

# Microservice Testing





Somkiat Puisungnoen

Somkiat Puisungnoen

Update Info 1

View Activity Log 10+

...  
Timeline About Friends 3,138 Photos More

When did you work at Opendream?  
... 22 Pending Items

Post Photo/Video Live Video Life Event

What's on your mind?

Public Post

Intro  
Software Craftsmanship

Software Practitioner at สยามชัมนาภิกิจ พ.ศ. 2556

Agile Practitioner and Technical at SPRINT3r

Somkiat Puisungnoen 15 mins · Bangkok · ⚙️

Java and Bigdata





Page

Messages

Notifications 3

Insights

Publishing Tools

Settings

Help ▾



somkiat.cc

@somkiat.cc

Home

Posts

Videos

Photos



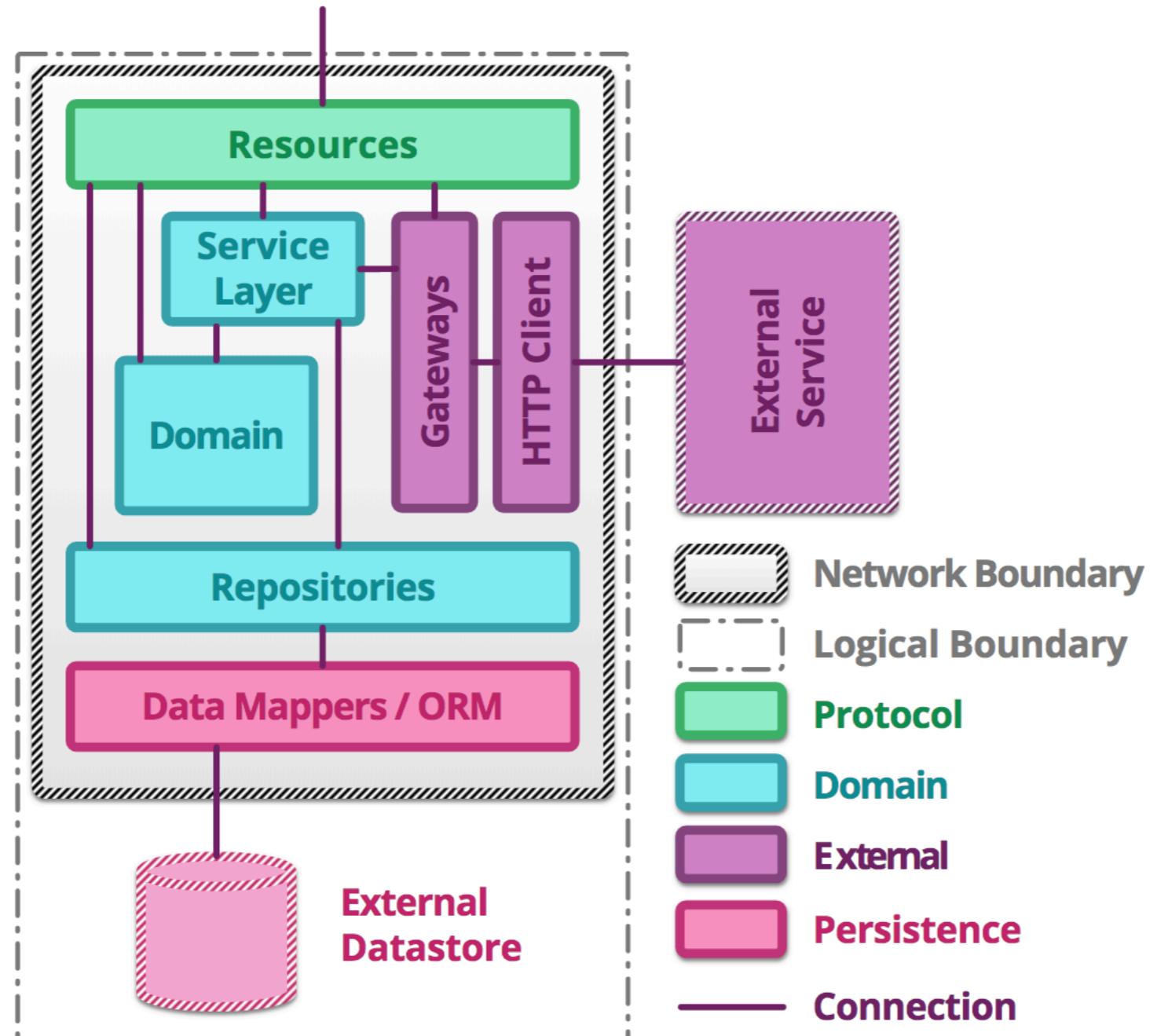
**<https://github.com/up1/course-microservice-testing>**



