

ArchUnit

Test your Software Architecture!

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Who of you is doing
Microservices?

A photograph of the ancient stone monument Stonehenge, located in Wiltshire, England. The image shows several large, upright sarsen stones standing in a circular arrangement, some with smaller stones resting on top. The stones are set against a backdrop of a bright blue sky filled with scattered, fluffy white clouds. In the foreground, there is a well-maintained green lawn. A few small groups of people can be seen walking around the site, providing a sense of scale to the massive stones.

Who of you is doing a
Modular Monolith?



Who of you is doing a
Big Ball of Mud?

(Aka shitty Monolith)

ArchUnit is for everyone

(Except for the big ball of mud)

ArchUnit

Introduction

- C#: <https://github.com/TNG/ArchUnitNET>
- Java: <https://github.com/TNG/ArchUnit>
- Testing framework to specify and assert rules
for your software architecture

The What?

- Define rules as “unit tests”
 - To test the architecture
 - Of your services/modules/component whatever

The Why?

- Keeps the whole system in a predefined schema
 - Easier to understand, modify and extend
 - Enables easy parallel development by different teams
 - While keeping consistency
 - Standardisation vs. Autonomous Teams

Time for some Action

Step 1

Load Architecture



```
private static readonly Architecture Architecture =  
    new ArchLoader().LoadAssemblies(typeof(ExampleClass).Assembly).Build();
```

Step 2

Define Layers



```
private readonly IObjectProvider<IType> ApiLayer =  
    Types().That().ResideInAssembly(".Api", useRegularExpressions: true).As("API Layer");  
  
private readonly IObjectProvider<IType> CoreLayer =  
    Types().That().ResideInAssembly(".Core", useRegularExpressions: true).As("Core Layer");
```

Step 3

Rules!

- Define your rules
- And test your architecture

Nice story, show me the code!