DEVNATION
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Decomposing a Java EE Monolith into WildFly Swarm Microservices

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- Co Founder/Lead of WildFly Swarm
- Author of “JBoss Weld CDI for Java Platform”

What is WildFly Swarm?

Just enough Application Server

- Don’t need EJB, don’t bundle EJB
- Java EE components independently deployable
- Re-uses existing WildFly v10

How?

```
<plugin>
  <groupId>org.wildfly.swarm</groupId>
  <artifactId>wildfly-swarm-plugin</artifactId>
  <version>1.0.0.Final</version>
  <executions>
    <execution>
      <goals>
        <goal>package</goal>
      </goals>
    </execution>
  </executions>
</plugin>
```

Develop RESTFul Endpoint Demo

Quick Recap

1. Created Hello RESTFul Endpoint
2. Ran it with `wildfly-swarm:run`
3. Packaged and ran as *uber* jar
4. Ran it from IDE
5. Debugged it from IDE

BOM

```
<dependencyManagement>
  <dependencies>
    <dependency>
      <groupId>org.wildfly.swarm</groupId>
      <artifactId>bom</artifactId>
      <version>${project.version}</version>
      <type>pom</type>
      <scope>import</scope>
    </dependency>
  </dependencies>
</dependencyManagement>
```

Fractions

JAX-RS

JPA

Mail

Management

CDI

JMS

OpenShift

Undertow

Hibernate Search

Bean Validation

JSF

Remoting

JGroups

Keycloak

Spring

