GERRIT FREISE

Experienced Solution Architect and Senior Software Developer

PERSONAL DATA

Nationality	German
Languages	German (native), English
Year of Birth	1987
Availability	By arrangement
Rate	By arrangement
Preferred Location	Frankfurt a.M., Darmstadt
Contact	06078 7837884 · gerrit.freise@crevio.de

POSITIONS

Solution Architect · Senior Software Developer/Lead Developer · Technical Project Manager & Team Lead · Agile Coach & Scrum Master

MY CONTRIBUTION TO YOUR SUCCESS

Over **15 years** as *Software Architect* & *Lead Developer* in enterprise environments.
I am your enabler for the *Cloud* – certified as **AWS Solutions Architect**.
I lead project teams (e.g., as **SAFe Solution Architect** & **CSP-SM**) reliably to success.
I combine the **M.Sc. Computer Science** with deep **Java & Microservices expertise**.
I master new domains (e.g., KRITIS, Logistics) **quickly and confidently**.
I clarify *complex architectures* and ask **the right questions at the right time**.
I manage stakeholders to **align technical needs with business goals**.

SKILLS

Field of Expertise: Software Development & Architecture, Solution Architecture

Backend development with Java (including Java EE/Jakarta EE), Spring Boot, and OSGi
Experienced in designing, building, and maintaining microservice architectures
Frontend development with Eclipse RCP, SWT, Swing, JavaScript, TypeScript, React.js, and Angular
Expertise in interface technologies such as REST, SOAP, RPC, and RMI
Experience with messaging systems such as TIBCO Rendezvous, TIBCO EMS (JMS), and Apache Kafka
Familiar with persistence technologies such as Oracle DB, Oracle Coherence, MySQL, Microsoft SQL Server, and Hazelcast
DevOps engineering with GitLab CI, Ansible, and the Ansible Automation Platform (Ansible Tower / AWX)
Infrastructure as Code with Terraform/OpenTofu and Pulumi
AI-assisted, agentic software development (Agentic Coding) with Claude (Claude Code) and Google Gemini CLI

Field of Expertise: Lead and Solution Architect, Project Management & Team Leadership

Many years of experience as a SAFe Solution Architect/Engineer (SAFe SAE)
Certified Professional for Software Architecture – Foundation Level (CPSA-F)
AWS Certified Solutions Architect - Associate
Design and expansion of scalable software solutions
Integration of software solutions into existing IT landscapes
Selection of new technologies and coordination with external projects and applications
Design of sophisticated cloud architectures and operation of applications in the cloud

Building new development teams and further development of existing teams
Experience in technical project management in challenging customer environments
Conducting team, employee, and interview discussions

Field of Expertise: Agile Methods & Agile Coaching

Highest ScrumMaster certification from the Scrum Alliance (CSP-SM)
Certified Product Owner (CSPO)
Experience in coaching agile methods such as Scrum, Kanban, and SAFe
Active support of agile transformations
Experienced Scrum Master
Leading and moderating workshops

Industry Knowledge

Railway Operations, Telecommunications, Logistics, Automotive, Public Sector

Methods

Design and implement software and solution architectures
Establish and lead project teams
Facilitate agile methodologies and establish agile frameworks
Implement customer requirements effectively
Integrate software solutions into existing IT landscapes
Conduct fundamental troubleshooting of IT systems
Design fault-tolerant systems
Develop mature client-server architectures

