SpringOne Platform by Pivotal

Spring Boot vs. Spring Data

for Apache Geode / Pivotal GemFire

By John Blum
@john_blum

What’s different?

Why Spring?

A long time ago…

😍

spring

Spring Boot

Spring Mobile

Spring Android

Spring Social

Spring Cloud Data Flow

Spring LDAP

Spring AMQP

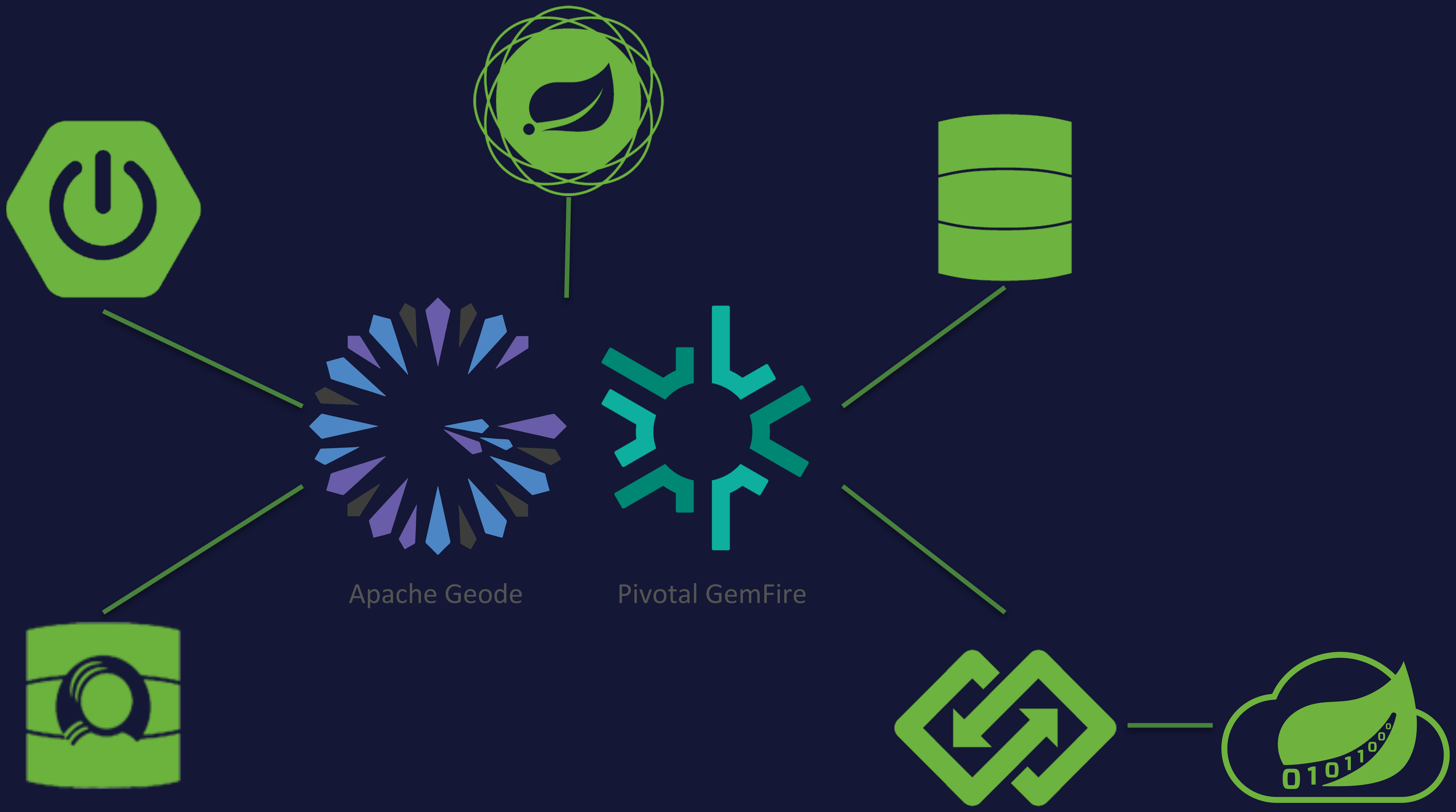
Spring Kafka

Spring Web Flow

Spring Hateoas

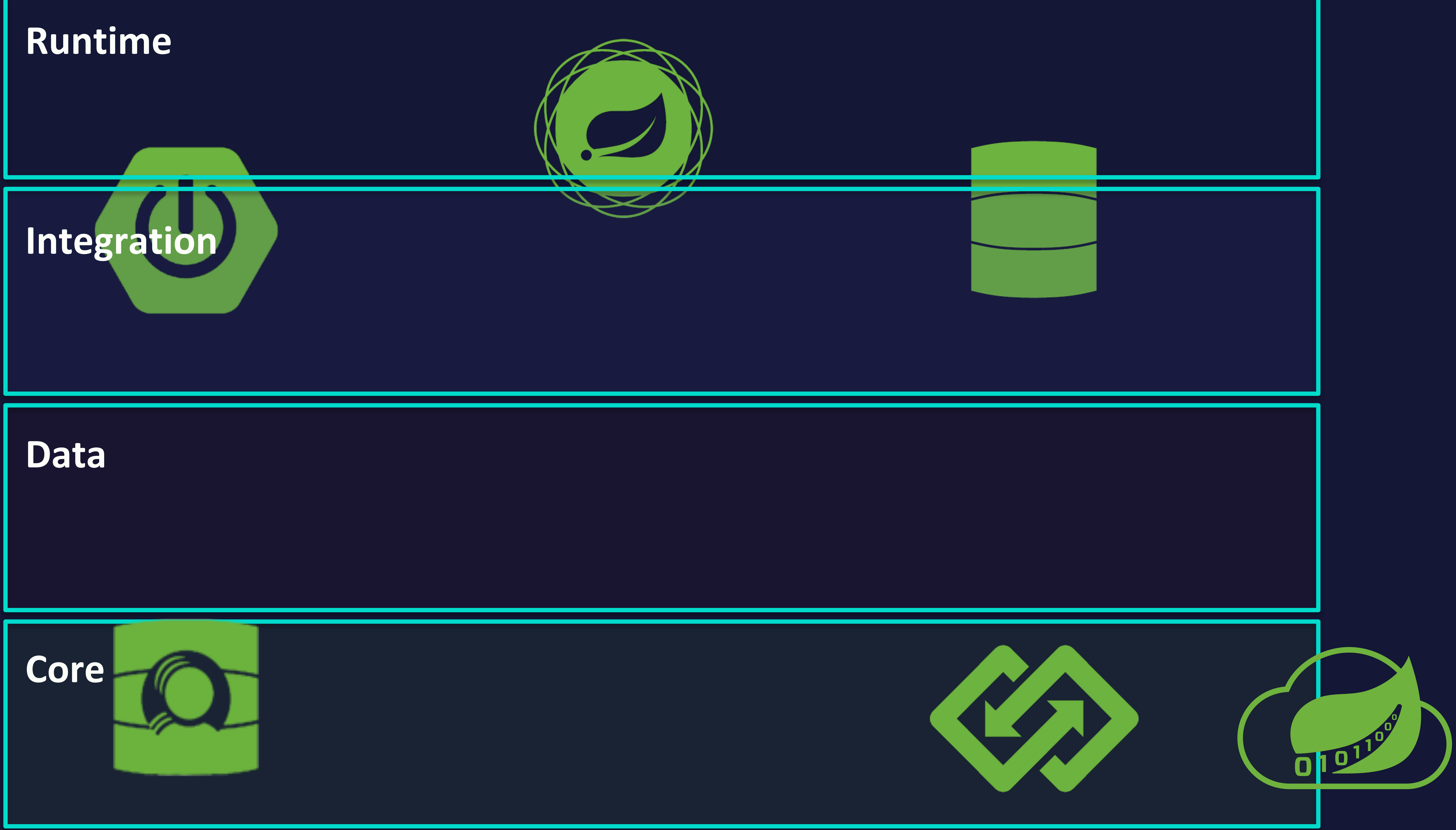
Spring Session

Spring Web Services



Apache Geode

Pivotal GemFire

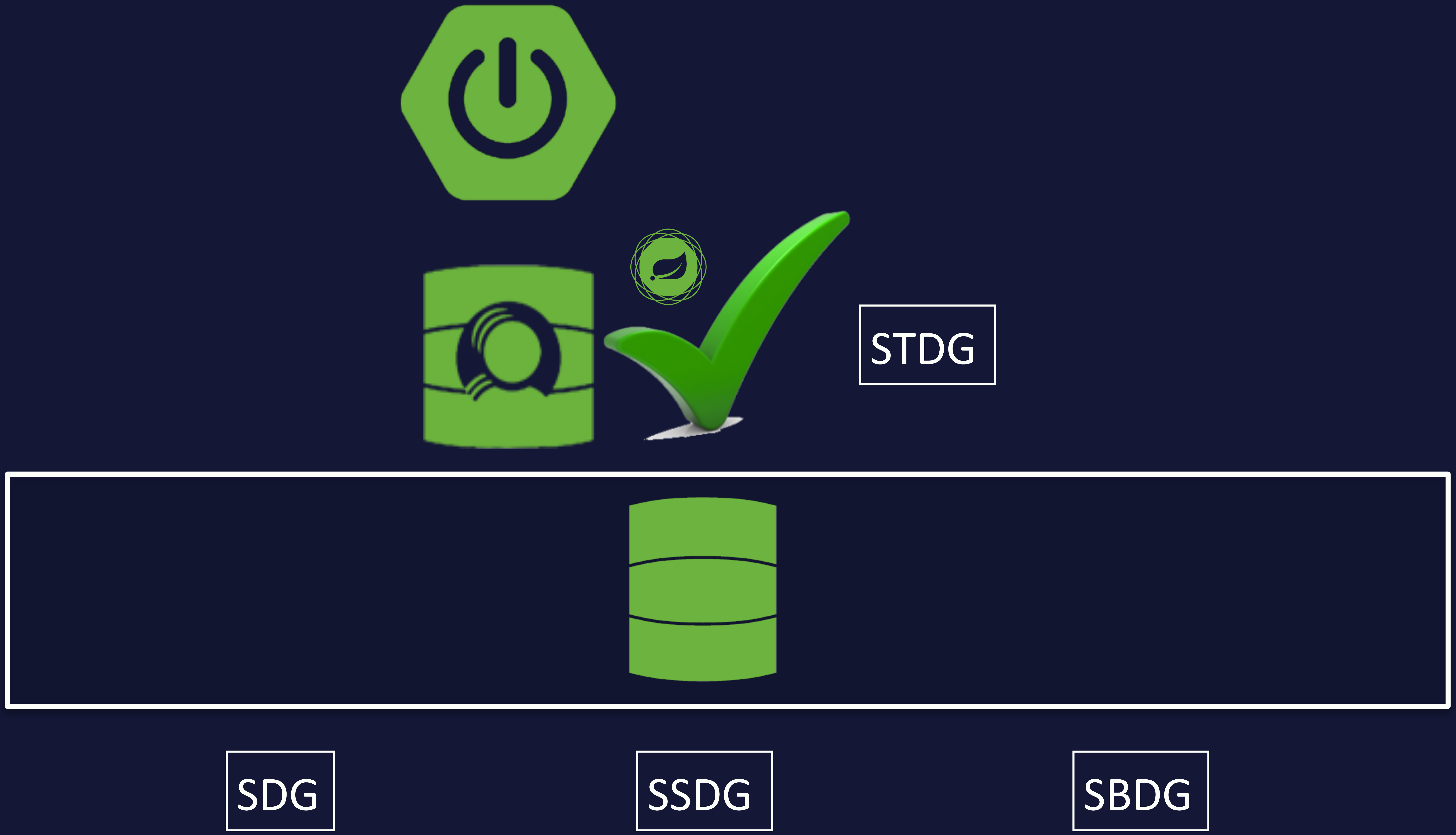


Runtime

Integration

Data

Core



STDG

SDG

SSDG

SBDG

Spring Data

- **Choice**
  - **(Explicit with Annotations)**
- Get Started Quickly & Easily
- Interchangeable Dependencies
  - (Apache Geode ←→ Pivotal GemFire)
- Move between environments
  - (IDE ←→Cloud)

