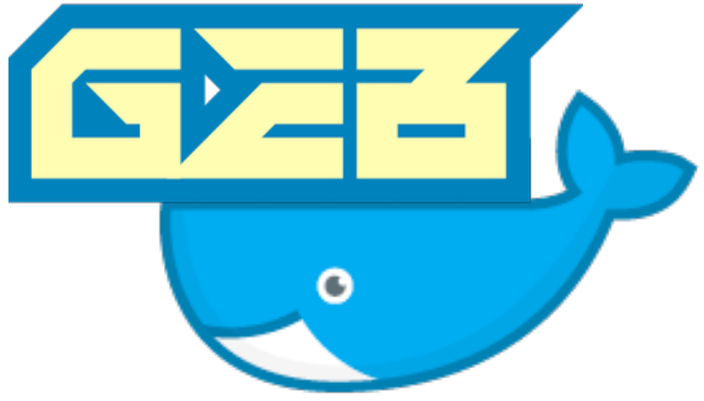
End-zu-End Tests mit

Docker  **Geb**

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[HACKERGARTEN]
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Auf dem Weg zu **C**ontinuous **D**elivery

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„Continuous Delivery measurably reduces both deployment pain and team burnout.“

– Jez Humble

https://www.continuousdelivery.com/evidence-case-studies/#research

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End-to-End ?

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User Experience

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Legacy Software

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Varianten in Software

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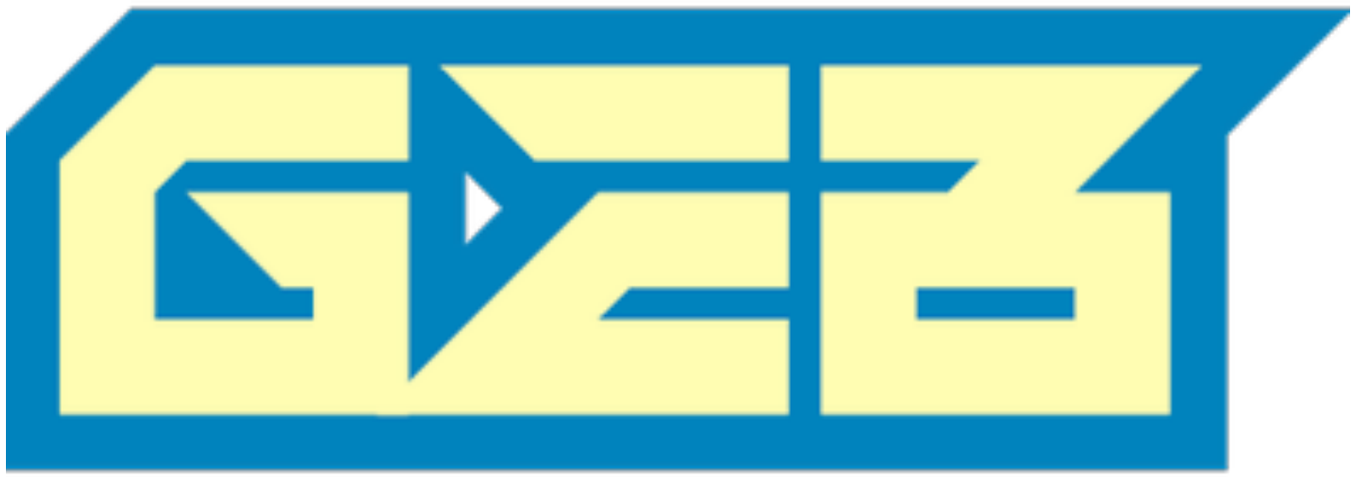

- Groovy DSL on top of Selenium/WebDriver
- IDE support: syntax & debugging
- PageObject, Modules

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```
import geb.Browser

Browser.drive {
    go "http://myapp.com/login"

    assert $("h1").text() == "Please Login"

    $("form.login").with {
        username = "admin"
        password = "password"
        login().click()
    }

    assert $("h1").text() == "Admin Section"
}
```

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waitFor { }

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waitFor { }

