Sylvain **Leroy**

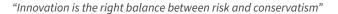CTO / SOFTWARE MODERNIZATION ARCHITECT

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"Innovation is the right balance between risk and conservatism"

Key Points

- **Architect and consultant** specialized in cloud migration issues and legacy software modernization.

- **15+ years** involved in software migration projects, tools and methods.

- Solution Architect specialized in Migration and Software Modernization for Amazon Web Services.

- Multiple certifications in AWS technologies

- Founder of a company specialized in legacy software modernisation (Tocea) and Software quality

- Worked for several industries and sectors as public organizations, banks, insurances, ISV...

- Several times CTO (ISV, Startup, company registered in Netherlands stock market)

- Recognized for my ability to help IT teams to **organize and perform modernization of their legacy software**.

- Coach and tutor in various IT domains (Software Craftmanship, Cleancode, Software programming)

Education

GCP ASSOCIATE CLOUD ENGINEER CERTIFICATION	*Online*
PEARSON	*2023*
AWS SOLUTION ARCHITECT PRO CERTIFICATION	*Online*
PEARSON	*2023*
AWS DEVOPS PRO CERTIFICATION	*Online*
PEARSON	*2023*
AWS DEVELOPER ASSOCIATE CERTIFICATION	*Online*
PEARSON	*2023*
AWS DATABASE SPECIALITY CERTIFICATION	*Online*
PEARSON	*2023*
AWS SOLUTION ARCHITECT ASSOCIATE CERTIFICATION	*Online*
PEARSON	*2023*
AWS SYSOPS ASSOCIATE CERTIFICATION	*Online*
PEARSON	*2023*
INTRODUCTION TO IBMI/RPG LANGUAGE	*Online*
METRIXWARE	*Jan 2021*
ANGULAR 2 TRAINING	*Geneve*
NINJA SQUAD	*Jan 2017*
INTRODUCTION TO COBOL AND 3270	*Nanterre*
METRIXWARE	*2015*

Static analysis and refactoring tools, Research Project
INRIA/IRISA

Rennes

Jun 2007-2010

Performance and Micro Architecture, Master's Program
University of Rennes 1

Rennes

Sep 2004-Jun 2007

Bachelor of Computer Sciences
University of Rennes 1

Rennes

Sep 2002-Jun 2004

Experience

SOLUTION ARCHITECT AND SOFTWARE MODERNIZATION

Switzerland

CONSULTANT

September 20179 - June 2021

Keyteo - Assura

Technical Leader
March 2021 - September 2021

CONTEXT
- 100+ staff project
- Team 15 people, 1 architects, 2 Techleads, devs / analysts
- Flat hierarchy environment
- Core ERP migration from AS400 to Adcubum Syrius solution

ACHIEVEMENTS
- Functional/Technical specifications, Architecture and Software Design
- Software quality control and best practices
- Agile/Scrum environment

TECHNOLOGIES
- *TIBCO* : REST/SOAP environment, Java language

SALT SA

SOLUTION ARCHITECT
March 2020 - March 2021

CONTEXT
- IT Team 30 people, 5 architects, 25 devs / analysts
- Flat hierarchy environment
- Near-shoring in France (15 people)
- 4 Backends, 2 UI had to be migrated from Spring 2/Java 5 to Spring 5, Java 11 using Hexagonal Architecture
- Central payment system : 5 software, one 3rd party provider (Datatrans)
- 3 allocated people + Project manager

ACHIEVEMENTS
- Prepare a technological roadmap and execute the modernization of the Payment system
- One year project, to perform much everything on our own; (automated tests, non-regression, software modernization plus 1 UI rebuilt from scratch)
- Reverse engineering of the legacy system to allow later improvements
- Coached and trained junior developers.

TECHNOLOGIES
- *Java Backend migration* : Java 6/Open JPA -> Java 11/Spring Boot/Data
- *Frontend/Backend migration* : Groovy/Play migration : Play Framework -> Spring Boot/MVC/Thymeleaf
- *Frontend migration* : GWT -> SPA/Typescript/Webpack/JQuery
- *Automated testing* : Junit 5, Cucumber, Selenium

La Mobilière

CONTEXT
- Fixed-term employment contract
- Project Migration of 3 Legacy JBOSS/JSF Applications to Jboss 7.2
- Project LCM on existing systems
- Large organization in SAFE: 200 people
- Totally new team dedicated to this project: 7 people
- Time-constrained modernization
- Reverse-engineering and technology architecture impact analysis

