```
Script started on Wed 09 May 2018 05:46:20 PM UTC
[root@otuslinux vagrant]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1009M  7.1G  13% /
devtmpfs              489M     0  489M   0% /dev
tmpfs                 497M     0  497M   0% /dev/shm
tmpfs                 497M  6.6M  490M   2% /run
tmpfs                 497M     0  497M   0% /sys/fs/cgroup
/dev/sda2            1014M   61M  954M   6% /boot
tmpfs                 100M     0  100M   0% /run/user/1000
[root@otuslinux vagrant]# lvcreate -L1G -n swap centos
  Logical Volume "swap" already exists in volume group "centos"
[root@otuslinux vagrant]# mkswap centos/swap
centos/swap: No such file or directory
[root@otuslinux vagrant]# mkswap /dev/centos/swap
Setting up swapspace version 1, size = 1048572 KiB
no label, UUID=e148a234-e98d-4e35-8fa4-395c485112f1
[root@otuslinux vagrant]# lvcreate -L2G -n var -m1 centos
  Logical volume "var" created.
[root@otuslinux vagrant]# mount /dev/centos/var /mnt
mount: /dev/mapper/centos-var is write-protected, mounting read-only
mount: unknown filesystem type '(null)'
[root@otuslinux vagrant]# mkfs.ext4 /dev/centos/var
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

131072 inodes, 524288 blocks

26214 blocks (5.00%) reserved for the super user

First data block=0

Maximum filesystem blocks=536870912

16 block groups

32768 blocks per group, 32768 fragments per group

8192 inodes per group

Superblock backups stored on blocks:

32768, 98304, 163840, 229376, 294912

Allocating group tables: done

Writing inode tables: done

Creating journal (16384 blocks): done

Writing superblocks and filesystem accounting information: done

[root@otuslinux vagrant]# mount /dev/centos/var /mnt

[root@otuslinux vagrant]# cp -aR /var/* /mnt

[root@otuslinux vagrant]# nano /etc/fstab

[root@otuslinux vagrant]# mount -a

[root@otuslinux vagrant]# df -h

Filesystem Size Used Avail Use% Mounted on

```
/dev/mapper/centos-root  8.0G 1009M  7.1G  13% /
devtmpfs                 489M     0  489M   0% /dev
tmpfs                    497M     0  497M   0% /dev/shm
tmpfs                    497M  6.6M  490M   2% /run
tmpfs                    497M     0  497M   0% /sys/fs/cgroup
/dev/sda2               1014M   61M  954M   6% /boot
/dev/mapper/centos-var   2.0G  155M  1.7G   9% /mnt
tmpfs                    100M     0  100M   0% /run/user/1000
[root@otuslinux vagrant]# umount /mnt
[root@otuslinux vagrant]# mount -a
[root@otuslinux vagrant]# df -h
Filesystem               Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1009M  7.1G  13% /
devtmpfs                 489M     0  489M   0% /dev
tmpfs                    497M     0  497M   0% /dev/shm
tmpfs                    497M  6.6M  490M   2% /run
tmpfs                    497M     0  497M   0% /sys/fs/cgroup
/dev/sda2               1014M   61M  954M   6% /boot
/dev/mapper/centos-var   2.0G  155M  1.7G   9% /var
tmpfs                    100M     0  100M   0% /run/user/1000
[root@otuslinux vagrant]# lvcreate -L1G -n home centos
  Logical volume "home" created.
[root@otuslinux vagrant]# mkf
mkfifo      mkfs        mkfs.btrfs   mkfs.cramfs  mkfs.ext2    mkfs.ext3    mkfs.ext4    mkfs.minix   mkfs.xfs
[root@otuslinux vagrant]# mkfs.ext4 /dev/centos/home
```

```
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
65536 inodes, 262144 blocks
13107 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=268435456
8 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done

[root@otuslinux vagrant]# mount /dev/mapper/centos-home /mnt
[root@otuslinux vagrant]# cp -aR /home/* /mnt
[root@otuslinux vagrant]# ls -l /mnt
total 20
```

