



Contract Driven Development

DEPLOYING YOUR MICROSERVICES INDEPENDENTLY WITHOUT
INTEGRATION TESTING

Hari Krishnan

Consultant and Coach

Cloud Transformation

Extreme Programming

Agile and Lean



Context

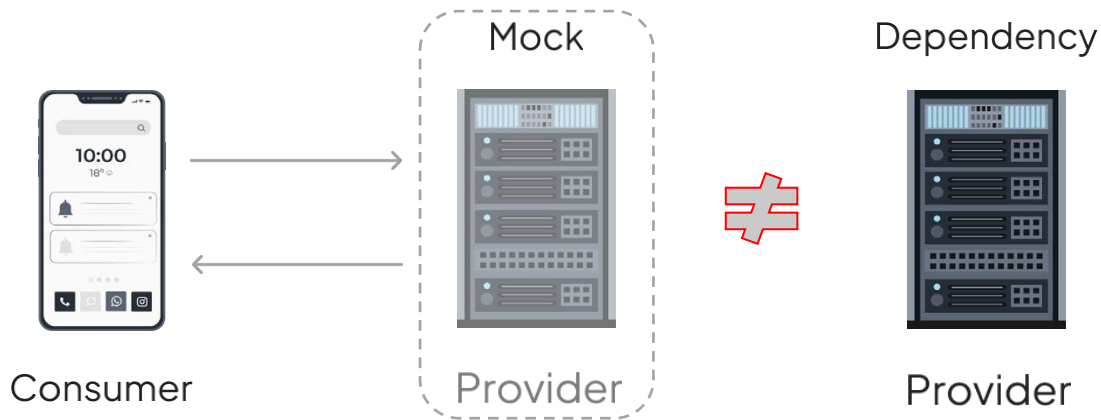
Why Contract Driven Development?

