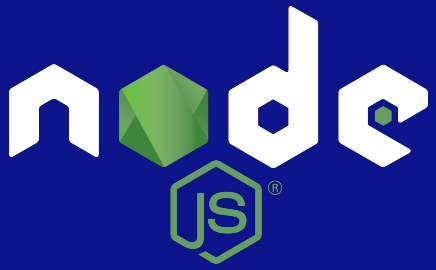
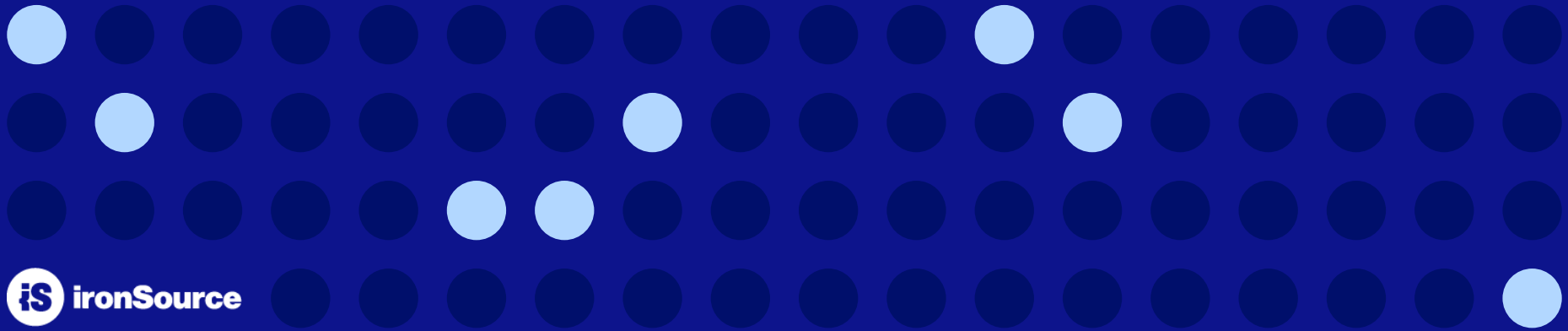
Node.js Monthly Meetup



June 2019



ironSource

Who we are

Daniel Singer

Senior Software Engineer
ironSource infra team

Hates ice cream

github.com/zigius

Rami Moshe

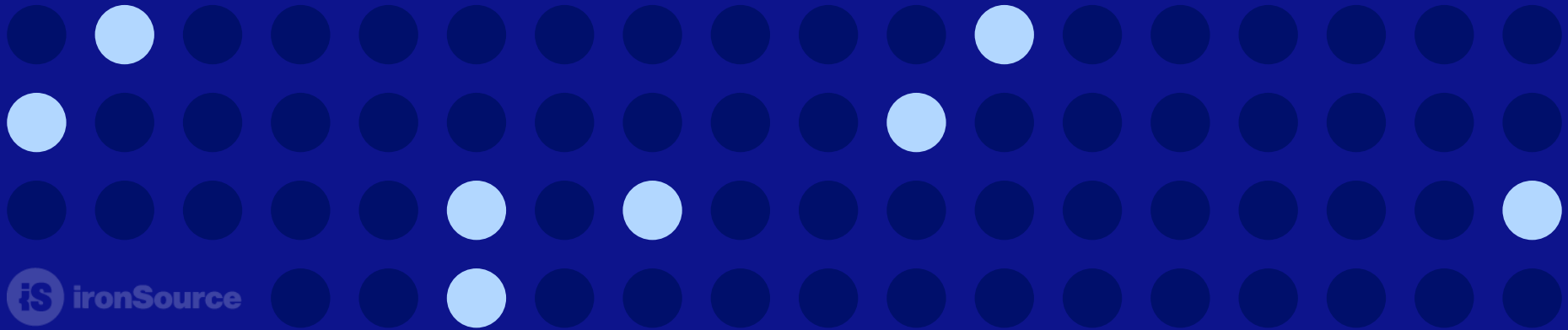
Senior Software Engineer
ironSource infra team

