Designing Event-driven Applications with Apache Kafka Ecosystem

EXPERIENCING THE IMPACT OF AN EVENT-DRIVEN ARCHITECTURE

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GLOBOMANTICS

Online store for custom t-shirts

Business:

- Designing
- Producing
- Delivering

Module Overview

Enterprise Architectures

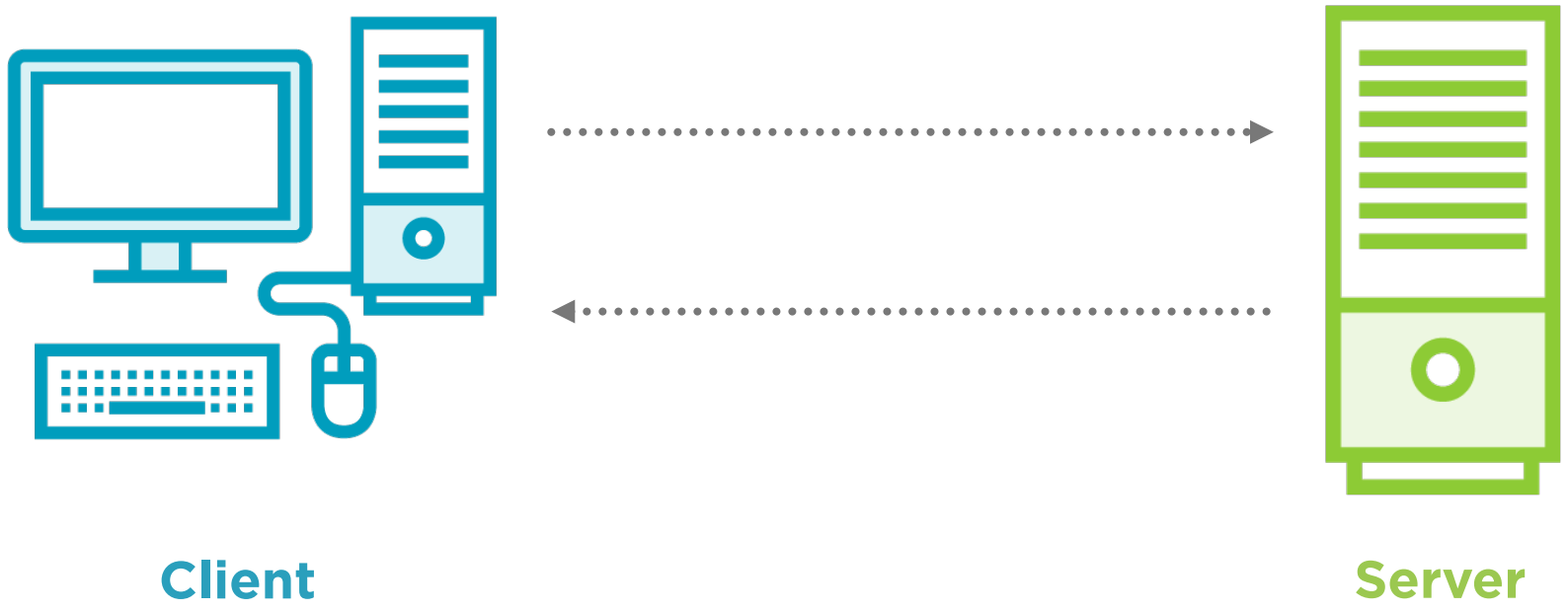
Messages, Events, Commands

EDA Benefits

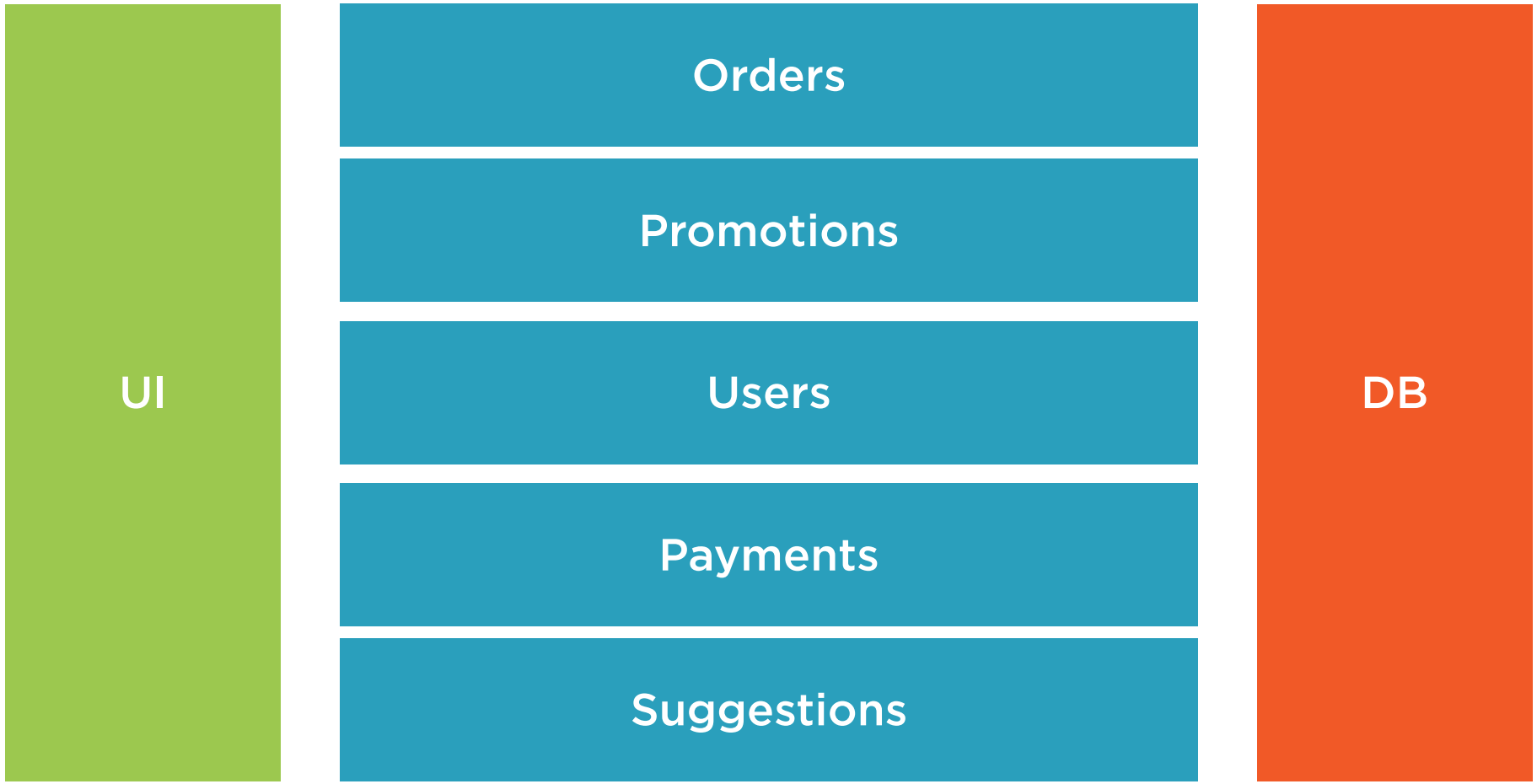
EDA Drawbacks

Event Storming

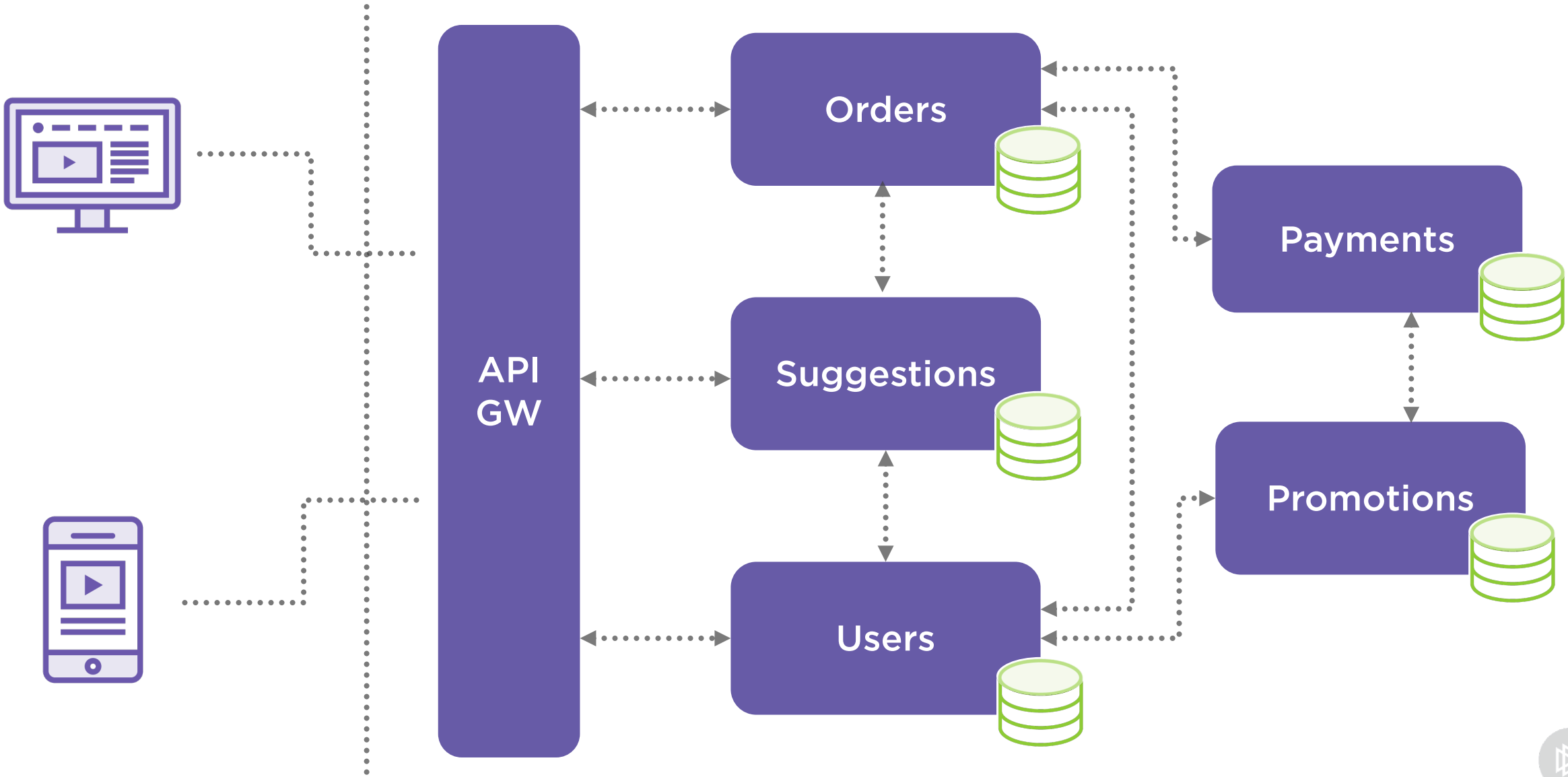