Spring Boot

- **Opinionated**
  - **(*Convention Over Configuration*)**
- Get Started Even Faster with Ease
- Maintain Interchangeable Dependencies
- Move from Standalone to PCC

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```
<dependency>
  <groupId>org.springframework.data</groupId>
  <artifactId>spring-data-gemfire</artifactId>
  <version>2.0.9.RELEASE</version>
</dependency>
```

```
<dependency>
  <groupId>org.springframework.data</groupId>
  <artifactId>spring-data-geode</artifactId>
  <version>2.0.9.RELEASE</version>
</dependency>
```

```
<dependency>
  <groupId>org.springframework.geode</groupId>
  <artifactId>spring-geode-starter</artifactId>
</dependency>
```

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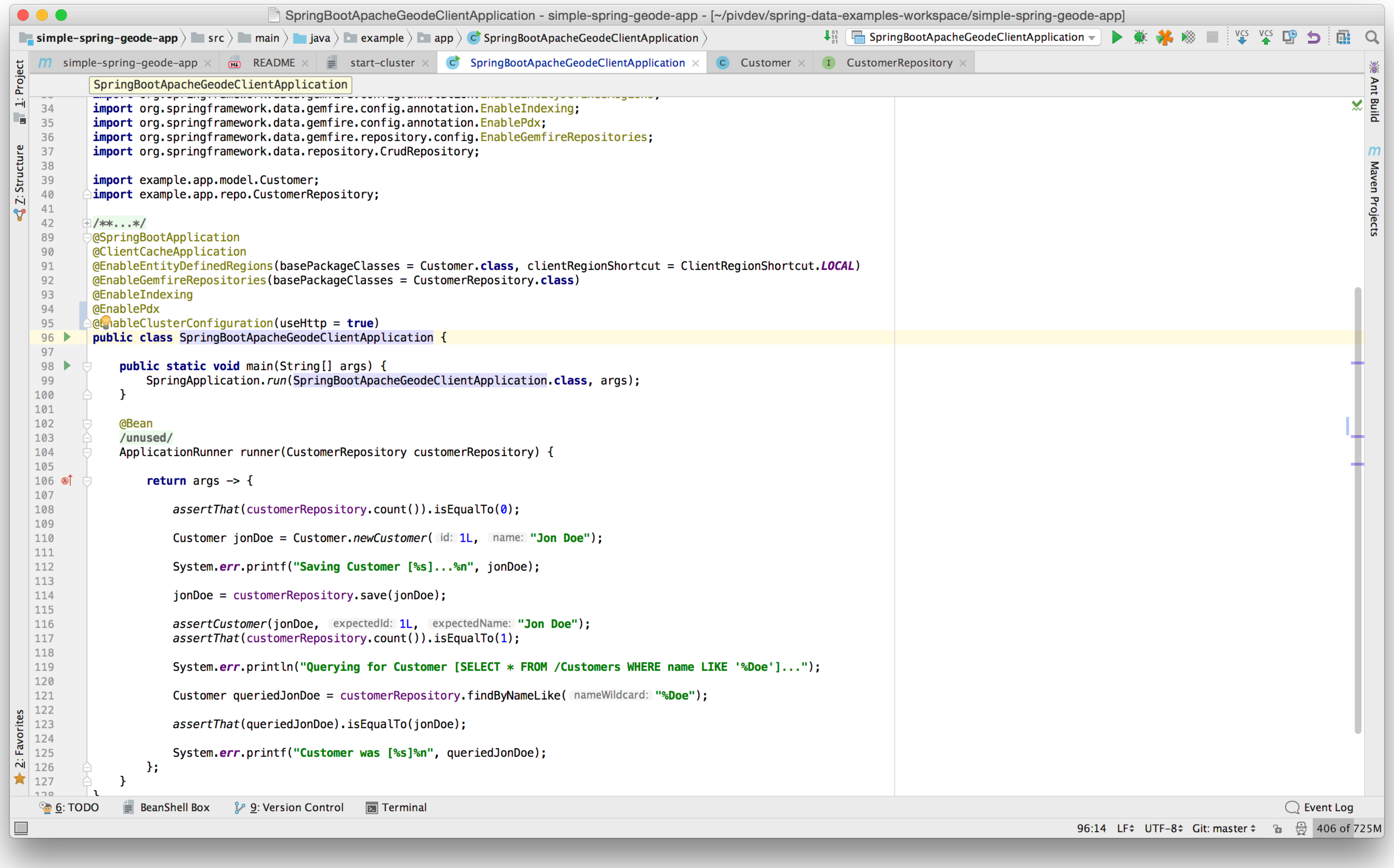