Loves to REST

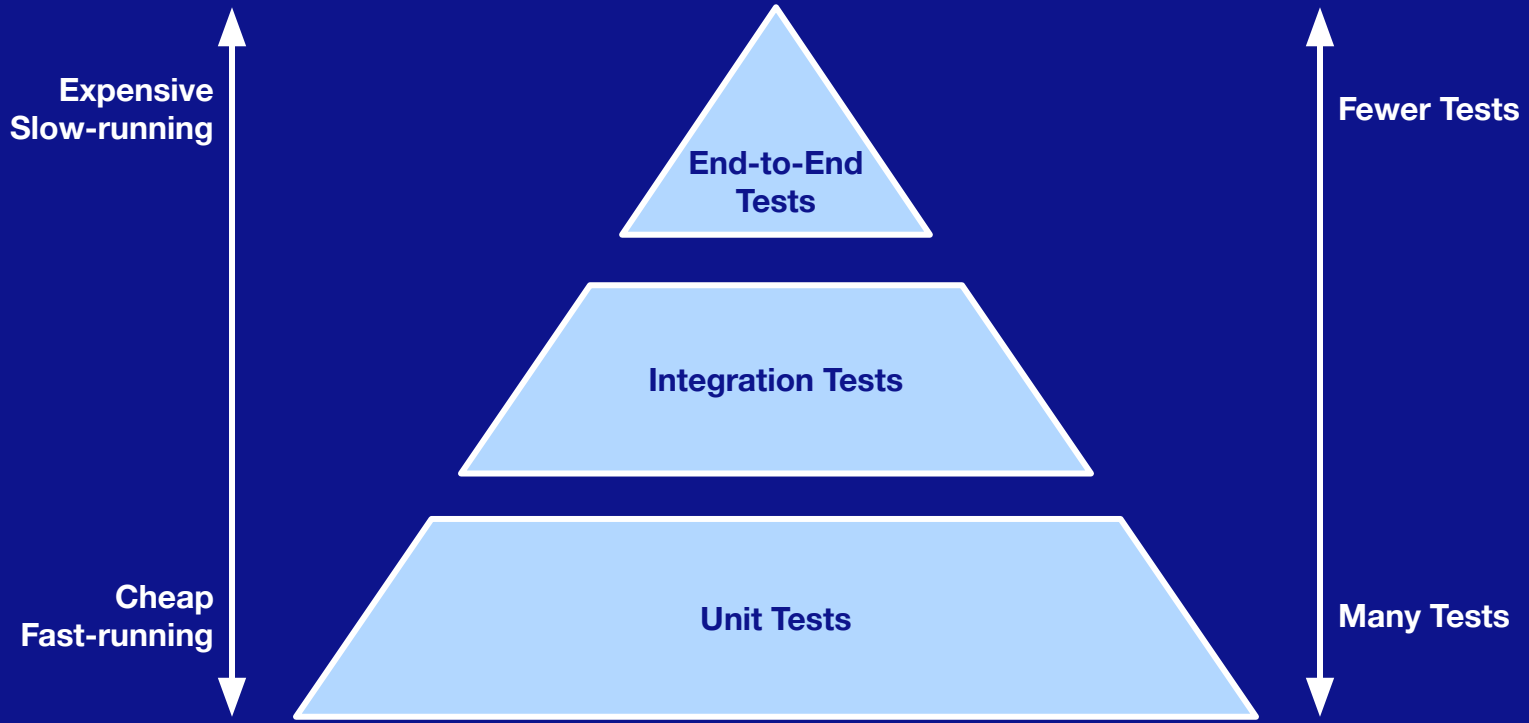
github.com/ramimoshe

Previously on node.js Meetup

Tests? Why?



