สยามชำนาญกิจ
SIAM CHAMNAN KIT

# Contract Testing with Pact

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# Topics

Problem ?
Contract testing
What is Pact ?
Workshop with NodeJS and Go

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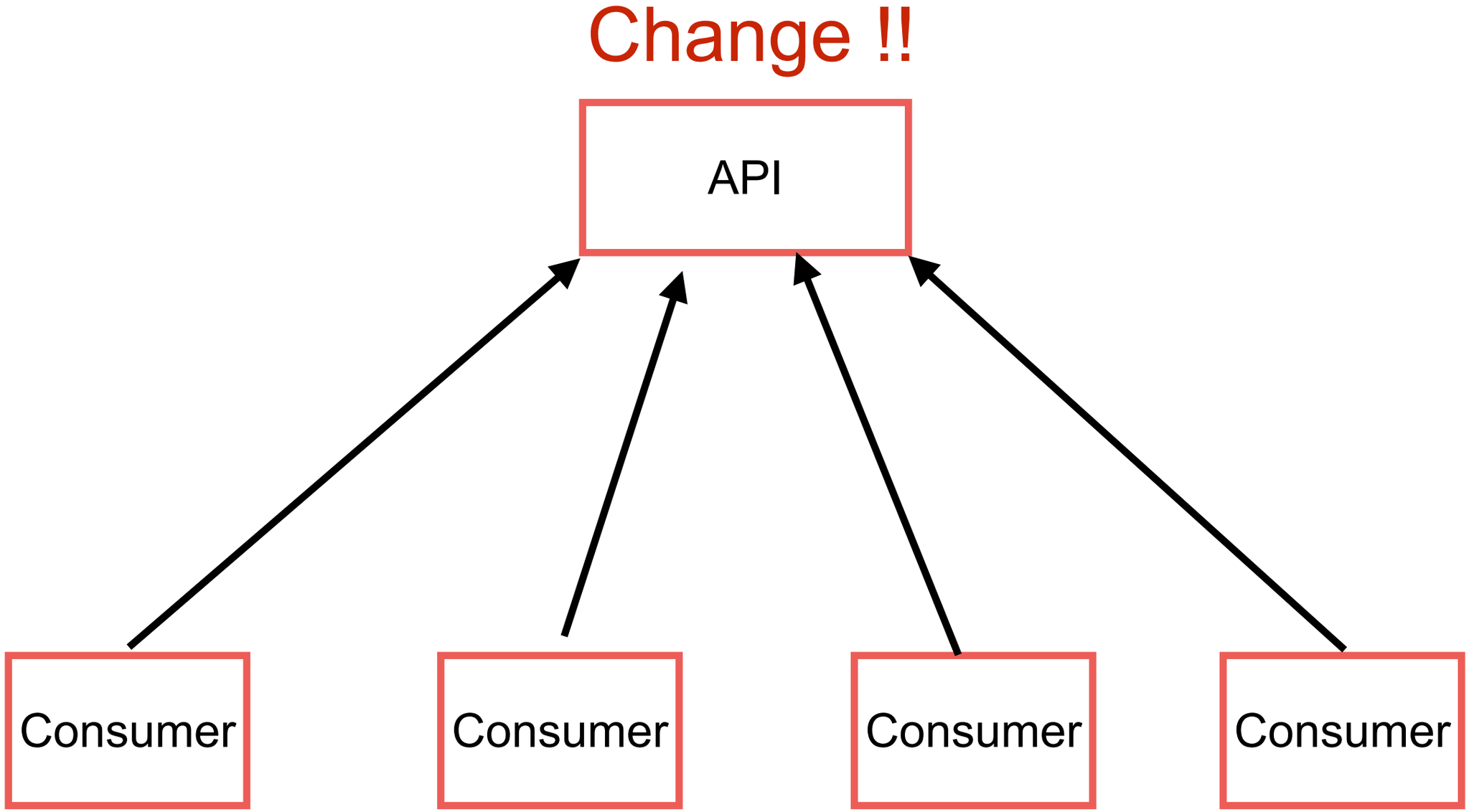
# Problem ?





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# Ensure API compatibility

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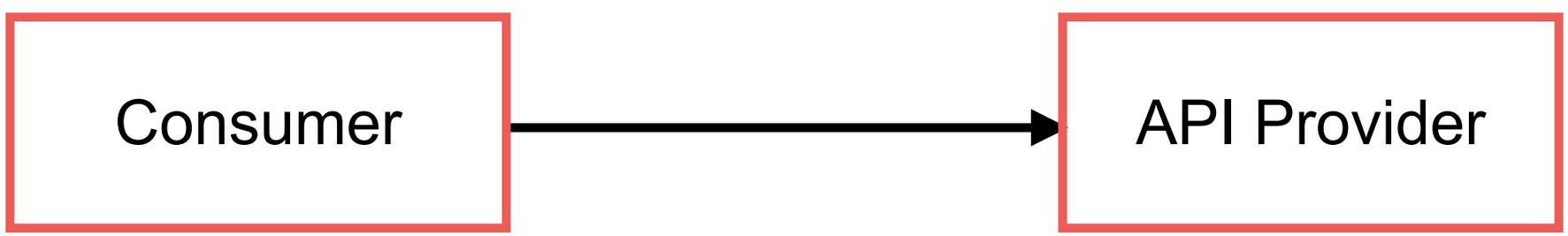
# Integration test

High confidence to release





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# Problems of integration test

Control Dependency !!
Slow feedback
Break easily
A lots of maintenance

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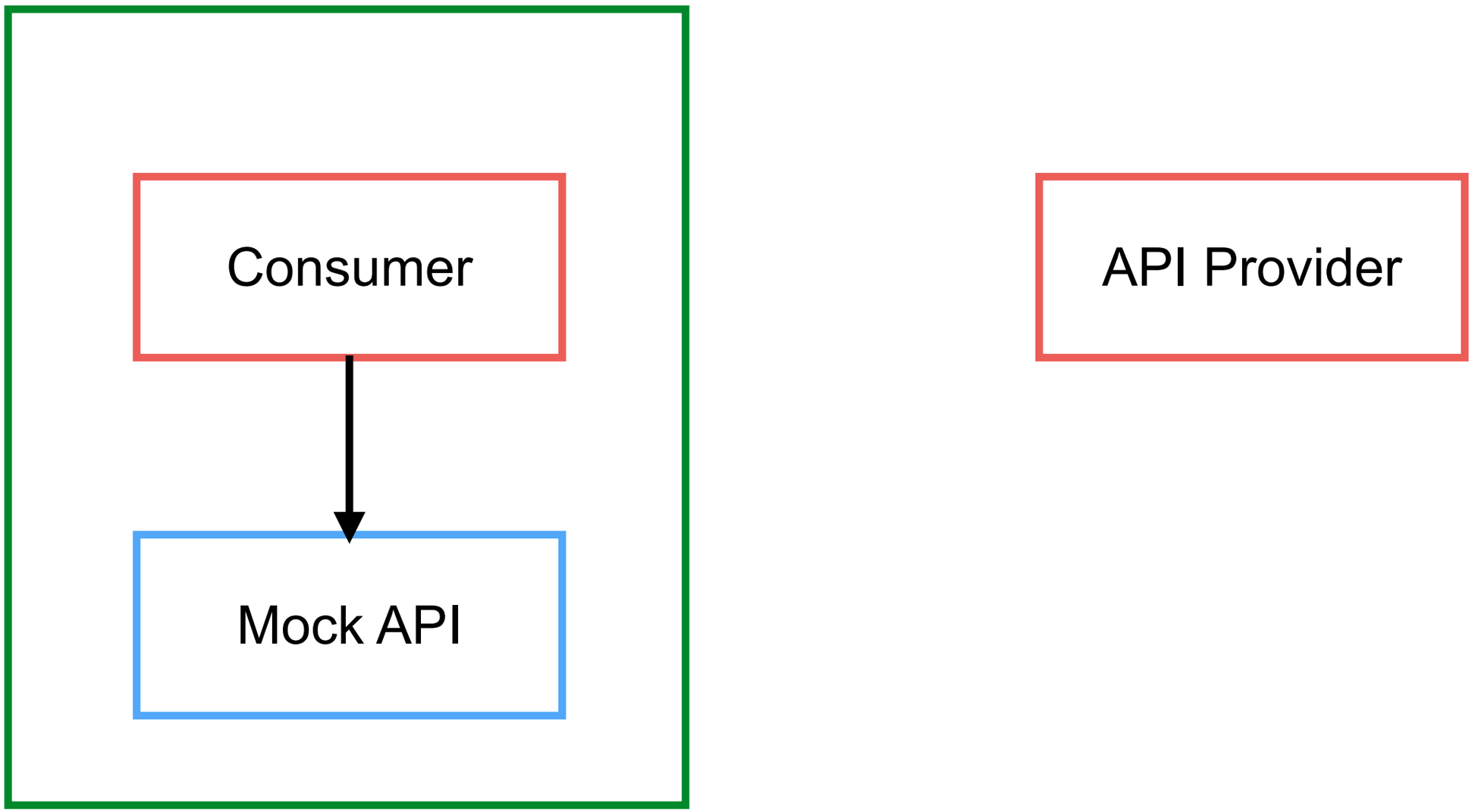
# Component test





