1、 通过 tar 将/var/log 目录进行归档并分别实现最低和最高级别的压缩比，归档文件保存在用户目录/home/user 下，记录、观察过程和结果；

a、進到/home/user 下，用 tar -cf dayu.tar /var/log 命令將/var/log 進行歸檔。

b、然後用 gzip -9 dayu.tar 對歸檔的目錄實現最高壓縮比，再用 a 中的命令對/var/log 目錄進行歸檔，然後用 mv dayu.tar dayu1.tar 命令對第二次歸檔的目錄進行改名，再用 gzip -1 dayu1.tar 對歸檔目錄實現最小壓縮比。

```
[root@server user]# tar -cf dayu.tar /var/log
tar: Removing leading `/' from member names
[root@server user]# ls
dayu.tar
```

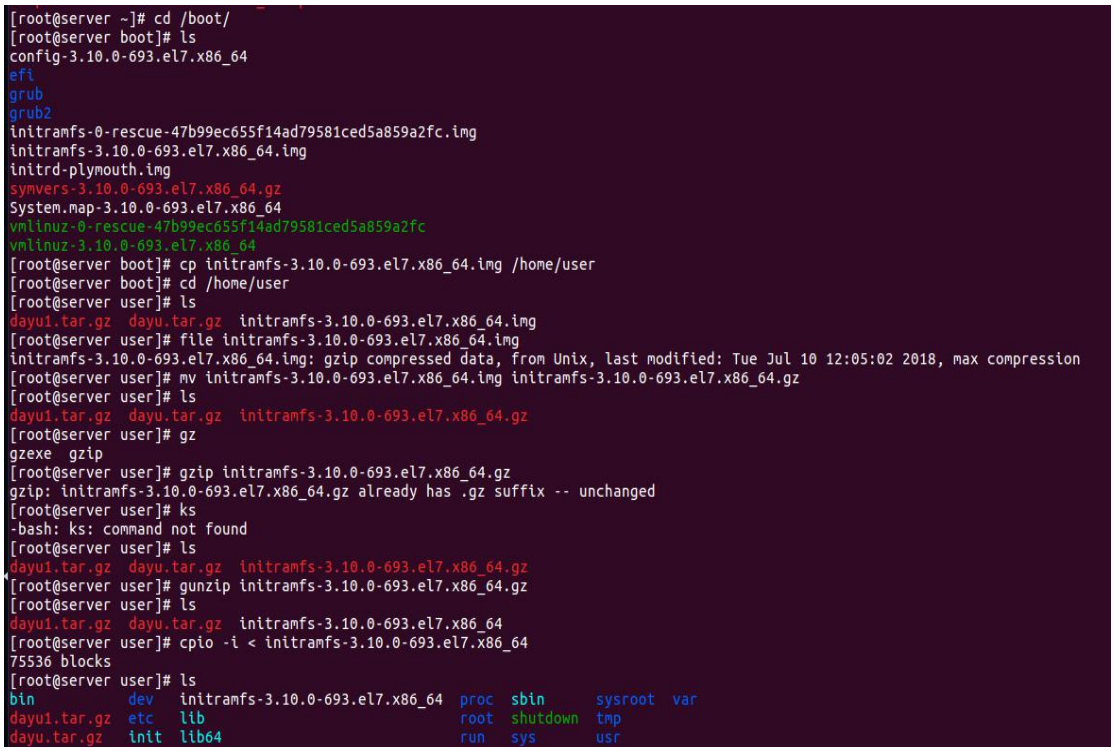
```
[root@server user]# gzip -9 dayu.tar
[root@server user]# ls
dayu.tar.gz
[root@server user]# tar -cf dayu.tar /var/log
tar: Removing leading `/' from member names
[root@server user]# ls
dayu.tar  dayu.tar.gz
[root@server user]# gzip -1 dayu.tar
gzip: dayu.tar.gz already exists; do you wish to overwrite (y or n)?
        not overwritten
[root@server user]# mv dayu.tar dayu1.tar
[root@server user]# ls
dayu1.tar  dayu.tar.gz
[root@server user]# gzip -1 dayu1.tar
[root@server user]# ls
dayu1.tar.gz  dayu.tar.gz
[root@server user]# ll
total 2940
-rw-r--r--. 1 root user 1677012 9月  12 19:37 dayu1.tar.gz
-rw-r--r--. 1 root user 1330083 9月  12 19:35 dayu.tar.gz
[root@server user]# ll -h
total 2.9M
-rw-r--r--. 1 root user 1.6M 9月  12 19:37 dayu1.tar.gz
-rw-r--r--. 1 root user 1.3M 9月  12 19:35 dayu.tar.gz
```

