

Freelance Security Engineer / Architect

Personal

First name: Franky
Last name: Vertriest
Date of birth: 04/06/1986
Gender: Male
Place of residence: Wakken (Dentergem, West-Flanders)
Nationality: Belgian
Experience: 15 years
Driver license: B
Company: BitBox (BE 0649.800.228, <https://bitbox.be>)

Competences

Technical (short): Java 21/Go
Test Driven Development
Clean Code
Domain Driven Design
Web services (SOAP/REST/GraphQL), Micro-Services
Hibernate/JPA
Maven/Gradle
Cloud (AWS/Azure)
JavaScript/jQuery/AngularJS/Vue.js

Social: Team player
Analytical mindset
Strong focus of results
Pragmatic

Certifications

Oracle Certified Java 6 Developer:	2012
MongoDB Certified Developer:	2014
AngularJS Developer:	2015
AWS Certified Associate:	2018
CISSP (provisionally):	2025

Languages

Dutch:	Native
English:	Fluent
French:	Decent
German:	Basic

Technical Competences

Operating Systems:	Unix/Windows
Application servers:	JBoss, OC4J, Tomcat, Jetty, Docker, Kubernetes, serverless, ...
Tools:	Scripting, Matlab, CVS, Maven, Gradle, Eclipse, Drupal, Android SDK, Hibernate, Webservices (SOAP/REST/GraphQL), Apache Axis2, JAX-WS, IntelliJ, SVN, GIT, Spring, SpringBoot, Apache Camel, ActiveMQ, JMS, RabbitMQ, Grafana, Redis, TwistLock, ...
Design:	UML, Domain Driven Design, MicroServices, C4-model, Structurizr, Draw.io, Gliffy, ...
Programming:	Java, Cobol, GoLang, C, C++, CUDA, MicroC, HTML, CSS, JavaScript, CGI, PHP, jQuery, Flex, ActionScript, Angular JS, Vue.js, Playwright
Methodology:	Agile software Development : Scrum, ScrumBan, Kanban, Lean Waterfall Test Driven Development Clean Code
Functional knowledge:	Public services, Social Security, SEPA, DEBITS, Publishing Systems, GTFS, Open Data, Quark Publishing Systems, GDPR, AI Act, Digital markets act,...

Professional experience

Flemish government - WEWIS

Period: February 2025 - Now

Job-title: Security engineer

Technology: AWS, ISO 27001

Security engineer in a government department, supporting the CISO and security team. Primary focus on embedding a “Security In” culture within development teams and product delivery, with responsibilities including:

- **Software maturity:**

- Help development teams in their code and architecture reviews to improve “As-Is” security
- Assist with and give advise on the technical design of re-usable security features such as authentication, role management, key management, audit/log.
- Assist with and give advise on the integration of security tools into the Application Lifecycle Management and its stack
- Be able to reason about and guide the different teams with regards to access to and policies around data being used, implementing security controls, and improving CI/CD and application lifecycle processes

- **Security testing:**

- Identify how software applications can be attacked.
- Instill thinking in “Abuse cases”.
- Coach teams to integrate security in automated testing.
- Support/coordinate adversarial testing (pentesting). Help interpreting results.
- Interpret results of automated system scans & assist with resolution. Make sure security problems reach different teams and stakeholders.
- Know about systems hardening.
- Be able to follow up on security measures together with a wide array of teams
- Be able to (assist with) setting up automated security testing and reporting

- **Threat response:**
 - Contributing to incident response and disaster recovery processes
 - Help setup monitoring and alerting for security metrics, and assessing emerging threats.
- **Governance:**
 - Supporting the planning and implementation of security policies, processes, and controls in collaboration with the CISO, DPO, and Privacy Officer.
 - Define technical security targets such as crypto requirements, antivirus scanning, user management, authentication,...
 - Be the technical support required in the information security team

Easypay - Partena

Period: July 2023 – February 2025

Job-title: Enterprise Architect

Technology: Java 21, DDD, Azure, Kafka, on-prem

As an enterprise architect, my role is to assess clients' current structures, systems, processes, and technology infrastructures, and modernize them to meet contemporary standards. In practice, this involves:

