



Spring Dynamic Modules

OSGi meets the Spring Framework

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About

OSGi and Java Enterprise consultant

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The OSGi Look

There's life beyond J(2)EE

<http://www.osgilook.com>



12-14 novembre 2009
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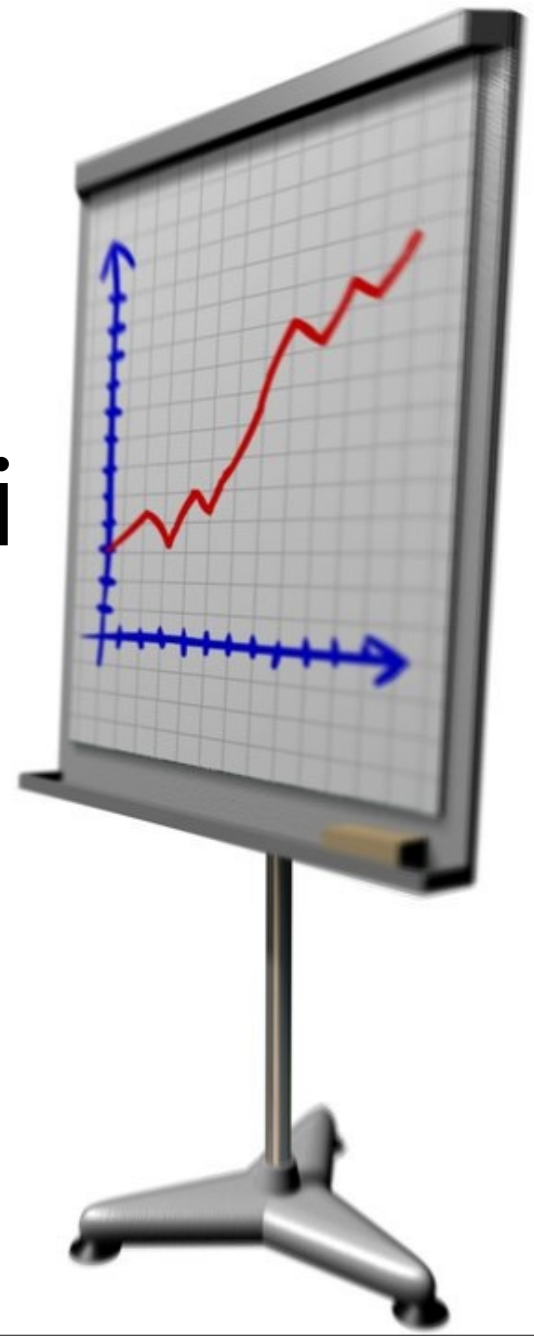
<http://www.jaxitalia.com>

Summary

OSGi

Spring Dynamic Modules for OSGi

What's next



OSGi

A dynamic module system
for Java

(Demo)

