

3.– 6. September 2012
in Nürnberg



Herbstcampus

Wissenstransfer
par excellence

OSGi Mars World in Action

OSGi heißt Modularität, Komponenten und Services in Java

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SEITENBAU GmbH

OSGi Mars World in Action

Christian Baranowski

Welcome



- Christian Baranowski
- Software Qualitätssicherung @ SEITENBAU GmbH Konstanz (DE)
 - Custom Software Solutions
 - E-Government Solutions
 - Identity Management and SSO Solutions
 - www.seitenbau.de
- Vorstand OSGi Users' Forum Germany
 - Co-lead (mit Jochen Hiller) German Enterprise Working Group.
 - OSGi Code Camp

OSGi

OSGi



Modularity
Modules

OSGi



Modularity
Modules



Lifecycle

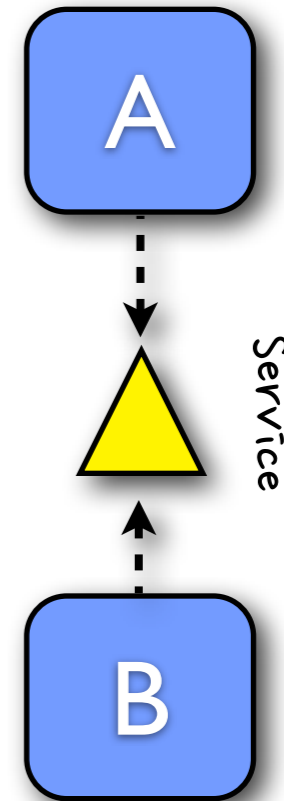
OSGi



Modularity
Modules



Lifecycle



Services

OSGi

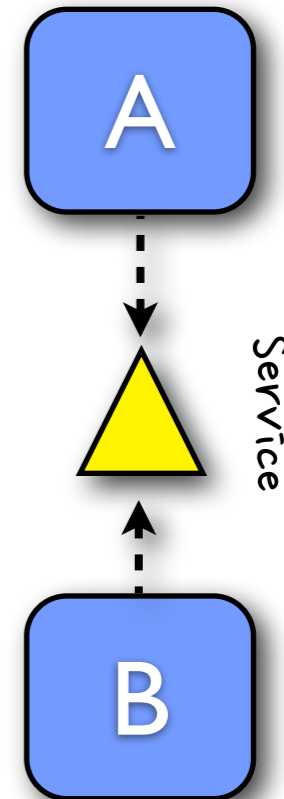


Modularity
Modules



Lifecycle

Security



Services

OSGi

ist ein offener Standard der

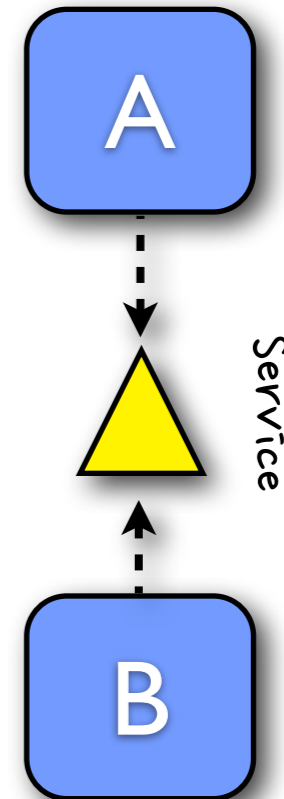


Modularity
Modules



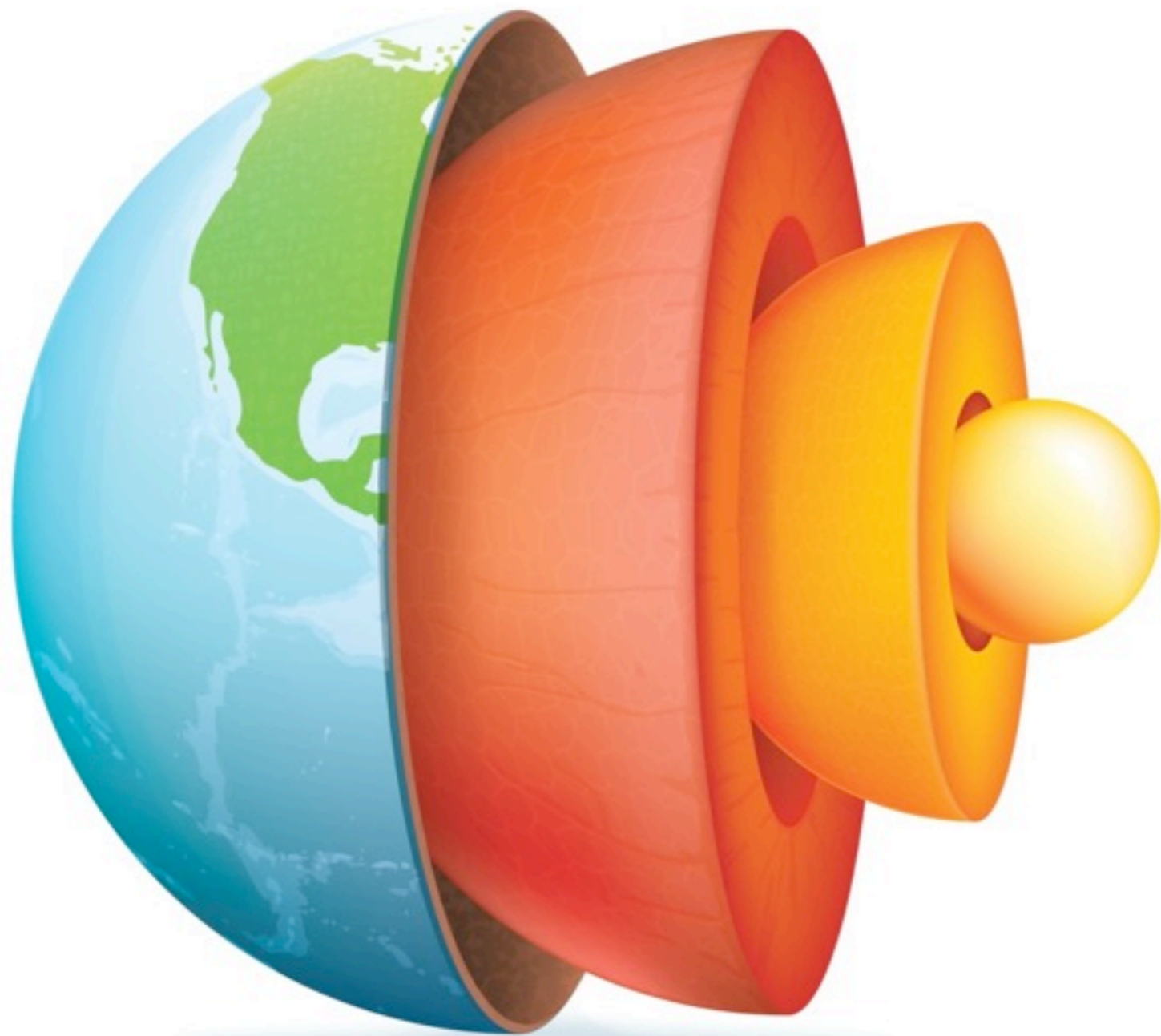
Lifecycle

Security



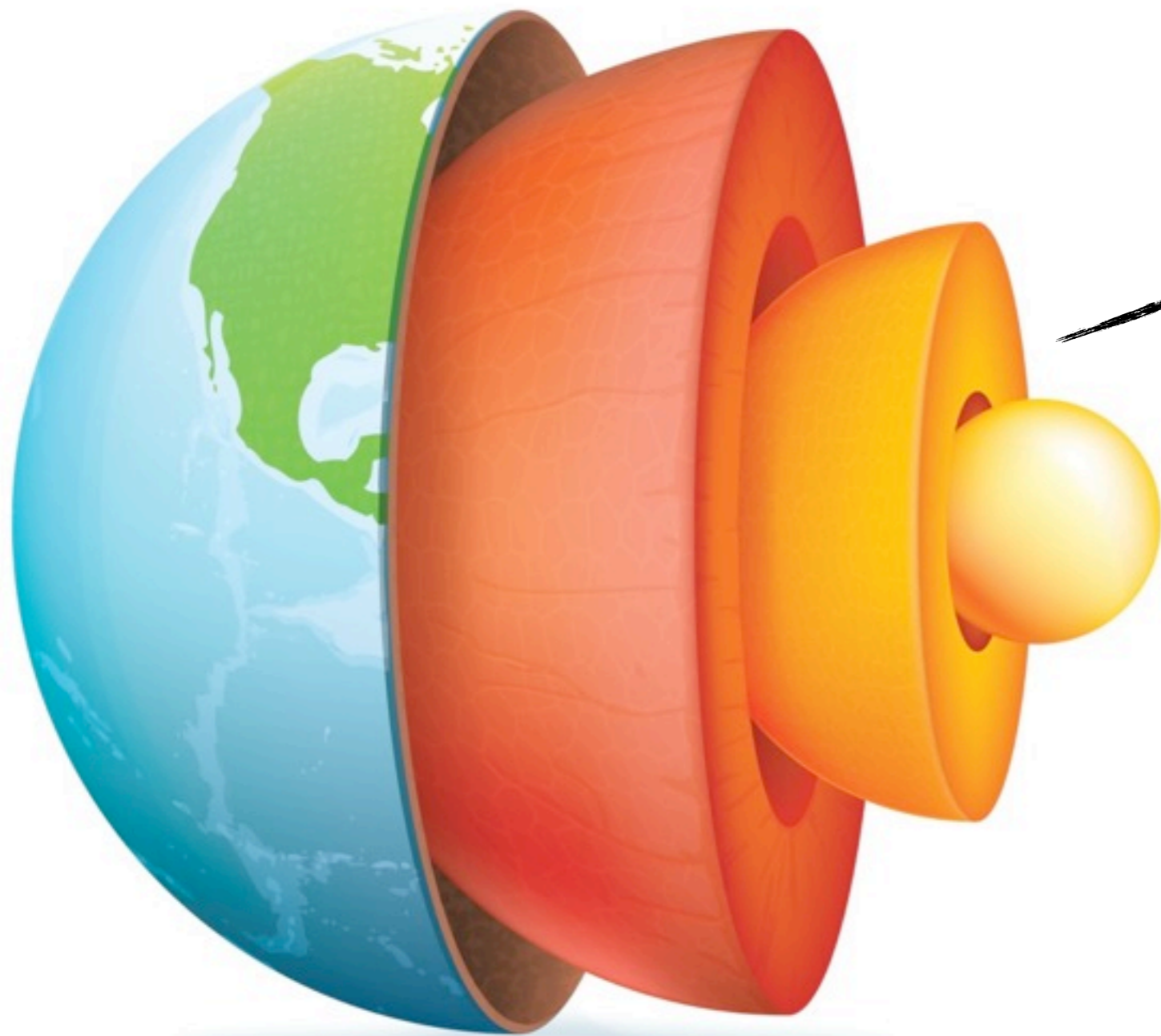
Services

OSGi Specification World