# Microservice Testing



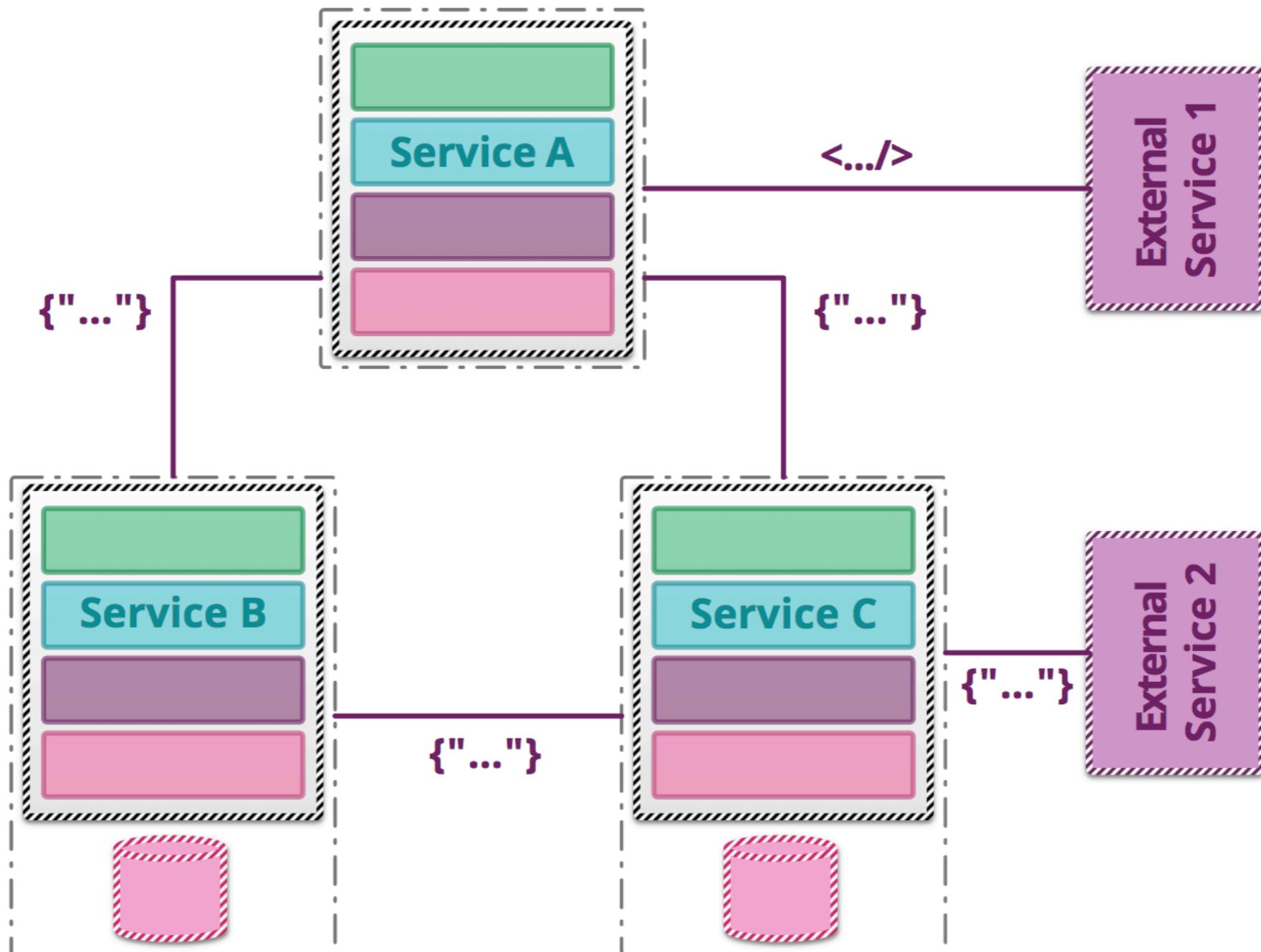
# Service structure



<https://martinfowler.com/articles/microservice-testing>



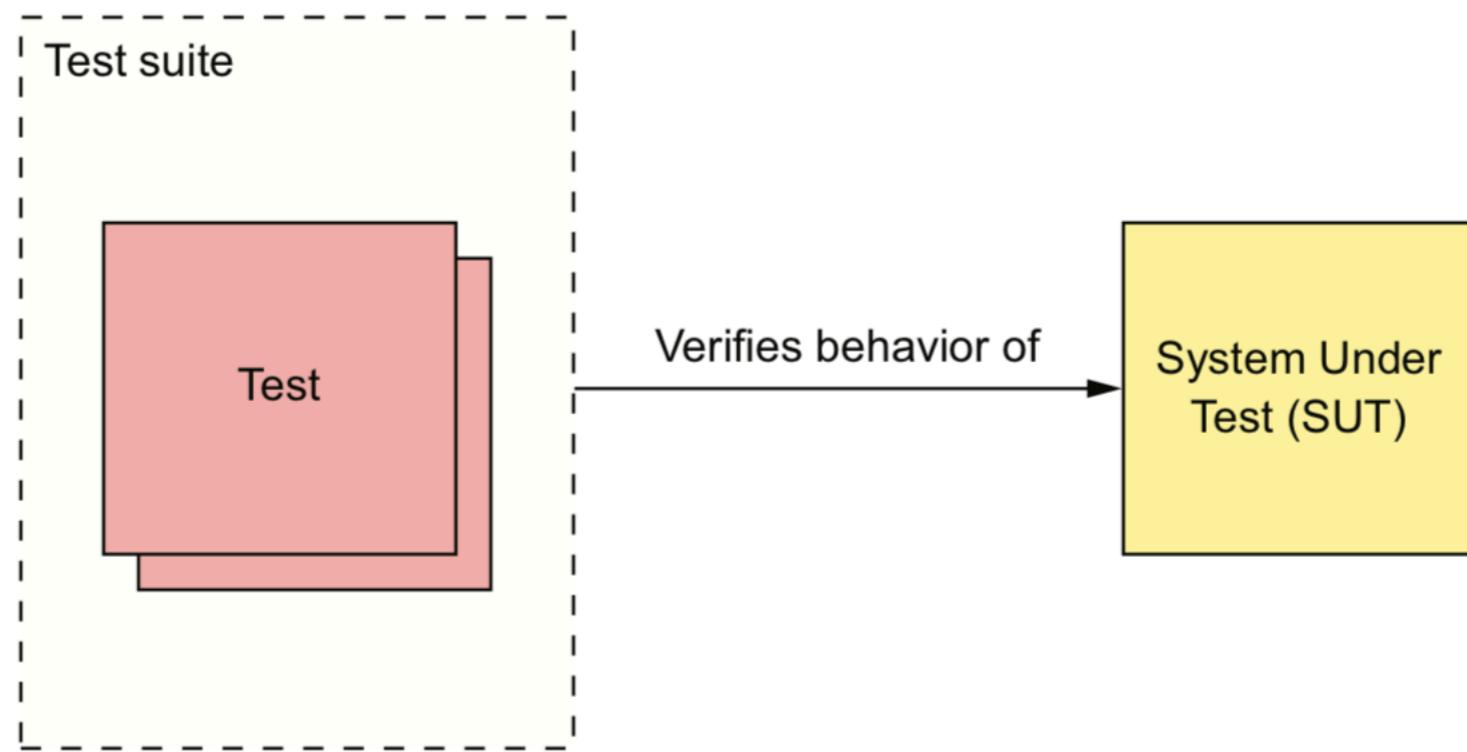
# Multiple services



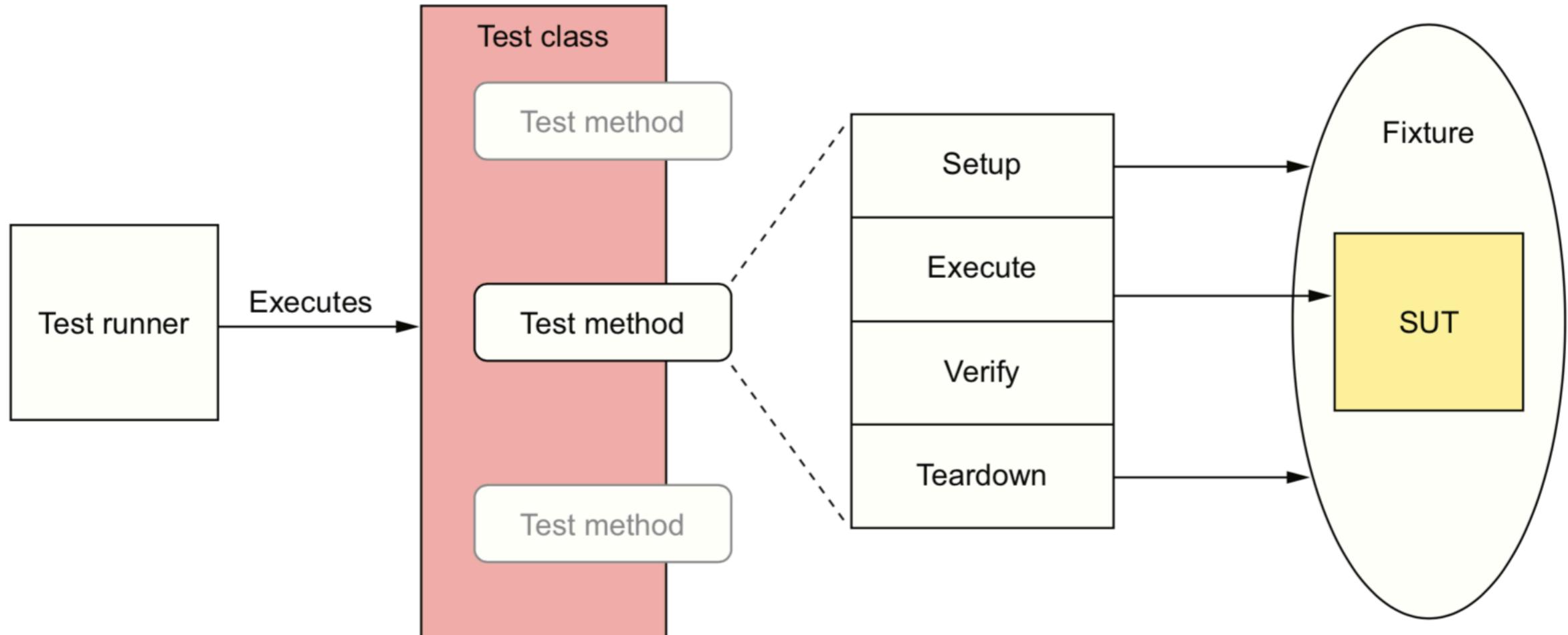
<https://martinfowler.com/articles/microservice-testing>