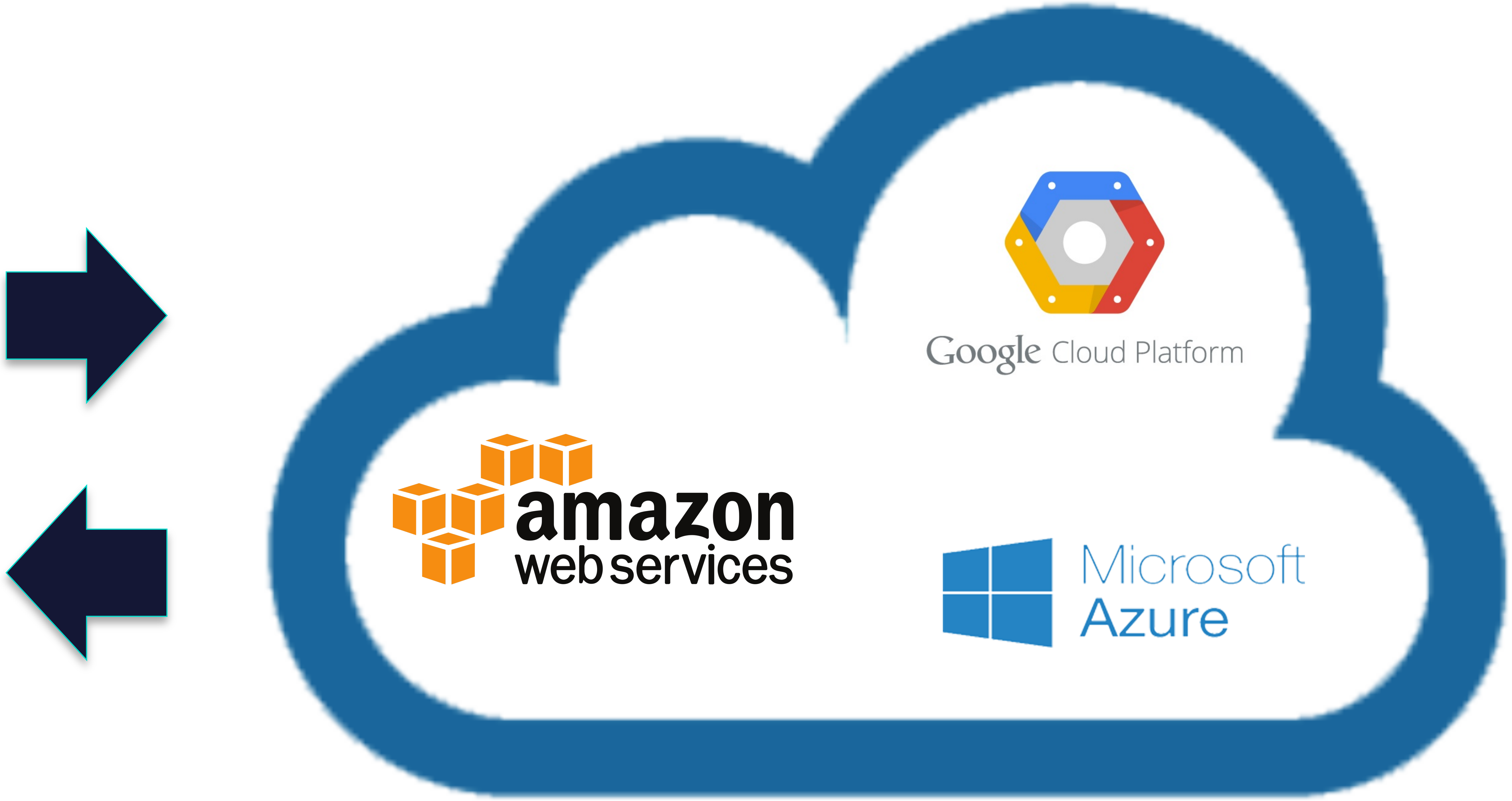
```
<dependency>
  <groupId>org.springframework.geode</groupId>
  <artifactId>spring-gemfire-starter</artifactId>
</dependency>
```


SpringBootApacheGeodeClientApplication - simple-spring-geode-app - [~/pivdev/spring-data-examples-workspace/simple-spring-geode-app]
simple-spring-geode-app 〉 src 〉 main 〉 java 〉 example 〉 app 〉 SpringBootApacheGeodeClientApplication 〉
SpringBootApacheGeodeClientApplication
simple-spring-geode-app
README
start-cluster
SpringBootApacheGeodeClientApplication
Customer
CustomerRepository
1: Project
7: Structure
2: Favorites
Ant Build
Maven Projects
6: TODO
BeanShell Box
9: Version Control
Terminal
Event Log
96:14 LF÷ UTF-8÷ Git: master÷
406 of 725M