Module System

Clear boundaries

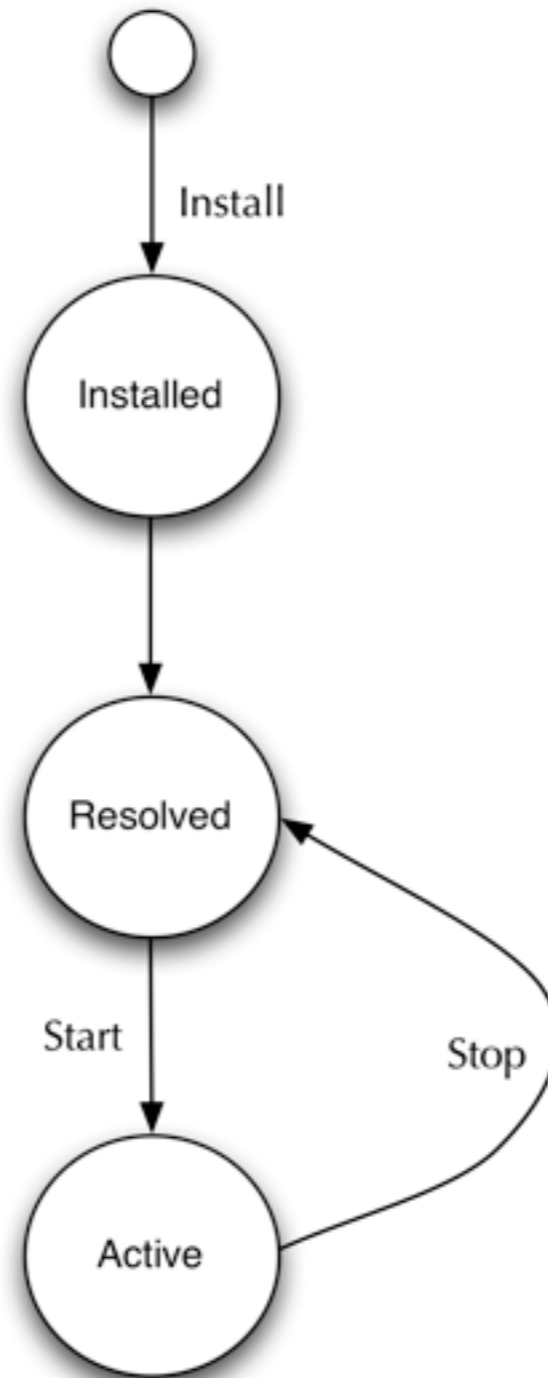
Dependencies

Metadata

Lifecycle



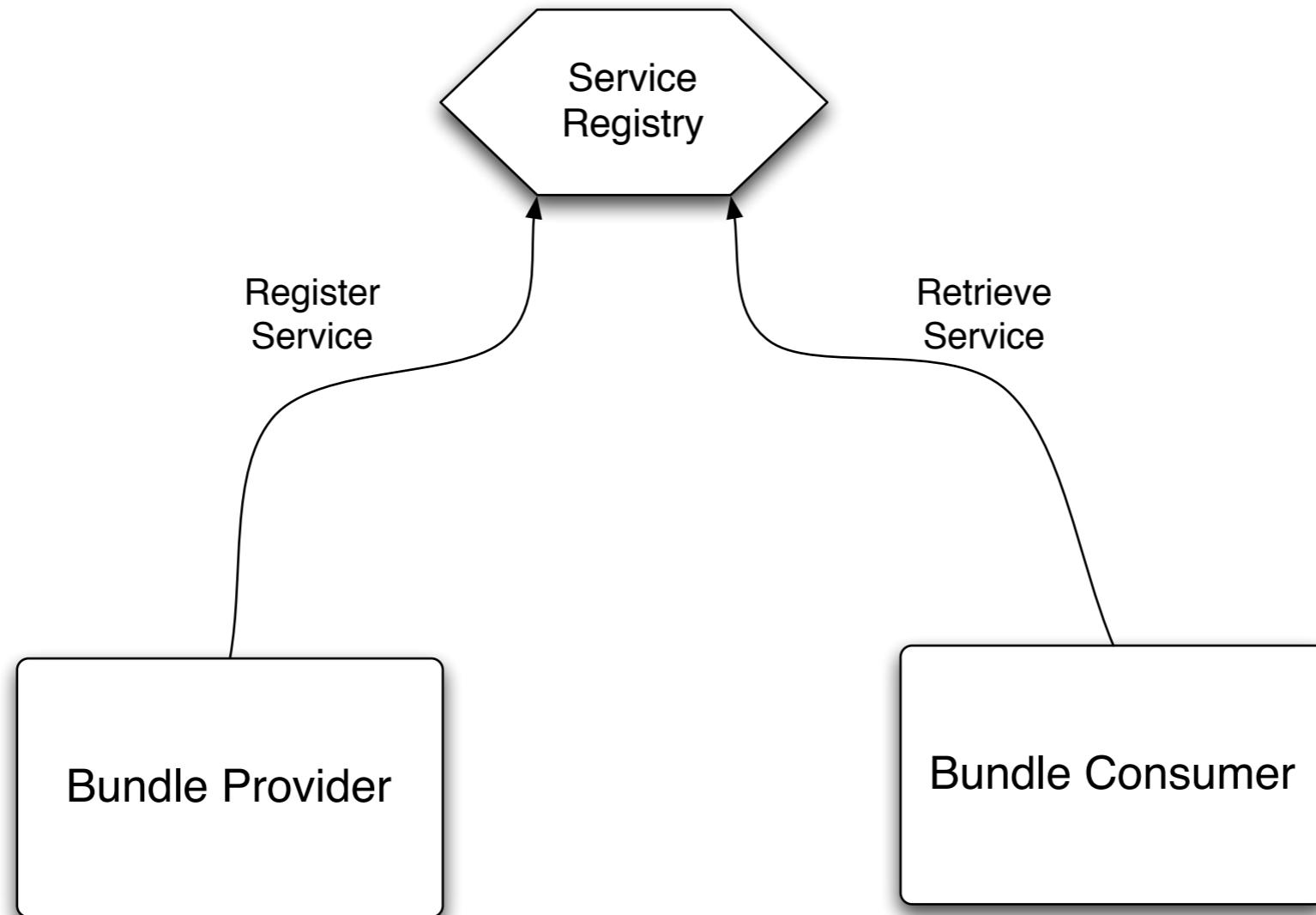
Lifecycle of bundle



Service System

Service Oriented Architecture
in the JVM

Service System



