

AIX HOW TO CLONE A ROOTVG USING ALTERNATE DISK INSTALLATION ALTER_DISK_COPY

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Sometimes we need to upgrade the AIX Technology Level (TL), but it can become dangerous because imagine if we perform an upgrade and after that the system simply doesn't start again, or maybe an application starts getting locking. What I mean is that always we need to have a fallback plan, like an easier backup.



The rootvg is the VG responsible to store the AIX configuration, so before to start the upgrade we can create an alternate VG, it is almost like mirroring, but to install an alternate VG we need to have 2 disks, one that has the rootvg and another one without any data. When we perform the alternate VG it will copy an image of your current system and store it in the other disk, so in the future if necessary to make a

fallback it can be performed in few minutes.

Sometime people think that if the server already has an image stored in a TAPE it is good, and is not necessary to do an alternate disk, but you need to understand that the reading speed of a TAPE is really slow, and customers always does not have time to wait. And with an alternate VG you can make this fallback in few minutes.

Step 1. Preparing for the alternate disk installation

You need to have two disks to perform this installation, one must be not part of any VG(as hdisk1) and the other should be the disk with the rootvg(hdisk0) :

```
hdisk0 0009710fa9c79877 rootvg active
hdisk1 0009710f0b90db93 None
```

Obs. At this point if you rootvg is using a mirror you will net to unmirror the vg and remove the other disk from the rootvg as bellow :

```
# unmirrorvg rootvg
# reducevg rootvg hdiskXX
```

If your rootvg is using a mirror you can use the disk removed from rootvg to perform the alternate.

Step 2. Performing the clone The coomand-line for cloning rootvg is :

```
# alt_disk_install -C -B hdisk1
-C : To create the alternate
-B : To not change the boot sequence
hdisk1 : the disk not in user
```

To follow the process of the alternate task look at the alternate disk log file in :
/var/adm/ras/alt_disk_inst.log

Step 3. Checking if the alternation worked

To check if the alternation was done you can check with the lspv :

```
hdisk0 0009710fa9c79877 rootvg  
hdisk1 0009710f0b90db93 altinst_rootvg
```

3.1. Wake up your alternate VG to see if it is working

To make sure if it is working you can wake up your alternation VG with the command below, and after the command load finish you type df :

```
# alt_rootvg_op -W -d hdisk1  
  
# df -m  
Filesystem MB blocks Free %Used Iused %Iused Mounted on  
/dev/hd4 128.00 102.31 21% 2659 11% /  
/dev/hd2 1968.00 111.64 95% 40407 58% /usr  
/dev/hd9var 112.00 77.82 31% 485 3% /var  
/dev/hd3 96.00 69.88 28% 330 3% /tmp  
/dev/hd1 208.00 118.27 44% 1987 7% /home  
/proc - - - - - /proc  
/dev/hd10opt 1712.00 1445.83 16% 6984 3% /opt  
/dev/alt_hd4 128.00 102.16 21% 2645 11% /alt_inst  
/dev/alt_hd1 208.00 33.64 84% 1987 21% /alt_inst/home  
/dev/alt_hd10opt 1712.00 1445.77 16% 6984 3% /alt_inst/opt  
/dev/alt_hd3 96.00 72.38 25% 335 2% /alt_inst/tmp  
/dev/alt_hd2 1968.00 100.32 95% 40407 59% /alt_inst/usr  
/dev/alt_hd9var 112.00 77.53 31% 477 3% /alt_inst/var
```

3.2. Put your alternate VG to sleep back

You need to remember to sleep back your alternate disk, otherwise if you reboot the system you can damage your alternation data :

```
# alt_rootvg_op -S hdisk1
```

Step 4. Booting from the alternate disk

By default if you not type -B when perform the **step 2**, the boot sequence will be changed to the alternate disk. We have used the -B so the boot sequence is the same than before.

Let's make believe that anything helped and we need to boot the system with the alternate disk. To change the boot sequence is just follow the steps :

To check the bootable disk that is set:

```
# bootlist -m normal -o  
hdisk0
```

To change the boot disk :

```
# bootlist -m normal hdisk1
```

Step 5. Destroy the alternate

```
# alt_disk_install -X <Alternate_VG_Name>
```

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