# REST Wrecks Microservices!

Wait, What?

# About Me

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# Goals

Avoid the pit of despair

Think for yourself

# REST Wrecks Microservices!

The Shoulders of Giants

# REST? Microservices?

You keep using those words...

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# REST

https://www.ics.uci.edu/~fielding/pubs/dissertation/rest_arch_style.htm

# You’re probably not doing REST

I disagree that the popular understanding of the term is different. What is different is the desire of certain companies, authors, and speakers to say REST when they know it is just HTTP; not because they don't know the meaning of the term, but because $$$ >> meaning.

Roy Fielding

https://twitter.com/fielding/status/1108092713516163072

# Roy on REST

I am getting frustrated by the number of people calling any HTTP-based interface a REST API. Today's example is {redacted}. That is RPC. It screams RPC. There is so much coupling on display that it should be given an X rating… [I]f the engine of application state (and hence the API) is not being driven by hypertext, then it cannot be RESTful and cannot be a REST API.

Roy Fielding

https://roy.gbiv.com/untangled/2008/rest-apis-must-be-hypertext-driven

# HATEOAS

Hypermedia as the Engine of Application State

https://en.wikipedia.org/wiki/HATEOAS

With HATEOAS, a client interacts with a network application whose application servers provide information dynamically through hypermedia. A REST client needs little to no prior knowledge about how to interact with an application or server beyond a generic understanding of hypermedia.

The restrictions imposed by HATEOAS decouple client and server. This enables server functionality to evolve independently.

# Chasing REST

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# To REST or not to REST...

Should you REST?

Should you worry about whether you’re doing REST or not?

What really matters?

# Microservices

# Microservices

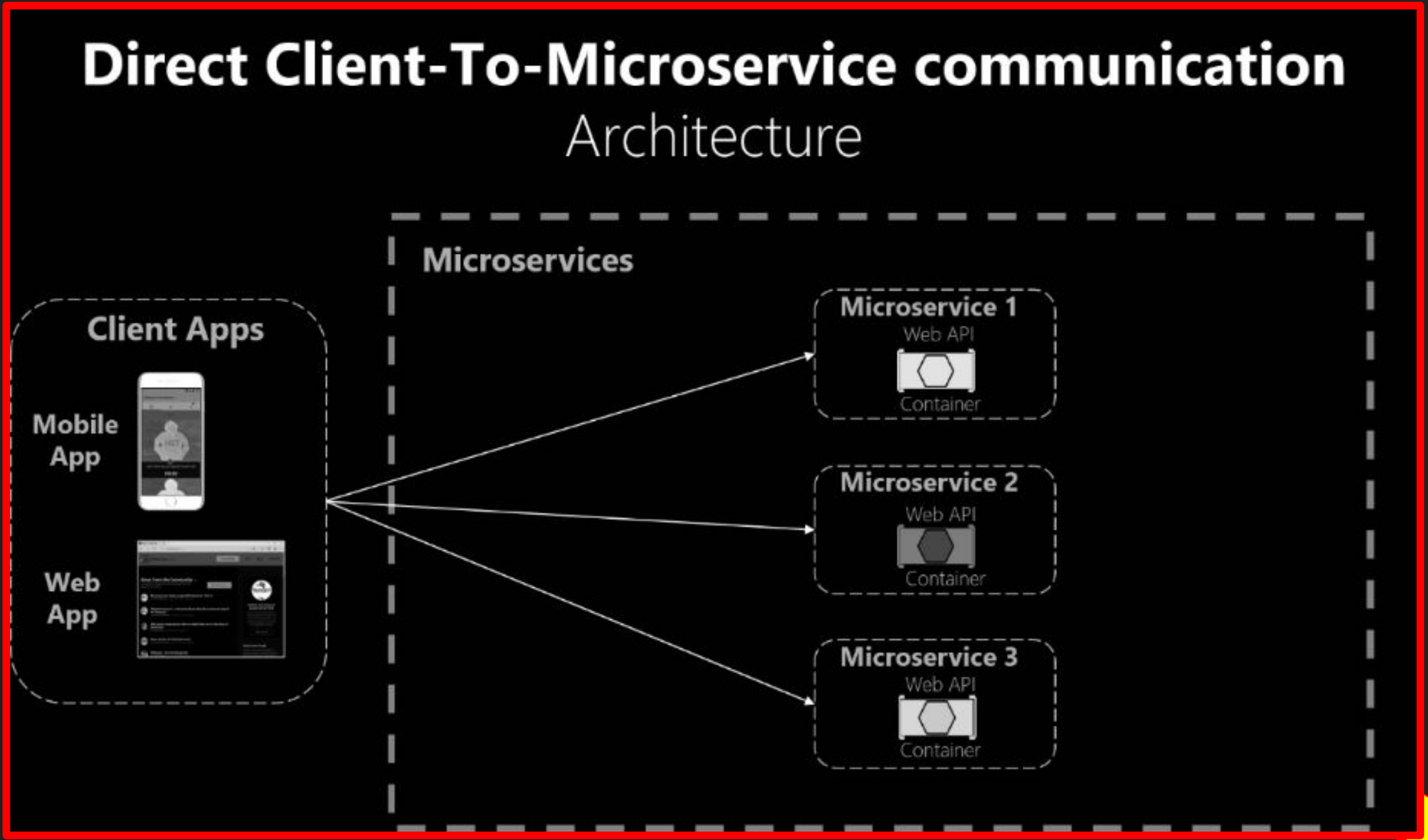
2005 - Peter Rodgers - “Micro-Web Services”