2、 通过 cpio 解开/boot/initramfs-x.xxx-xxx.img 文件，并将揭开内容与当前根目录下的结构进行一级子目录数量对比，记录过程和结果；

a、進到/boot/目錄下復制 initramfs-x.xxx-xxx.img 文件，將文件拷貝到/home/user 下，進到/home/user 下，用 file 命令查看 initramfs-x.xxx-xxx.img 文件類型。initramfs-3.10.0-693.el7.x86_64.img initramfs-3.10.0-693.el7.x86_64.gz，文件後綴.img 改爲.gz。

b、gunzip initramfs-3.10.0-693.el7.x86_64.gz 用此命令將文件解壓，之後 ls 對兩個文件進行對比。如下圖。

c、cpio -i < 對此文件進行解包。



3、 为用户目录/home/user 挂载镜像 lv，并记录操作过程，破坏主卷并实施救援，记录操作观察结果；

a、將兩塊磁盤轉換爲 pv，創建 vg，建立鏡像 lv，格式化之後，將鏡像 lv 掛載到/home/user。

用 lvs -a -o +devices 命令查看鏡像卷。

```
[root@server ~]# pvcreate /dev/vd[b-c]
  Physical volume "/dev/vdb" successfully created.
  Physical volume "/dev/vdc" successfully created.
[root@server ~]# vgcreate vg /dev/vd[b-c]
  Volume group "vg" successfully created
[root@server ~]# lvcreate -L 4G -m1 -n lv vg
WARNING: ext4 signature detected on /dev/vg/lv at offset 1080.
  Wiping ext4 signature on /dev/vg/lv.
  Logical volume "lv" created.
[root@server ~]# lvdisplay
  --- Logical volume ---
  LV Path                /dev/vg/lv
  LV Name                lv
  VG Name                vg
  LV UUID                kEO1qa-GQrX-gYct-aKNR-veEB-0yq1-MQyCdw
  LV Write Access        read/write
  LV Creation host, time server, 2018-09-13 10:05:59 +0800
  LV Status              available
  # open                 0
  LV Size                4.00 GiB
  Current LE             1024
  Mirrored volumes       2
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     8192
  Block device           252:4
```

```
[root@server ~]# mkfs.ext4 /dev/vg/lv
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=0 blocks, Stripe width=0 blocks
262144 inodes, 1048576 blocks
52428 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=1073741824
32 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

[root@server ~]# mount /dev/vg/lv /home/user
[root@server ~]# df -hT
Filesystem        Type      Size  Used Avail Use% Mounted on
/dev/vda2         ext4       94G  1.3G   88G   2% /
devtmpfs          devtmpfs  2.0G     0  2.0G   0% /dev
tmpfs             tmpfs     2.0G     0  2.0G   0% /dev/shm
tmpfs             tmpfs     2.0G  8.5M  2.0G   1% /run
tmpfs             tmpfs     2.0G     0  2.0G   0% /sys/fs/cgroup
/dev/vda1         xfs      1014M  120M  895M  12% /boot
tmpfs             tmpfs     396M     0  396M   0% /run/user/0
/dev/mapper/vg-lv ext4      3.9G   16M  3.6G   1% /home/user
[root@server ~]# lvs -a -o +devices
  LV            VG Attr       LSize Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert D
  lv            vg rwi-aor--- 4.00g                                    100.00           l
  [lv_rimage_0] vg iwi-aor--- 4.00g                                                      /
  [lv_rimage_1] vg iwi-aor--- 4.00g                                                      /
  [lv_rmeta_0]  vg ewi-aor--- 4.00m                                                      /
  [lv_rmeta_1]  vg ewi-aor--- 4.00m                                                      /
```

