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# DENIS TOUSSAINT

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## Skills Summary

Project management: fixed price & T&M

Scope and requirements management

Solutions integration (API gateway, API management, ESB)

Application design and architecture

Proposals writing

Risks assessment

Technical support

Team lead

## Education

**Bachelor in engineering sciences / Ecole Polytechnique de Louvain (UCL) / 2004-2007**

Electricity / Informatics science

**Master, Electrical and Electronics Engineering / Ecole Polytechnique de Louvain (UCL) / 2007-2009**

Specialization: nanotechnology, MEMS and NEMS, electronic circuits and systems

Thesis: Measuring the pH of solutions by interdigitated microsensor, modeling and development of an interface in CMOS SOI technology.

**TOGAF 9 Foundation / 2012**

The Open Group, License 64756

**TOGAF 9 Certified / 2013**

The Open Group, License 78061

**Jahia Developer Certification / 2013**

Jahia solutions

**Architecting on AWS / 2014**

Amazon

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## Experience

### Nedwork

*Freelance – architect, project manager / Jan. 2015 - now*

### Projects

#### **AG non fisc : new developments / FPS Finances / Program Manager / Feb. 2017 – now**

Description: The lot5 is a contract used by the FPS Finances to develop new features or new applications.

Function: In this program, I'm responsible for developing this contract with the account manager. I setup meetings with the different business partners to collect their needs for future applications. If there is a need for new developments, I meet with the different stakeholders to make a suitable proposal given their business cases. The main challenge of the proposal elaboration stands in the proper consideration of the business needs, while ensuring relevant interactions between applications and availability of systems in order to deliver a suitable high-level solution at the right price. The complete analysis and solution will be developed later when the project is started. I'm also responsible for staffing the project.

#### **ESB Integration / FPS Finances / Project manager / May 2016 – now**

##### **Architect / Sept. 2014 – now**

Description: The FPS Finances has acquired a complete SOA suite to offer connectivity, integration, security and monitoring of its assets. The main goal of the project is to apply SOA principles to increase productivity, security and interoperability between systems.

Function: In this project, I'm responsible for the follow up of the project, the team, the budgets, managing requirements, the delivery of related items and operational support. I am also working as an integrator for different departments (customs, patrimonial documentation, value added tax, ...) whose main goal is to orchestrate, secure, and integrate the communications between their different systems (webservices, messaging ...). I am also designing and implementing reusable components (FTP, CODA/XML converter, CCNCIS, Audit, Monitoring, deadletter queues) and services.

Technologies: Sonic ESB, Sonic MQ, Actional Intermediary, Management server, wssecurity,, JMS, SOAP, REST.

#### **CSAM Mandates / FPS Finances / Project manager / Jan. 2016 – Oct. 2016**

Description: CSAM is a governmental joined initiative between federal organizations (ONSS, BCSS, Fedict, FPS Economie, FPS Finances, FPS Intérieur) aimed at gathering the federal identification, authentication and authorization services. In order to complete their offering, they needed a federal mandate service (<https://www.csam.be>). Given the success of the mandate application opened by the FPS Finances to the eHealth platform, the joined group of organizations has decided to use this same application as the mandate provider of reference. The objective of this project is to design a generic mandate application in accordance with the CSAM style guide and ultimately reach a technologic upgrade.

Function: Within this project, I've written the proposal in fixed price with guaranteed result. I am the project manager and am responsible for successfully delivering this project. I have defined a new

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secure application architecture using JSON REST API services and a javascript frontend based on ReactJS. On one side, I am ensuring this architecture allows other applications to use our services to integrate mandates in their own applications. On the other side, I am focusing on diminishing the FPS Finances datacenter load by using javascript for all user interactions. I am also actively promoting the application to new potential customers (demo, security setup, ESB integration). I've already integrated the city of Antwerpen to the solution, and the city of Liège has already showed its interest. The different regions are also expressing interest in using the mandates.

Technologies: JEE6, REST, DB2, JMS, ESB, ReactJS, HTML5, SASS, Weblogic 12

### **eHealth Mandates / FPS Finances / Project manager / Mar. 2014 – June 2015**

Description: The e-Health federal platform wants to use the mandate application of the FPS Finances (FedIAM Mandates) in order to manage their mandates. They want their customers to be able to manage their mandates in self-service instead of the current civil servant encoding. To meet the e-Health requirements, the FPS Finances application needs to be adapted.

Function: In this role, I have to design the solution to integrate e-Health mandates into the FPS Finances mandates application. The solution involves 3 stakeholders: FEDICT for authentication and service exposition through the federal service bus, e-Health as mandates application consumer, and FPS Finances as mandates application provider. I manage the project within all its aspects: planning, steering presentations, architecture, analyses, development and support. This project is developed under a fixed price with guaranteed result scheme.

Technologies: JSF, JBoss seam, DB2, weblogic 10, SOAP, wssecurity, Actional Intermediary

## **Oniryx**

*Consultant – architect, project manager / Sept. 2011- Dec. 2014*

### **Projects**

#### **FormaForm / Forem / Project manager / Jan. 2013 – Feb. 2014**

Description: Le Forem, Bruxelles Formation and IFAPME wanted a portal for their professionals. The portal had to act as a CMS and be able to manage trainings (modules, sessions, budgets, reporting, ...), create a network of professionals regrouped by common interests (directory and communities) and allow users to share content (video, doc, link, ...). We decided to implement the desired functionalities using a Jahia portal.

Function: My function as team leader and project manager is to manage needs and functionalities among the different partners and lead corresponding developments in order to respect planning. I design and implement the architecture making use of rest services and Apache Camel routing to handle asynchronous notifications. In order to make full use of the Jahia portal capabilities, different Jahia modules are implemented to meet the desired functionalities. The entire portal is built using html5 features (full javascript and ajax user interface) making the portal very responsive and fast which leverages the user experience.