Enterprise Software Architecture



Monolith



Microservices



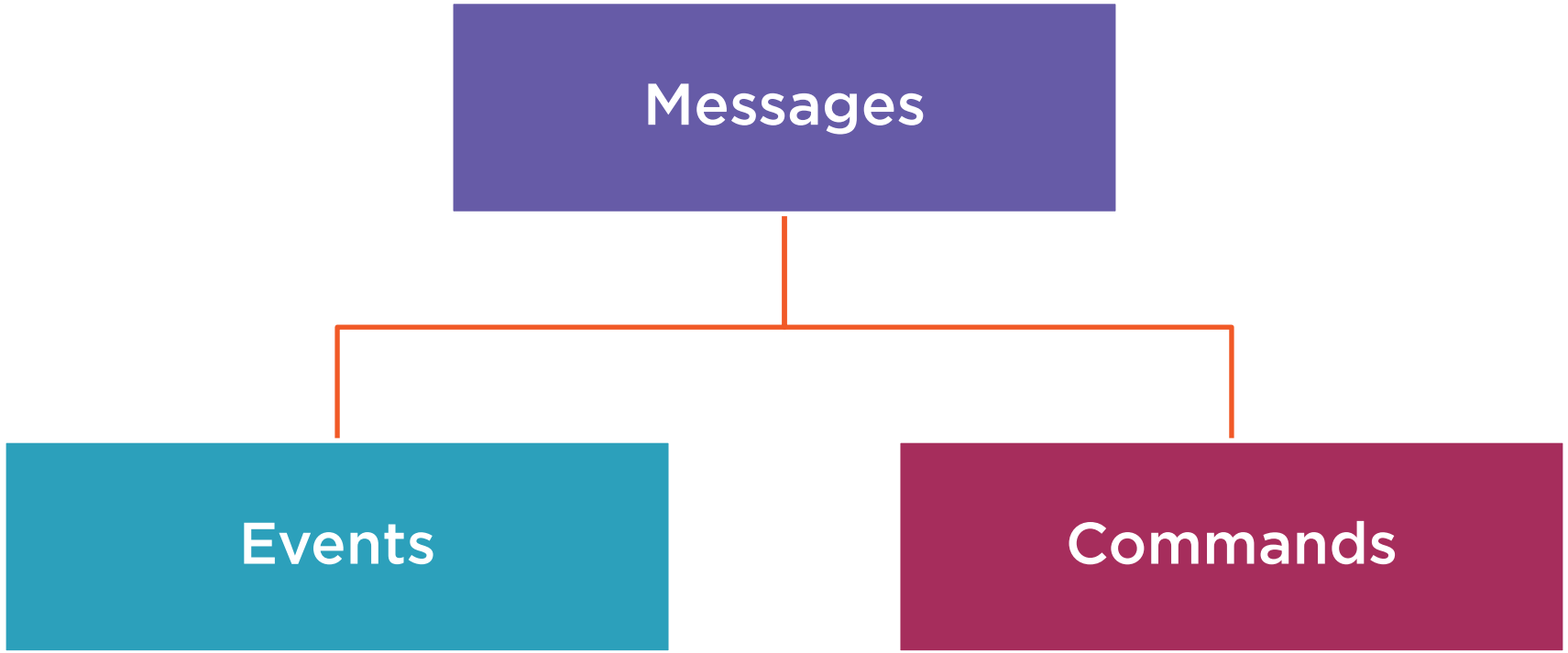
Event-driven Architecture (EDA)

A **software architecture** pattern promoting the production, detection, consumption of, and reaction to **events**.

