

# Verifying microservices in chains without chain testing?

**Pascal Dufour**  
pascal@agilix.nl  
@pascal\_dufour

# Pascal Dufour



# Consumer Driven Contracts

What do you know.

1 minute

## The plan for this “talk”

### Basics

A) Statement 1: Discuss 2 minute with your neighbor

B) Statement 1: Discus 3 minute with a pair of neighbors

C) Vote as a group

Repeat with statement 2

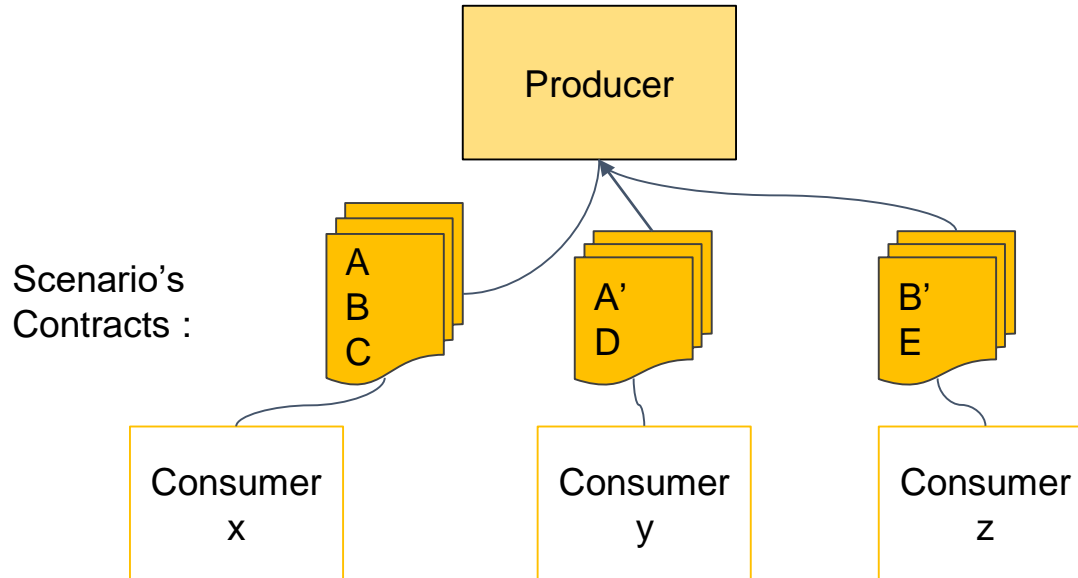
Repeat with statement 3

Repeat with statement 4

### Debrief &Take aways



# The Idea?



# Definitions

- Consumer Driven Contracts is a pattern that drives the development of the Producer from its Consumers point of view.
- Producer  
Service that exposes an API / Sends an message
- Consumer  
Service that consumes the the API of the producer /Send a request
- Contract  
Agreement between consumer and producer what the API / message will look like.

# Which problems solves CDC

- Late feedback from a changing API.
- Producer design not fitting the expectation by consumers
- Unclear expectation of the behavior of the API



# Chain testing reality

## Positive

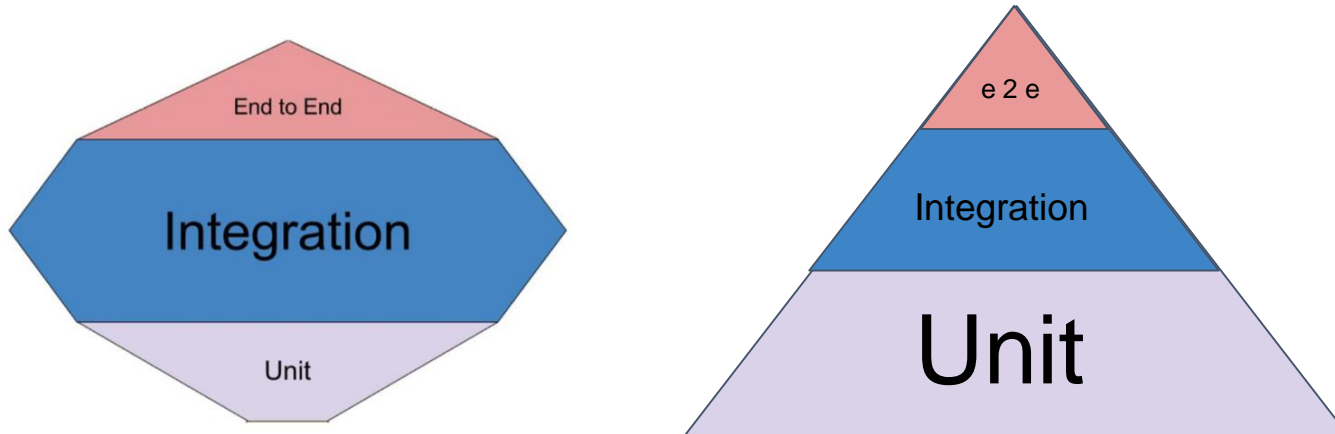
- The real thing
- Visual tests
- Business test
- Realistic simulations
- Connected to all external systems
- "All" user test are possible

## Negative

- Test data (hell)
- Never in sync (configuration)
- Long run time
- Difficult to debug
- Late feedback
- Too many dependencies
- Operation costs
- False sense of security

# Microservices

Is there for microservices a different test strategy?





CDC is only useful for  
testing the syntax  
max fieldlength, only  
numeric,  
optional/mandatory

# Relations between dependent fields should be tested!

When Tax amount is specified,  
Tax % might be required

A CDC-test should  
always break when a  
contract is changed!

Every response status has  
a corresponding test!

A 404 (object not found)

# Debrief

- Consumer Driven Contracts is a pattern that drives the development of the Producer from its Consumers point of view.
- Force communication
- Formal
- Documentation
- Fast feedback during development



# Take aways

- Consumer Driven Contracts is a pattern that drives the development of the Producer from its Consumers point of view.
- Force communication
- Fast feedback to the developer.
- Producer design seen as black box (design should be tested by producer it self)
- Data format like an IBAN number should be tested.
- Contract should be extendable (adding additional fields by the producer should be possible.)
- Stubs needed for the contract are useful elsewhere
- The principle of CDC can be used outside micro services.

# Thank you

All slides can be download at  
<http://Agilix.nl/>

# Links

- Martin Fowler [Consumer-Driven Contracts: A Service Evolution Pattern](#)
- Marcin Grzejszczak [consumer driven contract](#)
- Spotify: [Testing of Microservices](#)

Special thanks to