#CDD

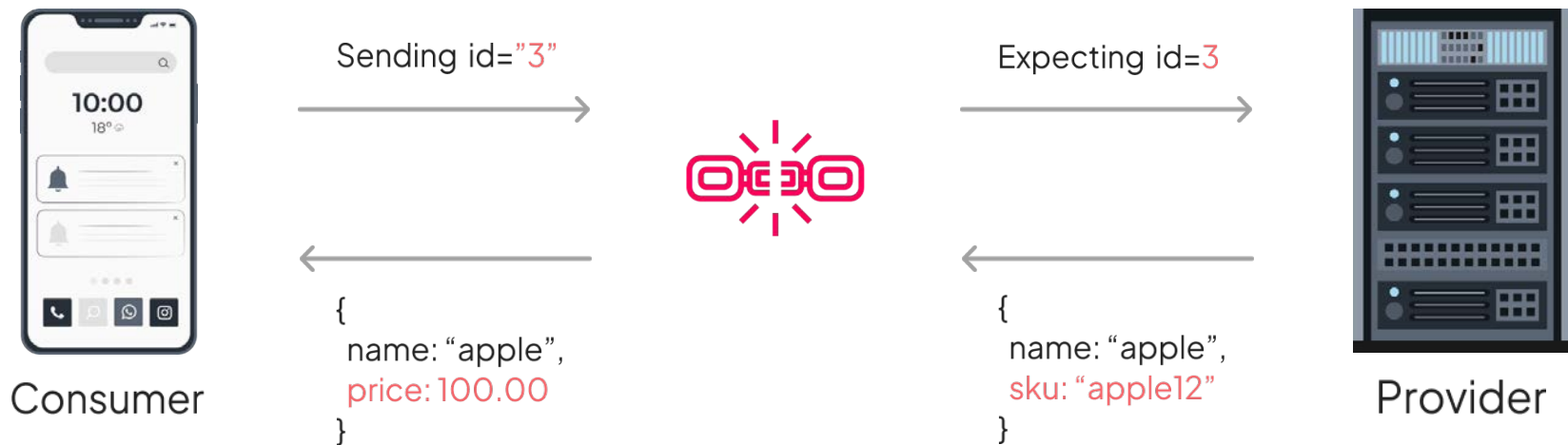
Context



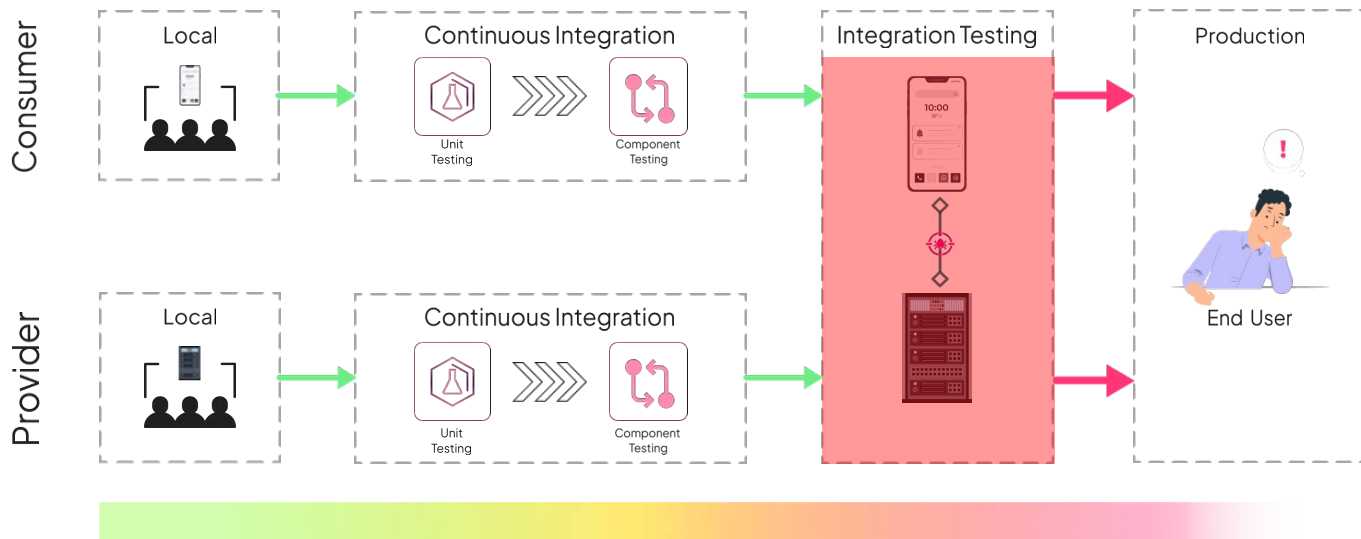
Building the consumer



Broken Integration



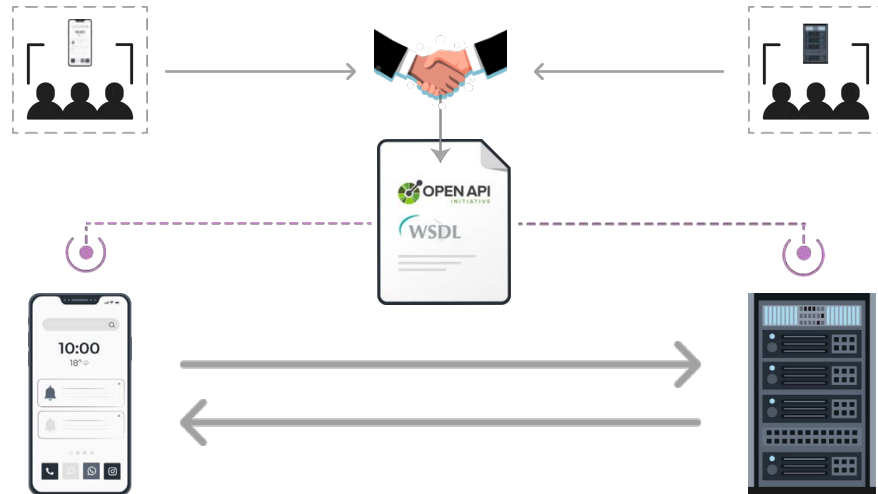
Where do you find such issues?



