



Design and implementation of an all-purpose demo-server platform

Opportunity for a 4 months internship

SAP RESEARCH - SAP LABS FRANCE

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The internship will be performed at SAP Labs France in the Security & Trust area of SAP Research in the context of several EU-sponsored projects.

Working in an EU research project encompasses showing tangible results via means of a broad range of prototype applications. These demos are developed depending on the need of the project, and can range from simple videos to complex live setup of a network of hardware sensor components.

These demos are meant to fulfill three requirements:

- From the internal project side, show evidences and proofs of concept
- From a company perspective, raise awareness about the achievements and skills of the group
- From a program perspective, help identify projects working in similar and in complementary areas

However, keeping these demonstrators alive is a tedious task. Often, how to run the demo is known by a few persons only, generally too busy to run them on-demand, especially once the project is finished. Also, the general awareness of other projects is difficult to achieve, as each demo is kept internal to the project and is difficult to access unless you know where to look.

Based on these facts, the goal of the internship is to design and implement a 'demo center' concept, helping fulfilling the three aforementioned requirements.

The solution should offer a simple way to gather demos into a central interface, either by physically moving the demo onto a server or by linking to it.

The solution should be designed in such a way that a person working on a new project understands how he can 'connect' his demo to the demo center.

The demo center should support a broad range of demo types. It should namely support the fact that several demos can rely on the same components but with conflicting requirements (i.e. web server listening on port 80 running on Java 1.5 for one demo, and web server listening on port 80 running on Java 1.6 for the other demo). Solutions to this kind of problems (VMWare, URL rewriting...) should be analyzed and thought through.

Last, the demo center should run via a web interface and be accessible from different places easily.

The candidate is, as such, expected to:

- Grasp the different kinds of demos currently run by SAP Research
- Get familiar with the technical tools he can use for realizing the demo center
- Brainstorm motivated design proposals, highlighting pros and cons
- Implement the demo center
- Design the web interface, which will also be the GUI for administering the server
- Write the appropriate user manual and administrator manual documents

The ratio between software development and research related activities is expected to be around 60% development.

Technologies involved:

Design: UML

GUI (possibly): JSP, PHP, OpenLaszlo, Web Dynpro

Platform (possibly): Tomcat, NetWeaver

Virtualization (possibly): VMWare

Network tools (possibly): VNC, Remote Desktop, SCP...

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Candidate Profile

- Very good design skills
- Broad general knowledge in networks and web servers
- Good experience in web design
- Fluency in English (working language)
- Good oral and written communication skills
- Knowledge of Cygwin, web protocols and RIA applications would be a strong plus.

The position is to be filled ASAP.

Internship Context

SAP & SAP Research

Serving more than 41,200 customers worldwide, [SAP is the world's largest business software company and the world's third-largest independent software provider overall](#). We have a rich history of innovation and growth that has made us a true industry leader. Today, SAP employs more than 41,900 people in more than 50 countries. Our professionals are dedicated to providing the highest level of customer service and support.

SAP has leveraged our extensive experience to deliver a comprehensive range of solutions to empower every aspect of business operations. By using SAP solutions, organizations of all sizes – including small businesses and midsize companies – can reduce costs, improve performance, and gain the agility to respond to changing business needs.

SAP has also developed the SAP NetWeaver platform, which allows our customers to achieve more value from their IT investments.

[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 competitivités *Risques* (Risk) and *Solutions Communicantes Sécurisées* (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.

20 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 2,1 Euros/lunch, like other SAP employees.
- vacation: at the discretion of your manager (usually 1 worked/day per month).
- holidays: based on french holidays
 - 2008: January 1st, March 23rd,24th, May 1st,8th;July 14th;Aug 15th;Nov 1st,11th;Dec 25th,31st are French 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 250 Euros will be deducted from your monthly salary. Otherwise you are on your own.

If you have any question, do not hesitate to contact us.

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] Design and implementation of an all-purpose demo-server platform

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