.0(3)I7(9)/10.2(4)/g" /mnt/patches/repository/patch.conf.pc2yy55.2310
sed -i "s/p34388153_221000_Linux-x86-64.zip/p35667496_221000_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.pc2yy55.2310
sed -i "s/FILES_PATCHBASE=p20629338_212000_Linux-x86-64.zip/FILES_PATCHBASE=p20629338_231300_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.pc2yy55.2310
sed -i "s/FILES_CELL=p34483757_221000_Linux-x86-64.zip/FILES_CELL=p35767204_221000_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.pc2yy55.2310
sed -i "s/FILES_OPATCH=p6880880_122010_Linux-x86-64.zip/FILES_OPATCH=p6880880_190000_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.pc2yy55.2310
sed -i "s/FILES_SWITCH=p34388152_221000_Linux-x86-64.zip/FILES_SWITCH=p35468771_221000_Linux-x86-64.zip/g" /mnt/patches/repository/patch.conf.pc2yy55.2310

#nohup /opt/oracle.ahf/exachk/exachk -a -clusternodes `cat $HOME/dbs_group | awk '{print $1}'|xargs| sed -e 's/ /,/g'` -s &> /tmp/exachk_`date +%Y-%m-%d_%H-%M`.log &

##mycmd## dcli -l root -g $HOME/cell_group 'cellcli -e list physicaldisk' | grep -v normal
##mycmd## dcli -l root -g $HOME/cell_group 'cellcli -e list celldisk' | grep -v normal
##mycmd## dcli -l root -g $HOME/cell_group 'cellcli -e list griddisk attributes name,asmmodestatus,asmdeactivationoutcome' | grep -vi yes

### cleanup
dcli -l root -g $HOME/dbs_group 'mkdir -p /EXAVMIMAGES/patches'
dcli -l root -g $HOME/dbs_group 'ls -al /EXAVMIMAGES/patches'
#dcli -l root -g $HOME/dbs_group 'rm -rf /EXAVMIMAGES/patches/*'
#dcli -l root -g $HOME/dbs_group 'rm -rf /EXAVMIMAGES/patches/.*'
dcli -l root -g $HOME/dbs_group 'ls -al  /EXAVMIMAGES/patches'

dcli -l root -g $HOME/guests_group 'mkdir -p /u01/patches'
#dcli -l root -g $HOME/guests_group 'rm -rf /u01/patches/*'
#dcli -l root -g $HOME/guests_group 'rm -rf /u01/patches/.*'
dcli -l root -g $HOME/guests_group 'ls -al  /u01/patches'
dcli -l root -g $HOME/guests_group 'df -hP|grep /u01/patches'


##mycmd## dcli -l root -g $HOME/dbs_group  'dbmcli -e list alerthistory'
##mycmd## dcli -l root -g $HOME/guests_group 'dbmcli -e list alerthistory'

##mycmd## dcli -l root -g $HOME/dbs_group 'dbmcli -e drop alerthistory all'
##mycmd## dcli -l root -g $HOME/guests_group 'dbmcli -e drop alerthistory all'

---------------------- ##mycmd## ipmitool bmc reset cold
---------------------- ##mycmd## dcli -l root -g $HOME/cell_group ipmitool bmc reset cold
```

```
vi /EXAVMIMAGES/patches/screenrc

hardstatus alwayslastline "%{= RY}%H %{kG}%{G} kompo.0: %{c}%w %=%{kG}%c:%s %D, %M %d %Y "
defscrollback 5000
deflog on
logfile screenlog_kompo.0
sessionname kompo.0

cd /EXAVMIMAGES/patches
screen -c /EXAVMIMAGES/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '


dcli -l root -g $HOME/dbs_group -f /EXAVMIMAGES/patches/screenrc -d /EXAVMIMAGES/patches/screenrc
dcli -l root -g $HOME/guests_group -f /EXAVMIMAGES/patches/screenrc -d /u01/patches/screenrc