ACHIEVEMENTS
- Migration, modernization, and QA performed on time and budget
- Excellent feedback from the stakeholders
- Frequent architecture discussions with the local architecture team

TECHNOLOGIES
- *Java Backend migration*: JBOSS 6.4->7.2, Java 6 to Java 11 Migration, Spring upgrade, Hibernate Upgrade and JBOSS Drools upgrade
- *Frontend migration*: Replace Primefaces with the the latest version
- *Java Backend migration*: Java 8 to Java 11 Migration, Spring upgrade, Hibernate Upgrade and JBOSS Drools upgrade
- *Automated testing*: Junit 4, Cucumber
- *Methodology*: SAFE, SCRUM

CTO

INTERNAL POSITION

Biomed Company

CONTEXT
- Company at Euronext/Amsterdam
- 20+ staff company, 10+ IT
- Chief Technical director / VP of Engineering
- Multi-cultural environement

ACHIEVEMENTS
- Process review of IT Department
- New release of the Hardware/Software solution for Genomic sequencing
- Specificatons of a new Genomic sequencing solution into the Cloud

TECHNOLOGIES

FAVEEO SA

CONTEXT
- Small Organization Environment (5 people)
- Personal challenge to bring innovation
- Principal Architect, Lead Dev
- OKR/KPI oriented organization with strong budget and business incentives
- Multi-cultural environement

ACHIEVEMENTS
- `https://essentials.news`
- `https://sylvainleroy.com/upload/videoscript-7fc1ccef88.mp4`
- Architecture Design and development of an innovative **AI prediction system** to detect future viral newspaper articles
- Architecture Design and development of an innovative system to generate Video using newspaper articles and AI
- Architecture Design an Automated AI generated mailing using Mailchimp, Elasticsearch and Java 11
- Achieved the technological and innovation goals for the company.

TECHNOLOGIES
- Event Architecture, Pipeline, Messaging using RabbitMQ
- Java, Spring Boot, DeepLearning4j, Smile, Docker
- Vue.js, Spring Boot, RabbitMQ; Docker, MongoDB, Elasticsearch, OpenNLP
- Pure Cloud Player : AWS Environment
- Mail generation system using Node.JS, Java 8, Spring Boot and Mailchimp

Azqore

CONTEXT
- 200+ organization, 50+ IT
- Software Quality Assessment and Senior Architect position
- In charge of the Software Factory / Quality of the deliveries inshore/offshore
- Software quality control for the external software providers

ACHIEVEMENTS
- Saved an externalized security Software project that went wrong (quality, architecture). The project ongoing was halted and conflictual. Been able to bring solutions and get the software provider aligned with Azqore goals to end the project.
- Enhanced the Environment runtime availability by defining, coaching, and lead the monitoring activities

TECHNOLOGIES
- Software Architecture modelization tools, Cobol, Java, SonarQube, Jenkins, GITLab, Application ManageEngine, Sailpoint IQ

GHI, GSK, HSBC

Solution Architect, Tech Lead
January 2017 - December 2017

CONTEXT
- 3 Projects, two offsite, one onsite
- Generally in Scrum/Agile teams
- Architect role directly with the GSK/Novartis Upper Architecture management
- Solution Architect / Delivery control in a complex delivery environment for HSBC
- As Product Owners of the Bank Middleware system, really high stability and performance expected from the Architecture team
- Offshore with India and China : architecture, coaching, delivery, review, first level of technical support

ACHIEVEMENTS
- *1st Trimester 2017 - GHI*: Software Quality Assessment and Performance testing
- *2nd Trimester 2017 - GSK Novartis*: Modernization of the Drug Packaging system
- *TechTalk*: Speaker: "Why developers should care about quality ?"
- *HSBC Private Banking*: member of the Architecture/Middleware team: performed several deliveries and go live in a multicultural / distributed environment

TECHNOLOGIES
- *GHI*: Spring and Angular technologies, Okta authentication, JMeter and Gatling
- *GSK*: W4 Business engine, Docker, Jenkins, Oracle, Java, Javascript, JSP, Tomcat, Apache, Gradle, JIRA, Bamboo
- *HSBC*: Avaloq, Ansible, Jenkins, Spring, REST, SOAP, MQ, WebSphere

STAKEHOLDER AND CTO

Rennes, Nanterre

METRIXWARE/TOCEA

Jun. 2014 - Dec. 2016

CONTEXT
- Mergers between two companies (20 + 15 staff)
- Three sites : Paris, Rennes, Montreal
- Two very different cultures : 25 years, 50+ years
- Technology director for several product lines : Mainframe product, Software Factory product, DevOps product and Legacy Software migration products
- Principal Consultant for Key Accounts
- 50+ Active customer references France and International: insurances, banks, administrations, industries

