

Spring Framework's Dynamic Language Support

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Your Speaker

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Overview

- Spring Framework
- Wiring Beans in Spring
- Dynamic Languages
- Dynamic Languages and Spring
- Wiring Dynamic Language Beans
- Demo Web Application
- Questions / Comments
- References

Spring Framework

Some Basic Principles Behind Spring

- Dependency Injection
- Wiring or Configuring Dependencies
- Programming to Interfaces
- Abstraction
- Flexibility (not dependent on Spring)
- Lightweight Container

Wiring Beans in Spring

Let's take a look at a sample application context file:

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans">

    <bean name="myBean" class="com.thejavajar.MyBean"/>

    <bean name="myOtherBean" class="com.thejavajar.MyOtherBean">
        <property name="myBean" ref="myBean"/>
    </bean>

</beans>
```

Wiring Beans in Spring

Let's take a look at our Java:

```
public class MyOtherBean {  
  
    // This is injected because of our wiring:  
    // <property name="myBean" ref="myBean"/>  
    MyBeanInterface myBean  
  
    public void getMyBean() {  
        return this.myBean;  
    }  
  
    public MyBean setMyBean(MyBean myBean) {  
        this.myBean = myBean;  
    }  
}
```

Dynamic Languages

Dynamic Languages (Supported in Spring 2.5)

- Groovy, JRuby, BeanShell

Why Dynamic Languages?

- Productivity (A little less code, most of the time)
- Flexibility
- Simplicity (MOP, AOP part of the language in Groovy)
- Growing Popularity

Dynamic Languages

How simple and productive can it be?

```
def writer = new StringWriter()
  def xml = new MarkupBuilder(writer)
  xml.records() {
    myCarList.each { c ->
      car {
        name(c.name)
        make(c.make)
      }
    }
  }
  print writer.toString()
```

Sample Results:

```
<records>
  <car>
    <name>XTerra</name>
    <make>Nissan</make>
  </car>
  .
  .
  .
</records>
```

Dynamic Languages and Spring

Spring Supports Groovy, JRuby, BeanShell

Why? Right from the Spring 2.5 Reference:

“...the languages have a lot of traction in the Java enterprise community...”

My Thoughts

- Springsource / Interface 21 want to give developers options
- Spring is on the Java technology edge
- JSR 223; Scripting support is a part of Java

Wiring Dynamic Language Beans

Let's take a look at a sample application context with beans supported by dynamic languages:

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
       xmlns:lang="http://www.springframework.org/schema/lang">

  <lang:groovy id="groovyMessenger" refresh-check-delay="3000"
              script-source="WEB-INF/groovy/MessengerImpl.groovy"/>

  <lang:jruby id="jrubyMessenger" refresh-check-delay="3000"
             script-interfaces="com.thejavajar.services.Messenger"
             script-source="WEB-INF/jruby/MessengerImpl.rb"/>

</beans>
```

Wiring Dynamic Language Beans

The Java interface and the Groovy and JRuby implementations:

```
interface Messenger {  
    public String sendMessage(String message);  
}
```

```
class GroovyMessenger implements Messenger {  
    String sendMessage(String message) {  
        return "I am going to send a message with Groovy! $message"  
    }  
}
```

```
class MessengerImpl  
    def sendMessage(message)  
        return "I am going to send a message with JRuby!" + message  
    end  
end  
MessengerImpl.new
```

Demo Web Application

Let's take a look at a demo:

What is in the demo?

- Web Application using Spring MVC
- A few Groovy beans
- A few Java beans
- A JRuby bean
- A few Java interfaces

Questions / Comments

Spring Framework's Dynamic Language Support

Questions / Comments

References

Spring 2.5.x Reference

<http://static.springframework.org/spring/docs/2.5.x/reference/>