

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 <https://github.com/edwardgauld/macspy0>

The screenshot displays the Microsoft Azure portal interface. At the top, the navigation bar shows 'Microsoft Azure' and a search bar. Below this, the breadcrumb trail indicates 'Home > macspy'. The main content area is titled 'macspy App Service'. On the left, a sidebar menu lists various management options: Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Security, Deployment, Quickstart, Deployment slots, Deployment Center, Settings, Configuration, Authentication / Authorization, Application Insights, Identity, Backups, and Custom domains. The 'Overview' section is currently selected. The main panel shows the 'macspy' App Service details, including its resource group, status (Running), location (Australia East), subscription, and various URLs. Below the details, there are three tiles for 'Diagnose and solve problems', 'Application Insights', and 'App Service Advisor'. At the bottom, there are three charts: 'Http 5xx', 'Data In', and 'Data Out', each with a 'Screenshot' button.

Microsoft Azure Search resources, services, and docs (G+)

Home > macspy

macspy App Service

Search (Cmd+/)

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Security

Deployment

Quickstart

Deployment slots

Deployment Center

Settings

Configuration

Authentication / Authorization

Application Insights

Identity

Backups

Custom domains

App Service has installed a patch that changes cross-site and iframe cookie handling due to upcoming changes in the new version of Chrome. Developers relying on these scenarios need to update their apps to handle these changes. Click to learn more.

Resource group (change) : macspy

Status : Running

Location : Australia East

Subscription (change) : Azure for Students

Subscription ID : 0831a87d-dc7a-4cde-9534-92dc470234bd

Tags (change) : Click here to add tags

URL : https://macspy.azurewebsites.net

App Service Plan : comp6841sa (F1: Free)

FTP/deployment user name : No FTP/deployment user set

FTP hostname : ftp://waws-prod-sy3-029.ftp.azurewebsites.windows...

FTPS hostname : ftps://waws-prod-sy3-029.ftp.azurewebsites.windows...

Diagnose and solve problems

Application Insights

App Service Advisor

Http 5xx

Data In

Data Out

Screenshot

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.