OSGi Core
Version 4.3 / R5

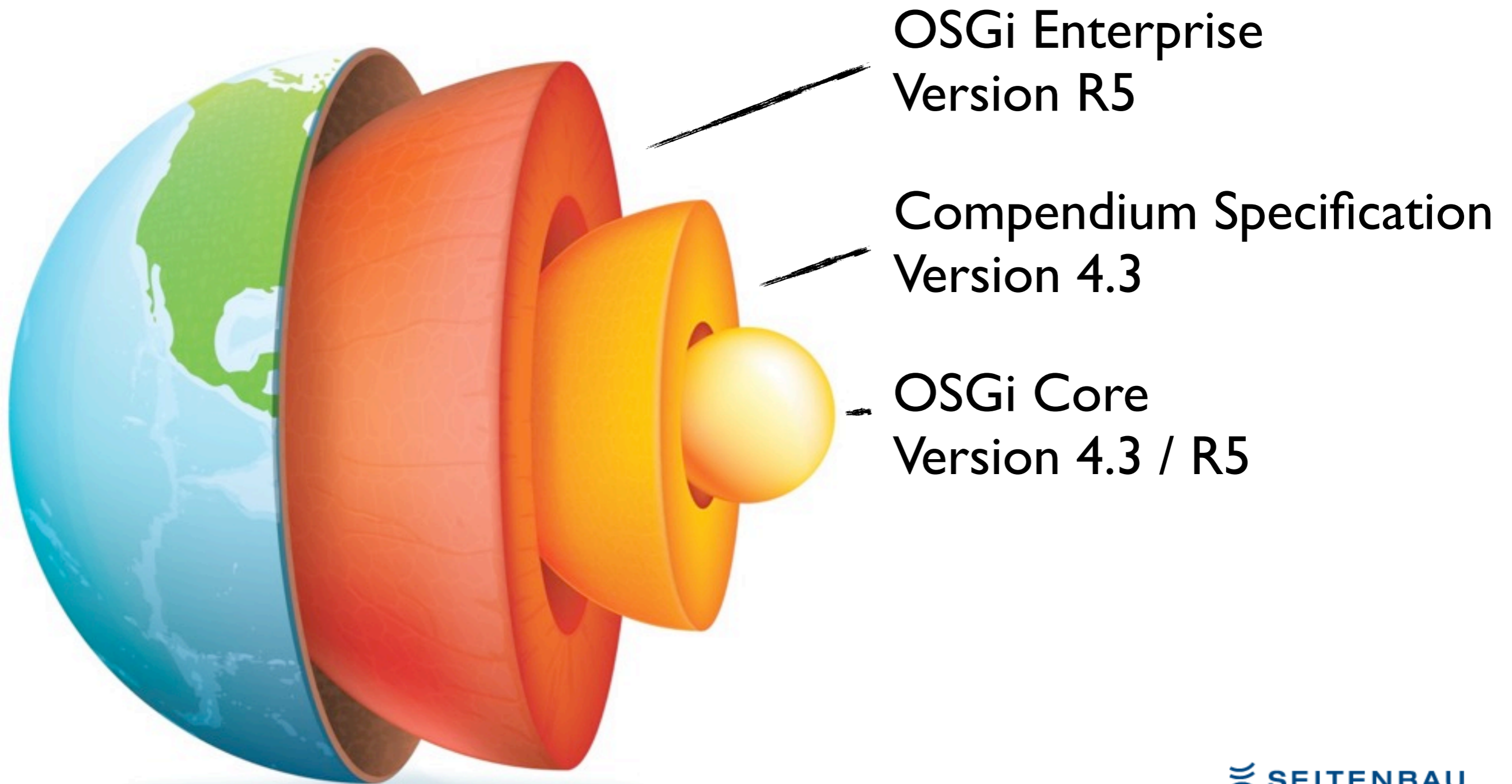
OSGi Specification World



Compendium Specification
Version 4.3

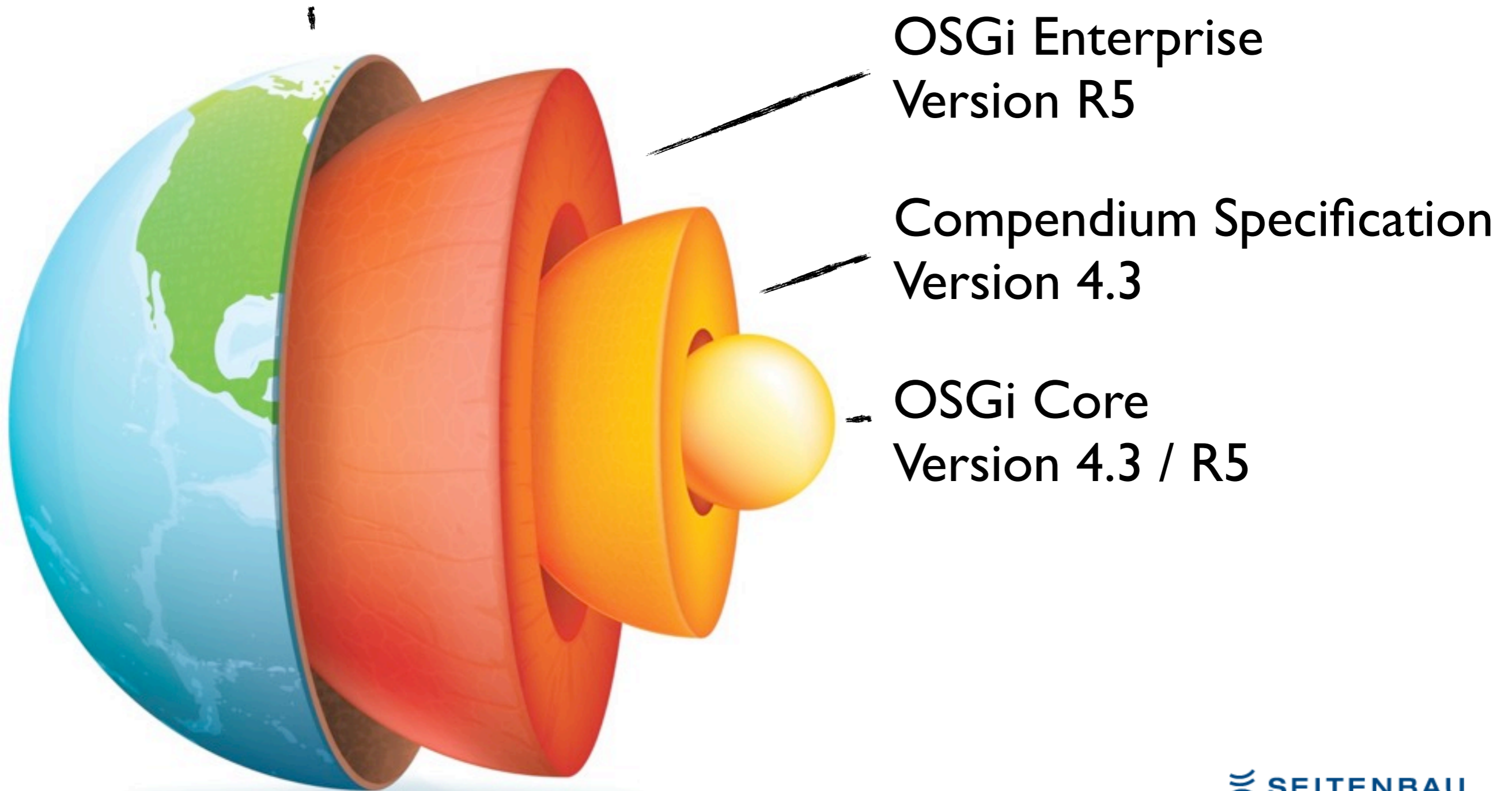
OSGi Core
Version 4.3 / R5

OSGi Specification World



OSGi Specification World

OSGi Applications



Open Source OSGi Frameworks

Core Compendium

Apache Felix (ASL)
<http://felix.apache.org/>

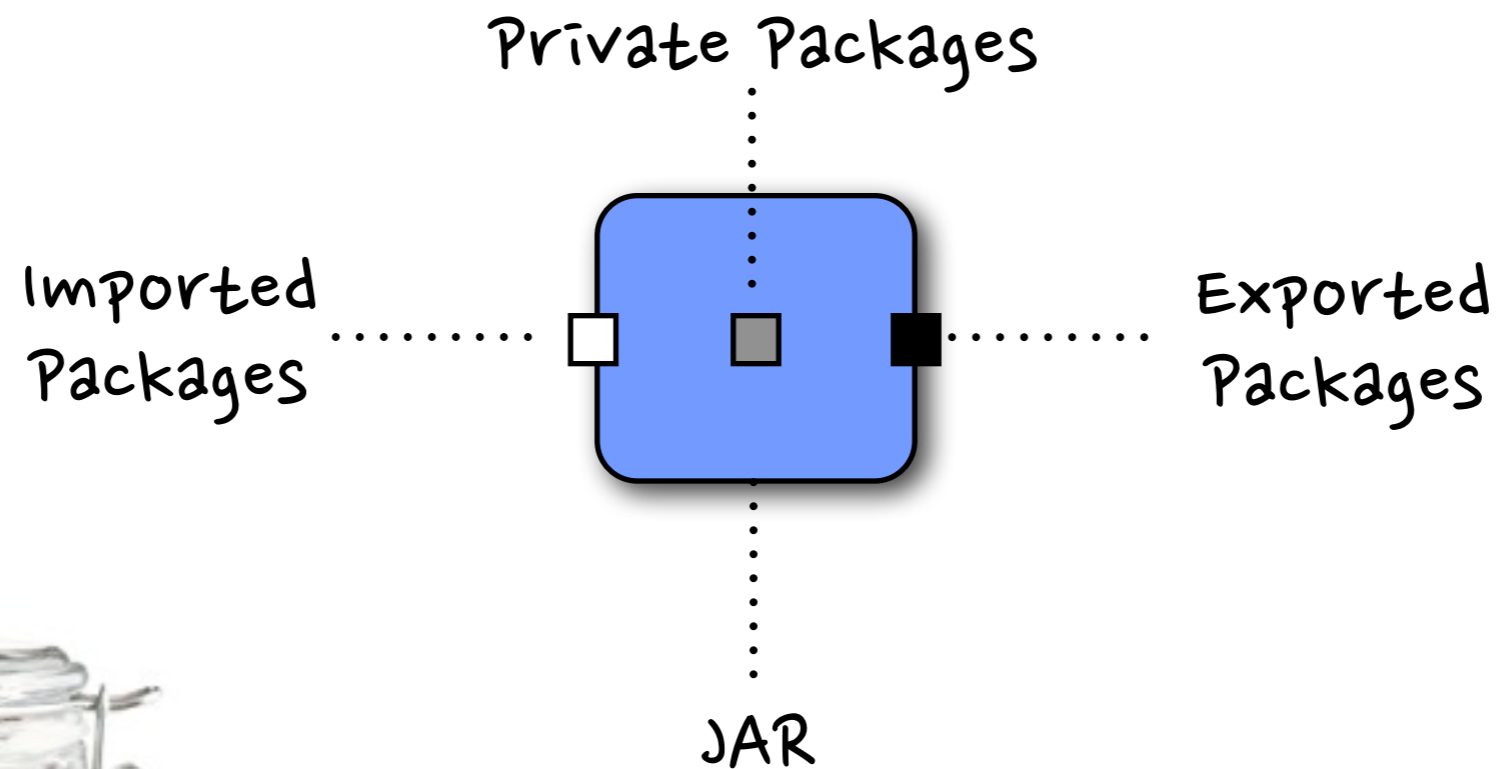
Eclipse Equinox (EPL)
<http://eclipse.org/equinox/>

Enterprise

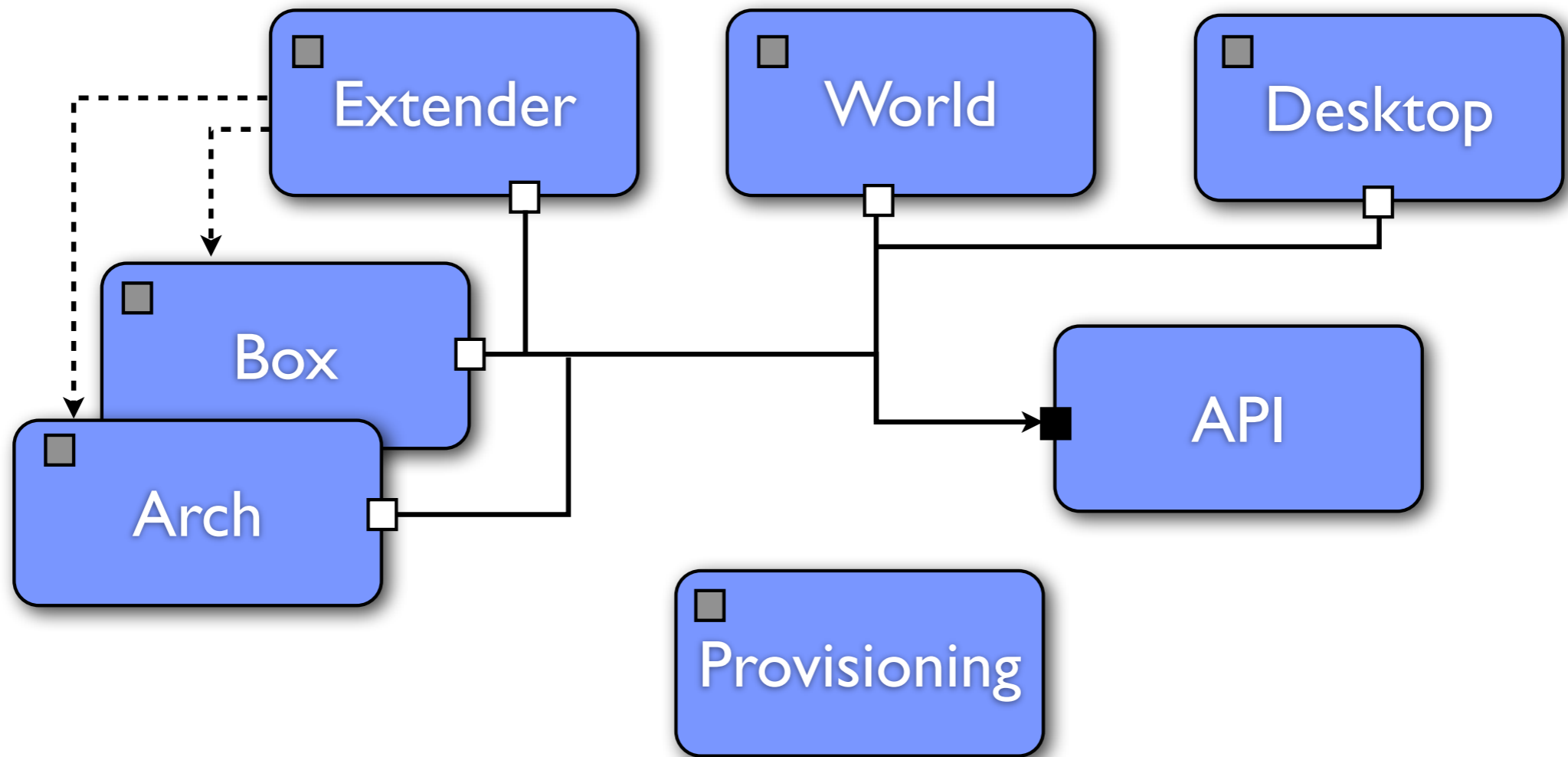
Apache Aris (ASL)
<http://aries.apache.org>