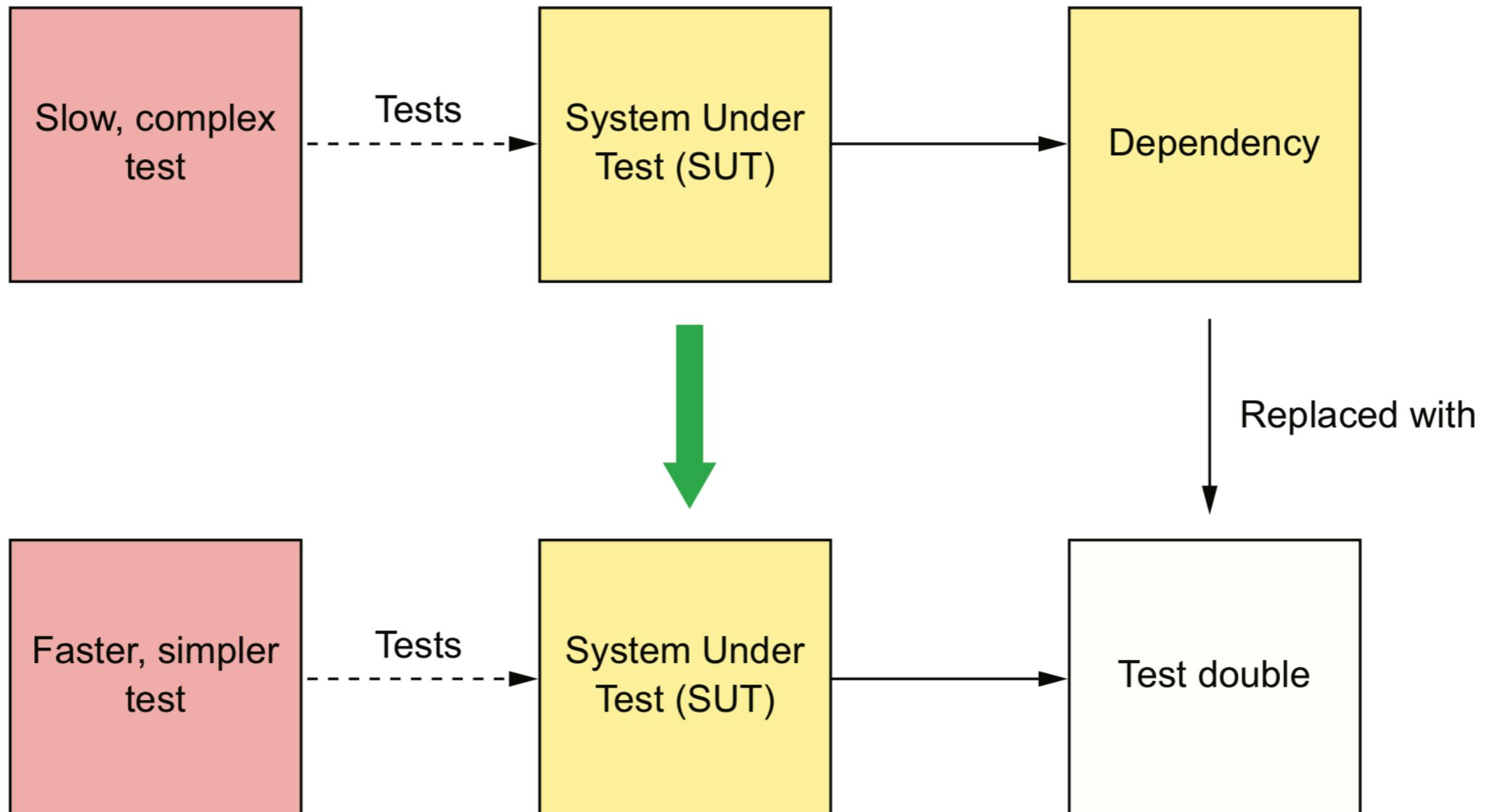
# Testing



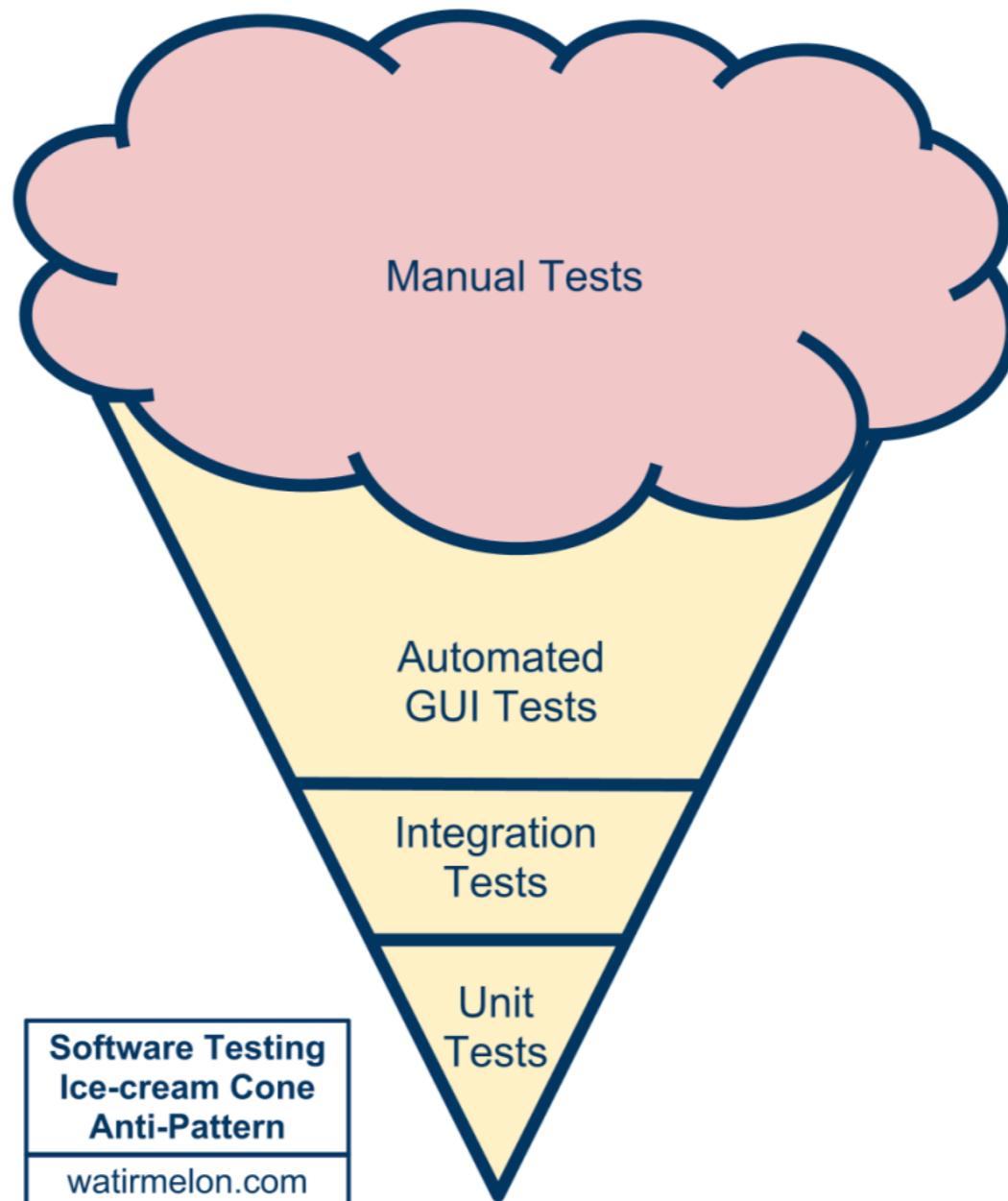
# Structure of Automated tests



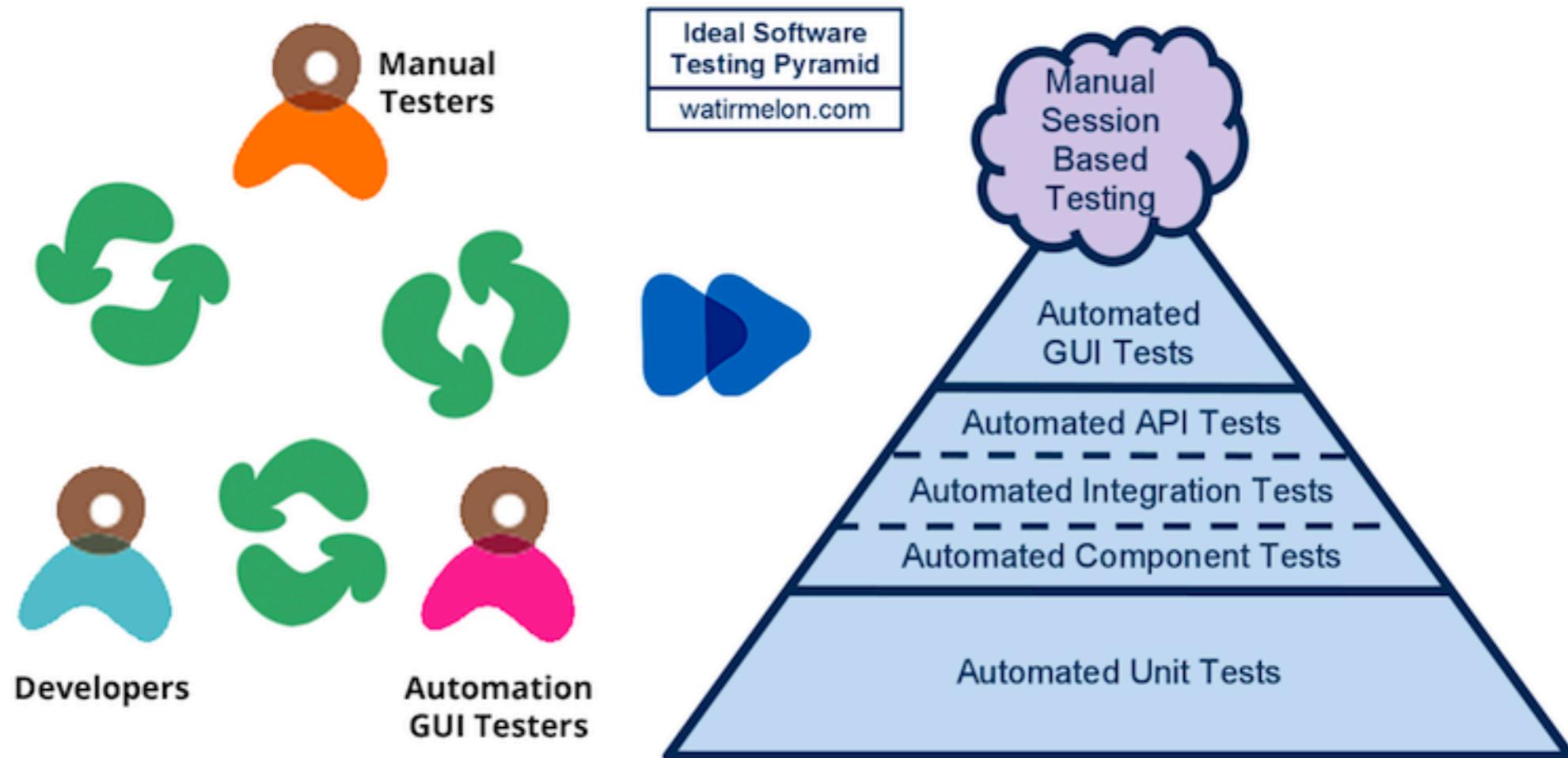
# Working with Test double

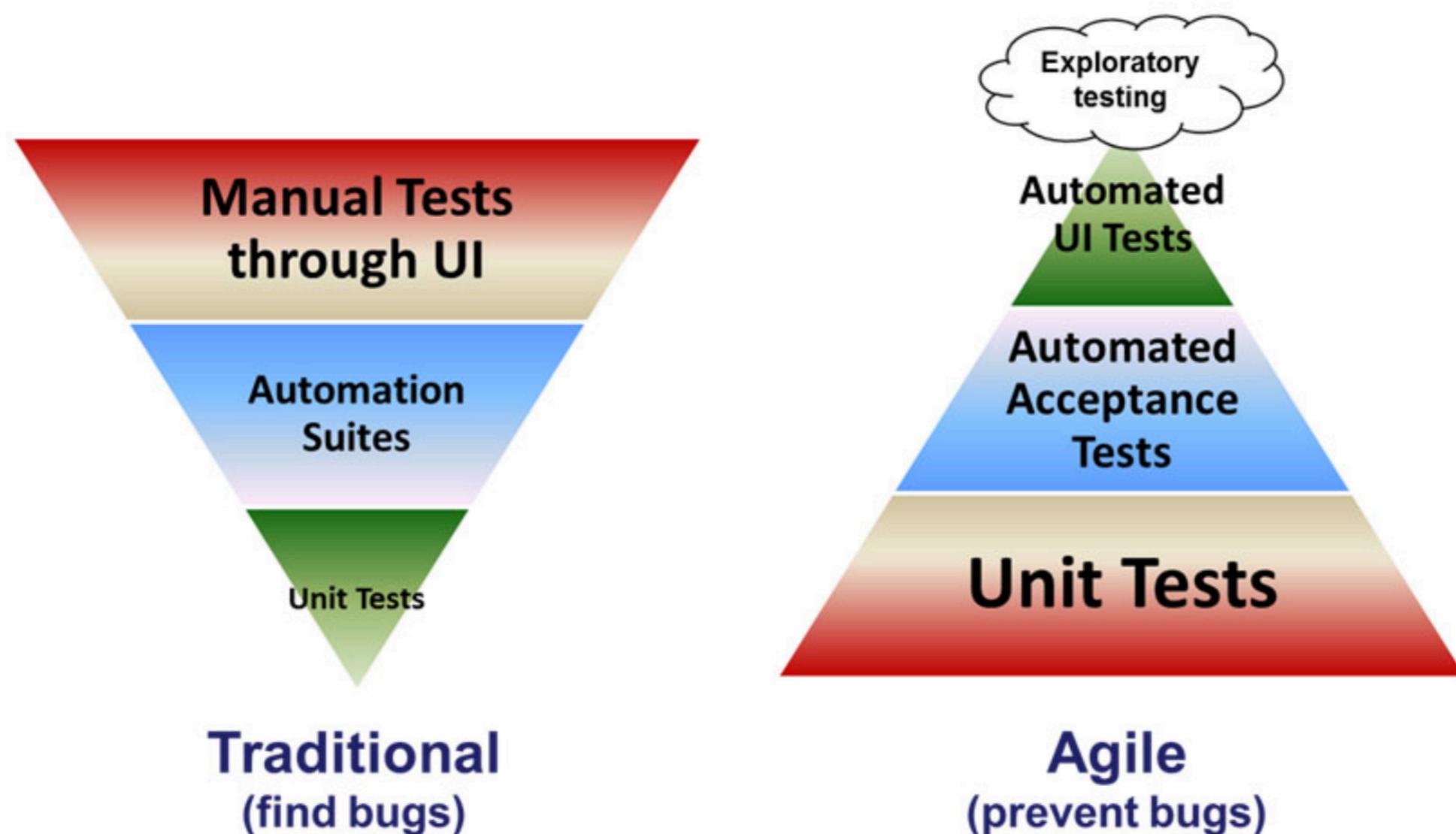


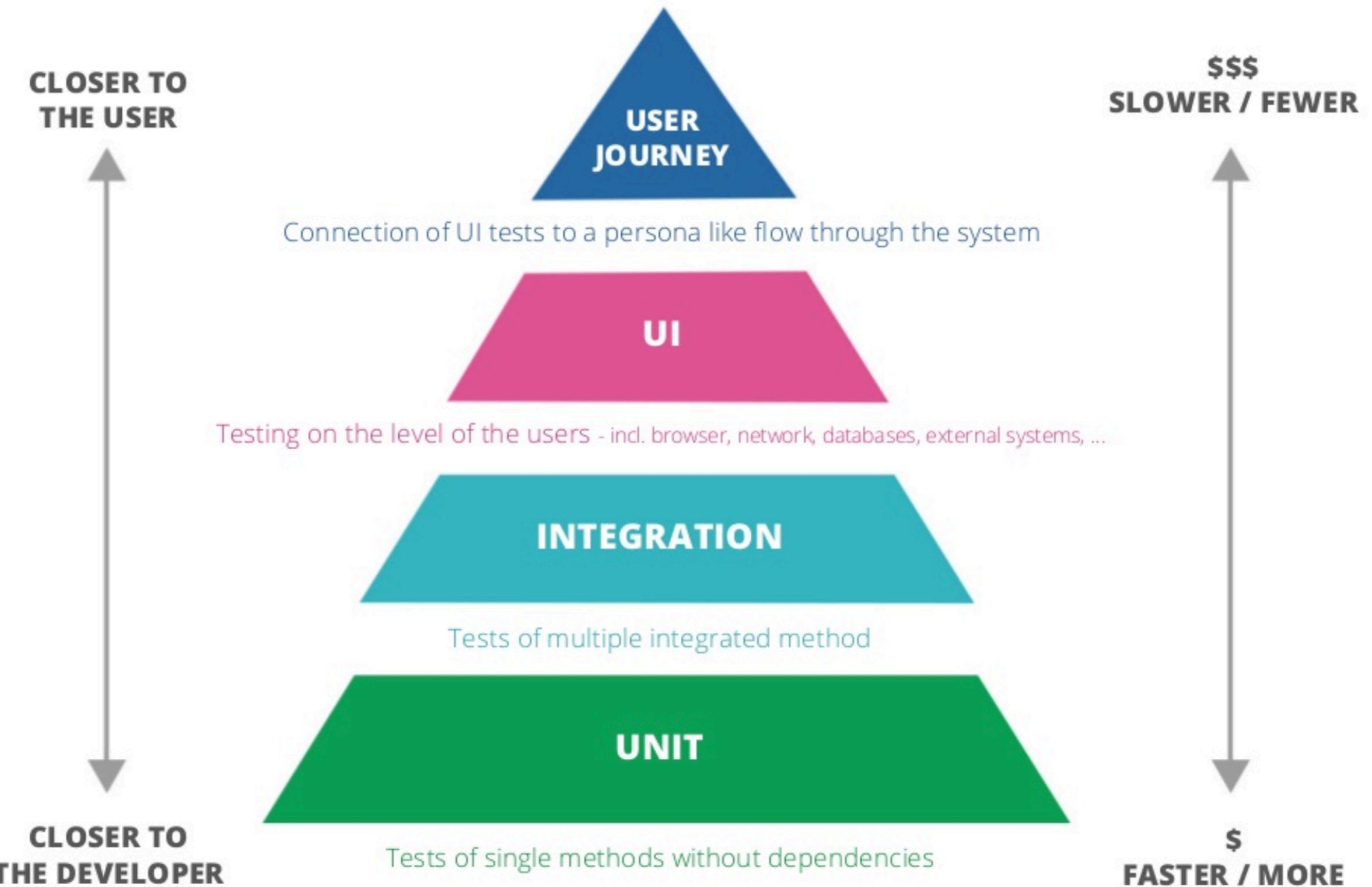
# Ice-cream testing



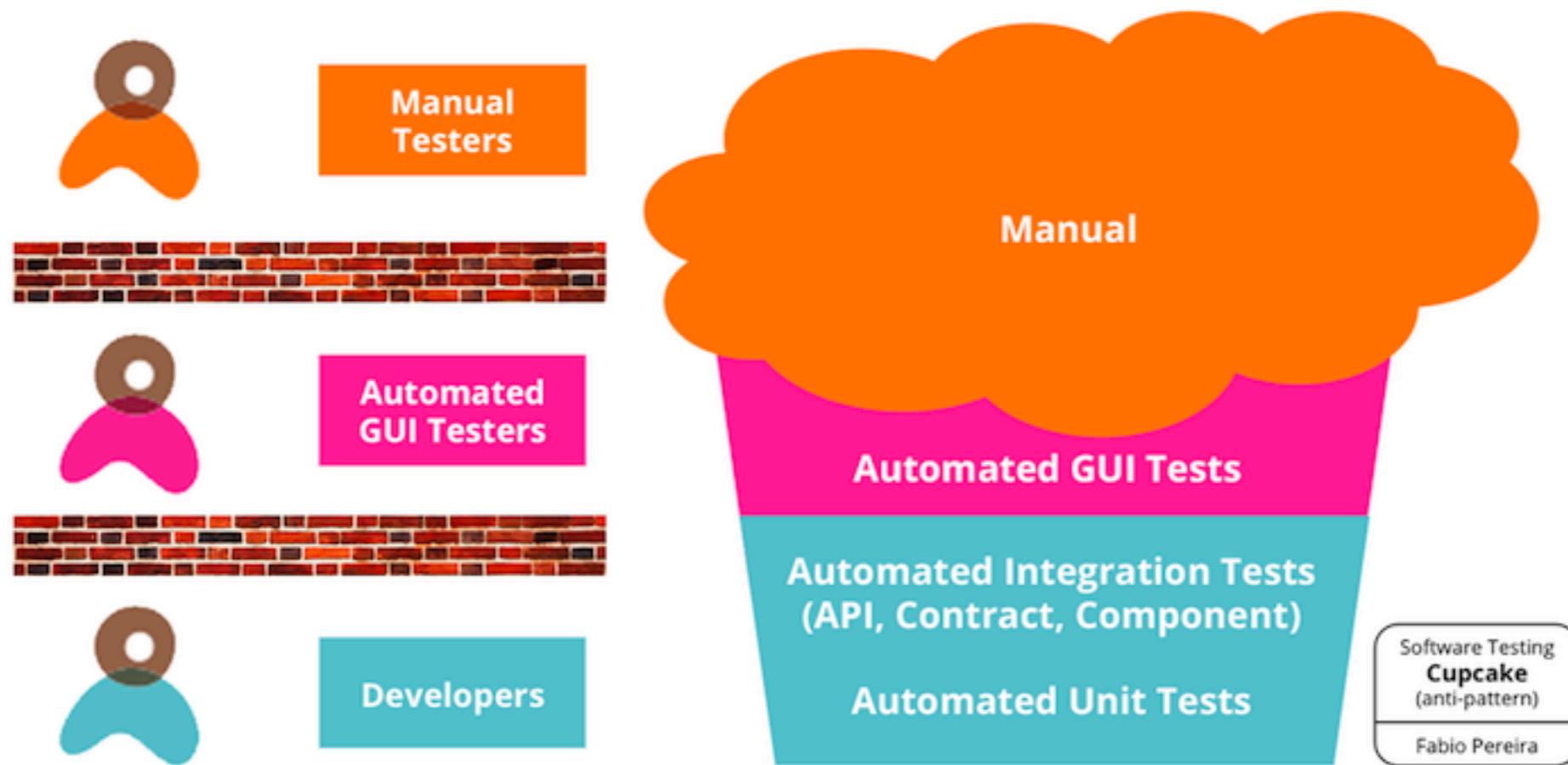
# Pyramid testing



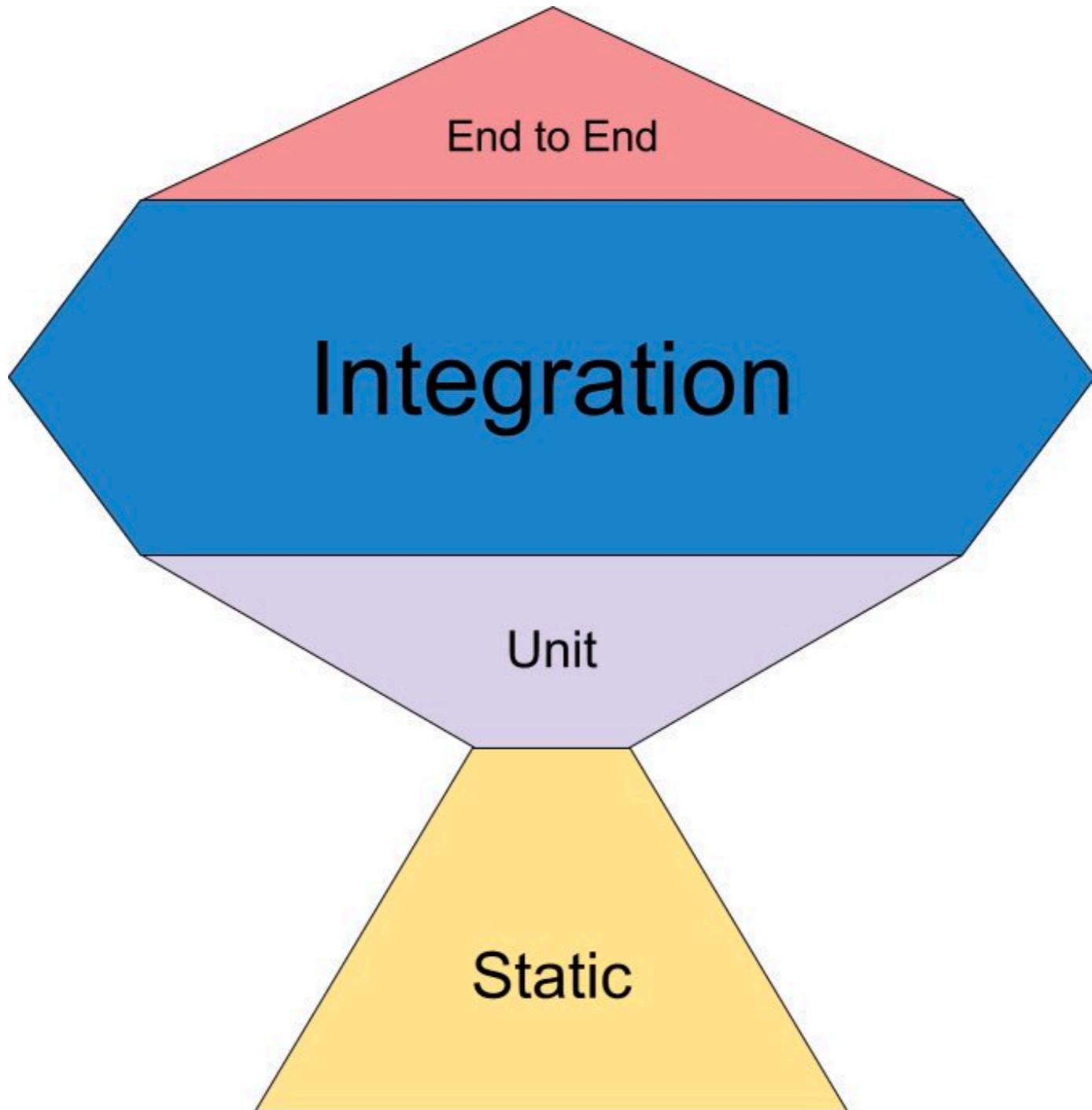




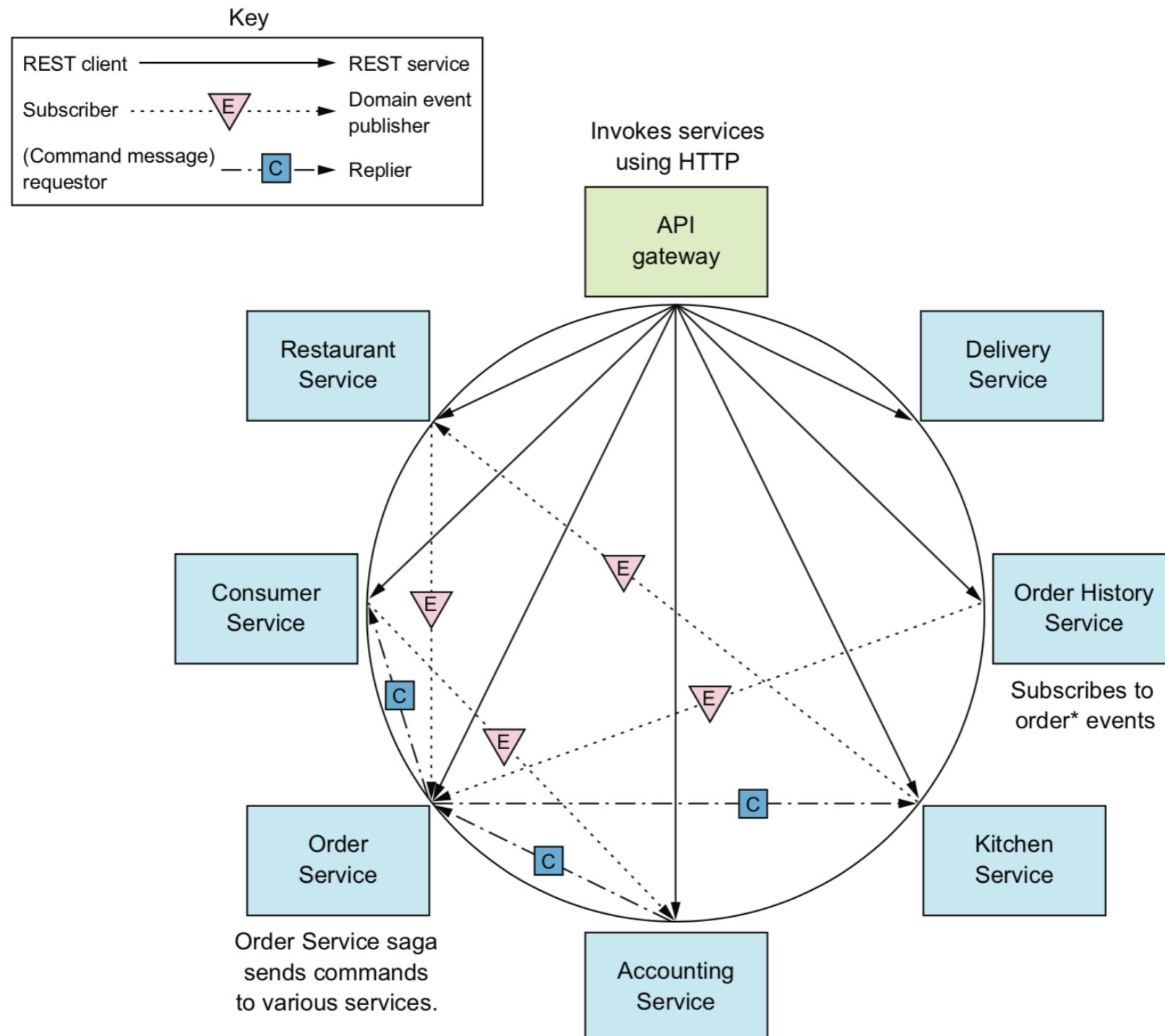