Infinispan

Transactions

Monitoring

Logstash

Consul

JCA

Hystrix

Ribbon

Jolokia

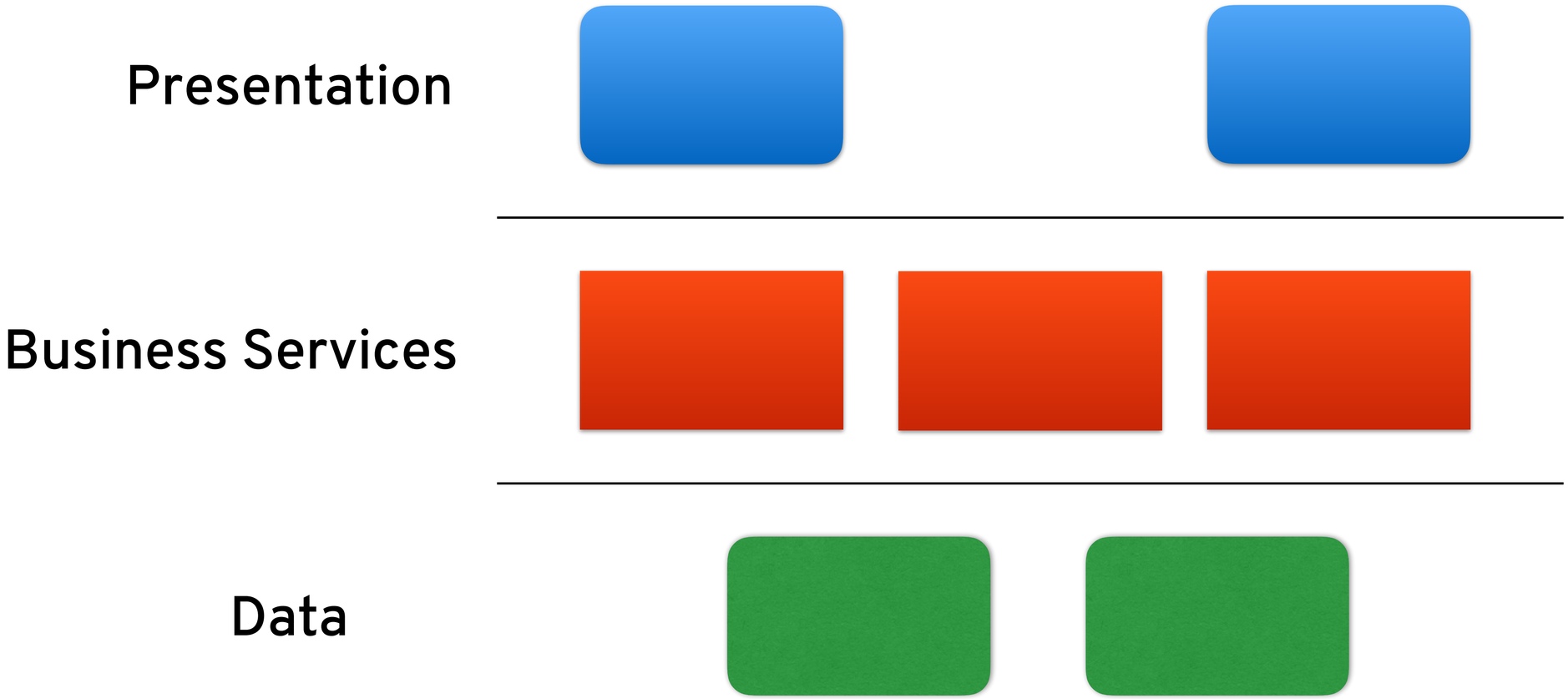
JMX

Web Services

EJB

Monoliths

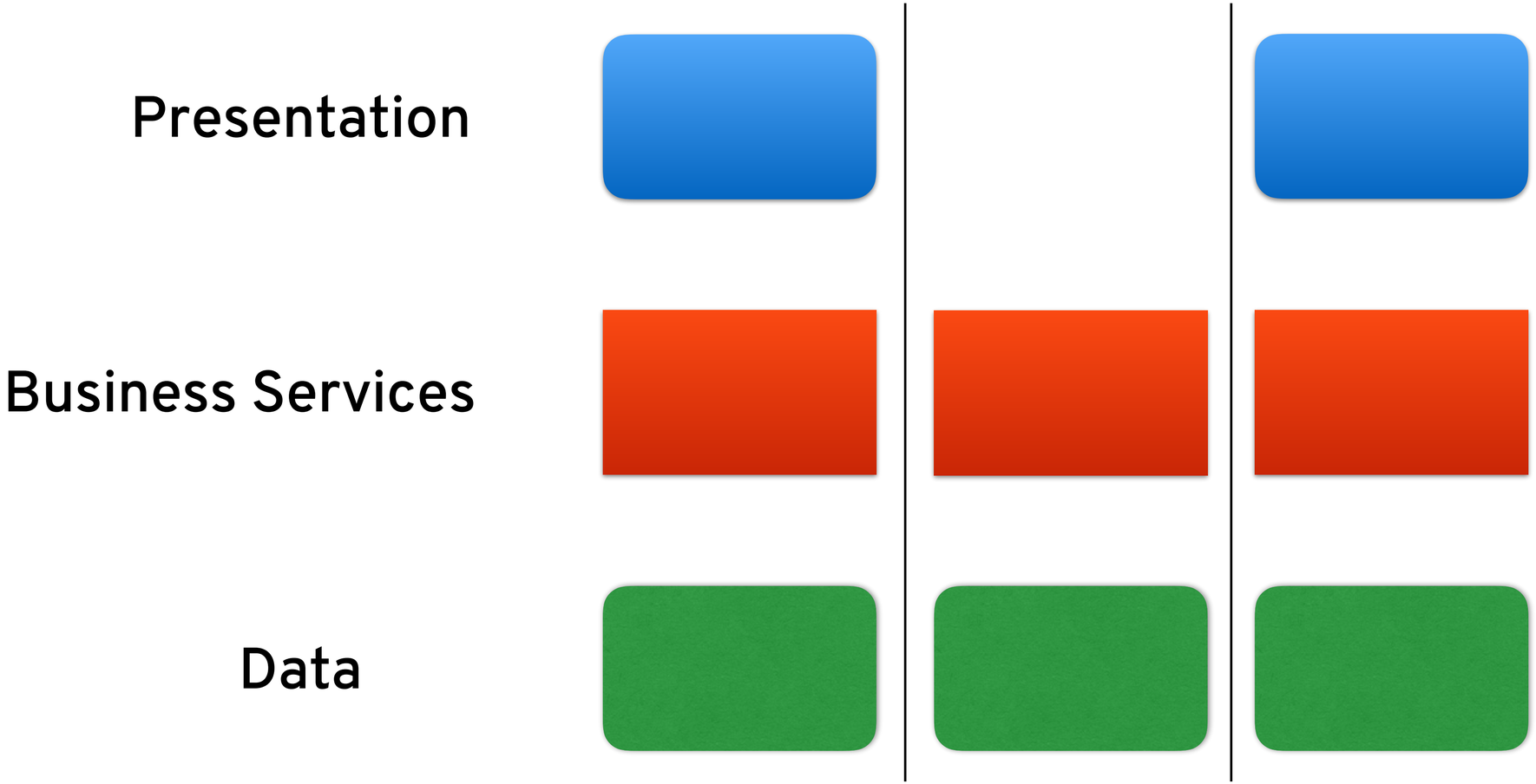
Typical Java EE Layers



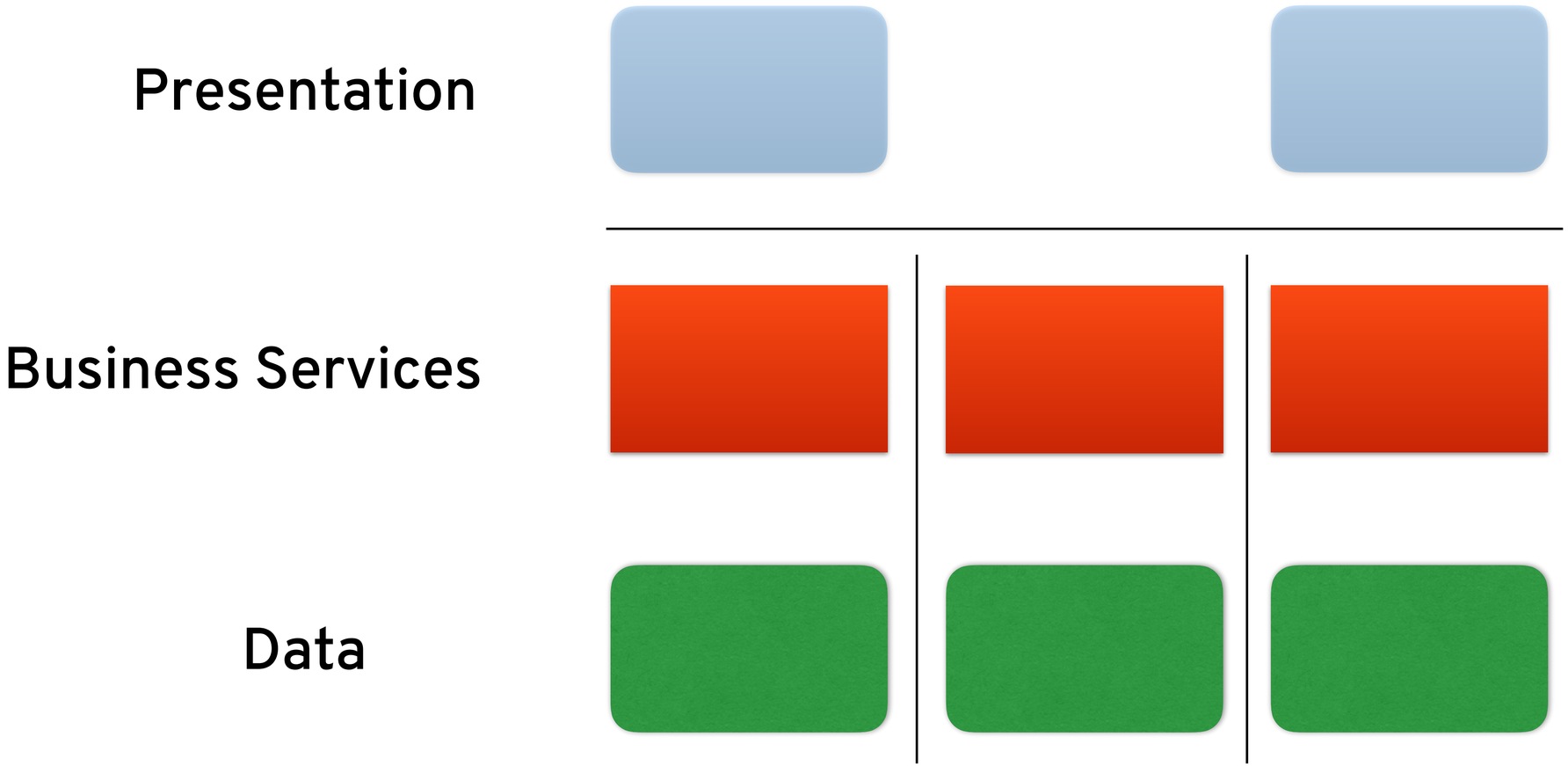
Design Considerations

- Bounded contexts
- Coarse -> Finer granularity

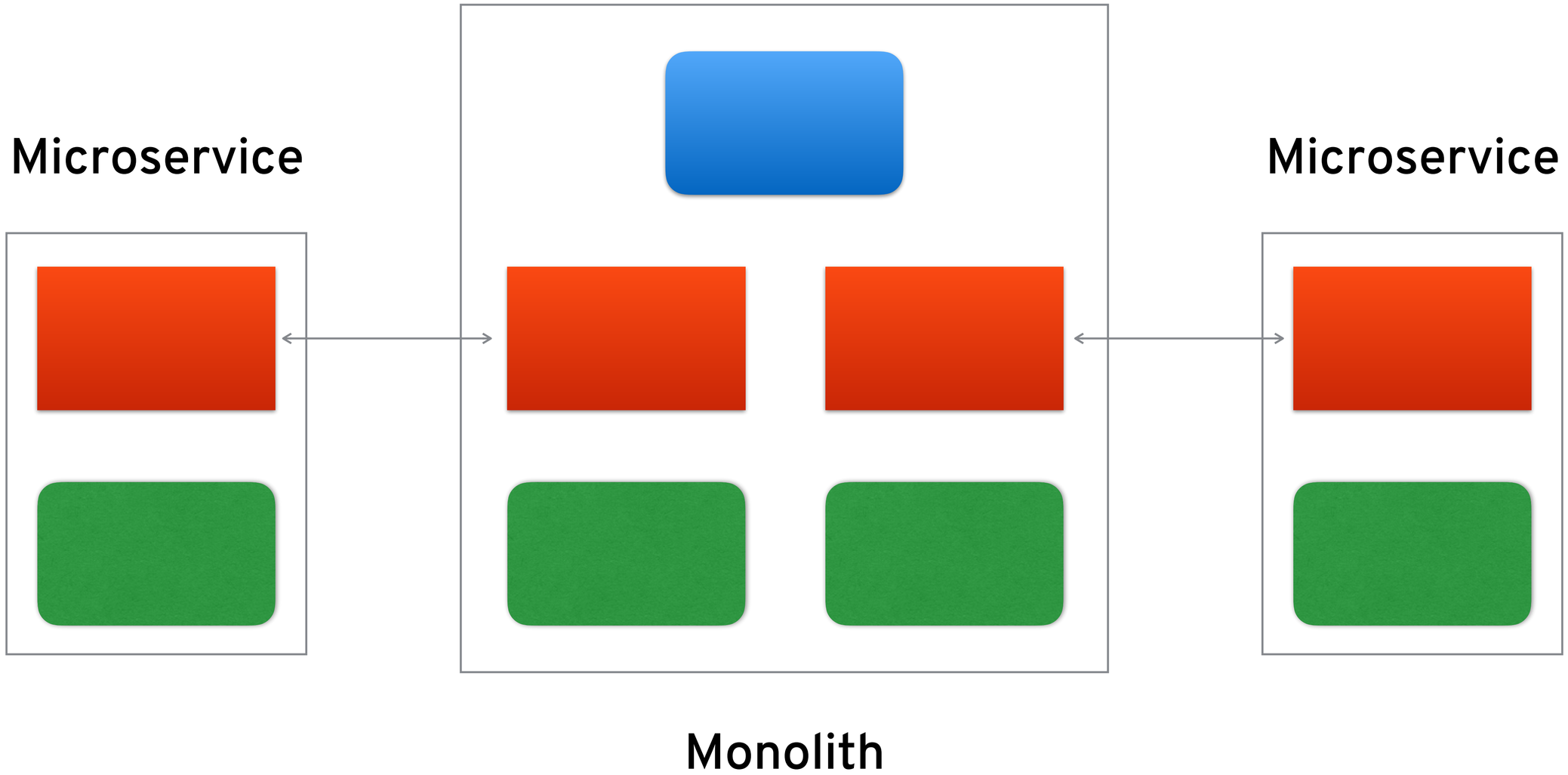
Vertical Layers



Vertical Layers

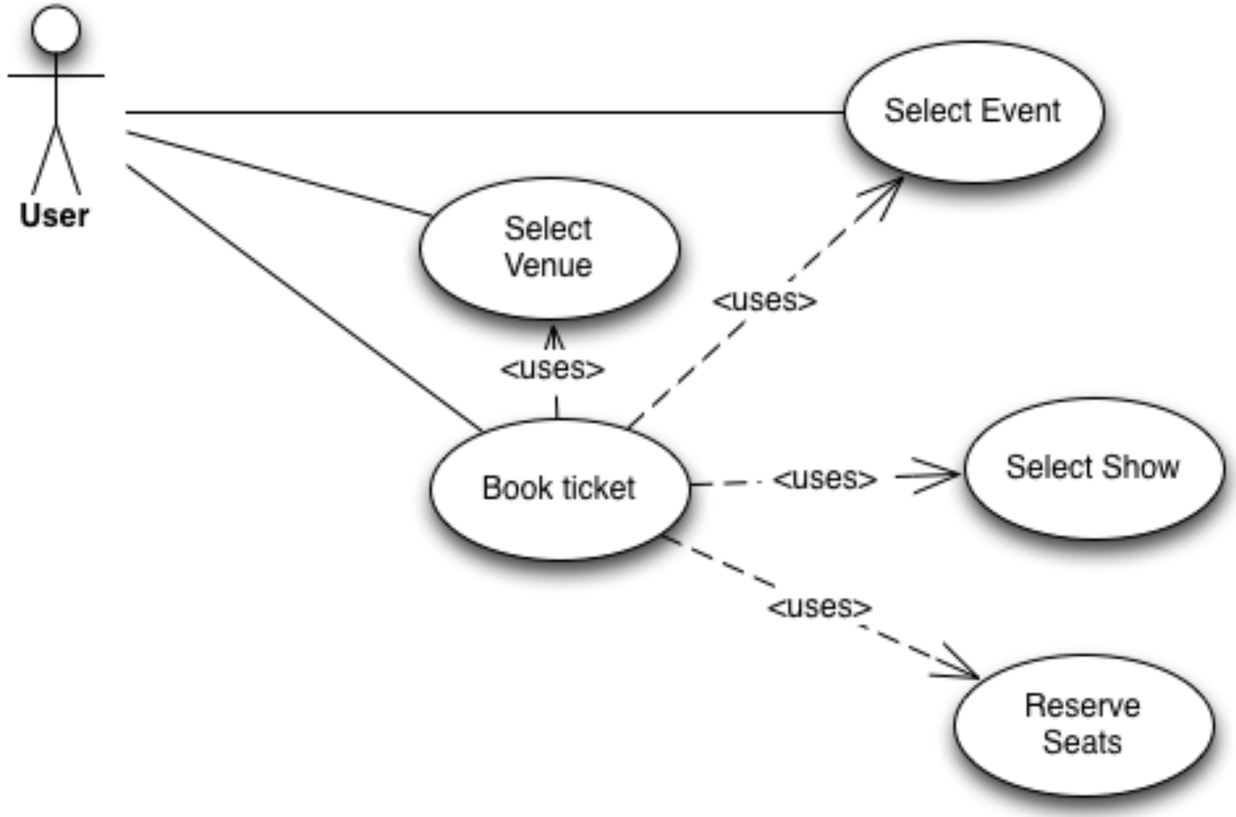


