ASP.NET Core Microservices: Getting Started

HOW TO CREATE A MICROSERVICE

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Module Overview

What we're buliding

Microservices architecture

A first microservice

Connecting the UI

Generating classes with OpenAPI

gRPC

Event catalog

Shopping basket

Payment

Flexible scaling

Deploy independently

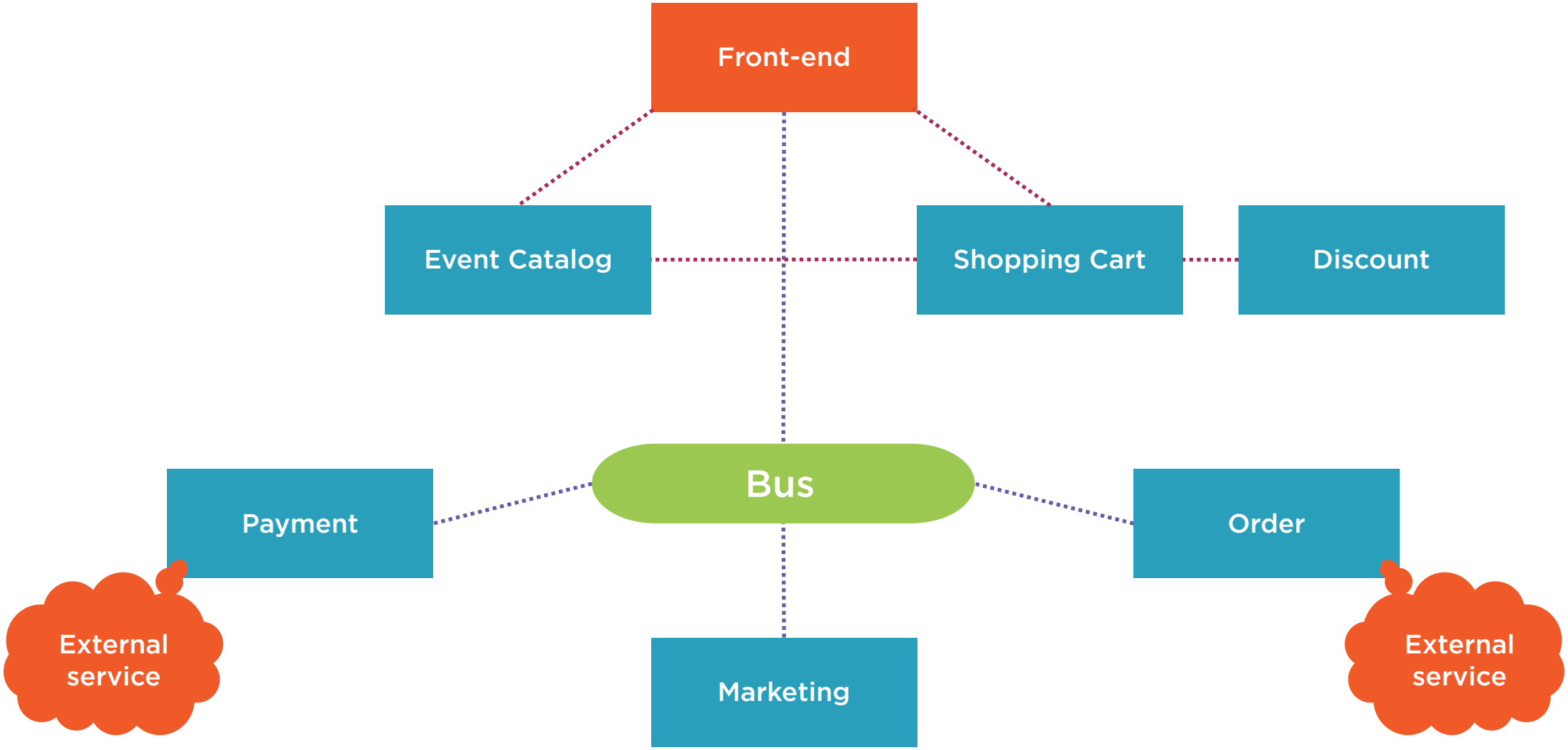
- Continuous delivery

Separated teams

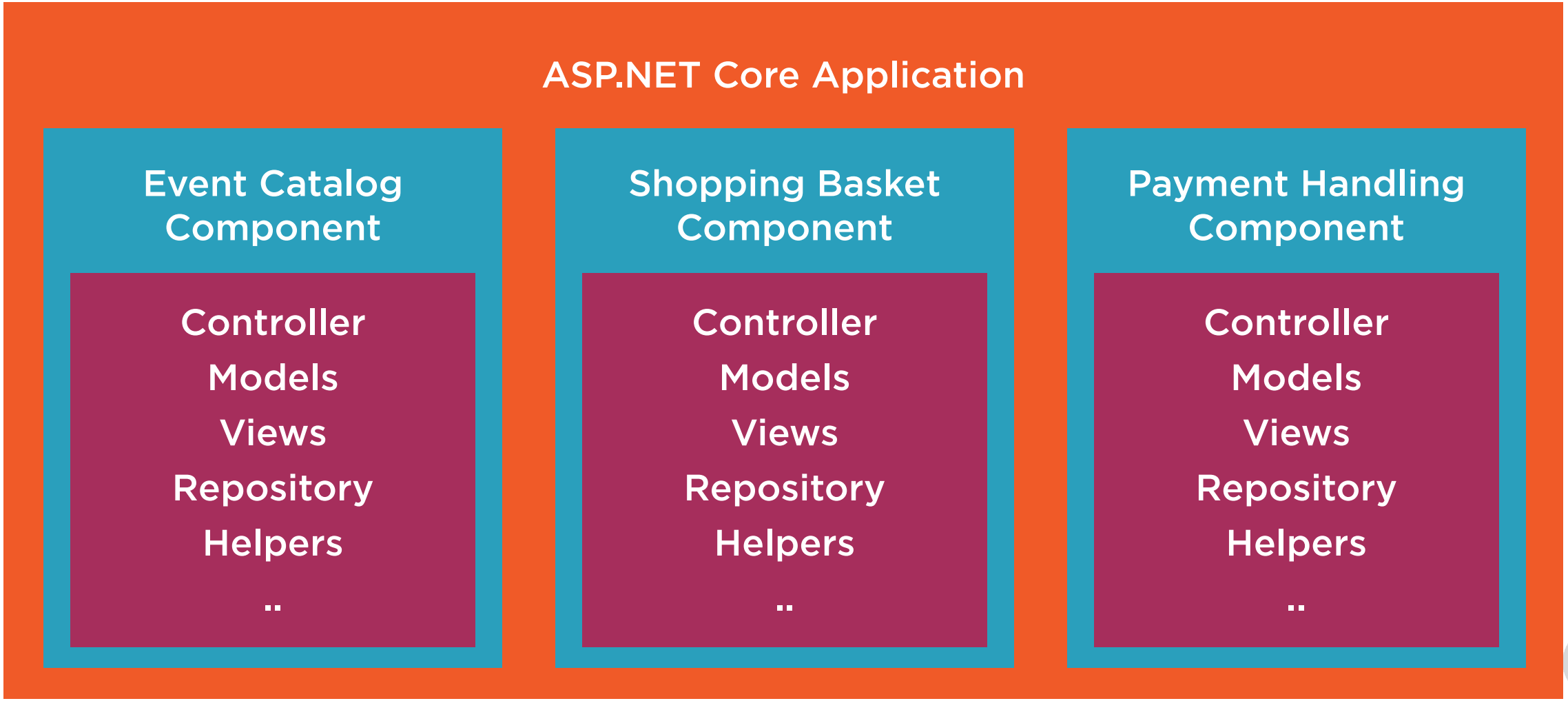