```
drwx------. 2 root    root    16384 May  9 17:50 lost+found
drwx------. 3 vagrant vagrant  4096 Apr  3 21:46 vagrant
[root@otuslinux vagrant]# cp -aR /home /mnt
[root@otuslinux vagrant]# ls -l /mnt
[vagrant@otuslinux vagrant]$ cat log1
Script started on Wed 09 May 2018 05:46:20 PM UTC
[root@otuslinux vagrant]# df -h
Filesystem             Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1009M  7.1G  13% /
devtmpfs               489M     0  489M   0% /dev
tmpfs                  497M     0  497M   0% /dev/shm
tmpfs                  497M  6.6M  490M   2% /run
tmpfs                  497M     0  497M   0% /sys/fs/cgroup
/dev/sda2             1014M   61M  954M   6% /boot
tmpfs                  100M     0  100M   0% /run/user/1000
[root@otuslinux vagrant]# lvcreate -L1G -n swap centos
  Logical Volume "swap" already exists in volume group "centos"
[root@otuslinux vagrant]# mkswap centos/swap
centos/swap: No such file or directory
[root@otuslinux vagrant]# mkswap /dev/centos/swap
Setting up swapspace version 1, size = 1048572 KiB
no label, UUID=e148a234-e98d-4e35-8fa4-395c485112f1
[root@otuslinux vagrant]# lvcreate -L2G -n var -m1 centos
  Logical volume "var" created.
[root@otuslinux vagrant]# mount /dev/centos/var /mnt
```

```
mount: /dev/mapper/centos-var is write-protected, mounting read-only
mount: unknown filesystem type '(null)'
[root@otuslinux vagrant]# mkfs.ext4 /dev/centos/var
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
131072 inodes, 524288 blocks
26214 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=536870912
16 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376, 294912

Allocating group tables: done
Writing inode tables: done
Creating journal (16384 blocks): done
Writing superblocks and filesystem accounting information: done

[root@otuslinux vagrant]# mount /dev/centos/var /mnt
```

```
[root@otuslinux vagrant]# cp -aR /var/* /mnt
[root@otuslinux vagrant]# nano /etc/fstab
[root@otuslinux vagrant]# mount -a
[root@otuslinux vagrant]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1009M  7.1G  13% /
devtmpfs              489M     0  489M   0% /dev
tmpfs                 497M     0  497M   0% /dev/shm
tmpfs                 497M  6.6M  490M   2% /run
tmpfs                 497M     0  497M   0% /sys/fs/cgroup
/dev/sda2            1014M   61M  954M   6% /boot
/dev/mapper/centos-var   2.0G  155M  1.7G   9% /mnt
tmpfs                 100M     0  100M   0% /run/user/1000
[root@otuslinux vagrant]# umount /mnt
[root@otuslinux vagrant]# mount -a
[root@otuslinux vagrant]# df -h
Filesystem            Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1009M  7.1G  13% /
devtmpfs              489M     0  489M   0% /dev
tmpfs                 497M     0  497M   0% /dev/shm
tmpfs                 497M  6.6M  490M   2% /run
tmpfs                 497M     0  497M   0% /sys/fs/cgroup
/dev/sda2            1014M   61M  954M   6% /boot
/dev/mapper/centos-var   2.0G  155M  1.7G   9% /var
tmpfs                 100M     0  100M   0% /run/user/1000
```

```
[root@otuslinux vagrant]# lvcreate -L1G -n home centos
  Logical volume "home" created.
[root@otuslinux vagrant]# mkf
mkfifo  mkfs  mkfs.btrfs  mkfs.cramfs  mkfs.ext2  mkfs.ext3  mkfs.ext4  mkfs.minix  mkfs.xfs
[root@otuslinux vagrant]# mkfs.ext4 /dev/centos/home
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
65536 inodes, 262144 blocks
13107 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=268435456
8 block groups
32768 blocks per group, 32768 fragments per group
8192 inodes per group
Superblock backups stored on blocks:
        32768, 98304, 163840, 229376

Allocating group tables: done
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done
```