### OH patcher
dcli -l root -g $HOME/guests_group 'ls -al /mnt/patches/repository/p20629338_231300_Linux-x86-64.zip'
dcli -l root -g $HOME/guests_group 'unzip -qo /mnt/patches/repository/p20629338_231300_Linux-x86-64.zip -d /u01/patches'
dcli -l root -g $HOME/guests_group 'ls -al /u01/patches'
dcli -l root -g $HOME/dbs_group 'unzip -qo /mnt/patches/repository/p20629338_231300_Linux-x86-64.zip -d /EXAVMIMAGES/patches'
dcli -l root -g $HOME/dbs_group 'ls -al  /EXAVMIMAGES/patches'

dcli -l root -g $HOME/guests_group -f /mnt/patches/repository/patch.conf.no2yy86.2310 -d /u01/patches/conf/patch.conf
dcli -l root -g $HOME/dbs_group -f /mnt/patches/repository/patch.conf.no2yy86.2310 -d /EXAVMIMAGES/patches/conf/patch.conf

dcli -l root -g $HOME/guests_group -f /mnt/patches/repository/patch.conf.pc2yy55.2310 -d /u01/patches/conf/patch.conf
dcli -l root -g $HOME/dbs_group -f /mnt/patches/repository/patch.conf.pc2yy55.2310 -d /EXAVMIMAGES/patches/conf/patch.conf

### OS
dcli -l root -g $HOME/guests_group 'mkdir -p /u01/patches/tmp/'
dcli -l root -g $HOME/guests_group 'mkdir /u01/patches/patches'
dcli -l root -g $HOME/dbs_group 'mkdir /EXAVMIMAGES/patches/tmp'
dcli -l root -g $HOME/dbs_group 'mkdir /EXAVMIMAGES/patches/patches'


dcli -l root -g $HOME/guests_group 'ls -al /mnt/patches/repository/p35667496_221000_Linux-x86-64.zip'
dcli -l root -g $HOME/dbs_group 'ls -al /mnt/patches/repository/p35667496_221000_Linux-x86-64.zip'

dcli -l root -g $HOME/dbs_group 'cp /mnt/patches/repository/p35667496_221000_Linux-x86-64.zip /EXAVMIMAGES/patches/patches/'
dcli -l root -g $HOME/guests_group 'cp /mnt/patches/repository/p35667496_221000_Linux-x86-64.zip /u01/patches/patches/'

dcli -l root -g $HOME/dbs_group 'cp /mnt/patches/repository/p35853251_2211500_Linux-x86-64.zip /EXAVMIMAGES/patches/patches/'
dcli -l root -g $HOME/guests_group 'cp /mnt/patches/repository/p35853251_2211500_Linux-x86-64.zip /u01/patches/patches/'


dcli -l root -g $HOME/guests_group 'ls -al  /u01/patches/patches/'
dcli -l root -g $HOME/dbs_group 'ls -al /EXAVMIMAGES/patches/patches/'

dcli -l root -g $HOME/dbs_group 'cp /mnt/patches/repository/p35667496_221000_Linux-x86-64.zip /EXAVMIMAGES/patches/patches/'
dcli -l root -g $HOME/guests_group 'cp /mnt/patches/repository/p35667496_221000_Linux-x86-64.zip /u01/patches/patches/'

### dbnu
dcli -l root -g $HOME/guests_group 'ls -al /mnt/patches/repository/p21634633_231500_Linux-x86-64.zip'
dcli -l root -g $HOME/dbs_group 'ls -al /mnt/patches/repository/p21634633_231500_Linux-x86-64.zip'

dcli -l root -g $HOME/dbs_group "unzip -o -j -d /EXAVMIMAGES/patches/patches /mnt/patches/repository/p21634633_231500_Linux-x86-64.zip '*dbnodeupdate.zip'"
dcli -l root -g $HOME/dbs_group 'unzip -qo /EXAVMIMAGES/patches/patches/dbnodeupdate.zip -d /EXAVMIMAGES/patches/bin/dbnu'
dcli -l root -g $HOME/dbs_group 'bash -c "export gc_patch_base=/EXAVMIMAGES/patches;source /EXAVMIMAGES/patches/lib/constants.sh;source /EXAVMIMAGES/patches/lib/log_message.sh;source
/EXAVMIMAGES/patches/lib/checkDBnodeupdate.sh;checkDBnodeupdate;exit"'

dcli -l root -g $HOME/guests_group "unzip -o -j -d /u01/patches/patches /mnt/patches/repository/p21634633_231500_Linux-x86-64.zip '*dbnodeupdate.zip'"
dcli -l root -g $HOME/guests_group 'unzip -qo /u01/patches/patches/dbnodeupdate.zip -d /u01/patches/bin/dbnu'
dcli -l root -g $HOME/guests_group 'bash -c "export gc_patch_base=/u01/patches;source /u01/patches/lib/constants.sh;source /u01/patches/lib/log_message.sh;source /u01/patches/lib/checkDBnodeupdate.sh;checkDBnodeupdate;exit"'

dcli -l root -g $HOME/dbs_group '/EXAVMIMAGES/patches/bin/dbnu/dbnodeupdate.sh -V'
dcli -l root -g $HOME/guests_group '/u01/patches/bin/dbnu/dbnodeupdate.sh -V'