Basic Testing Pyramid



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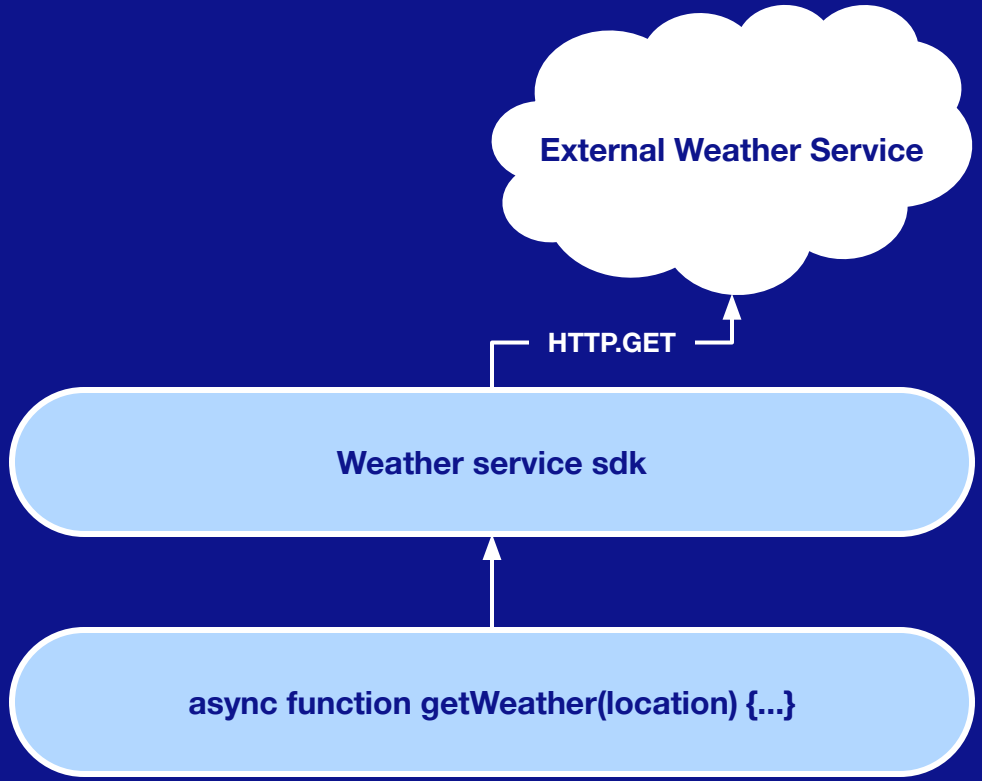
Unit Tests



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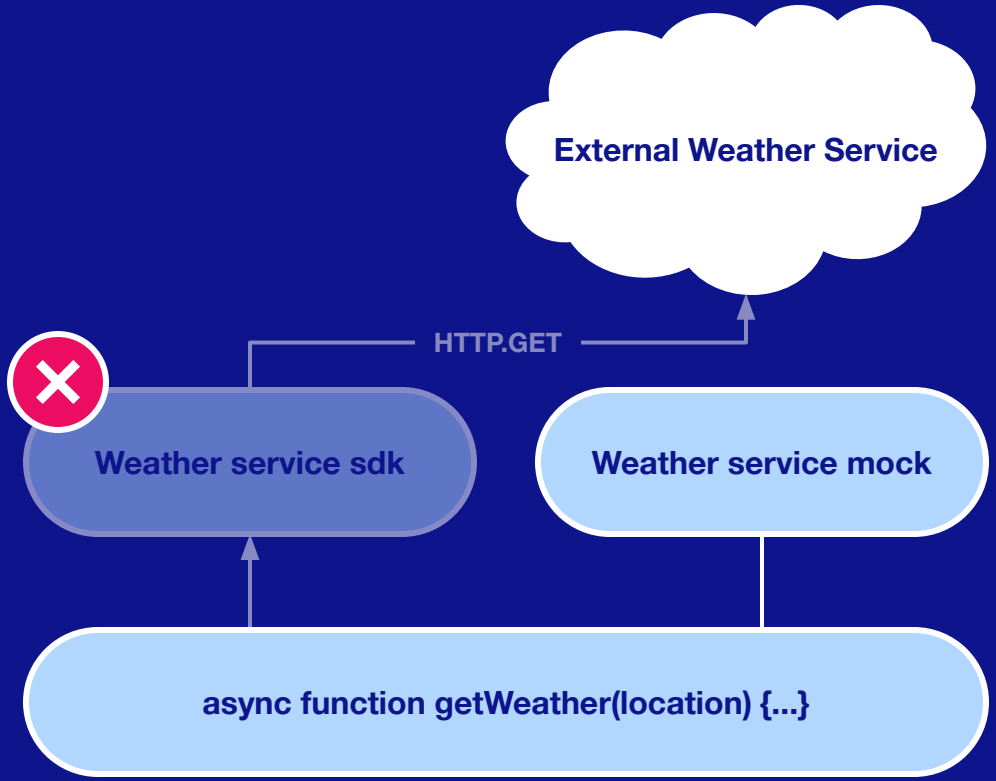
Unit Tests