# Cupcake testing



# Trophy testing

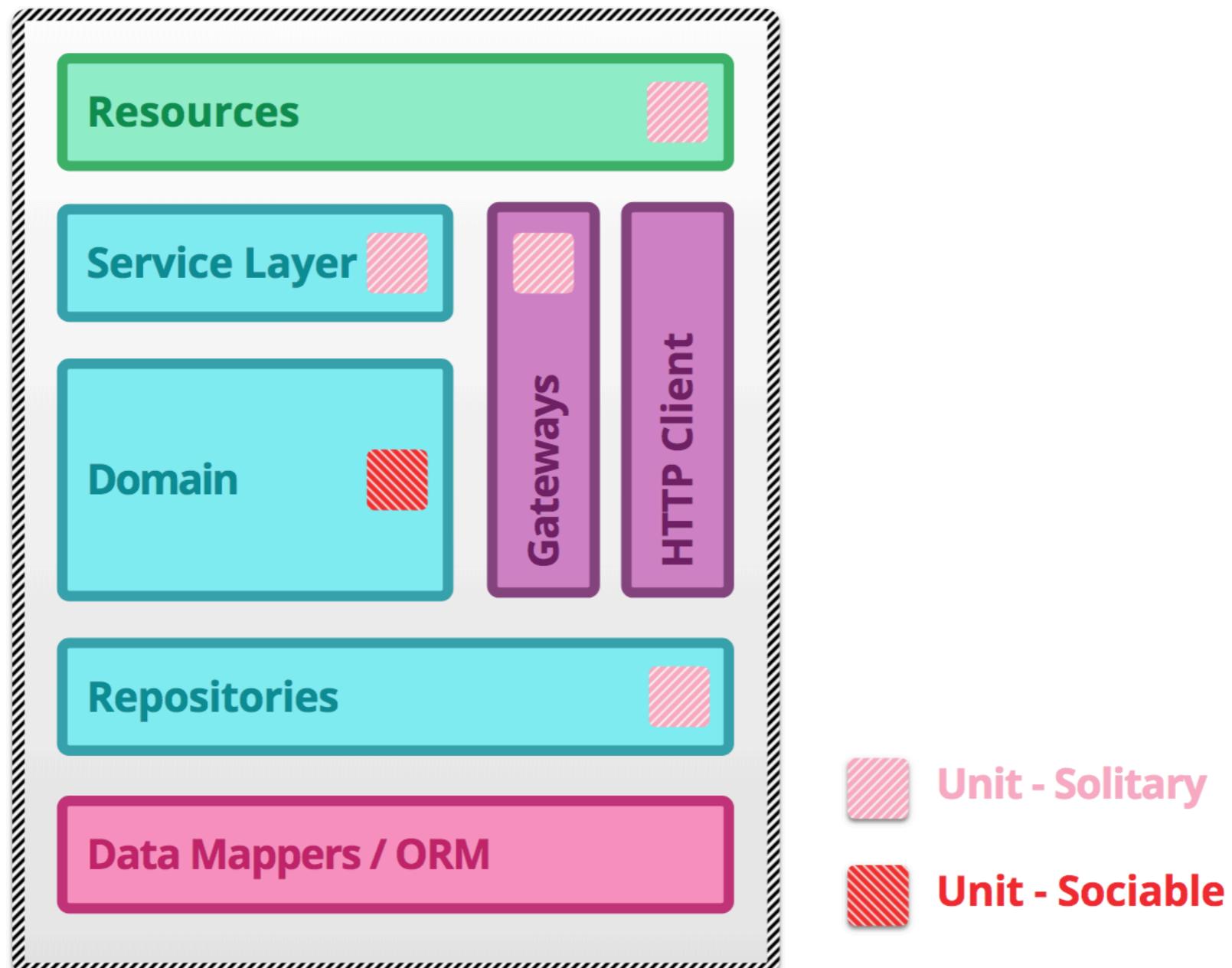


# Testing Microservices ?

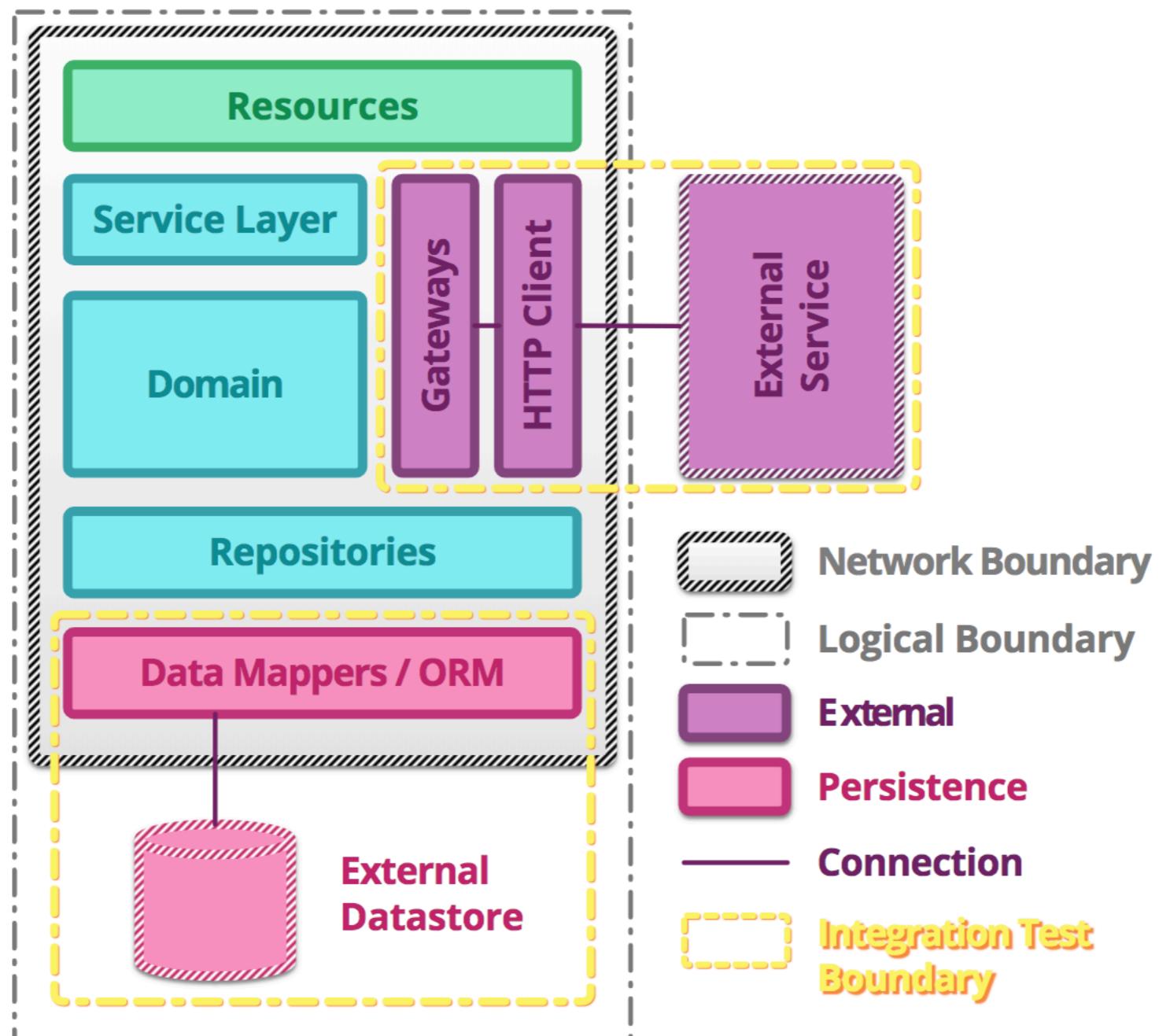




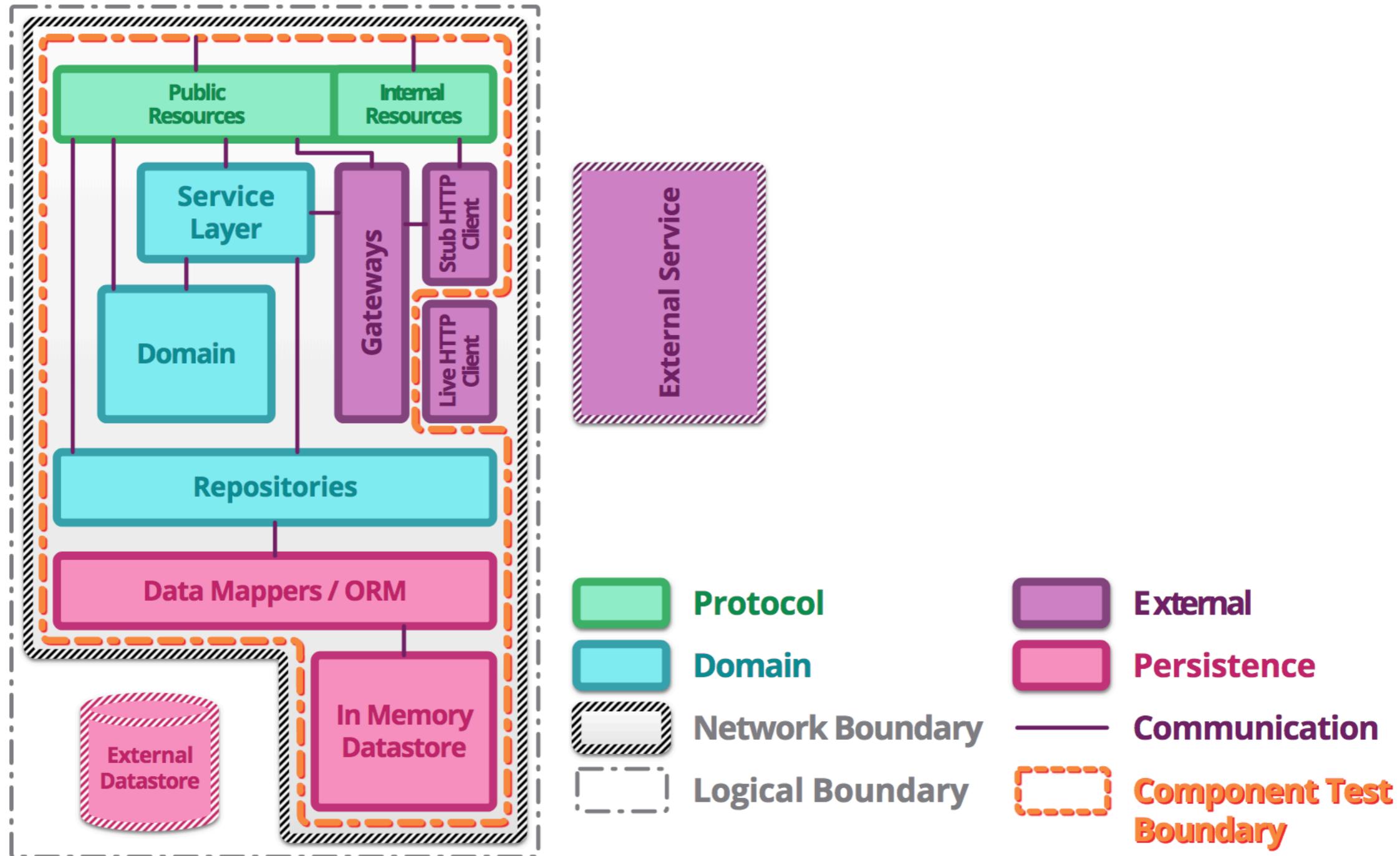
# Unit testing



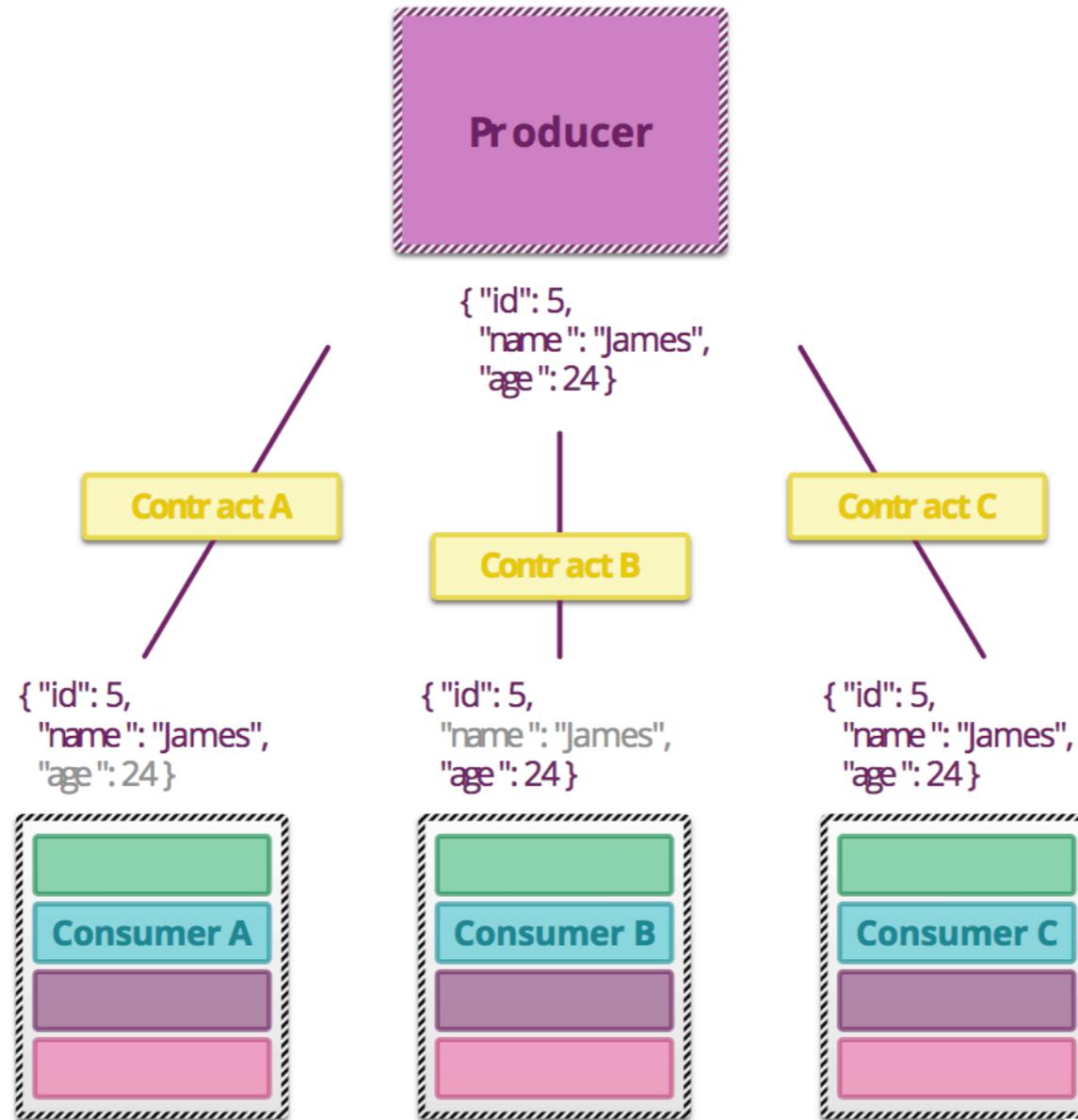
# Integration testing



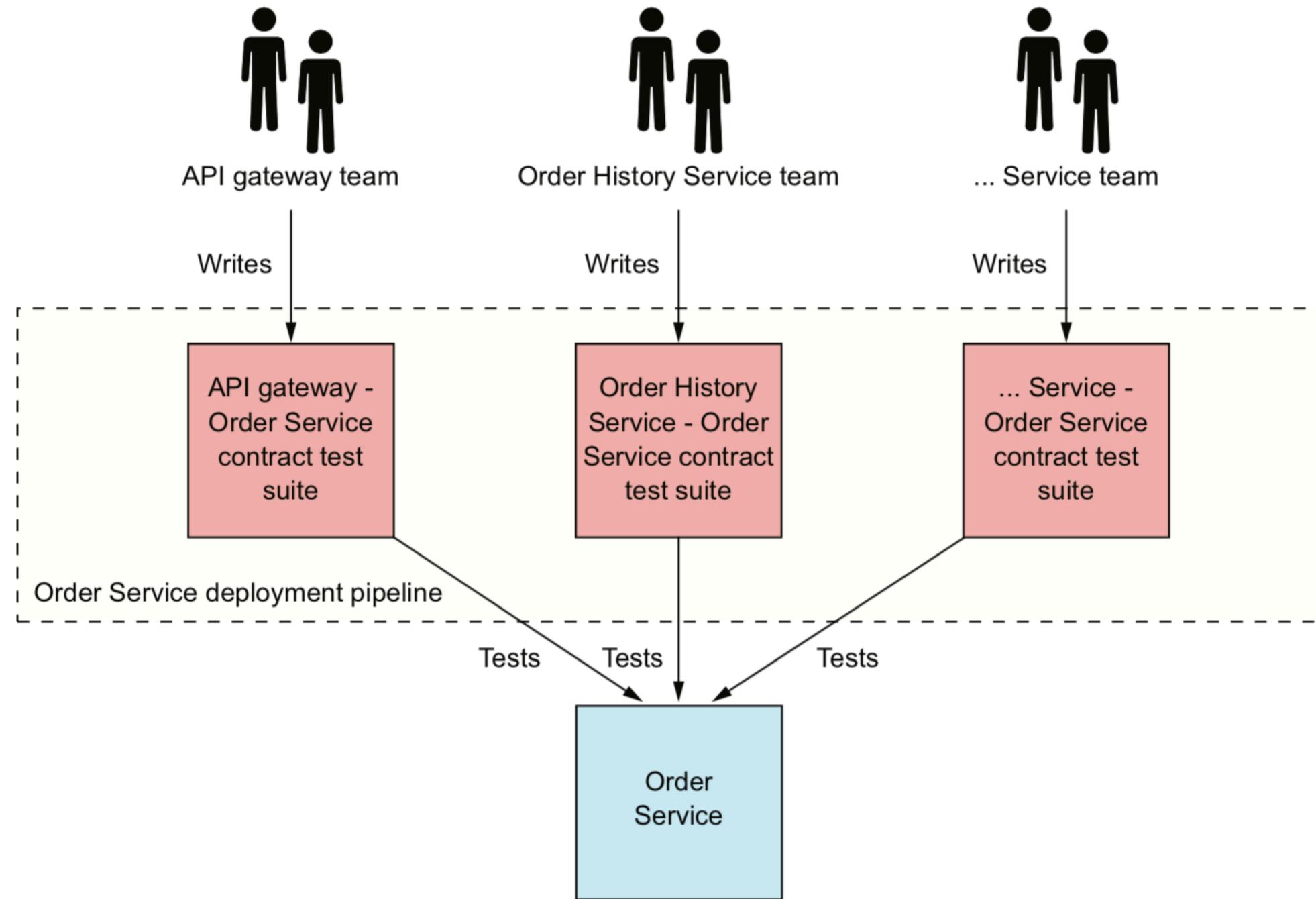
# Component testing



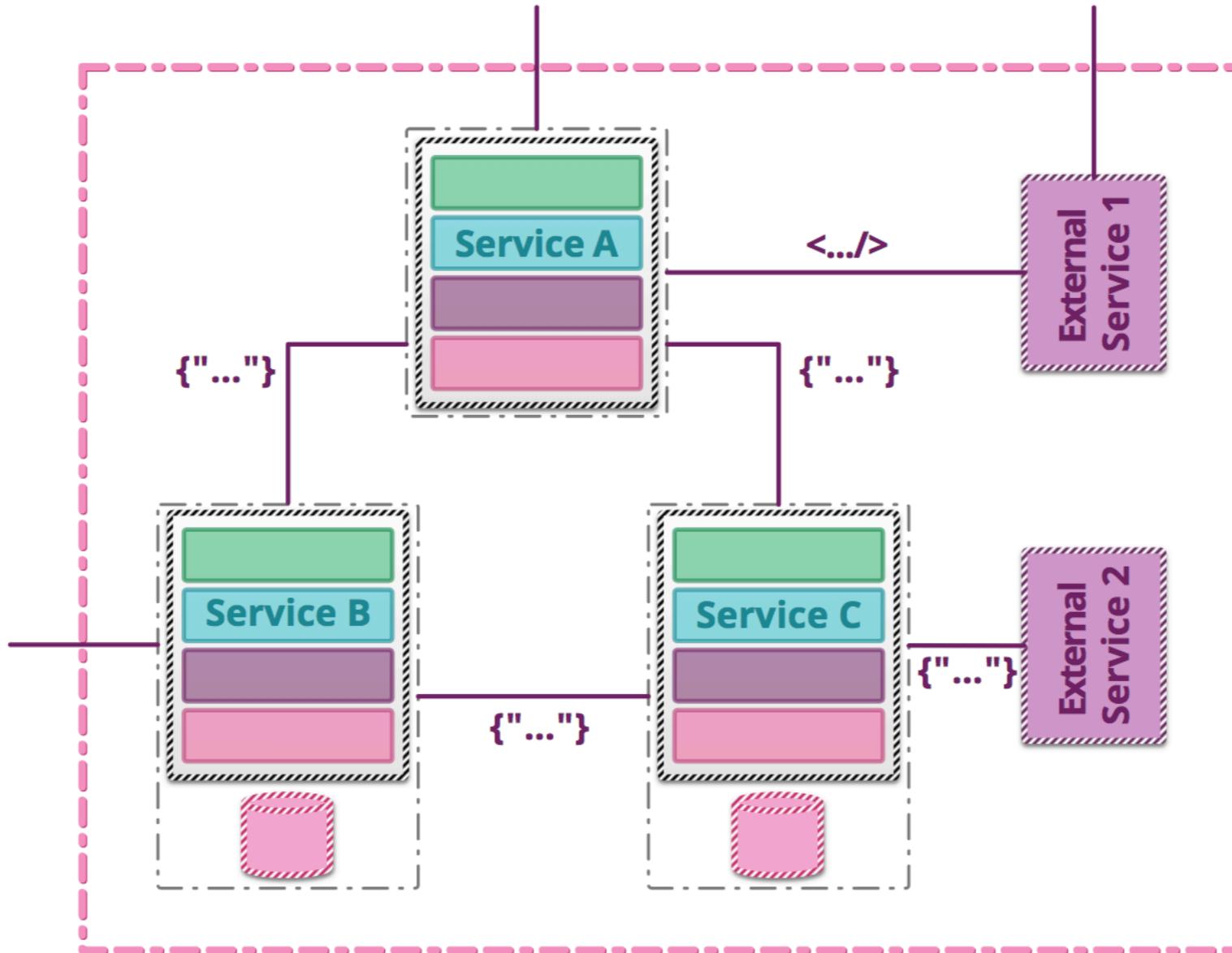
# Contract testing



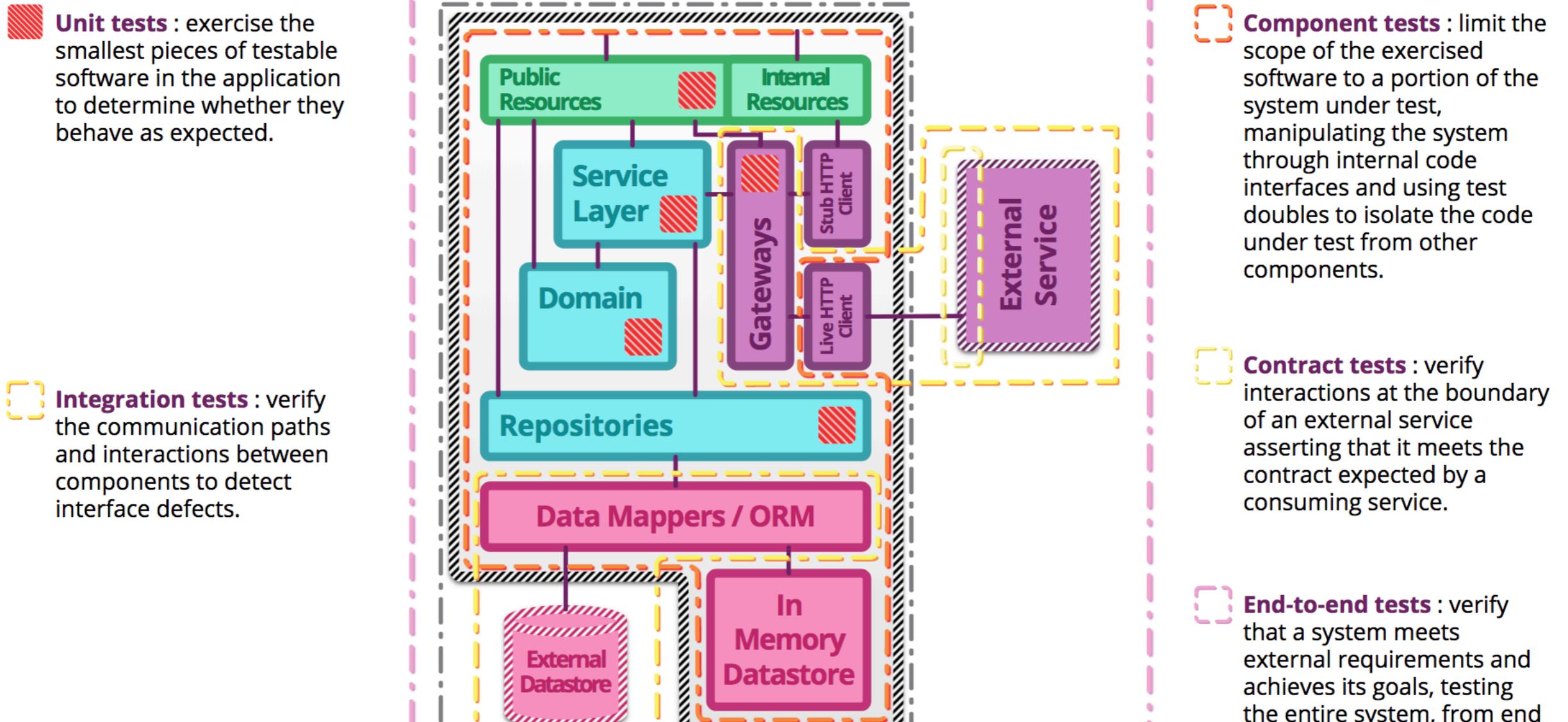
# Consumer Contract testing



# End-to-End testing



# Summary



# What is your testing strategy ?



