



UNIVERSITY OF GUAM
INFORMATION TECHNOLOGY
EDUCATE. INNOVATE. CONNECT.

How to make your Internet Faster

Jose Dante Santiago
Jr. Network Engineer, University of Guam

What do we use the internet for

- Browsing websites (i.e. News, Research)
- Streaming Videos (i.e. YouTube, NetFlix)
- Social Media (i.e. Facebook, Instagram)
- Gaming (i.e. PC games, PlayStation)

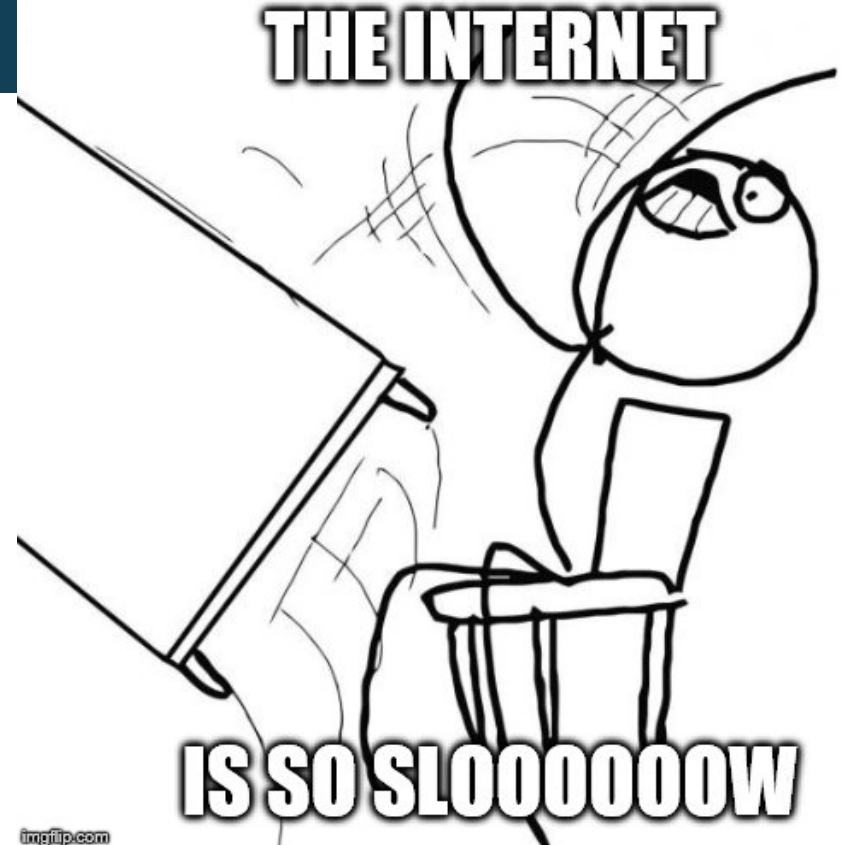
THIS IS



THE INTERNET

Biggest complaints

- Lag
- The internet is slow
- Internet keeps disconnecting



What causes those issues?

- Latency: The amount of time between you and the server
- Bandwidth: The amount of traffic, or internet that can travel on your line



Wired over Wireless

- A wired connection is a lot faster than wireless
- Wireless requires frequency transmissions
- Wired has less chance of interference



Wireless Interference

- Concrete walls and metal fences
- Far away from the wireless signal
- Microwaves and cordless phones



2.4 Ghz or 5 Ghz

- 2.4 Ghz is stronger at going through walls but is susceptible to Microwaves and Cordless phones and other common frequencies
- 5 Ghz is faster but doesn't do well with concrete walls



Wired Interference

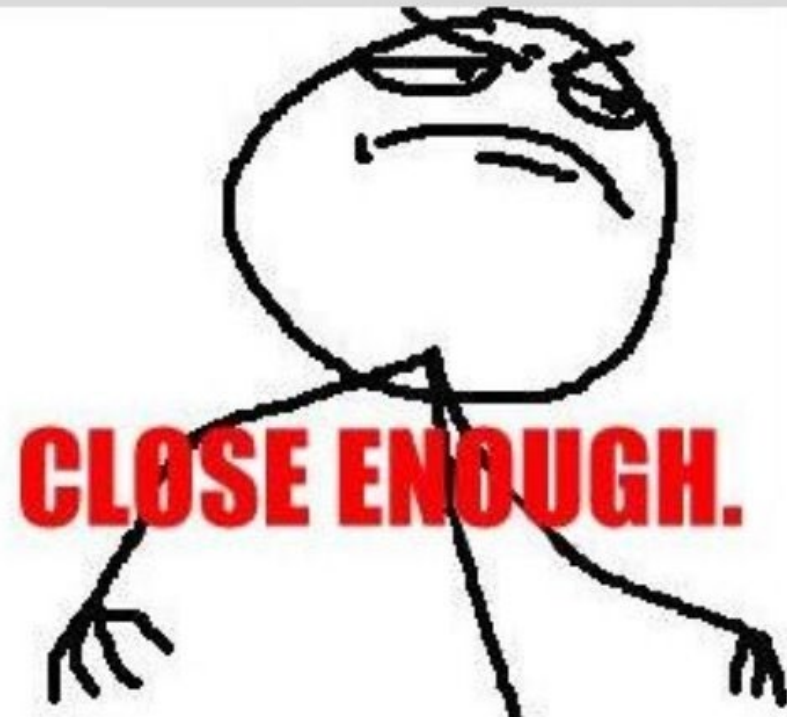
- Running power cables next to ethernet cables can cause interference



