MIKA KOIVISTO

Hands-On Solution Architect | Lead Developer | Fintech & API Integration Expert

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PROFESSIONAL SUMMARY

I am a Lead Developer and Hands-On Solution Architect with over 25 years of experience in software development and system integrations, specializing in payments and banking systems for the past 7 years. I have extensive expertise in designing scalable API integrations using technologies such as Vert.x and Java in hybrid cloud environments, with a proven track record of delivering mission-critical solutions that meet stringent regulatory requirements and security standards.

Key Skills:

- **Payments and Fintech**: Expertise in PSD2, Open Banking, and regulatory compliance for secure financial systems.
- **Architecting Scalable Systems**: Expert in Vert.x, Java, and AWS for building high-performance, cloud-native applications.
- **DevOps and Automation**: Hands-on experience with CI/CD, automation tools, and cloud environments.
- **Agile Leadership:** Skilled in leading teams and implementing agile methodologies, including Scrum, Kanban, and TDD**.**
- **API Security and Integration**: Specialized in secure API design using OAuth 2.0, JWT, OpenID Connect, mutual-TLS with eIDAS certificates.

COMPETENCE

- **Architectural patterns**: Microservices, Serverless, Event-Driven Architecture, SOA, REST, n-Tier architectures
- **Programming languages**: Java, JavaScript/Node.js, Ruby, Python
- **Frameworks**:Vert.x, Spring Boot, OSGi
- **Cloud and DevOps**: AWS, Jenkins, Ansible, Docker
- **Middleware**: Apache Kafka, RabbitMQ (MQTT), ActiveMQ, ServiceMix
- **API Security**: OAuth 2.0, JWT, OpenID Connect, SAML, AWS API Gateway, Apigee, TLS/SSL, Financial API (FAPI), PKI
- **Databases**: MySQL/MariaDB, PostgreSQL, DynamoDB, DB2, Oracle
- **Monitoring**: Dynatrace, DataDog, Nagios, New Relic, JMX, SNMP, Grafana, Prometheus, OpenTelemetry
- **Agile Practices**: Scrum, Kanban, XP, TDD, CI/CD
- **Test automation**: Cucumber, RestAssured, TestContainers, Junit, Robot Framework, JMeter, SonarQube, WireMock
- **Home automation**: MQTT, Home Assistant

WORK EXPERIENCE

OP Financial Group (Contract)	Apr 2017 - Present
Helsinki, Finland	
Lead Developer and Architect, PSD2 APIs	Apr 2017 - Present

- **Collaborated with stakeholders**, including enterprise architects, security architects, cloud architects, and lawyers, to design and architect the **PSD2-compliant** payment, account information, and funds confirmation APIs. This ensured full regulatory compliance and adhered to **Open Banking standards**, which granted OP the distinction of being the **first Nordic bank** to receive an **exemption from fallback channels**.
- **Re-engineered the APIs** using **Vert.x** as requirements evolved, transitioning from a mixed technology stack to a standardized one. This resulted in improved performance, scalability, and maintainability, while also creating synergies with other team projects.
- **Took ownership** of and consolidated the **authorization solutions** for web, mobile, and sandbox environments, previously maintained by different teams, into a single unified solution, simplifying maintenance and reducing development overhead.
- **Co-authored the first JWT-based security token** for internal API usage, providing a **stateless alternative** to the existing **SAML 2.0** and session-based token systems, facilitating **hybrid cloud development**.
- **Represented OP** in **Open Banking Europe technical and functional working groups**, contributing to the definition of the **OBE directory service**.
- **Maintained and operated** the production environment, optimizing the solution to be managed by a **two-person team**, streamlining operations and enabling deployments at any time.

Lead Developer and Architect, Siirto Payment APIs   Sep 2024 - Present
- **Took over as the technical lead** on the existing solution, which requires a complete technical overhaul to align with OP's architectural standards and meet new regulatory requirements.

Lead Developer and Architect, GovAPI   Apr 2020 - Present
- Provided architectural guidance and conducted code reviews, ensuring the project aligns with OP's architectural guidelines and requirements.

Lead Developer and Architect, Daily banking service plans   Dec 2023 - Present
- Took over as the technical lead on the project, providing team guidance and conducting code reviews to ensure alignment with OP's architectural standards.

Technologies used: Java 17, Vert.x, Docker, hybrid cloud with AWS, PostgreSQL, Apigee, REST, OpenAPI, JWT, OAuth2.0 with Financial API, OpenID Connect, Dynatrace, TestContainers, RestAssured, Apache Kafka

Freelancer   Jan 2017 - Present
Select assignments:
- **CA Technologies (USA)**: Implementation of encrypted token support to Liferay SAML 2.0 provider. Worked with teams in USA and India to integrate the solution to CAs own product.
- **Mondi Group (Austria)**: Performed performance analysis for a Liferay platform to identify and provide a report with actionable suggestions to fix the issues.

Liferay   Apr 2009 – Dec 2016
Senior Software Engineer
Helsinki, Finland   Jun 2014 – Dec 2016
- Focused on mitigating, preventing, and fixing security vulnerabilities while designing security features for the core platform.

Senior Software Engineer
Los Angeles, CA USA   Nov 2010 – May 2014
- Reported directly to the company founder and Chief Software Architect, working closely on key development projects.
- Lead designer and developer for Liferay SAML 2.0 Identity Provider and Service Provider support, a key feature for enterprise customers.
- Integration specialist, managing Liferay document library connectors and third-party integrations for SSO (including SAML, SiteMinder, and Facebook) to support secure single sign-on and content management solutions.
- Trained support staff on troubleshooting, helping improve response times and resolution efficiency.

Senior Consultant   Apr 2009 – Oct 2010
Frankfurt am Main, Germany
- Provided **architecture consulting, auditing**, and **solution validation** for **Fortune Global 500** clients, including Robert Bosch, Vodafone, Barclays, and IBM.
- Led **technical workshops** and supported **pre-sales efforts**, assisting with technical evaluations and solution design.
- Conducted **performance tuning** and managed production installations to ensure optimized system performance.
- Developed custom implementations and contributed to Liferay product development to meet client-specific requirements, including integrations using SAML and Terracotta DSO.

Logica (now CGI)
Senior Technical Architect   Nov 2001 – Mar 2009
Helsinki Finland

Lead Software Architect   Nov 2006 – Mar 2009
- Led the technical coordination of architects across multiple concurrent projects. Provided technical pre-sales support and evaluated RFPs. Conducted regular architecture and code reviews, and mentored developers and architects. Architected message-driven SOA solutions. Designed portal and CMS solutions using Liferay Portal and Microsoft Office SharePoint Server.

Software Architect   Jan 2006 – Oct 2006
- Lead Developer and Architect in IBM WebSphere Portal implementations

Software Designer   Nov 2001 – Dec 2005
- Developed portal and CMS solutions using IBM and Bea Weblogic Portal, Fatwire, and IBM Workplace WCM. Developed enterprise Java solutions and participated in internal product development and client projects, progressing from senior developer to lead developer.

Spray Network   Nov 1999 – Nov 2001
Helsinki, Finland
Lead Developer

Western Washington University   Oct 1997 – Oct 1998
Bellingham, WA USA
Web Technician [Computer assistant IV]