b、用 dd if=/dev/zero of=/dev/vdb count=10 命令對/dev/vdbjinxing 破壞，用 pvs 查看是否只剩下一塊盤，然後用 umount /home/user 卸載，在進行掛載。

c、vgreduce --removemissing --force vg 移除破壞的磁盤，pvs 查看是否移除。之後解除鏡像。對數據進行修復。

```
[root@server ~]# dd if=/dev/zero of=/dev/vdb count=10
10+0 records in
10+0 records out
5120 bytes (5.1 kB) copied, 0.000304571 s, 16.8 MB/s
[root@server ~]# vgs
  WARNING: Device for PV KPVF1o-yQBZ-I2va-ICRi-EbFa-RSPt-gsBBHk not found or rejected by a filter.
  WARNING: Couldn't find all devices for LV vg/lv_rimage_0 while checking used and assumed devices.
  WARNING: Couldn't find all devices for LV vg/lv_rmeta_0 while checking used and assumed devices.
  VG #PV #LV #SN Attr   VSize  VFree
  vg   2   1   0 wz-pn- 39.99g 31.98g
[root@server ~]# lvs
  WARNING: Device for PV KPVF1o-yQBZ-I2va-ICRi-EbFa-RSPt-gsBBHk not found or rejected by a filter.
  WARNING: Couldn't find all devices for LV vg/lv_rimage_0 while checking used and assumed devices.
  WARNING: Couldn't find all devices for LV vg/lv_rmeta_0 while checking used and assumed devices.
  LV   VG Attr       LSize Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  lv   vg rwi-aor-p- 4.00g                                    100.00
[root@server ~]# pvs
  WARNING: Device for PV KPVF1o-yQBZ-I2va-ICRi-EbFa-RSPt-gsBBHk not found or rejected by a filter.
  WARNING: Couldn't find all devices for LV vg/lv_rimage_0 while checking used and assumed devices.
  WARNING: Couldn't find all devices for LV vg/lv_rmeta_0 while checking used and assumed devices.
  PV         VG Fmt  Attr PSize   PFree
  /dev/vdc   vg lvm2 a--  <20.00g 15.99g
  [unknown]  vg lvm2 a-m  <20.00g 15.99g
[root@server ~]# umount /home/user
[root@server ~]# df -hT
Filesystem     Type      Size  Used Avail Use% Mounted on
/dev/vda2      ext4       94G  1.3G   88G   2% /
devtmpfs       devtmpfs  2.0G     0  2.0G   0% /dev
tmpfs          tmpfs     2.0G     0  2.0G   0% /dev/shm
tmpfs          tmpfs     2.0G  8.5M  2.0G   1% /run
tmpfs          tmpfs     2.0G     0  2.0G   0% /sys/fs/cgroup
/dev/vda1      xfs      1014M  120M  895M  12% /boot
tmpfs          tmpfs     396M     0  396M   0% /run/user/0
```

```
[root@server ~]# mount /dev/vg/lv /home/user
[root@server ~]# df -hT
Filesystem        Type      Size  Used Avail Use% Mounted on
/dev/vda2         ext4       94G  1.3G   88G   2% /
devtmpfs          devtmpfs  2.0G     0  2.0G   0% /dev
tmpfs             tmpfs     2.0G     0  2.0G   0% /dev/shm
tmpfs             tmpfs     2.0G  8.5M  2.0G   1% /run
tmpfs             tmpfs     2.0G     0  2.0G   0% /sys/fs/cgroup
/dev/vda1         xfs      1014M  120M  895M  12% /boot
tmpfs             tmpfs     396M     0  396M   0% /run/user/0
/dev/mapper/vg-lv ext4      3.9G   16M  3.6G   1% /home/user
[root@server ~]# vgreduce --removemissing --force vg
  WARNING: Device for PV KPVF1o-yQBZ-I2va-ICRi-EbFa-RSPt-gsBBHk not found or rejected by a fil
  WARNING: Couldn't find all devices for LV vg/lv_rimage_0 while checking used and assumed dev
  WARNING: Couldn't find all devices for LV vg/lv_rmeta_0 while checking used and assumed devi
  Wrote out consistent volume group vg.
[root@server ~]# pvs
  WARNING: Not using lvmetad because a repair command was run.
  PV         VG Fmt  Attr PSize   PFree
  /dev/vdc   vg lvm2 a--  <20.00g 15.99g
[root@server ~]# lvconvert -m0 /dev/vg/lv
  WARNING: Not using lvmetad because a repair command was run.
Are you sure you want to convert raid1 LV vg/lv to type linear losing all resilience? [y/n]: y
  Logical volume vg/lv successfully converted.
[root@server ~]# lvdisplay
  WARNING: Not using lvmetad because a repair command was run.
  --- Logical volume ---
  LV Path                /dev/vg/lv
  LV Name                lv
  VG Name                vg
  LV UUID                kEO1qa-GQrX-gYct-aKNR-veEB-0yq1-MQyCdw
  LV Write Access        read/write
  LV Creation host, time server, 2018-09-13 10:05:59 +0800
  LV Status              available
  # open                 1
  LV Size                4.00 GiB
  Current LE             1024
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     8192
  Block device           252:4
```

```
[root@server ~]# pvcreate /dev/vdb
  WARNING: Not using lvmetad because a repair command was run.
  Physical volume "/dev/vdb" successfully created.
[root@server ~]# vgextend vg /dev/vdb
  WARNING: Not using lvmetad because a repair command was run.
  Volume group "vg" successfully extended
[root@server ~]# lvconvert -m1 /dev/vg/lv dev/vdb
  WARNING: Not using lvmetad because a repair command was run.
  Physical Volume "dev/vdb" not found in Volume Group "vg".
[root@server ~]# lvs
  WARNING: Not using lvmetad because a repair command was run.
  LV   VG Attr       LSize Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  lv   vg -wi-ao---- 4.00g
[root@server ~]# pvs
  WARNING: Not using lvmetad because a repair command was run.
  PV         VG Fmt  Attr PSize   PFree
  /dev/vdb   vg lvm2 a--  <20.00g <20.00g
  /dev/vdc   vg lvm2 a--  <20.00g <16.00g
```

