

# NASes (Network-attached Storage)

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November 20, 2025



# What's a NAS?

- It's a computer!
  - But optimized around storage and networking
  - “Appliance”
- Primarily serves files
  - As opposed to a “SAN” that serves disk blocks
    - Storage area network
- May provide other services as well

# Primary Services

- Storage: **RAIDs** and **JBODs**
  - Redundant Array of Inexpensive Disks
  - Just a Bunch Of Disks
  - JBODs vs. RAIDs
  - File systems: **Ext4** vs. **Btrfs** vs. **ZFS**
- Networking: Fast Ethernet
  - Nowadays offering 2.5, 5, and 10 Gpbs connections

# Some NAS Providers

- Do-It-Yourself
  - [TrueNAS Community Edition](#) (Debian)
  - [OpenMediaVault](#) (Debian)
- Commercial
  - [Synology](#) (DSM [Linux, custom?])
  - [TrueNAS Scale](#) (FreeBSD and Debian)
  - [QNAP](#) (QTS [Linux, custom?])
  - [TerraMaster](#) (TNAS [Linux, custom, maybe CentOS?])
  - [UGREEN](#) (UGOS Pro [custom, but is Debian])

# Why UGREEN?

- Wanted to see what a vendor's NAS could do
  - I could always DIY later if I wanted
  - Cheap enough not to have buyer's remorse
- Bought UGREEN products before
- Seemed to do enough of what I wanted
  - Kept pushing to find something missing or annoying, but couldn't

# Why DH4300 Plus?

- Spousal Approval
  - Time Machine
  - Built-in Media Player, Apps for Apple TV and phone
    - Plex / Jellyfin
    - HDMI port
  - Form factor (small footprint) and low noise
- Tailscale, SSH, SAN Manager [iSCSI]
- Syncing, Cloud drives

Demo!