

Threat Detection dataset

Opportunity for a 3-month internship

Security Research @ SAP Labs France
Sophia-Antipolis – France

SAP's security vision is built on 5 ideals to secure business: Defendable Application, Zero-Knowledge, Zero-Vulnerability, Security by Default, and Transparency.

SAP's security research group lays the foundation for realising the vision: The 30+ researchers of the Security Research unit focus on security engineering (e.g., the automation of the secure software development lifecycle), secure business execution (e.g., business process security and security in cloud based business applications) and secure operations (e.g., secure maintenance and support of complex and heterogeneous cloud IT landscapes).

[Security Research](#) proposes a 3-month internship in its Sophia-Antipolis offices (Mougins, France).

INTERNSHIP TOPIC

The SAP Enterprise Threat Detection is a solution able to detect security incidents / attacks by analysing a large amount of applications and system logs.

We are aiming at enhancing the current capabilities of the product by introducing big data analytics capabilities on top of the existing rule-based detection mechanism, as well as applying advanced anonymization techniques on the gathered dataset.

In this context, we are aiming at generating diverse realistic datasets in order to assess the capability of different analytics algorithms (supervised learning, unsupervised learning) and anonymization techniques (privbayes, privkagr, ...)

As such, the goals of the internship are the following:

- Deploy the demo SAP Enterprise Threat Detection (SAP ETD) virtual machines into an Amazon AWS account
- Setup the demo systems, comprising SAP ETD as well as a Netweaver system, so that Netweaver logs are consumed and analysed by SAP ETD
- Write a report dumping log data on the Netweaver side and on the ETD side, for offline import and analysis
- Develop programs simulating Netweaver system users, generating log data for analysis
- Develop 'vulnerable' programs prone to abuse
- Simulate users both using and abusing the vulnerable program(s) in order to generate a realistic log dataset

We expect that 20% of time will be dedicated to research activities, and 80% to development

CANDIDATE PROFILE

- University Level: Last year of MSc or less if the student has a good profile
- Good knowledge of ABAP
- Good knowledge of Netweaver
- Good knowledge of system logs (secure audit log, transaction log, ...)
- Interest in research work
- Fluency in English (working language)
- Good oral and written communication skills

INTERNSHIP CONTEXT

SAP

Over the past 45 years, SAP has grown to become the world's leading provider of business software solutions. With 12 million users, 96,400 installations, and more than 1,500 partners, 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 group includes subsidiaries in over 180 countries and employs more than 84 000 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 2,40 €uro/lunch, like other SAP employees.
- *Holidays*: French Bank Holidays
 - January 1st; April 2nd, May 1st, May 8th, May 10th, May 21st, 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 send **in English** your CV, a cover letter and any relevant documents to the following persons stating the title of the Internship in the subject: [Internship Application] **Proactive Intrusion Deception**.

Supervisor
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