d、使用 lvconvert -m1 /dev/vg/lv /dev/vdb 命令對數據進行恢復，lvs 查看是否修復。

```
[root@server ~]# lvconvert -m1 /dev/vg/lv /dev/vdb
  WARNING: Not using lvmetad because a repair command was run.
Are you sure you want to convert linear LV vg/lv to raid1 with 2 images enhancing resilience? [y/n]: y
  Logical volume vg/lv successfully converted.
[root@server ~]# lvdisplay
  WARNING: Not using lvmetad because a repair command was run.
  --- Logical volume ---
  LV Path                /dev/vg/lv
  LV Name                lv
  VG Name                vg
  LV UUID                kEO1qa-GQrX-gYct-aKNR-veEB-0yq1-MQyCdw
  LV Write Access        read/write
  LV Creation host, time server, 2018-09-13 10:05:59 +0800
  LV Status              available
  # open                 1
  LV Size                4.00 GiB
  Current LE             1024
  Mirrored volumes       2
  Segments               1
  Allocation             inherit
  Read ahead sectors     auto
  - currently set to     8192
  Block device           252:4
```

數據已恢復

```
[root@server ~]# lsblk
NAME              MAJ:MIN RM  SIZE RO TYPE MOUNTPOINT
sr0                11:0    1 1024M  0 rom
vda               253:0    0  100G  0 disk
├─vda1            253:1    0    1G  0 part /boot
├─vda2            253:2    0 95.1G  0 part /
└─vda3            253:3    0  3.9G  0 part [SWAP]
vdb               253:16   0   20G  0 disk
├─vg-lv_rmeta_1   252:2    0    4M  0 lvm
│ └─vg-lv         252:4    0    4G  0 lvm  /home/user
└─vg-lv_rimage_1  252:3    0    4G  0 lvm
  └─vg-lv         252:4    0    4G  0 lvm  /home/user
vdc               253:32   0   20G  0 disk
├─vg-lv_rmeta_0   252:0    0    4M  0 lvm
│ └─vg-lv         252:4    0    4G  0 lvm  /home/user
└─vg-lv_rimage_0  252:1    0    4G  0 lvm
  └─vg-lv         252:4    0    4G  0 lvm  /home/user
vdd               253:48   0   20G  0 disk
vde               253:64   0   20G  0 disk
vdf               253:80   0   20G  0 disk
vdg               253:96   0   20G  0 disk
vdh               253:112  0   20G  0 disk
vdi               253:128  0   20G  0 disk
vdj               253:144  0   20G  0 disk
vdk               253:160  0   20G  0 disk
vdl               253:176  0   20G  0 disk
vdm               253:192  0   20G  0 disk
[root@server ~]#
```

4、 为用户目录/home/user 挂载 raid5 卷，记录操作过程，随机破坏阵列中一块硬盘并实施救援，记录操作观察结果；

a、根據題意需先使用 mdadm -C /dev/md1 -a yes -l 5 -n 3 -x 1 /dev/vd{d,h,i,j}，進行 RAID5 的創建。 mkfs.ext4 /dev/md1 對 RAID5 進行格式化，之後用 mount /dev/md1 /home/user 進行掛載。

```
[root@server ~]# mdadm -C /dev/md1 -a yes -l 5 -n 3 -x 1 /dev/vd{d,h,i,j}
