

```
# - bof - #  
#!/bin/bash
```

```
/DataPool/Images/Programs/Linux.Img/Linux_Ubuntu.Img/Ubuntu_Server.Img/1-  
Linux_Configuration_Files/General-Documentation_uServer/uServer-  
Setup&Configuration(Updated)/uServer-uDesktop_Btrfs-Snapper_Install/
```

```
4-uServer_Btrfs-Install.sh
```

```
use          VManagerTemplate_HDD_UEFI_Swap-Btrfs-Ext4
```

```
sda  
├sda1 vfat          FAT32 EFI BOOT A43C-FF34  
├sda2 swap          1      Swap      c2eba29d-70e7-43eb-8196-883623d81278  
├sda3 btrfs          uServer 5b089947-bf6a-4f67-8681-c6963f606561  
└sda4 Ext4           Data    f2fd310a-7d78-4027-9df4-02f381cac6a1
```

```
# - - #  
# - ssh error - #  
#  ssh-keygen -R 10.0.0.1
```

```
# - - #  
# - Documentation - #  
https://work-work.work/blog/2018/12/01/ubuntu-1804-btrfs.html  
https://askubuntu.com/questions/1298465/create-btrfs-snapshots-of-home-when-its-not-set-up-as-a-subvolume
```

```
# :1  
# - - #  
# - Install uServer mounting btrfs partition - #  
# Do not reboot when finished install  
# Alt + F2 to terminal  
sudo -i;  
mount -l | grep target;  
umount /target/boot/efi;
```

```
# :2  
# - - #  
# - Create subvolumes - #  
cd /target;  
btrfs subvolume create @;  
btrfs subvolume create @home;  
btrfs subvolume create @.snapshots;  
btrfs subvolume list .;
```

```
# :3
# - - #
# - Move / folders to @ - #
mv -t @ b* d* e* h* i* l* m* o* p* r* s* t* u* v*;
ls -lah /target;
# - @ @home - #
```

```
cd /;
umount /target/cdrom;
umount /target;
```

```
# :4
# - - #
# - Mount partitions - #
mount -o
ssd,noatime,nodiratime,compress=lzo,space_cache=v2,discard=async,autodefrag,subvol=
@ /dev/vda3 /target;
mount -o
ssd,noatime,nodiratime,compress=lzo,space_cache=v2,discard=async,autodefrag,subvol=
@home /dev/vda3 /target/home;
```

```
mkdir -p /target/.snapshots;
```

```
mount -o
ssd,noatime,nodiratime,compress=lzo,space_cache=v2,discard=async,autodefrag,subvol=
@.snapshots /dev/vda3 /target/.snapshots;
mount /dev/vda1 /target/boot/efi;
mount --bind /proc /target/proc;
mount --bind /dev /target/dev;
mount --bind /sys /target/sys;
```

```
lsblk -l;
lsblk -l | grep target;
```

```
# :5
# - - #
# - chroot into target - #
sudo -i;
chroot /target;
```

```

# :6
# - - #
# - Edit /etc/fstab - #
vim /etc/fstab;

UUID=0548-C74E /boot/efi vfat umask=0077
0 1
UUID=b57fa660-8faf-4eea-a4dd-9a3244153b9e none swap sw
0 0

UUID=91d6e1d7-c53d-4e19-9e3b-b40eff5857ec / btrfs
ssd,noatime,nodiratime,compress=lzo,space_cache=v2,discard=async,autodefrag,subvol=@
0 0
UUID=91d6e1d7-c53d-4e19-9e3b-b40eff5857ec /home btrfs
ssd,noatime,nodiratime,compress=lzo,space_cache=v2,discard=async,autodefrag,subvol=@home
0 0
UUID=91d6e1d7-c53d-4e19-9e3b-b40eff5857ec /.snapshots btrfs
ssd,noatime,nodiratime,compress=lzo,space_cache=v2,discard=async,autodefrag,subvol=@.snapshots
0 0

# :7
# - - #
# - Install grub - #
update-initramfs -u -k all;
grub-install --recheck /dev/vda;
update-grub;

ip -c a;

# :8
# - - #
# - Create Data subvolume - #
ssh 10.0.0.1
ssh 192.168.1.24
ssh 192.168.122.100
sudo apt update; sudo apt upgrade -y; sudo apt autoremove -y;
sudo rm -r /swap.img;
sudo timedatectl set-ntp true;
sudo timedatectl set-timezone America/New_York;

lsblk;
lsblk -f;

# :9
# - - #
# - List volumes - #
sudo btrfs subvolume list /;
sudo btrfs subvolume show /;
sudo btrfs subvolume show /home;

```

```
# :10
# - - #
# - Create Data with ZFS - #
```

```
# :10.1
# - - #
# - Install zfs - #
sudo apt install zfsutils-linux -y;
```

```
# :10.2
# - - #
# - lsblk partitions - #
lsblk;
```

```
vda      252:0      0   100G   0 disk
├─vda1 252:1      0    640M   0 part /boot/efi
├─vda2 252:2      0      2G   0 part [SWAP]
├─vda3 252:3      0     30G   0 part /home
|                                     /.snapshots
|                                     /snap
|                                     /
└─vda4 252:4      0   67.4G   0 part
```

```
# :10.3
# - - #
# - Create Zfs Data - #
sudo zpool create -f Data /dev/vda4;
```

```
lsblk -f;
```

```
vda
├─vda1 vfat          FAT32   EFI BOOT   0548-C74E          632.6M
1% /boot/efi
├─vda2 swap          1       Swap      7f437b3b-5d29-46d2-bc69-cf778d9e261c
[SWAP]
├─vda3 btrfs         4df70782-bf58-4a24-97d6-ec21b1a44c2f  27.1G
8% /home
|
| /.snapshots
|
| /snap
|
| /
└─vda4 zfs_member    5000    Data      3317544244928078294
```

```

# :10.4
# - - #
# - Disk failure - #
# - Status Data Zfs - #
zpool status -v;
zpool status -v Data;
zpool iostat;
zpool iostat -v;
zpool iostat -v Data;

zpool list;
df -kh;
zfs list;

# :10.5
# - - #
# - Create DataSets in Data Zfs - #
sudo zfs create Data/Images;
sudo zfs create Data/Images/Backup;
sudo zfs create Data/Images/Programs;
sudo zfs create Data/Images/VManager;

sudo zfs create Data/Documents;
sudo zfs create Data/Documents/Downloads;
sudo zfs create Data/Documents/Music;
sudo zfs create Data/Documents/Pictures;
sudo zfs create Data/Documents/Videos;

sudo zfs create Data/WebServer;

# :10.6
# - - #
# - Create folders in Data Zfs - #
sudo chown -R is_derayo:is_derayo /Data;
chmod -R 775 /Data;

mkdir -p /Data/Images/Programs/Linux.Img;
mkdir -p /Data/Images/Programs/Macintosh.Img;
mkdir -p /Data/Images/Programs/Microsoft.Img;

ln -s /Data/Images/Programs /Data/WebServer/Programs;

# :11
# - - #
# - More references on Zfs - #
uServer_ZFS-DataPool_Install.txt

# - eof - #

```