Old routers can do a lot more if you install the free OpenWRT upgrade

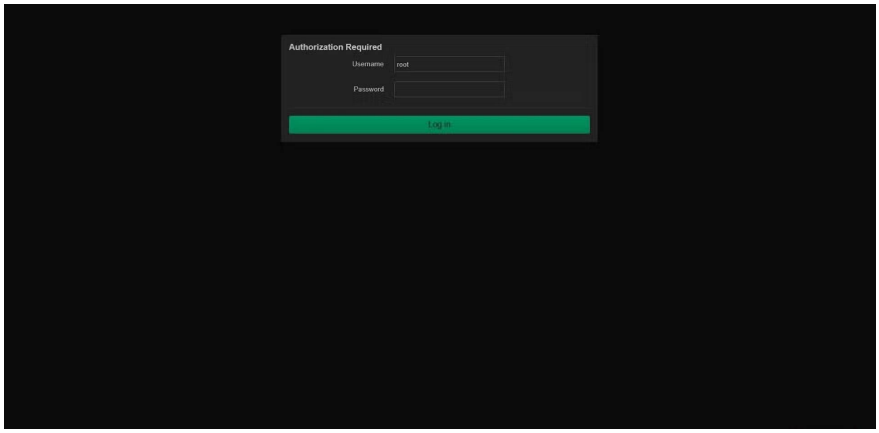
That's when many people discovered OpenWRT, a free, Linux-based firmware built exactly to unleash that potential.

Once you get into the tech world full of gibberish, you start questioning every piece of tech around you, thinking 'I can tweak this to make it work better'. And when you realize how powerful and customizable open source software is, that thought turns into 'surely there is a better open source alternative for this'.

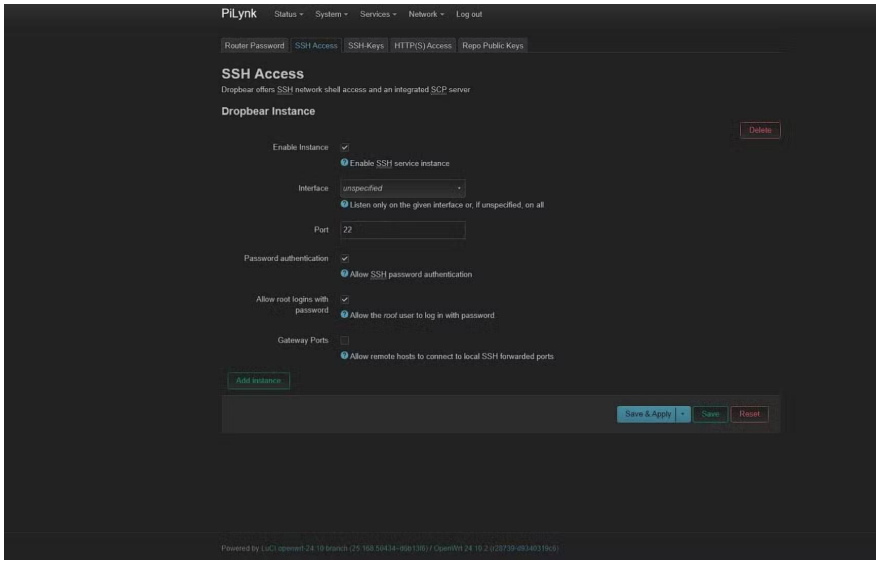
That's when many people discovered OpenWRT, a free, Linux-based firmware built exactly to unleash that potential.