```
package demo

import geb.Browser

Browser.drive {
    go "https://mynethome.de/animation.html"

    assert title == "Animation For Waitfor Example"

    $("div#app button").click()
    waitFor { !$("div.modal").hasClass("fade-enter-active") }

    $("div.modal button").click()
    waitFor { !$("div.modal").hasClass("fade-leave-active") }

}
```

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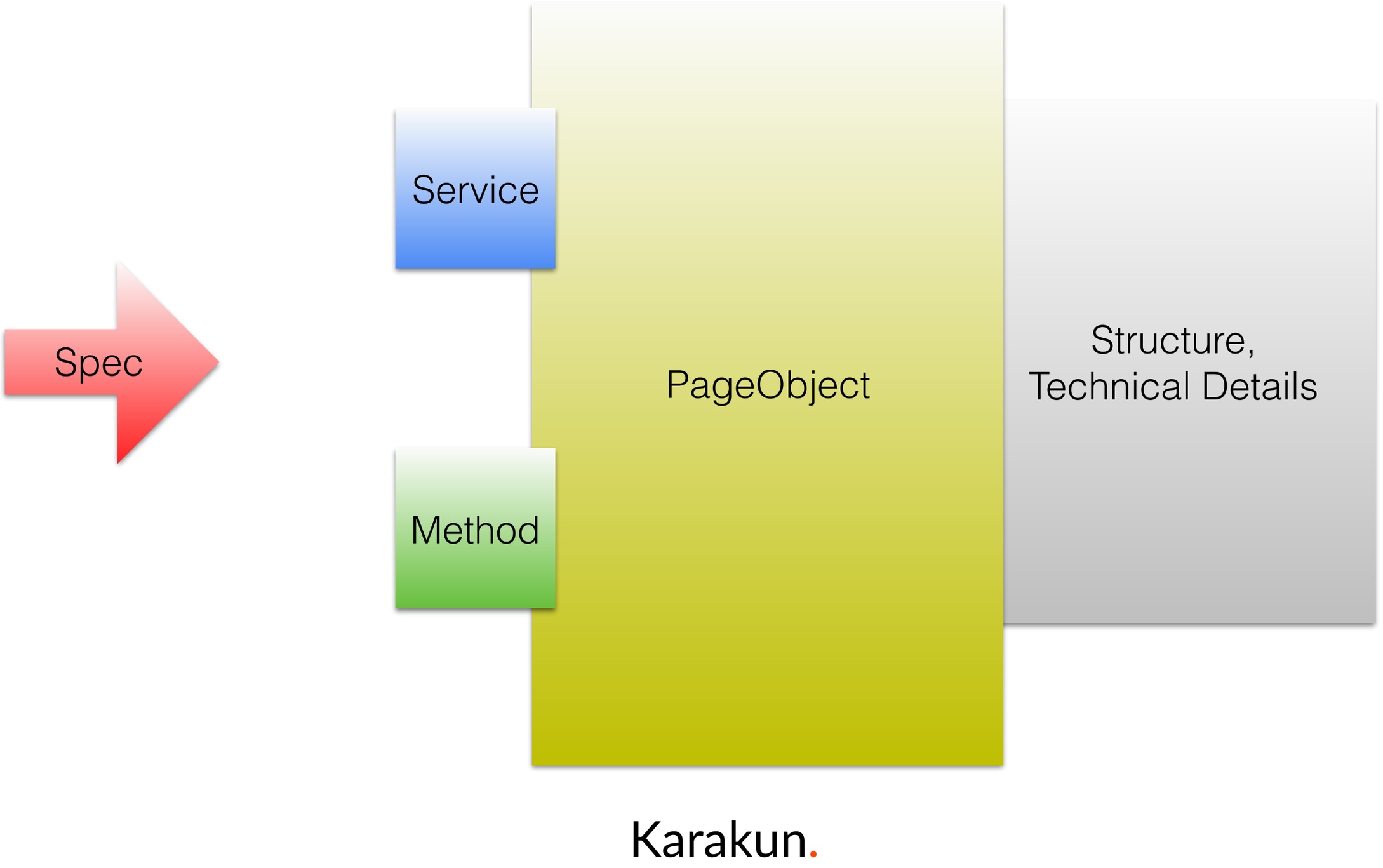
PageObject



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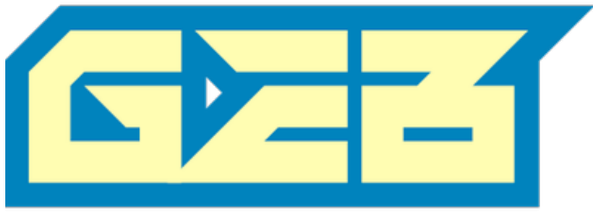
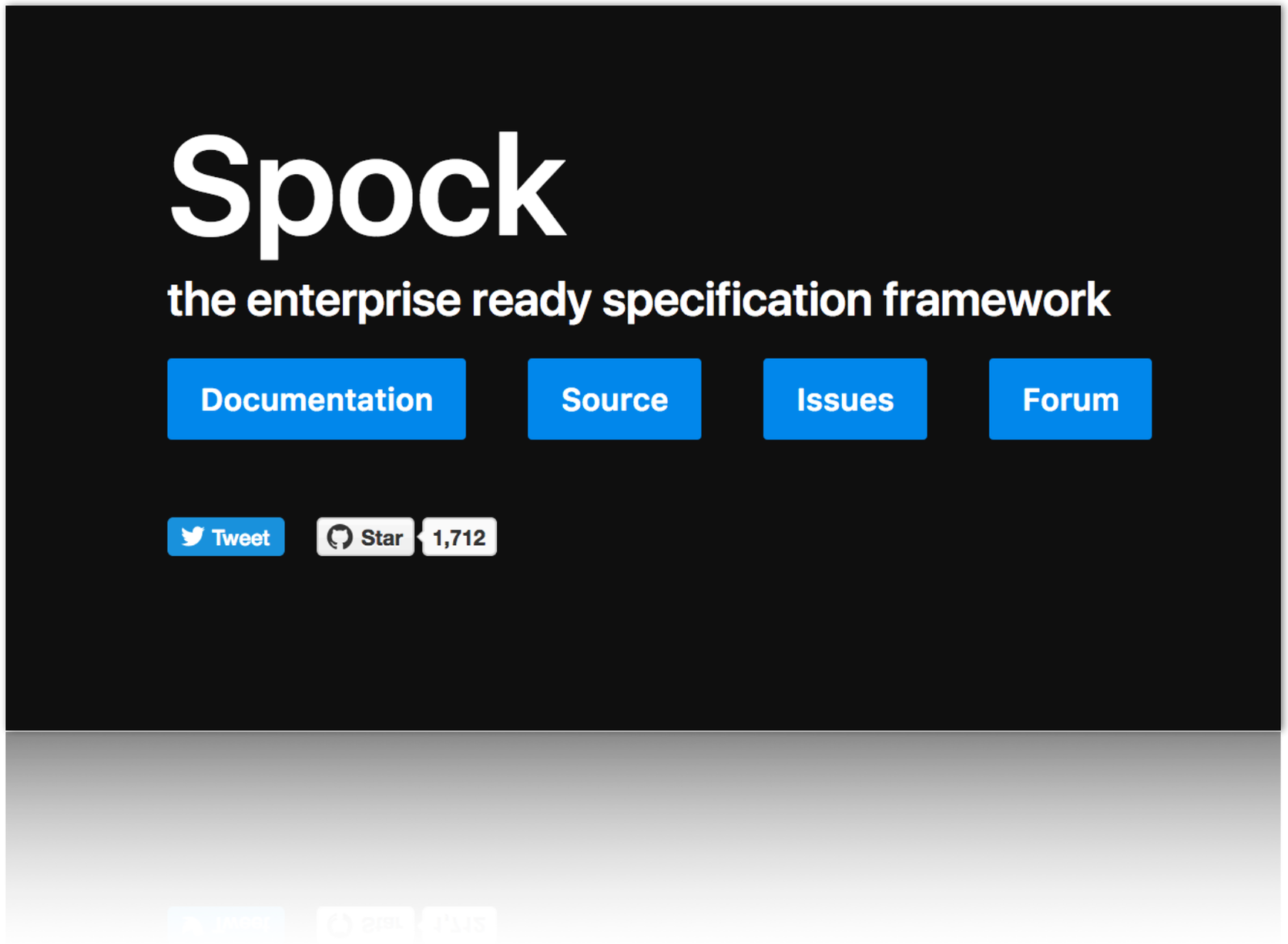


+ Spock



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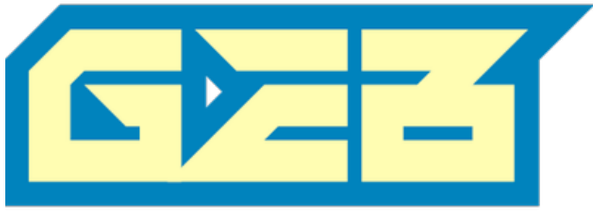

+ Spock