What's an OSGi Application?

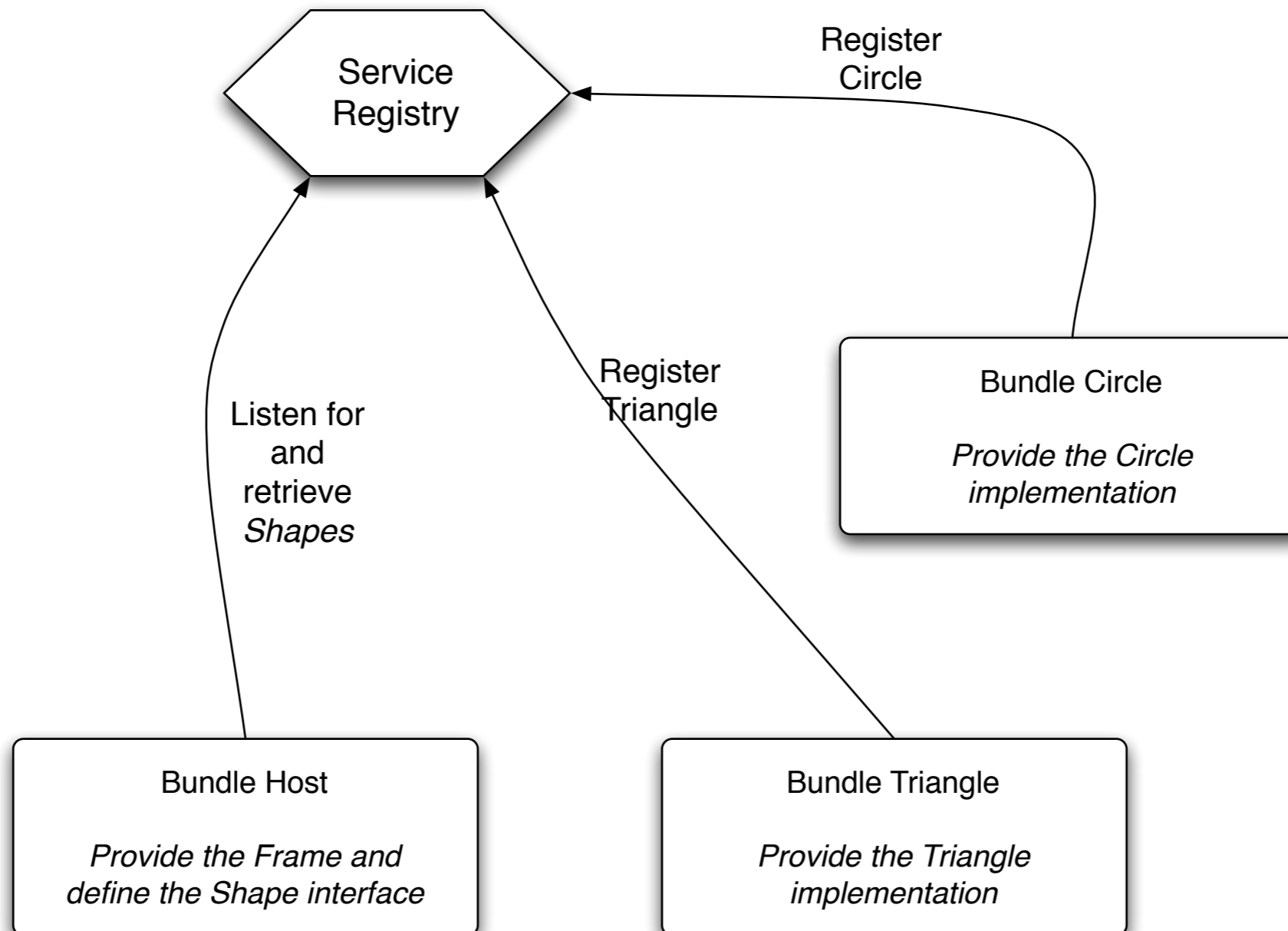
A collection of bundles interacting via Service interfaces

Bundles developed and installed independently

Bundle and services can appear and disappear



What's behind the demo



Why Spring DM?

