OSGI BASICS - LAB
SYSTEM INTEGRATION WITH JBOSS

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STEP 1

OSGI SERVICE USING ACTIVATOR

1. Clone git repository
   - git clone https://github.com/qa/course-sys-int-osgi-seminar

2. Build project and checkout proper git branch
   - git checkout osgi-00
   - mvn clean install

3. Deploy all bundles (hello-api, hello-en, hello-client)

4. Register OSGi service implemented by class EnGreetingImpl in hello-en module
   - Set service properties:
     - lang=EN
     - service.ranking=3
   - Set property "loggingService" in your service
     - Lookup org.osgi.service.log.LogService service from registry

5. Rebuild hello-en module and update bundle

6. Test OSGi service using hello-client bundle (stop|start)
STEP 2
OSGI SERVICE USING BLUEPRINT

1. Checkout branch \texttt{osgi-01}
2. Create OSGi service implemented by class DeGreetingImpl in hello-de module
   - Set service properties:
     - lang=DE
     - service.ranking=1
3. Deploy hello-de bundle
4. Check the OSGi service was registered
5. Force client to use German implementation
<?xml version="1.0" encoding="UTF-8"?>
<blueprint xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
           xmlns="http://www.osgi.org/xmlns/blueprint/v1.0.0"
           xsi:schemaLocation="http://www.osgi.org/xmlns/blueprint/v1.0.0
                              http://www.osgi.org/xmlns/blueprint/v1.0.0/blueprint.xsd">

</blueprint>
STEP 3

OSGI SERVICE USING SPRING

1. Checkout branch **osgi-02**
2. Create OSGi service implemented by class DeGreetingImpl in hello-fr module
   - Set service properties:
     - lang=FR
     - service.ranking=2
3. Deploy hello-fr bundle
4. Check the OSGi service was registered
5. Force client to use French implementation
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xmlns:osgi="http://www.springframework.org/schema/osgi"
    xmlns="http://www.springframework.org/schema/beans"
    xsi:schemaLocation="
        http://www.springframework.org/schema/osgi
            http://www.springframework.org/schema/osgi/spring-osgi-1.2.xsd
        http://www.springframework.org/schema/beans
            http://www.springframework.org/schema/beans/spring-beans.xsd">
</beans>
STEP 4
REGISTER SERVICE TRACKER

- Checkout branch `.osgi-03`
- Create service tracker for interface `Greeeting` and track adding and removing of implementations in standard output (use service attribute "lang")
  - `org.osgi.util.tracker.ServiceTracker`
  - Important ServiceTracker methods
    - `open`, `close` - just call
    - `addingService`, `removedService` - override
- Register service tracker
  - Choose whatever possibility (Activator, Blueprint, Spring)
  - Some hints for usage of component frameworks
    - You may need bean attributes: init-method, destroy-method
    - Bundle context reference name
      - Spring: "bundleContext"
      - Blueprint: "blueprintBundleContext"
STEP 5

TRY YOUR APPLICATION

- Checkout branch **osgi-04**
- Try your application
- Get familiar with more karaf commands
  - Use `<tab>` to show all possible commands
  - Use `help` keyword to get command manual
THANK YOU!