```
[root@otuslinux vagrant]# mount /dev/mapper/centos-home /mnt
[root@otuslinux vagrant]# cp -aR /home/* /mnt
[root@otuslinux vagrant]# ls -l /mnt
total 20
drwx------. 2 root    root    16384 May  9 17:50 lost+found
drwx------. 3 vagrant vagrant  4096 Apr  3 21:46 vagrant
[root@otuslinux vagrant]# cp -aR /home /mnt
[root@otuslinux vagrant]# ls -l /mnt
total 24
drwxr-xr-x. 3 root    root     4096 Apr  3 21:45 home
drwx------. 2 root    root    16384 May  9 17:50 lost+found
drwx------. 3 vagrant vagrant  4096 Apr  3 21:46 vagrant
[root@otuslinux vagrant]# ls -l
total 0
[root@otuslinux vagrant]# ls -l /mnt
total 24
drwxr-xr-x. 3 root    root     4096 Apr  3 21:45 home
drwx------. 2 root    root    16384 May  9 17:50 lost+found
drwx------. 3 vagrant vagrant  4096 Apr  3 21:46 vagrant
[root@otuslinux vagrant]# ls -l /
total 86044
lrwxrwxrwx.   1 root root        7 May  9 17:36 bin -> usr/bin
dr-xr-xr-x.   5 root root     4096 May  9 17:43 boot
drwxr-xr-x.  20 root root     3460 May  9 17:50 dev
```

```
drwxr-xr-x.  79 root root     8192 May  9 17:43 etc
drwxr-xr-x.   3 root root       21 Apr  3 21:45 home
lrwxrwxrwx.   1 root root        7 May  9 17:36 lib -> usr/lib
lrwxrwxrwx.   1 root root        9 May  9 17:36 lib64 -> usr/lib64
drwxr-xr-x.   2 root root        6 Nov  5  2016 media
drwxr-xr-x.   5 root root     4096 May  9 17:51 mnt
drwxr-xr-x.   3 root root       39 May  9 17:30 opt
dr-xr-xr-x. 190 root root        0 May  9  2018 proc
dr-xr-x---.   3 root root      170 May  9 17:45 root
-rw-r--r--.   1 root root 88080384 May  9 17:36 root-dump
drwxr-xr-x.  25 root root      840 May  9 17:47 run
lrwxrwxrwx.   1 root root        8 May  9 17:36 sbin -> usr/sbin
drwxr-xr-x.   2 root root        6 Nov  5  2016 srv
dr-xr-xr-x.  13 root root        0 May  9 17:43 sys
drwxrwxrwt.   9 root root     4096 May  9 17:50 tmp
drwxr-xr-x.  13 root root      155 Apr  3 21:42 usr
drwxr-xr-x.   2 root root       18 May  9 17:46 vagrant
drwxr-xr-x.  19 root root     4096 May  9 17:48 var
[root@otuslinux vagrant]# umount /mnt
[root@otuslinux vagrant]# nano /etc/fstab
[root@otuslinux vagrant]# mount -a
[root@otuslinux vagrant]# df -h
Filesystem             Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1009M  7.1G  13% /
devtmpfs               489M     0  489M   0% /dev
```

```
tmpfs                   497M     0  497M   0% /dev/shm
tmpfs                   497M  6.6M  490M   2% /run
tmpfs                   497M     0  497M   0% /sys/fs/cgroup
/dev/sda2              1014M   61M  954M   6% /boot
/dev/mapper/centos-var   2.0G  155M  1.7G   9% /var
tmpfs                   100M     0  100M   0% /run/user/1000
/dev/mapper/centos-home  976M  2.6M  907M   1% /home
[root@otuslinux vagrant]# exit

Script done on Wed 09 May 2018 05:52:45 PM UTC
```

Часть 2

```
[vagrant@otuslinux vagrant]$ cat log2
Script started on Wed 09 May 2018 05:53:11 PM UTC
[root@otuslinux vagrant]# mc

[root@otuslinux var]# lvcreate -l500M -n home_snap -s /dev/centos/home
  Invalid argument for --extents: 500M
  Error during parsing of command line.
[root@otuslinux var]# lvcreate -L500M -n home_snap -s /dev/centos/home
  Using default stripesize 64.00 KiB.
  Logical volume "home_snap" created.
[root@otuslinux var]# lv
bash: lv: command not found
[root@otuslinux var]# lvs
```