#### Cells

dcli -l root -g $HOME/dbs_group 'unzip -qo /mnt/patches/repository/p35767204_221000_Linux-x86-64.zip -d /EXAVMIMAGES/patches/tmp'

#### OH
dcli -l root -g $HOME/guests_group 'mkdir -p /u01/patches/tmp/OPATCH_12'
dcli -l root -g $HOME/guests_group 'unzip -qo /mnt/patches/repository/p6880880_190000_Linux-x86-64.zip -d /u01/patches/tmp/OPATCH_12/'
dcli -l root -g $HOME/guests_group -f /mnt/patches/repository/p6880880_190000_Linux-x86-64.zip -d /u01/patches/patches/
```

19.20 GI

```
dcli -l root -g $HOME/guests_group 'unzip -qo /mnt/patches/repository/p35319490_190000_Linux-x86-64.zip -d /u01/patches/tmp/'
dcli -l root -g $HOME/guests_group 'unzip -qo /mnt/patches/repository/p35656840_1920000DBRU_Linux-x86-64.zip -d /u01/patches/tmp/'
dcli -l root -g $HOME/guests_group 'unzip -qo /mnt/patches/repository/p35755646_1920000DBRU_Linux-x86-64.zip -d /u01/patches/tmp/'
```

Checks espace disque

```
dcli -l root -g $HOME/dbs_group 'df -h /EXAVMIMAGES'
dcli -l root -g $HOME/guests_group 'df -h /u01/patches'
dcli -l root -g $HOME/guests_group 'df -h /u01/app/19.0.0.0/grid/'
```

02_DBNodesOS

```
### on KVM Host
cd /EXAVMIMAGES/patches
screen -c /EXAVMIMAGES/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '

##mycmd## cd /EXAVMIMAGES/patches/bin
##mycmd## ./precheck.sh -skip_switches -recheck_all
##mycmd## egrep -v 'INFO|PASS|SUCCESS|OUTPUT|^$'  `find /var/log/PlatinumPatching/PRECHECKS -name "precheck*.log" ! -name "*debug*"  | xargs ls -altrt | tail -1| awk -F' ' '{print $9}'`

##mycmd## ### find /var/log/PlatinumPatching/PRECHECKS -name "precheck*.log" ! -name "*debug*" -exec ls -rlt {} \+;
##mycmd## ### egrep -v 'INFO|PASS|SUCCESS|OUTPUT|^$'
##mycmd## egrep -v 'INFO|PASS|SUCCESS|OUTPUT|^$'  `find /var/log/PlatinumPatching/PRECHECKS -name "precheck*.log" ! -name "*debug*"  | xargs ls -altrt | tail -1| awk -F' ' '{print $9}'`
##mycmd## /opt/exadata_ovm/vm_maker --list --vcpu --memory

2023-Oct-31 09:26:03 UTC [FAIL]      *** no2yy861: Free space on /EXAVMIMAGES filesystem. Required: 157286400K  Available: 121028420K
2023-Oct-31 09:33:01 UTC [FAIL]      *** no2yy862: The active and inactive lvm size are NOT equal
=> ne pas tenir compte

### on each 1st cluster node
cd /u01/patches/
screen -c /u01/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '
##mycmd## cd /u01/patches/bin
##mycmd## ./precheck.sh -dbnodes=`/u01/app/19.0.0.0/grid/bin/olsnodes -n | awk '{print $1}'|xargs| sed -e 's/ /,/g'` -skip_cells -skip_database -skip_switches -skip_em -recheck_all
##mycmd## ### find /var/log/PlatinumPatching/PRECHECKS -name "precheck*.log" ! -name "*debug*" -exec ls -rlt {} \+;
##mycmd## ### egrep -v 'INFO|PASS|SUCCESS|OUTPUT|^$'
##mycmd## egrep -v 'INFO|PASS|SUCCESS|OUTPUT|^$'  `find /var/log/PlatinumPatching/PRECHECKS -name "precheck*.log" ! -name "*debug*"  | xargs ls -altrt | tail -1| awk -F' ' '{print $9}'`

