Philip Limbeck

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Freelance and Consulting Work

11-2022–11-2023   **Consultant**, *XType*, Vienna

Description:
: Migrating the existing solution from a monolith which doesn't scale to an event-driven architecture based on Kafka. The solution extracts data from ServiceNow and links it together with items regarding the same logical entity. Those logical entities form deployment units which can be moved around on available ServiceNow instances. The ServiceNow instances are labelled according to QA, production, etc.. forming stages in a CI/CD process.

Responsibilities:
: ○ Facilitated workshops about event-driven architecture and Kafka
: ○ Guided the engineering team in creating a more scalable architecture to eventually supersede their monolith
: ○ Implemented a prototype of a Kafka-based data pipeline reading from ServiceNow and producing a graph-based collection of business items

Achievements:
: ○ Rolled out a prototype to their test environment, reducing latency for item ingestion and processing from 24 hours to near real time
: ○ Demonstrated concepts and best-practices for future services

Languages:
: Java, Protobuf

Datastores:
: Kafka, PostgreSQL

Frameworks:
: Spring/Spring Boot, Kafka Streams, Kubernetes

Concepts:
: Event Driven Architecture

Cloud:
: Amazon Web Services EKS (Elastic Kubernetes Service)

Tools:
: ArgoCD, Jenkins, Maven, Grafana, Prometheus, AlertManager

10-2021–05-2023   **Software Architect**, *BUX*, Vienna/Amsterdam

Description:
: Extending a trading platform with various features. One major project was scaling their quote stream which handles price data from external provider. As more products were introduced and their existing provider license ended, their existing architecture could not handle the load of the new external provider. Another project was about introducing infrastructure-as-code for core-team based on Terraform modules, making their whole cloud-infrastructure declarative.

Responsibilities:
: ○ Introduced of infrastructure-as-code for the core teams to ensure traceability of changes
: ○ Research on using GraalVM (a polyglot runtime with Ahead-of-Time capabilities) for microservices
: ○ Hands-on cross-team feature development
: ○ Defined architectural constraints and extension points with ADRs (Architectural Decision Records)
: ○ Managed a part of the core team

Achievements:	○ Scaled the existing quote stream components from 1-per-second to sub-second processing
	○ Reduced startup time for their microservices from 60+ to a 5 seconds on average
	○ Carried out the promotion of a team member
Languages:	Java, Kotlin, Protobuf, Terraform
Datastores:	Kafka, RabbitMQ, PostgreSQL
Frameworks:	Spring/Spring Boot, Kubernetes, GraalVM
Concepts:	Event Driven Architecture, CQRS (Command-Query Responsibility Segregation)
Cloud:	Google Cloud Platform (Networking, GKE (Google Kubernetes Engine), Compute Engine, Buckets)
Tools:	GitHub Workflows, Maven, Grafana, Prometheus, AlertManager

Contractual Employment

12-2019–09-2021	**Engineering Team Lead**, *BUX*, Amsterdam, NL
Description:	Extending a trading platform with various features. Leading a team of engineers around their career development, goals and growth in the company. The company uses CQRS (Command-Query Response Segregation) excessively, maintaining its own framework library in Java. Extension of the framework with business process management layer.
Responsibilities:	○ Led a team (two sub-teams) of eight software engineers to foster their professional growth
	○ Designed a system for deferred execution of stock orders
	○ Extended the in-house CQRS library to support modelling business processes
	○ Feature development to extend the core platform
Achievements:	○ Achieved a 100% retention rate during my time as team-lead and facilitated the promotion of a team member
	○ Seamlessly rolled out deferred execution stock orders, processing over 5000 orders daily without any major operational disruptions
	○ Significantly reduced development time of two microservices by using the business process abstraction
	○ Defined and setup a seamless on-call rotation with clear separation of responsibilities on alerts among two sub-teams
Languages:	Java, Kotlin, Protobuf, Python
Datastores:	Kafka, RabbitMQ, PostgreSQL
Frameworks:	Spring/Spring Boot, Kubernetes
Concepts:	Event Driven Architecture, CQRS
Cloud:	Google Cloud (Networking, GKE, GCP, Buckets)
Tools:	GoCD, Maven, Grafana, Prometheus, AlertManager

10-2018–11-2019	**Senior Software Engineer**, *BUX*, Amsterdam, NL

Description:	Greenfield development of a trading platform. The platform executes stock orders received by the end-user through the middleware. Orders are validated and tracked throughout their lifecycle. Required cash and assets are reserved and exchanged after the order executed. A product catalog and quotes are maintained to allow the end-user to choose which stock to buy/sell at which price.
Responsibilities:	○ Implemented an order management system in a team of two from scratch ○ Implemented a core product catalog which is automatically synced throughout all microservices ○ Implemented a data pipeline providing quotes for services who need price tags ○ Defined and managed all infrastructure needed for testing, operations and monitoring (we build it, we run it) ○ Defined and implemented CI/CD and integration tests
Achievements:	○ Go-live of the trading platform (order management, quotes, product catalog) with no delay ○ Enabled an efficient way for operations to do product updates across the services ○ Setup a green field project around observability, CI/CD and cloud infrastructure
Languages:	Java, Protobuf, Shell Scripting, Python
Datastores:	Kafka, RabbitMQ, PostgreSQL
Frameworks:	Spring/Spring Boot, Kubernetes
Concepts:	Event Driven Architecture, CQRS
Cloud:	Google Cloud (Networking, GKE, GCP, Buckets)
Tools:	GoCD, Maven, Grafana, Prometheus, AlertManager

09-2017–09-2018	**Senior Software Engineer**, *Automic, acquired by CA/Broadcom*, Vienna, AT
Description:	Adding event-driven workflow processing to an existing job-scheduling solution using Apache Flink. Extending an analytics software with various chart types and filtering features.
Responsibilities:	○ Feature development and system design ○ Reduced technical debt in the web interface
Languages:	Java, Shell Scripting, Cobol
Datastores:	Kafka, PostgreSQL
Frameworks:	Spring Boot, Kubernetes, Vaadin, Apache Flink, Cucumber

10-2015–08-2017 **IT Senior Consultant**, *EBCONT*, Vienna, AT

Description: The presentation management tool is a web-interface which allows importing images of various file types. These images can be combined together representing slides in presentations. The presentations can be show-cased in the tool directly. Several transition animations are possible. A monolith architecture serves as a backend for storing slides and metadata.

Responsibilities: ○ Feature development and system design

Languages: Java
Datastores: MariaDB
Frameworks: Spring Boot