Auditing through Event Sourcing

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Dealing With Request Failures

Logging

Distributed tracing

Logging

Show that the program is working as expected

Output relevant information for diagnosing problems

Distributed Tracing

Correlate logs about a single operation

Submit translation followed by locking a document

Succeeding operations inherit tracing context

> The process of systematically and independently examining source material to ascertain a true and fair view of a given concern.

Wikipedia

Auditing in Practice

Financial audit

Computing audit

On call operators audit failures and introduce preventative measures

Event Sourcing

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Git

Google Docs, Sheets, Slides, etc.

Text editor

Event Sourcing Gotchas

Auditing done to perfection

Potentially incur large storage costs

Capturing and maintaining state can be complex

Should be considered local to application

Bounded Contexts

Document service

Translation service

Service to Service Communication

Global event store

Maintain history of bounded context events

Publishers and consumers

Gives ability to replay events due to failure

Promotes elasticity

Designing the Message Broker

Available Global Event Store Options

ActiveMQ

Amazon SQS

RabbitMQ

Many others

Global Event Store Components

Topics

Partitions

Apache ZooKeeper

Confluent Schema Registry

Apache Kafka Setup

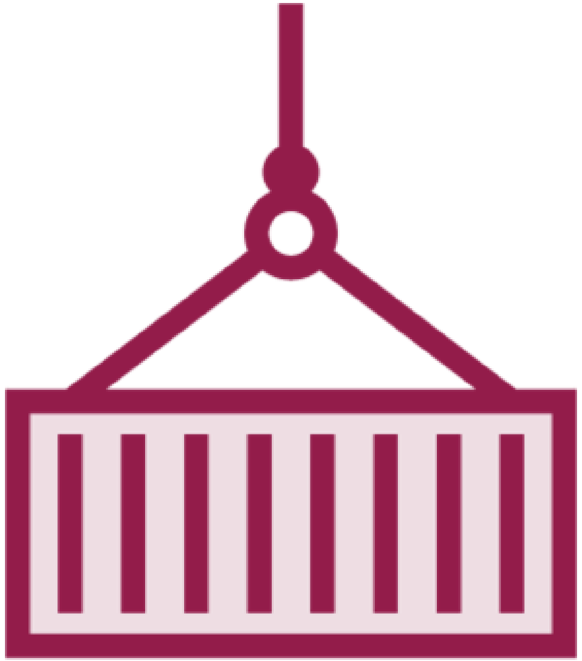
Single Apache ZooKeeper server

Single Apache Kafka broker

Single Schema Registry node

Installing and Running Docker

Introduction to Docker



Open platform

Focused on containers

Lighter than virtual machines

Reduced performance overhead

Orchestration through Docker Compose

Implementing Consumers and Publishers

High Level Customer Workflow

Uploads document to be translated

Submits document for translation

Cancels the pending request

Uploads and submits another revision

Monitors translation status

Translator accepts translation request

Global Events For Consideration

Document submitted for translation

Cancelling a translation request

Document locked

Document unlocked

Submission accepted

Demo: Message Driven Architecture

Summary

Delivered more durable messaging

Achieved a more meaningful stance on reactive principles

Not yet addressed rolling back distributed transactions

Address remaining scenario through SAGAs