mdadm: Unknown keyword DEVICE/dev/vdd
mdadm: Defaulting to version 1.2 metadata
mdadm: array /dev/md1 started.
[root@server ~]# mkfs.ext4 /dev/md1
mke2fs 1.42.9 (28-Dec-2013)
Filesystem label=
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
Stride=128 blocks, Stripe width=256 blocks
2621440 inodes, 10477568 blocks
523878 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2157969408
320 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912, 819200, 884736, 1605632, 2654208,
        4096000, 7962624

Allocating group tables: done
Writing inode tables: done
Creating journal (32768 blocks): done
Writing superblocks and filesystem accounting information: done

[root@server ~]# mount /dev/md1 /home/user
[root@server ~]# df -hT
Filesystem     Type      Size  Used Avail Use% Mounted on
/dev/vda2      ext4       94G  1.3G   88G   2% /
devtmpfs       devtmpfs  2.0G     0  2.0G   0% /dev
tmpfs          tmpfs     2.0G     0  2.0G   0% /dev/shm
tmpfs          tmpfs     2.0G  8.5M  2.0G   1% /run
tmpfs          tmpfs     2.0G     0  2.0G   0% /sys/fs/cgroup
/dev/vda1      xfs      1014M  120M  895M  12% /boot
tmpfs          tmpfs     396M     0  396M   0% /run/user/0
/dev/md1       ext4       40G   49M   38G   1% /home/user
```

用 mdadm /dev/md1 -f /dev/vdd 命令將 vdd 標記爲損壞。

```
[root@server ~]# mdadm -D /dev/md1
mdadm: Unknown keyword DEVICE/dev/vdd
/dev/md1:
           Version : 1.2
     Creation Time : Thu Sep 13 13:56:35 2018
        Raid Level : raid5
        Array Size : 41910272 (39.97 GiB 42.92 GB)
     Used Dev Size : 20955136 (19.98 GiB 21.46 GB)
      Raid Devices : 3
     Total Devices : 4
       Persistence : Superblock is persistent

       Update Time : Thu Sep 13 13:58:40 2018
             State : clean, degraded, recovering
    Active Devices : 2
   Working Devices : 4
    Failed Devices : 0
     Spare Devices : 2

            Layout : left-symmetric
        Chunk Size : 512K

Consistency Policy : resync

    Rebuild Status : 59% complete

              Name : server:1  (local to host server)
              UUID : 0e695ff1:24ec9482:08dfab40:848165a7
            Events : 30

    Number   Major   Minor   RaidDevice State
       0     253       48        0      active sync   /dev/vdd
       1     253      112        1      active sync   /dev/vdh
       4     253      128        2      spare rebuilding   /dev/vdi

       3     253      144        -      spare   /dev/vdj
[root@server ~]#
[root@server ~]# mdadm /dev/md1 -f /dev/vdd
mdadm: Unknown keyword DEVICE/dev/vdd
mdadm: set /dev/vdd faulty in /dev/md1
```