Eclipse Gemini (EPL)
<http://www.eclipse.org/gemini/>

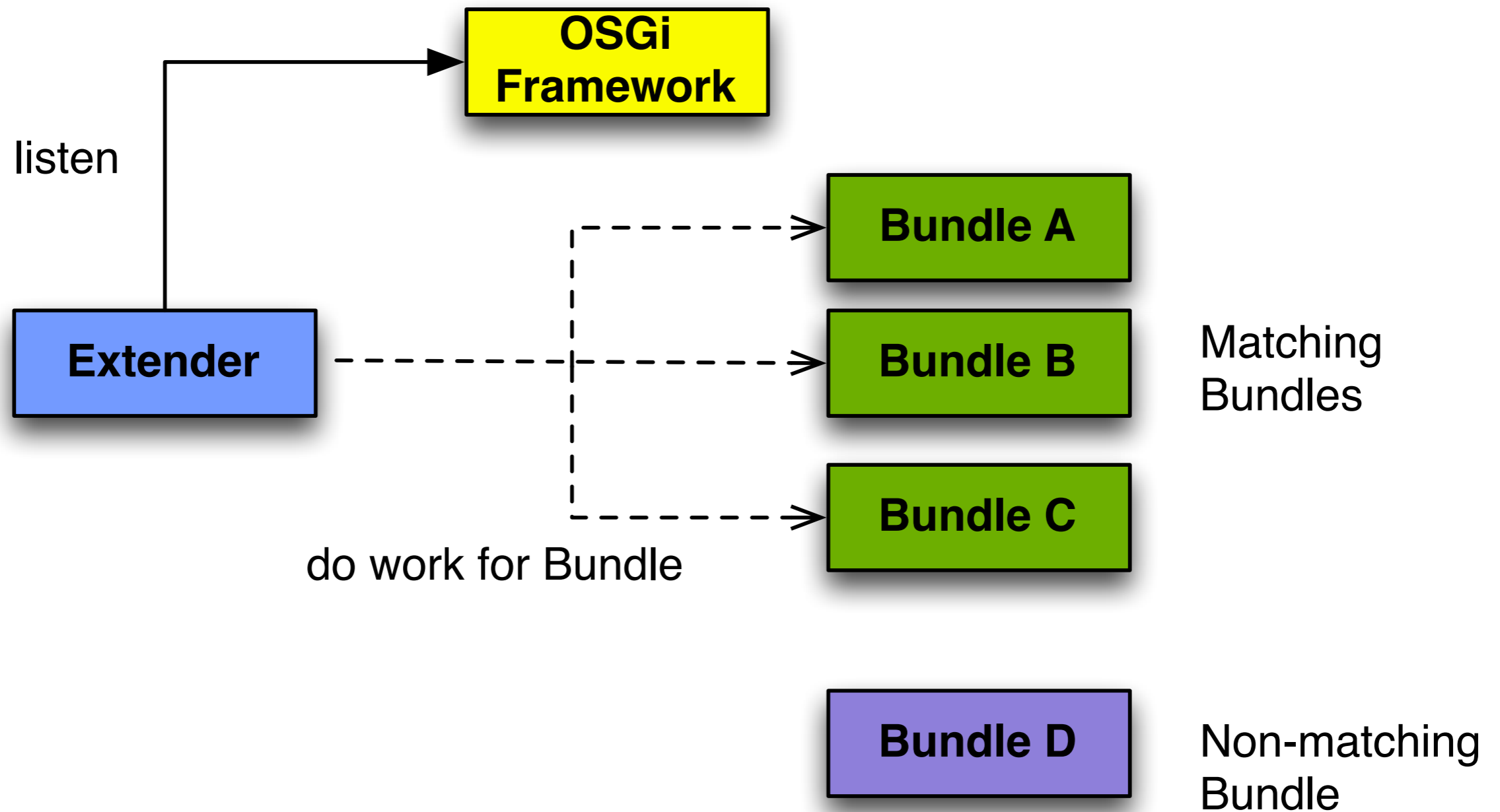
Bundle



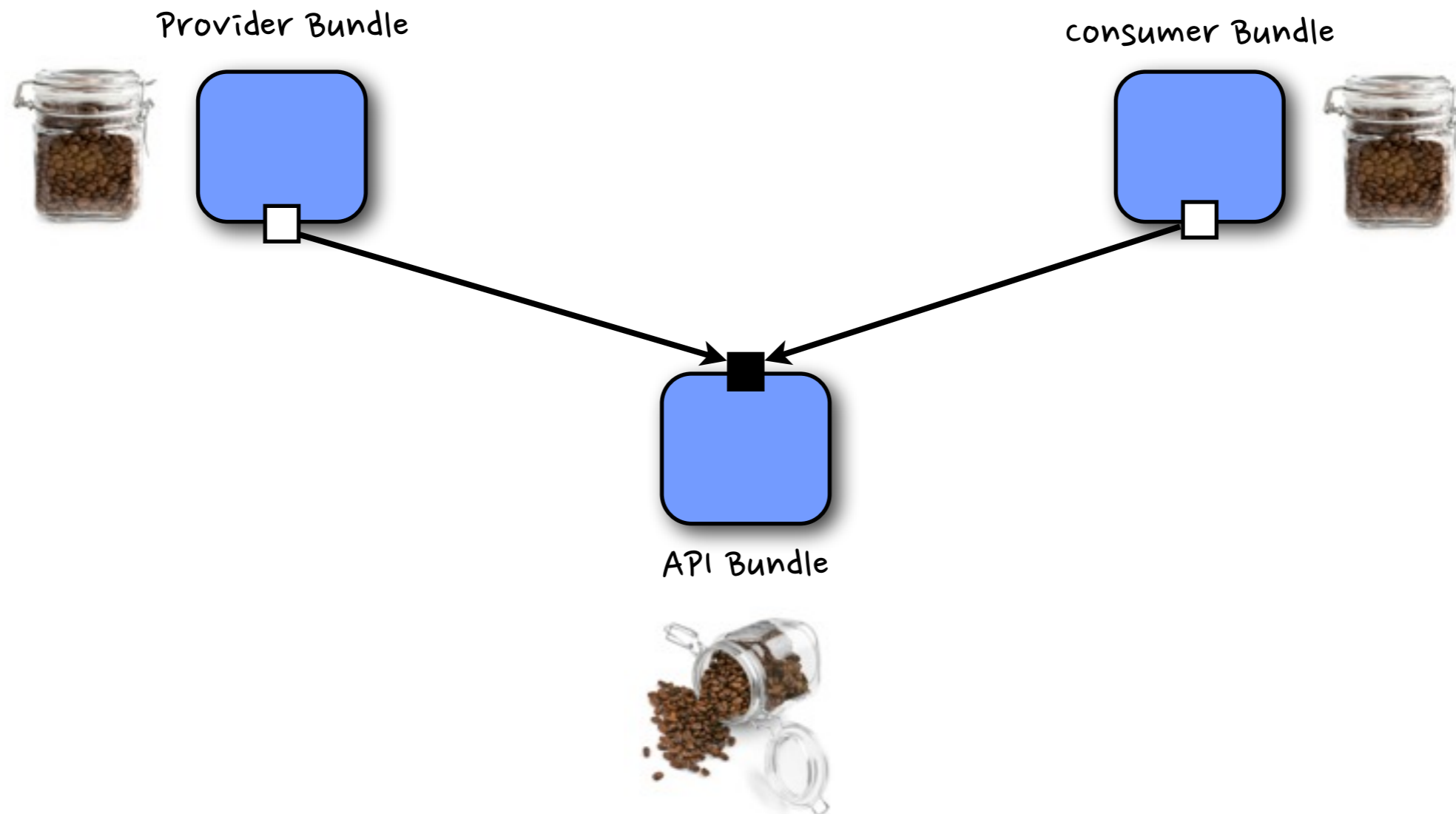
Modularity Demo



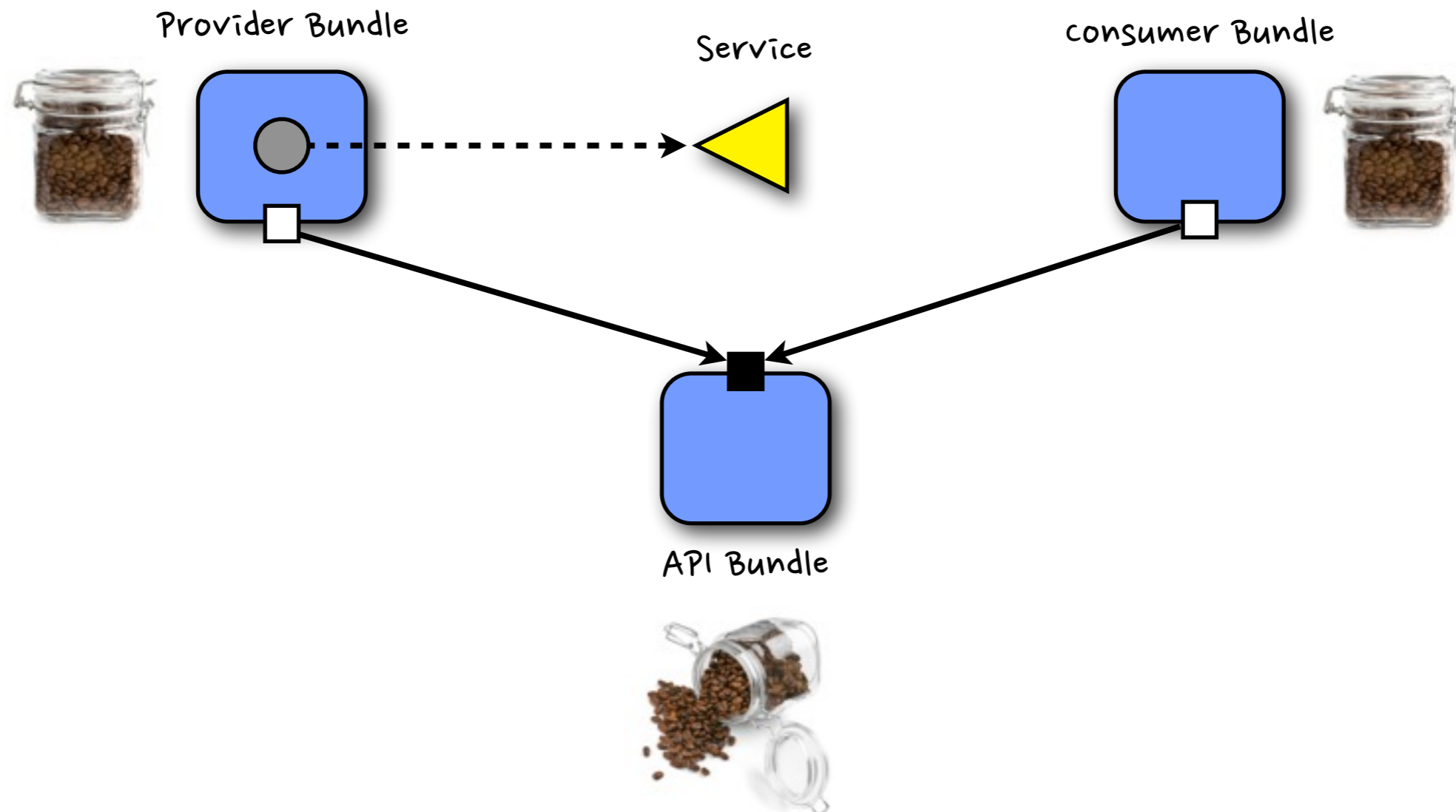
Extender Pattern



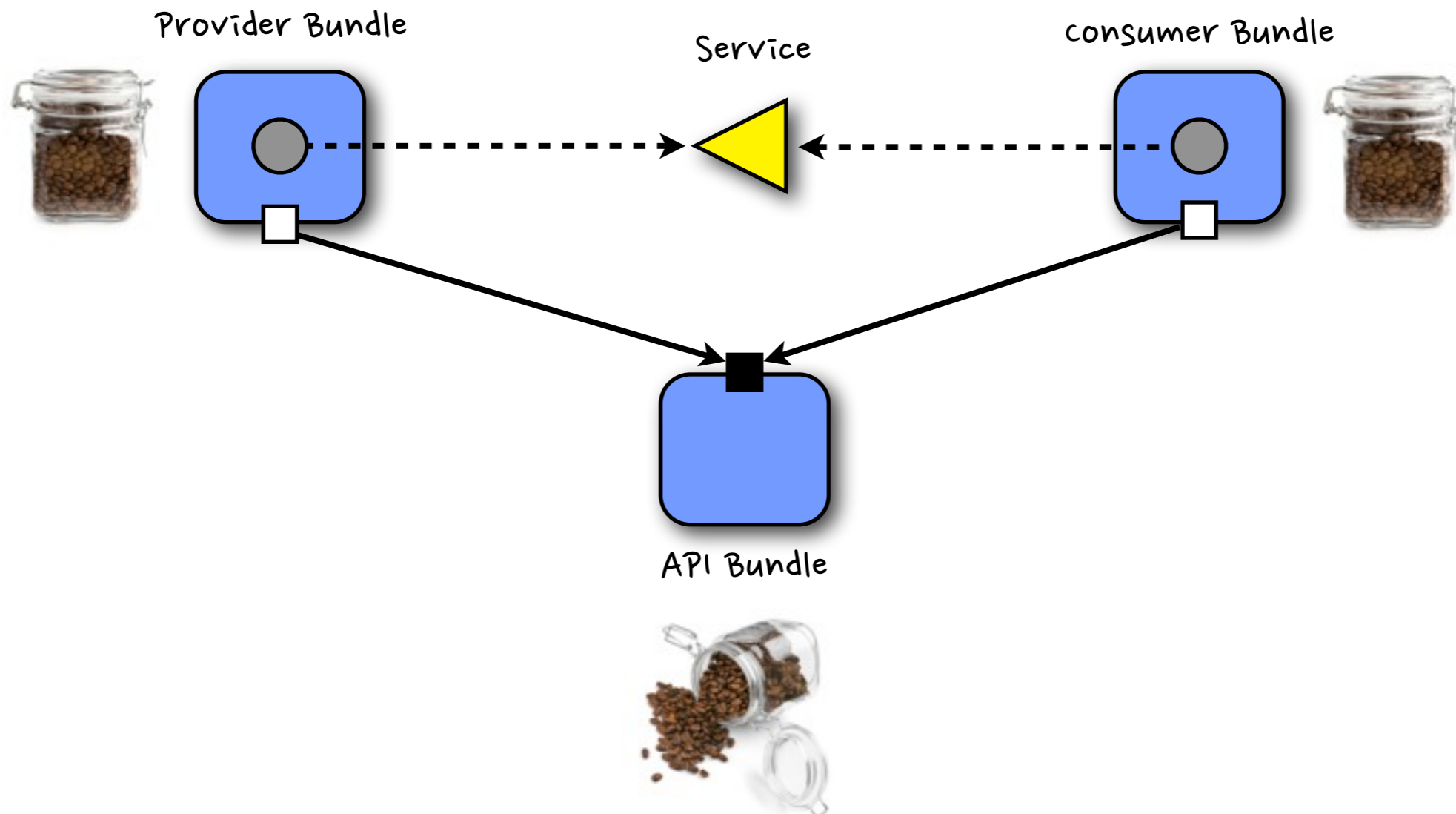