OSGi is **NOT** about user interfaces

OSGi is about building modular and service oriented applications

Enterprise applications need modularity and SOA



Spring Dynamic Modules

Part of the Spring open source portfolio

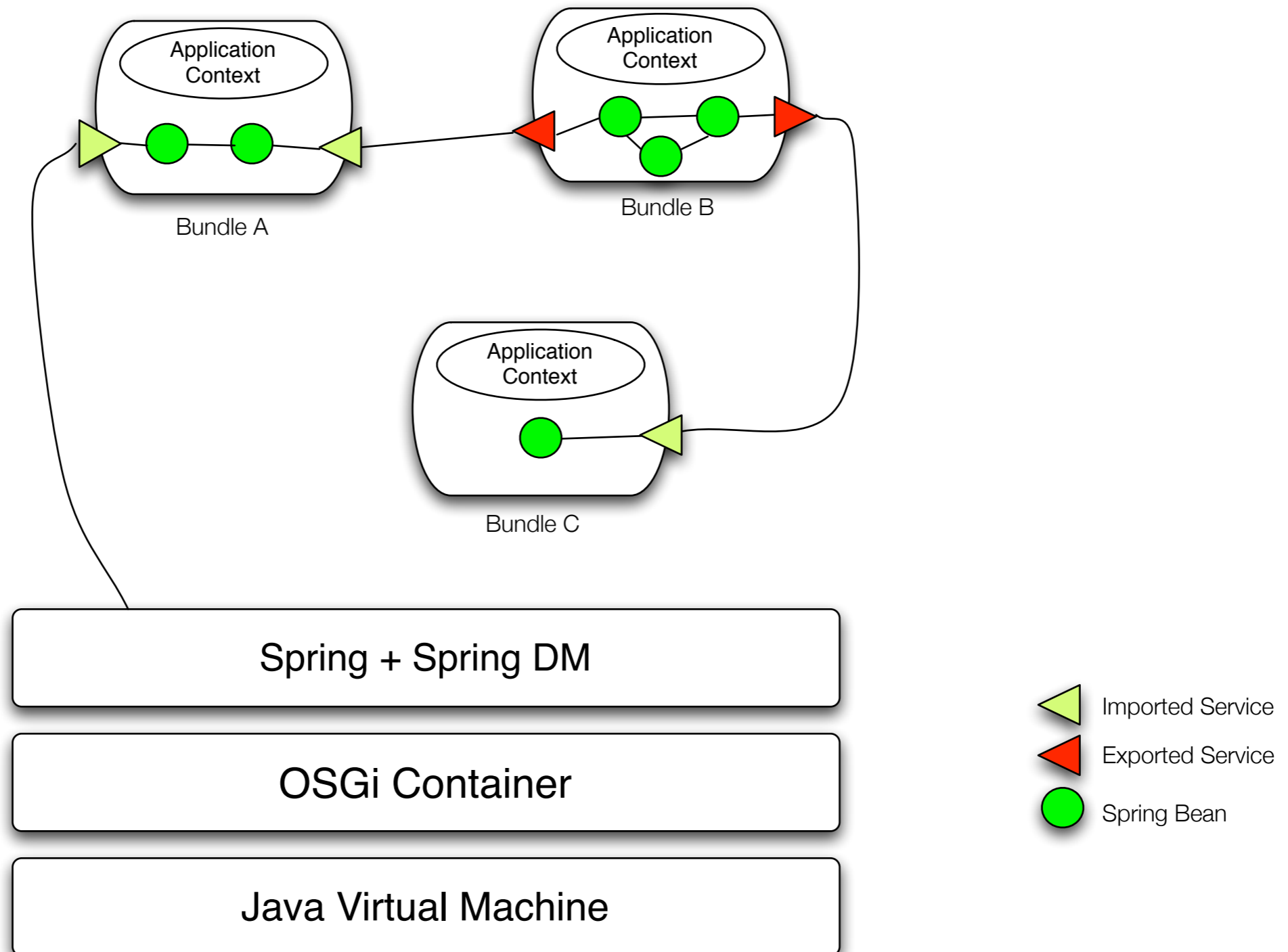
Formerly known as Spring-OSGi

Works with every OSGi container

Allows you to implement Spring applications
on top of any OSGi framework



Spring DM idea



Bundles & Spring

One application context per bundle

When a bundle is started, its application context is discovered and instantiated

Bundles can export Spring beans as OSGi services

Bundles can import OSGi services

Beans as OSGi Services