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# Improve collaboration and confidence with Contract testing


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# Contract Testing

https://docs.pact.io/


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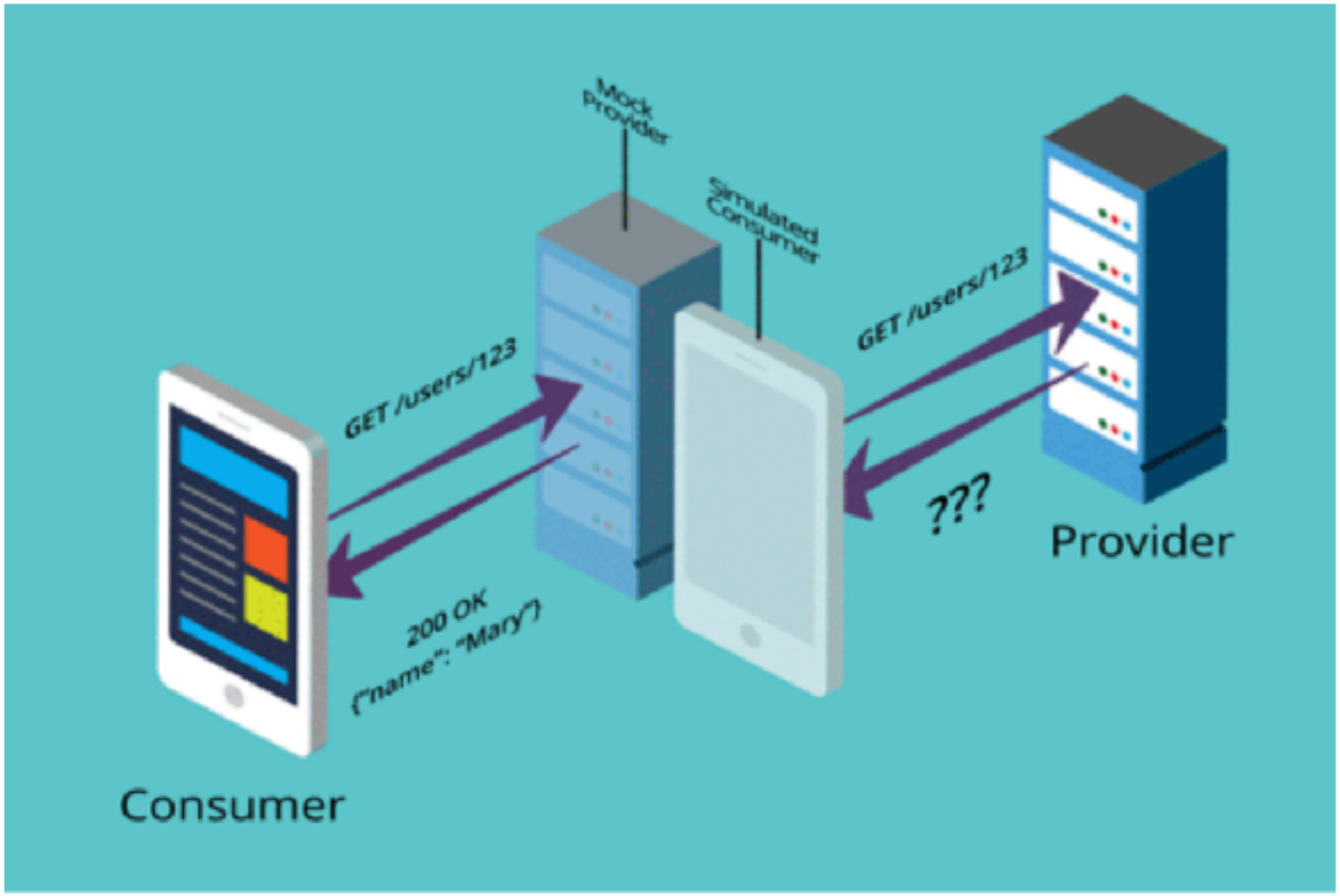
# Contract Testing




https://pactflow.io/how-pact-works/#slide-2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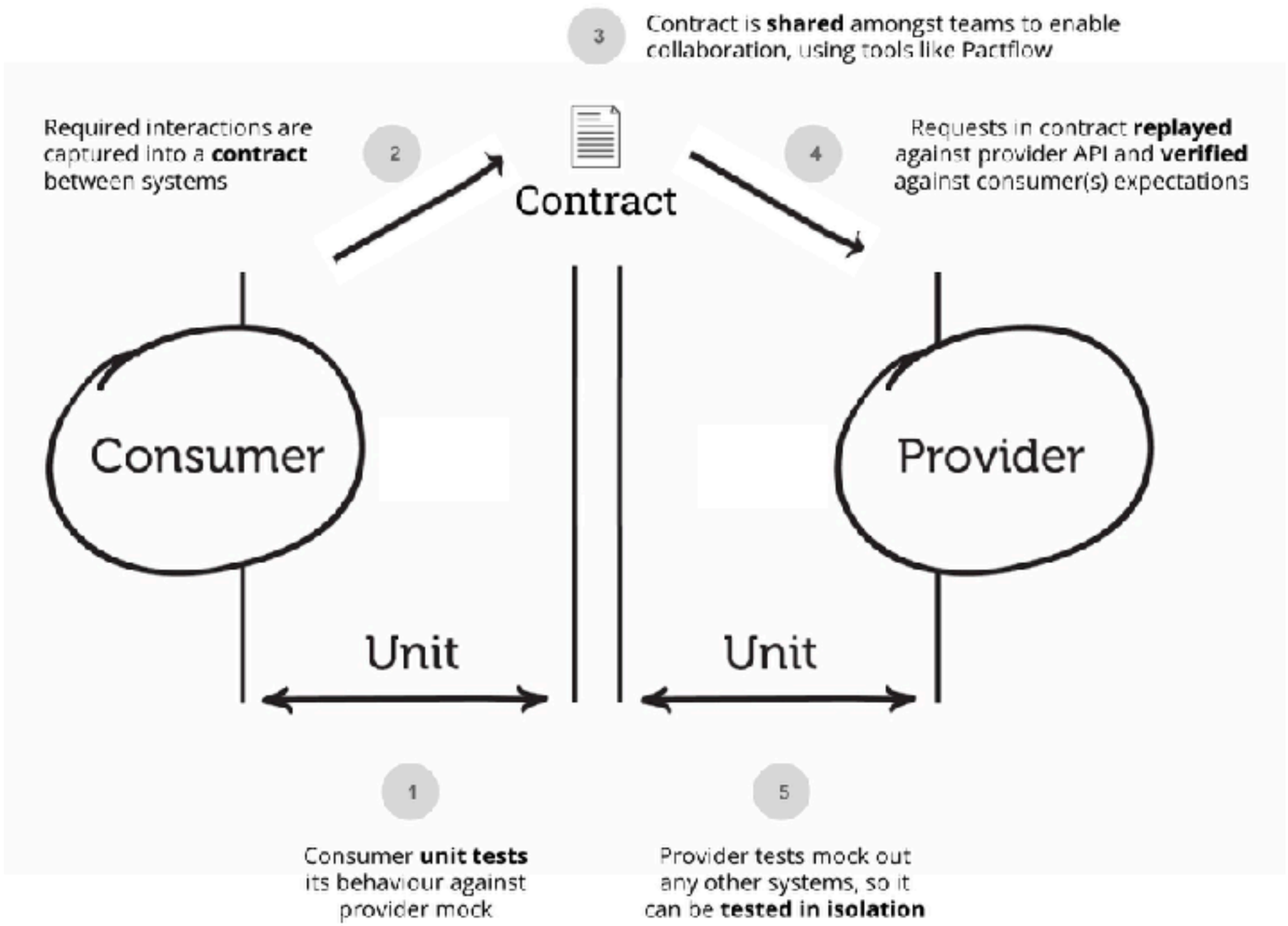
# Contract Testing