OSGi Services



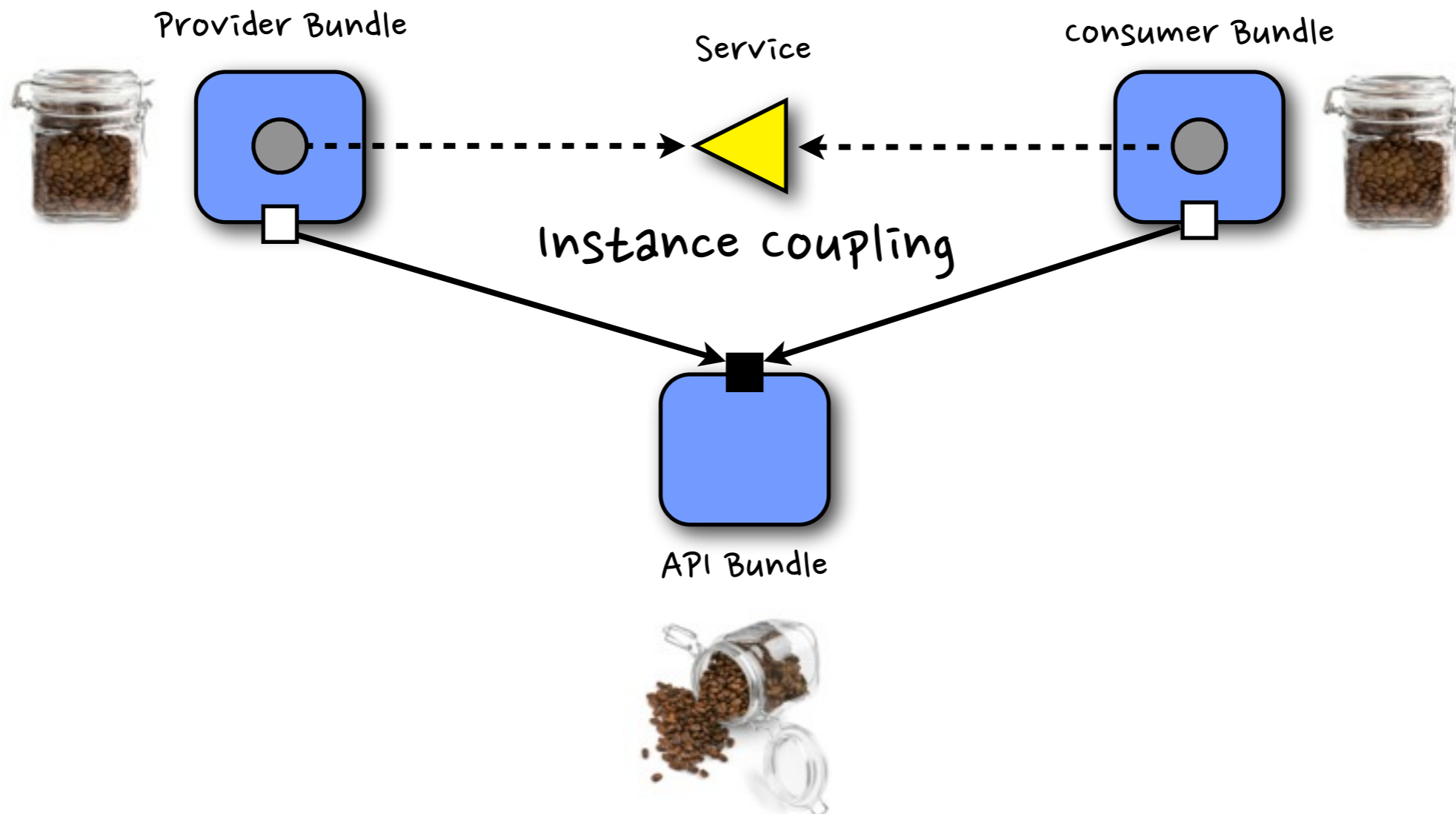
OSGi Services



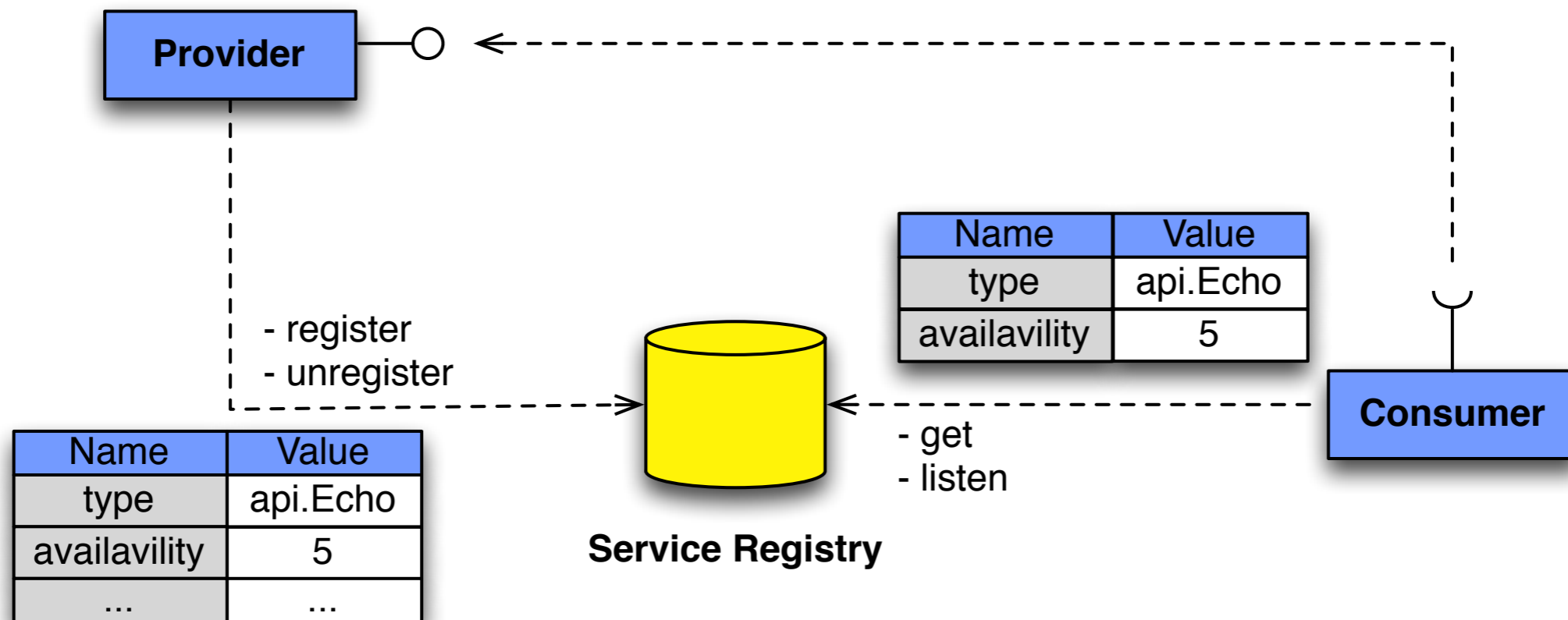
OSGi Services



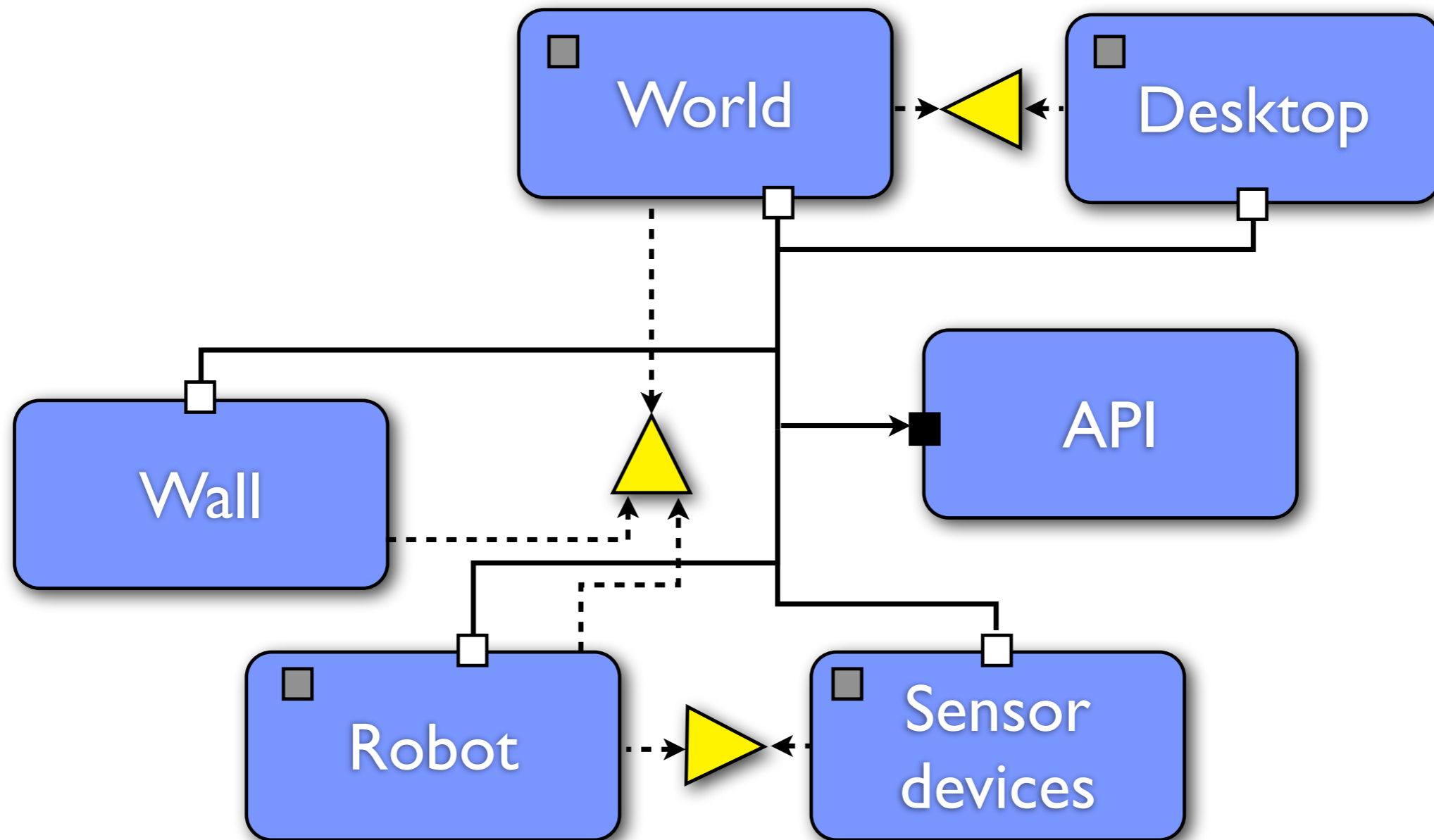
OSGi Services



Service Registry

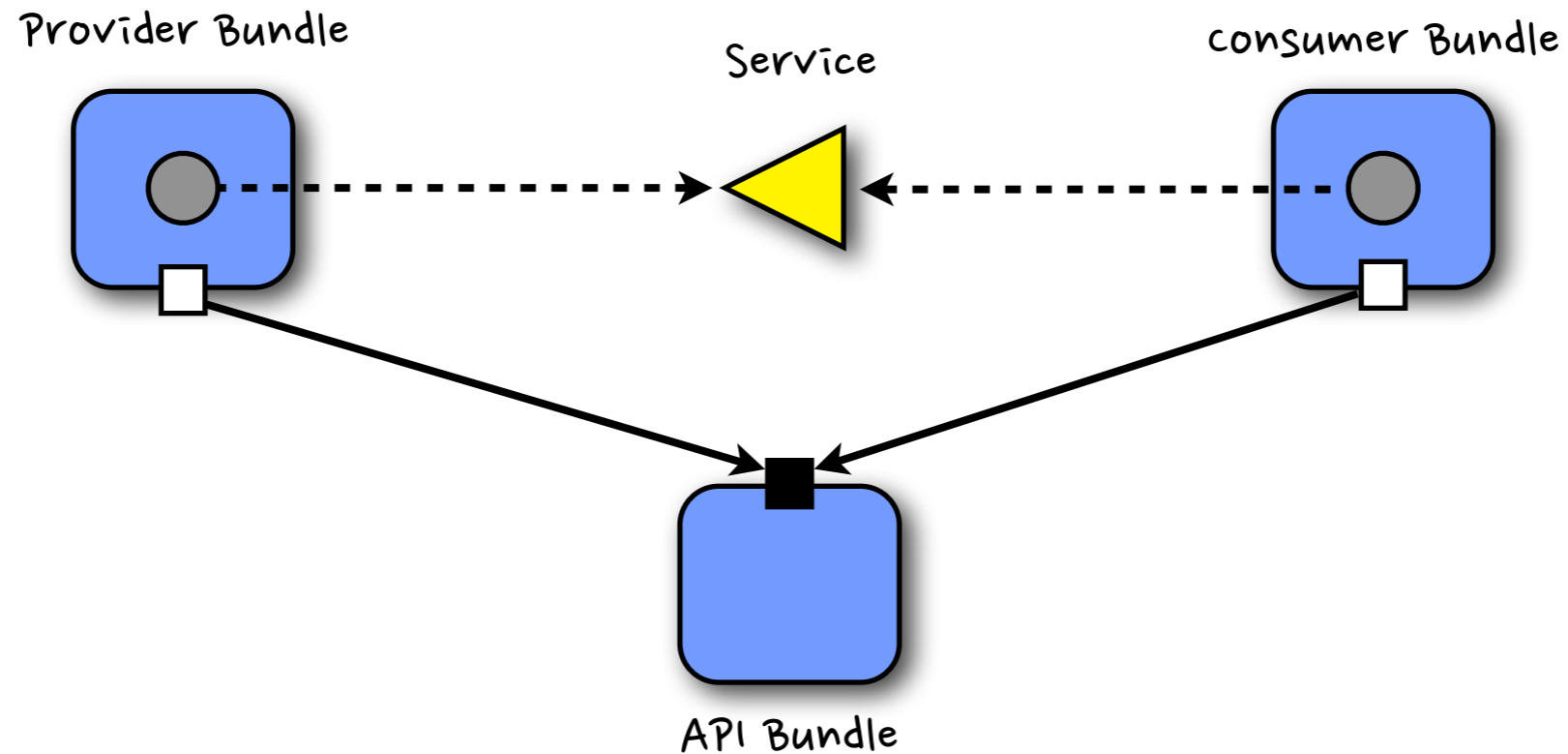