ACHIEVEMENTS
- Creation of a profitable activity around Software Modernization consulting
- Built the renown of the company over Software Factory and Devops Expertise
- Increased the company renown for its Technology/Architecture Roadmap and Software Assessment
- Launched successfuly an KPI/DevOps Dashboard solution to track Devops initiative ROI
- Acquired a knowledge of the IBMz and IBMi challenges and integration issues with the Digital ecosystem
- *Software Modernization Project* Modernization program of the Swift Transfer Product for Fircosoft, Accuity
- *Software Modernization Project* Modernization program and transformation of the C/C++ Indexation Engine for SoLocal/Pages Jaunes
- *Software Modernization Project* Modernization program of 7 applications for INSEE
- *Software Modernization Project* Modernization program of core Logistic Product for SIGMA informatique
- *Software Modernization Project* Modernization program of the Orange's Webmail
- *Software Modernization Assessment* Architecture and Technology Roadmap for DGAC ministry
- *Software Modernization Assessment* State Council
- *Software Quality Assessment* Economy and Budget Ministry
- *Software Modernization Assessment* Canadian Promutuel
- *Software Quality Assessment and Postmortem* Delegated Software Quality Expert for the French Ministry of Environment
- *Digital Transformation Roadmap for AXA software built over IBMz* AXA
- *Software Modernization Assessment* C/C++ SEPA Payment system for Cedricom
- *IT Organization and Software Assessment* Campus France

TECHNOLOGIES
- Proprietary Modernization framework and tools
- Eclipse Modeling and Framework
- Java ecosystem

Cofounder and CTO TOCEA/Echoes Labs

Rennes, Quebec

TOCEA

Mar. 2011 - Jun. 2014

Context

- *Tocea is an innovating company that provides refactoring source-to-source solutions to help the software editor to refurbish their legacy software in record time and budget*
- Won the National Emerging Industry Innovation price in 2011 and 2012
- Built a team from 0 to 20, created a local branch in Montreal
- Technology director for two product lines : Software Quality Product and Software modernization product
- Principal Consultant for Key Accounts
- 50+ Active customer references France and International: insurances, banks, administrations, industries

Achievements

- *Architect*, main developer for a solution of Code Quality analysis, competitor of SonarQube
- *Contributor to SonarQube ecosystem* : development of a Saas solution for SonarQube to provide worldwide Quality benchmarks
- *DevOps Coach* for SoftAtHome company, 60 Developers, 20 QA
    Modernization of S@H Software Factory and build
    Test Automation coach, and Requirements analysis

Technologies

- Proprietary Modernization framework and tools
- Eclipse Modeling and Framework
- Java ecosystem

Research Engineer for SERENITEC(SEcurity, REfactoriNg, Internet, TEchnologies) Research Project

Rennes

INRIA/IRISA

Sep. 2007 - Sep. 2010

- **Main developer** of a new technology for the detection of **quality**, reliability and **security** problems in Web Applications
- Technical Lead of a research team (2 Phd, 2 Engineers)
- Code Qualimetry tool development : C/C++, Java

Skills

Cloud Architect

Google Cloud	GCE, GKE, Pub/Sub, GCB, API
Amazon Web Services	Solution Architect, SysOps, DevOps

Mainframe and Legacy

Legacy Software migration	Cloud Software migration (Monoliths), Test Automation, 12 Factors, Source-to-source expert
Mainframe experience	**Cobol**, **JCL**, (Code review), Java - Mainframe Integration (3270, Messaging)

Recent skills

Programming Languages	Java 8,11+, JavaScript, TypeScript, Groovy, Bash
Web/UI	Vue.JS (vuex, vue-router), Angular 8+, GWT, EJS
Frameworks	Spring Boot, Spring 5, JPA, Hibernate, Nuxt.JS, Node.JS, Express
Test Tools	Selenium, SoapUI, Cucumber, JUnit 5/4, Mockito, Postman
Software Architecture	Cleancode, CQRS, DDD, Hexa/Clean Architectures, Microservices, Archimate
Databases	Oracle, PostgreSQL
Platform services	Tomcat, Apache2, HAProxy