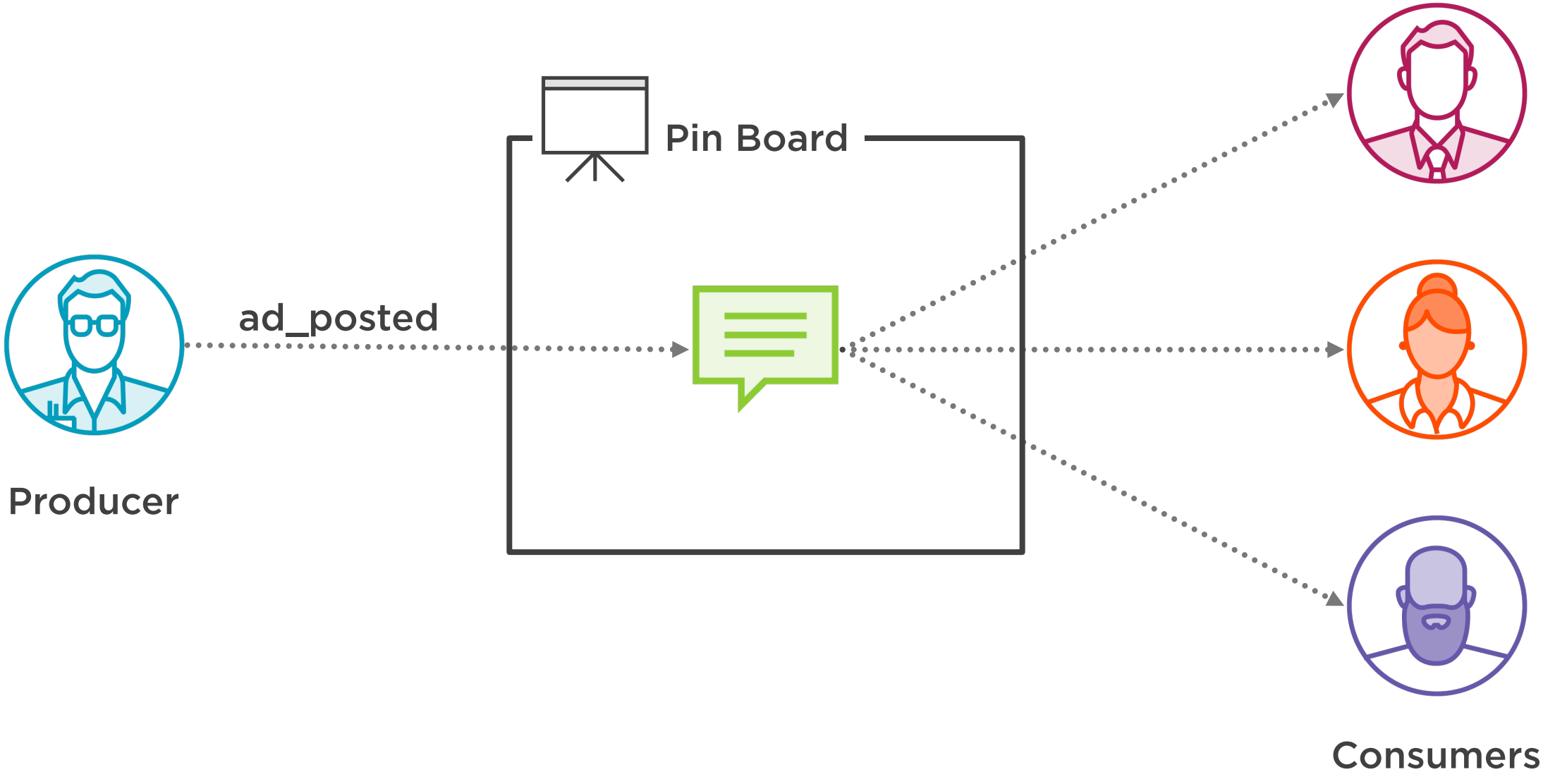
-Wikipedia

Event-driven Architecture

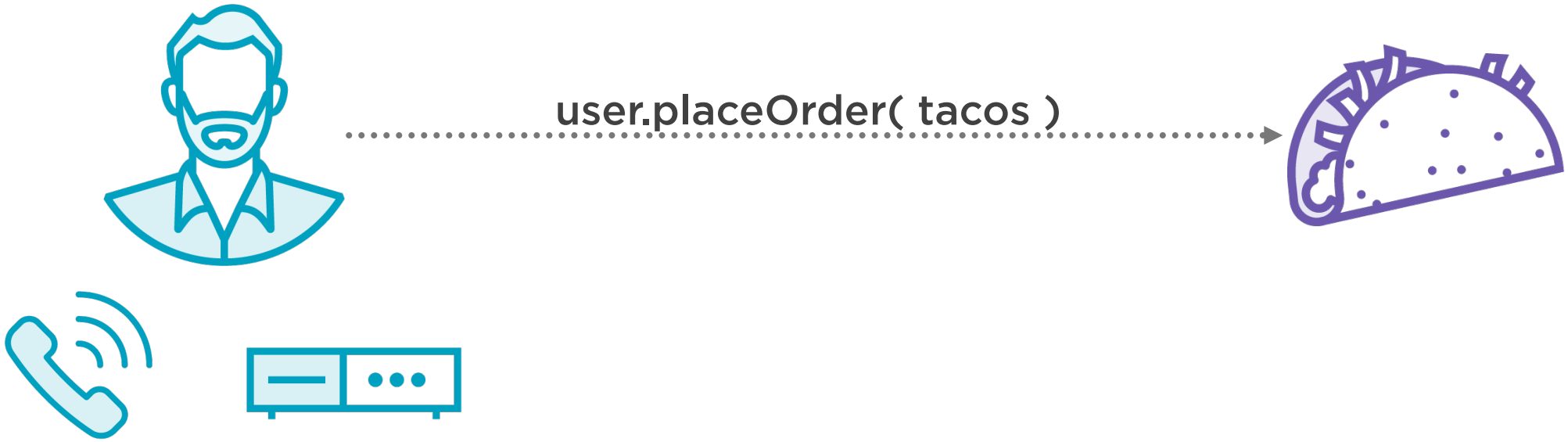
Messages, Events, Commands



Events



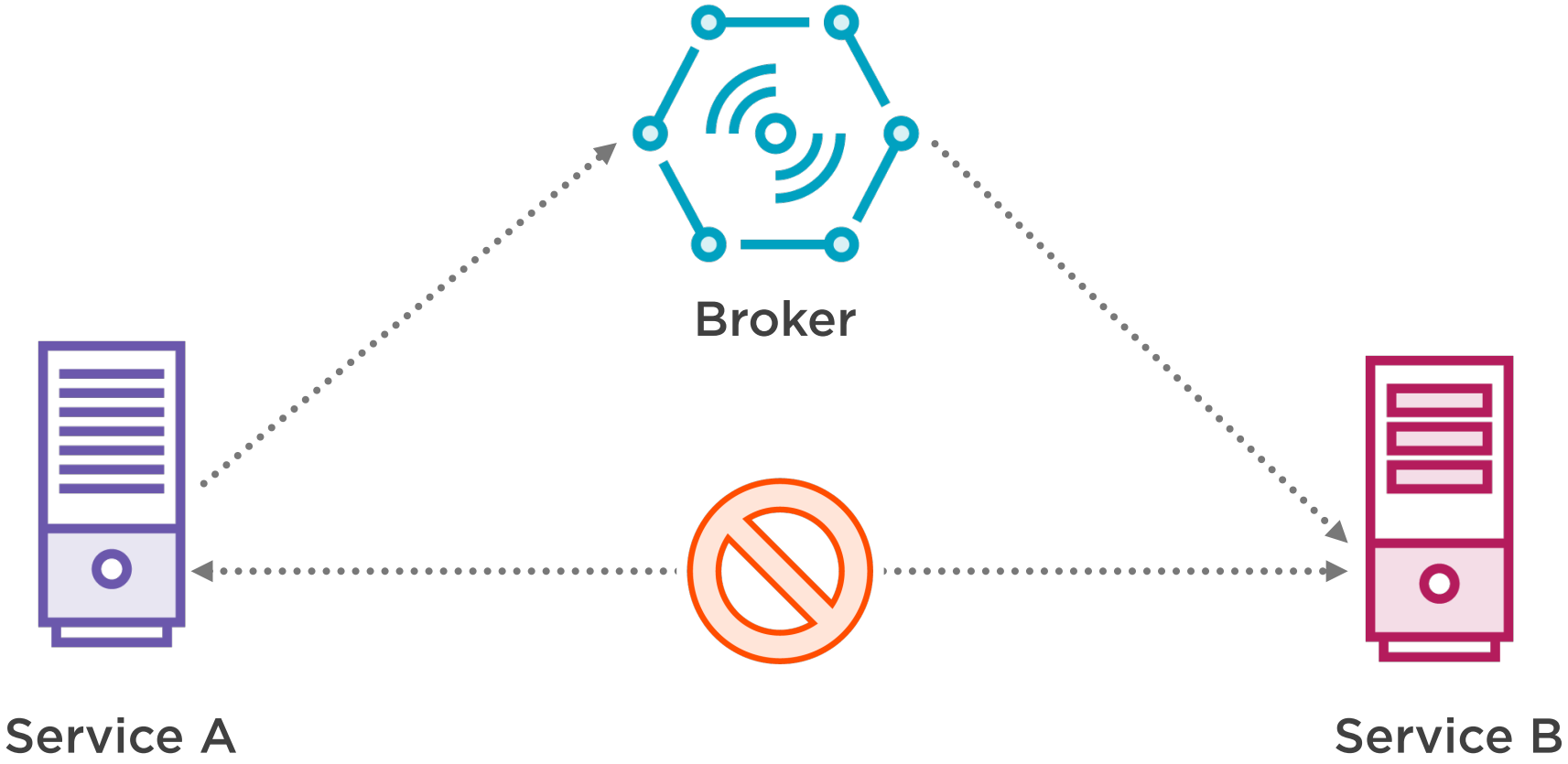
Commands



Benefits of EDA

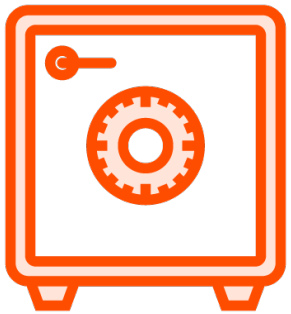
Decoupling

Decoupling