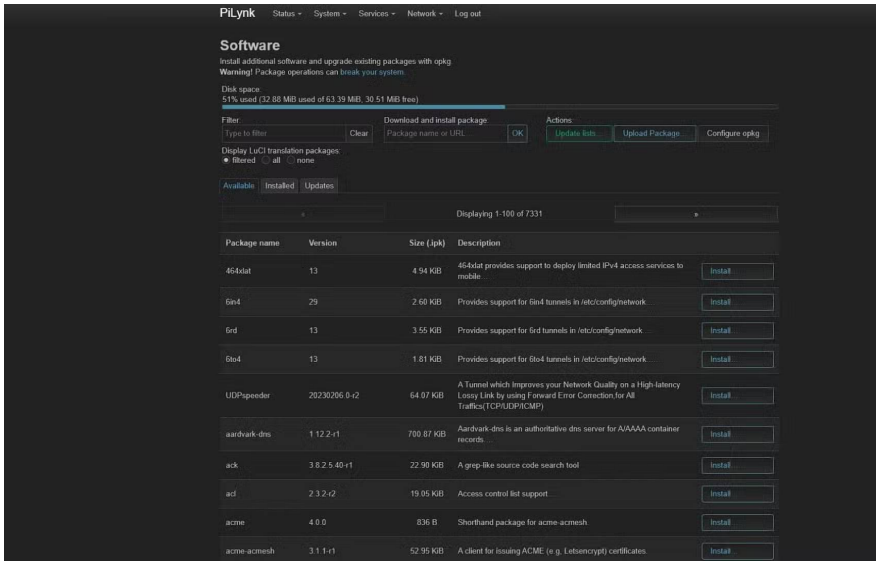
Why do people want their routers to do more?

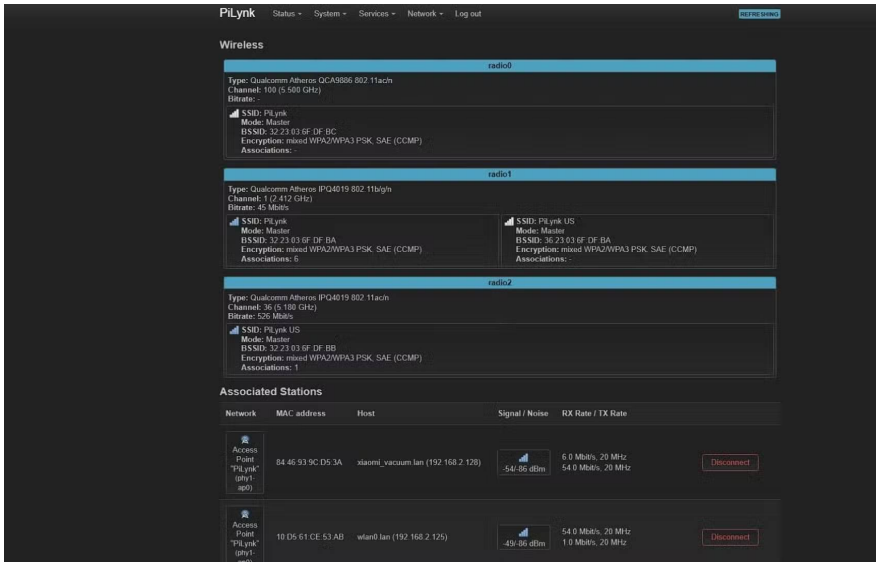
What is OpenWRT?




PiLynk
Status
System
Services
Network
Log out
REFRESHING
Firmware Version
OpenWrt 24.10.2 r28739-d9340319c6 / LuCI openwrt-24.10 branch 25.168.50434~d6b13f6
Kernel Version
6.6.93
Local Time
2025-10-08 15:22:15
Uptime
9d 17h 42m 25s
Load Average
0.81, 0.22, 0.08
Memory
Total Available
93.17 MiB / 241.36 MiB (38%)
Used
142.84 MiB / 241.36 MiB (59%)
Buffered
140.00 KiB / 241.36 MiB (0%)
Cached
36.54 MiB / 241.36 MiB (15%)
Storage
Disk space
32.88 MiB / 63.39 MiB (51%)
Temp space
4.84 MiB / 120.68 MiB (4%)
/dev/sda1 (/mnt/storage)
31.64 GiB / 931.48 GiB (3%)
Port status
lan1
1 GbE
▲ 22.6 GiB
▼ 3.5 GiB
lan2
no link
▲ 0 B
▼ 0 B
lan3
no link
▲ 0 B
▼ 0 B
lan4
no link
▲ 0 B
▼ 0 B
wan
100 M
▲ 7.2 GiB
▼ 55.8 GiB
Network