Shift-Left

Identify compatibility issues without integration testing

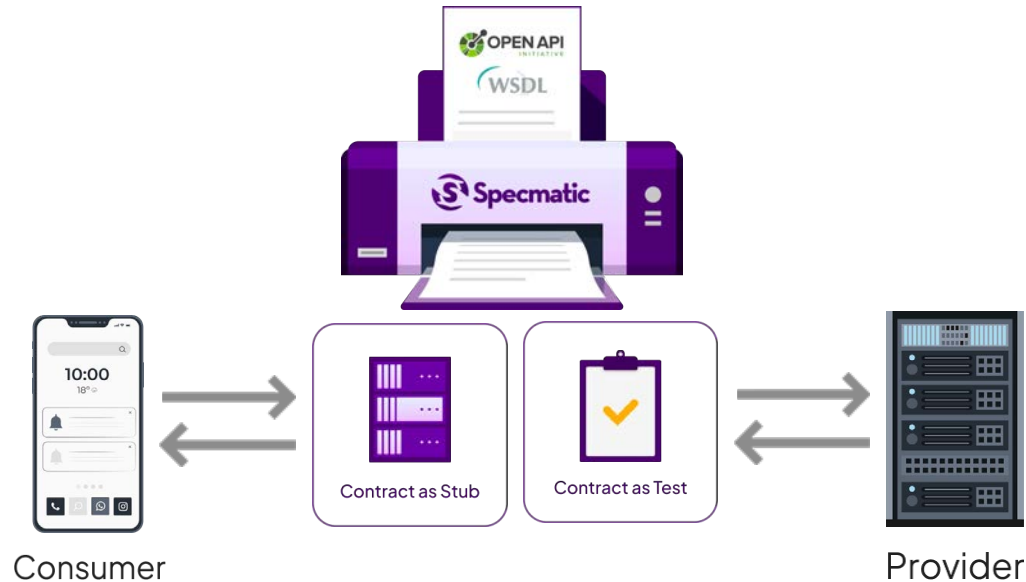
API Specifications



Executable Contracts

Enforcing API Specifications

API Specifications as Executable Contracts



Provider Side Story

Contract as Tests

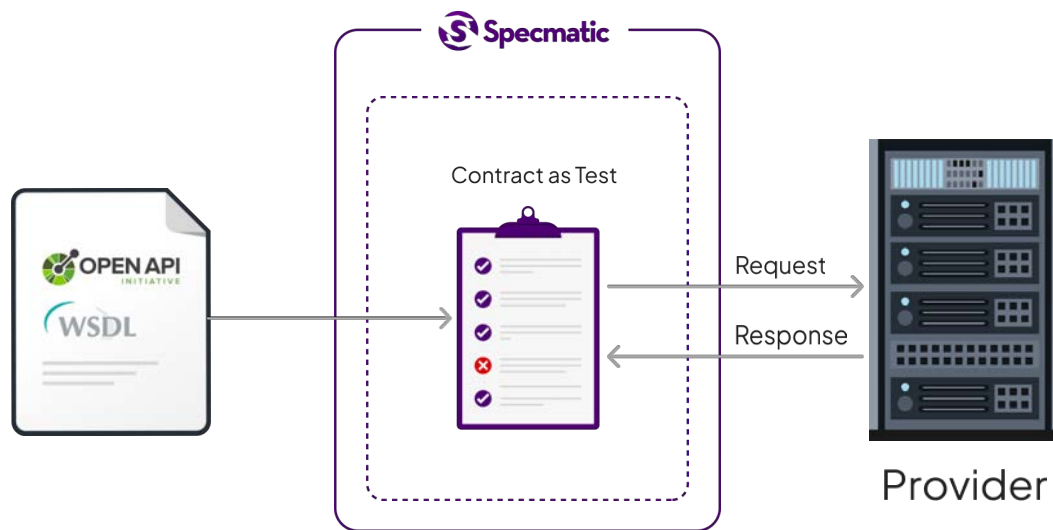
#TESTS-FOR-FREE

Building the provider

API Specification

