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06.24.09

Porównanie i integracja Spring Dynamic Modules z OSGi Declarative Services

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Eclipse demoCamp

Spring IDE

OSGi

- klasycznie
- deklaratywnie
- springowo

Spring DM Server



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Spring IDE

wsparcie dla Spring IoC

edytor plików konfiguracyjnych

podpowiadanie składni

podpowiedzi kontekstowe

wsparcie dla dynamicznego zarządzania
zależnościami

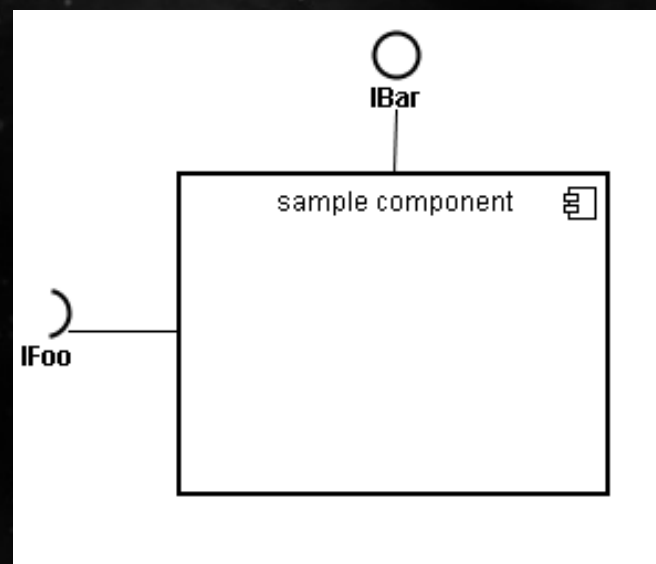
wsparcie dla Spring DM Server, Spring OSGi

wsparcie dla Spring Web Flow, Spring Batch,
Spring Security

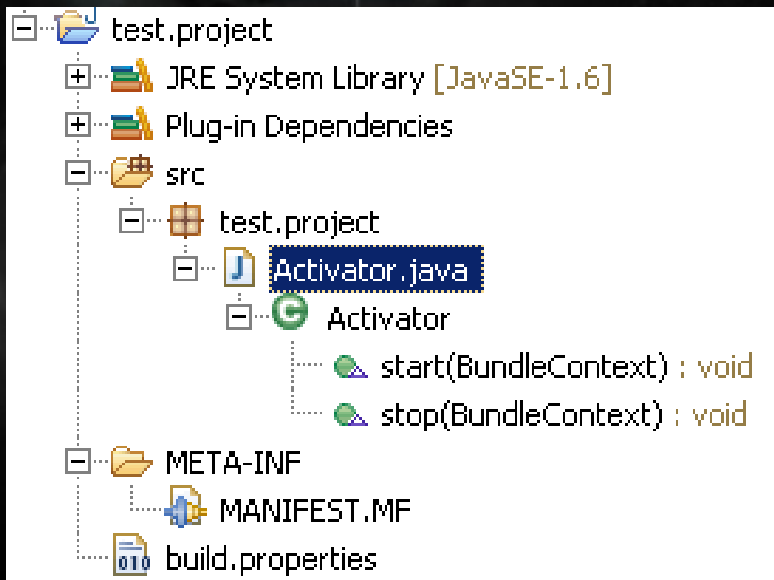
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OSGi

abstrakcja pojęć
reżywalność
zarządzanie



Prosty bundle



```
public class Activator implements
BundleActivator {

public void start(BundleContext context)
throws Exception {
    System.out.println("start");
}

public void stop(BundleContext context)
throws Exception {
    System.out.println("stop");
}
}
```



Service API

Rejestracja

```
BundleContext#registerService(...);
```

Użycie

```
BundleContext#getServiceReference(...);
```

```
BundleContext#getService(...);
```