Easy to expand

Reliable

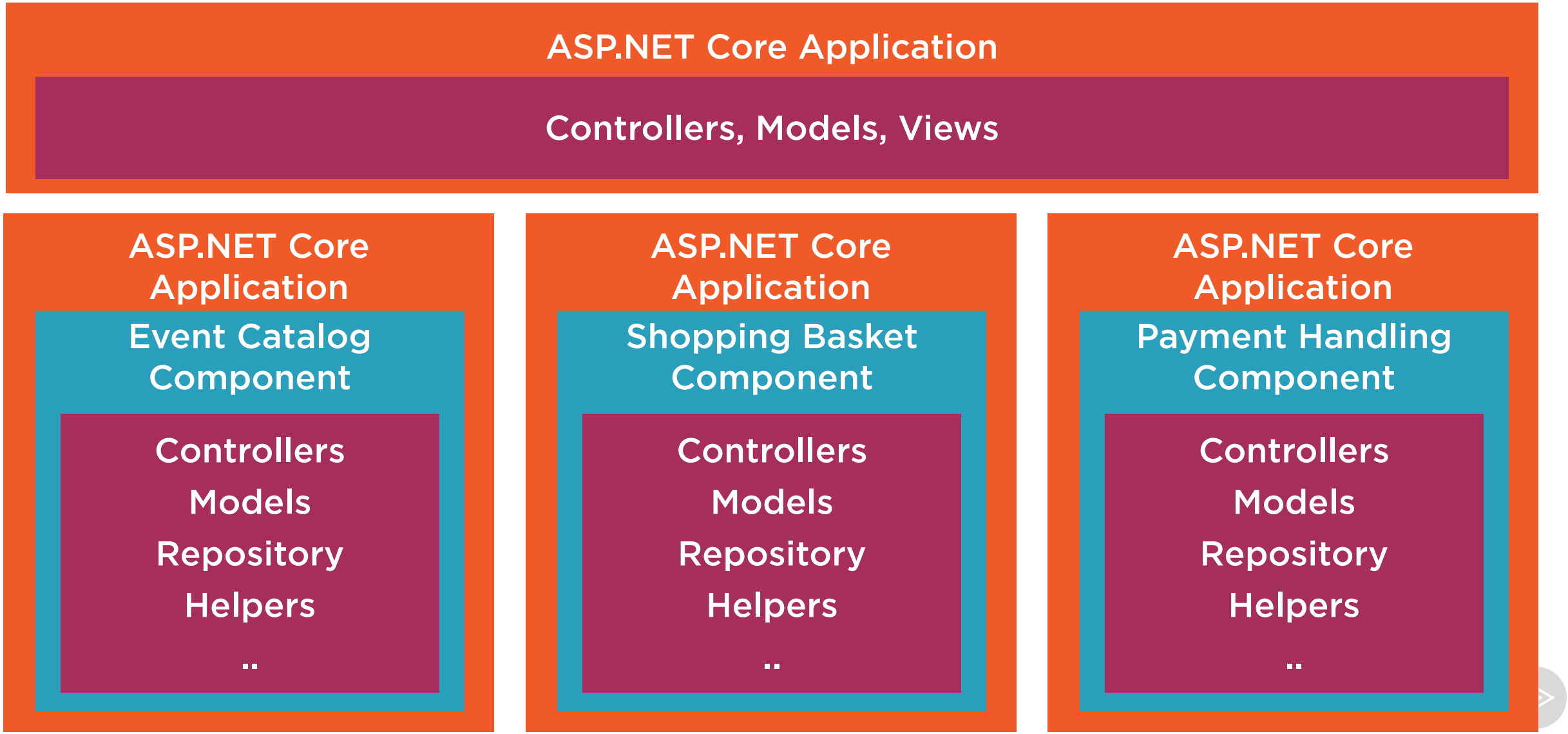
Complete GloboTicket Solution



The Traditional Approach



The Microservices Approach



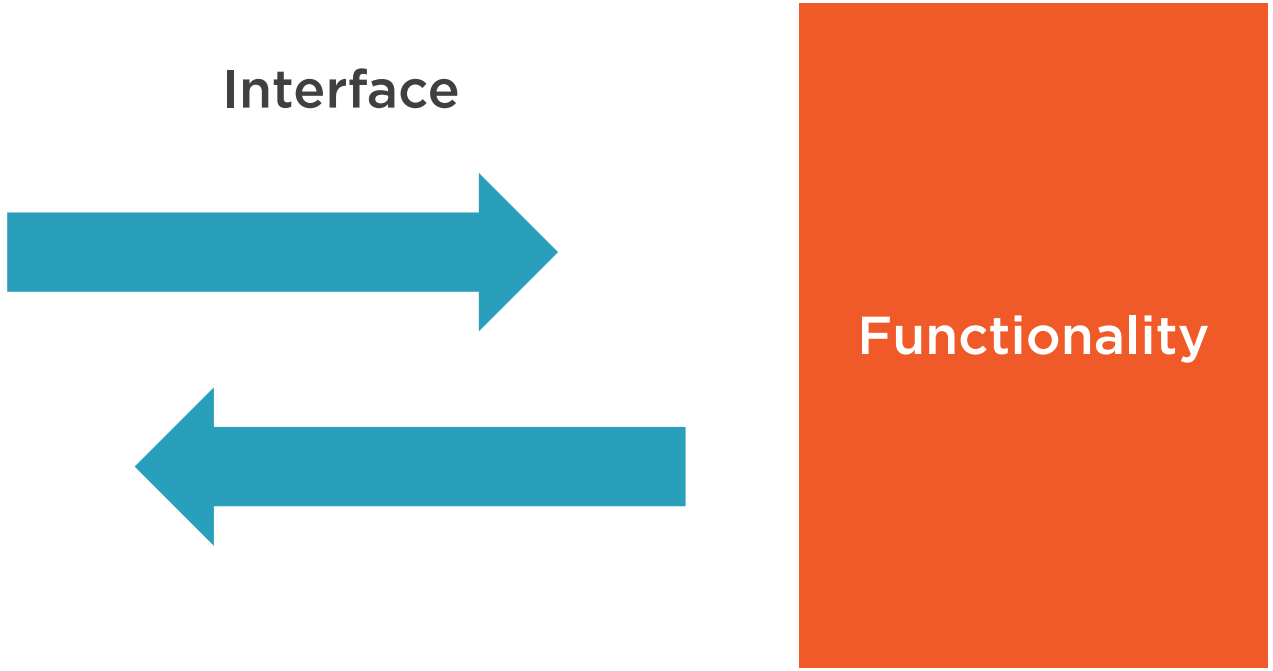
The Microservice Architectural Style

Applications consisting of small services

Each service is independent

Each service performs one distinct task

A Service



Evolving a Microservice

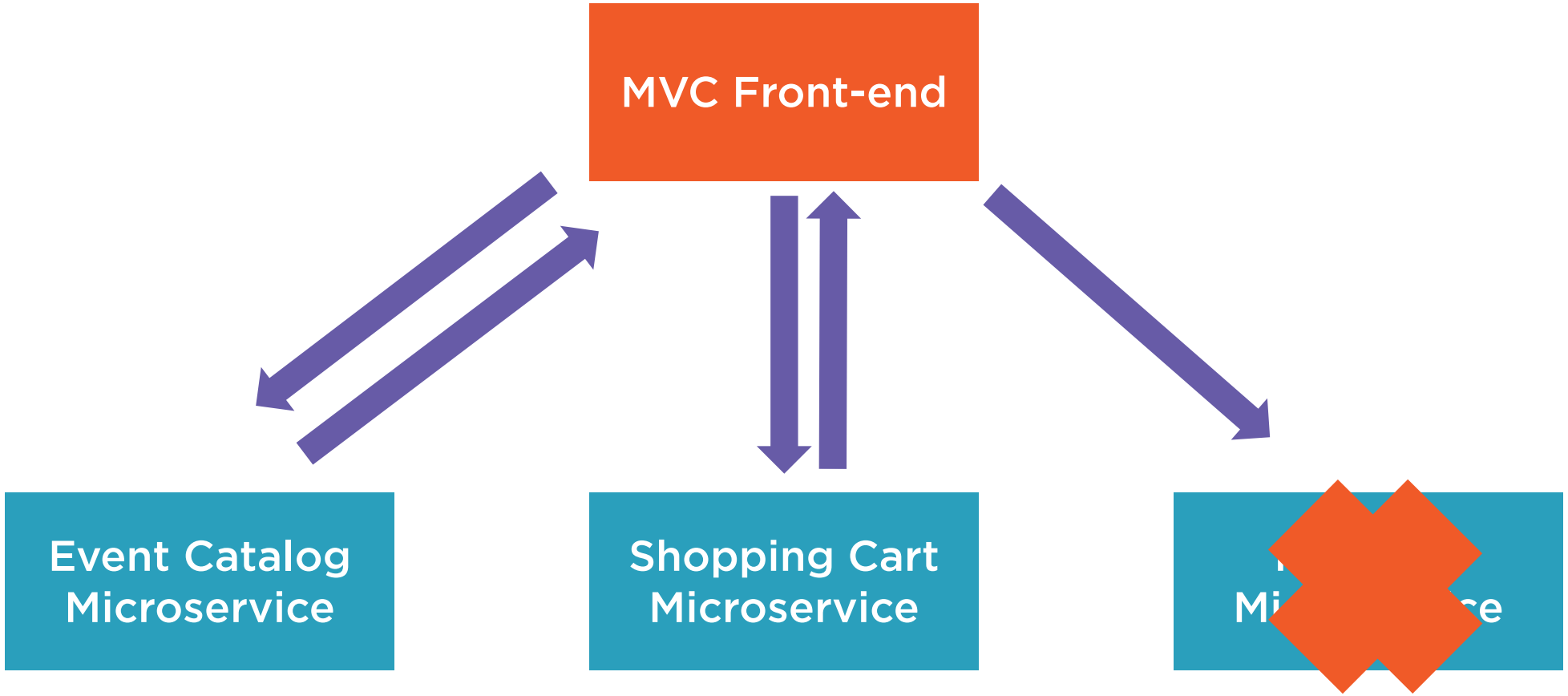
Is it still independent?

Does it still perform one task?