2007 - Juval Löwy - “Every class a service”

> I never called these services “microservices.” Then, as now, I did not think the microservices concept existed. There are no microservices—only services.
>
> Juval Löwy, *Righting Software*
>
> *rightingsoftware.org*

20?? - Michael “Monty” Montgomery - “Ten Fallacies of Microservices”

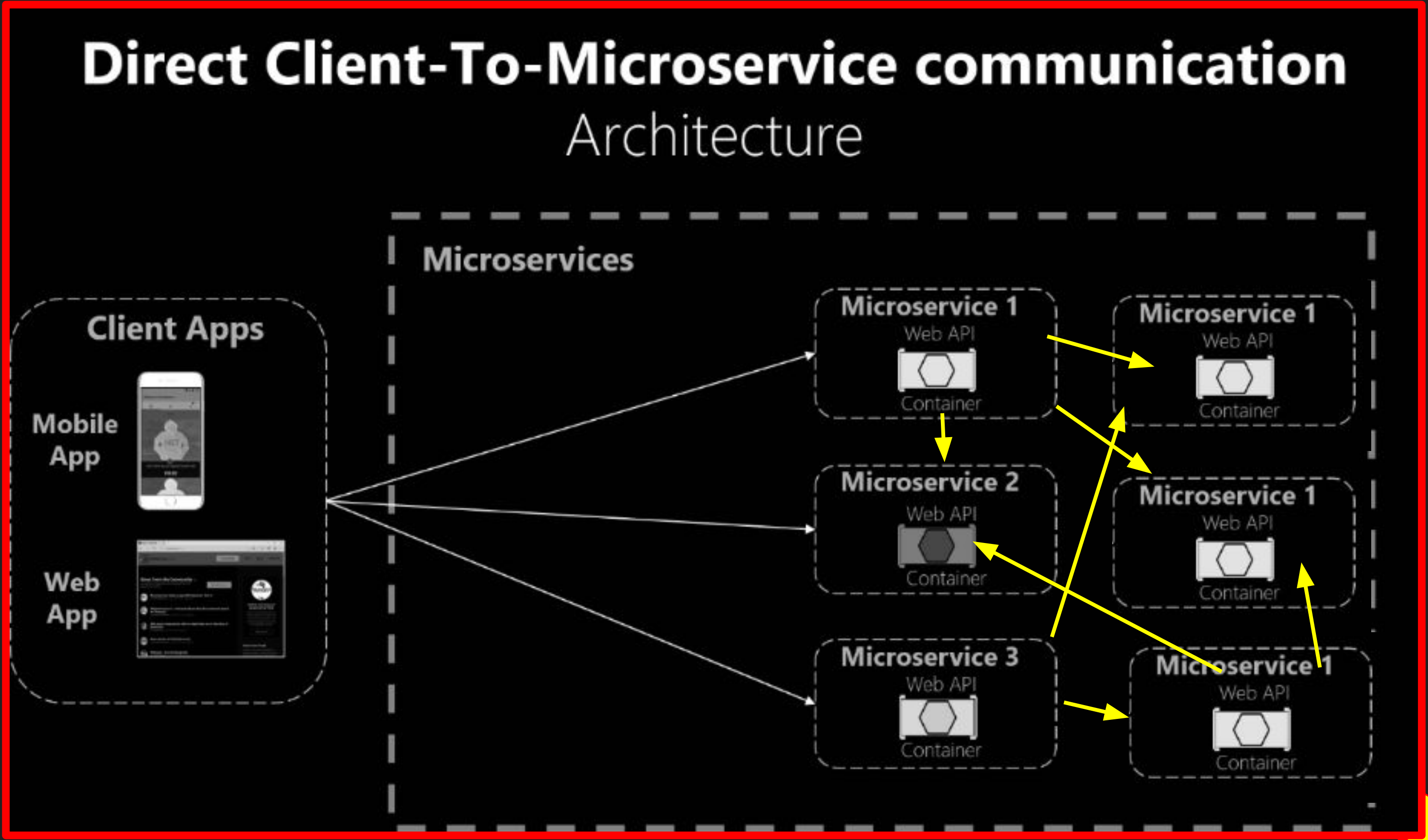
https://en.wikipedia.org/wiki/Microservices#History



