Store games on a nas

Instead of using the internal storage or an external USB key or a hard drive to store your data (games, saves, configuration, ...) you can use a NAS (network area storage) which can be a dedicated NAS, a computer or an internet box if it supports it.

Configurable items

The file to configure is present on the boot partition of the Batocera system. You can edit it from any computer as it is hosted on a FAT32 file system; it is located in `/boot` once the Batocera system is booted and is called `batocera-boot.conf`.

There are 4 things that you can map to your NAS:

- the whole user data directory called SHARE
- only the roms directory called ROMS
- only the bios directory called BIOS
- only the saves directory called SAVES
- or a combination of the 3 last ones

Samba/Windows shares

Windows shares can use identification or a guest account to connect.

Examples of content of the file `batocera-boot.conf`:

In these examples, the Windows CIFS share is called Documents and batocera is a directory inside this share. The IP address of the Windows shared server is 192.168.0.1 in this example.

the whole user data directory on the nas

```
sharedevice=NETWORK
sharedirectory_smb1=SHARE@192.168.0.1:Documents/batocera:guest
```

only the roms on the nas

```
sharedevice=NETWORK
sharedirectory_smb1=ROMS@192.168.0.1:Documents/batocera/roms:guest
```

only the roms on the nas with CIFS authentication

```
sharedevice=NETWORK
sharedirectory_smb1=ROMS@192.168.0.1:Documents/batocera/roms:username=john,pas
```
store_games_on_a_nas

sword=wayne

**roms, saves and bios on the nas**

```sh
sharedevice=NETWORK
sharenetwork_smb1=ROMS@192.168.0.1:Documents/batocera/roms:guest
sharenetwork_smb2=SAVES@192.168.0.1:Documents/batocera/saves:guest
sharenetwork_smb3=BIOS@192.168.0.1:Documents/batocera/bios:guest
```

**SMB versions**

In several cases, **you need to add SMB options**, for instance if you NAS requires a specific SMB version:

```sh
sharenetwork_smb1=ROMS@192.168.0.1:Documents/Batocera/roms:guest,vers=1.0
```

CIFS version is needed for several NAS vendors:

- when using and Orange Livebox as a NAS, or on Synology (tested on a DS418play), you need `vers=1.0`
- if you use OpenMediaVault 5, you need `vers=3.0`

In this kind of setup, make sure that:

- you provide the exact name your SMB share on the NAS (`Documents/Batocera/roms` in the example above is the path from your NAS export)
- you have the right user authentication (`username=john,password=wayne` in the example above) and, if you use anonymous guest access, that you have write access enabled, so that Batocera can write the updated in the `gamelist.xml` files, and download scraped metadata like thumbnails or video snapshots

**NFS shares**

Examples of content of the file `batocera-boot.conf`:

the whole user data directory on the nas

```sh
sharedevice=NETWORK
sharenetwork_nfs1=SHARE@192.168.0.1:/mnt/Documents/batocera
```

only the roms on the nas, with, for example a specific NFS version

```sh
sharedevice=NETWORK
```
store games on a nas

```
sharenetwork_nfs1=ROMS@192.168.0.1:/mnt/Documents/batocera/roms:vers=4
```

**Roms, saves and bios on the nas**

```
sharedevice=NETWORK
sharenetwork_nfs1=ROMS@192.168.0.1:/mnt/Documents/batocera/roms
sharenetwork_nfs2=SAVES@192.168.0.1:/mnt/Documents/batocera/saves
sharenetwork_nfs3=BIOS@192.168.0.1:/mnt/Documents/batocera/bios
```

**Advanced**

**Troubleshooting**

Make sure you escape special characters in your CIFS passwords if you have some.

For troubleshooting purposes, you have /tmp/mountNetwork.log and /tmp/mountNetwork.err that will give you some insights on the mount failures if needed.

**Samba/Windows shares**

Examples of mapping other directories via sharenetwork_cmd.

```
sharenetwork_cmd1=mount.cifs -o guest //192.168.0.1/Documents/batocera/music /userdata/music
sharenetwork_cmd2=mount.cifs -o guest //192.168.0.1/Documents/batocera/cheats /userdata/cheats
sharenetwork_cmd3=mount.cifs -o guest //192.168.0.1/Documents/batocera/screenshots /userdata/screenshots
sharenetwork_cmd4=mount.cifs -o guest //192.168.0.1/Documents/batocera/themes /userdata/themes
```

**NFS and root permissions**

Batocera has a unique root user, so all files accessed on the share are from the root user, which can conflict with how your other NFS clients access files. You should check how the file permissions are declared on your NFS server, but a common way to make sure your file permissions are managed correctly is to map the file rights to the UID of the user that will access these files locally. Typically, if your NFS shares are defined in /etc/exports and you want to give access to a user with UID/GID of 1000, you can make it with:

```
/media/games/batocera
192.168.0.1(rw,sync,all_squash,anonuid=1000,anongid=1000,no_subtree_check)
```