```
  LV       VG        Attr       LSize   Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  LogVol00  VolGroup00 -wi-a----- <37.47g
  LogVol01  VolGroup00 -wi-a-----   1.50g
  home     centos    owi-aos---   1.00g
  home_snap centos    swi-a-s--- 500.00m      home   0.00
  root     centos    -wi-ao----   8.00g
  swap     centos    -wi-a-----   1.00g
  var      centos    rwi-aor---   2.00g                                    100.00
[root@otuslinux var]# mc


[root@otuslinux home]# lvs
  LV       VG        Attr       LSize   Pool Origin Data%  Meta%  Move Log Cpy%Sync Convert
  LogVol00  VolGroup00 -wi-a----- <37.47g
  LogVol01  VolGroup00 -wi-a-----   1.50g
  home     centos    owi-aos---   1.00g
  home_snap centos    swi-a-s--- 500.00m      home   0.10
  root     centos    -wi-ao----   8.00g
  swap     centos    -wi-a-----   1.00g
  var      centos    rwi-aor---   2.00g                                    100.00
[root@otuslinux home]# lvconvert --merge /dev/centos/home_snap
  Can't merge until origin volume is closed.
  Merging of snapshot centos/home_snap will occur on next activation of centos/home.
[root@otuslinux home]# exit
```

Script done on Wed 09 May 2018 05:56:08 PM UTC

Часть 3

[vagrant@otuslinux vagrant]$ cat log3

Script started on Wed 09 May 2018 06:25:39 PM UTC

[root@otuslinux vagrant]# mkfs

mkfs mkfs.btrfs mkfs.cramfs mkfs.ext2 mkfs.ext3 mkfs.ext4 mkfs.minix mkfs.xfs

[root@otuslinux vagrant]# mkfs.btrfs /dev/s

sda sda2 sdb sdd sdf sg0 sg2 sg4 sg6 snapshot stderr stdout

sda1 sda3 sdc sde sdg sg1 sg3 sg5 shm/ snd/ stdin

[root@otuslinux vagrant]# mkfs.btrfs /dev/sd

sda sda1 sda2 sda3 sdb sdc sdd sde sdf sdg

[root@otuslinux vagrant]# mkfs.btrfs /dev/sd

sda sda1 sda2 sda3 sdb sdc sdd sde sdf sdg

[root@otuslinux vagrant]# mkfs.btrfs /dev/sd{f,g}

btrfs-progs v4.9.1

See http://btrfs.wiki.kernel.org for more information.

Label: (null)

UUID: ddb40bb8-f194-49b4-9cbf-5088be0b2d72

Node size: 16384

Sector size: 4096

```
Filesystem size:    1000.00MiB
Block group profiles:
  Data:             RAID0          128.00MiB
  Metadata:         RAID1           50.00MiB
  System:           RAID1            8.00MiB
SSD detected:       no
Incompat features:  extref, skinny-metadata
Number of devices:  2
Devices:
   ID        SIZE  PATH
    1   500.00MiB  /dev/sdf
    2   500.00MiB  /dev/sdg

[root@otuslinux vagrant]# mount /dev/sd
sda   sda1  sda2  sda3  sdb   sdc   sdd   sde   sdf   sdg
[root@otuslinux vagrant]# mount /dev/sdf /mnt
[root@otuslinux vagrant]# cp -aR /opt/* /mnt
[root@otuslinux vagrant]# ls -l /mnt
total 0
drwxr-xr-x. 1 root root 122 May  9 17:31 VBoxGuestAdditions-5.2.10
[root@otuslinux vagrant]# umount /mnt
[root@otuslinux vagrant]# nano /etc/fstab
[root@otuslinux vagrant]# mount -a
[root@otuslinux vagrant]# df -h
```

```
Filesystem            Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1010M  7.1G  13% /
devtmpfs              489M     0  489M   0% /dev
tmpfs                 497M     0  497M   0% /dev/shm
tmpfs                 497M  6.7M  490M   2% /run
tmpfs                 497M     0  497M   0% /sys/fs/cgroup
/dev/sda2            1014M   61M  954M   6% /boot
/dev/mapper/centos-var   2.0G  156M  1.7G   9% /var
/dev/mapper/centos-home  976M  2.6M  907M   1% /home
tmpfs                 100M     0  100M   0% /run/user/1000
tmpfs                 100M     0  100M   0% /run/user/0
/dev/sdf              1000M   33M  867M   4% /opt
[root@otuslinux vagrant]# btrfs
usage: btrfs [--help] [--version] <group> [<group>...] <command> [<args>]