# Workshop



# Microservices need automation



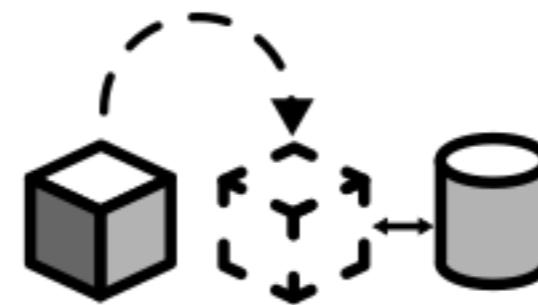
**Build**



**Test**



**Provide  
Infrastructure**



**Deploy**



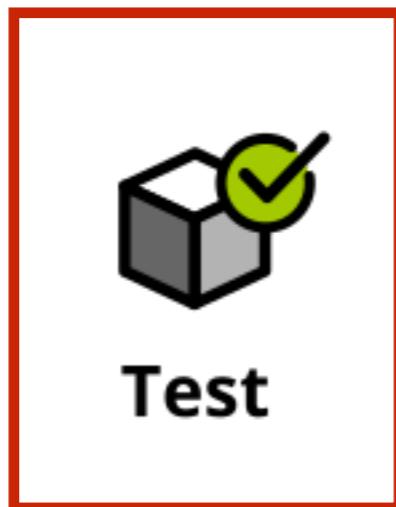
**Test  
More**



# Microservices need automation



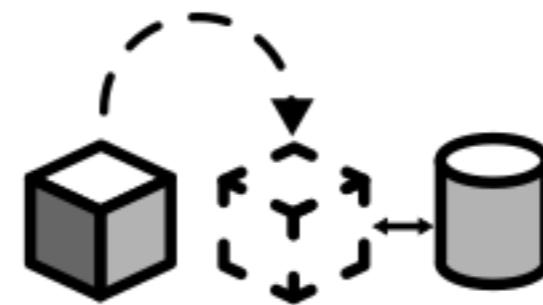
Build



Test



Provide  
Infrastructure



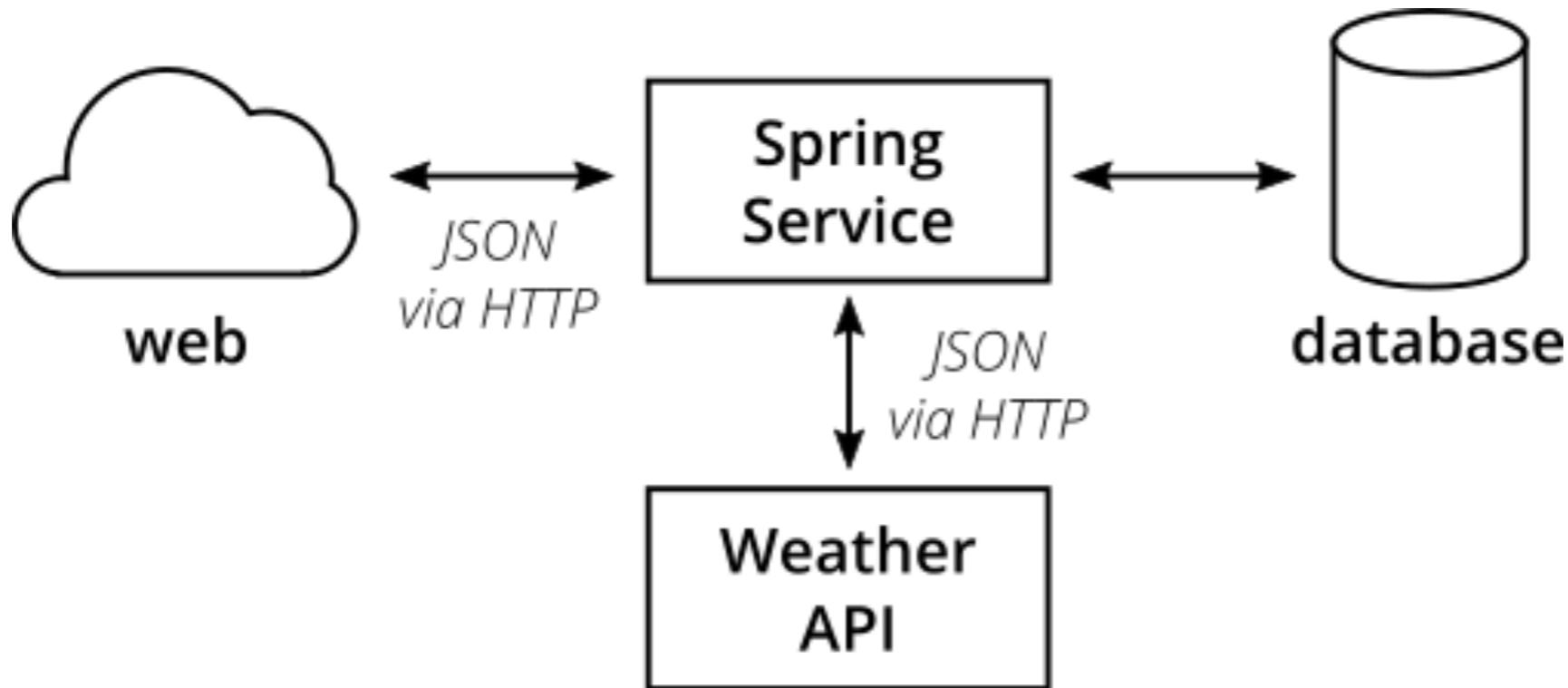
Deploy



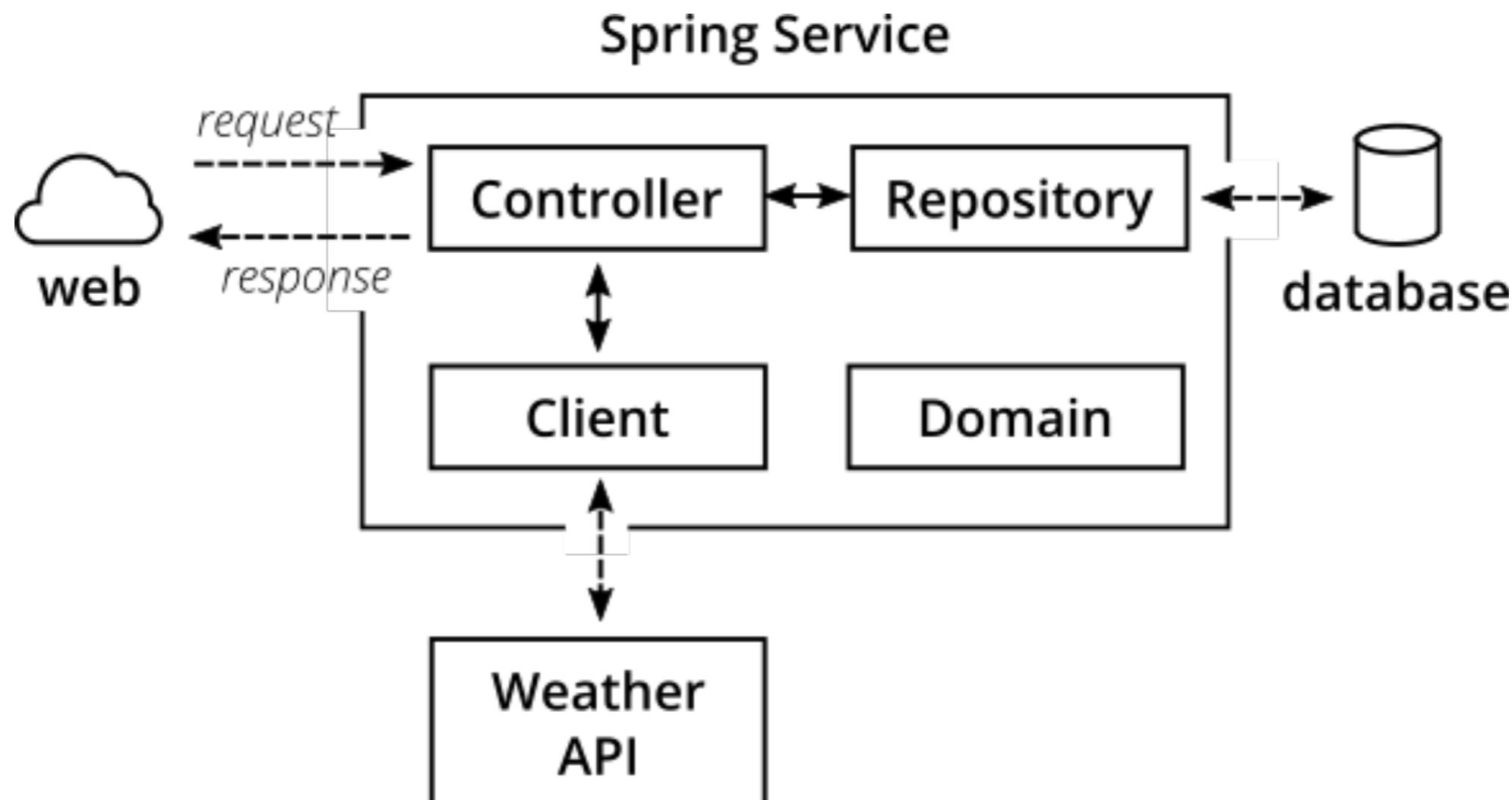
Test  
More



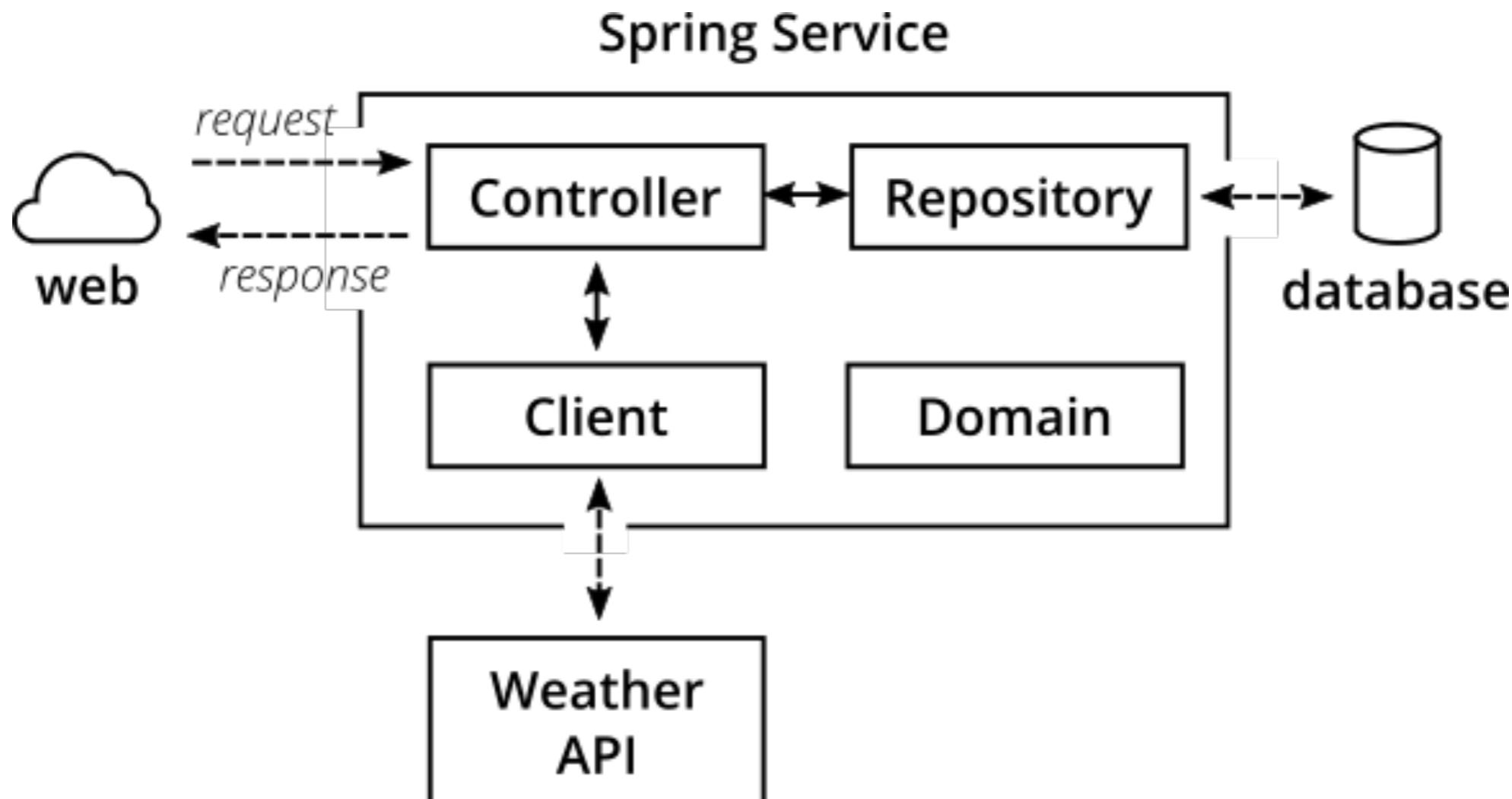