https://pactflow.io/how-pact-works/#slide-1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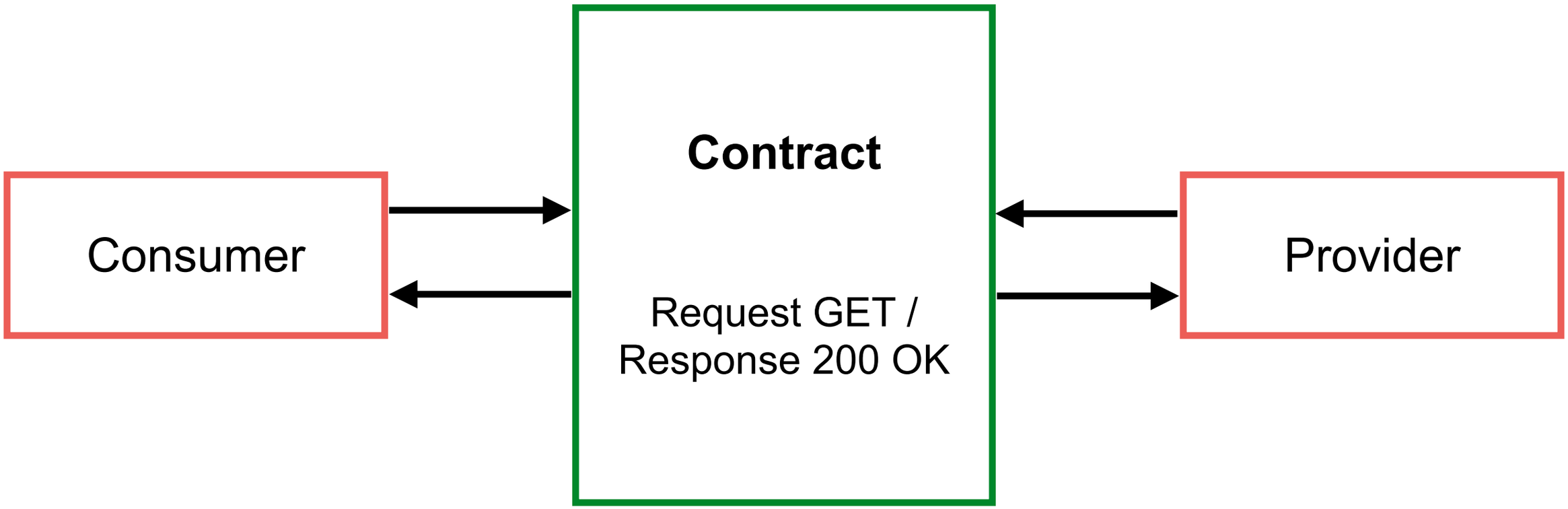
# Contract Testing

Check ad ensure the interoperability of software application in isolation





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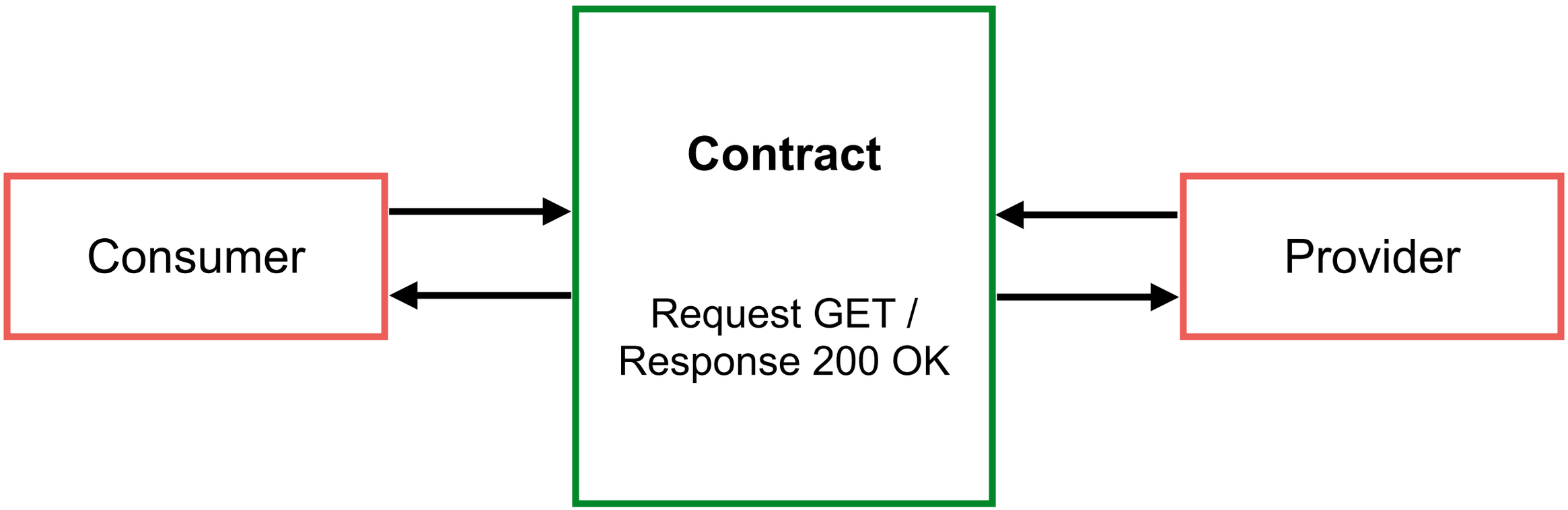
# Contract Testing

