# Microservices Architecture

 $Software\ Architecture$ 

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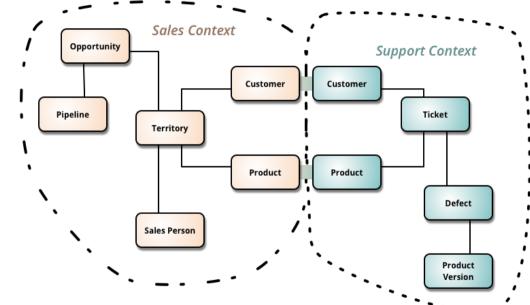
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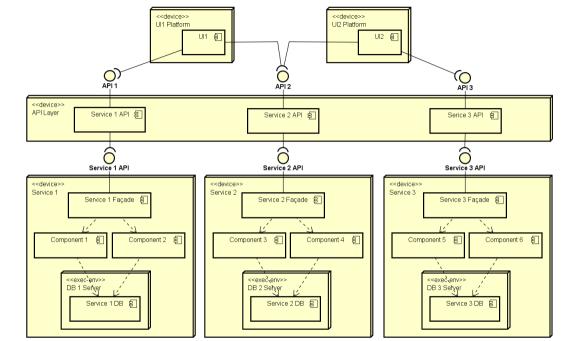
#### Microservices

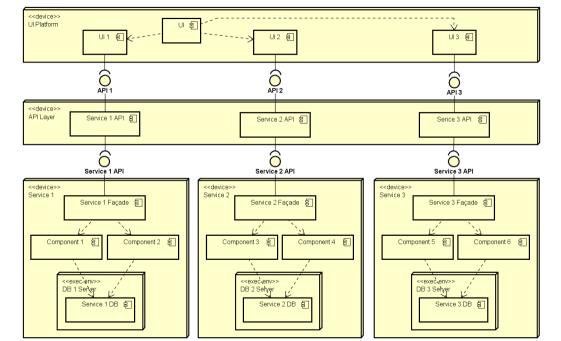
Inspired by DDD

### 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.

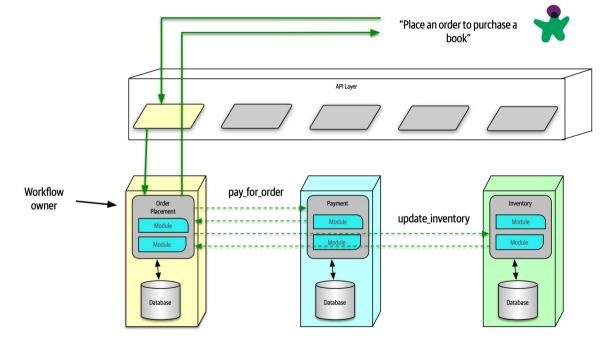
## Corollary 2. No Reuse

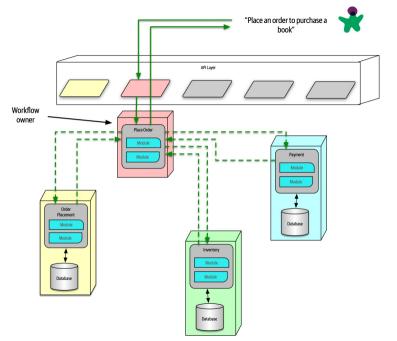
vices, to avoid dependencies.

Services do not reuse components from other ser-

Choreography & Orchestration

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



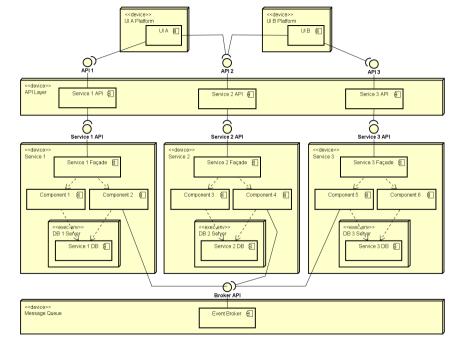


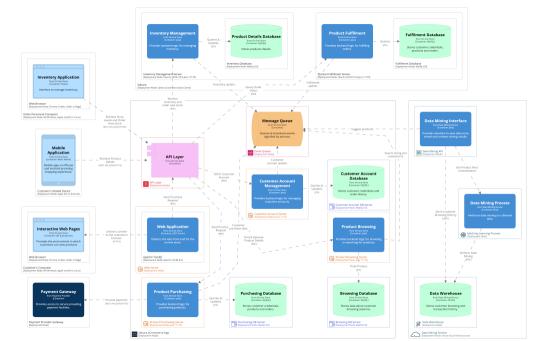
How bad is the coupling with choreography or orchestration?

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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 Reliability 00 Interoperability 00 Scalability Security Deployability Testability Simplicity