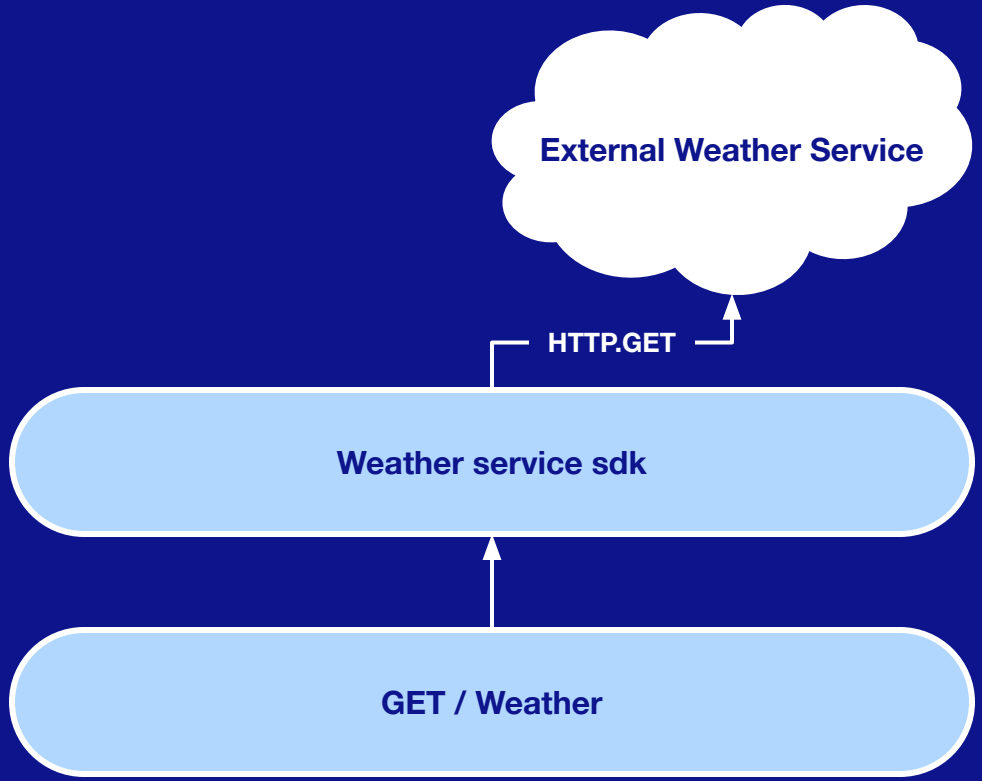

External Weather Service
HTTP.GET
Weather service sdk
Weather service mock
async function getWeather(location) {...}