Move your Router

- Shortening the distance between your device and the router will improve your internet experience

FULL BAR SIGNAL?



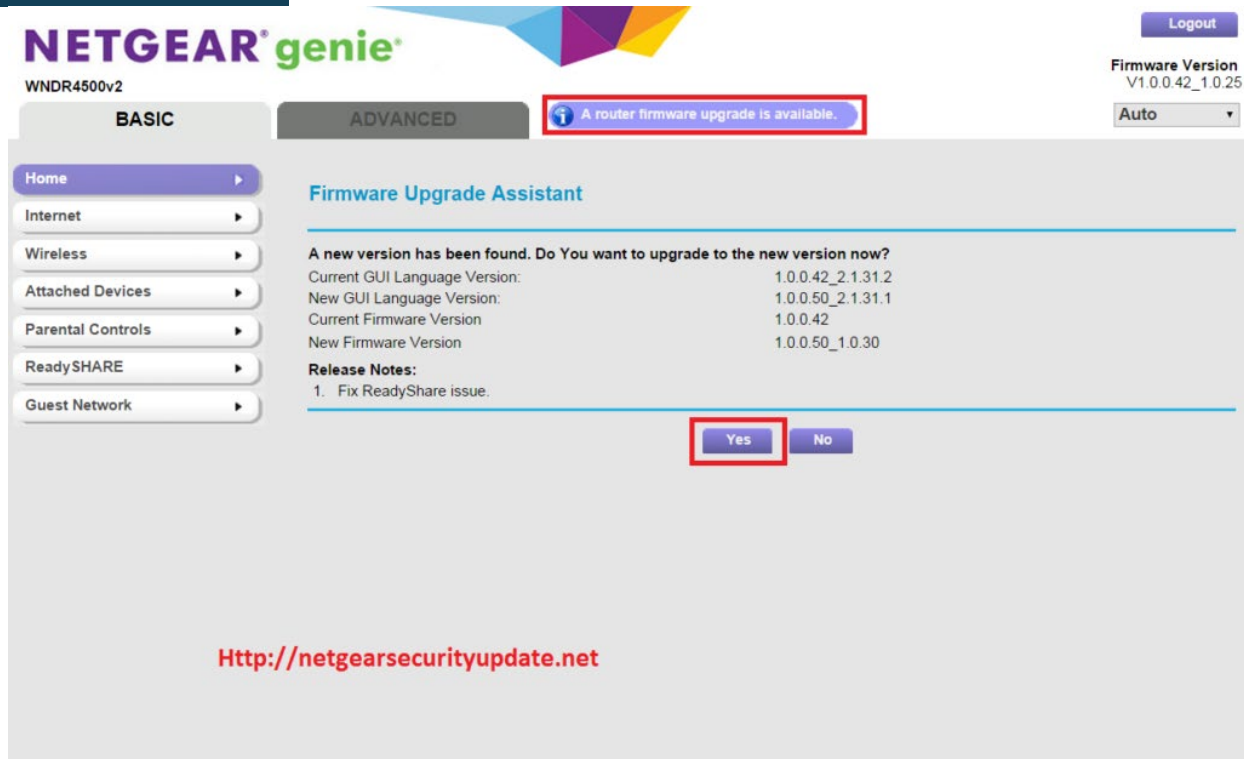
Directing the wi-fi signal

- This is an old technique to focus the wi-fi signal to a certain direction



Update your router firmware

- Updating your router can fix any bugs your router may have



The screenshot shows the Netgear Genie web interface for a WNDR4500v2 router. The interface is divided into 'BASIC' and 'ADVANCED' tabs. A notification banner at the top right of the 'ADVANCED' tab states 'A router firmware upgrade is available.' Below this, the 'Firmware Upgrade Assistant' section displays a message: 'A new version has been found. Do You want to upgrade to the new version now?'. A table compares the current and new versions:

Current Version	New Version
Current GUI Language Version: 1.0.0.42_2.1.31.2	New GUI Language Version: 1.0.0.50_2.1.31.1
Current Firmware Version: 1.0.0.42	New Firmware Version: 1.0.0.50_1.0.30

Below the table, the 'Release Notes' section lists: '1. Fix ReadyShare issue.' At the bottom of the notification area, there are 'Yes' and 'No' buttons.

