OSM Orchestration Exercise

Lab 10-1 - Create Orchestration Stages

In this section we will move towards completing our Orchestration Cartridge by defining the stages of decomposition/orchestration and finally creating the Orchestration process that will be run when the order arrives.

As you have seen from the previous labs, significant work has gone into creating definitions for the FUNCTION, SYSTEM and GRANULARITY order components through the use of Product Specifications and Decomposition Rules.

As far as OSM is considered, the definitions only determine what '**could**' be produced and it is the '**Orchestration Sequence**' that determines what is **actually** produced.

As the Orchestration Sequence runs it builds up an '**Executable Order Component Name**' comprising of all stages separated by '.' Eg <stage1>.<stage2>.<stage3> etc.

As defined as best practice by Oracle, this equates to 'FUNCTION.SYSTEM.GRANULARITY'

Mapping this to the Order Components we have previously defined. We would expect to see Executable Order Component Names such as:

- InitiateBillingFunction.BillingSystem.OrderGranularity
- ProvisionOrderFunction.ProvisioningSystem.ItemGranularity
- ShipOrderFunction.Shipping-InHouse.OrderGranularity

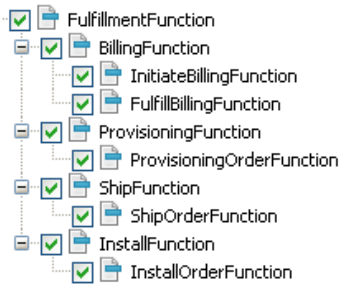
These are the decomposed components that ultimately map to 'real' OSM sub-processes.

Enough theory, we will now configure the '**Orchestration Stages**' that will form the '**Orchestration Sequence**'.

1. Under your cartridge, right-click and create a new '**Orchestration Stage**'.

   - Name: **DefineOrchestrationFunctions** for the stage name.
   - Folder Name: **STAGE**

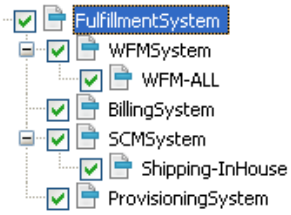
   - Under the '**Produces Order Components**' section check all the functions you have created e.g.



   - Leave the '**Depends on Orchestration Stage**' field blank.

2. Repeat this operation for **DefineOrchestrationSystems**.

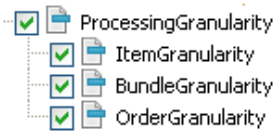
   - Select the following system components.



- In the '**Depends on Orchestration Stage**' select '**DefineOrchestrationFunctions'**.

3. Finally repeat this operation for **DefineOrchestrationGranularity**

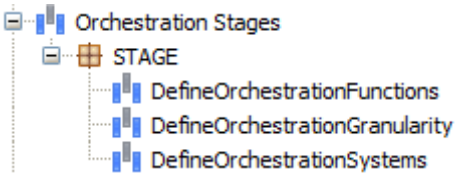
   - Select the following granularity components.



   - In the '**Depends on Orchestration Stage**' select '**DefineOrchestrationSystems'**.

4. Select 'File / Save All' from the main menu bar.

You should now have the following structure



5. Now create a new '**Orchestration Sequence**'

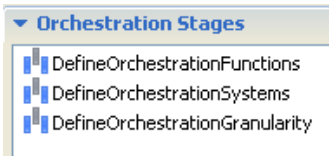
   - Name: **OrchestrationSequence**
   - Folder Name: **SEQUENCE**.

The '**Orchestration Sequence**' object is quite complex and relies on a number of other components to function.

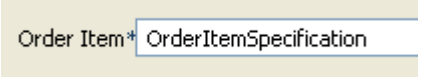
Firstly we will configure the 'Stages' that will be run during the decomposition process.

6. Under the 'Orchestration Stages' window, use the 'Select' button to pick

   - DefineOrchestrationFunctions
   - DefineOrchestrationSystems
   - DefineOrchestrationGranularity

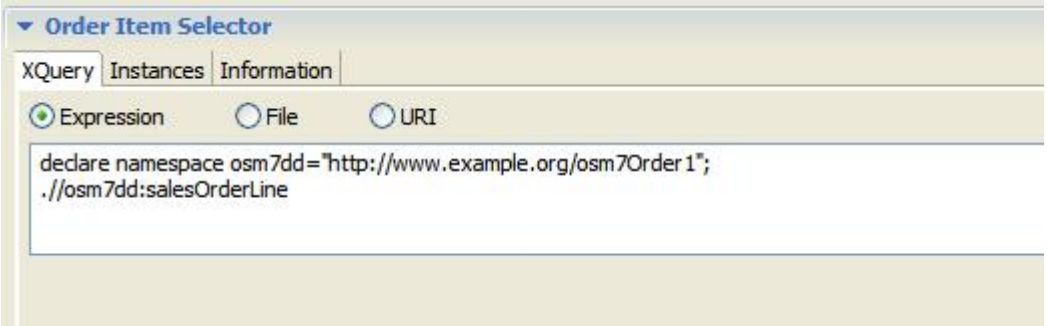


7. Then select your Order item Specification, called 'OrderitemSpecification'.



8. You then need to tell the 'Orchestration Sequence' how to identify an order line in the order XML file. This is done using a simple XQuery statement e.g.

```
declare namespace osm7dd="http://www.example.org/osm7Order1";
.//osm7dd:OrderLine
```



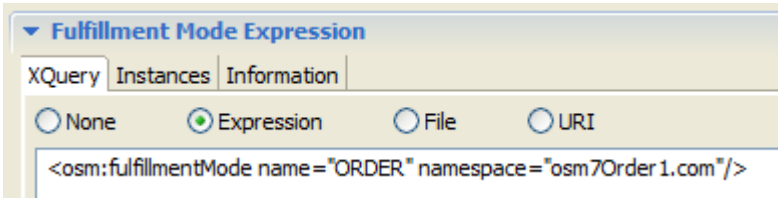
Finally, we need to specify the '**Fulfilment Mode**' that will be used in the production of the orchestration Plan (decomposition). Remember that the Fulfillment Mode is used in the Product Specifications to offer multiple decomposition strategies for different Fulfillment Modes.

In this example we will 'Hard Code' the Fulfillment Mode, but it would normally be selected from the incoming order.

9. Add the following XQuery statement into the '**Fulfillment Mode Expression'** box.

   - Select the 'Expression' radio button.
   - Add the following line as the XQuery.

```
<osm:fulfillmentMode name="ORDER" namespace="osm7Order1.com"/>
```



This completes the configuration of the '**Orchestration Sequence**'.

We have now completed **Lab** 10-1

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