```
<beans>  
  <bean name="customerService"  
    class="demo.customerservice.impl.CustomerServiceImpl"/>  
  
  <osgi:service id="customerServiceOsgi" ref="customerService"  
    interface="demo.customerservice.CustomerService"/>  
  
</beans>
```


Importing OSGi services

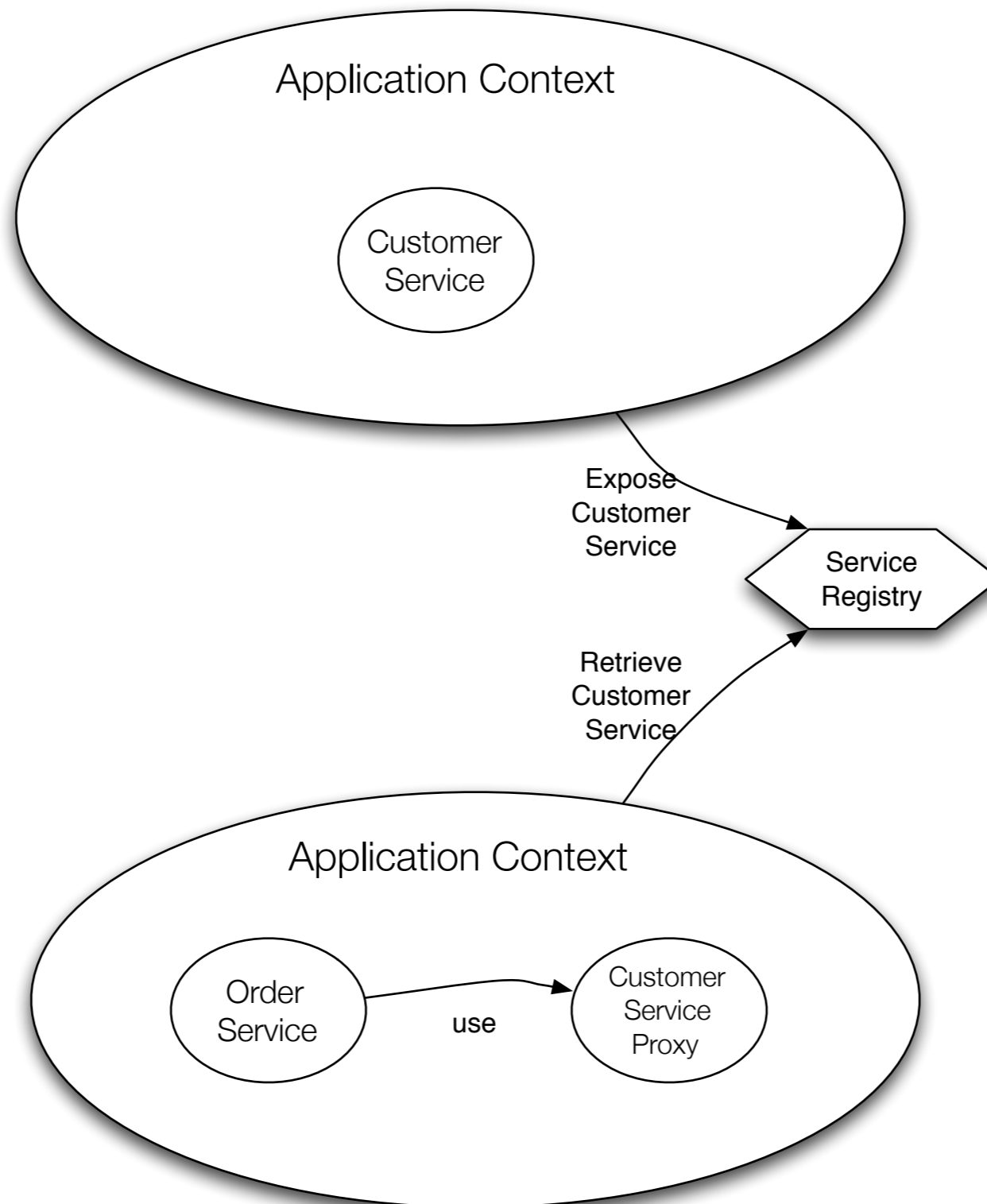
```
<beans>

  <osgi:reference id="customerServiceOsgi"
    interface="demo.osgi.customerservice.CustomerService"/>

  <bean id="orderService"
    class="demo.osgi.orderservice.internal.OrderServiceImpl">
    <property name="customerService">
      <reflocal="customerServiceOsgi"/>
    </property>
  </bean>

</beans>
```