PiLynk
Status
System
Services
Network
Log out
Router Password
SSH Access
SSH-Keys
HTTP(S) Access
Repo Public Keys
SSH Access
Dropbear offers SSH network shell access and an integrated SCP server
Dropbear Instance
Delete
Enable Instance
Enable SSH service instance
Interface
unspecified
Listen only on the given interface or, if unspecified, on all
Port
22
Password authentication
Allow SSH password authentication
Allow root logins with password
Allow the root user to log in with password
Gateway Ports
Allow remote hosts to connect to local SSH forwarded ports
Add instance...
Save & Apply
Save
Reset
Powered by LuCI openwrt-24.10 branch (25.168.50434~d6b13f6) / OpenWrt 24.10.2 (r28739-d9340319c6)


PiLynk
Status
System
Services
Network
Log out
Software
Install additional software and upgrade existing packages with opkg
Warning! Package operations can break your system.
Disk space:
51% used (32.88 MiB used of 63.39 MiB, 30.51 MiB free)
Filter:
Type to filter
Clear
Download and install package:
Package name or URL
OK
Actions:
Update lists...
Upload Package...
Configure opkg
Display LuCI translation packages:
filtered
all
none
Available
Installed
Updates
Displaying 1-100 of 7331
Package name
Version
Size (ipk)
Description
464xlat
13
4.94 KiB
464xlat provides support to deploy limited IPv4 access services to mobile...
Install
6in4
29
2.60 KiB
Provides support for 6in4 tunnels in /etc/config/network
Install
6rd
13
3.55 KiB
Provides support for 6rd tunnels in /etc/config/network
Install
6to4
13
1.81 KiB
Provides support for 6to4 tunnels in /etc/config/network
Install
UDPspeeder
20230206.0-r2
64.67 KiB
A Tunnel which Improves your Network Quality on a High-latency Lossy Link by using Forward Error Correction,for All Traffics(TCP/UDP/ICMP)
Install
aardvark-dns
1.12.2-r1
700.87 KiB
Aardvark-dns is an authoritative dns server for A/AAAA container records...
Install
ack
3.8.2.5.40-r1
22.90 KiB
A grep-like source code search tool
Install
acl
2.3.2-r2
19.05 KiB
Access control list support
Install
acme
4.0.0
836 B
Shorthand package for acme-acmesh
Install
acme-acmesh
3.1.1-r1
52.95 KiB
A client for issuing ACME (e.g. Letsencrypt) certificates
Install



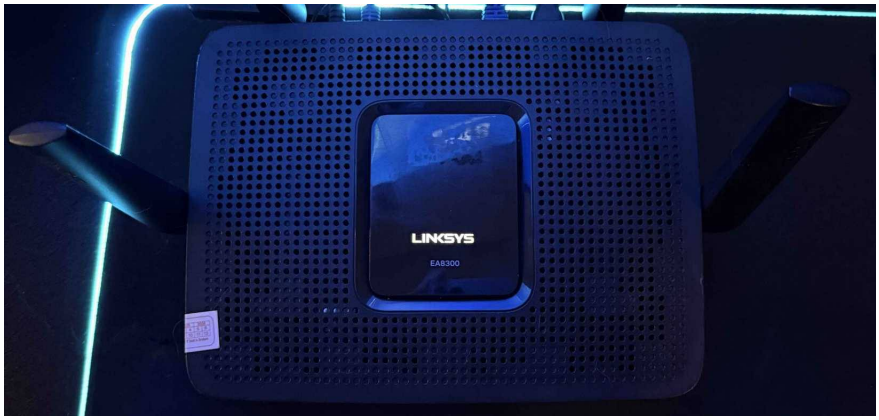
People use VPNs a lot—so much so that they even set up their own this year. At home, your VPN is always on on all your devices. But that means you're running the same VPN configuration on dozens of different devices, wasting processing power each time. That's the first thing you want to fix with a network-wide VPN.