用 mdadm /dev/md1 -r /dev/vdd 命令對 vdd 進行移除。

```
[root@server ~]# mdadm -D /dev/md1
mdadm: Unknown keyword DEVICE/dev/vdd
/dev/md1:
           Version : 1.2
     Creation Time : Thu Sep 13 13:56:35 2018
        Raid Level : raid5
        Array Size : 41910272 (39.97 GiB 42.92 GB)
     Used Dev Size : 20955136 (19.98 GiB 21.46 GB)
      Raid Devices : 3
     Total Devices : 4
       Persistence : Superblock is persistent

       Update Time : Thu Sep 13 14:01:38 2018
             State : clean, degraded, recovering
    Active Devices : 2
   Working Devices : 3
    Failed Devices : 1
     Spare Devices : 1

            Layout : left-symmetric
        Chunk Size : 512K

Consistency Policy : resync

    Rebuild Status : 1% complete

              Name : server:1  (local to host server)
              UUID : 0e695ff1:24ec9482:08dfab40:848165a7
            Events : 52

    Number   Major   Minor   RaidDevice State
       3     253      144        0      spare rebuilding   /dev/vdj
       1     253      112        1      active sync   /dev/vdh
       4     253      128        2      active sync   /dev/vdi

       0     253       48        -      faulty   /dev/vdd
[root@server ~]# mdadm /dev/md1 -r /dev/vdd
mdadm: Unknown keyword DEVICE/dev/vdd
mdadm: hot removed /dev/vdd from /dev/md1
```

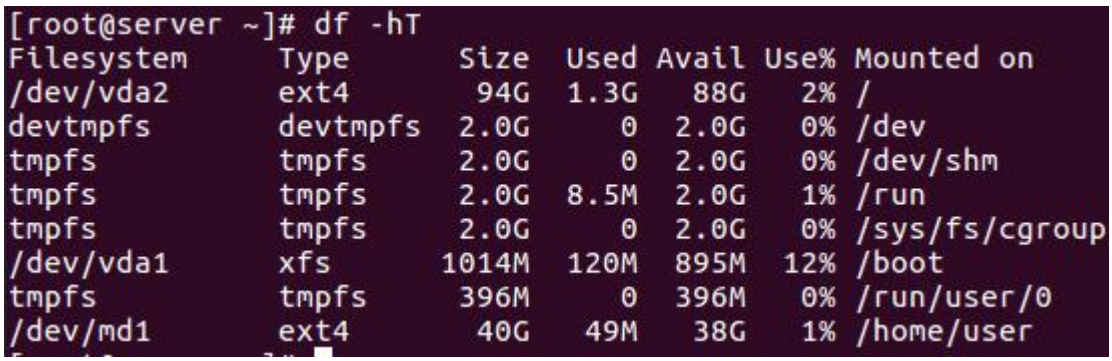
用 mdadm --misc --zero-superblock -f /dev/vdd 清空損壞的 vdd。

```
[root@server ~]# mdadm -D /dev/md1
mdadm: Unknown keyword DEVICE/dev/vdd
/dev/md1:
           Version : 1.2
     Creation Time : Thu Sep 13 13:56:35 2018
        Raid Level : raid5
        Array Size : 41910272 (39.97 GiB 42.92 GB)
     Used Dev Size : 20955136 (19.98 GiB 21.46 GB)
      Raid Devices : 3
     Total Devices : 3
       Persistence : Superblock is persistent

       Update Time : Thu Sep 13 14:02:21 2018
             State : clean, degraded, recovering
    Active Devices : 2
   Working Devices : 3
    Failed Devices : 0
     Spare Devices : 1

            Layout : left-symmetric
        Chunk Size : 512K

Consistency Policy : resync

    Rebuild Status : 6% complete

              Name : server:1  (local to host server)
              UUID : 0e695ff1:24ec9482:08dfab40:848165a7
            Events : 61

    Number   Major   Minor   RaidDevice State
       3     253      144        0      spare rebuilding   /dev/vdj
       1     253      112        1      active sync   /dev/vdh
       4     253      128        2      active sync   /dev/vdi
[root@server ~]# mdadm --misc --zero-superblock -f /dev/vdd
```