- Technology modernization: Migrating legacy technologies such as COBOL, VB6, JDK8, and JSF to modern versions like JDK21 and Angular.
- Domain-driven design: Guiding design of functional domains based on business-driven input, regulatory requirements and security standards
- Security
 - Authentication and identity management: Implementing Single Sign-On (SSO) with Identity Providers such as Azure B2C and PingOne.
 - Authorization framework: Developing a role-based, hierarchical Customer Identity and Access Management (CIAM) component
 - Data governance
- Cloud adoption: Transitioning from on-prem servers to public cloud platforms like Azure.

Process improvements

The following process changes were implemented to support the new architecture:

- Empowering three development teams to adopt the new architectural approach.
- Transitioning from traditional waterfall methodologies to Agile practices (Scrum and Kanban).
- Introducing DevSecOps principles, with a focus on containerization and Infrastructure as Code (IaC).

- Establishing quality gates for new development, supported by strict principles to ensure resilient software, including static code analysis, vulnerability scanning, continuous integration and deployment.

Key challenges and goals

The ecosystem at Partena Group is extensive, encompassing multiple brands such as Partena, Parentia, Easypay, Staffable, and HorecaFocus. The primary challenge is maintaining the unique identity of each brand while aligning the underlying infrastructure and technology stack across the organization.

I collaborate closely with stakeholders, including business leaders, IT teams, and project managers, to understand their objectives and identify areas for improvement. My work is supported by a skilled architecture circle comprising two solution architects, one infrastructure architect and myself.

Flemish government - WSE

Period: Mai 2019 – April 2023

Job-title: Technical Lead – Team Lead

Technology: Java 17, DDD, Micro-Services, Vue.js, GraphQL, AWS, Cypress, Kanban, Grafana...

The project involved the creation of a brand-new portal dedicated to Flemish citizens and enterprises, enabling them to apply for social funds. To accomplish this, we assembled a skilled team consisting of 2 backend developers, 2 frontend developers, 1 automatic test engineer, 2 functional analysts, 1 product owner, and myself as the team lead/tech lead. One of the major challenges we faced was ensuring the support for multiple businesses such as ESF (European Social Funds) and OSE (Ondersteuning Sociale Economie). After aligning the user requirements and mapping out a development timeline spanning 18 months, we successfully launched the portal on 01/01/2021.

In my role as team lead/tech lead, I am responsible for guiding and supporting the team members to help them reach their full potential. Additionally, I maintain regular communication with the business stakeholders to provide non-functional support. On enterprise level I was the lead or initiator of the Java 11-migration, Java 17-migration, Vulnerability squashing initiative, Structurizr-tool, mailbox testing and User data collection initiative.

Furthermore, every week, the technical leads of WSE gather to discuss and collaborate on enterprise-wide architecture matters.

Flemish government - AIV

Period: September 2018 – Mai 2019

Job-title: PM – Technical Lead

Technology: Java 11, DDD, Micro-Services, Vue.js, Atlassian, AWS, Azure, SOAP, ...

When I joined the 'Mijn BurgerProfiel' project, it was just two months away from its release to the general public. During the final stages leading up to the go-live, our primary focus was on completing all functionalities, conducting monitoring activities, performing penetration testing, and ensuring compliance with GDPR-regulations. Following a successful release, our attention shifted to maintenance mode. Our key objectives were to optimize AWS costs, address any existing technical debt, migrate to SpringBoot 2, and transition from Java 8 to Java 11.

SFPD (Federal Pension Services)

Period: September 2017 – September 2018

Job-title: Java Coach / Developer

Technology: Java 8, Java EE, Vaadin, SOAP, Groovy, ...

At the SFPD I coached and supported developers, mainly junior-developers with 0-3 years experience:

- Pairing with developers to help them solve tickets
- TDD exercises, kata's
- Organizing reading groups for books like Effective Java, Clean Code, ...