Enable teams to deploy microservices independently





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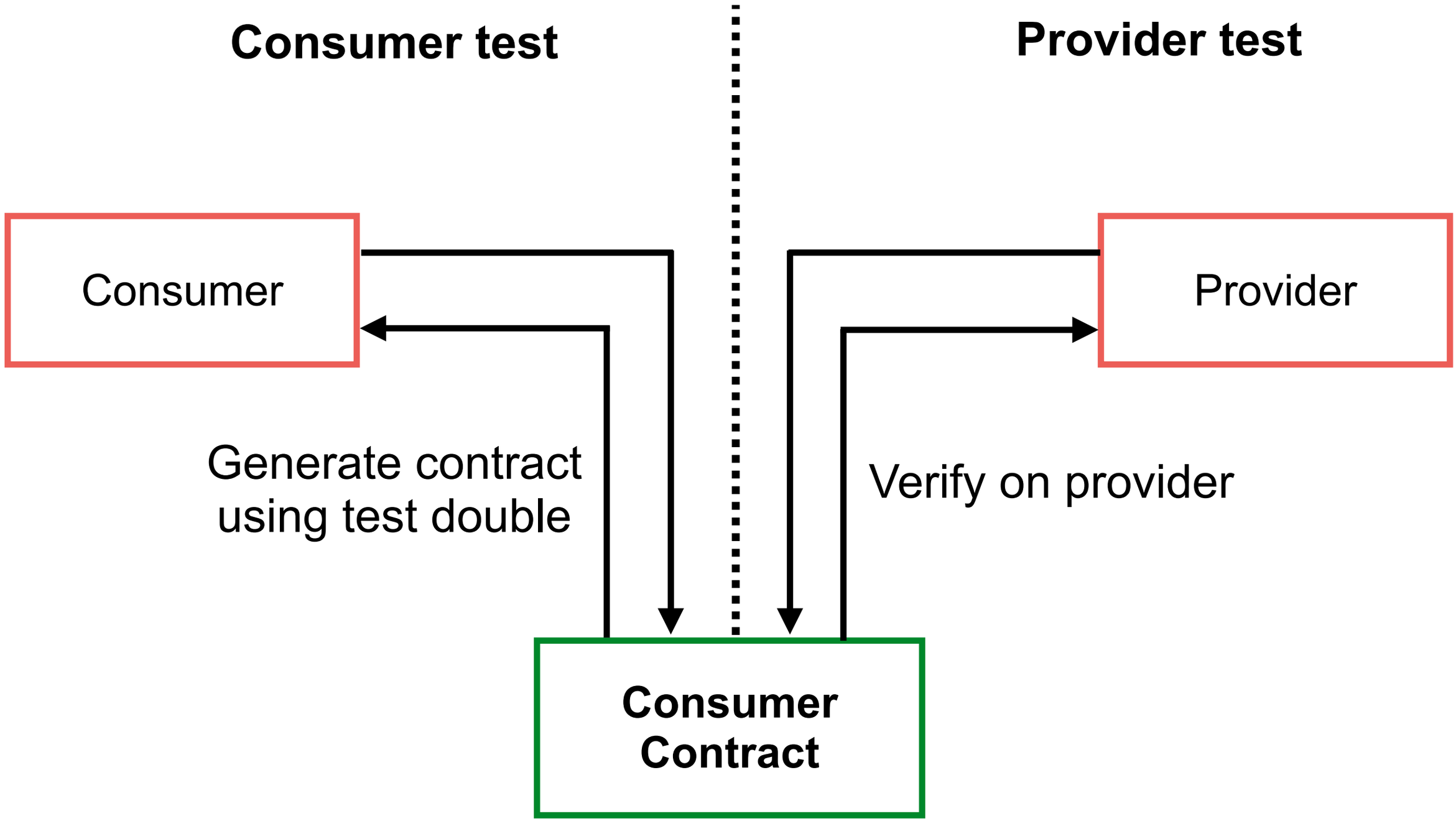
# Consumer-driven Contract Testing





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# Working with Pact

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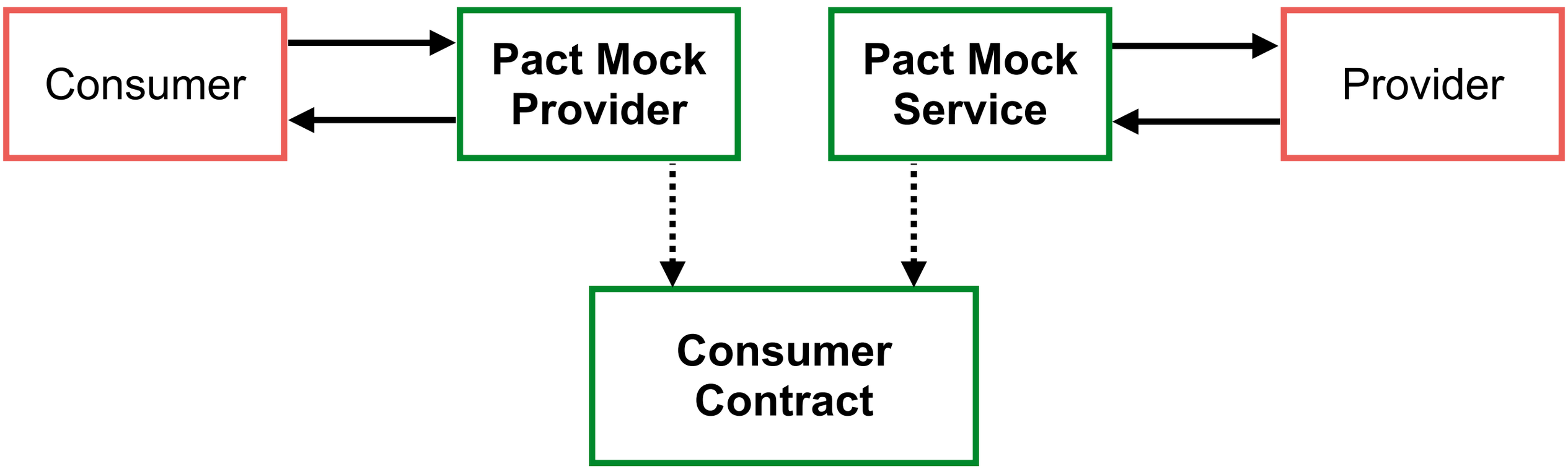
# Working with Pact

Code-first consumer-driven contract testing tool

**Consumer test** **Provider test**





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# Pact broker

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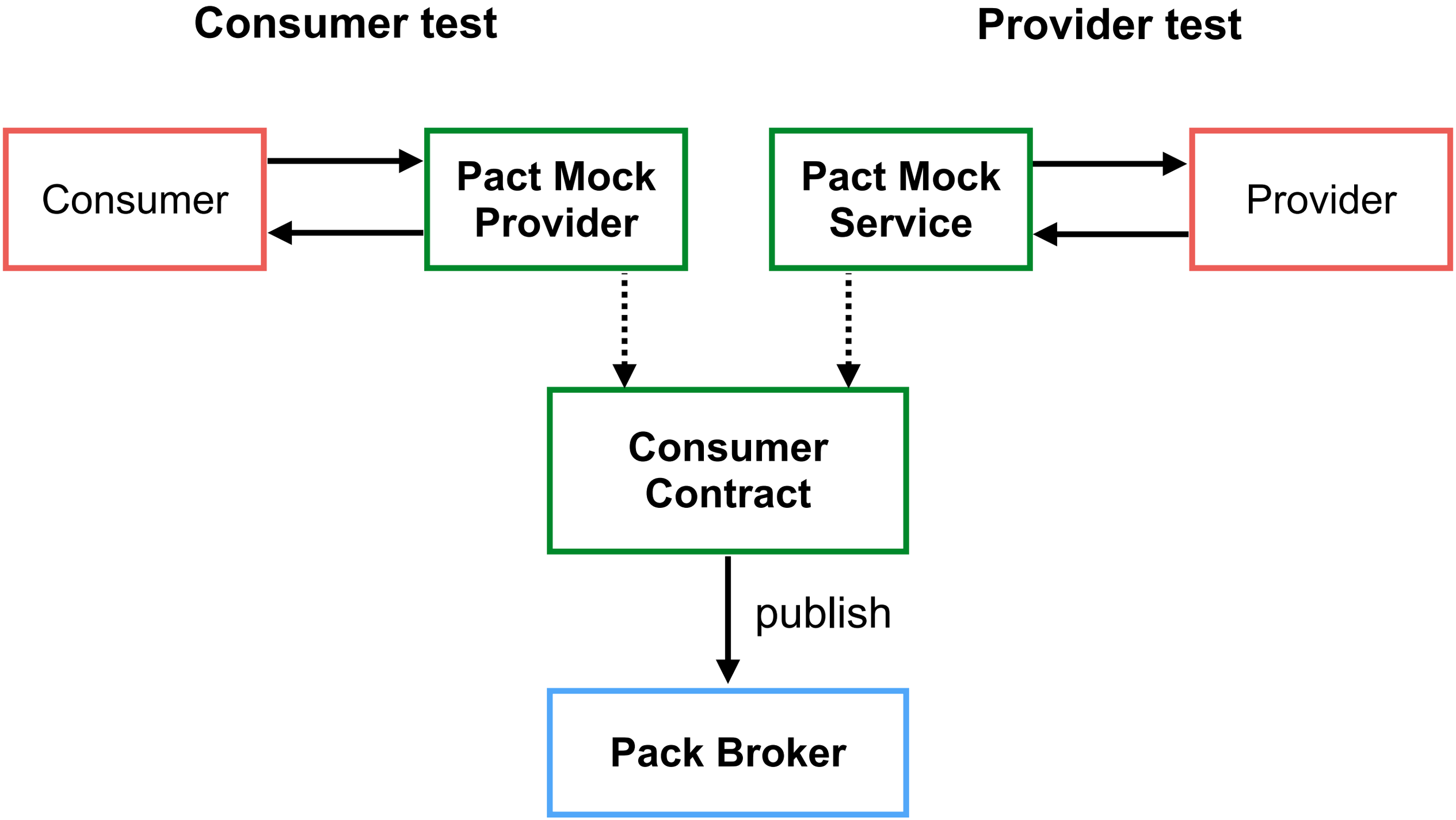
# Working with Pact broker