Benefits of EDA

Decoupling



Encapsulation

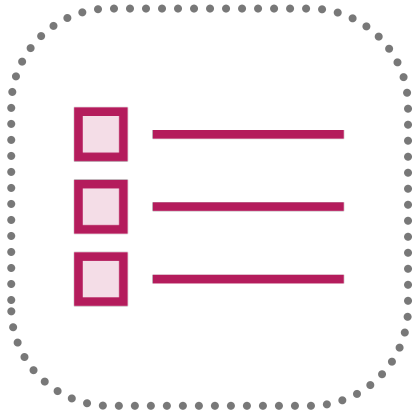
Encapsulation

Analytics

Payments

Promotions

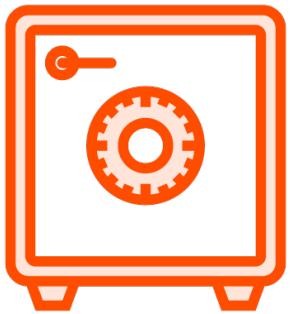
Suggestions



Authentication

Benefits of EDA

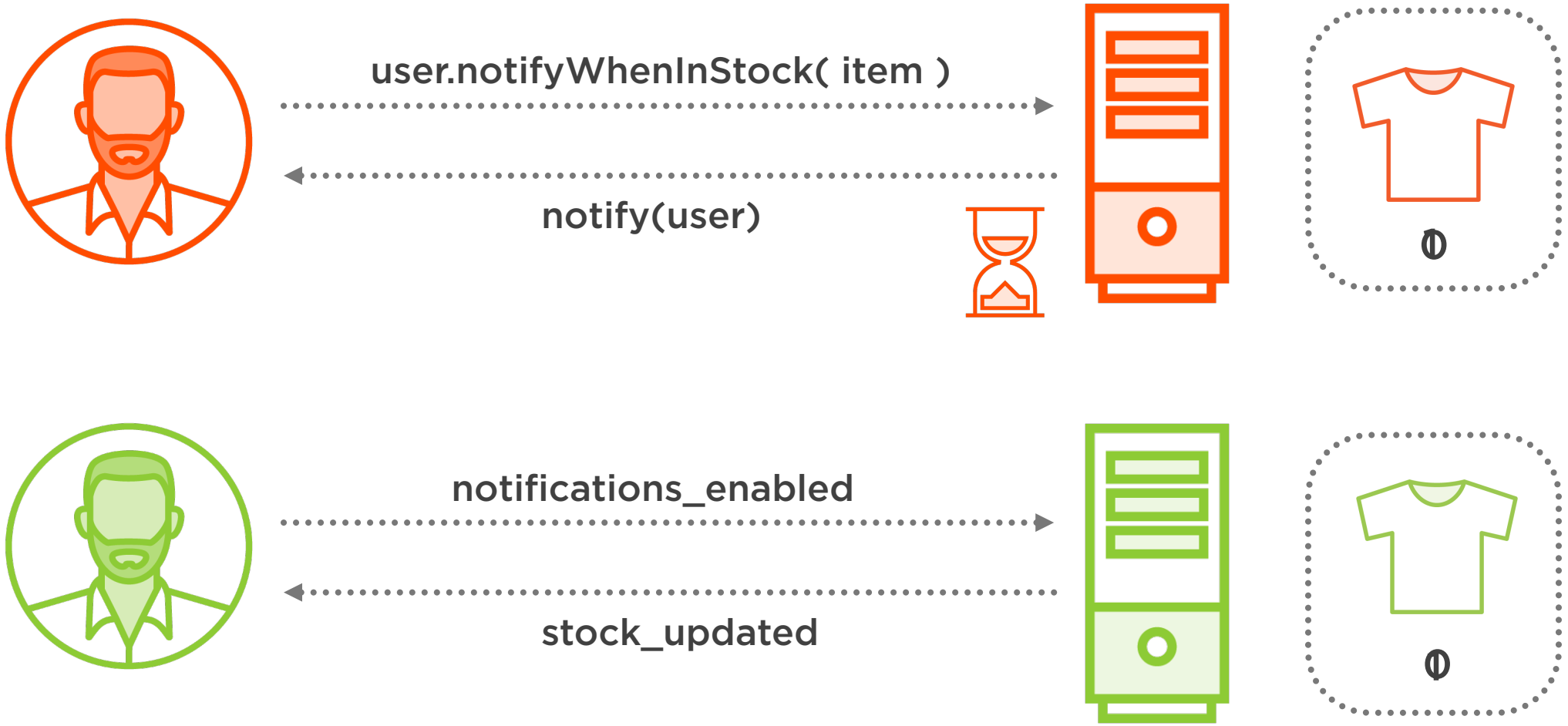
Decoupling



Encapsulation