Demo OSGi Services



Demo

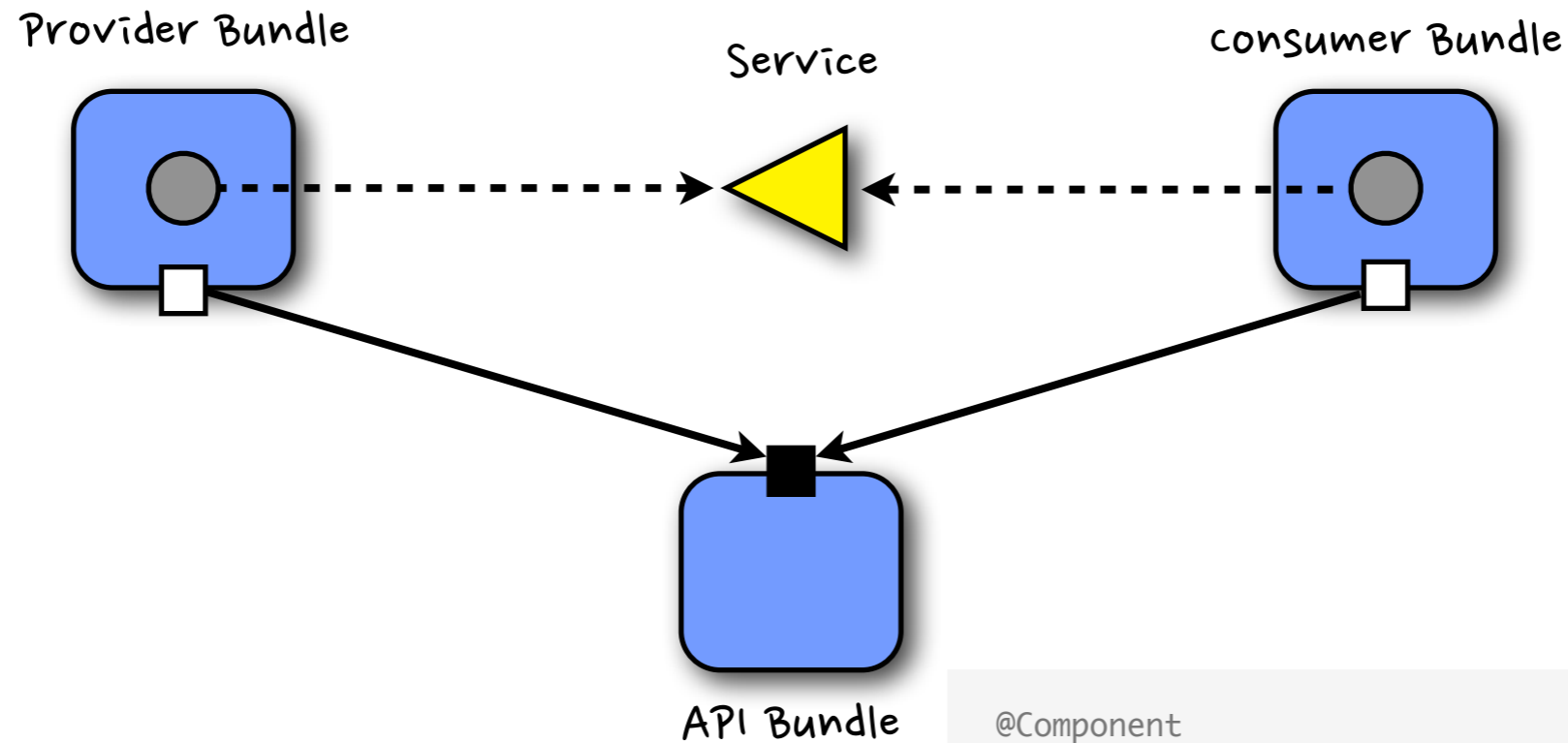
OSGi Declarative Services



```
<scr:component name="InfoProvider">  
  <implementation class="..RobotInfoComponent"/>  
  <service>  
    <provide interface="..RobotInformation" />  
  </service>  
</scr:component>
```

```
<scr:component name="InfoConsumer">  
  <implementation class="..InfoConsumer"/>  
  <reference name="RobotInformation"  
    interface=".. RobotInformation"  
    bind="setInfo" unbind="unsetInfo" />  
</scr:component>
```