```
given: "an empty bank account"
// ...

when: "the account is credited $10"
// ...

then: "the account's balance is $10"
// ...
```

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+ Spock

```
@Stepwise
class RegistrationWorkflowSpec{

    def "Navigating to registration form displays form with account-plan options"() {
        given: "homepage is shown"
        // code goes here

        when: "clicking the menu to start the registration"
        // code goes here

        then: "the registration form is shown"
        // code goes here

        then: "and account-plan dropdown is filled with three options"
        // code goes here
    }

    def "submitting the filled in form brings up the confirmation page"() {
        when: "the form is filled with valid values and submitted"
        // code goes here
```

1

2

+ Spock

```
@Unroll
def "tax calculated for #statename: given amount (#amount) == #calculatedTax"() {
    expect:
@Unroll
def "tax calculated for #statename: given amount (#amount) == #calculatedTax"() {
    expect:
        def result = testee.calculate(statename, Double.valueOf(amount as String))
        def expected = Integer.valueOf(calculatedTax as String)
        expected == result

    where:
        [statename, amount, calculatedTax] << getResourceAsStream("test.csv").readLines()*. split(",")
}
```

```
TaxSpec (demo)                                                    3s 457ms
  OK  tax calculated for ukraine: given amount (400) == 480       3s 164ms
  !   tax calculated for switzerland: given amount (500) == 540   197ms
  OK  tax calculated for germany: given amount (200) == 238       96ms
```

```
Condition not satisfied:

expected == result
|        |  |
540      |  600.0
         false
```

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Non-blocking Tests?

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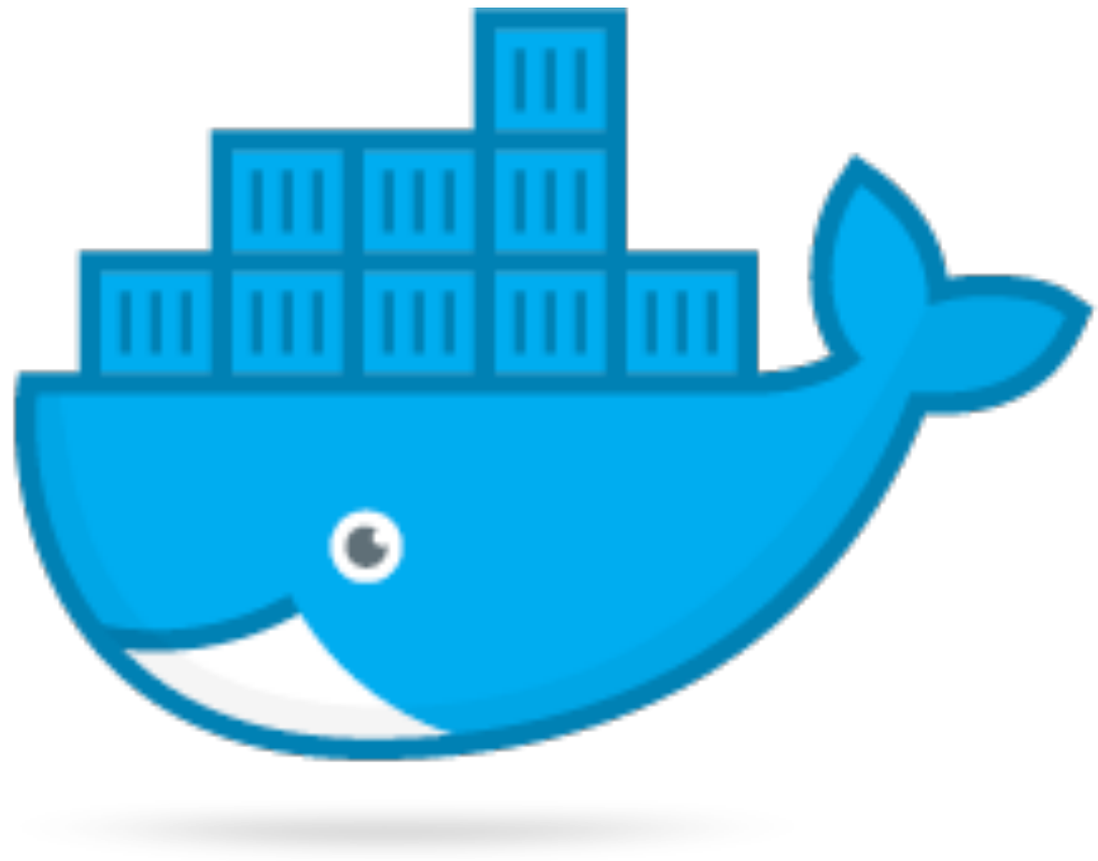
Docker



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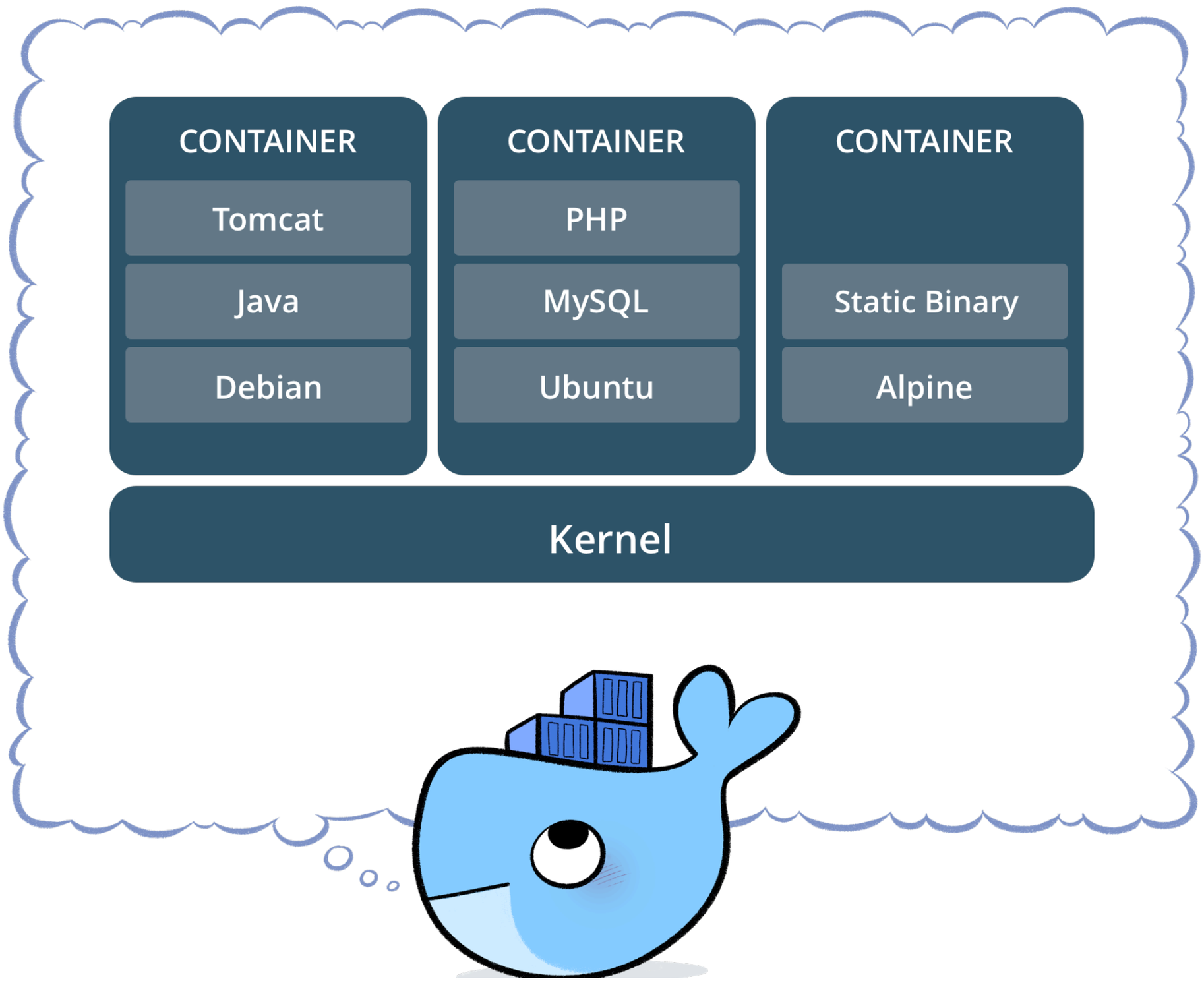
CONTAINER
