

Building Startup Systems





Agenda

Scheduling update! No Class Wed Sep 13th. Extending to Sep 27th.

- Review
- Build some RESTful endpoints
- CircleCI
- Docker
- AWS ECS

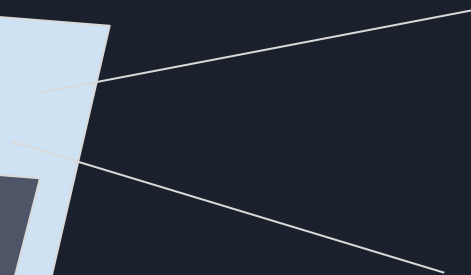


Last Time

- Git setup
- RESTful design
- Cloned and ran the **skeleton** project

00. The Goal

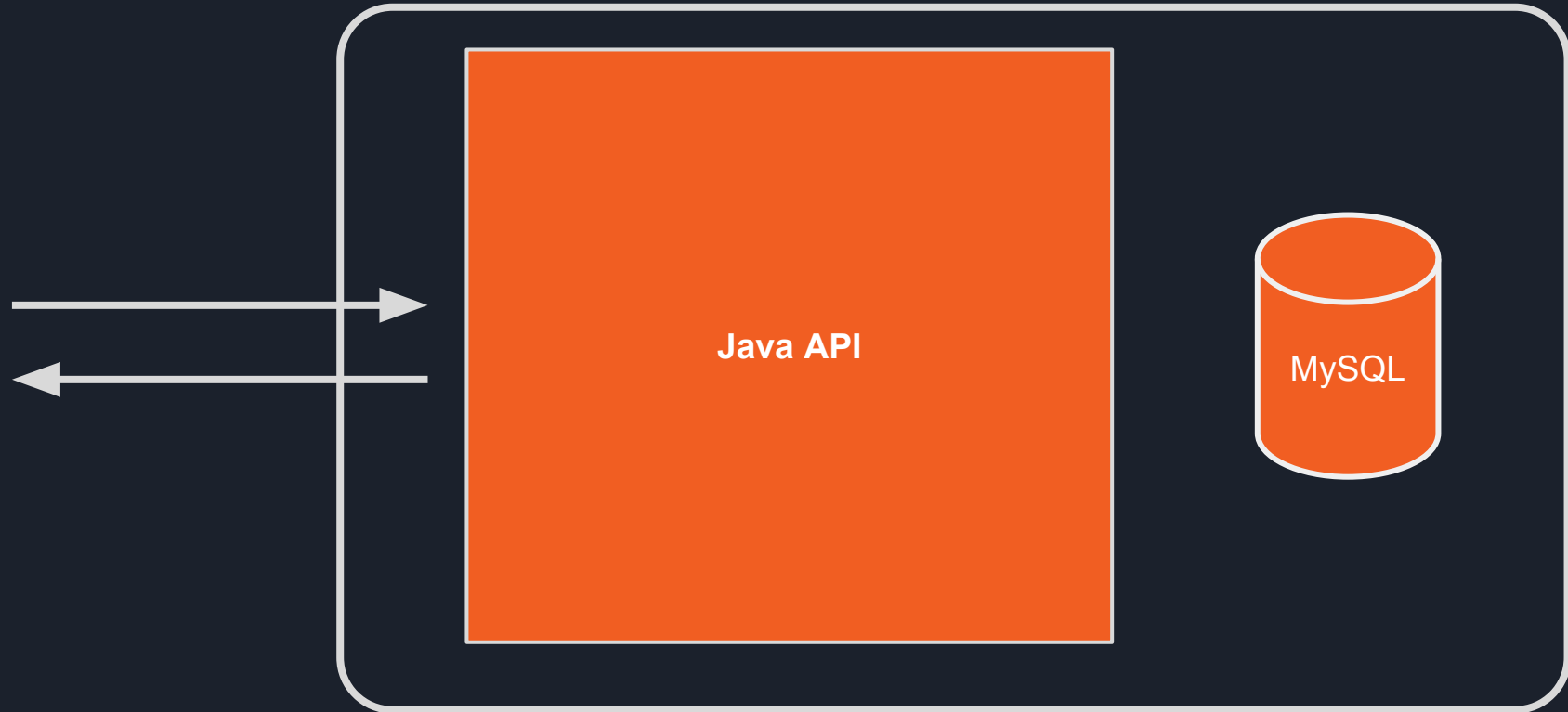




01. Build a RESTful API



Backend Architecture





Backend Architecture



The diagram illustrates a backend architecture. A large orange rectangle represents the application logic, containing a function signature and body. A grey arrow points into the rectangle from the left, and another grey arrow points out of the rectangle to the left. To the right of the rectangle is an orange cylinder representing a MySQL database, labeled 'MySQL'.

```
ResponseType f(RequestType req) {  
    ...  
    return responseObj  
}
```

