Max Schlüssel

Freelance Software Architect

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Summary

Software architect specializing in API-first architectures, cloud-native platforms, and scalable backend systems. Strong hands-on experience in Java and TypeScript, as well as in building distributed systems on AWS, Spring-based microservices, and GraphQL. Over 10 years of experience in the e-commerce domain working with SAP Commerce and Commercetools, including search and data platforms such as Elasticsearch/OpenSearch and the integration of various payment providers.

Skills & technologies

AWS   Lambda   TypeScript/JavaScript/NodeJS   Java/Spring   Serverless Framework   Python

GraphQL   OpenAPI / Swagger   REST   MACH architecture   Microservices   Event-driven

Terraform   Docker   Kubernetes (EKS)   Helm   Fargate   CloudFormation   IAM   Cognito

Elasticsearch/OpenSearch   MongoDB/DocumentDB   DynamoDB   Neo4J   MySQL

GitHub Actions   Bitbucket workflows   DataDog   OSGi/Karaf   Quarkus   J2EE

SAP Commerce / Hybris   Commercetools   Adyen, Worldpay, Computop

Certifications

- iSAQB Certified Professional for Software Architecture (CPSA-F)
- IPMA Certified Project Management Associate (Level D)
- SAP Certified Development Professional – Hybris Commerce 6.2 Developer
- Oracle Certified Java SE 7 Programmer

Project history

Software Architect (freelance), B/S/H/ Hausgeräte GmbH

05/2021 – now

Architecture and development of core APIs and services to transform a monolithic SAP Commerce platform into a cloud-native MACH architecture (Commercetools) for 300+ websites of a global home appliances manufacturer.

- Planning and implementation of a scalable AWS-based product data service to consolidate, enrich, and provide product data for search and marketing platforms (Empathy, ChannelEngine, DataFeedWatch, Bazaarvoice, Zoovu)
- API architecture, interface design, technical consulting for relevant stakeholders, and quality assurance of all interface definitions
- Development and continuous enhancement of the GraphQL server for B2C, B2E, and B2X as the central backend-for-frontend for the new Sherpa commerce frontend
- Leading role in integrating the new search provider Empathy to replace the existing Fredhopper search
- Design and development of the commerce integration layer between Commercetools and various BSH microservices; ensuring robust, consistent, and scalable data flows
- Integration of new APIs into the service landscape, implementation of import/export pipelines (catalogs, pricing, inventory)
- Implementation of transition and commerce APIs (price history, promotions, OCR)
- Architecture of the Campaign Service, an AWS-based service for configuring and delivering customer campaigns based on complex rules

  AWS   Commercetools   GraphQL   Serverless   Lambda   TypeScript/NodeJS

11/2022 – now

Payments API - Architecture and development of a serverless application as a payment gateway to standardize communication and integration across more than 10 international payment providers.

- Requirements analysis and architecture design as a cloud-based service
- Design of a generic payment and notification interface, as well as an integration strategy into the commerce platform via GraphQL and the integration layer
- API- and event-driven Lambda functions using the Serverless Framework with TypeScript/Node.js
- Implementation of a frontend cockpit application for business users using React, integrated with SAML/SSO via Cognito
- Development of integrations with various payment providers (Adyen, Access Worldpay, CIB, CMI, Computop, Craftgate, PayU, Razorpay, Tillhub, Worldpay)

  AWS   Event-Driven   Serverless   Lambda   TypeScript/NodeJS

Software Architect (freelance), ThinkingLabs GmbH

07/2023 – now

Strategic support in company-wide architecture and technology direction, as well as hands-on implementation of products in the areas of search, knowledge base, chat assistants, and podcast generation.