Tools and Technologies

Languages & Frameworks	Java, J2EE / Jakarta EE, Spring Boot, Eclipse RCP, SWT, Swing, Python
Web Technologies	React.js, Angular, Node.js, NPM, JavaScript, TypeScript, TanStack Query, Vite, HTML, CSS, XML, PHP, JSP, JSF, Apache Web Server, NGINX, Tomcat, JBoss, SSL/TLS, OAuth2, PrimeFaces
Container Technologies	Docker, Kubernetes, Podman
Cloud Technologies	AWS, Amazon ECS, Amazon EKS, Amazon EC2, Amazon S3, Amazon EFS, Amazon EBS, Amazon RDS, AWS CDK, AWS Lambda, AWS IAM
Databases & Persistence	HQL, SQL & PL/SQL, Hibernate, Oracle DB, MySQL, Microsoft SQL Server, PostgreSQL
In-Memory-Grids	Oracle Coherence, Hazelcast
Messaging	TIBCO Rendezvous, TIBCO EMS, JMS, Apache Kafka, Protobuf, RabbitMQ
Interface Technologies	SOAP, REST, OpenAPI, RMI, RPC, gRPC, AMQP
Office & Collaboration	Microsoft PowerPoint, Word, Excel, Outlook, SharePoint
ALM & Project Management	HP ALM/Quality Center, Atlassian Jira & Confluence, Arija
Test/Test Automation	Unit-Tests, Integration-Tests, ArchUnit, Jubula, Eggplant, Selenium, Playwright
Version Control	Git, GitLab, GitHub, Bitbucket
Operating Systems	Linux/Unix [RedHat, CentOS, Debian, Ubuntu, Alpine, SUSE Linux Enterprise Server/SLES], Windows
DevOps	Ansible, Ansible Automation Platform, GitLab CI, Jenkins, GitHub Actions, Maven, Gradle, Ant, Artifactory, Nexus, Terraform, OpenTofu, Pulumi, SonarQube, WhiteSource/Mend, Gitleaks, Teamscale
Logging/Monitoring	Log4j, SLF4J, Logback, Micrometer, Prometheus, Grafana, Loki, InfluxDB, ELK-Stack [Elasticsearch, Logstash, Kibana], Icinga, AWS CloudWatch
Development Environments	IntelliJ, Eclipse, Visual Studio Code
Architecture & Modeling	Enterprise Architect, PlantUML, arc42, ADRs [Architecture Decision Records]
AI-Assisted Development	Agentic Coding, Claude / Claude Code, Google Gemini CLI

CERTIFICATES

04/2025 AWS Certified Solutions Architect - Associate
02/2025 AWS Certified Cloud Practitioner
01/2025 CPSA-F (Certified Professional for Software Architecture – Foundation Level) – iSAQB®
03/2019 CSP-SM (Certified Scrum Professional – ScrumMaster) – Scrum Alliance
08/2018 A-CSM (Advanced Certified ScrumMaster) – Scrum Alliance
03/2018 CSM (Certified ScrumMaster) – Scrum Alliance
12/2017 Certified Software Engineer for RCS (Rail Control System, Schweizerische Bundesbahn SBB)
06/2017 CSPO (Certified Scrum Product Owner) – Scrum Alliance
05/2014 IAF Practitioner's Level
01/2013 Sophora CMS (SOCDT, SOCAD, SOCDD, SOCSD, SOCAR, SOCCD) – subshell

WORK EXPERIENCE

01/2021 – today **CREVIO GmbH** — Managing Director
04/2018 – today **Freelancer**
06/2016 – 06/2021 **mtrail Deutschland GmbH** — Senior Software Architect
02/2013 – 05/2016 **Capgemini Deutschland GmbH** — Software Engineer Lead
10/2010 – 01/2013 **K.IM, Darmstadt** — Software Developer

EDUCATION

10/2010 – 03/2013 *Master of Science in Computer Science*
Technical University of Darmstadt
Specializations: Software Engineering, Trusted Systems, Net Centric Systems, Data and Knowledge Engineering, IT Management
Final Grade: 1.89

10/2006 – 09/2010 *Bachelor of Science in Computer Science*
Philipps-Universität Marburg
Specializations: Software Engineering, Parallel Programming, Business Administration
Final Grade: 2.1

PROJECTS

Development of interface software for the integration of heterogeneous systems

Duration, Location	08/2025 – today, Hamburg
Roles	Senior Software Developer / Software Architect
Client, Industry	Public Administration – Central IT Service Provider of the Federal Government, Public Sector
Team Size	50

Design and implementation of interface software to integrate heterogeneous legacy systems. Development of robust backend components using Java 21, REST interfaces, and Oracle database integration. Ensuring data consistency, scalability, and code quality through modern testing and build toolchains.