Then there's the USB port on the back of the D-Link. You can do a lot with a router 's USB port . In theory, you could use it to turn the router into a local media server. I plugged in my 1TB WD hard drive and nothing happened. Turns out it only supports external hard drives under 16GB.

OpenWRT solves both problems. It's a free, open-source Linux router firmware that supports most modern routers and some older ones. It's a super lightweight Linux system, and you can imagine the freedom it offers. Again—you're installing Linux on your router. You have full command line access and can install or tweak anything you can imagine. VPNs and NAS are just the beginning.

OpenWRT Upgrade Journey

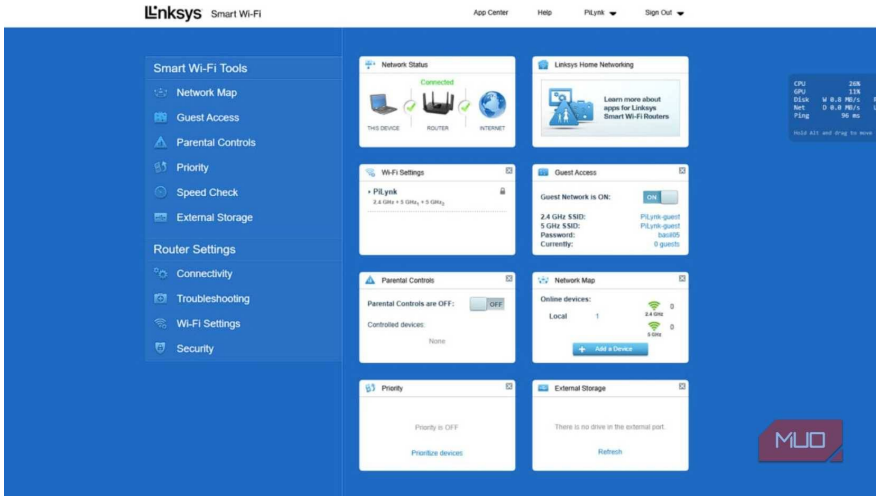
There have been some glitches



Breathing new life into old technology is a very exciting idea. Big tech companies hate the idea because it threatens their constant upgrade cycles. Routers in particular suffer from this—most only get firmware updates every one or two years, and rarely with groundbreaking new features. Try installing OpenWRT on an old D-Link. In this example, a D-Link 2750U purchased about six years ago (DSL modem routers are getting old). Unfortunately, it doesn't support OpenWRT.

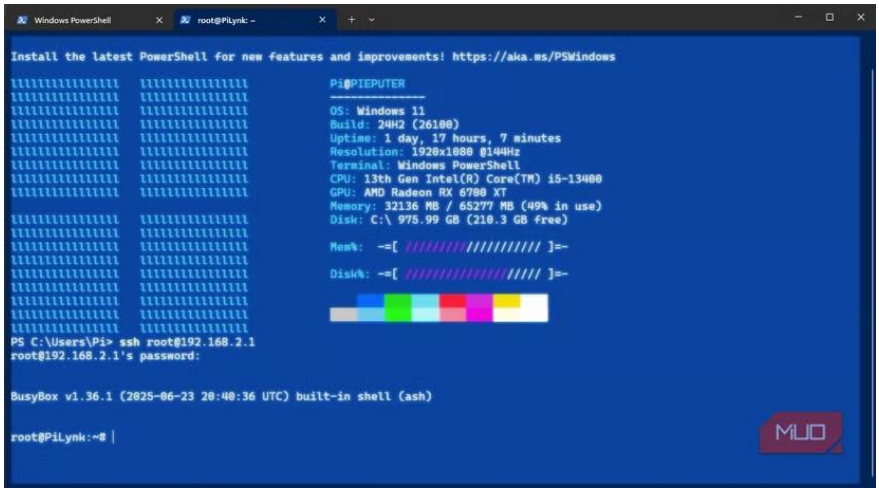
So I went on a hunt for the cheapest router that supported OpenWRT. I wanted a USB 3.0 port for my NAS, dual-band Wi-Fi, and solid performance, so I chose the Linksys EA8300. It has a quad-core Qualcomm processor, 256MB of RAM, tri-band Wi-Fi (two 5GHz bands, one 2.4GHz band), and a USB 3.0 port. Perfect.