Command groups:
  subvolume        manage subvolumes: create, delete, list, etc
  filesystem       overall filesystem tasks and information
  balance          balance data across devices, or change block groups using filters
  device           manage and query devices in the filesystem
  scrub            verify checksums of data and metadata
  rescue           toolbox for specific rescue operations
  inspect-internal  query various internal information
  property         modify properties of filesystem objects
```

quota manage filesystem quota settings

qgroup manage quota groups

replace replace a device in the filesystem

Commands:

check Check structural integrity of a filesystem (unmounted).

restore Try to restore files from a damaged filesystem (unmounted)

send Send the subvolume(s) to stdout.

receive Receive subvolumes from a stream

help Display help information

version Display btrfs-progs version

For an overview of a given command use 'btrfs command --help'

or 'btrfs [command...] --help --full' to print all available options.

Any command name can be shortened as far as it stays unambiguous,

however it is recommended to use full command names in scripts.

All command groups have their manual page named 'btrfs-<group>'.

[root@otuslinux vagrant]# btrfs subvolume list

btrfs subvolume list: too few arguments

usage: btrfs subvolume list [options] [-G [+|-]value] [-C [+|-]value] [--sort=gen,ogen,rootid,path] <path>

List subvolumes (and snapshots)

-p print parent ID

-a print all the subvolumes in the filesystem and
distinguish absolute and relative path with respect
to the given <path>

-c print the ogeneration of the subvolume

-g print the generation of the subvolume

-o print only subvolumes below specified path

-u print the uuid of subvolumes (and snapshots)

-q print the parent uuid of the snapshots

-R print the uuid of the received snapshots

-t print the result as a table

-s list snapshots only in the filesystem

-r list readonly subvolumes (including snapshots)

-d list deleted subvolumes that are not yet cleaned

-G [+|-]value
filter the subvolumes by generation
(+value: >= value; -value: <= value; value: = value)

-C [+|-]value
filter the subvolumes by ogeneration
(+value: >= value; -value: <= value; value: = value)

--sort=gen,ogen,rootid,path
list the subvolume in order of gen, ogen, rootid or path
you also can add '+' or '-' in front of each items.
(+:ascending, -:descending, ascending default)

[root@otuslinux vagrant]# btrfs subvolume list -a

btrfs subvolume list: too few arguments

usage: btrfs subvolume list [options] [-G [+|-]value] [-C [+|-]value] [--sort=gen,ogen,rootid,path] <path>

List subvolumes (and snapshots)

-p print parent ID

-a print all the subvolumes in the filesystem and
distinguish absolute and relative path with respect
to the given <path>

-c print the ogeneration of the subvolume

-g print the generation of the subvolume

-o print only subvolumes below specified path

-u print the uuid of subvolumes (and snapshots)

-q print the parent uuid of the snapshots

-R print the uuid of the received snapshots

-t print the result as a table

-s list snapshots only in the filesystem

-r list readonly subvolumes (including snapshots)

-d list deleted subvolumes that are not yet cleaned

-G [+|-]value
filter the subvolumes by generation

(+value: >= value; -value: <= value; value: = value)

-C [+|-]value

filter the subvolumes by ogeneration

(+value: >= value; -value: <= value; value: = value)

--sort=gen,ogen,rootid,path

list the subvolume in order of gen, ogen, rootid or path

you also can add '+' or '-' in front of each items.

(+:ascending, -:descending, ascending default)

[root@otuslinux vagrant]# btrfs subvolume -a

btrfs subvolume: unknown token '-a'

usage: btrfs subvolume <command> <args>

btrfs subvolume create [-i <qgroupid>] [<dest>/]<name>

Create a subvolume

btrfs subvolume delete [options] <subvolume> [<subvolume>...]

Delete subvolume(s)

btrfs subvolume list [options] [-G [+|-]value] [-C [+|-]value] [--sort=gen,ogen,rootid,path] <path>

List subvolumes (and snapshots)

btrfs subvolume snapshot [-r] [-i <qgroupid>] <source> <dest>|[<dest>/]<name>

Create a snapshot of the subvolume

btrfs subvolume get-default <path>

Get the default subvolume of a filesystem

btrfs subvolume set-default <subvolid> <path>

Set the default subvolume of a filesystem

btrfs subvolume find-new <path> <lastgen>

List the recently modified files in a filesystem

btrfs subvolume show <subvol-path>

Show more information of the subvolume

btrfs subvolume sync <path> [<subvol-id>...]

Wait until given subvolume(s) are completely removed from the filesystem.

manage subvolumes: create, delete, list, etc

[root@otuslinux vagrant]#

[root@otuslinux vagrant]#

[root@otuslinux vagrant]# btrfs subvolume snapshot /opt /home/opt-backup

ERROR: not a btrfs filesystem: /home

[root@otuslinux vagrant]# btrfs subvolume snapshot /opt /dev/

Display all 174 possibilities? (y or n)

[root@otuslinux vagrant]# btrfs subvolume snapshot /opt /dev/sd

sda sda1 sda2 sda3 sdb sdc sdd sde sdf sdg

[root@otuslinux vagrant]# btrfs subvolume snapshot /opt /dev/sd

sda sda1 sda2 sda3 sdb sdc sdd sde sdf sdg

[root@otuslinux vagrant]# btrfs subvolume snapshot /opt /dev/sdg/opt-snap

ERROR: cannot access /dev/sdg/opt-snap: Not a directory

[root@otuslinux vagrant]# btrfs subvolume snapshot /opt /dev/sdg/

ERROR: cannot access /dev/sdg/: Not a directory