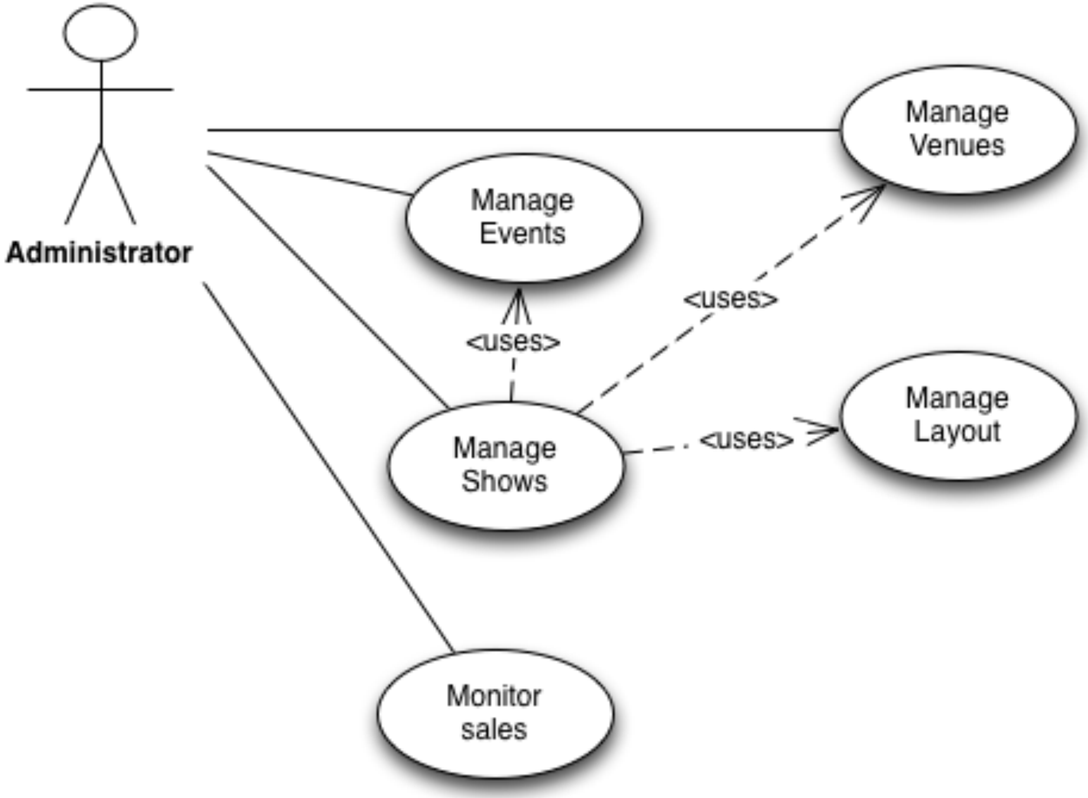
Hybrid Monolith



Ticket Monster

What is it?


User
Select Event
Select Venue
<uses>
<uses>
Book ticket
<uses>
Select Show
<uses>
Reserve Seats


Administrator
Manage Venues
Manage Events
<uses>
<uses>
Manage Shows
<uses>
Manage Layout
Monitor sales

Monolith Demo

Decoupled Data

Debezium

- http://debezium.io/
- Distributed platform for change data capture
- Stream insert/update/delete events to applications
- v0.2.2, still early days

The Future

Hot off the Press!

1.0.0.Final now available!

Roadmap

- Simplify fraction development
- Reduce application boilerplate
- Improve developer experience
- Monthly release schedule (Google Group Discussion)

Microservices Book

- Topics
  - Enterprise Java
  - Microservices
  - Migrating a Monolith
  - MEAP in coming months

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Questions and Discussion!