Bigger picture

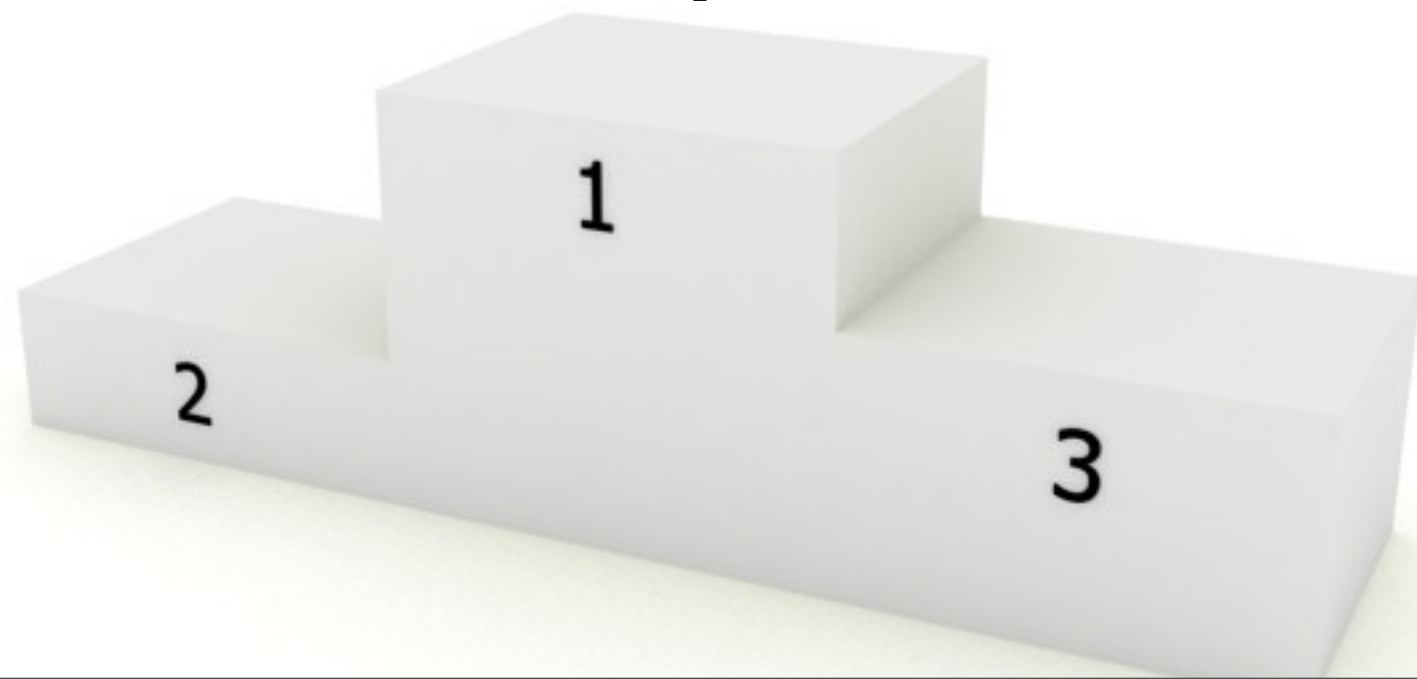


Result

(Almost) no dependencies on OSGi APIs

Everything is a POJO (Spring philosophy)

Improved application modularity



Going forward

Standardization: OSGi Blueprint Service

Enterprise OSGi support in Spring DM

Full support for Web Applications
and Java EE components

Integration with OSGi Remote-Services

Inter-JVM services



Questions?



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