Tomcat
Java
Debian
CONTAINER
PHP
MySQL
Ubuntu
CONTAINER
Static Binary
Alpine
Kernel

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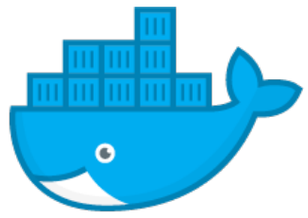
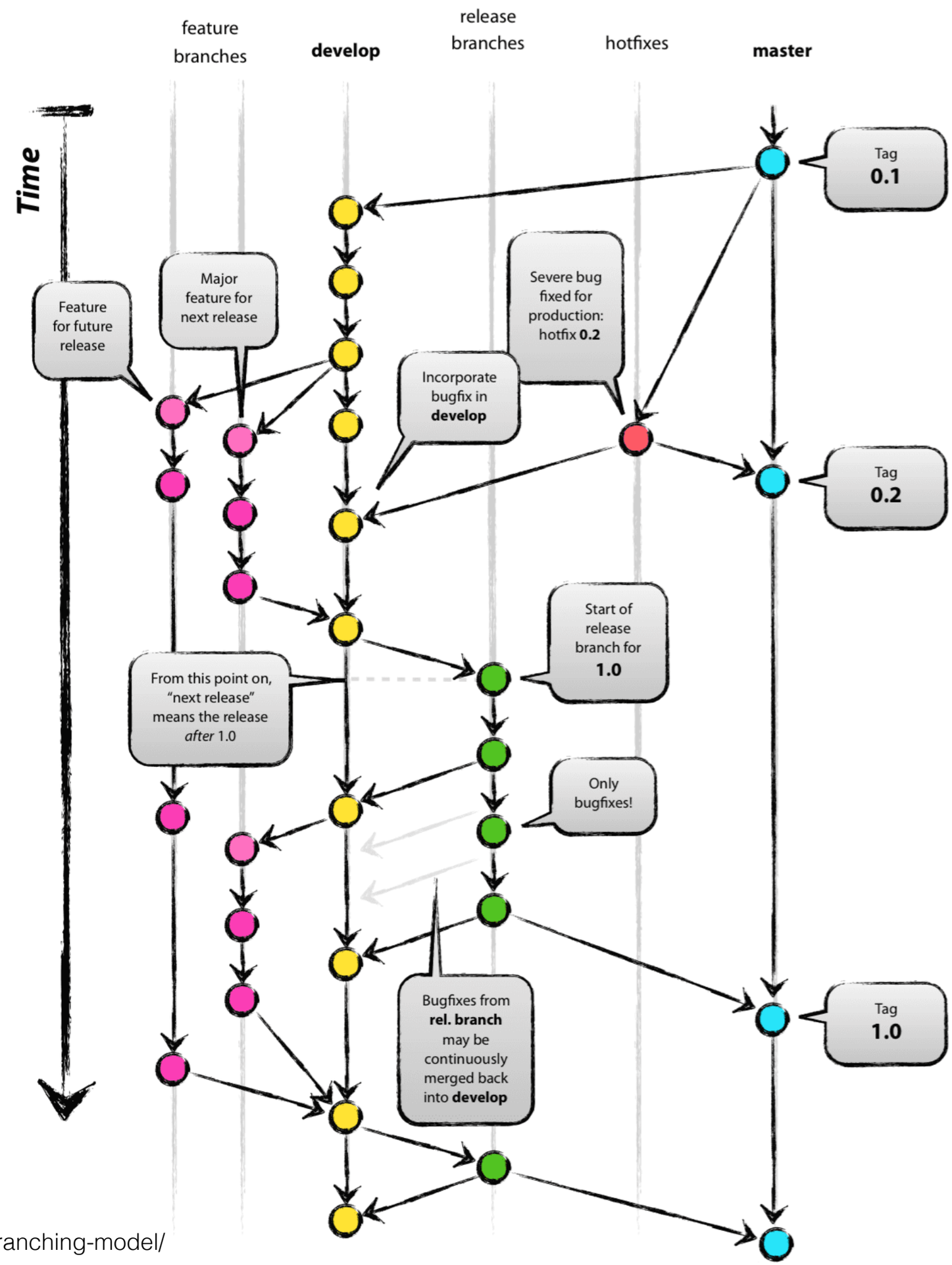
Docker



- Docker WebDriver Selenium Container
- Xvfb: X virtual frame-buffer
- Chrome, Firefox
- Video recording