# Direct Client-To-Microservice communication

Architecture

https://docs.microsoft.com/en-us/dotnet/architecture/microservices/architect-microservice-container-applications/direct-client-to-microservice-communication-versus-the-api-gateway-pattern

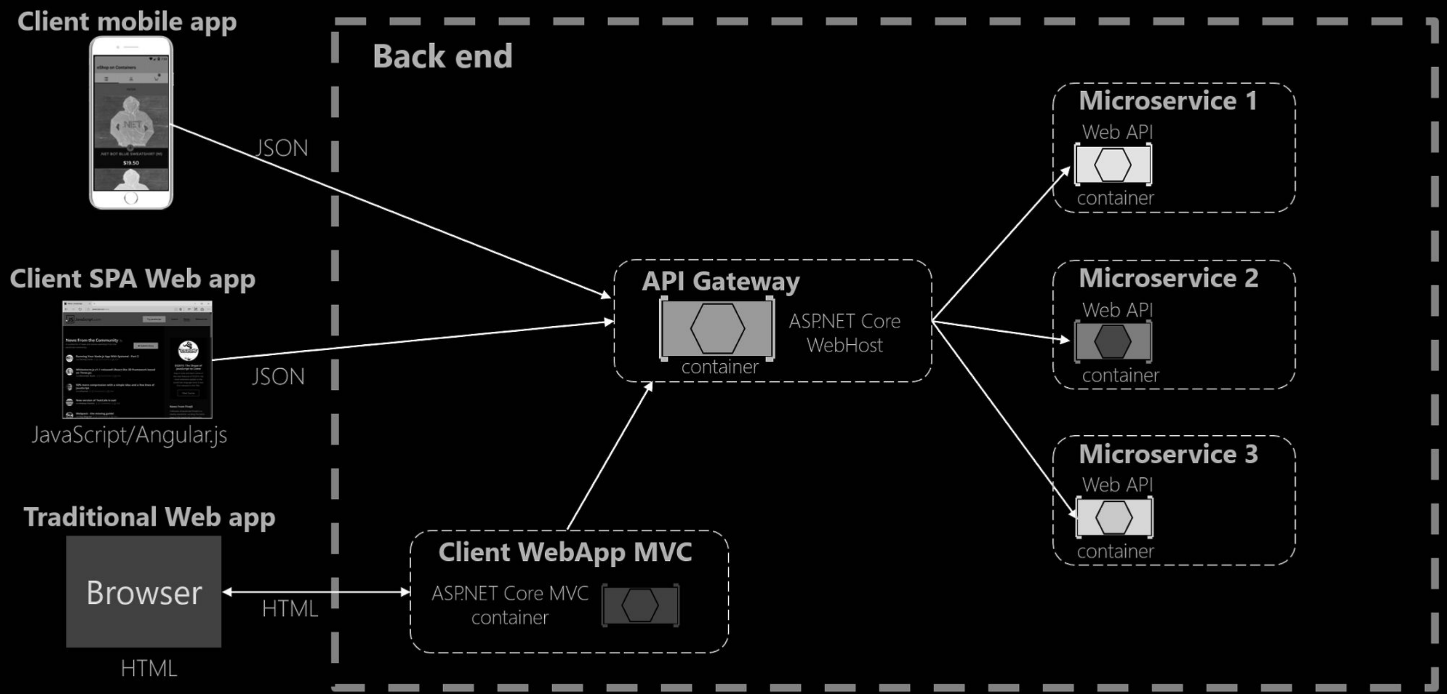


# Direct Client-To-Microservice communication

Architecture

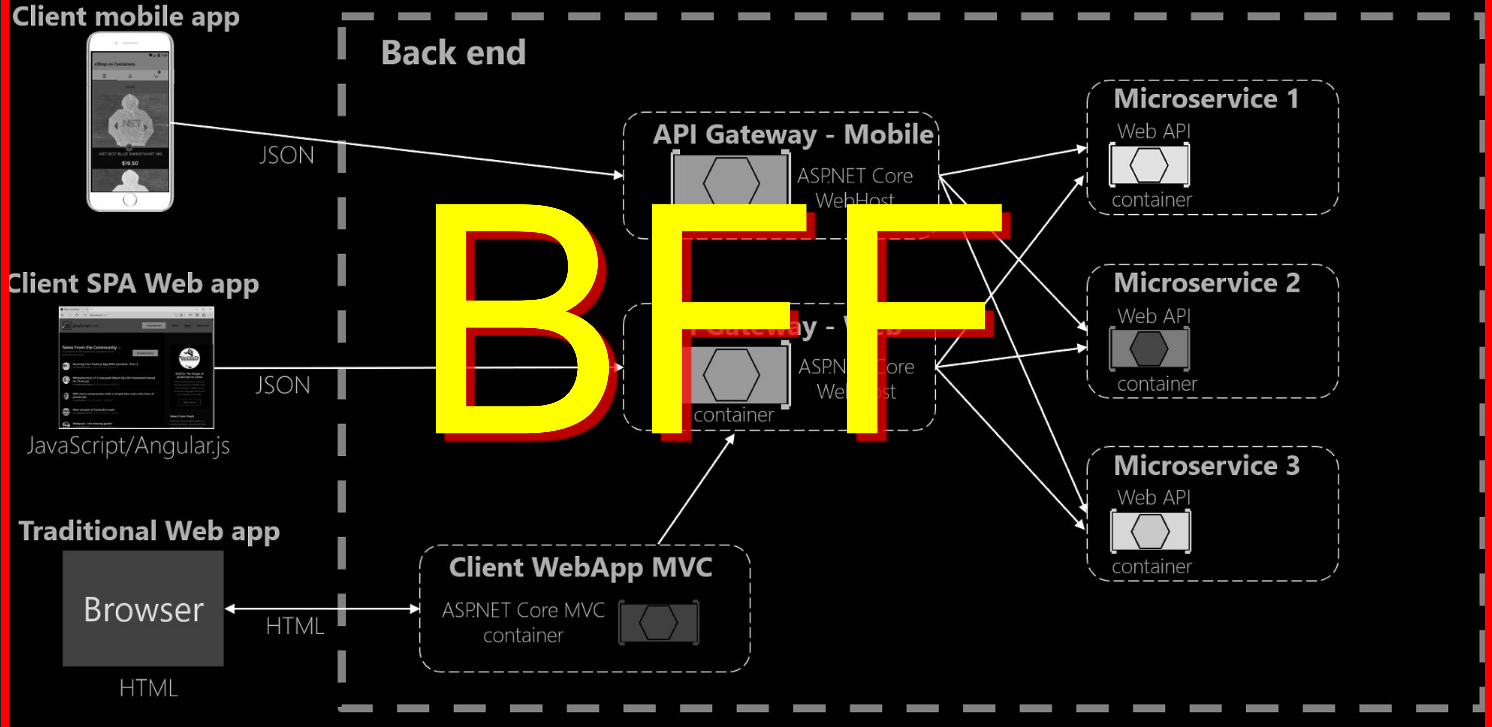
https://docs.microsoft.com/en-us/dotnet/architecture/microservices/architect-microservice-container-applications/direct-client-to-microservice-communication-versus-the-api-gateway-pattern

# Using a single custom **API Gateway service**



https://docs.microsoft.com/en-us/dotnet/architecture/microservices/architect-microservice-container-applications/direct-client-to-microservice-communication-versus-the-api-gateway-pattern

# Using multiple **API Gateways / BFF**



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Questions?

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