```
[root@otuslinux vagrant]# btrfs subvolume create /dev/sdg/opt-snap
ERROR: cannot access /dev/sdg/opt-snap: Not a directory
[root@otuslinux vagrant]# btrfs subvolume snapshot /opt /opt/opt-snap
Create a snapshot of '/opt' in '/opt/opt-snap'
[root@otuslinux vagrant]# df -h
Filesystem             Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1010M  7.1G  13% /
devtmpfs                 489M     0  489M   0% /dev
tmpfs                    497M     0  497M   0% /dev/shm
tmpfs                    497M  6.7M  490M   2% /run
tmpfs                    497M     0  497M   0% /sys/fs/cgroup
/dev/sda2               1014M   61M  954M   6% /boot
/dev/mapper/centos-var   2.0G  156M  1.7G   9% /var
/dev/mapper/centos-home  976M  2.6M  907M   1% /home
tmpfs                    100M     0  100M   0% /run/user/1000
tmpfs                    100M     0  100M   0% /run/user/0
/dev/sdf                1000M   33M  867M   4% /opt
[root@otuslinux vagrant]# btrfs subvolume list
btrfs subvolume list: too few arguments
usage: btrfs subvolume list [options] [-G [+|-]value] [-C [+|-]value] [--sort=gen,ogen,rootid,path]
<path>


    List subvolumes (and snapshots)
```

-p print parent ID

-a print all the subvolumes in the filesystem and
distinguish absolute and relative path with respect
to the given <path>

-c print the ogeneration of the subvolume

-g print the generation of the subvolume

-o print only subvolumes below specified path

-u print the uuid of subvolumes (and snapshots)

-q print the parent uuid of the snapshots

-R print the uuid of the received snapshots

-t print the result as a table

-s list snapshots only in the filesystem

-r list readonly subvolumes (including snapshots)

-d list deleted subvolumes that are not yet cleaned

-G [+|-]value
filter the subvolumes by generation
(+value: >= value; -value: <= value; value: = value)

-C [+|-]value
filter the subvolumes by ogeneration
(+value: >= value; -value: <= value; value: = value)

--sort=gen,ogen,rootid,path
list the subvolume in order of gen, ogen, rootid or path
you also can add '+' or '-' in front of each items.
(+:ascending, -:descending, ascending default)

[root@otuslinux vagrant]# btrfs subvolume list -pa

btrfs subvolume list: too few arguments

usage: btrfs subvolume list [options] [-G [+|-]value] [-C [+|-]value] [--sort=gen,ogen,rootid,path] <path>

List subvolumes (and snapshots)

-p print parent ID

-a print all the subvolumes in the filesystem and
distinguish absolute and relative path with respect
to the given <path>

-c print the ogeneration of the subvolume

-g print the generation of the subvolume

-o print only subvolumes below specified path

-u print the uuid of subvolumes (and snapshots)

-q print the parent uuid of the snapshots

-R print the uuid of the received snapshots

-t print the result as a table

-s list snapshots only in the filesystem

-r list readonly subvolumes (including snapshots)

-d list deleted subvolumes that are not yet cleaned

-G [+|-]value
filter the subvolumes by generation

(+value: >= value; -value: <= value; value: = value)

-C [+|-]value

filter the subvolumes by ogeneration

(+value: >= value; -value: <= value; value: = value)

--sort=gen,ogen,rootid,path

list the subvolume in order of gen, ogen, rootid or path

you also can add '+' or '-' in front of each items.

(+:ascending, -:descending, ascending default)

