## **Something Awesome Project**

## macspy - spyware for MacOS

Consists of two major components - a target, who is being spied on, and an admin, who is doing the spying. The admin is able to send requests to the target for various data. The part that runs on the target's computer will discreetly collect data from the target in response and send it back to the admin.

The source code, along with the details of how to set it up and the features supported can be found here https://github.com/edwardgauld/macspy

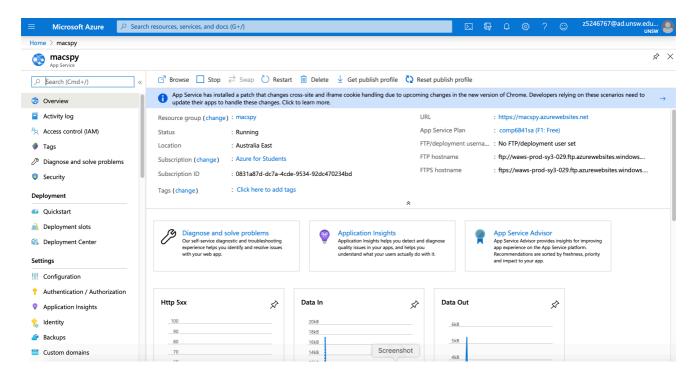
## Things I learned:

- -How to assess the difficulty of tasks better.
- -Problem solving. Had to research to figure out the best way to implement a feature that would work, and piece together and adapt unrelated segments of code to make it do what I wanted.
- -How launch agents work and are configured
- -Python3 libraries related to argument processing, data representation, audio recording and saving, socket programming, concurrent programming.
- -How great decoupling and modular programming is. Keeping the 'main' code minimal made it easy to debug. The modular approach to supporting features made it very easy to integrate new ones, none of the main code had to be changed.

## Other things:

I worked on trying to get a server up and working on azure so that the admin and target could move around the world and the system would still work. I also wanted to learn about C# frameworks and azure web app development.

I realised that what I wanted to do was too complicated to do in a couple weeks in addition to doing everything else. But I still learned a lot about this and made a valid start. You can view the code here <a href="https://github.com/edwardgauld/macspy0">https://github.com/edwardgauld/macspy0</a>



I also realised that the messages would not get past many firewalls, and could be detected by malware detectors. So I researched and found a cool way to get around this. https://www.blackhat.com/docs/eu-15/materials/eu-15-Bureau-Hiding-In-Plain-Sight-Advances-In-Malware-Covert-Communication-Channels-wp.pdf

I would send the commands and data hidden in HTTP error messages, a form of stenography. Did not get to implement this and test it against the defences, but it was cool to learn about.