

Backup to USB Drive

Introduction

For some applications it might be necessary to use an external drive without adding this drive to a ZPool. E.g. if you want to copy from or to an external device. TrueNAS did not play well with this USB Backup solution. So finally I created another Hardware with a Linux client OS (MXLinux) to get the job done.

Setup / mounting

TrueNAS will not mount a drive automatically when plugged into an USB Port. This has to be done manually. In this example I will use an external drive from LaCie.

1. Plug in the drive to any USB Port
2. Figure out the name of the device. It can be seen in Storage --> Disks. It is usually the drive without pool.
3. Enter

```
lsblk -p | grep "disk\|part"
```

It will show show the exact name of the partition you want to mount.

```
admin@nas01:~$ lsblk -p | grep "disk\|part"
/dev/sda          8:0    0 476.9G  0 disk
├─/dev/sda1      8:1    0    1M    0 part
├─/dev/sda2      8:2    0  512M  0 part
├─/dev/sda3      8:3    0 460.4G  0 part
└─/dev/sda4      8:4    0   16G   0 part
/dev/sdb          8:16   0 10.9T   0 disk
/dev/sdc          8:32   0 16.4T   0 disk
/dev/sdd          8:48   0  7.3T   0 disk
├─/dev/sdd1      8:49   0 300M   0 part
└─/dev/sdd2      8:50   0  7.3T   0 part
/dev/nvme0n1     259:0   0 119.2G  0 disk
└─/dev/nvme0n1p1 259:1   0 119.2G  0 part
```

In this case it is sdd2.

4. Enter

```
blkid /dev/sdd2
```

It will show you the UUID of the partition you want to mount

```
root@nas04[/home/admin]# blkid /dev/sdd2
/dev/sdd2: LABEL_FATBOOT="EFI" LABEL="EFI" UUID="B7D1-A689" BLOCK_SIZE="512" TYPE="vfat"
PARTUUID="5545caa6-b0c3-4558-b222-aac5fb9c0026"
```

5. Create a mountpoint

```
mkdir /mnt/LaCie
```

6. add to fstab

```
UUID=B7D1-A689 /mnt/LaCie vfat
rw,relatime,mask=0022,dmask=0022,codepage=437,ioccharset=iso8859-
1,shortname=mixed,errors=remount-ro 0 0
```

7. Mount the device

```
mount -a
```

Explanation

It seems to be awkward to make so many steps to mount an USB device. However, TrueNAS does no auto mount. So a permanent mount must be added manually to the fstab. And furthermore, TrueNAS seems to change the name of the partition frequently, so the UUID of the partition has to be used.

Create an rsync job

Create the file `/root/rsync_exclude.txt` with this content:

```
ix-applications
relika
.~tmp~
```

```
*/*_*
*/.DocumentRevisions-V100/
*/.DS_Store
*/.fsevents/
*/.Spotlight-V100/
*/.TemporaryItems/
*/.Trashes/
.*
.*
@Recycle
*.*_thumb
sync.ffs_lock
```

All these files/directories will not be copied to the target drive. These items are created by MacOS and will automaticall re-created, when these objects in the backup are used by MacOS.

The command for the rsync job looks like this:

```
rsync -av --delete --log-file="/var/log/rsyncd.LaCie.log" --no-perms --no-owner --no-group --exclude-from
"/root/rsync_exclude.txt" /mnt/N4pool/ /mnt/LaCie/backup
```

If you want to run it over the network:

create a passwordless ssh connection

[Enable ssh login with a public key](#)

```
rsync -av --delete --log-file="/var/log/rsyncd.LaCie.log" --no-perms --no-owner --no-group --exclude-from
"/root/rsync_exclude.txt" rsync@nas04.simmy.ch:/mnt/N4pool/ /mnt/lacie/backup
```

Add to cron

```
sudo crontab -e
```

```
# Edit this file to introduce tasks to be run by cron.
#
# Each task to run has to be defined through a single line
# indicating with different fields when the task will be run
```

```

# and what command to run for the task
#
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h dom mon dow  command
0 1 * * * /root/nas04_backup.sh
0 3 * * * /root/hcloud_backup.sh
0 1 * * * /root/dyndns.sh
0 4 * * * /root/hcloud2_backup.sh

```

Job descriptions

Currently there are four jobs executed:

Job	description
nas04_backup.sh	Backup all data in unencrypted from nas04 to external USB Drive
hcloud_backup.sh	old unencrypted backup of hCloud
hcloud2_backup.sh	backup from hCloud on nas02 to encrypted external usb drive
dyndns.sh	Update for hosting.de DynDNS service

hcloud2_backup.sh

The data is located on nas02.simmy.ch in an encrypted dataset. rsyncd is installed and configured on nas02.simmy.ch. This docker container is not listening on port 22, but on port 30026. Therefore it was necessary to modify the rsync job:

```
rsync -av --delete --log-file="/var/log/rsyncd.armorlock2.log" --no-perms --no-owner --no-group --exclude-from  
"/root/rsync_exclude.txt" rsync://nas02.simmy.ch:30026/hcloud_simmy /mnt/armorlock/backup/hcloud2
```

Useful links

[rsync documentation](#)

[Manually mount a USB drive in the Linux terminal](#)

[How To Use Rsync to Sync Local and Remote Directories](#)

[How to use UUID to mount a volume](#)

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