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nasłuchiwanie zdarzeń

serwis tracker

Podejście klasyczne



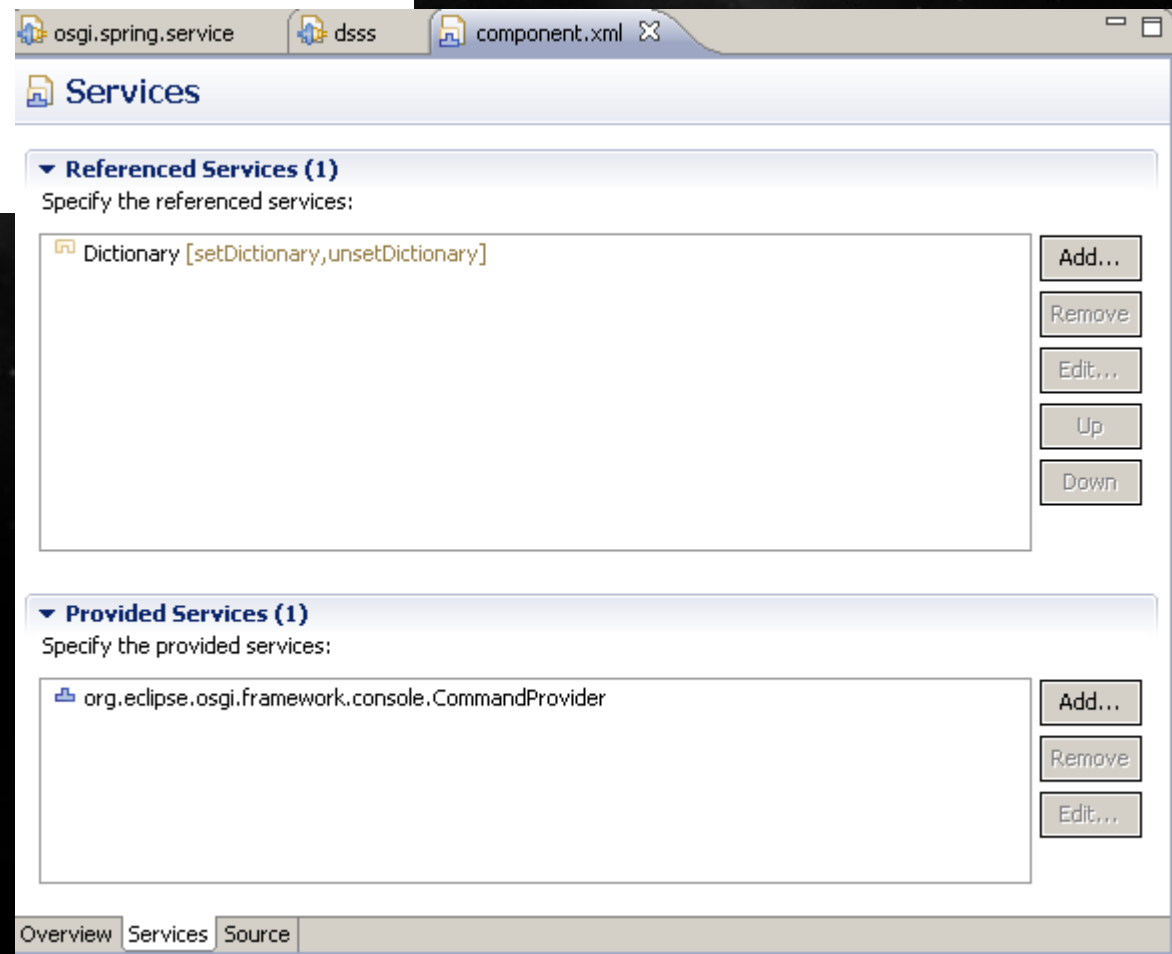
Declarative services

Service-Component: OSGI-INF/component.xml

zależność na: org.eclipse.equinox.ds w środowisku docelowym

```
<?xml version="1.0" encoding="UTF-8"?>
<component immediate="true" name="sdt.server.osgi.multi">
  <implementation class="sdt.server.Component"/>
  <reference cardinality="0..1"
interface="sdt.server.help.IHelpService" name="helpService"
policy="dynamic"
  bind="bindHelp" unbind="unbindHelp" />
  <service>
    <provide interface="example.Foo"/>
  </service>
</component>
```