Unit Tests in node.js

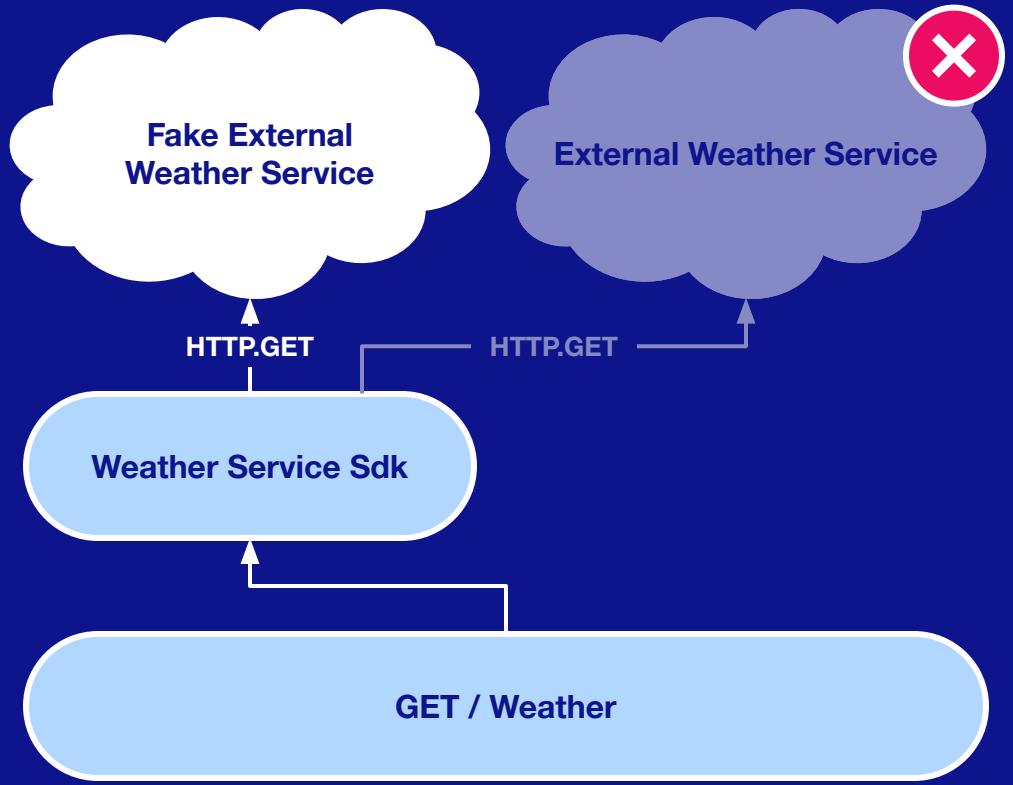
```
'use strict';
const weatherService = require('weather-js');

exports.getWeather = async (location) => {
    const weather = await weatherService.find(location);
    return weather;
};
```

```
'use strict';

jest.mock('weather-js');

const getWeather = require('./weather').getWeather;

test('Get weather - weather is sunny in tel aviv - should return 37 celcius', () => {
    const weather = getWeather('Tel Aviv');
    expect(weather).toEqual(37);
    expect(weatherService.find).toHaveBeenCalledWith('Tel Aviv');
});
```