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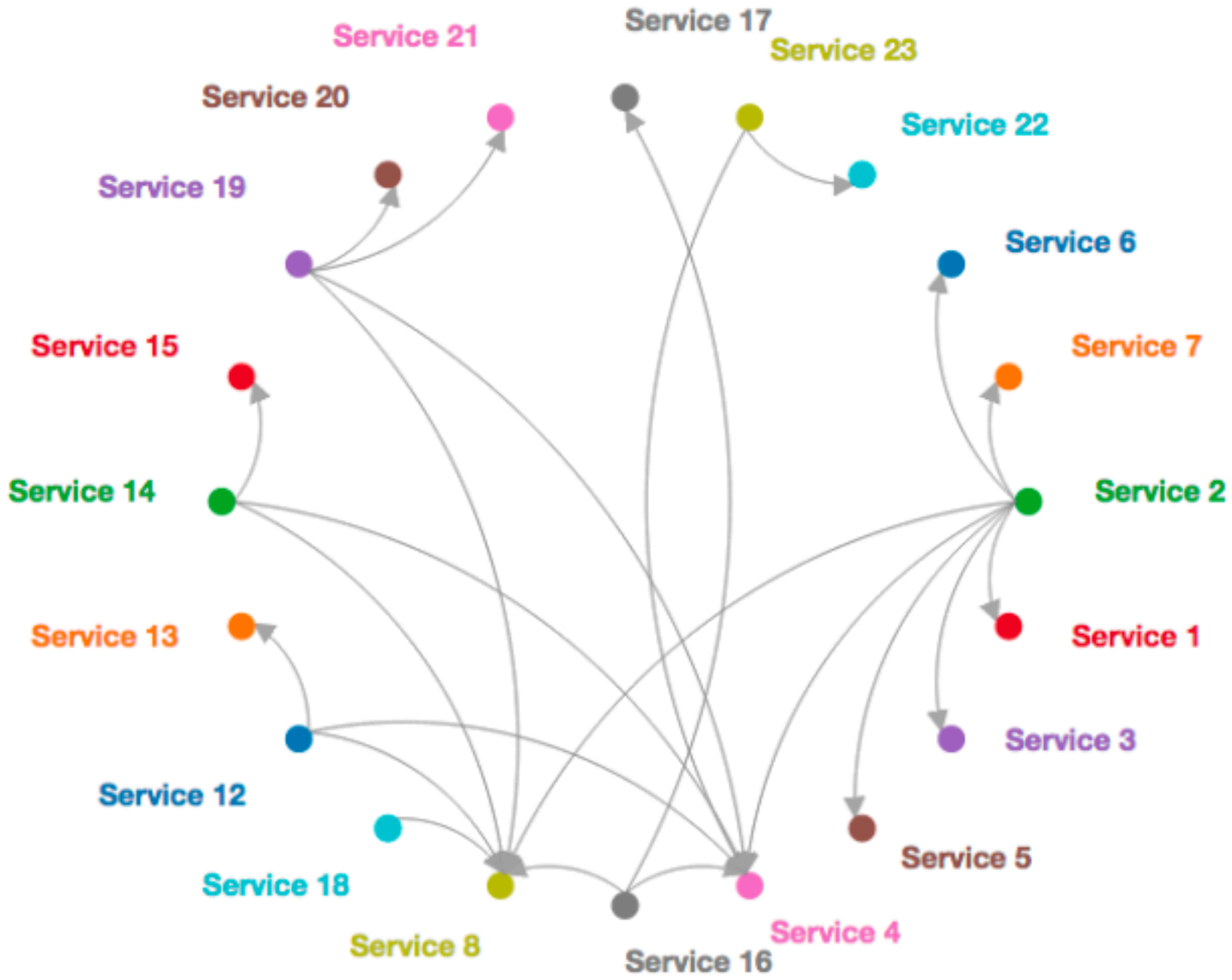



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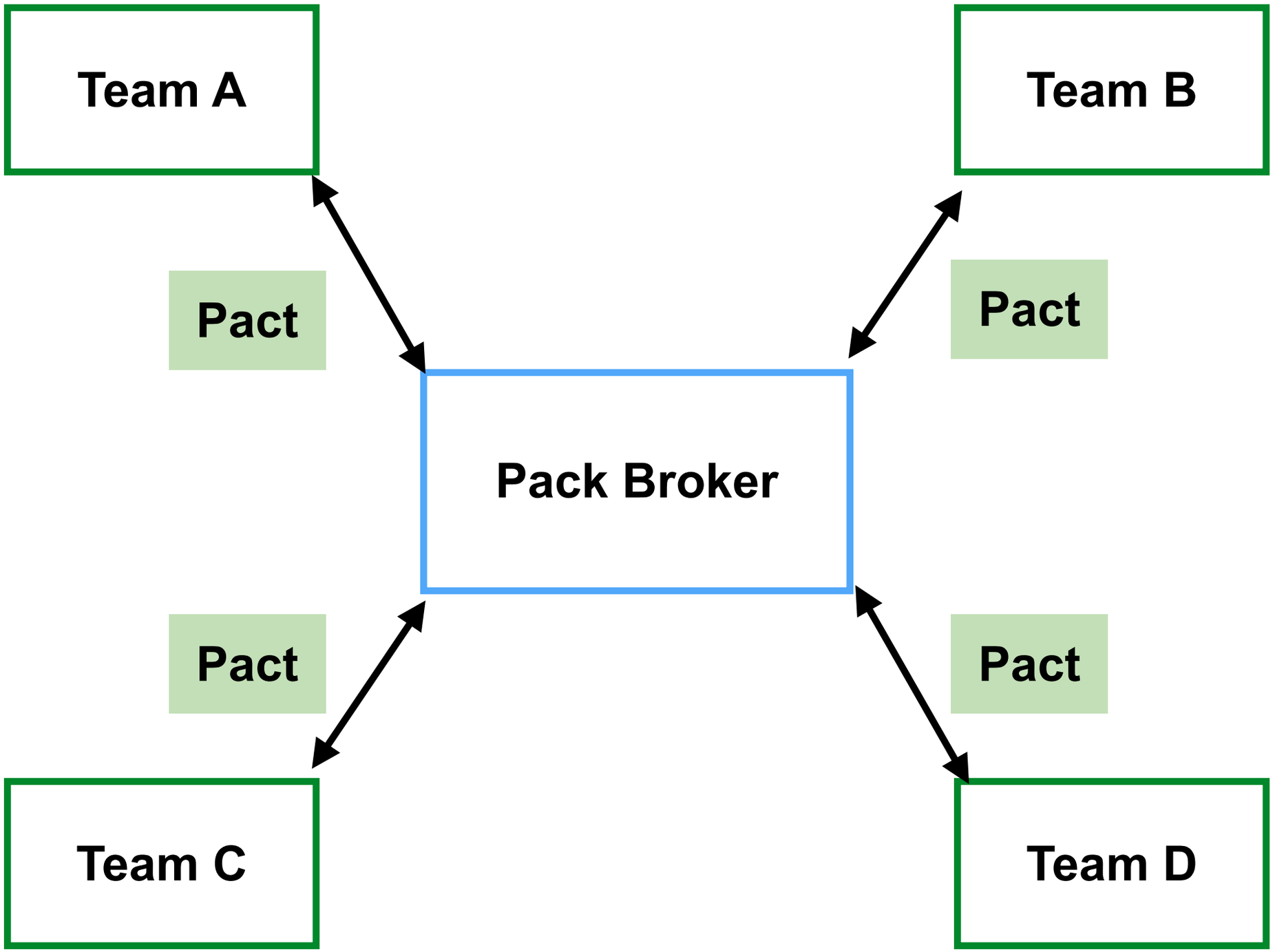