Declarative services



Spring dynamic services

organizacja wewnętrzna z użyciem spring'a
deklaratywna definicja serwisów
deklaratywne zarządzanie zależnościami
obsługa dynamiki systemu



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Przykład

```
<?xml version="1.0" encoding="UTF-8"?>
<bean:beans xmlns:bean="http://www.springframework.org/schema/beans"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://www.springframework.org/schema/osgi"
xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans.xsd
http://www.springframework.org/schema/osgi
http://www.springframework.org/schema/osgi/spring-osgi.xsd">

<reference id="dataSource" interface="javax.sql.DataSource" cardinality="1..1" />
<reference id="entityManagerFactory" interface="javax.persistence.EntityManagerFactory"
cardinality="1..1" />
<reference id="rankService"
interface="put.ksantypa.rank.service.MenadzerAlgorytmowRankingowych" cardinality="1..1" />
<reference id="selectorService" interface="put.student.mcselection.service.Selector"
cardinality="1..1" />
<service id="dataService" ref="dataAccessController"
interface="put.ksantypa.services.DataService" />
<service id="commandService" ref="commandController"
interface="put.ksantypa.services.CommandService" />
<service id="screenService" ref="screenServiceBean"
interface="put.ksantypa.services.ScreenService" />
<service id="fileService" ref="fileServiceBean"
interface="put.ksantypa.services.FileService" />
<service id="reportsTemplatesService" ref="reportsTemplatesBean"
interface="put.ksantypa.services.ReportsTemplatesService" />
</bean:beans>
```



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Możliwości

serwisy dynamiczne (opcjonalne) i statyczne –
(0..1, 1..1, 0..*, 1..*)