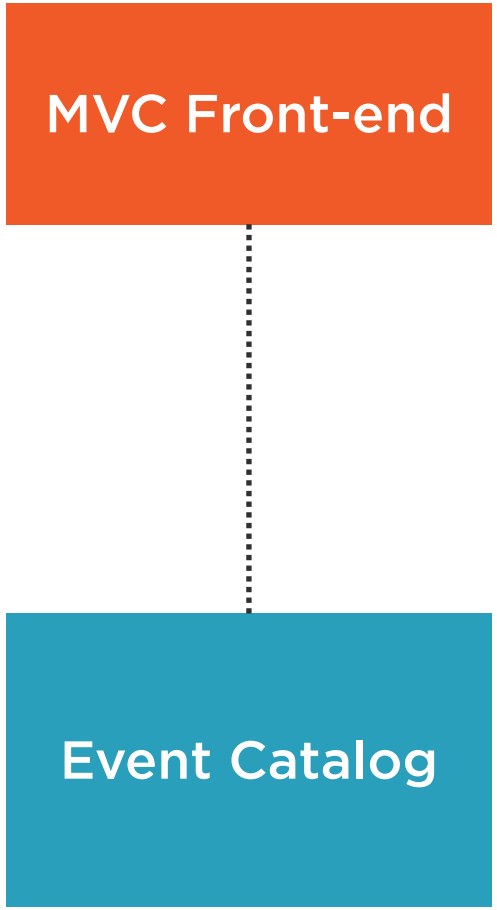
Add a microservice

Refactor architecture

The Problem with Request-Response



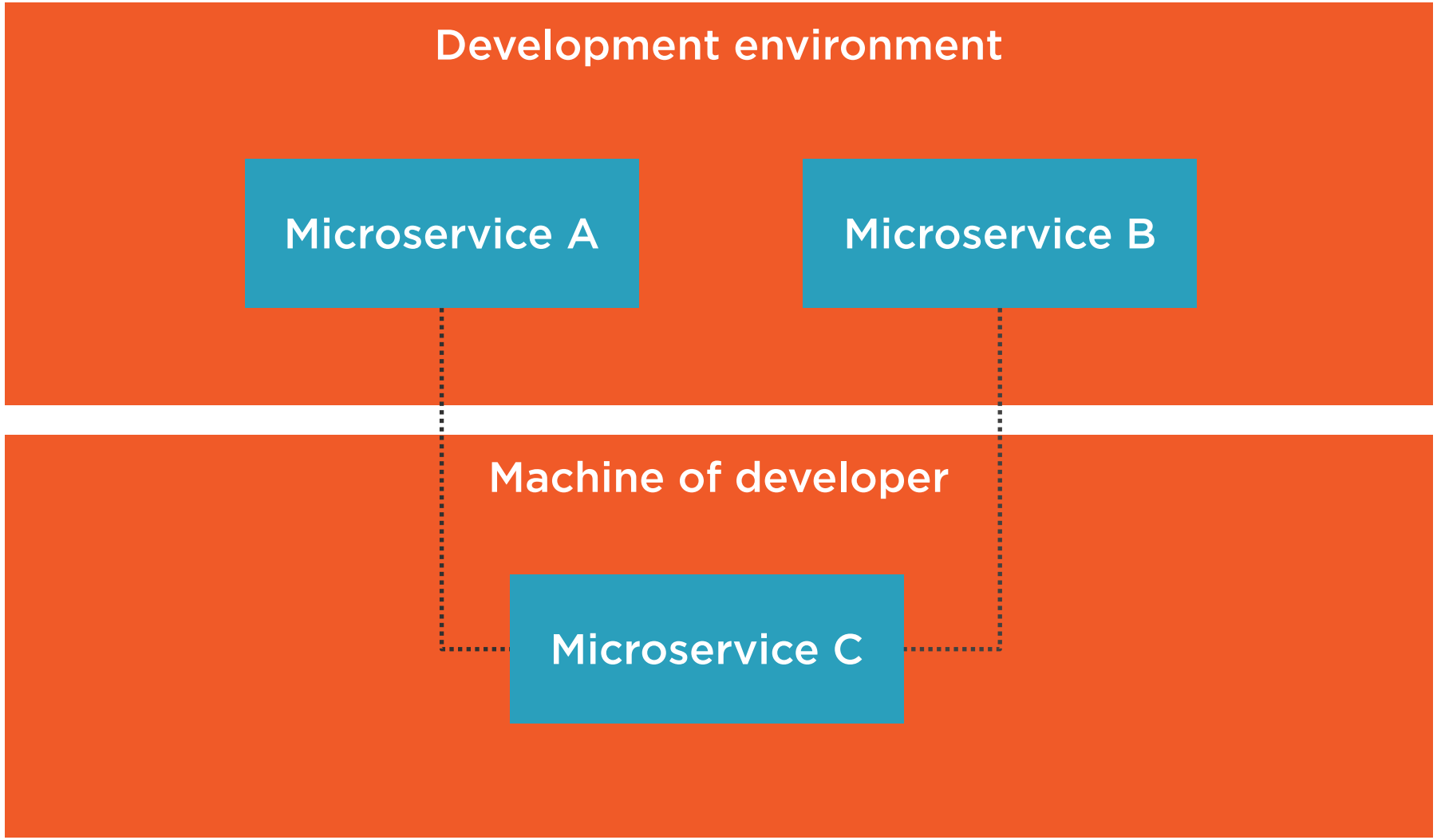
A First Microservice