DS Annotation



```
@Component
public class RobotInformationComponent implements RobotInformation {

    List<String> robotNames = new ArrayList<String>();

    @Reference(multiple=true, dynamic=true)
    public void addRobot(Robot robot) {
        robotNames.add(robot.getName());
    }

    public void removeRobot(Robot robot) {
        robotNames.remove(robot.getName());
    }

    @Override
    public List<String> getRobotNames() {
        return robotNames;
    }
}
```

```
@Component
public class SysoutRobotInformation {

    RobotInformation information;

    @Reference
    public void setInformation(RobotInformation i) {
        this.information = i;
    }

    @Reference
    public void unsetInformation(RobotInformation i) {
        this.information = null;
    }
}
```

Demo Modeling Dynamic with OSGi





Enterprise OSGi

Demo Web Application Bundle



Demo

JDBC™ Service Specification



Demo

JPA Service Specification



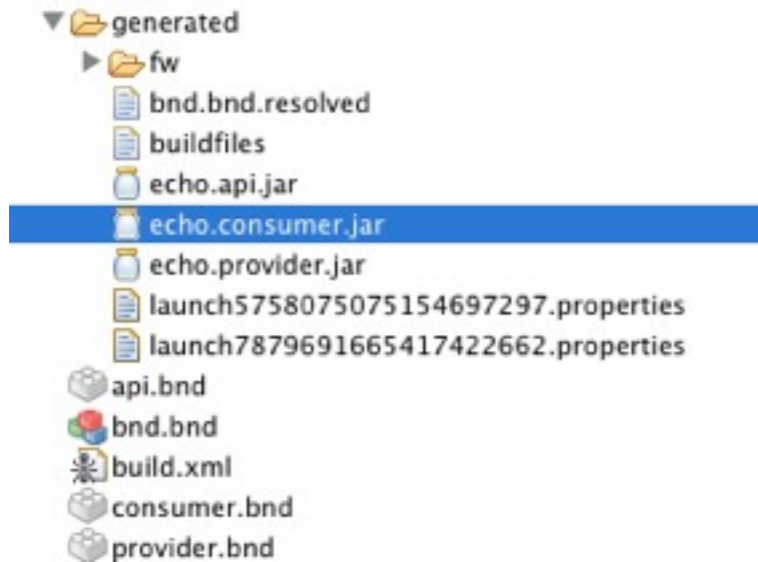


OSGi Tooling...

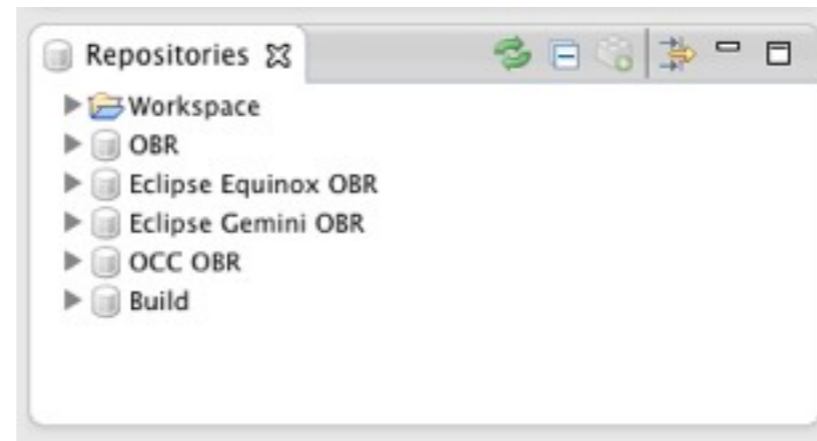
Bndtools



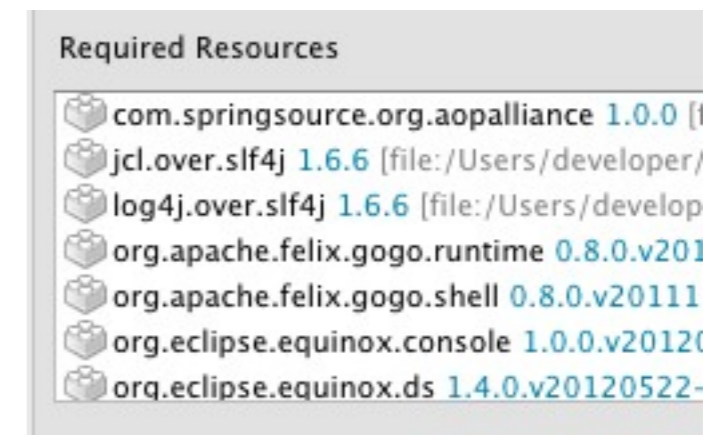
Instant Builder



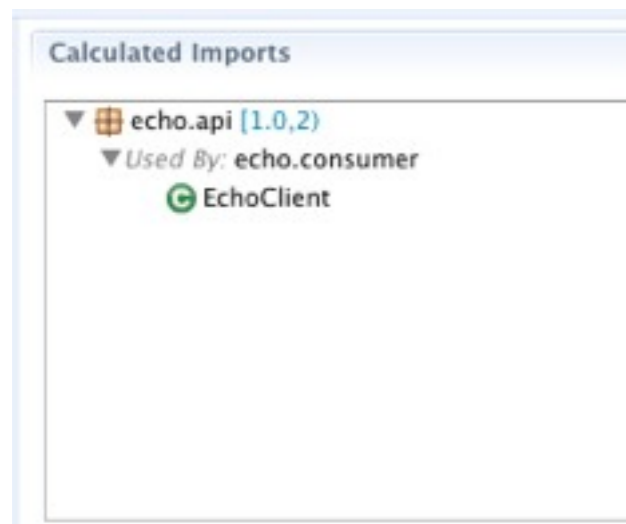
Repositories



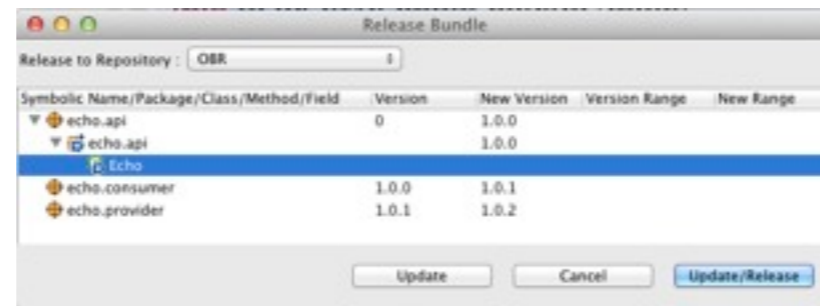
OBR Resolving



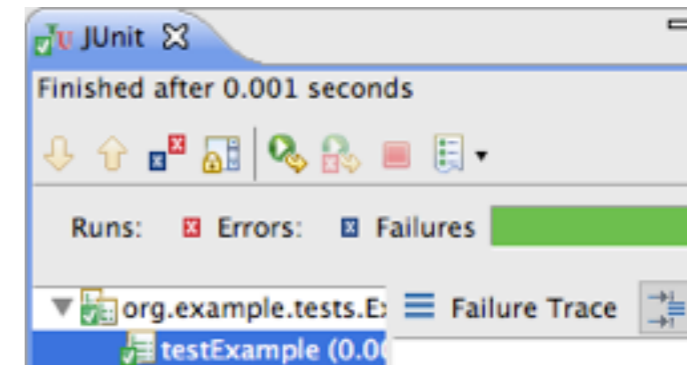
Import Analysis



Semantic Versioning



Integrated Testing



Q&A

Twitter @tux2323

References

Simbad 3D Robot Simulator - <http://simbad.sourceforge.net/>

OSGi in Action (ISBN 1933988916)

Richard S. Hall, Karl Pauls, Stuart McCulloch, and David Savage

Why OSGi?

BJ Hargrave (IBM), Peter Kriens (aQute)

<http://www.slideshare.net/bjhargrave/why-osgi>

Bndtools - <http://bndtools.org/>

OSGi Demo Mars Robot Project

<http://code.google.com/a/eclipselabs.org/p/occl/>

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Vielen Dank!

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