



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 modul
 - 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 modul and update bundle

STEP2

OSGI SERVICE USING BLUEPRINT

- ① Checkout branch **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

STEP2

BLUEPRINT SKELETON

```
<?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>
```

STEP3

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

STEP 3

SPRING SKELETON

```
<?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>
```

STEP4

REGISTER SERVICE TRACKER

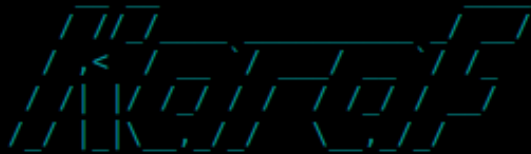
- Checkout branch **osgi-03**
- Create service tracker for interface **Greeting** and track adding and removing of implementations in standard output (use service attribute "lang")
 - **org.osgi.util.tracker.ServiceTracker**
 - Important ServiceTracker methods
 - **open, close** - just call
 - **addingService, 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"

STEP5

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

```
→ default-karaf ./bin/karaf
```



```
Apache Karaf (4.0.0)
```

```
Hit '<tab>' for a list of available commands  
and '[cmd] --help' for help on a specific command.  
Hit '<ctrl-d>' or type 'system:shutdown' or 'logout' to shutdown Karaf.
```

```
karaf@root(> █
```




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THANK YOU!