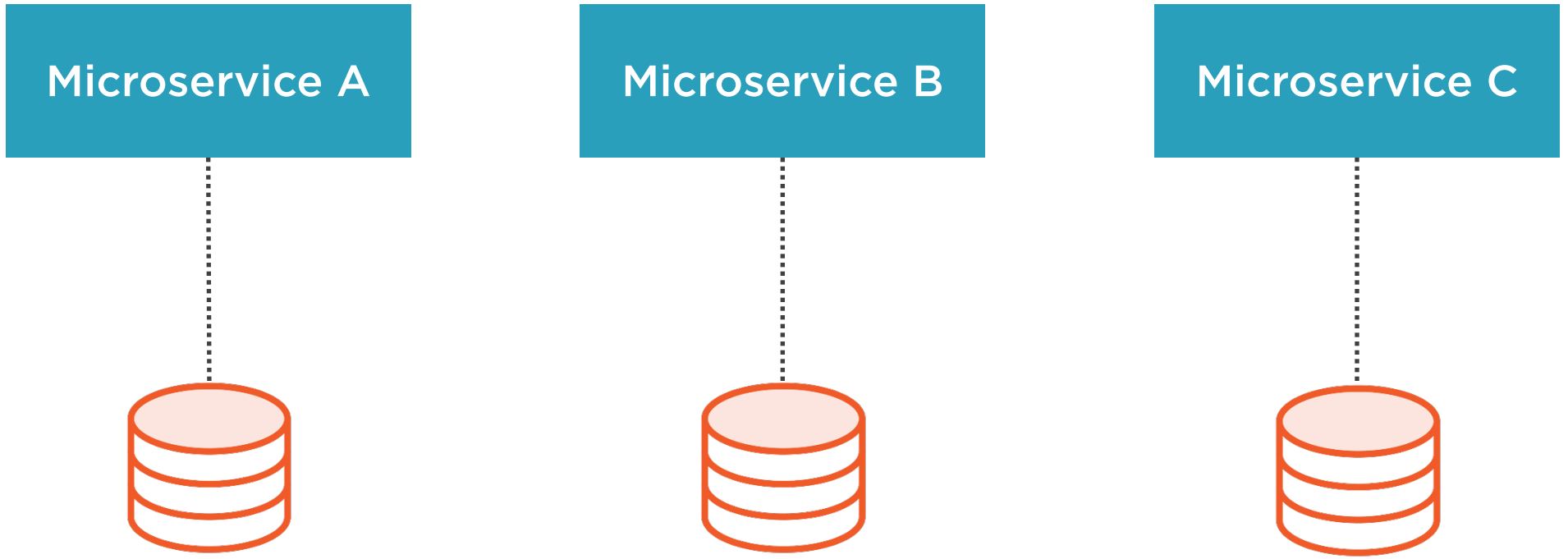
Understanding ASP.NET Core 3.x

https://github.com/
GillCleeren/ps-microservices-path

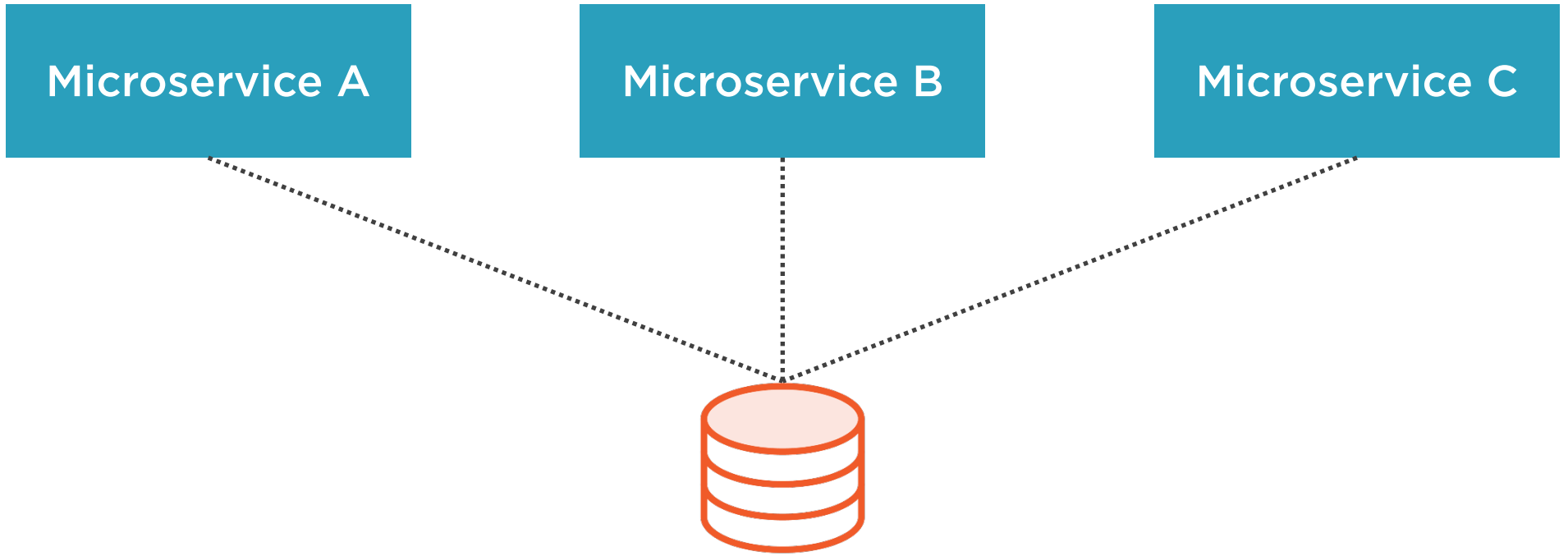
Connecting to Microservices at Development Time