MySQL



Backend Concepts

API Object

An class representing a structured JSON Request or Response

Controller

A class responsible for handling HTTP requests

DAO

A class responsible for serialization of data to Relational DB

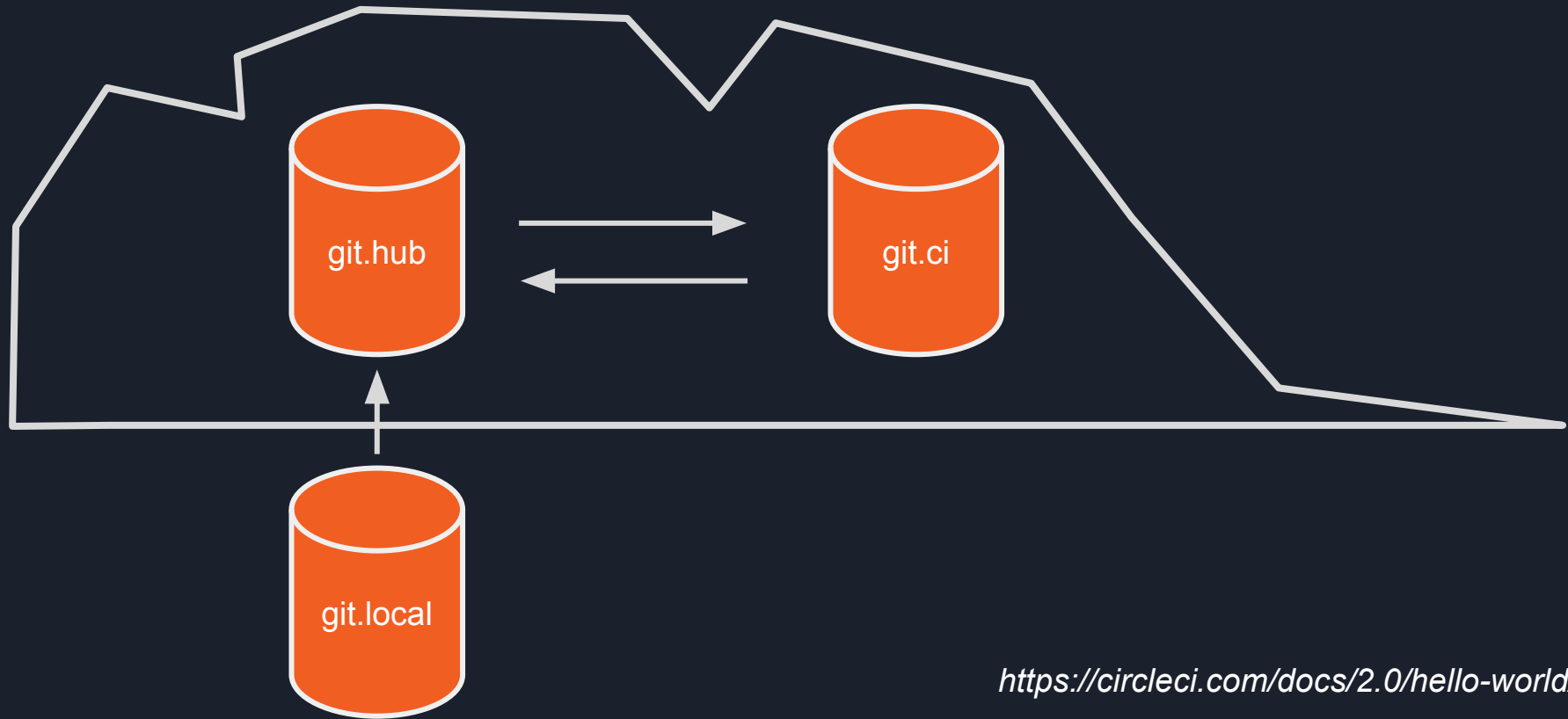
JOOQ

A Java library providing an SQL-like DSL for manipulating data