Test

System Under Test

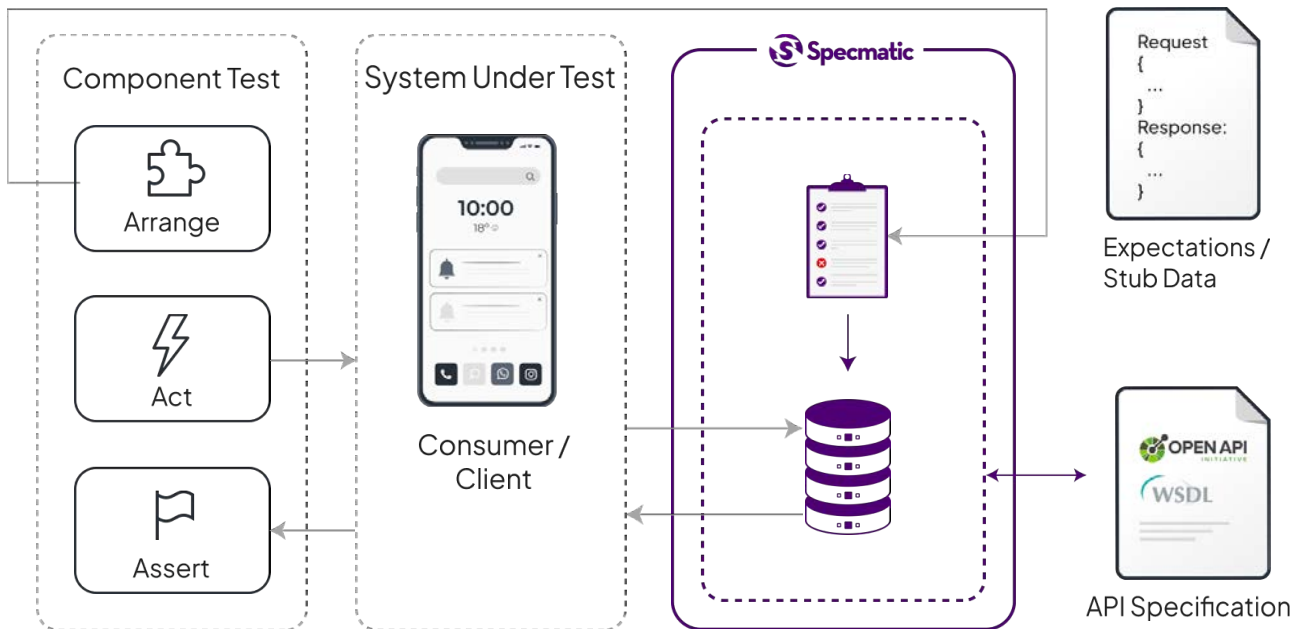


Consumer Side Story

Emulating the Provider

#SMART-MOCKS

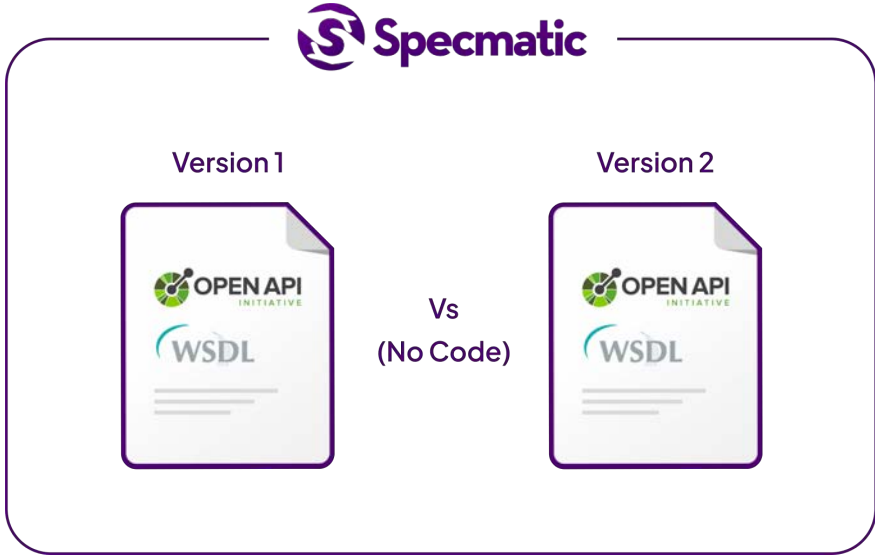
Anatomy of a Component Test



Backward Compatibility

Contract vs Contract

Contract vs Contract



Contract vs Contract

Live Demo

POP-QUIZ

Which of these changes are backward compatible?