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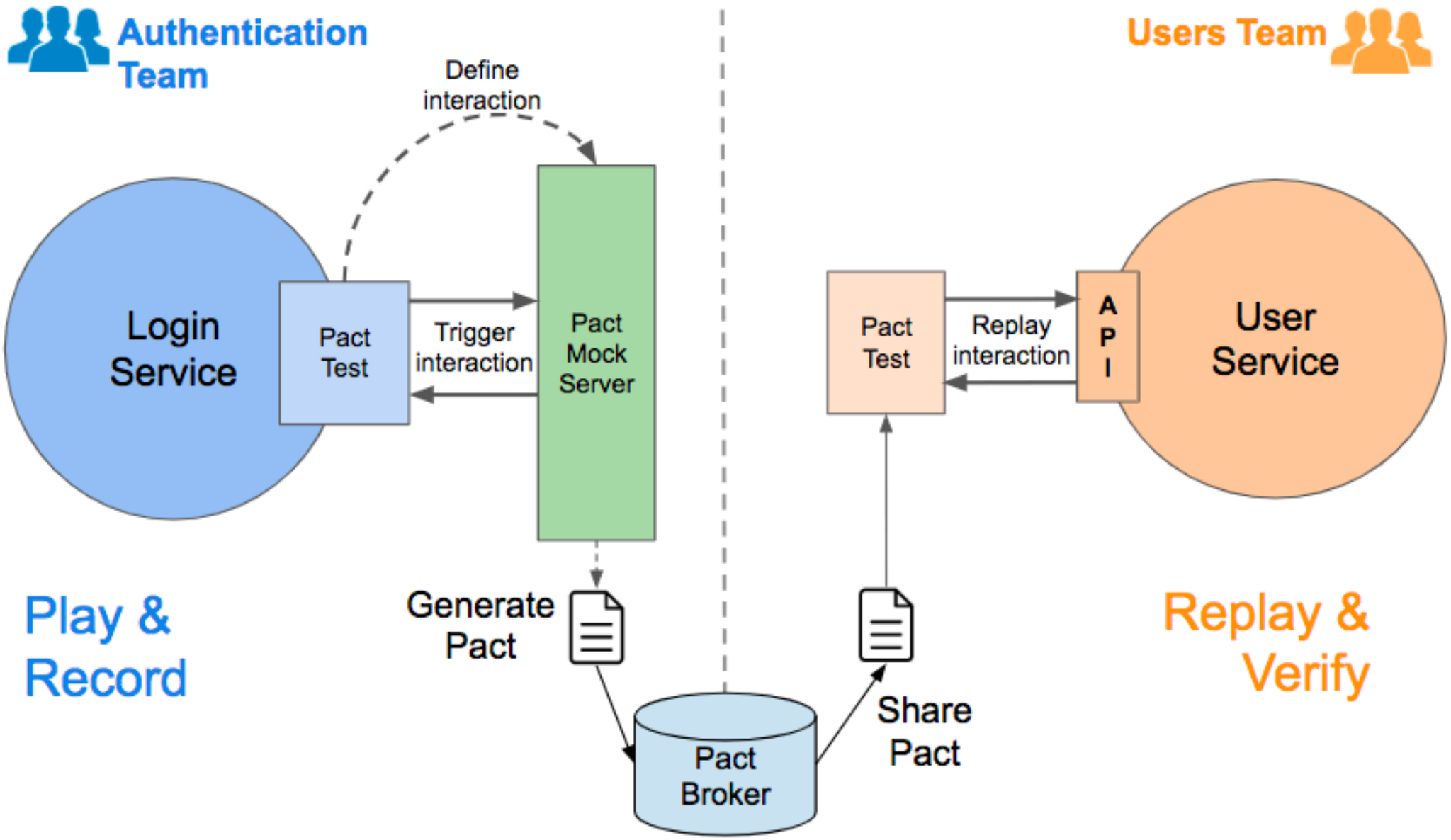
# Example with Pact





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# Steps to use Pact

Write code for consumer test
Generate contract from consumer test
Create Pact Mock Service to test the provider API
Create Pact Mock Provider as mock API

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# Write code for consumer test

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# Design First with APIs

Design APIs specification
Create contract test
Generate contract from test

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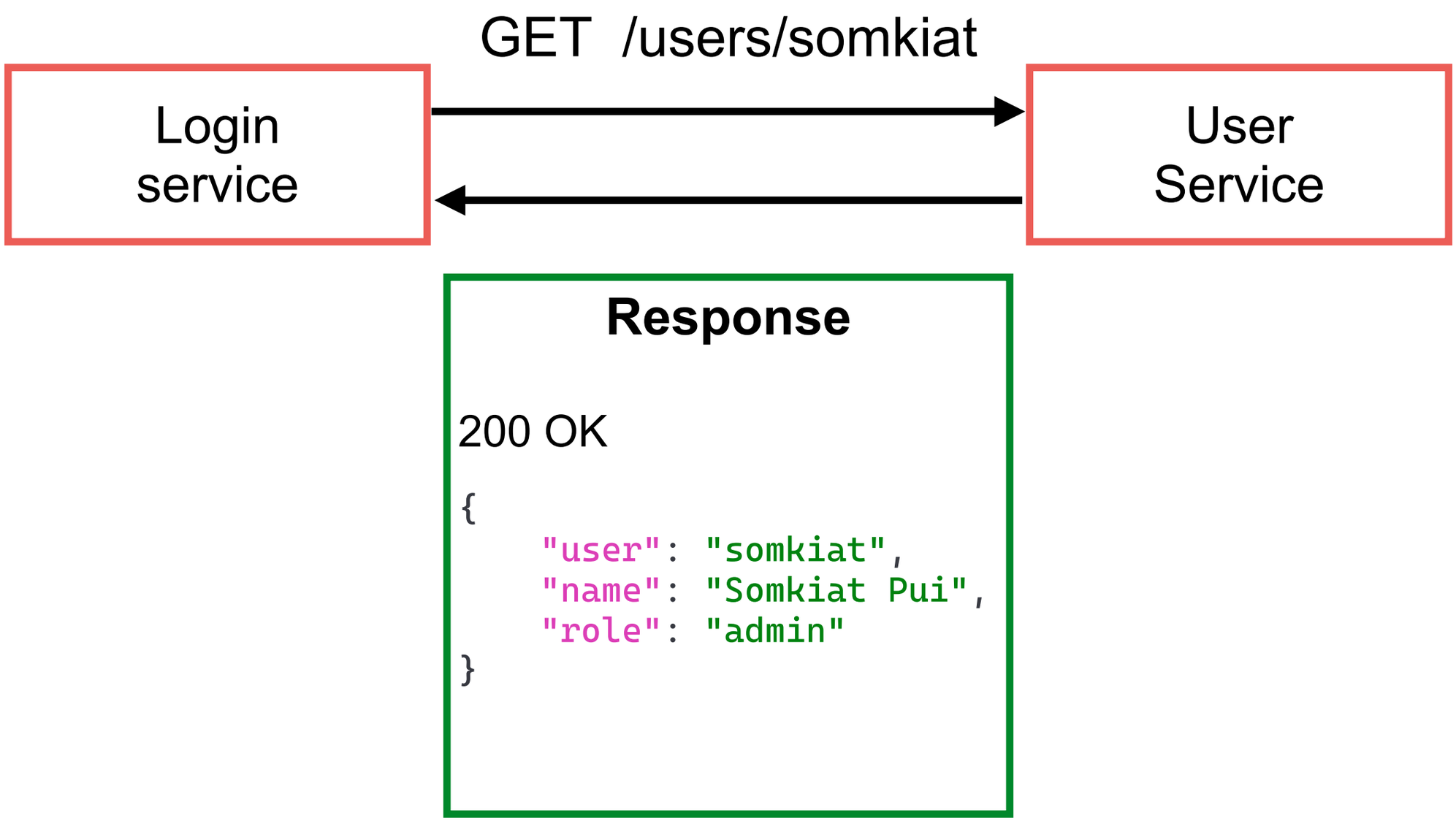
# API