# Sample Application



# Internal architecture



# Internal architecture



<https://github.com/up1/demo-microservice-testing>



# Run all tests

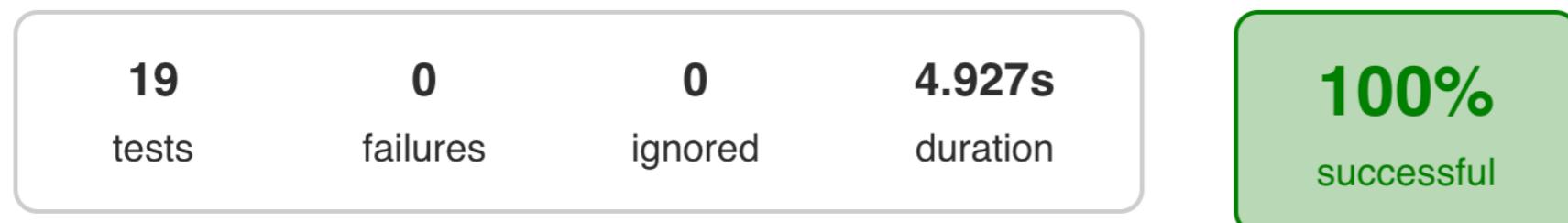
```
$gradlew test jacocoTestReport
```



# Test report

/build/reports/tests/test/index.html

## Test Summary



Packages

Classes

Package	Tests	Failures	Ignored	Duration	Success rate
<a href="#">example</a>	12	0	0	4.050s	100%
<a href="#">example.person</a>	1	0	0	0.285s	100%
<a href="#">example.weather</a>	6	0	0	0.592s	100%



# Code coverage report

/build/reports/coverage/index.html

---

 demo-microservice-testing

---

## demo-microservice-testing

Element	Missed Instructions	Cov.	Missed Branches	Cov.	Missed	Cxty
 <a href="#">example.person</a>		14%		0%	17	22
 <a href="#">example.weather</a>		64%		33%	17	27
 <a href="#">example</a>		92%		n/a	1	8
Total	200 of 406	50%	44 of 52	15%	35	57

---



# Run sample project

```
$set WEATHER_API_KEY=<data>  
$gradlew bootRun
```



# Endpoint of services

URL	Detail
<u><a href="http://localhost:8080/hello">http://localhost:8080/hello</a></u>	Hello service
<u><a href="http://localhost:8080/hello/&lt;lastname&gt;">http://localhost:8080/hello/&lt;lastname&gt;</a></u>	Get data from database
<u><a href="http://localhost:8080/weather">http://localhost:8080/weather</a></u>	Get data from REST APIs



# How to testing ?



# How to testing ?

Unit testing

Integration testing

Contract testing

End-to-End testing