Tasks

- Software development with Java 17 using Jakarta EE and Spring Boot 3
- Upgrade to Spring Boot 3.5 for current features and security standards
- Transition of the application to Java 21
- Application server migration to JBoss 8.1
- Co-architecting backend integration of heterogeneous legacy systems
- Integration of Elasticsearch to accelerate complex search queries
- Design and implementation of high-performance REST APIs
- Established structured application logging with Log4j
- Maintenance and evolution of PrimeFaces legacy web interfaces
- Migration of the web interfaces from PrimeFaces 13 to PrimeFaces 14
- Design of a modern React stack and integration into the legacy ecosystem
- Data persistence using SQL and PL/SQL on Oracle Database
- Ensuring code quality via tests and static analysis (Teamscale)
- Version control and collaborative development with Git
- Build toolchain automation using Jenkins and Maven

Tools

Java 21, Java EE/Jakarta EE, EJB, Spring Boot 3, JBoss 8.1, JUnit, JSF, PrimeFaces, HTML, XHTML, CSS, JavaScript, TypeScript, React.js, TanStack Query, Log4j, RESTful, OpenAPI, JSON, Hibernate, JPA, SQL & PL/SQL, Oracle DB, Unit-Tests, Integration-Tests, Teamscale, arc42, Git, Jenkins, Maven, Nexus, IntelliJ, Atlassian Jira, Confluence, Playwright

Cloud migration and architectural advancement of a rail dispatching system (critical infrastructure)

Duration, Location	09/2021 – 07/2025, Frankfurt a.M.
Roles	SAFe Solution Architect/Engineer (SAFe SAE) / Software Architect
Client, Industry	large German rail infrastructure operator, Transport/Logistics
Team Size	80 / 5 implementation teams

In the second phase of the project, the existing dispatching system was gradually migrated to the AWS cloud. The focus was not only on the technical migration but also on the architectural modernization of the application. Key components included infrastructure services, databases, and domain-critical modules.

The system was upgraded to Java 17 and 21, and the architecture was refactored into a more modular structure. Additionally, a comprehensive performance monitoring and observability concept was introduced. A major objective was to ensure operational reliability in the context of critical infrastructure (KRITIS) and to enable the successful go-live in June 2025.

The project remained embedded in a larger program with over 11 subprojects. As technical lead within the project management team, I was responsible for architectural decisions, coordination of technical teams, and ensuring compliance with non-functional requirements.

Tasks

- Responsible for migration to Java 17 and Java 21
- Migration of the application to AWS Cloud incl. Infrastructure as Code (IaC)
- Evaluation of TIBCO Rendezvous replacement with an alternative solution

- Development of PoCs and technical feasibility studies
- Performance monitoring and evaluation of the application and Oracle DB
- Ensuring non-functional requirements with a focus on performance
- Planning and execution of load and performance tests
- Architecture ownership of the overall system and technical design
- Contributing to network architecture and definition of firewall rules within AWS
- Design and development of individual microservices
- Implementation of event-driven architecture principles
- Documentation of the architecture and creation of the operations manual
- Support for migration from Bitbucket/Jenkins to GitLab and GitLab-CI pipelines
- Contributing to the Ansible stack for deployment automation
- Implementation into the program's centralized monitoring stack
- Ensuring code quality and security using established tools
- Responsibility for TLS/SSL encryption and certificate management across the system architecture
- Release management responsibility and compilation of overall releases
- Support of the overall program go-live in June 2025
- Part of the three-member project leadership team with technical authority (SAE)
- Prioritization of technical topics within PI planning sessions
- Leading a specialized team to efficiently implement technical tasks
- Coordination and collaboration with other projects in the program
- Alignment of technical and functional interfaces (internal and external)
- Assessment of technical incidents and definition of corrective measures