Microservices and Datastores

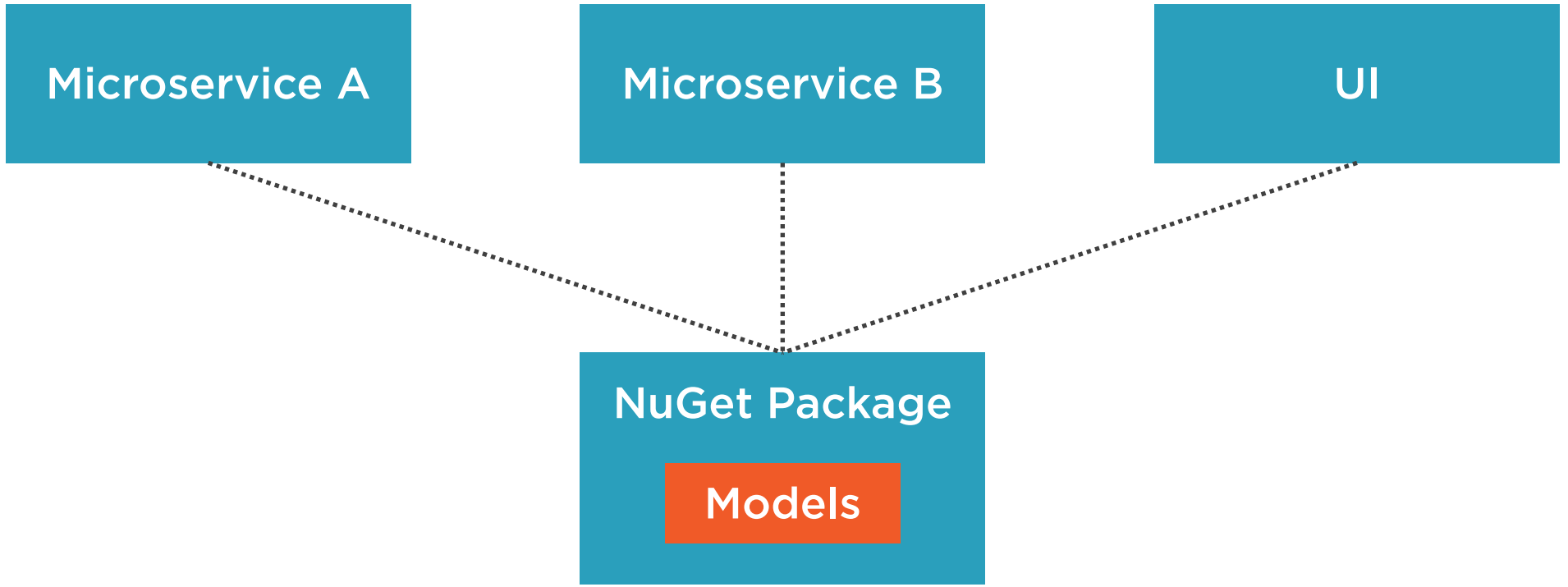


Sharing a Database (Don't Do This)

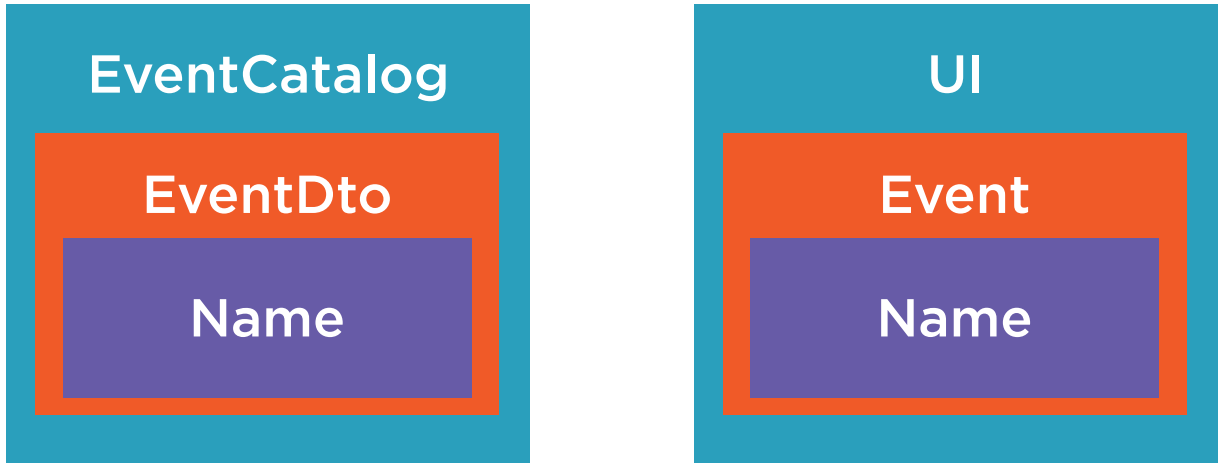


Microservices and Model Classes

Microservices and Model Classes (Don't Do This)