```java
import org.springframework.data.gemfire.config.annotation.EnableIndexing;
import org.springframework.data.gemfire.config.annotation.EnablePdx;
import org.springframework.data.gemfire.repository.config.EnableGemfireRepositories;
import org.springframework.data.repository.CrudRepository;

import example.app.model.Customer;
import example.app.repo.CustomerRepository;

/**...*/
@SpringBootApplication
@ClientCacheApplication
@EnableEntityDefinedRegions(basePackageClasses = Customer.class, clientRegionShortcut = ClientRegionShortcut.LOCAL)
@EnableGemfireRepositories(basePackageClasses = CustomerRepository.class)
@EnableIndexing
@EnablePdx
@EnableClusterConfiguration(useHttp = true)
public class SpringBootApacheGeodeClientApplication {

    public static void main(String[] args) {
        SpringApplication.run(SpringBootApacheGeodeClientApplication.class, args);
    }

    @Bean
    /unused/
    ApplicationRunner runner(CustomerRepository customerRepository) {

        return args -> {

            assertThat(customerRepository.count()).isEqualTo(0);

            Customer jonDoe = Customer.newCustomer( id: 1L,  name: "Jon Doe");

            System.err.printf("Saving Customer [%s]...%n", jonDoe);

            jonDoe = customerRepository.save(jonDoe);

            assertCustomer(jonDoe,  expectedId: 1L,  expectedName: "Jon Doe");
            assertThat(customerRepository.count()).isEqualTo(1);

            System.err.println("Querying for Customer [SELECT * FROM /Customers WHERE name LIKE '%Doe']...");

            Customer queriedJonDoe = customerRepository.findByNameLike( nameWildcard: "%Doe");

            assertThat(queriedJonDoe).isEqualTo(jonDoe);

            System.err.printf("Customer was [%s]%n", queriedJonDoe);
        };
    }
```



Spring Cloud + Pivotal Cloud Foundry®

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What’s Next? (Spring Data Moore)

- Repository Projections
- Paging Repositories
- Function Executions on Repositories
- Reactive Repositories
- Streaming Function Support
- Deploying SDG defined Functions in Apache Geode/Pivotal GemFire
- @EnableAutoDeploy
- Actuator and Micrometer Support in Spring Boot
- And more…

References

* github.com/jxblum

Questions?

Thank You

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