Tools

Java 17, Java 21, Spring Boot (3.x, incl. Spring Data, Spring Security, etc.), Eclipse RCP/-SWT, Swing, JUnit, Eclipse Equinox/ OSGi, Kotlin, React.js, Node.js, NPM, JavaScript, TypeScript, HTML, CSS, Python, Apache Web Server, NGINX, Tomcat, Docker, Kubernetes, AWS, Amazon ECS, Amazon EKS, Amazon EC2, Amazon S3, Amazon EFS, Amazon EBS, Amazon RDS, AWS IAM, AWS CDK, AWS Lambda, HQL, SQL & PL/SQL, Hibernate, JPA, Flyway, Oracle DB, Oracle Coherence, H2, PostgreSQL, Hazelcast, TIBCO Rendezvous, TIBCO EMS, JMS, Apache Kafka, Protobuf, RabbitMQ, AMQP, SOAP, REST, gRPC, OAuth2, TLS, SSL, XML, JSON, Mockito, Unit-Tests, Integration-Tests, Jubula, Eggplant, Git, GitLab, Bitbucket, Linux/Unix [RedHat, CentOS], Windows, Ansible, Ansible Automation Platform / Ansible Tower / AWX, GitLab CI, Jenkins, Maven, Gradle, Artifactory, Infrastructure as Code (IaC), Pulumi, SonarQube, WhiteSource/Mend, Gitleaks, Log4j, Micrometer, Prometheus, Grafana, InfluxDB, ELK-Stack [Elasticsearch, Logstash, Kibana], Icinga, AWS CloudWatch, IntelliJ, Eclipse, Oracle SQL Developer, Microsoft PowerPoint, Word, Excel, Outlook, SharePoint, HP ALM/Quality Center, Atlassian Jira, Confluence, Arija, Enterprise Architect, AsciiDoc, SAFe, Scrum

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Initial adaptation and further development of a rail dispatching system (critical infrastructure)

Duration, Location	06/2016 – 09/2021, Frankfurt a.M.
Roles	Software Developer / Software Architect / Fullstack Developer / Scrum Master in SAFe / Deputy Technical Project Manager (2016–2017)
Client, Industry	large German rail infrastructure operator, Transport/Logistics
Team Size	80 / 5 implementation teams

In the first phase of the project, a dispatching system from a Swiss rail infrastructure operator was adopted and gradually adapted to the requirements of German railway operations.

In addition to integration into existing system landscapes, the focus was on developing new components, introducing a web-based user interface, and establishing agile processes based on Scrum and SAFe.

Within the project, I assumed multiple roles: Fullstack Developer, Software Architect, and Scrum Master. I also contributed to the technical project management. My operational responsibilities included application development, test management, quality assurance, and supporting control centers during the rollout of new features.

Tasks

- Development with Java 8 and Java 11 using Spring Boot and React.js

- Use of Eclipse RCP/-SWT and Equinox/OSGi for UI and component development
- Development of a web interface for visualizing key details for dispatchers
- Design of software components in coordination with the lead architect
- Documentation of technical subcomponents and architectural details
- Integration into distributed messaging with TIBCO Rendezvous and TIBCO EMS (JMS)
- Data persistence with Oracle DB, Oracle Coherence, and Hibernate
- Creation and maintenance of SQL and PL/SQL database scripts
- Test-driven development (TDD) with Mockito, unit and integration testing
- Ensuring code quality standards using SonarQube
- Development of microservices for initial provisioning of third-party systems
- Support for frontend and interface test automation using common tools (e.g. Jubula)
- Scrum Master of multiple teams and Agile Leader in a SAFe project context
- Effort estimation for non-standard requirements
- Onboarding and mentoring of new team members
- Deputy technical project lead from 2016 to 2017

Tools

Java 8, Java 11, Spring Boot (incl. Spring Data, Spring Security, etc.), Eclipse RCP/-SWT, Swing, Eclipse Equinox/OSGi, JUnit, Kotlin, React.js, Node.js, NPM, JavaScript, HTML, CSS, Python, Apache Web Server, Tomcat, HQL, SQL & PL/SQL, Hibernate, JPA, Flyway, Oracle DB, Oracle Coherence, H2, Hazelcast, TIBCO Rendezvous, TIBCO EMS, JMS, Protobuf, SOAP, REST, gRPC, XML, JSON, Mockito, Unit-Tests, Integration-Tests, Jubula, Eggplant, Git, Bitbucket, Linux/Unix [RedHat, CentOS], Windows, Ansible, Ansible Automation Platform / Ansible Tower / AWX, Jenkins, Maven, Nexus, Artifactory, SonarQube, Log4j, Micrometer, Grafana, InfluxDB, Eclipse, Oracle SQL Developer, Microsoft PowerPoint, Word, Excel, Outlook, SharePoint, HP ALM/Quality Center, Atlassian Jira, Confluence, Enterprise Architect, AsciiDoc, SAFe, Scrum

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Development of a portal, backend, and app for operating parcel shops

Duration, Location	09/2014 – 05/2016, Frankfurt a.M.
Roles	Software Developer / Software Architect / Fullstack Developer
Client, Industry	large German parcel/logistics company, European department, Logistics
Team Size	12 (Germany: 11, Poland: 1)

Kiosk and shop owners across Europe should be enabled to receive and distribute packages via a simple app. For this purpose, an app was developed for both Android and iOS, along with a backend system that receives the data and forwards it to the existing IT infrastructure of each country.