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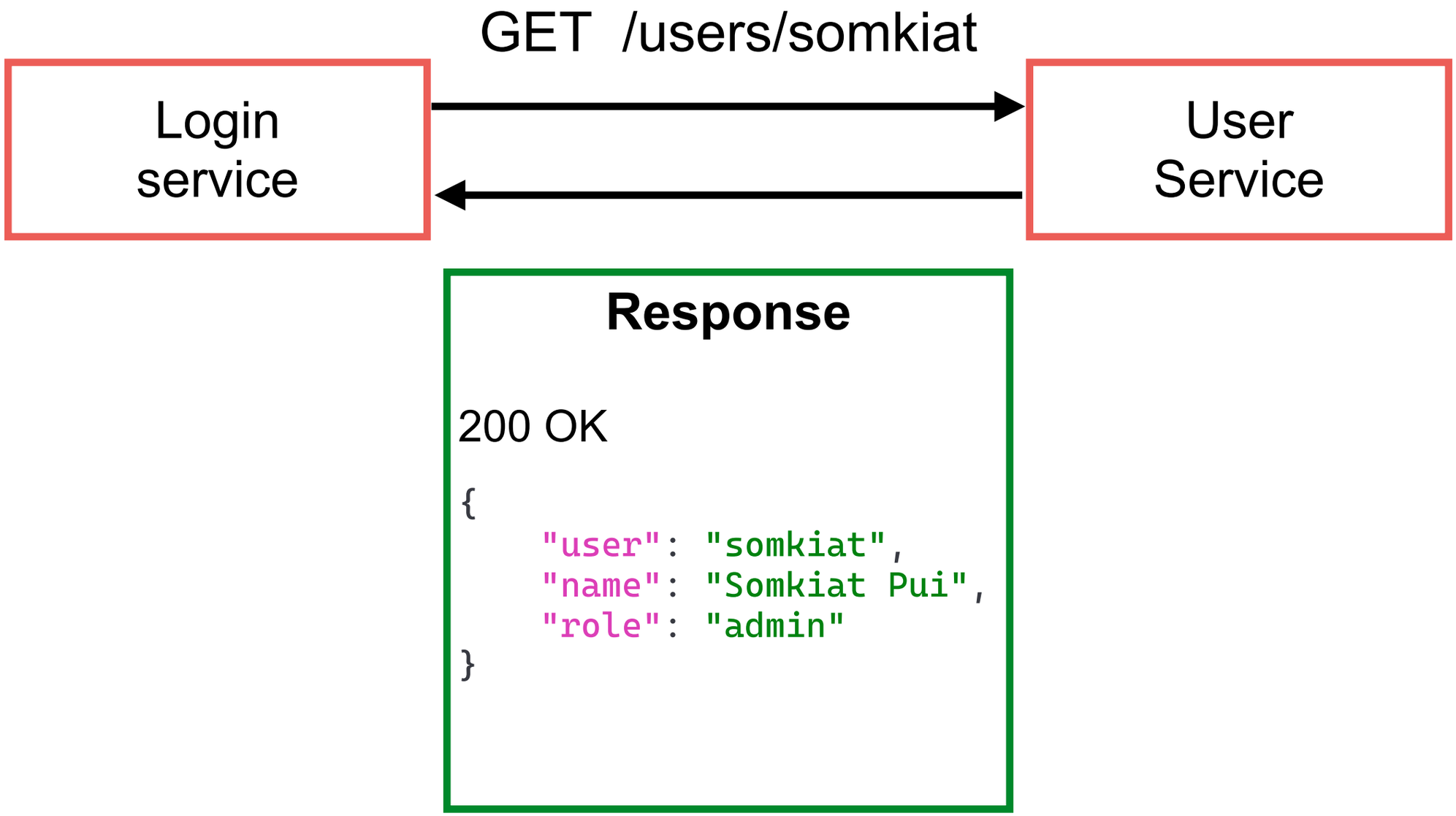
# How do we test ?



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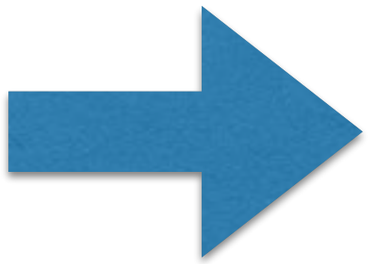
# Change in User service !!

**Response**

200 OK

```
{
    "user": "somkiat",
    "name": "Somkiat Pui",
    "role": "admin"
}
```



**Response**

200 OK

```
{
    "user": "somkiat",
    "name": "Somkiat Pui",
    "roles": ["admin", "user"]
}
```

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# Change in User service !!

| | | |
|---|---|---|
| User Service | Testing | Deploy |
| Login service | Testing ? | Deploy ? |

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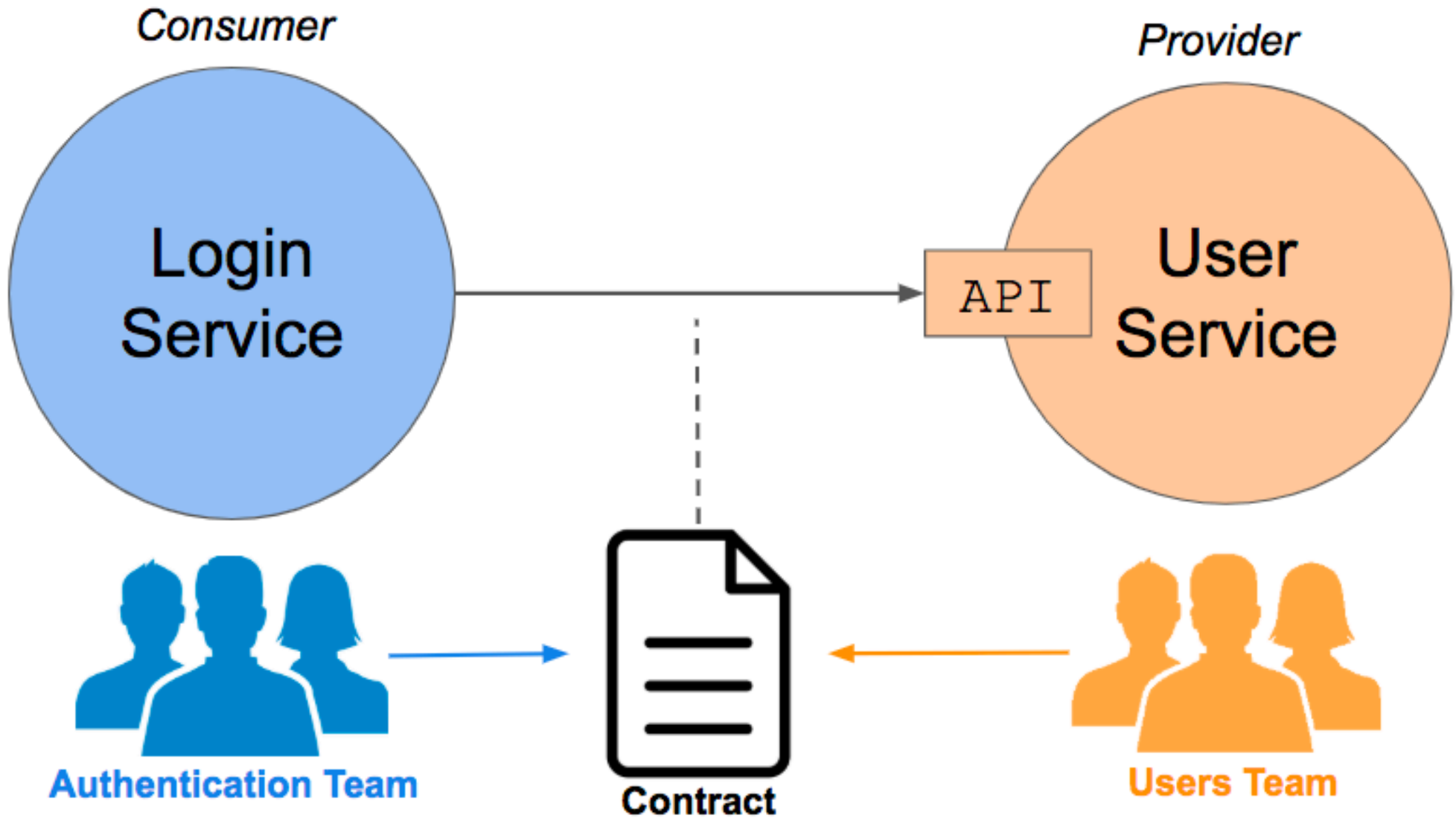



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# Structure of contract test