- Further development of the Spring-based search service (including REST API redesign, query optimizations for OpenSearch/Elasticsearch, ranking logic, profiling, and load testing) for the new search on kicker.de
- Development of a query analyzer for automatic entity recognition (players, teams, etc.) to improve search quality
- Setup of the EKS cluster using Terraform as Infrastructure as Code, including deployment via ECR and migration of existing services to Helm charts
- Knowledge base service with embedding of customer documents and retrieval via OpenSearch
- Architecture of a question-answering pipeline based on Neo4j, Python, and LLM agents (Cypher query generation, retrieval, complex QA flows)
- Architecture and partial implementation of a multi-device AI chatbot platform (React frontend, Spring microservices, voice I/O, OpenAI integration)
- Strategy and implementation of a reusable React component library setup using Rollup, replacing the legacy Thymeleaf frontend and enabling adoption across new React applications; strategic groundwork for migration to a full React stack

Java   Spring   OpenSearch   Terraform   Kubernetes   React

Software Architect – neteleven GmbH

10/2017 – 05/2021

Leading contribution to the further development of B/S/H/ Hausgeräte GmbH's e-commerce platform, focusing on CMS integration, marketing pages, and search functionality.

- Analysis of complex business requirements, conducting refinements, and advising on architecture and integration topics
- Technical lead for backend and frontend development in an international, cross-functional team
- Design and continuous enhancement of the CMS integration for incorporating FirstSpirit content
- Development and optimization of search integration based on Fredhopper and Elasticsearch
- Implementation of numerous third-party integrations (including Bazaarvoice, ChannelEngine) to extend marketing and analytics capabilities
- Development of a scalable, AWS-based content crawler (Node.js, Docker, ECS Fargate) for efficient indexing and synchronization of content pages

Java   Spring   SAP Commerce (Hybris)   Elasticsearch   Fargate   JavaScript/NodeJS

IT Architect – Habermaaß GmbH

06/2016 – 09/2017   Java, Spring, SAP Commerce/Hybris

Further development of multiple Hybris 5.x-based webshops for brands within the HABA group, supporting the e-commerce presence of Jako-O, Fitz, HABA, and Wehrfritz.

- Design and implementation of a unified foundation for core webshop modules
- Technical lead for both backend and frontend development
- Redesign of CI/CD processes for the entire shop landscape using Jenkins
- Development of a generic import module to standardize data imports from GenEx
- Integration of the PayGate to standardize and centralize all payment processes

Java   Spring   SAP Commerce (Hybris)   Jenkins

02/2016 – 09/2017

GenEx – Generic export system (custom ETL software) for consolidating and providing product and ERP data.

- Design of a generic product data model for the HABA group based on common standards such as OASIS UBL 2.1
- Development of a system based on OSGi / Apache Karaf
- Data provisioning to various third parties via configurable export pipelines
- Provision of product data to internal departments such as BI and Controlling

Java   OSGi   Karaf   Camel

since 2016

Member of the architecture board of the HABA group.

- Contributed to the development of the company-wide IT strategy
- Defined IT architecture principles and development standards
- Conducted technology evaluations, feasibility studies, and drove innovation initiatives
- Defined IT policies, guidelines, and governance frameworks

Software Developer – Habermaaß GmbH

10/2015 – 05/2016

PayGate – Internal system for payment processing and integration of various payment providers.

- Requirements analysis and system design aligned with commerce use cases
- Architecture and design of a highly available OSGi application based on Apache Karaf and Apache Camel
- Support and guidance for the development team

Java   OSGi   Karaf   Camel

04/2013 – 05/2016

Development of the Wehrfritz online shops based on SAP Hybris 5.x.

- Planning and design of the webshop based on the SAP Hybris Accelerator
- Development of new extensions and add-ons for the shop system
- Implementation of the WCMS component to render components maintained in the CMS
- Data exports for search and search integration implemented with Apache Solr
- Data imports from various systems via Apache Camel; product data from PIM (Hybris), ERP data from IBM Power7 and Microsoft Dynamics AX

Java   Spring   SAP Commerce (Hybris)

Apprentice: Computer Science Expert (Software Development) – Habermaaß GmbH

09/2010 – 06/2013

Further development of the company's proprietary Java-based custom software ("HABA Menu") with various components supporting business processes.

- Development of an application for maintaining shipping regulations and automated display on the production conveyor line
- Adaptation of logistics-related backend services on the JBoss application server (EJB)
- Integration of the AS/400 database and triggering routines for various business processes
- Implementation of user interfaces using Java Swing

Java   Spring   JBoss   EJB   Swing