

LOCAL HDD

Installation Guide & How It Works

Product documentation · Mac client + Linux Server Setup · Version 1.0

What this product is

LOCAL HDD turns a spare hard drive on a Linux PC into a **private network drive** that appears on your Mac like a local disk. Each user gets their own locked folder. Nobody else on the share can see your files.

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2. Product overview

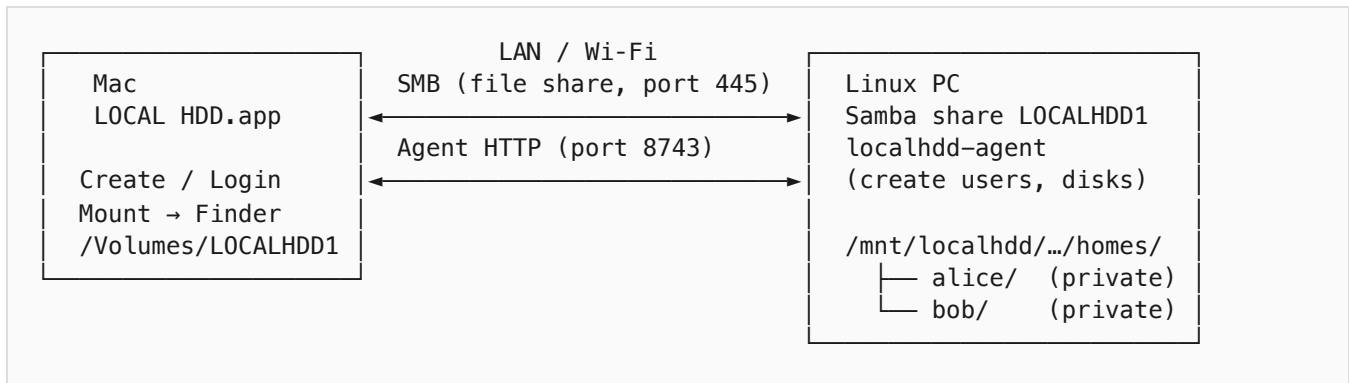
LOCAL HDD is two pieces that work together. You need both.

Piece	Where it runs	What it does
LOCAL HDD Server Setup	Linux PC with a spare HDD	One-time wizard: prepares the disk, installs file sharing (Samba), starts the LOCAL HDD agent, creates the default admin account, shows connection details for the Mac.

LOCAL HDD (app)	Mac	Create or Login, mount the drive in Finder, auto-reconnect, transfer files.
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Without Linux Server Setup, the Mac app has nothing to connect to. The Linux half is part of the product — not an optional “extra script.”

3. How it works



3.1 Share vs private folder

- Everyone mounts the same share name: **LOCALHDD1**.
- Samba maps that share to `homes/<username>/` only.
- When you log in as `alice`, you only see Alice’s files. You cannot browse Bob’s folder.

3.2 Create vs Login

- **Create** — Mac app asks the Linux agent to make a new username + password and a new private home folder, then mounts.
- **Login** — username already exists (from Server Setup default admin, or a previous Create). Mount only.

3.3 Agent token

Creating users is protected by an **Agent Token** (a secret string created during Linux setup). The Mac app sends it when you press Create. Login/mount uses the SMB password only.

4. Requirements

Linux PC (server)

- Debian/Ubuntu-style Linux recommended (e.g. Ubuntu / Lubuntu 18.04+).
- A **spare disk** ($\geq \sim 8$ GB) that is *not* the Linux system disk. Server Setup formats spare disks only.

- Network connection on the same LAN as the Mac.
- Desktop session available to run the GTK wizard (or you can use the command-line installer scripts).
- Packages pulled in by setup: Samba, Python 3, GTK3 (for the wizard), PolicyKit.

Mac

- macOS that can run the LOCAL HDD app (recent macOS recommended).
- Same local network as the Linux PC.
- Installer: LOCAL-HDD-1.0.0.pkg or LOCAL-HDD-1.0.0.dmg.

5. Install order (important)

1. **Linux first** — install and finish *LOCAL HDD Server Setup*. Copy the connection card (IP, token, admin user/password).
2. **Mac second** — install the LOCAL HDD app. Login (or Create) using those details.