http://nvie.com/posts/a-successful-git-branching-model/

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Automation!

Docker&Geb + CI

Demo

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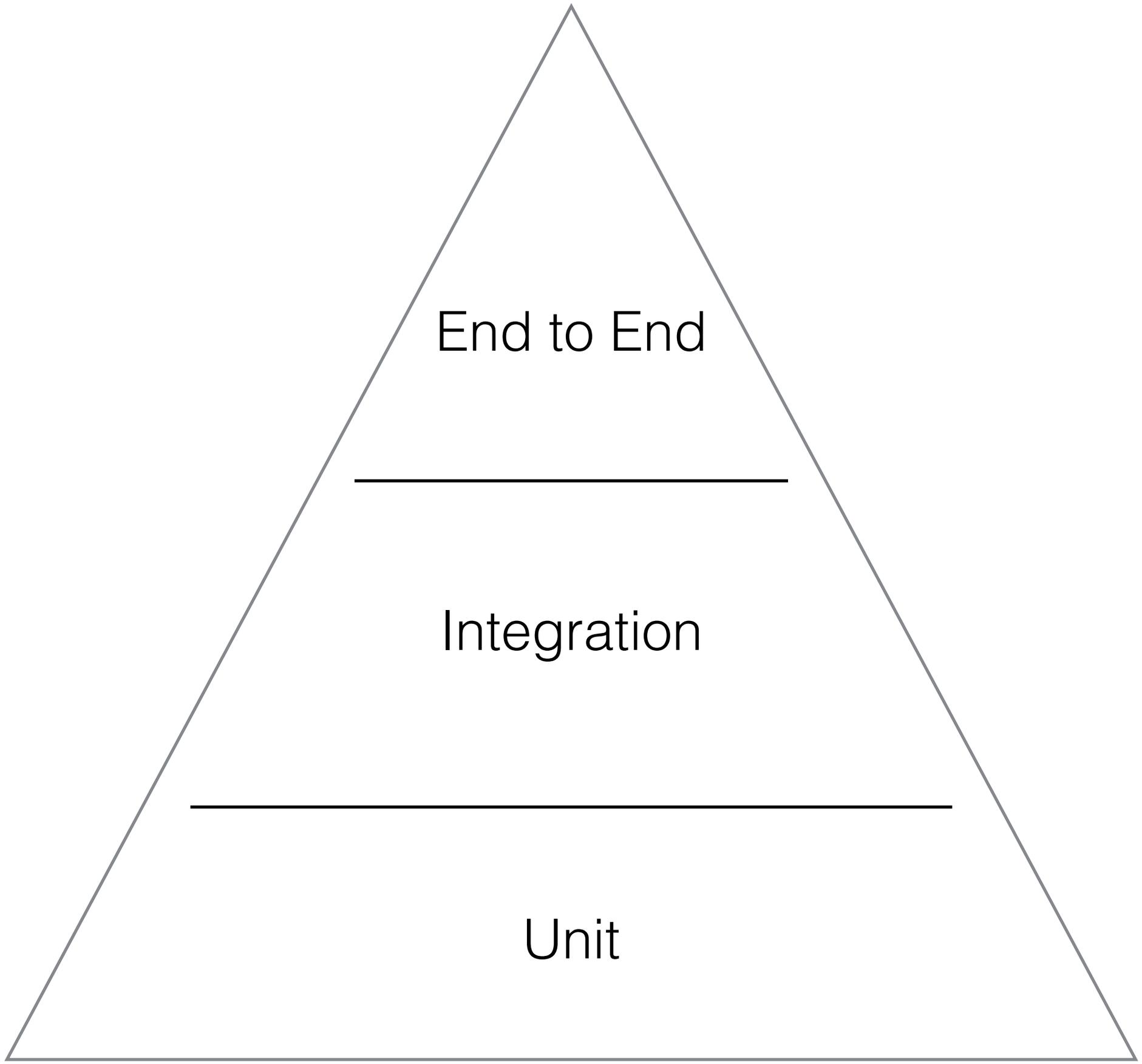

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- E2E ersetzen keine anderen Tests - sie sind die Vervollständigung der Test-Suite!