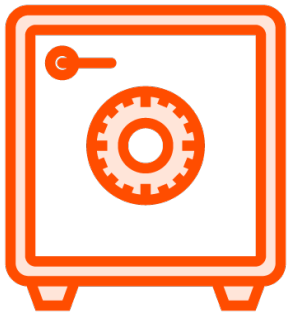
Optimization

Optimization



Benefits of EDA

Decoupling

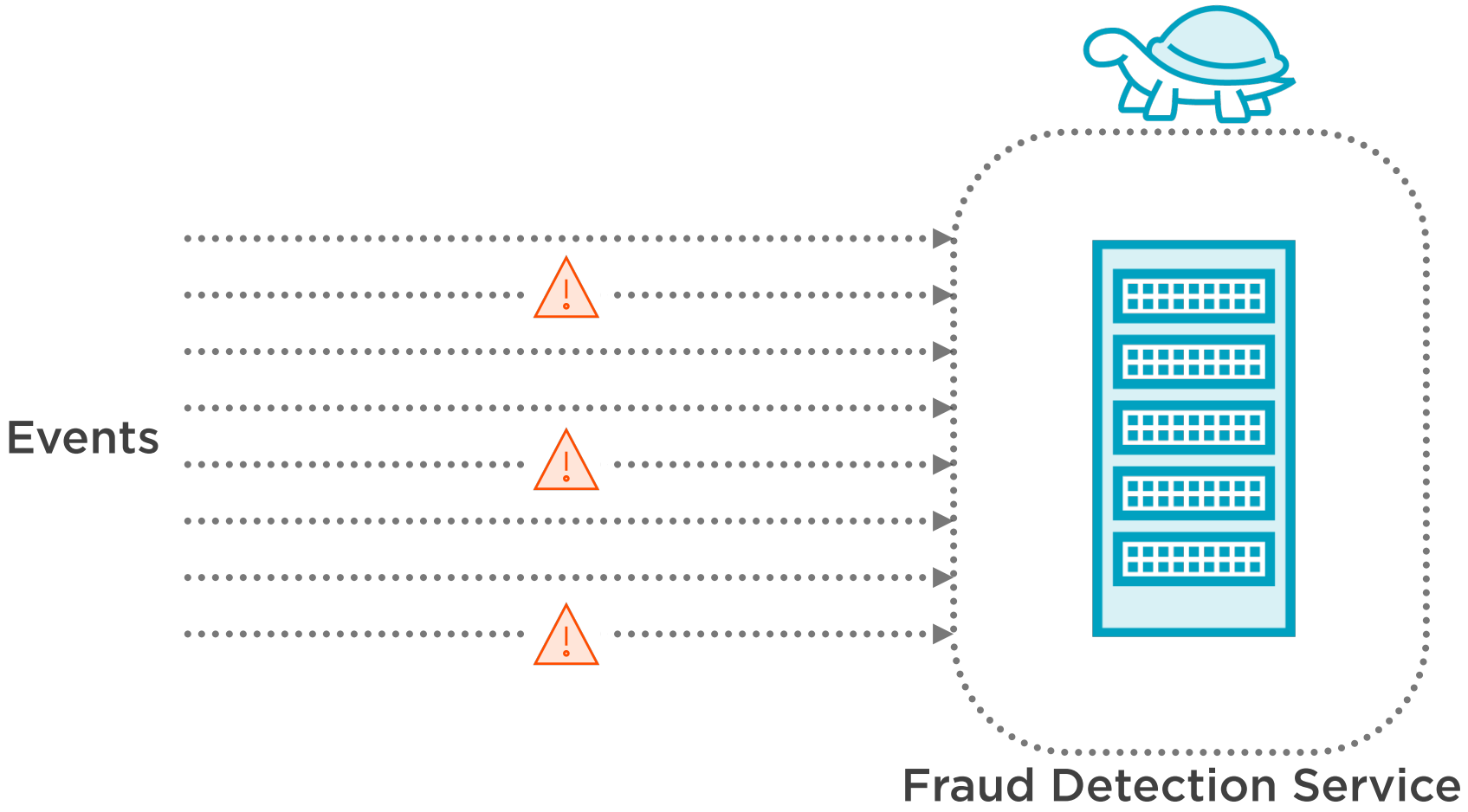


Encapsulation

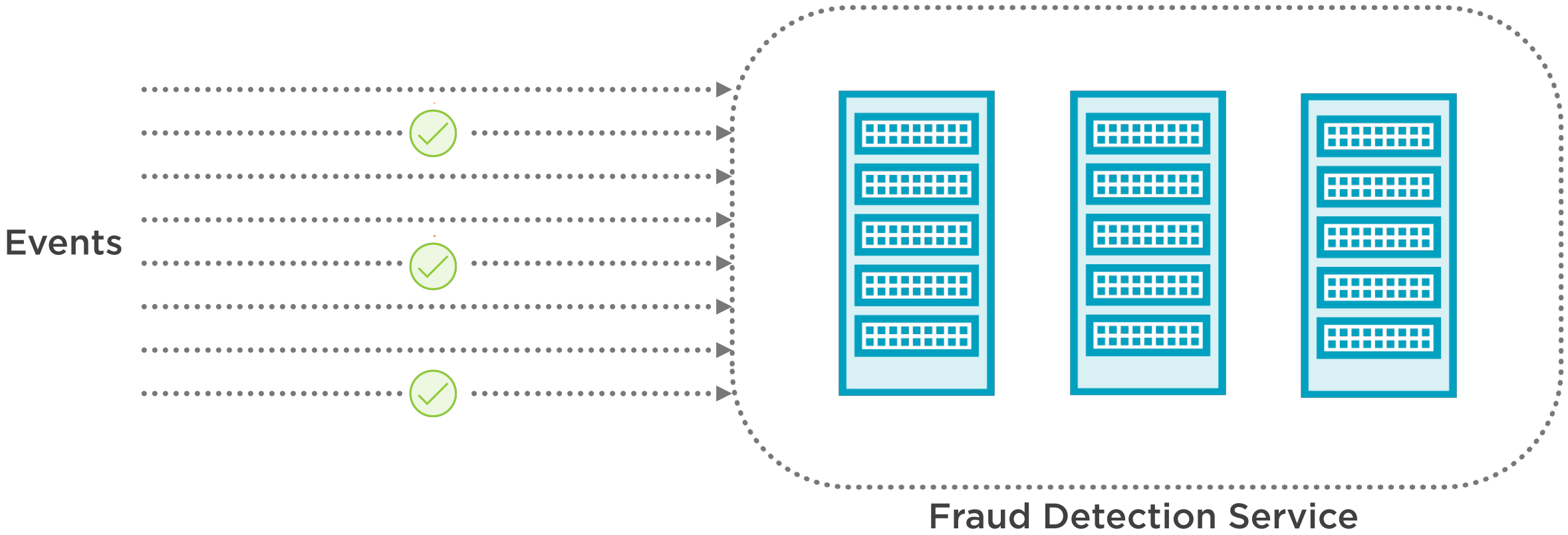
Optimization

Scalability

Scalability



Scalability



EDA Drawbacks

Steep learning curve

Complexity