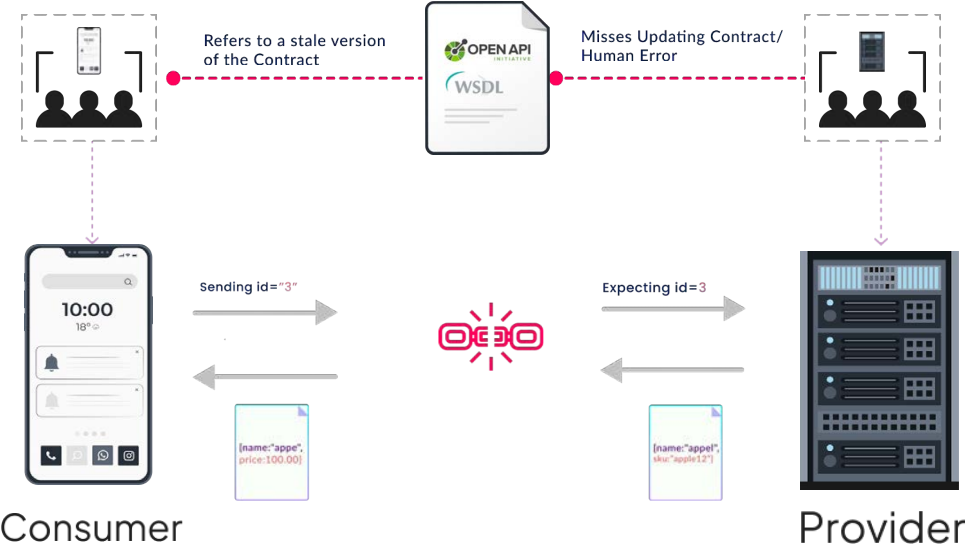
- In Request – Add a mandatory / required field
- In Request – Change Optional Nullable field to Optional Non-Nullable
- What if I change a schema component that is referenced
 - in request and response?
 - at various levels of hierarchy as part of other schema components
 - across multiple specification files (remote references)