### on KVM Host
##mycmd## for myNodes in `/opt/exadata_ovm/vm_maker --list | awk -F '(' {'print $1'}`; do ssh $myNodes egrep -v "INFO|PASS|SUCCESS|OUTPUT|^$"  `find /var/log/PlatinumPatching/PRECHECKS -name "precheck*.log" ! -name "*debug*"  | xargs ls -altrt | tail
-1| awk -F ' ' '{print $9}'` ; done
##mycmd## /opt/exadata_ovm/vm_maker --list --vcpu --memory

-------------------------------------------------------------------------------------------------------------------------------------

### on each 1st cluster node
cd /u01/patches
screen -c /u01/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '
/u01/app/19.0.0.0/grid/bin/crsctl disable crs
/u01/app/19.0.0.0/grid/bin/crsctl stop crs -f
##mycmd## sync
##mycmd## shutdown -h now

### on KVM Host
cd /EXAVMIMAGES/patches
screen -c /EXAVMIMAGES/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '
/opt/exadata_ovm/vm_maker --list --vcpu --memory
##mycmd## /opt/exadata_ovm/vm_maker --start-domain --all
##mycmd## /opt/exadata_ovm/vm_maker --list --vcpu --memory
##mycmd## ipmitool bmc reset cold
##mycmd## reboot

cd /EXAVMIMAGES/patches
screen -c /EXAVMIMAGES/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '

##mycmd## /opt/exadata_ovm/vm_maker --list-domains
```

```
df -hP
umount -a -t nfs4,smbfs,nfs,cifs -f -l
cp /etc/fstab /etc/fstab.origQDPE
grep -v nfs /etc/fstab > /etc/fstab.noNFS
unalias cp ; cp -f /etc/fstab.noNFS /etc/fstab
##mycmd## df -hP

##mycmd## /opt/exadata_ovm/vm_maker --stop-domain --all
##mycmd## /opt/exadata_ovm/vm_maker --list-domains
##mycmd## cd /EXAVMIMAGES/patches/bin/dbnu
dcli -l root -g $HOME/dbs_group imageinfo -version
dcli -l root -g $HOME/dbs_group imageinfo -status
dcli -l root -g $HOME/dbs_group uname -r

##mycmd## ipmitool lan print  # adresse IP de l'ILOM

##mycmd## ./dbnodeupdate.sh -u -l /EXAVMIMAGES/patches/patches/p35667496_221000_Linux-x86-64.zip -b
##mycmd## ./dbnodeupdate.sh -u -l /EXAVMIMAGES/patches/patches/p35667496_221000_Linux-x86-64.zip -t 22.1.15.0.0.230901 -v -M
##mycmd## ./dbnodeupdate.sh -u -l /EXAVMIMAGES/patches/patches/p35667496_221000_Linux-x86-64.zip -t 22.1.15.0.0.230901 -n -q


cd /EXAVMIMAGES/patches
screen -c /EXAVMIMAGES/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '
dcli -l root -g $HOME/dbs_group imageinfo -version
dcli -l root -g $HOME/dbs_group imageinfo -status
dcli -l root -g $HOME/dbs_group uname -r
##mycmd## /opt/oracle.cellos/CheckHWnFWProfile
##mycmd## cd /EXAVMIMAGES/patches/bin/dbnu
##mycmd## ./dbnodeupdate.sh -t 22.1.15.0.0.230901 -c -q
##mycmd## cp -f /etc/fstab.origQDPE /etc/fstab
##mycmd## mount -a ; df -hP
##mycmd## /opt/exadata_ovm/vm_maker --list --vcpu --memory


### on each KVM Guests of patched KVM Host
cd /u01/patches
screen -c /u01/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '

dcli -l root -g $HOME/dbs_group imageinfo -version
dcli -l root -g $HOME/dbs_group imageinfo -status
dcli -l root -g $HOME/dbs_group uname -r
mount -a
rpm -qa | wc -l
#### if error, need to rebuild rpm database
        ls -al /var/lib/rpm/__*
        rm /var/lib/rpm/__*
        rpm --rebuilddb
        rpm -qa | wc -l
##mycmd## df -hP
 cp /etc/fstab /etc/fstab.origQDPE
grep -v nfs /etc/fstab > /etc/fstab.noNFS
unalias cp && cp -f /etc/fstab.noNFS /etc/fstab
##mycmd## umount -a -t nfs4,smbfs,nfs,cifs -f -l
##mycmd## df -hP
if [[ $(ps -ef | grep diagsnap | grep -vc grep) -gt 0 ]]; then /u01/app/19.0.0.0/grid/bin/oclumon manage -disable diagsnap; fi
 inodes=$(df -i -P / | awk 'END {print $3}'); if [ $inodes -gt 500000 ] && [ $inodes  -le 1000000 ]; then echo -e "\nWARN... $inodes files\n"; elif [ $inodes -gt 1000000 ]; then echo -e "\nFAIL... $inodes files\n"; else echo -e "\nPASS... $inodes
files\n"; fi
##mycmd## cd /u01/patches/bin/dbnu/
##mycmd## ./dbnodeupdate.sh -b -s
##mycmd## ls -alh /u01/patches/patches/p*_22*_Linux-x86-64.zip
##mycmd## ./dbnodeupdate.sh -u -l /u01/patches/patches/p35667496_221000_Linux-x86-64.zip -t 22.1.15.0.0.230901 -v -M
##mycmd## ./dbnodeupdate.sh -u -l /u01/patches/patches/p35667496_221000_Linux-x86-64.zip -t 22.1.15.0.0.230901 -n -q

# /dev/sda1 bug
##mycmd## ./dbnodeupdate.sh -u -l /u01/patches/patches/p35853251_2211500_Linux-x86-64.zip -t 22.1.15.0.0.231013 -v -M
##mycmd## ./dbnodeupdate.sh -u -l /u01/patches/patches/p35853251_2211500_Linux-x86-64.zip -t 22.1.15.0.0.231013 -n -q


cd /u01/patches/
screen -c /u01/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '
##mycmd## cd /u01/patches/bin/dbnu/
##mycmd## umount -a -t nfs4,smbfs,nfs,cifs -f -l
##mycmd## ./dbnodeupdate.sh -t 22.1.15.0.0.230901 -c -q
```

```
##mycmd## cp -f /etc/fstab.origQDPE /etc/fstab
##mycmd## mount -a
##mycmd## df -hP
    ##mycmd## yum list installed | grep fuse
    dcli -l root -g $HOME/dbs_group imageinfo -version
    dcli -l root -g $HOME/dbs_group imageinfo -status
    dcli -l root -g $HOME/dbs_group uname -r
##mycmd## . oraenv
/u01/app/19.0.0.0/grid/bin/crsctl enable crs
/u01/app/19.0.0.0/grid/bin/crsctl check crs


if issues
cd /var/log/cellos/
cat dbnodeupdate.log
cat dbserver_backup.sh.log
cat CheckHWnFWProfile.log
cat exadata.computenode.post.log
cat cellFirstboot.log
cat exachkcfg.log
cat vldrun.each_boot.log
cat validations.log


# Patching GI

cd /u01/patches
screen -c /u01/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '

tfactl status
tfactl stop
##mycmd## tfactl status


### not to be used
mv /u01/app/19.0.0.0/grid/OPatch /u01/app/19.0.0.0/grid/OPatch.`date +%Y%m%d`
ls -dl /u01/app/19.0.0.0/grid/OP*
unzip -qo /mnt/patches/repository/p6880880_190000_Linux-x86-64.zip -d /u01/app/19.0.0.0/grid
chown -R grid:oinstall /u01/app/19.0.0.0/grid/OPatch
su - grid -c "/u01/app/19.0.0.0/grid/OPatch/opatch version -oh /u01/app/19.0.0.0/grid"
###

##mycmd## cd /u01/patches/bin

./patch-homes.sh -h0 /u01/app/19.0.0.0/grid -h0b 35319490,35755646 -rolling --verify
./patch-homes.sh -h0 /u01/app/19.0.0.0/grid -h0b 35319490,35755646 -rolling


##mycmd## dcli -l root -g $HOME/dbs_group 'md5sum /u01/app/19.0.0.0/grid/bin/oracle'
/u01/app/19.0.0.0/grid/bin/crsctl query crs activeversion -f
/u01/app/19.0.0.0/grid/bin/crsctl check crs

for myNodes in `/opt/exadata_ovm/vm_maker --list | awk -F '(' {'print $1'}`; do ssh $myNodes /home/oracle/DBA/scripts/rac_status.sh ; done
```

03_StorageNodesOS