用 mdadm -D /dev/md1 查看已經將 vdd 移除。
用 mdadm /dev/md1 -a /dev/vdd 增加新的 vdd。並查看是否添加

```
[root@server ~]# mdadm -D /dev/md1
mdadm: Unknown keyword DEVICE/dev/vdd
/dev/md1:
           Version : 1.2
     Creation Time : Thu Sep 13 13:56:35 2018
        Raid Level : raid5
        Array Size : 41910272 (39.97 GiB 42.92 GB)
     Used Dev Size : 20955136 (19.98 GiB 21.46 GB)
      Raid Devices : 3
     Total Devices : 3
       Persistence : Superblock is persistent

       Update Time : Thu Sep 13 14:03:05 2018
             State : clean, degraded, recovering
    Active Devices : 2
   Working Devices : 3
    Failed Devices : 0
     Spare Devices : 1

            Layout : left-symmetric
        Chunk Size : 512K

Consistency Policy : resync

    Rebuild Status : 16% complete

              Name : server:1  (local to host server)
              UUID : 0e695ff1:24ec9482:08dfab40:848165a7
            Events : 71

    Number   Major   Minor   RaidDevice State
       3     253      144        0      spare rebuilding   /dev/vdj
       1     253      112        1      active sync   /dev/vdh
       4     253      128        2      active sync   /dev/vdi
[root@server ~]# mdadm /dev/md1 -a /dev/vdd
mdadm: Unknown keyword DEVICE/dev/vdd
mdadm: added /dev/vdd
```

```
[root@server ~]# mdadm -D /dev/md1
mdadm: Unknown keyword DEVICE/dev/vdd
/dev/md1:
           Version : 1.2
     Creation Time : Thu Sep 13 13:56:35 2018
        Raid Level : raid5
        Array Size : 41910272 (39.97 GiB 42.92 GB)
     Used Dev Size : 20955136 (19.98 GiB 21.46 GB)
      Raid Devices : 3
     Total Devices : 4
       Persistence : Superblock is persistent

       Update Time : Thu Sep 13 14:04:21 2018
             State : clean, degraded, recovering
    Active Devices : 2
   Working Devices : 4
    Failed Devices : 0
     Spare Devices : 2

            Layout : left-symmetric
        Chunk Size : 512K

Consistency Policy : resync

    Rebuild Status : 24% complete

              Name : server:1  (local to host server)
              UUID : 0e695ff1:24ec9482:08dfab40:848165a7
            Events : 84

    Number   Major   Minor   RaidDevice State
       3     253      144        0      spare rebuilding   /dev/vdj
       1     253      112        1      active sync   /dev/vdh
       4     253      128        2      active sync   /dev/vdi

       5     253       48        -      spare   /dev/vdd
```


[root@server ~]# df -hT
Filesystem Type Size Used Avail Use% Mounted on
/dev/vda2 ext4 94G 1.3G 88G 2% /
devtmpfs devtmpfs 2.0G 0 2.0G 0% /dev
tmpfs tmpfs 2.0G 0 2.0G 0% /dev/shm
tmpfs tmpfs 2.0G 8.5M 2.0G 1% /run
tmpfs tmpfs 2.0G 0 2.0G 0% /sys/fs/cgroup
/dev/vda1 xfs 1014M 120M 895M 12% /boot
tmpfs tmpfs 396M 0 396M 0% /run/user/0
/dev/md1 ext4 40G 49M 38G 1% /home/user