

# OpenWrt Flashing

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Technologies used: OpenWRT ,Linux, Captive Portal, Burpsuite

In the end of 2022 I entered my first year in university, but when I entered the student room and began to install my setup I found out that the Wi-Fi was very weak (2 mbps).

This wasn't allowing me to surf / play /stream as I wanted every thing was lagging etc.

And more the university network was using a WPA2-EAP enterprise network , and all my IoTs( Alexa for on example) can't connects to it ,so I got to find a solution .

I at first thought why not create a range extender using another router and use it to create a network using WPA2-Personnal?

After buying few range extender /router none of them was able to connect to this network and extend as a WPA2-PERSONAL.

So my father told me to look after something called OpenWrt, which after some research appears to be a Linux based OS developed to do routing (and more),so even if the functionality wasn't included I could still configured it manually.

The problem was that finding an on budget router compatible with OpenWrt was quite hard, but I finally found one ( TpLink Archer C6U v1 ,AC12000 MU-MIMO ) .

And then follow the steps(flash OS, install WPA-suppllicant) even if the installation of the wpa-suppllicant was quite tricky ( because it need network to install it but can't currently connect to it so i had to do an hotspot form my phone use one of the routers I kept from earlier and connect-it to the main one via RJ-45).

Once connected to the campus's network I just had to configure as range extender and check connection: wo went form 2 Mbps to 20Mbps and even 30 when not in high traffic !!

But more recently my University changed from WP2-EAP to an OPEN network using a captive portal to get internet access.

However my IoT's doesn't have any browser...

I then wanted to replicate the HTTP requests. When I went to intercept the request through my computer using Burpsuite it appeared there the portal saved the MAC of my machine and didn't prompt me to login again.

Even when I tried to logout I couldn't since the DNS was configured to resolve the portal domain only when not connected to the portal.

I had to search for another machine not logged in, setup the Burpsuite interceptor, recreate the request in the right order since it creates cookies at each step.

This project reflect my adaptability to situation and problem-solving way of thinking, my understanding of networks , ability to use Linux based system