Do not format or wipe disks by hand unless you know what you are doing. The Server Setup wizard skips the Linux system disk and prepares eligible spare disks as LOCALHDD1, LOCALHDD2, ...

6. Install on Linux (Server Setup)

6.1 Get the Linux package onto the machine

Copy the product folder that contains both `linux/` and `linux-app/` onto the Linux PC (USB drive, scp, etc.).

LocalHDD/	
linux/	← engine (Samba, agent, homes)
linux-app/	← Server Setup wizard + installers
mac/	← Mac sources (not needed on Linux)
dist-user/	← Mac PKG/DMG (for the Mac)

6.2 Install the Server Setup app

On the Linux PC, open a terminal in the product folder and run:

```
sudo bash linux-app/install-to-linux.sh
```

This installs to `/opt/localhdd-setup`, adds a menu entry **LOCAL HDD Server Setup**, and a command:

```
localhdd-server-setup
```

6.3 Run the wizard

1. From the application menu open **LOCAL HDD Server Setup**, or run `localhdd-server-setup`.
2. **Welcome** — read what will be installed; Continue.
3. **Account** — set the default admin username and password (used later for Mac *Login*). Confirm password. Agent port default is **8743**.
4. **Disks** — review the list. System disk = skipped. Spare disks = “Will become LOCAL HDD”.
5. **Confirm** — accept that spare disks will be formatted. Click **Install**. Enter your Linux admin password when PolicyKit / `sudo` asks.
6. **Done** — connection card appears. Click **Copy connection info** and keep it safe. Also saved on the server as `/etc/localhdd/mac-connection.txt`.

6.4 What the wizard installs

- Formats/mounts spare disks under `/mnt/localhdd/LOCALHDDn`
- Samba share **LOCALHDD1** (and more if multiple disks)
- Default SMB admin user you chose
- Per-user private homes (`homes/<user>`)
- Background service **localhdd-agent** on port **8743**
- Connection file for the Mac app

6.5 Optional: command-line only (no GUI)

If the desktop wizard is unavailable:

```
sudo bash linux-app/run-full-setup.sh
# Or:
sudo bash linux/localhdd-setup.sh
sudo bash linux/per-user-homes.sh
sudo cat /etc/localhdd/mac-connection.txt
```

You can pass account settings via environment variables:

```
sudo env LOCALHDD_SMB_USER=localhdd \
        LOCALHDD_SMB_PASS='ChooseAStrongPassword' \
        LOCALHDD_AGENT_PORT=8743 \
        bash linux-app/run-full-setup.sh
```

7. Install on Mac (LOCAL HDD app)

7.1 Installer files

On the Mac, use one of:

- LOCAL-HDD-1.0.0.pkg — standard macOS Installer wizard
- LOCAL-HDD-1.0.0.dmg — disk image that contains the PKG

Built from the project with:

```
cd /path/to/LocalHDD
./scripts/build-installer.sh
# Output typically under dist-user/
```

7.2 Install steps

1. Open the DMG (if used), then open **LOCAL-HDD-1.0.0.pkg**.
2. Follow Installer: Continue → destination (Applications) → Install. Enter your Mac password when asked.
3. When finished, launch **LOCAL HDD** from Applications (or Launchpad).
4. First launch shows **Create | Login**.

7.3 Settings you will need from Linux

Field	Where it comes from
Server IP	Linux connection card (your LAN IP from setup — never publish it)
Agent token	Linux connection card (Settings if Create needs it)
Username / password	Admin from Server Setup, or a new Create user
Share	Usually LOCALHDD1

8. First connection — Create or Login

8.1 Login (existing admin from Server Setup)

1. Choose **Login**.
2. Enter Server IP, admin username, and password from the Linux connection card.
3. Click **Login & Connect**.
4. The volume mounts (Finder Locations / /Volumes/...). Your private folder is the root of that volume.

Use Login for the default admin account created by Server Setup if you already stored files there (do not Create a different name if you need those files).

8.2 Create (new private user)

1. Choose **Create**.
2. Enter Server IP, a *new* username, and a password (4+ characters).
3. Agent token must be set (filled from setup or in Settings).
4. Click **Create & Connect**. The agent creates the Linux/Samba user + empty private folder, then mounts.

