Microservices Architecture

Software Architecture

Richard Thomas

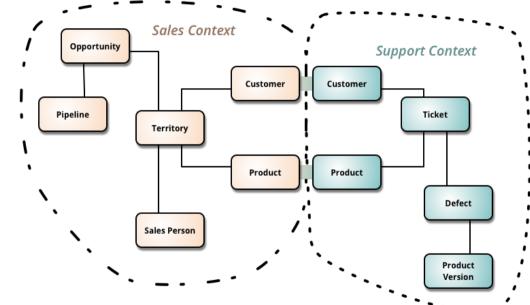
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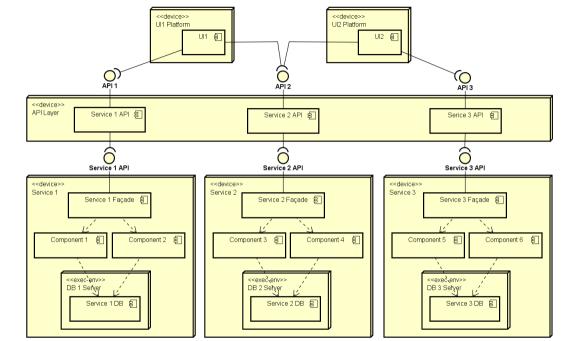
Microservices

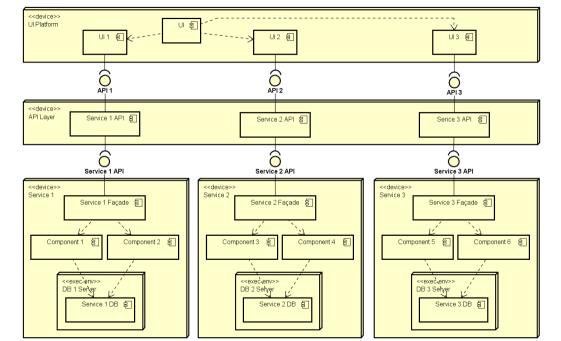
Inspired by DDD

Definition 1. Bounded Context

Logical boundary of a domain where particular terms and rules apply consistently.







Definition 2. Service Cohesion Principle

Services are cohesive business processes. They are a bounded context.

Definition 3. Service Independence Principle

Services should not depend on the implementation of other services.

Corollary 1. Low Coupling

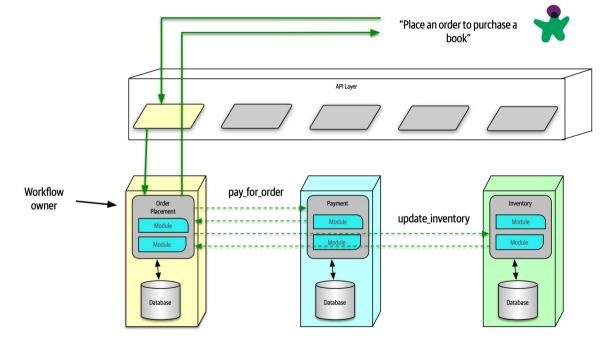
Services should have minimal coupling with other services.

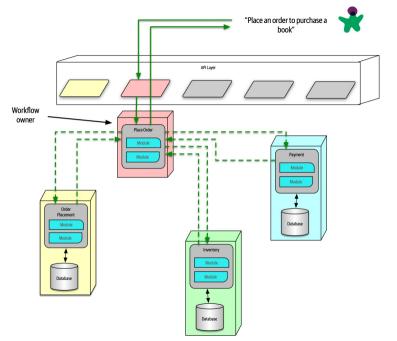
Corollary 2. No Reuse

Services do not reuse components from other services, to avoid dependencies.

Choreography & Orchestration

Choreography Similar to event-driven *broker*Orchestration Similar to event-driven *mediator*



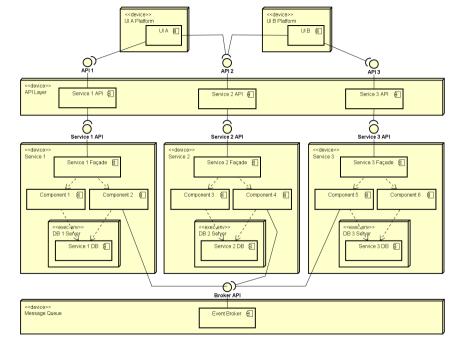


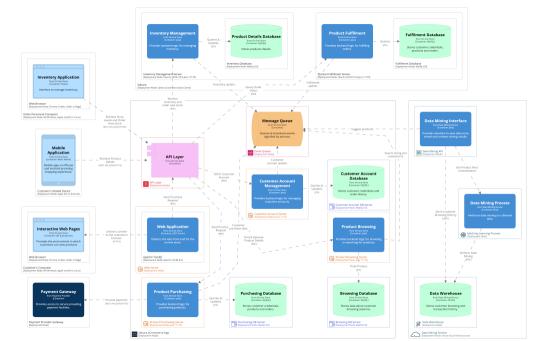
How bad is the coupling with choreography or orchestration?

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Answer

For a very large system, very bad.





Are *browsing* and *purchasing* separate contexts?

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Answer

- Are the a single business process or different processes?
- Do they share much or little data?

- What about *inventory management* and *browse*?
- How do they maintain a consistent product database?

Pros & Cons 00 Modularity Extensibility 00 Reliability 00 Interoperability 00 Scalability Security Deployability Testability Simplicity