Technologies: Jahia portal, Spring, Hibernate, Camel, JCR, REST, HTML5, jQuery, AngularJS, SQL Server (triggers, procedures), Tomcat

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## **Implementation SOA / Forem / architect / Sept. 2011 – Jan. 2013**

Description: Le Forem wanted to implement SOA and asked for advices in different fields like: feasibility, cartography existing, architecture blueprint for services, change management, business, application and technology needs.

Function: In this context, I collect needs from different architecture domains. I architect those domains and I write software architecture document for the ESB solution using ServiceMix. I develop connector components to integrate the existing solutions building blocks. I optimize performances of existing components, build a failure tolerance and security system. I study the solution scalability through load tests. I develop a high performance asynchronous monitoring agent. I also support developers team to help them integrate and make use the ESB solution.

Technologies: Java EE, JPA, Hibernate, Ajax, Weblogic 10, ServiceMix, OSGI, Karaf, Solr, ActiveMQ, Camel, REST (jersey), Apache web server, jQuery, JAX-RS, Spring, Blueprint.

## **Side projects**

### **Internal infrastructure / responsible / Sept. 2011 – Dec. 2014**

Description: Oniryx needed an internal infrastructure to develop a software factory.

Function: I am responsible for the internal infrastructure, this task involves the setup of the cisco router/firewall/vpn, the telephony services using VOIP (PBX - Asterisk), the NAS for storage management, public key infrastructure, monitoring and the setup of ESXi VM's needed for development.

Technologies: Amazon Webservices, Linux, Asterisk (VOIP), VM Ware ESXi, Cisco router, Cisco ASA, Cisco wireless controller, IPSec VPN, OpenVPN, Nagios

### **EPC / UCL / architect / Jul. 2012– Aug. 2012**

### **Weblaunchpad / CIRB / architect / Sept. 2012– Jan. 2013**

### **Federal commuter survey / FPS Mobility / Apr. 2014 – June 2014**

## **Sibelga**

*Technologist electricity / Feb. 2011 – Aug. 2011*

Description: Sibelga has a project to write down their workers' experiences in order to build secure and reliable work methods. Technologists also write technical specifications for materials like cables, transformers...

Function: My role is to meet internal clients and harvest different needs, prioritize, adapt the methodologies and write the necessary documents. I develop diplomatic skills in order to gather information due to the very protective attitude of departments. I also have some experiences in the high voltage network dispatching of Brussels.

## **Centran**

*Consultant - developer, architect / Sept. 2009 – Jan. 2011*

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## Projects

### **MyMinfin migration / FPS Finances / architect / June 2010 – Jan. 2011**

Description MyMinfin is the FPS Finances portal allowing citizens to access their information held by the FPS Finances. Those information are essentially all the files sent and received by the FPS Finances like cadastral revenue, tax return,... The portal also offers different services like agent's management, bank account numbers conversion SEPA/BIC IBAN, ...

Function: My role is to migrate the existing JBoss portal from JBoss 4.2 to Weblogic 10. This migration needs a new technical architecture using the new Java EE standards. Due to the application's critical visibility, I have to take care of different aspects like: performances, flexibility, modularity and generic programming. The architecture is a key point of the project. The portal is a content aggregator and provides custom tools set to access the services offered by the FPS Finances. The content is achieved by independent portlets.

Technologies: Liferay, Weblogic 10, DB2 9, Adobe Flex, Adobe Livecycle, JSF, JSP, SOAP, EJB, Spring, Portlets, authentication EID, IAM, Fed-IAM, User Management.

### **Tax-on-web / FPS Finances / developer / Dec. 2009 – May 2010**

Description: The Tax-on-web project is a well-known application to fill in the annual tax returns (more than 3 million declarations in year 2012). The major assets are rapidity, security, validation of fields and tax optimization.

Function: My role is to update the application for tax exercise 2010. This update included validations rules and front-end update with new fields to comply with the law. Due to the high visit peaks in June and July, we had to respect standards and best practices to support non-functional requirements and perform load tests.

Technologies: Weblogic 8.1, Weblogic 10, Struts 1, DB9, JSP, Quicktest, eID authentication

### **Dormant account / Identifin / developer / Oct. 2009 – Nov. 2009**

### **SFRS / Febelfin / developer / Sept. 2009 – Oct. 2009**

## Awards and Acknowledgements

### **Agoria / Nominee in security category of the eHealth awards**

Agoria - June 2015

## Technical background

HTML5, CSS3, javascript, ReactJS, AngularJS, handlebars, mustache, jQuery, backbonejs, underscorejs, webpack,, gulp, npm, sass

Event driven architecture: esb, nodejs, vertx, javascript

Lightweight java architectures: Spring, Hibernate, Tomcat, Jetty, Restlet, ...

Complex JEE architectures: JCR, JMS, JPA, JAXB, JAX-RS, JAX-WS, CDI, JNDI

Open-source frameworks & tools: Drools, Ant, Maven, Hudson/Jenkins...

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Applications servers: Weblogic, GlassFish, JBoss

Databases: Oracle, DB2, SqlServer, MySQL, H2

SOA: ServiceMix, Camel, OSGI, CXF, ActiveMQ, Sonic ESB, Sonic MQ, Actional Intermediary

Team lead: Agile, Scrum

Other: PKI, IAM, SAML, OAuth

## Languages

FR: Mother tongue

English: understanding: 5/5 - speaking: 5/5 - writing: 5/5

Dutch: understanding: 3/5 - speaking: 1/5 - writing: 1/5