



Home Server 101

The Beginner's Guide to Self-Hosting



A guide by **Jonathan's Build**

Why Self-Host?

You don't need to be a tech expert to run your own server. Here's what you get when you do.



Block Ads Everywhere, Automatically

Set up one thing on your server and ads disappear on every device in your home — phones, tablets, smart TVs, everything. No apps to install on each device. It just works.

No more YouTube ads on your TV



Keep Your Files on Your Own Hardware

Instead of paying Google or Apple to store your photos, documents, and files — keep them at home. No monthly fees, no storage limits, and nobody else can peek at your stuff.

Replaces Google Drive, Dropbox, iCloud — saves \$10-20/mo



Build Your Own Streaming Service

Rip your DVDs and Blu-rays (or add your existing digital collection) and stream them beautifully to any device. It looks and feels like Netflix, but it's yours — and it's free.

Replaces Netflix, Hulu, Disney+ — saves \$30-50/mo




A Sandbox to Learn and Tinker

A home server is your personal playground. Experiment, break things, fix them. You'll pick up real tech skills without even trying — and it's genuinely fun once you get going.

A hobby that pays for itself in skills

Hardware: What You Need

Good news — you probably already own something that can work. Here's what to look for.

-  **Start with what you have.** An old laptop, a spare desktop, even a Raspberry Pi can be your first server. You don't need to buy anything new to get started. The ThinkCenter below is what I use — but it's a suggestion, not a requirement.
- A Computer (any kind)**
A mini PC like a Lenovo ThinkCenter is ideal — small, quiet, energy efficient. But an old laptop with a broken screen works just as well. If it turns on and connects to WiFi, it can be a server. \$0 - 300
 - Network Switch** OPTIONAL
Gives you more ethernet ports if you want to hardwire multiple devices. Your router already has a few — this just adds more. Skip it until you need it. \$15 - 30
 - External Storage** OPTIONAL
Extra drives for your media library. USB drives, portable SSDs (like the Samsung T7), or even an old external hard drive. Start without it — add storage when you start running out of space. \$60 - 150
 - UPS (Battery Backup)** OPTIONAL
Keeps your server running through brief power flickers and protects against surges. Nice to have, but not necessary to get started. \$40 - 80
 - Smart Home Gear** OPTIONAL
Smart lights (Lutron Caseta), sensors, plugs — your server can control them all. A fun add-on once your server is up and running. \$80+

Minimum to get started

\$0 (use what you have)

Software: What to Run

All of this software is free. You just install it on your server and it runs.

Linux (Your Operating System)

Think of this as Windows or macOS, but free and built for servers. Debian or Ubuntu Server are the most beginner-friendly. Huge community — every question you'll have has already been answered online.

Docker (Your App Store)

Docker lets you install apps in neat little packages called "containers." Think of it like apps on your phone — each one runs independently and you can add or remove them without breaking anything else.

GREAT APPS TO START WITH

AD BLOCKING

AdGuard Home

Blocks ads and trackers on every device in your home. Set it up once and forget about it.

MEDIA STREAMING

Plex

Your own Netflix. Stream movies and TV to any device with a beautiful, familiar interface.

MEDIA AUTOMATION

Sonarr + Radarr

Automatically find and organize TV shows and movies. Pair with Jackett to search across sources.

DOWNLOADS

Transmission

A simple, lightweight download client. Can run behind a VPN for added privacy.

EBOOK LIBRARY

Calibre-Web

A beautiful web-based bookshelf. Browse your ebooks from any device or send them to your Kindle.

SMART HOME

Home Assistant

Control your lights, thermostat, and more from one dashboard. Works with thousands of devices.

FILE SYNC

Nextcloud

Your own Google Drive. Sync files, calendars, and contacts across all your devices.

MONITORING

Glances

See how your server is doing at a glance — CPU, memory, storage, and network activity.

Getting Started

Five steps. That's it. You can have a working home server by this weekend.

STEP 1

Find your hardware

Grab that old laptop, spare desktop, or pick up a refurbished mini PC. If it powers on and connects to your network, you're good.

STEP 2

Install Linux

Download Ubuntu Server, flash it to a USB drive with a free tool called Balena Etcher, boot from it, and follow the prompts. About 15 minutes.

STEP 3

Install Docker

One command in the terminal gets Docker running. After that, every app is just a small config file away.

STEP 4

Pick your first 3 apps

Start with AdGuard Home + Plex + Glances. In about an hour you'll have ad blocking, media streaming, and a monitoring dashboard.

STEP 5

Join a community

r/homelab and r/selfhosted on Reddit are incredibly welcoming. Ask questions, share your setup, and get ideas for what to try next.

HELPFUL RESOURCES

r/homelab

3M+ members sharing hardware setups, tips, and inspiration.

r/selfhosted

Software recommendations, Docker configs, and how-to guides.

linuxserver.io

Ready-to-use Docker images for nearly every app. Well-documented and reliable.

Follow Jonathan's Build

This guide is just the beginning. Follow along for step-by-step walkthroughs, live builds, and homelab tips.

TikTok: @jonathansbuild YouTube: @jonathansbuild