02. Testing and CI



CircleCI Tests your Code

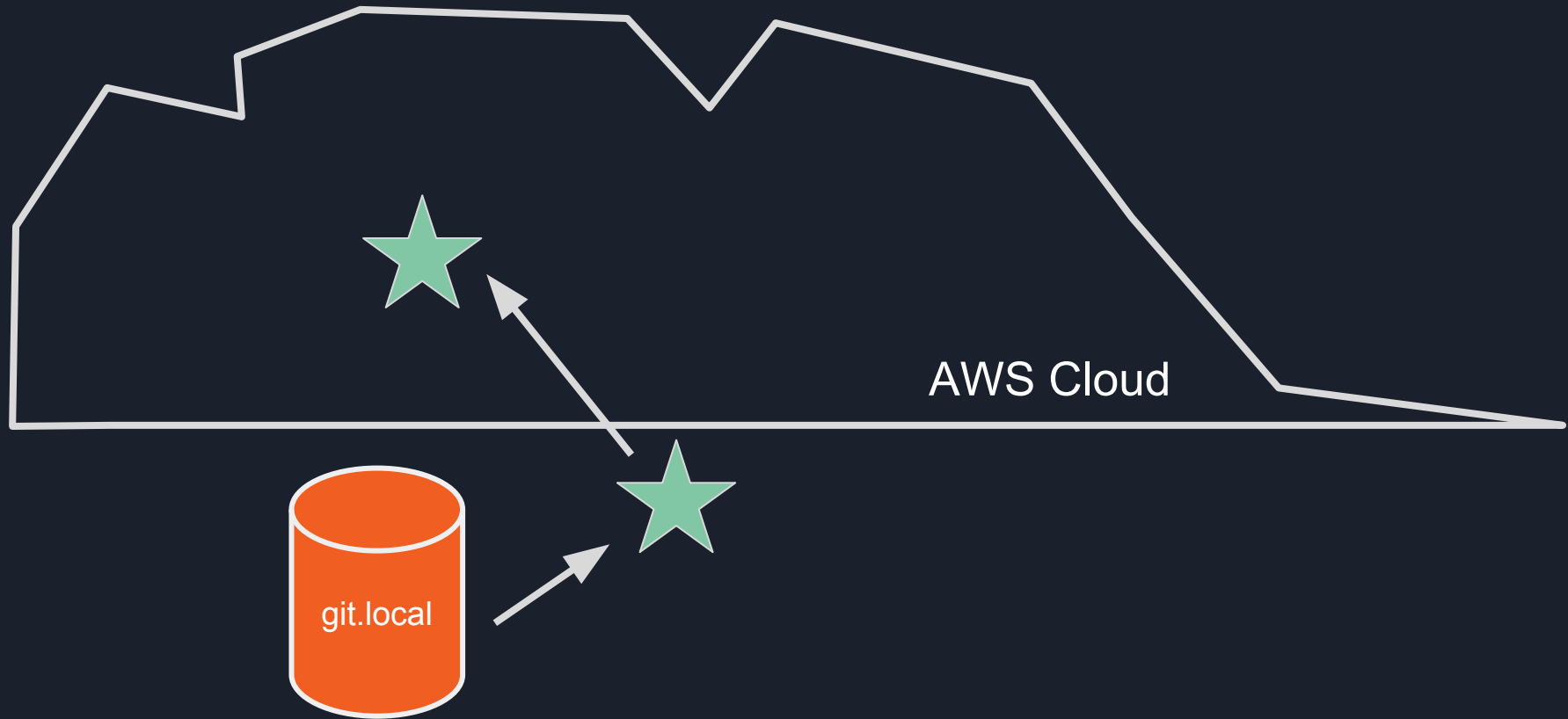


<https://circleci.com/docs/2.0/hello-world/>

03. Containers



Docker Images are a Deploy Artifact





An Image is an executable Linux + App code



**Linux Distribution
Software**

User software

Linux Kernel