

NASeS

(Network-attached Storage)

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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!