Create does **not** delete other users' data. It only adds a new empty home. To see existing files, Login as the user who owns them.

8.3 Reset setup on Mac

In the app Settings: **Reset setup (show Create / Login again)**. This clears the first-run flag so you can Create or Login again. It does not wipe the Linux disk.

9. Daily use

- **Mount** — use the Mac app (Mount / auto-connect at login if enabled).
- **Files** — work in Finder on the mounted volume, or use the app's transfer / paste-drop features where provided.
- **Eject** — use Eject in the app or Finder eject before unplugging the network.
- **Linux side** — leave Samba and localhdd-agent running (enabled as services by setup).

9.1 Finder / SMB URL (optional)

You can also mount without the app (less convenient):

```
smb://SERVER_IP/LOCALHDD1
```

Use the same username and password as in the app.

10. Users, passwords, and private folders

How user is created	Result
Linux Server Setup (admin)	Default account + homes/<admin>/

Mac app → Create	Calls agent POST /api/create_user → same as add-user helper
Linux terminal (advanced)	<code>sudo localhdd-add-user username 'password'</code>

Each user only sees their own home when they mount LOCALHDD1. Changing password for an existing Samba user is an advanced admin task (smbpasswd); prefer Create for new people.

11. Important paths & files

On Linux

Path	Purpose
/opt/localhdd-setup/	Installed Server Setup product
/usr/local/bin/localhdd-server-setup	Launcher
/mnt/localhdd/LOCALHDD1/	Disk mount + homes
.../homes/<user>/	That user's private files
/etc/localhdd/agent.env	Agent port + token
/etc/localhdd/mac-connection.txt	Connection card for Mac
/etc/localhdd/setup-result.json	Machine-readable setup result
/opt/localhdd/agent.py	Agent service script
localhdd-agent.service	systemd unit

On Mac

Path	Purpose
/Applications/LOCAL HDD.app	Client application
/Volumes/...	Mounted share
App Settings / Keychain	Saved IP, token, password

12. Troubleshooting

Problem	What to check
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Mac cannot reach agent / Create fails	Ping Linux IP; agent running (<code>systemctl status localhdd-agent</code>); port 8743; correct Agent Token; firewall allows the Mac.
Mount / Login fails	Correct username/password; Samba running (<code>systemctl status smbd</code>); share name LOCALHDD1; Mac on same LAN; firewall port 445.
“User already exists”	Switch to Login, or pick a different username for Create.
Mounted but folder looks empty / missing files	You logged in as a different user than the one who owns the files. Login as the owner (e.g. the Server Setup admin).
Finder size looks wrong	SMB Get Info can under-report. Trust the copy finished / check on Linux with <code>du</code> if needed.
No spare disk in wizard	Attach an unused disk ≥ 8 GB. System disk is never used for LOCAL HDD data.
Wizard asks for password and fails	Need an account in the sudo group; PolicyKit (pkexec) installed.

Useful Linux checks:

```
systemctl status smbd localhdd-agent
hostname -I
sudo cat /etc/localhdd/mac-connection.txt
sudo pdbedit -L
ls -la /mnt/localhdd/LOCALHDD1/homes/
```

13. Security notes

- Treat the **Agent Token** and SMB passwords like keys to the disk.
- Prefer a trusted LAN. If you lock Samba/firewall to one Mac IP, update that allow-list when the Mac’s IP changes (DHCP).
- Each user’s home is mode 700 — other SMB users should not see it.
- Do not publish `mac-connection.txt` or credentials in public downloads.
- Server Setup can format spare disks — confirm the disk list before Install.

14. Quick reference card

LINUX (once)

```
sudo bash linux-app/install-to-linux.sh
localhdd-server-setup
→ copy connection info
```

MAC

```
open LOCAL-HDD-1.0.0.pkg (or DMG)
open LOCAL HDD.app
→ Login with admin from Linux
   OR Create a new private user
```

SHARE

```
smb://<SERVER_IP>/LOCALHDD1
```

AGENT

```
http://<SERVER_IP>:8743
Token required for Create user
```

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Mac client + Linux Server Setup · Keep this document with your installers.