Experience

Programming Languages	C/C++ (5 years), PHP (1 year), Kotlin(beginner)
Web/UI	React-Native, Thymeleaf,JSF, Wicket
Frameworks	Struts, Loopback 3-4
Machine Learning	DeepLearning4j, Smile, Weka, KNime
Test Tools	JMeter, Gatling
Cloud	Terraform, Amazon(S3, EC2, ECK, ECS, ELB, ECR, IAM)
SAAS Services	DataTrans, Google API, Mailchimp, Mailjet, Auth0, Stripe
Databases	MySQL/MariaDB, MongoDB, Elasticsearch, Neo4J, Sqlite, Oracle
Platform services	Varnish,RabbitMQ, ActiveMQ, JBOSS Keycloak, JBOSS

Soft skills

Team management	20+ IT staff management, Product Owner, Roadmap, Agile/Kanban, SAFE, Scrum, Waterfall
Software Quality Assurance	ISO 9126, ISO 25000, Balanced scorecard, CMMI, KPI, COCOMO2
Quality Tools	SonarQube, Squale, Kiuwan, Codacy, Klocwork, Coverity + opensource
Innovation	Research promotion, Innovating ideas, Research project initiator
Languages	French (Natural), English (C1), German (A2), Russian (A1), Italian(Beginner)

Extracurricular Activity

Freelance   *France, Germany, Switzerland*

Consultancy   *2020-2022*

- Trainer (Gradle, JUnit, ...)
- Performance Audit for a Critical System of a Saas company
- *Software Modernization Project* Modernization program of Logistic Product for Nexter Military Equipment
- Design and development of an automated Adobe FLEX to Angular 8/9 conversion tool
- Design and development of an automated RPG4 to RPG 8 conversion tool
- Java 5 -> Java 11 Software Modernization for a Land Defense Leader in France and Europe

Freelance   *Switzerland*

Design and build of a Mobile Application for a Startup project   *2019*

- Using React Native, backend Node.JS and Typescript

Freelance for Thalès AVS   *France*

Software Factory and Devops Audit   *2019*

- Software SDLC and Factory audit for the Thalès AVS Group

Opensource Developer

SonarTSLint, SonarESLint Plugin

- Maintainer of the opensource SonarQube plugin SonarESLint.
- Contributor to some open-source projects.

Switzerland

PRESENT

Hobbies

- Being a great father of 3 and an source of inspiration
- Hiking, Cycling, Cooking
- Relic hunter
- Learning Italian, Russian

Honors & Awards

International

2013	**Finalist**, Innovation award from the French Ministry of the Industry (Créadev)	*Paris, France*
2012	**Finalist**, Innovation award from the French Ministry of the Industry (Emergence)	*Paris, France*
2011	**Laureate**, Phar Fund laureate	*Rennes*

Presentation

AWS Innovate 2023

How to build your business case for a Cloud migration ?

Worldwide

2023

AWS + Techfirm conference

AWS and SAP : how to migrate ?

Geneva,Switzerland

2023

Byoskill

Key speaker for the ScaleUp 360 Legacy IT Europe Conference

- Big bang or iterative evolution : my hands-on experience.

Switzerland

2020

Byoskill

Cleancode trainer

- Coaching and training of new Cleancode trainers

France

2019

OCTO

Presenter for OCTO

- Internal presentation : Why should we love our software ?

Lausanne

July. 2017

SERIAL

Presenter for SERIAL

- Internal presentation : Why code quality does really matter ? How to boost your dev skills.

Geneva

Apr. 2017

Metrixware : cross-company training

Cleancode trainer

- Cleancode course
- Design pattern course
- Automated testing course

France

2014-2016

Tocea : cross-company training

Java/Spring trainer

- Java best practices
- SOA Best practices
- Java software optimizations

France

2012

AFDEL

Presenter for AFDEL/TECH IN France

- Diminuer sa dette technique : stratégie de migration ... - TECH IN France

Paris

Jul. 2012

INRIA Workshop

Presenter for INRIA Workshop

- Source-to-source technics for Java software optimizations

Rennes

Sep. 2007

Writing

BLOG WRITER   *Switzerland*

DIGITAL TRANSFORMATION REFACTORING   *Jan 2017 -Now*

- Blog on various subjects : Code quality, refactoring, Enterprise Architecture, Digital Transformation
- `https://sylvainleroy.com`

MAIN WRITER   *France*

SOFTWARE LEGACY: HOW TO SAVE THEM ?   *Sep. 2016 - Dec. 2016*

- WhitePaper on Software legacy and how to handle the technical debt

MAIN WRITER   *France*

SOFTWARE REQUIREMENTS : A COMPLETE GUIDE AND MARKET STUDY   *Sep. 2015 - Nov. 2015*

- Exhaustive WhitePaper on Software requirement domain and requirement software market