automatyczne zarządzanie wstrzykiwaniem
zależności

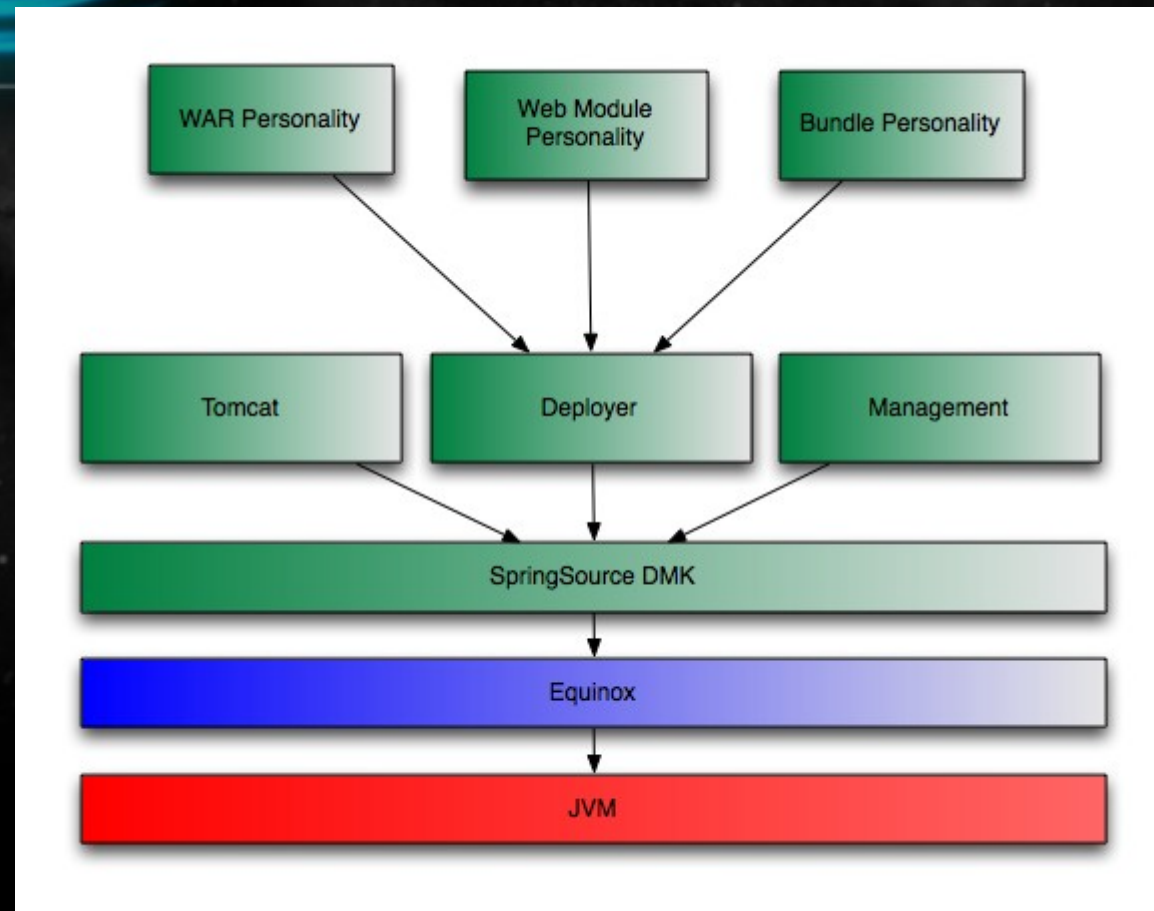
mechanizm listnerów

inteligentne kolekcje

definicja czasów oczekiwania

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Spring DM Server





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Spring DM Server

Wsparcie dla aplikacji (PAR)

Wsparcie dla bibliotek

Wsparcie dla bundle

Zapewnienie infrastruktury

Narzędzia tłumaczące biblioteki (bundlor)

Plugin Eclipse

Spring DM Server

Server	Status	Actions
SpringSource dm Server v1.0 at	Stopped	Republish
<ul style="list-style-type: none"> ksantypa.par <ul style="list-style-type: none"> algorithms controller datalayer datamodel rank 		Republish Republish Republish Republish Republish

Bundle Repository Browser

Search for Bundles and Libraries

Search for bundles and libraries by names, symbolic names, classes or packages. Wildcards such as * and ? are supported. Bundles and Libraries that appear in gray color are already installed.

Search

Select All

Deselect All

Analyse

View License

Download

Download source jars from repository

Installed Bundles and Libraries

The following bundles and libraries are currently installed in the SpringSource dm Server.

- [-] [+] Bundles - C:\Documents and Settings\nugae\.m2\repc
 - [+] Hessian Binary Web Service Protocol - com.spring
- [-] [+] Bundles - C:\Documents and Settings\nugae\.m2\repc
 - [+] Open Symphony Quartz Scheduler - com.springso
- [-] [+] Bundles - C:\Documents and Settings\nugae\.m2\repc
 - [+] Oracle JDBC Driver - com.springsource.oracle.jdb
- [-] [+] Bundles - C:\Documents and Settings\nugae\.m2\repc
 - [+] com.springsource.util.common (1.5.0.CI-R114-B4
- [-] [+] Bundles - C:\Documents and Settings\nugae\.m2\repc
 - [+] com.springsource.util.io (1.5.0.CI-R114-B40)
- [-] [+] Bundles - C:\Documents and Settings\nugae\.m2\repc
 - [+] com.springsource.util.math (1.5.0.CI-R114-B40)

Refresh

Install Sources

Open Manifest

New bundles or libraries added to the file system outside of Eclipse are not picked up automatically. [Update the bundle and library index.](#)

Overview
Repository



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Integracja Spring Server

Integracja Equinox platform

Wsparcie narzędziowe

Podsumowanie