If I have time left, I help development in the core application, mainly in the communication and identification domain. The communication domain focuses on sending letters, mails, SMS, ... to the pensioners. The identification domain manages the personal data of millions (pensioners, adults with work experience, ...) and communicates with other institutions like the KSZ/BCSS.

De Persgroep Publishing

Period: Juli 2015 – August 2017

Job-title: Scrum-Master

After a year with De Persgroep I became the Scrum Master of one team: team Fortress. This team was the backbone of all Print Content inside De Persgroep Publishing: it included all the management of editorial tools.

In Mai 2016 Team Fortress became a squad with a dedicated mission and metrics. The mission was to implement a huge editorial system for the newspaper *Algemeen Dagblad* and 7 other regional newspapers in the Netherlands. This was the biggest roll-out for the company ever and involved more than 1200 reporters and editors. This project was successfully completed with a month to spare.

Focus as team lead:

- Test Driven Development: ensure that every developer has the responsibility and the professionalism to ensure that his code is fully tested and operational
- Clean code: the code is very easy to understand and change
- Domain Driven Design: Business en development working together and speaking the same language
- Agile working in a team (Scrum, ScrumBan, Kanban)
- Introduction of Java 8
- Move to the cloud (AWS)

Extra tasks:

- Team management: providing a productive and enjoyable atmosphere
- Enforcing Scrum processes: facilitate retrospectives, stand-ups, estimations, ...
- Planning, discussion and estimation of tasks with the business
- Responsible for every release and deploy
- Reporting to the management
- Aiding and coaching developers and QA

De Persgroep Publishing

Period: Juli 2014 – June 2015

Job title: Analyst-Developer

Technology: Java, Spring, Hibernate, Oracle, MongoDB, REST Webservices, Flex, ActionScript, Angular JS, jQuery, HTML, CSS, JavaScript

As a member of a maintenance team, I guaranteed the correct operation of all editorial software. This software covers a lot of projects that make sure that what a journalist writes, will be printed correctly on the printing presses, appear on the website or one of the mobile apps. There are also a lot of extra concerns in publishing the articles: advertisement systems, payment of the journalists, planning of the newspaper, organization in the newsrooms, statistics, ...

The software exists already long, but is often modified and extended with new publications, requirements or technologies. It's essential that the editorial flow runs every day perfectly since the print presses need to start printing before a certain deadline. Missing that deadline means that millions of people will not receive a newspaper in their mailbox...

The team worked as a cross-functional entity. This means that the team was responsible for the technical analysis, design, front-end development, back-end development, testing and finally deploying. This experience has thought me a lot about the values of agile working and the best software principles.

EASYPAY

Period: October 2011 – June 2014

Job title: Developer

Technology: Java, CGI, HTML, CSS, JavaScript, jQuery (back office), JSF, JSP, Hibernate, Apache Axis2 web services, JAX-WS, Pervasive, MYSQL, Cobol

Development:

- Development was implemented following a technical analysis
- Front-end development and new features were written in Java
- Web services (SOAP) used in AXIS2 & JAX-WS.
- Back-end & business logic was mainly done in Cobol and Pervasive DB

Testing:

- Testing was extremely important because the business and the government left no margin of error
- The interpretation and understanding of testing results were some of the core tasks

Projects:

- SEPA: A new debit type of SEPA forms (B2B) was demanded by the finance industry and government. This implied that the payment module of the system had to be rewritten both back-end as front-end.

- Automation project: The core goal of this project was the automation of the interfaces between the government (RSVZ) and the social insurance funds (Entraide). The paper trail needed to be replaced by digital communication. The interfaces between the several participants were being build using web services (SOAP).
- Law changes: Changes in the law that had an impact on the social security, calculations on the contributions, pension, ... required software changes (back-end & front-end). The changes needed to pass through the complete workflow and had to run on all systems in production when the change in law took effect: this means very strict deadlines
- Management of enterprise supervisor (Eunomia): maintaining the existent software, but also adding new features. For this client there was also a need to act quickly on law changes or implement strategies to keep this company competitive.