

# ÁLVARO FELIPE MELCHOR

## EDUCATION

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University of Alcalá

*Telecommunication Engineer*

- M. Sc. Telecommunication Engineer (Computer Science & Electrical Engineer)

Madrid, Spain

Sep 2009 – Feb 2015

## PROFESSIONAL EXPERIENCE

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EY (Ernst & Young)

*Security Analyst – Advance Cybersecurity Intelligence Team*

Madrid, Spain

Mar 2016 – Nowadays

Developing tools to assess and gather the maximum information of the client before to carry on a penetration test, applying intelligence over all data generated with the aim to know better the target, its infrastructure and save time for the penetration tester. Using technologies such as Neo4j to express relationships between data.

S2 Grupo

*Security Analyst*

Madrid, Spain

May 2015 – Feb 2016

Monitoring network infrastructure using IDS to detect anomalies inside costumer's network, basic malware analysis, penetration testing using automated tools such as Nessus, OpenVAS, nikto, fierce, recon-ng, wpscan, etc.

University of Alcalá

*Intern Security Analyst*

Madrid, Spain

Sep 2014 – Feb 2015

I developed a tool written in Python to improve the verification process of TLS's certificates that are exchanged during the handshake using state of the art techniques with the aim to spot MITM attacks. The tool which is outdated can be found at <https://github.com/alvarofe/cassle>

Telefónica R+D

*Intern R+D Engineer*

Madrid, Spain

Jan 2014 – Sep 2014

My tasks were test different SDN controllers such as: Pyretic, Ryu, OpenDaylight, Floodlight, etc; to extract a common architecture to see advantages and disadvantages of each approach to extrapolate it to the project.

Besides, I started the implementation of odl-shim <https://github.com/fp7-netide/Engine/tree/master/odl-shim>

## PROJECTS

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Radare2

*Collaborator*

Mar 2015 - Nowadays

Among the tasks that I have had in the project has been improving the code that deals with ELF and MACH binaries, increasing the security of the tool when parsing those formats and adding new features. But above all, I am very attracted with XNU, that is why I fixed partially the debugger capabilities on iOS and Mac OS X using the MACH layer since Apple does not provide a complete ptrace as Linux. This is still an ongoing work because I have to fix aarch64 and add support for multithreaded applications.

<https://github.com/radare/radare2/commits?author=alvarofe>

## COURSES

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Securizame

*8 hours – Forensic on routers – Sergi Álvarez (pancake)*

Madrid, Spain

April 2016

- Firmware, authentication bypass, reverse engineer firmwares, reverse engineer malware for routers, memory dumps, etc.

University of Alcalá

*4 hours – Pentesting in Windows by Antonio Sanchez - Dionach*

Madrid, Spain

Jan 2015

- Recreation of a stage to perform penetration testing against a typical Windows-based business environment and presentation of basic techniques for this type of scenario and an audit step by step.

## LANGUAGES

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Spanish native. English B2/C1