```
[root@otuslinux vagrant]# btrfs subvolume list -p /dev/
Display all 174 possibilities? (y or n)
[root@otuslinux vagrant]# btrfs subvolume list -p /dev/sdf
ERROR: not a btrfs filesystem: /dev/sdf
ERROR: can't access '/dev/sdf'
[root@otuslinux vagrant]# btrfs subvolume list -p /opt
ID 257 gen 9 parent 5 top level 5 path opt-snap
[root@otuslinux vagrant]# btrfs subvolume list -p -a /opt
ID 257 gen 9 parent 5 top level 5 path opt-snap
[root@otuslinux vagrant]# btrfs subvolume list /opt
ID 257 gen 9 top level 5 path opt-snap
[root@otuslinux vagrant]# btrfs filesystem show /opt
Label: none  uuid: ddb40bb8-f194-49b4-9cbf-5088be0b2d72
        Total devices 2 FS bytes used 16.48MiB
        devid    1 size 500.00MiB used 122.00MiB path /dev/sdf
```

```
        devid    2 size 500.00MiB used 122.00MiB path /dev/sdg

[root@otuslinux vagrant]# btrfs filesystem show
Label: none  uuid: ddb40bb8-f194-49b4-9cbf-5088be0b2d72
        Total devices 2 FS bytes used 16.48MiB
        devid    1 size 500.00MiB used 122.00MiB path /dev/sdf
        devid    2 size 500.00MiB used 122.00MiB path /dev/sdg

[root@otuslinux vagrant]# df -h
Filesystem              Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1010M  7.1G  13% /
devtmpfs                489M     0  489M   0% /dev
tmpfs                   497M     0  497M   0% /dev/shm
tmpfs                   497M  6.7M  490M   2% /run
tmpfs                   497M     0  497M   0% /sys/fs/cgroup
/dev/sda2              1014M   61M  954M   6% /boot
/dev/mapper/centos-var   2.0G  156M  1.7G   9% /var
/dev/mapper/centos-home  976M  2.6M  907M   1% /home
tmpfs                   100M     0  100M   0% /run/user/1000
tmpfs                   100M     0  100M   0% /run/user/0
/dev/sdf                1000M   33M  867M   4% /opt
[root@otuslinux vagrant]# exit

Script done on Wed 09 May 2018 06:49:20 PM UTC
```

```
[root@otuslinux vagrant]# btrfs filesystem show
Label: none  uuid: ddb40bb8-f194-49b4-9cbf-5088be0b2d72
        Total devices 2 FS bytes used 16.48MiB
        devid    1 size 500.00MiB used 122.00MiB path /dev/sdf
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[root@otuslinux vagrant]# df -h
Filesystem               Size  Used Avail Use% Mounted on
/dev/mapper/centos-root  8.0G 1010M  7.1G  13% /
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/dev/sda2               1014M   61M  954M   6% /boot
/dev/mapper/centos-var   2.0G  156M  1.7G   9% /var
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tmpfs                    100M     0  100M   0% /run/user/1000
tmpfs                    100M     0  100M   0% /run/user/0
/dev/sdf                1000M   33M  867M   4% /opt
[root@otuslinux vagrant]# exit
```