Central Contract Repo

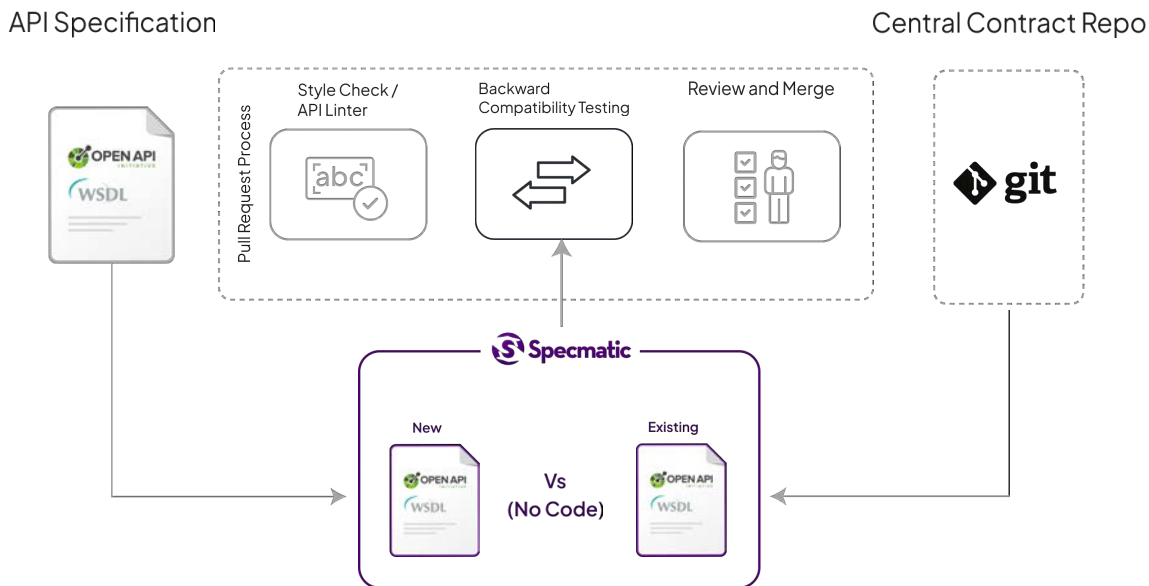
Are we on the same page?

#TREAT-CONTRACT-AS-CODE

Single source of truth



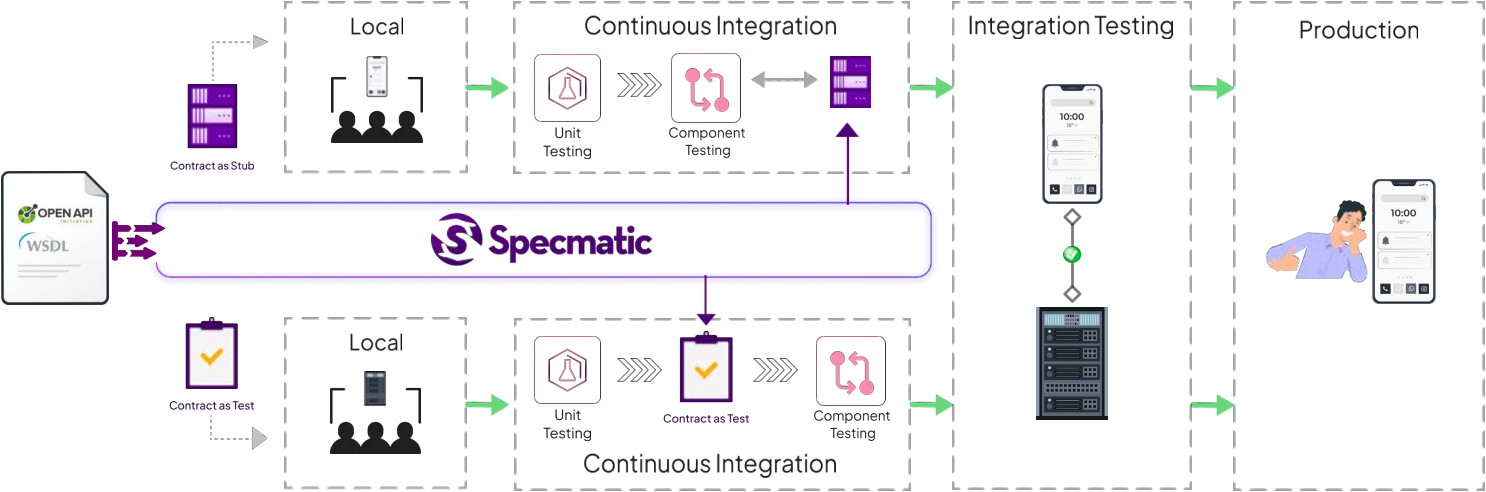
Central Contract Repo



Embracing CDD

Contract Driven Development and
CI Pipelines

Shift Left and kill Integration Tests



Q and A

<https://specmatic.in/>

Thank You!

@harikrishnan83

<https://specmatic.in>