```
### on KVM Host
cd /EXAVMIMAGES/patches
screen -c /EXAVMIMAGES/patches/screenrc
export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '
 cd /EXAVMIMAGES/patches/bin
##mycmd## ./precheck.sh -skip_dbsrv -skip_switches -recheck_all
##mycmd## egrep -v 'INFO|PASS|SUCCESS|^$'  `find /var/log/PlatinumPatching/PRECHECKS -name "precheck*.log" ! -name "*debug*"  | xargs ls -altrt | tail -1| awk -F' ' '{print $9}'`
##mycmd## dcli -l root -g $HOME/cell_group 'cellcli -e list physicaldisk' | grep -v normal
##mycmd## dcli -l root -g $HOME/cell_group 'cellcli -e list celldisk' | grep -v normal
##mycmd## dcli -l root -g $HOME/cell_group 'cellcli -e list griddisk attributes name,asmmodestatus,asmdeactivationoutcome' | grep -vi yes

### on each 1st cluster node
 cd /u01/patches
 screen -c /u01/patches/screenrc
 export PS1='\[\e[1;31m\][\u@\h (\t) \w]\$\[\e[0m\] '
##mycmd## /u01/app/19.0.0.0/grid/bin/crsctl query crs activeversion -f
su - grid
export ORACLE_SID=+ASM1
```

```
export ORAENV_ASK=NO
. oraenv
sqlplus / as sysasm <<EOF
set echo on
select * from gv\$asm_operation;
show parameter ASM_POWER_LIMIT
alter system set ASM_POWER_LIMIT = 256 scope=both;
show parameter ASM_POWER_LIMIT
column dg format a15
column attribute format a30
column value format a15
select dg.name dg,a.name attribute,a.value from v\$asm_diskgroup dg, v\$asm_attribute a where dg.group_number=a.group_number and a.name='failgroup_repair_time' order by dg;
column dg format a15
column attribute format a30
column value format a15
select dg.name dg,a.name attribute,a.value from v\$asm_diskgroup dg, v\$asm_attribute a where dg.group_number=a.group_number and a.name='disk_repair_time' order by dg;
column dg format a15
column attribute format a30
column value format a15
select dg.name dg,a.name attribute,a.value from v\$asm_diskgroup dg, v\$asm_attribute a where dg.group_number=a.group_number and a.name='compatible.asm' order by dg;
exit
EOF
exit


### ON KVM Host

##mycmd## cd /EXAVMIMAGES/patches/tmp/patch_22.1.15.0.0.230901
##mycmd## ./patchmgr -cells $HOME/cell_group.9_10 -reset_force
##mycmd## ./patchmgr -cells $HOME/cell_group.9_10 -cleanup
##mycmd## dcli -l root -g $HOME/cell_group.9_10 ipmitool bmc reset cold

####
##mycmd## dcli -l root -g $HOME/cell_group.9_10 'mount -av'


##mycmd## ./patchmgr -cells $HOME/cell_group.9_10 -patch_check_prereq -rolling
##mycmd## #### egrep -v 'INFO|PASS|SUCCESS|OUTPUT|^$' patchmgr.stdout ????
##mycmd## nohup ./patchmgr -cells $HOME/cell_group.9_10 -patch -rolling &

##mycmd## egrep 'Execute plugin check for Patching|state success Expected|Execute plugin check for Pre Disk Activation|Execute plugin check for Post Patch|Finalize patch and check final status on cells' patchmgr.stdout


su - grid
export ORACLE_SID=+ASM1
export ORAENV_ASK=NO
. oraenv
sqlplus / as sysasm <<EOF
set echo on lines 300 pages 5000
select * from gv\$asm_operation;
exit
EOF
exit

##mycmd## dcli -l root -g $HOME/cell_group.9_10 imageinfo -version
##mycmd## dcli -l root -g $HOME/cell_group.5_6 'cellcli -e list griddisk attributes name,status,asmmodestatus,asmdeactivationoutcome'
##mycmd## dcli -l root -g $HOME/guests_group "egrep -B 1 'rebalance of group|rebalance completed|asm_power_limit' /u01/app/grid/diag/asm/+asm/+ASM*/trace/alert_+ASM*.log"

##mycmd## ./patchmgr -cells $HOME/cell_group.9_10 -cleanup


### On KVM host (after all cells upgrade)
##mycmd## ./precheck.sh -skip_dbsrv -skip_switches -recheck_all
```