(Sec)DevOps for Eclipse Steady

Opportunity for a 6-month internship

Security Research @ SAP Labs France
Sophia-Antipolis – France

Maintaining security is a constantly shifting task, and we need to respond with continuous learning and research. The portfolio of SAP Security Research contains those topics that we believe are most important for SAP's security future.
SAP's vision to secure business is built on 3 ideals: **Zero-Vulnerability**, to harden the software by eliminating vulnerabilities, **Defensible Application**, to enable the software to identify and prevent attacks, and **Zero-Knowledge**, to make any theft of data useless through encryption.
Considering these aspects, SAP Security Research covers the following focal areas: Anonymization for Big Data, Secure Internet of Things, Software security analysis, Open-source analysis, Deceptive application, Applied cryptography, Quantum technology, and Machine Learning as enabler for the next generation of security.

Security Research proposes a 6-month internship in its Sophia-Antipolis offices (Mougins, France).

INTERNSHIP TOPIC

Nowadays software applications include more and more open-source (OSS) libraries. At the same time the number of vulnerabilities being discovered and publicly disclosed for OSS libraries is ever-increasing.
The gains obtained from the reuse of community-developed libraries may be offset by the cost of establishing a timely and effective vulnerability management process that allows organizations to identify, assess and mitigate vulnerabilities in open-source software. The consequences of poor vulnerability management are demonstrated by the severe security incidents that appear in the news with alarming frequency: breaches, such as the one suffered by Equifax in 2017, can have major legal, financial, and societal impacts.

Existing tools tackling such problem rely on metadata to map OSS libraries to vulnerabilities and thus suffer from both false positives and false negatives. The solution developed at SAP Security Research is instead code-centric and combines static and dynamic analysis to determine the reachability of the vulnerable portion of libraries used (directly or transitively) by an application. The implemented tool supports the analysis of Java and Python applications, is the officially recommended tool at SAP and has been open-sourced in 2018 (https://github.com/SAP/vulnerability-assessment-tool). In 2019, the tool will be moved to the Eclipse Foundation (Eclipse Steady).

The goal of the internship is to improve the project according to the various qualities mentioned by the badge program of the Core Infrastructure Initiative (CII), esp. regarding test coverage, test automation, static and dynamic code analysis and documentation. The goal of the internship is to fulfill all criteria required to obtain the silver or gold badge.

Technologies/techniques involved are: Java, Jenkins, GIT/SVN, Maven.

CANDIDATE PROFILE

- University Level: Last year of MSc or less if the student has a good profile
- Good knowledge of the Java programming language, JUnit tests, Jenkins and Maven
- Good knowledge of versioning control systems like GIT or SVN
- Good knowledge of HTML5 technologies (JS, CSS, AJAX)
- Interest in development work
- Fluency in English (working language)
- Good oral and written communication skills

INTERNSHIP CONTEXT

SAP

Founded in 1972, SAP has grown to become the world's leading provider of business software solutions. SAP is market leader in enterprise application software. The company is also the fastest-growing major database company. Globally, more than 77% of all business transactions worldwide touch an SAP software system. With more than 347.000 customers in more than 180 countries, SAP includes subsidiaries in all major countries. SAP is the world's largest inter-enterprise software company and the world's third-largest independent software supplier, overall. SAP solutions help enterprises of all sizes around the world to improve customer relationships, enhance partner collaboration and create efficiencies across their supply chains and business operations. SAP employs more than 98.600 people.

Security Research at SAP Labs France, Sophia Antipolis

Based at SAP Labs France Mougins, Security Research Sophia-Antipolis addresses the upcoming security needs, focusing on increased automation of the security life cycle and on providing innovative solutions for the security challenges in networked businesses, including cloud, services and mobile.

STANDARD INTERNSHIP PACKAGE

- *Salary*: depending on the length of the internship and your diploma.
- *Lunch*: SAP Labs France has a local cafeteria; interns contribute 2,63 €uro/lunch, like other SAP employees.
- *Holidays*: French Bank Holidays
  - January 1st; April 12th, April 13th, May 1st, May 8th, May 21st, June 1st, July 14th; August 15th, Nov 1st and 11th; December 25th
- *Travel*: no trip will be paid by SAP.
- *Accommodation*: SAP can propose an accommodation for the duration of your internship. The accommodation is subsidized by SAP: the intern pays half of the rental cost: 342€ for a 1-room apartment or 442€ for a 2-room apartment (Choice depending on the availability).

CONTACTS AND PROCEDURE

Please candidate by clicking on this link:
https://career5.successfactors.eu/sfcareer/jobreqcareer?jobId=234526&company=SAP&username=

UPLOAD (all documents must be in English):

- Your CV
- Cover letter
- Any relevant documents