Support tool for security assessment execution
Opportunity for a 6 months internship

SAP RESEARCH - SAP LABS FRANCE
NICE-SOPHIA ANTIPOLIS

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This internship is based in the SAP Labs France Research Lab, in Sophia-Antipolis. The Risk Mitigation team is performing security assessment of SAP products, including auditing, design review, code scanning and penetration testing.

In the context of these security assessment activities, we are looking for normalizing the assessment process and for facilitating the audit of mandatory security fields by developing a tool helping the auditors to measure what has already been covered and what is left to be checked.

In order to develop this tool, we are looking for a talented coder for an internship of 6 months. Aim of the work will be to define the specifications of the tool and to implement it. This internship will have a considerable practical part; some theoretical work might be expected as well.

The tool will be used as a cockpit for drilling-down into security topics. High-level topics (i.e. Confidentiality, Integrity, Availability goals) will break down into sub-topics, ultimately leading to atomic levels as defined by the CVE (Common Vulnerabilities and Exposures) and by the SAP internal security standard (PIL).
Depending on the intern's skills, refinements of the tool in terms of operational security support might be considered.

Within this internship, the student will deal with most of the following tasks:
- Familiarize with product security assessment and with SAP's security guidelines and processes
- Refine the assessment process and define how tool support can help
- Develop a library of security topics relevant both at design and product level
- Assess the state of the art in terms of similar support tools
- Implement a working prototype supporting multiple users, to be tested during a real product assessment

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

Technologies involved:

XML, SQL, Java or PHP, Apache and whatever makes sense

Candidate Profile

- University Level: Last year of MSc or less if the student has a good profile
- Excellent programming skills
- Knowledge of web technologies
- Interest in the security field
- Fluency in English (working language)
- Good oral and written communication skills

Internship Context

SAP & SAP Research

As the world's leading provider of business software, **SAP** delivers products and services that help accelerate business innovation for our customers. We believe that doing so will unleash growth and create significant new value – for our customers, SAP, and ultimately, entire industries and the economy at large. Today, more than 47,800 customers in more than 120 countries run SAP applications – from distinct solutions addressing the needs of small businesses and midsize companies to suite offerings for global organizations.

SAP Research –*Systematic Thought Leadership for Innovative Business*– As the global technology research unit of SAP, SAP Research significantly contributes to SAP's product portfolio and extends SAP's leading position by identifying and shaping emerging IT trends through applied research and corporate venturing.

In contrast to SAP's product groups, which work on new functions and releases, SAP researchers explore opportunities that haven't yet been developed into products. We track technology trends, evaluate the potential impact on SAP solutions and customers, and generate breakthrough technologies. The business model of SAP Research is based on co-innovation through

collaborative research. Working with leading universities, partners, customers, and SAP product groups, SAP Research oversees the development of promising ideas and prototypes into market-ready software for maximum customer value.

SAP Research is headquartered in Walldorf, Germany. SAP Research has identified six long-term and global research programs, among them the **Security & Trust Research** Program, which is lead by SAP Research at SAP Labs France.

SAP Research Sophia Antipolis, SAP Research Center Sophia Antipolis is located in the setting of one of the most important scientific parks worldwide. A high concentration of IT and telecommunication industries within walking distance, proximity to partners and customers, as well as the educational establishments in the region provide SRC Sophia Antipolis with an ideal working environment. Based at SAP Labs France, the focus of SRC Sophia Antipolis is mainly in the research field of security and trust. However, of great interest is the work on e-government and public safety applications. Local collaborations with external partners and educational organizations in the region, such as Inria, Eurécom Institute, and the University of Nice Sophia Antipolis, provide a strong benefit to these research activities. SAP Research also participates to the French poles de competitivites *Risques* (Risk) and *Solutions Communicantes Securisees* (Secure Communicating Solutions). Beyond that, SAP Research Sophia Antipolis is collaborating with industrial partners and customers which provide a strong benefit to the research activities.

30 researchers are working at SAP Labs France (among ~200 employees) and are mainly involved on European Research Projects in the area of Security & Trust with applications to eGovernment, Mobility and Public Security.

Standard Internship Package

- **Salary:** depending on the length of the internship and your diploma
- **Lunch:** SAP Labs France has a local cafeteria; interns contribute 2,18 Euro/lunch, like other SAP employees.
- **Holidays:** based on French holidays
  - 2011: January 1st; April 25th, May 1st, May 8th, June 2nd ; July 14th; August 15th , Nov 1st and 11th; December 25th, are French bank holidays.
- **Travel:** no personal travel (your trip to and from Nice) will be paid by SAP.
- **Accommodation:** we can propose to you an accommodation for the duration of your internship. If you accept SAP will take care of the rent but 275 Euros will be deducted from your monthly salary. Otherwise you are on your own.

Contacts and Procedure

Please send your CV and any relevant documents to the following persons stating the title of the Internship in the Subject
[Internship Application] Security Assessment Support Tool

Supervisor	Administrative point of contact
Cedric Hébert	Sylvine Eusebi
Cedric.Hebert@sap.com	Sylvine.Eusebi@sap.com
Tel. 0033-(0)4-92286347	Tel. 0033-(0)4-92286477