[Http://netgearsecurityupdate.net](http://netgearsecurityupdate.net)

Turn on QoS

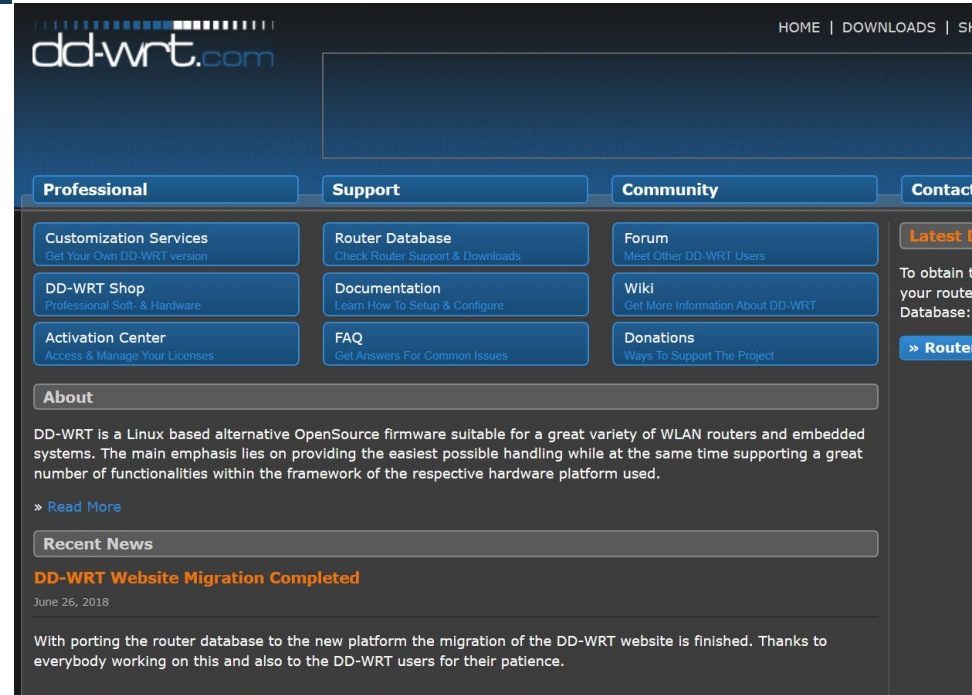
- Some routers come with the capability to turn on a Quality of Service feature
- This tells the router to prioritize certain applications



Flash router firmware

- This is fairly advanced, and could end up 'bricking' your router if something goes wrong
- Replace software with more enhanced features

<https://dd-wrt.com/>



The screenshot shows the dd-wrt.com website interface. At the top, there is a navigation bar with links for HOME, DOWNLOADS, and SEARCH. The main content area is organized into several sections: Professional, Support, Community, and Contact. Each section contains multiple links to various services and resources. Below these sections, there is an 'About' section with a brief description of DD-WRT as a Linux-based OpenSource firmware, followed by a 'Recent News' section featuring a post titled 'DD-WRT Website Migration Completed' dated June 26, 2018.

dd-wrt.com

HOME | DOWNLOADS | SEARCH

Professional Support Community Contact

Customization Services
Get Your Own DD-WRT version

Router Database
Check Router Support & Downloads

Forum
Meet Other DD-WRT Users

DD-WRT Shop
Professional Soft- & Hardware

Documentation
Learn How To Setup & Configure

Wiki
Get More Information About DD-WRT

Activation Center
Access & Manage Your Licenses

FAQ
Get Answers For Common Issues

Donations
Ways To Support The Project

Latest News

To obtain the latest version of your router's firmware, visit the Router Database:

» Router Database

About

DD-WRT is a Linux based alternative OpenSource firmware suitable for a great variety of WLAN routers and embedded systems. The main emphasis lies on providing the easiest possible handling while at the same time supporting a great number of functionalities within the framework of the respective hardware platform used.

» Read More

Recent News

DD-WRT Website Migration Completed

June 26, 2018

With porting the router database to the new platform the migration of the DD-WRT website is finished. Thanks to everybody working on this and also to the DD-WRT users for their patience.

Buy a new router

- New routers come better wireless signal support
- Faster processing and Internet speeds
- 802.11b/g/n
- 802.11ac/ax



Buy a Wireless Access Point

- Buying Additional Access points to, add coverage
- Access points plug into you're your existing Router and create a new SSID where they are installed



Buy a wireless mesh system

- Google wi-fi
- Shares connection wirelessly
- But share the same interference issues that regular wi-fi has.



Buy more Internet

- Talk to your Internet Service Provider to increase your bandwidth
- 15 Mbps (2 people)
- 30 Mbps (4 people)
- 60 Mbps (6 people)

- Mbps = Mega Bits Per Second





UNIVERSITY OF GUAM
INFORMATION TECHNOLOGY
EDUCATE. INNOVATE. CONNECT.

For more information contact:

uognoc@triton.uog.edu

helpdesk@triton.uog.edu