You can save money by buying a used router.



When I looked at the OEM firmware for a quick review, it didn't support VPN configurations, and its NAS features were pretty rudimentary. Go straight to the firmware update page and install OpenWRT. OpenWRT turns the router into a full-fledged Linux machine. Open a terminal on your Windows computer and type:

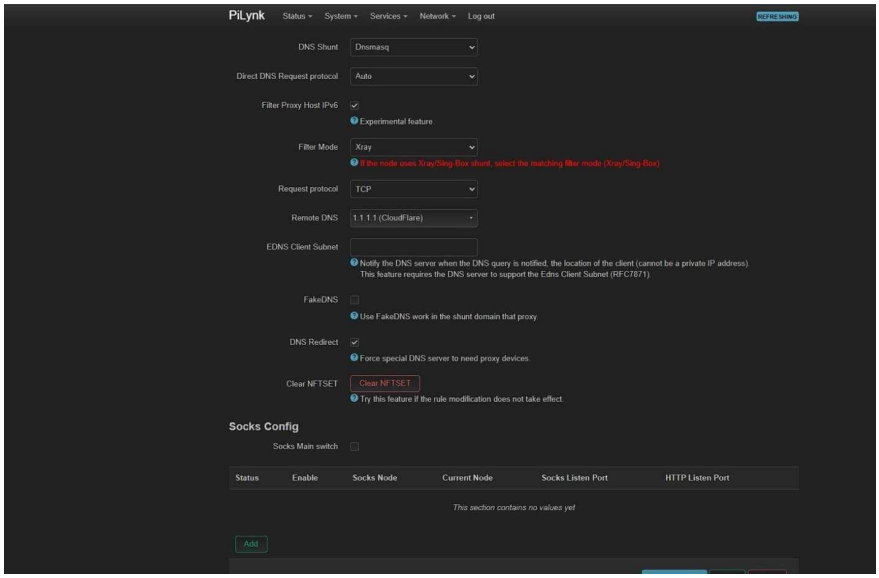
```
ssh root@192.168.1.1
```



And that's it! Your router is now ready to be used as a computer. It may sound intimidating, but don't worry - OpenWRT also comes with a neat web interface (LuCI) that you can access by typing the same IP address into your browser. You can configure (almost) everything from there without ever touching a terminal.

What OpenWRT offers

Unlimited



Install PassWall and Samba on your router. PassWall allows you to put all network interfaces on the VPN and supports multiple VPN protocols. You can set up WireGuard VPN on one interface while leaving the others connected directly. Samba allows you to use an external hard drive as a NAS, so you can access it through Kodi on your TV. You can also set up network-wide ad blocking, DNS encryption, and more. There are no limits.

But to get a router with built-in WireGuard VPN support and NAS features, you'd normally have to buy a monster like the Asus ROG Rapture GT-AXE11000, which starts at around $400. But now, thanks to OpenWRT, there's nothing the $400 Asus can do that the $30 Linksys can't—at least within the hardware limits.

So, consider this an ode to the joys of open source software. Your current router probably isn't as old and outdated as the D-Link in the example, so hopefully this will be a completely free upgrade in your case.