

# Testing mit Angular

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Thomas Gassmann (@gassmannT)



@gassmannT

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makes IT easier. ■ ■ ■

# ■ Who are we?



**Thomas Gassmann**

Senior Consultant & Trainer

Trivadis AG

[thomas.gassmann@trivadis.com](mailto:thomas.gassmann@trivadis.com)

@gassmannT

Passionate about Angular, Ionic,  
ASP.NET

# ■ Content

**1. Introduction**

**2. Unit Test**

**3. e2e**

**4. Outro**

# ■ What kind of tests exists?

## Unit Tests

- Test certain functions or units of code
- Super fast
- Easy to write

## e2e Tests

- Runs the real application and simulate the users behavior
- Very slow
- Very fragile

# ■ Test Strategy

- Use the smallest test type possible
- Write readable tests
- Test all the time
- Make tests fail

# Tools & Setup

## ■ Tools





@JohannesHoppe



## ■ Tools





- Test runner
- Test code on various browsers
- Integrate with various continuous integration services like Jenkins



- Behavior-driven development framework
- Fast
- Dependency free



# Protractor

end to end testing for AngularJS

- End-to-end test framework
- Built on top of Selenium WebDriverJS
- Runs in a real browser
- Test like a user

## ■ Insiders' tip



### Wallaby.js

- Integrated Continuous Testing Tool for JavaScript

# Demo

# Unit Tests

## ■ Definition

**Unit Testing** is a level of software **testing** where individual functions of a software are tested. The **purpose** is to validate that each function of the software performs as designed.



