

■ Immich NAS Build Guide (Fresh from Box - Ubuntu 25.04 + RAID5)

1. Get Ubuntu 25.04

- On another PC, download the ISO: <https://ubuntu.com/download>
- Create a bootable USB drive:
 - * Windows: use Rufus (<https://rufus.ie/>)
 - * Mac/Linux: use balenaEtcher or dd
- Plug the USB into your NAS, enter BIOS/boot menu, boot from USB.

2. Install Ubuntu

- Select 'Install Ubuntu 25.04'.
- Install only on your system disk (58GB eMMC or 476GB NVMe).
- ■■■ Do NOT format the 3.6TB NVMe drives (these are for RAID).
- Finish installation and reboot into Ubuntu.

3. Update System & Install Tools

```
sudo apt update && sudo apt -y upgrade
sudo apt -y install mdadm docker.io docker-compose-plugin
sudo systemctl enable --now docker
```

4. Create RAID5 Array

```
lsblk -o NAME,SIZE,MOUNTPOINT # identify nvme0n1..nvme4n1 (~3.6TB each)
sudo mdadm --create --verbose /dev/md0 --level=5 --raid-devices=5 /dev/nvme[0-4]n1
cat /proc/mdstat
```

```
# Format & mount
sudo mkfs.ext4 -L immich_raid /dev/md0
sudo mkdir -p /mnt/raid
sudo mount /dev/md0 /mnt/raid
df -h /mnt/raid # should show ~15T
```

5. Make RAID Persistent

```
sudo blkid /dev/md0
# copy UUID and replace below
echo "UUID=YOUR-UUID /mnt/raid ext4 defaults,nofail 0 0" | sudo tee -a /etc/fstab
sudo mdadm --detail --scan | sudo tee /etc/mdadm/mdadm.conf
sudo update-initramfs -u
```

6. Install Immich

```
mkdir -p ~/immich && cd ~/immich
wget -O docker-compose.yml https://github.com/immich-app/immich/releases/latest/download/docker-compose.yml
wget -O .env https://github.com/immich-app/immich/releases/latest/download/example.env
```

7. Configure .env

```
nano .env

# Replace contents with:
IMMICH_VERSION=release
TZ=America/New_York

DB_USERNAME=immich
DB_PASSWORD=ChangeMe123
DB_DATABASE_NAME=immich
DB_DATA_LOCATION=./postgres

UPLOAD_LOCATION=/mnt/raid/immich
```

8. Create Data Folders

```
mkdir -p postgres
sudo mkdir -p /mnt/raid/immich
sudo chown -R $USER:$USER /mnt/raid/immich
```

9. Start Immich

```
docker compose up -d
docker compose ps
docker compose logs -f database # wait for 'database system is ready to accept connections'
```

10. Verify Storage

```
docker compose exec immich-server df -h /data # expect ~15T, not ~98G
ls -la /mnt/raid/immich # expect library, encoded-video, thumbs, profile, backups
```

11. Access Web UI

<http://<server-ip>:2283>

- Create your first user
- Upload a test photo
- Confirm file is stored in /mnt/raid/immich/library/original