Configuring Spring Web Flow Environment

Summary

The next is the setting for web development environment to use the Spring Web Flow.

Configuration

The XML document to define Flow of the Spring Web Flow has following schema.

```
<beans xmlns="http://www.springframework.org/schema/beans"
        xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:webflow="http://www.springframework.org/schema/webflow-config"
        xsi:schemaLocation="
http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans-2.5.xsd
http://www.springframework.org/schema/webflow-config
http://www.springframework.org/schema/webflow-config/spring-webflow-config-2.0.xsd">

        <!-- Setup Web Flow here -->
</beans>
```

Basic Configuration

To use Spring Web Flow, FlowRegistry and FlowExecutor should be configured.

FlowRegistry performs the role [1] of getting the flow xml created according to the registered scenario. FlowExecutor executes registered flow setting xml[2]. We'll examine the area where Web Flow system is executed in combination with Spring MVC later.

```
<!-- [1] Register Flow setting file -->
<webflow:flow-registry id="flowRegistry">
   <webflow:flow-location path="/WEB-INF/flows/booking/booking.xml" />
</webflow:flow-registry>

<!-- [2] Provide service of playing the pivotal role of Flow execution-->
<webflow:flow-executor id="flowExecutor" />
```

flow-registry option

flow-registry can be set as follows as shown below.

```
<!-- [1] Default is name-flow.xml but can be directly designated. -->
<webflow:flow-location path="/WEB-INF/flows/booking/booking.xml" />

<!-- [2] Can be identified with id -->
<webflow:flow-location path="/WEB-INF/flows/booking/booking.xml" id="bookHotel" />

<!-- [3] Meta information can be registered. -->
<webflow:flow-location path="/WEB-INF/flows/booking/booking.xml">
        <flow-definition-attributes>
                <attribute name="caption" value="Books a hotel" />
        </flow-definition-attributes>
</webflow:flow-location>

<!-- [4]ANT pattern can be designated. -->
<webflow:flow-location-pattern value="/WEB-INF/flows/**/*-flow.xml" />

<!--
        [5]Can use and combine the positions at the default prefix path.
```

```
           Flow definition file should be located at the related folder to improve the modulation.   -->
<webflow:flow-registry id="flowRegistry" base-path="/WEB-INF">
        <webflow:flow-location path="/hotels/booking/booking.xml" />
</webflow:flow-registry>

<!-- [6]Flow inheritance structure configuration possible -->
<!-- my-system-config.xml -->
<webflow:flow-registry id="flowRegistry" parent="sharedFlowRegistry">
        <webflow:flow-location path="/WEB-INF/flows/booking/booking.xml" />
</webflow:flow-registry>

<!-- shared-config.xml -->
<webflow:flow-registry id="sharedFlowRegistry">
        <!-- Global flows shared by several applications -->
</webflow:flow-registry>
```

Custom FlowBuilder Service Configuration

The flow-builder-services can customize the services or configurations used in establishing the flow. When it is not designated, the default service is used.

```
<webflow:flow-registry id="flowRegistry"     flow-builder-services="flowBuilderServices">
        <webflow:flow-location path="/WEB-INF/flows/booking/booking.xml" />
</webflow:flow-registry>

<webflow:flow-builder-services id="flowBuilderServices" />
```

Aavilable Services

conversion-service

Customizing ConversionService used by SWF system. If required during Flow execution, convert the specific type to other type(propertyEditor nature)

expression-parser

Used for ExpressionParser customizing. Unified EL is used by default, and the area of use is classpath. OGNL is used as other ExpressionParser.

view-factory-creator

Customizing ViewFactoryCreator. Default ViewFactoryCreator is Spring MVC ViewFactories showing JSP, Velocity, Freemaker in the screen.

development

Flow development mode setting. If it is true, Flow definition is changed, and hot-reloading is applied(including resource such as message bundles).

In Other Customization

```
<webflow:flow-builder-services id="flowBuilderServices"
        conversion-service="conversionService"
        expression-parser="expressionParser"
        view-factory-creator="viewFactoryCreator" />

<bean id="conversionService" class="..." />
<bean id="expressionParser" class="..." />
<bean id="viewFactoryCreator" class="..." />
```

flow-executor Option

Putting flow execution listener

The listener that is related to flow execution lifecycle is registered using the flow-execution-listener.

```
<flow-execution-listeners>
        <listener ref="securityListener" />
        <listener ref="persistenceListener" />
</flow-execution-listeners>
```

In addition, it can be applied to specific flow.

```
<listener ref="securityListener" criteria="securedFlow1,securedFlow2"/>
```

Adjust FlowExecution persistence

```
<flow-execution-repository max-executions="5" max-execution-snapshots="30" />
```

max-executions

Designate the number of flow execution that can be created per user session

max-execution-snapshots

Designate the number of history spot that can be received per Flow execution. Designate as 0 not to use snapshot. Set to -1 to disable restriction.

Reference

- Spring Web Flow reference 2.0.x
- Spring Web-Flow Framework Reference beta with Korean (by Park Chan Wook)