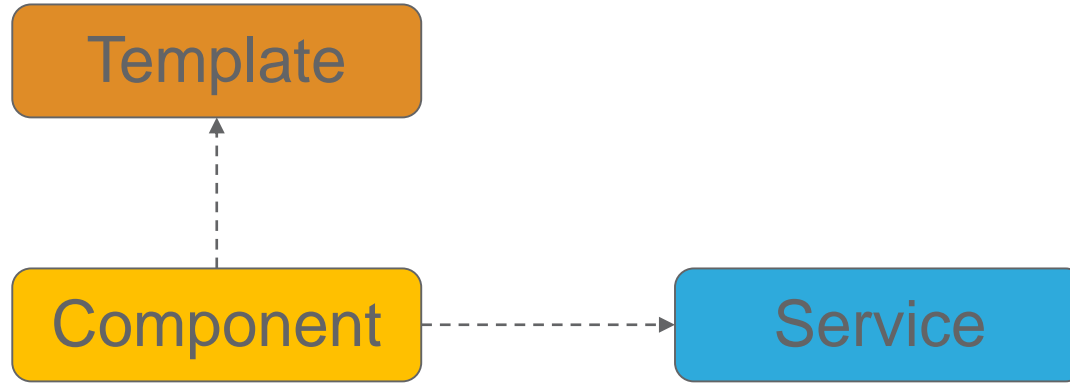
# ■ Unit Test vs. Integration Test

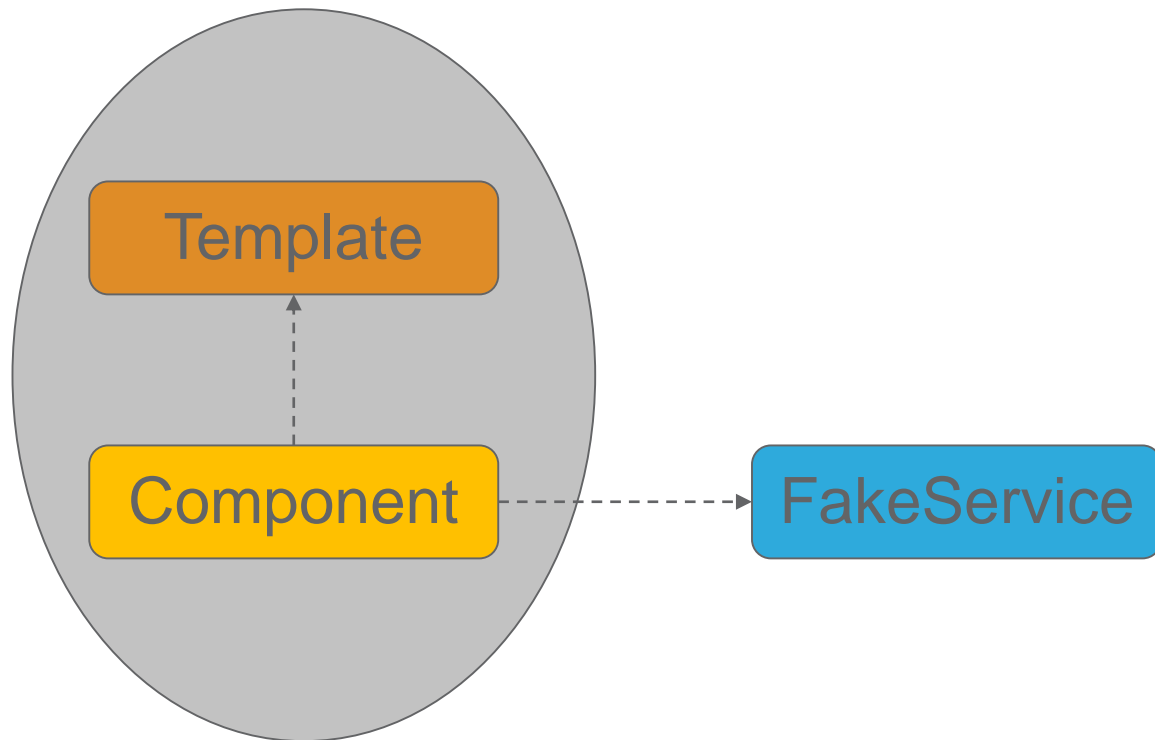
## Unit Test

- Test in isolation, without external resources (e.g. templates)
- Just a simple function

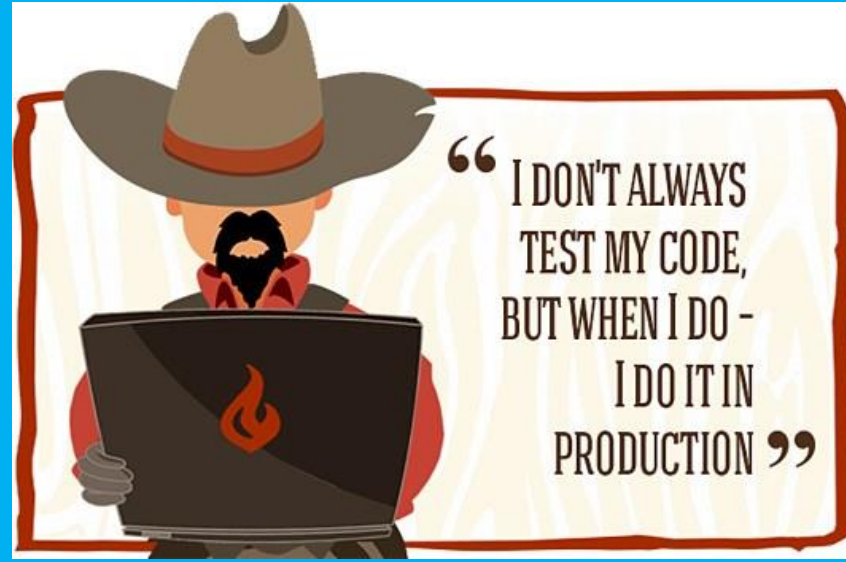
## Integration Test

- Test with external resources (e.g. templates)





It helps you catch defects **before**  
releasing software



## ■ Basics

```
describe('Test Suite', () => { //Test Suite
    it("A single spec", () => { // Spec or test

    });
});
```

## ■ Basics

```
describe('Test Suite', () => { // Test Suite
  it("A single spec", () => { // Spec or test
    // Arrange
    let component = new AppComponent();

    // Act
    component.ngOnInit();

    // Assert
    expect(component.title).toBe("hallo thomas");
  });
});
```

# Demo

# E2e Tests



## ■ e2e Tests

- Test the entire app as a whole
- Simulate a real user
- With protractor

# Demo

## ■ How to start

- Angular CLI
- Our Demos
- Documentation on Angular Docs
- Ask us 😊

# Demos and slides



[github.com/gassmannT/Angular-WDC](https://github.com/gassmannT/Angular-WDC)

# Thank you – Besten Dank

Thomas Gassmann

thomas.gassmann@trivadis.com

@gassmannT

Tel. +41 58 459 52 81