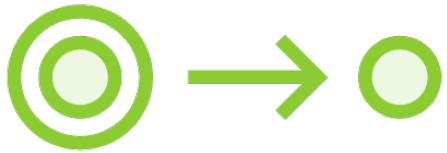
Loss of transactionality

Lineage

Event Storming & DDD

Typical system

Revolves around data(base)



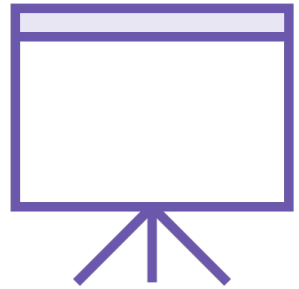
Event-driven system

Revolves around events

The Workshop

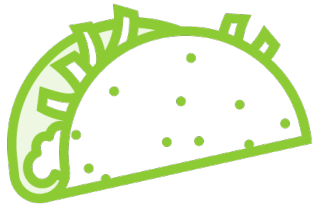
Room

Right people



Sheet of paper / empty wall

Sticky notes



Food

Coloring Scheme

Domain event

Policy

External system

Command

DDD

Aggregate

Bounded context

Demo

Event Storming session

DDD in action

Summary

- Enterprise Architectures
- Messages, Events, Commands
- EDA Benefits
- EDA Drawbacks
- Event Storming