Integration Tests



Integration Tests

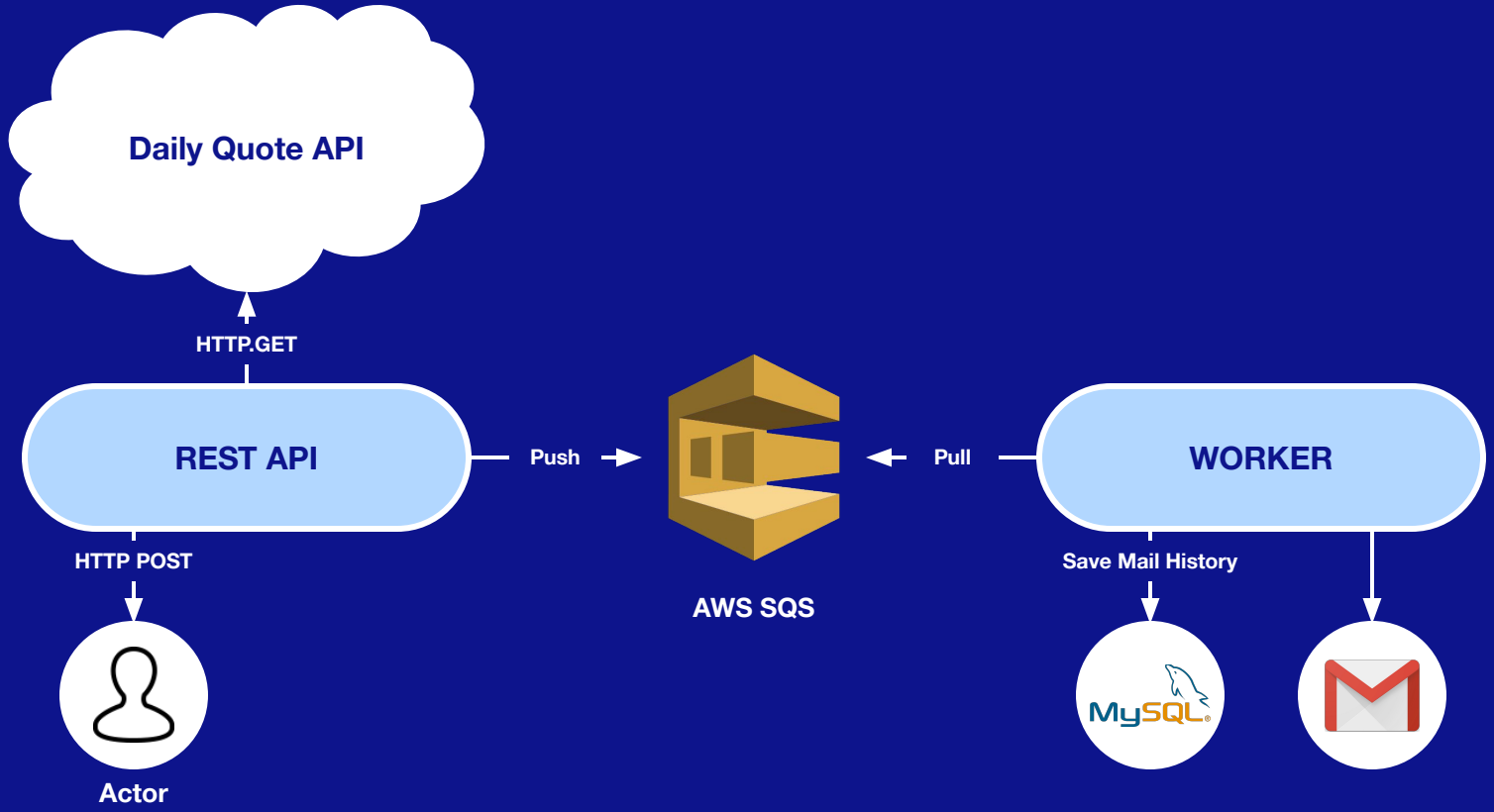


Integration Tests in node.js

```
'use strict';

beforeEach(async () => {
    await fakehttpserver.start('data.json');
});

afterEach(async () => {
    await fakehttpserver.end();
});

test('Get Weather - weather is sunny in Tel Aviv - should return 37 celcius', async () => {
    const weather = await request.get(`http://localhost:8080/weather?location=TelAviv`);
    expect(weather).toEqual(37);
});
```

Integration Tests OR Unit Tests?