Versioning



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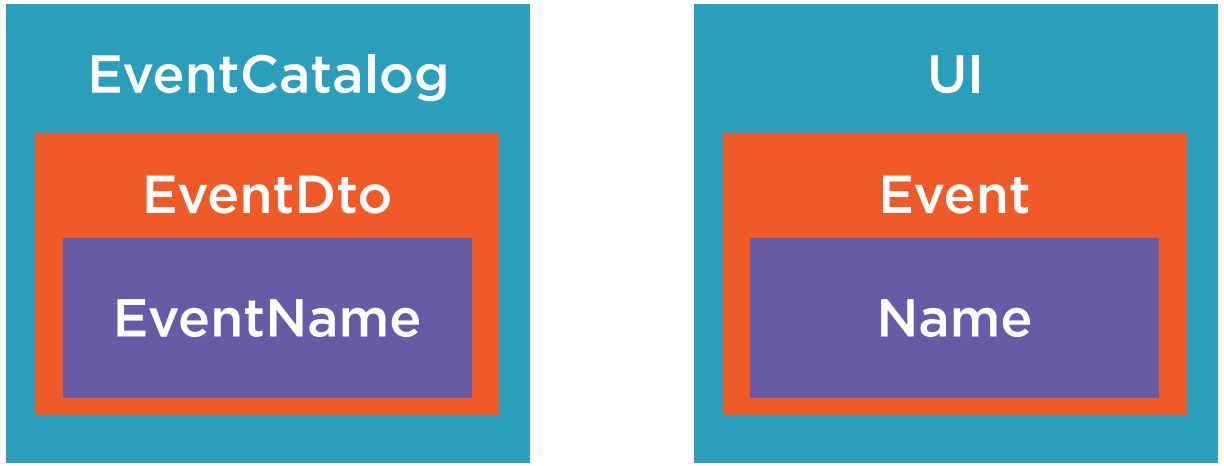

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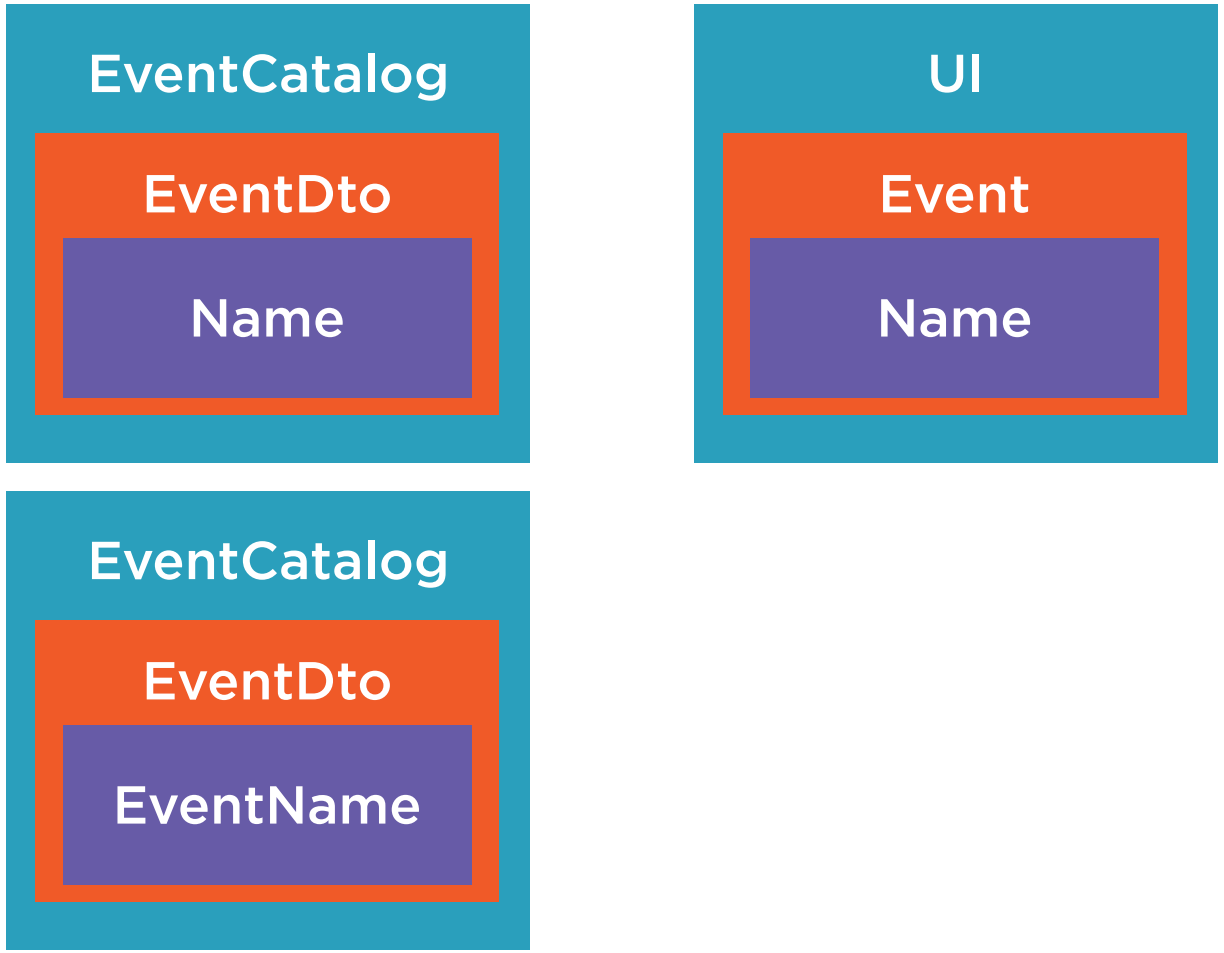
EventCatalog
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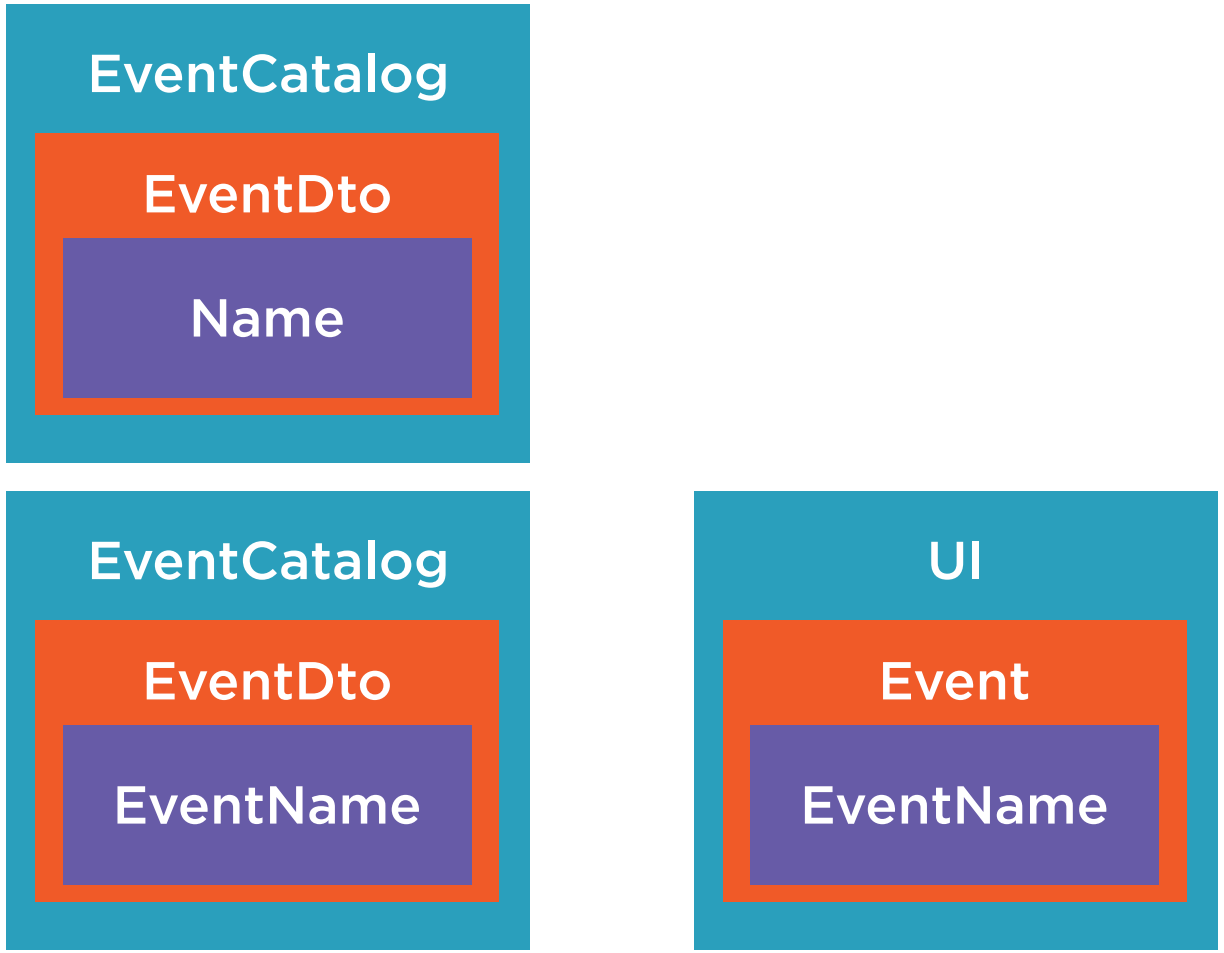
Versioning