Additionally, a portal based on Liferay was created to provide back-office employees and shop owners with various data, reports, and invoices.

The application was initially rolled out as a pilot project in Belgium and has since moved into live operation there. Later, additional countries, including Austria and the Netherlands, were integrated into the system.

Starting in May 2016, preparations began for integrating additional countries such as the Czech Republic and Slovakia, as well as for consolidating and integrating the partner management system based on Salesforce.

Tasks

- Responsible for the architecture and development of the portal based on Liferay 6.2 EE
- Technology expert in Liferay and lead developer in the project
- Architectural responsibility for integrating and consolidating heterogeneous legacy systems
- Use of REST and SOAP as interface technologies
- Logging with Log4j
- Use of SQL and Oracle DB for data persistence
- Ensuring code quality through unit tests, integration tests, and SonarQube
- Creation of automated tests (test automation) using Selenium
- Source code management initially with SVN, later with Git
- Build toolchain consisting of Jenkins and Maven
- Transition of the project from a traditional approach to Scrum
- Onboarding and mentoring of new team members in the project

- Initially used HP Quality Center for requirements management, later switched to Atlassian Jira

Tools

Java 7, Spring Boot (incl. Spring Data, Spring Cloud, Spring Batch, Spring Integration, etc.), JUnit, Liferay 6.2 EE, JSF, HTML, CSS, Log4j, REST, SOAP, SFTP, Hibernate, JPA, Flyway, HQL, SQL, Oracle DB, H2, Unit-Tests, Integration-Tests, SonarQube, Selenium, SVN, Git, Jenkins, Maven, Nexus, Eclipse, Scrum, Atlassian Jira

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Design of a prototype based on Salesforce

Duration, Location	08/2014 – 09/2014, Frankfurt a.M.
Roles	Software Developer
Client, Industry	large automotive company, Automotive
Team Size	3

A prototype was developed for an automotive manufacturer to showcase a shop solution for digital products in vehicles as part of a Proof of Concept (PoC).

Tasks

- Integration of a web interface with Salesforce
- Design and implementation of the prototype
- Presentation of results to the client for project acquisition

Tools

Salesforce, JavaScript, HTML, CSS, Eclipse

Backend development for receiving, processing, and storing reports (IPTV)

Duration, Location	07/2014 – 08/2014, Frankfurt a.M.
Roles	Software Developer
Client, Industry	large telecommunications company, Telco/Media
Team Size	3

To enable the reception, processing, and storage of quality reports in the IPTV sector of a major telecommunications company, a backend application was developed. It receives the reports, analyzes them, and converts them into a storable format. The biggest challenge was accurately interpreting and converting the received binary data.

Tasks

- Software development based on Java 7 (Java EE / Jakarta EE)

Tools

Java 7, JUnit, Eclipse, Ant, XML

Interface implementation for the management and integration of recording platforms (IPTV)

Duration, Location	03/2014 – 07/2014, Darmstadt
Roles	Software Developer
Client, Industry	large German telecommunications company, Telco/Media
Team Size	10

To enable mobile applications in the IPTV sector of a major German telecommunications company to record and watch TV recordings, a system was designed to act as an interface between the recording platforms (cloud solution) and various end devices.

Tasks

- Backend development based on Java 7/J2EE (Java EE / Jakarta EE) & Spring
- Integration of interfaces via REST
- Use of Git as a version control system
- Use of Jenkins and Maven
- Working with Scrumban, a hybrid approach combining Scrum and Kanban

Tools

Java 7/J2EE (Java EE/Jakarta EE), Spring, JUnit, JBoss, REST, Git, Jenkins, Maven, IntelliJ, Scrumban

Development of an internal information portal

Duration, Location	04/2013 – 01/2014, Frankfurt a.M.
Roles	Software Tester / Deputy Test Manager
Client, Industry	large German airline, Aviation
Team Size	12 (Germany: 5, Poland: 7)

The project focuses on creating a unified information portal for global procedures, work instructions, regulations, and updates related to ground processes, products, and services. The system was deployed on the existing infrastructure, meaning old terminals with limited hardware capabilities.