- E2E sollten als finaler „passt alles?“ Test betrachtet werden

- „Acceptance Tests“

Am Horizont…

- Living Documentation:

Geb/Spock Specs + AsciiDoctor

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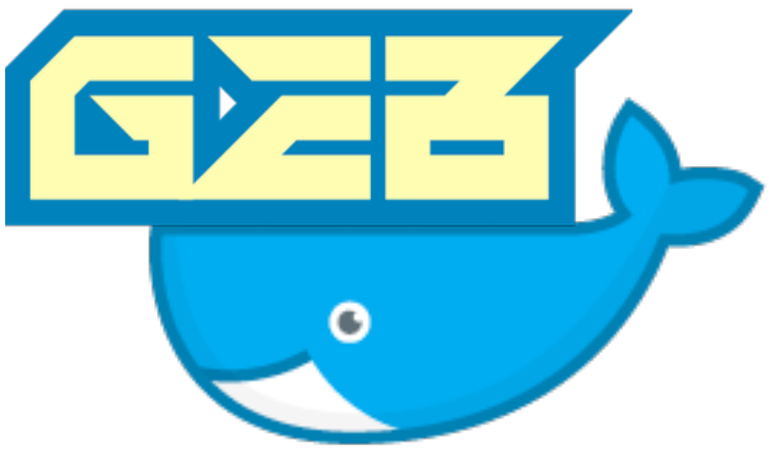

Happy with End-to-End testing

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