EventCatalog
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NSwag

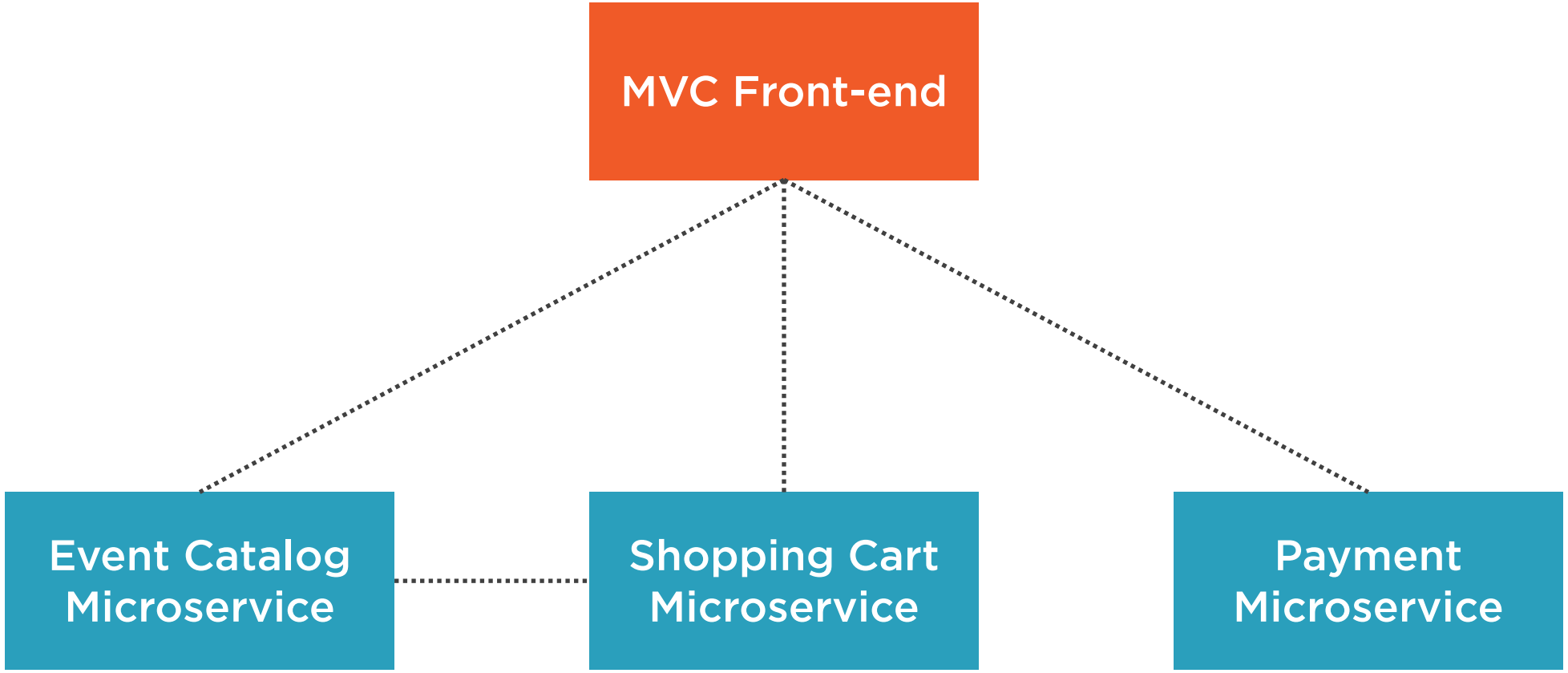
Generating Classes

No direct code sharing

Using an exposed contract

Still a versioning problem

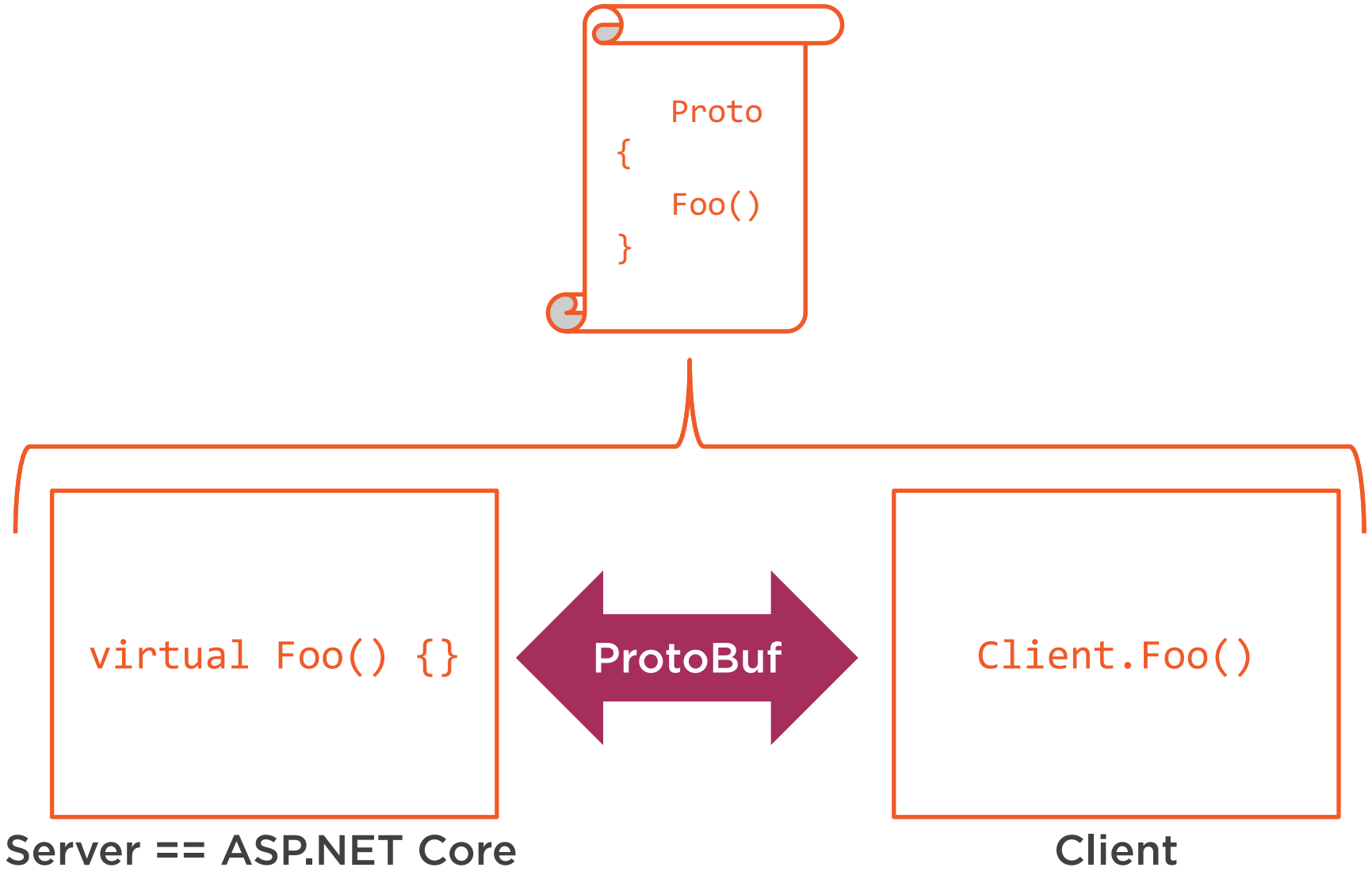
What We're Building



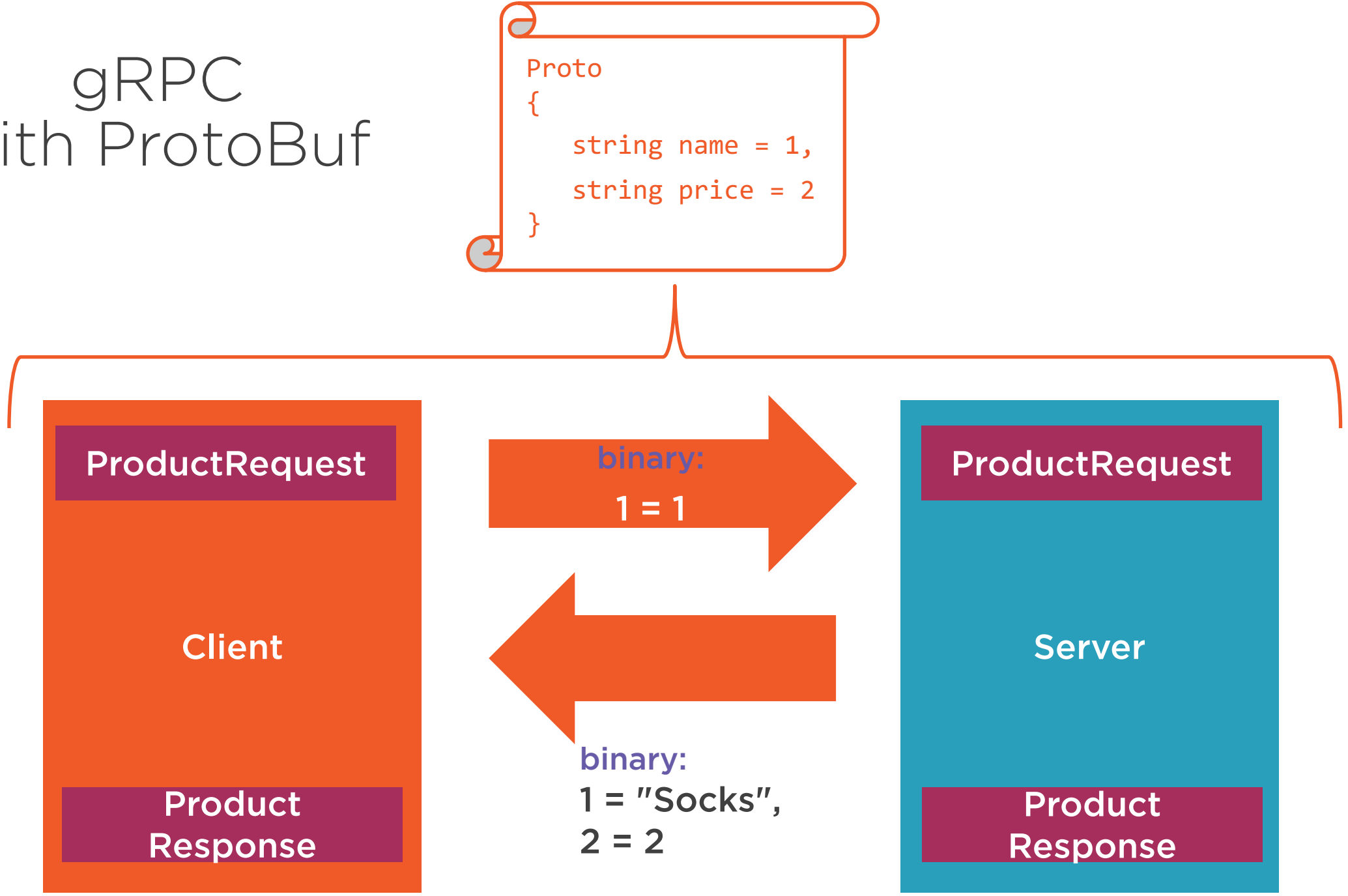
What is gRPC?

- Alternative to REST
- Faster
- Supports streaming
- Call function over the wire
- Behavioral coupling
- Ideal for a microservice environment

gRPC with Protocol Buffers



gRPC with ProtoBuf



Summary

Microservices architecture is a great solution for the GloboTicket business case

A microservice could just be a small API

- but we'll see more types soon

Generating classes could help as an alternative to sharing classes

gRPC and microservices are a match made in heaven