A key component was replacing the free-text formats of UNISYS to ensure seamless communication after the legacy system was phased out. The biggest challenge was meeting performance requirements despite the outdated hardware.

Tasks

- Test management
- Development of test ideas and test cases in TestLink
- Black-box testing of software based on Adobe CQ5
- Analysis of existing errors and defects
- Issue management using Jira and HP Quality Center
- Coordination and monitoring of work packages
- Technical guidance for employees in the nearshore center in Poland
- Creation and optimization of the initial rights and roles concept
- Preparation and editing of customer-specific documentation
- Creation and maintenance of training materials

Tools

Adobe CQ5, Java/Java EE, JSF, JBoss, Ant, OSGi, TestLink, Jira, HP Quality Center

DOKIM

Duration, Location	12/2010 – 01/2013, Darmstadt
Roles	Software Developer
Client, Industry	real estate service provider, Real Estate Management
Team Size	4

DOKIM is a management software for real estate administration at church and municipal levels. In addition to recording basic data and operating costs, it also provides calculations, charts, and comprehensive reports based on this data.

Tasks

- Implementation in Java 6
- Revision and enhancement of the user interface (Swing)
- Development, modeling, and optimization of various calculation modules
- Maintenance, management, and development of XML documents and formats
- Implementation and optimization of complex calculations in SQL
- Integration of security concepts
- Planning and modeling of a new client-server architecture

Tools

Java 6, Swing, XML, SQL

SUMMARY OF OTHER PROJECTS

2026 – today	Development of a cross-repository pipeline dashboard for real-time monitoring of all CI/CD pipelines (main branches, merge requests, scheduled pipelines, and release tags). Tree and flat views with additive filters, job drill-down, and restarting of pipelines and jobs via GitLab OAuth single sign-on Tools: Java 25, Spring Boot 4, Hexagonal Architecture (ArchUnit), React.js, Vite, TypeScript, TanStack Query, OpenAPI, GitLab REST API, OAuth2/OIDC (GitLab SSO), GitLab and GitLab CI, Docker, Claude Code

2025 – today	Architected and developed a suite of microservices for smart heating control. Established event-driven communication using RabbitMQ to ensure resilient data ingestion from diverse IoT sources and sensors Tools: Java 25, Spring Boot 4, RabbitMQ, Nexus Repository Manager, GitLab and GitLab CI, Docker, Terraform/OpenTofu, Prometheus, Grafana, Loki, Claude Code
2024 – 2025	Nexus Repository Manager self-provisioning tool Tools: Java 21, Nexus Repository Manager, Swagger, OpenAPI Specification (OAS), GitLab and GitLab CI, Docker
2024	Development of tools for automated data acquisition and monitoring of modern energy and heating systems (e.g., smart meters, heat pumps, heating circuits) Tools: Java 21, Spring Boot (3.x), Python, PostgreSQL, InfluxDB, Prometheus, Grafana, Loki, GitLab and GitLab CI, Docker, Nexus
2022 – 2024	Tool for controlling FRITZ!Box devices Tools: Java 21, Spring Boot (3.x), Maven, Docker, GitHub, GitHub Actions
2021	Development, enhancement, and maintenance of the company's website Tools: Node.js, React.js, GitLab and GitLab CI, Docker, Terraform/OpenTofu
02/2014 – 03/2014	Preparation and delivery of a CQ5 training
10/2012 – 01/2013	Master's thesis: Analysis and Evaluation of Ranking Strategies for Chain Completion Proposals Tools: Eclipse RCP, Cassandra DB
04/2011 – 09/2011	Plugin development: Implementation of a flexible Advanced Configuration Page for the Eclipse JDT Content Assist Lists Tools: Eclipse RCP
05/2010 – 08/2010	Bachelor's thesis: Design and implementation of a graphical editor for Composite Model Refactorings in Eclipse Tools: Eclipse EMF