Consumer and Provider
Interaction, provider state
Request and expected response

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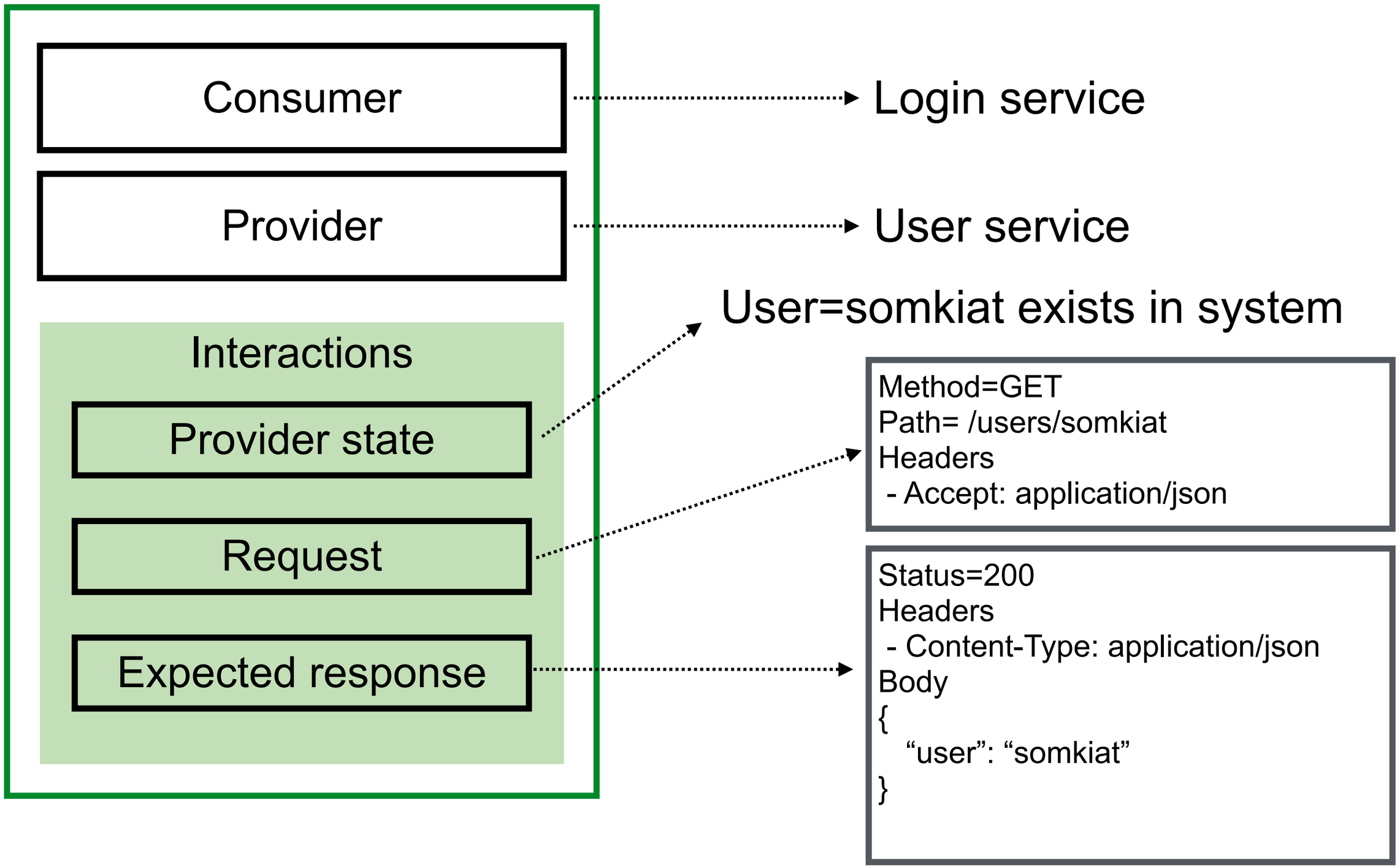
# Structure of contract test





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# Working in CI/CD pipeline

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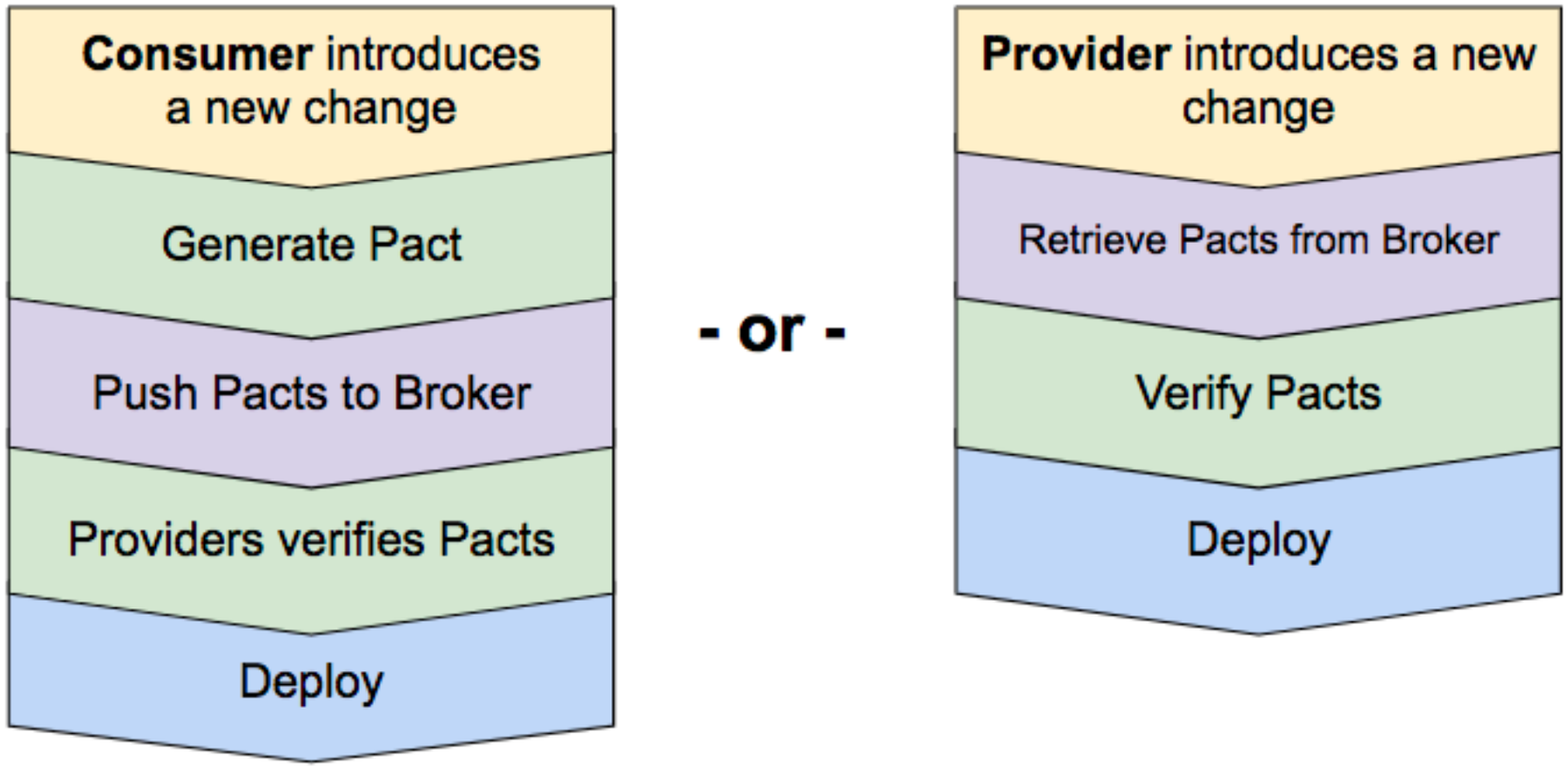
# CI/CD pipeline

When code/api changes !!





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# CI/CD pipeline

When code/api changes !!

Implement changes

Generate Pact Contract test

Push pact to broker

Each provider verified Pacts

Deploy service

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# Contract test

Provider state setup for each interaction
Don’t limit contracts to happy paths
Automation process in deployment pipeline

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# Q/A

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