Example of Small Microservices Architecture



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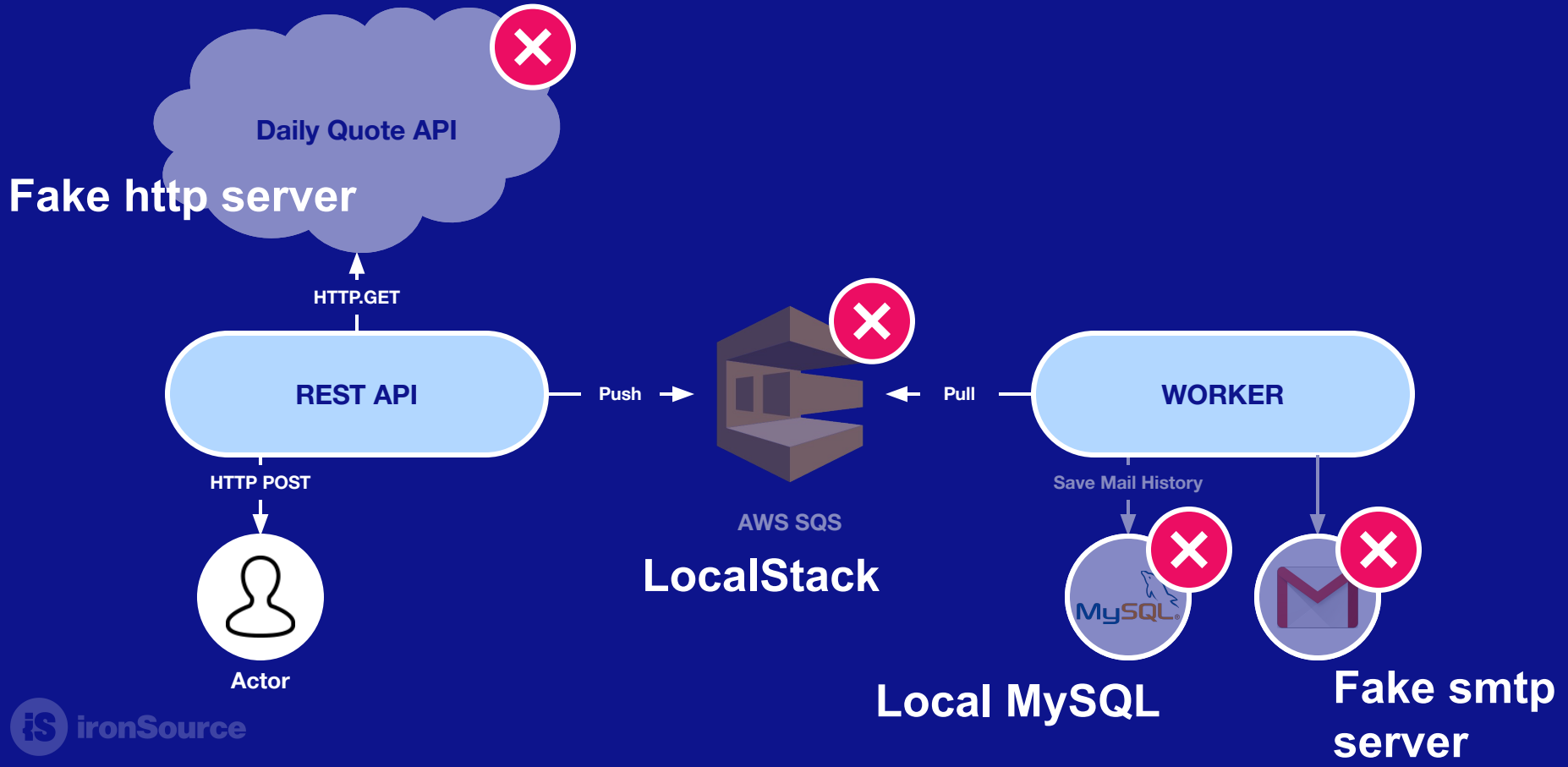
Preparing the Environment for Integration Testing



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Docker Compose?

docker-compose.yml

```yaml
version: '3'

services:
  db:
    image: mysql:5.7
    volumes:
      - db_data:/var/lib/mysql
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: password1234
      MYSQL_DATABASE: wordpress
      MYSQL_USER: wordpress
      MYSQL_PASSWORD: wordpress

  wordpress:
    depends_on:
      - db
    image: wordpress:latest
    ports:
      - "8000:80"
    restart: always
    environment:
      WORDPRESS_DB_HOST: db:3306
      WORDPRESS_DB_USER: wordpress
      WORDPRESS_DB_PASSWORD: wordpress
volumes:
    db_data:
```

Test Lifecycle in ironSource

1. Write your service
2. Create new test to integration-test project
3. Run integration-test project
4. Push service code & test code
5. Integration tests run on build server
6. Code is deployed to production

DEMO

BONUS
DEBUGGING

Q&A

Resources:

The demo:

https://github.com/ironsource/meetups-daily-quote-api

https://github.com/ironsource/meetups-daily-quote-integration-tests

https://github.com/ironsource/meetups-daily-quote-worker

The tools:

https://github.com/ramimoshe/queue-router

https://github.com/ramimoshe/fake-smtp-server

https://github.com/jmartin82/mmock

https://github.com/localstack/localstack

Thank You

(we’re hiring)