

Multi Language Support using Extract Rule



Applies to:

SAP NetWeaver Mobile 7.1 (Data Orchestration Engine). For more information visit the [Mobile Homepage](#).

Summary

This document explains how to enable multi language feature in DOE using a concept of extract rule.

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1. Focus

This document explains how to enable multi language feature in Data Orchestration Engine using a concept of Extract rule.

The intended audience for the document is:

- **Development consultants**
- **Support consultants**

2. Scenario

Mobile users would like to work with the data in a language which he can understand, and he will not be interested in data belongs to other languages. The mobile middleware should be capable of sending the data

3. Example

Take a simple order scenario in which root node contains the order details and a child node contains order descriptions in different languages.

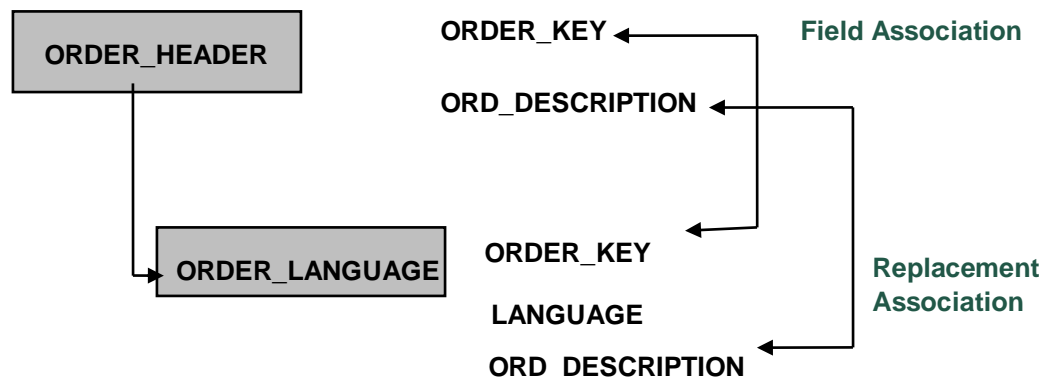
This can be achieved in Data Orchestration Engine (DOE) by modeling the following things.

4. Defining an Extract Association

Defining an extract association has two parts again.


Field association: To map the backend keys between the associated nodes to uniquely identify the instance.

Replacement association: To pickup the value to be replaced in the current node field from the associated node field.



Above model, based on the field **ORDER_KEY** it will identify the corresponding instance in the child node language and it will replace the root node **ORD_DESCRIPTION** with the child node language **ORD_DESCRIPTION** based on the device language.

While defining the association, modeler has to select the '**Association type**' as '**Extract**' as shown in the following picture.

Association Details	
Association Name	EXT
Description	Extract Association
Data Object Name	ORDER 
Associated Node	ORDER_LANGUAGE

Association Type	
<input type="radio"/> Complete	<input type="radio"/> Partial
<input checked="" type="radio"/> Extract	

4.1 Field Association

Set the field association which is a next step to the one above which is explained in the following picture.

Defining the Field Association

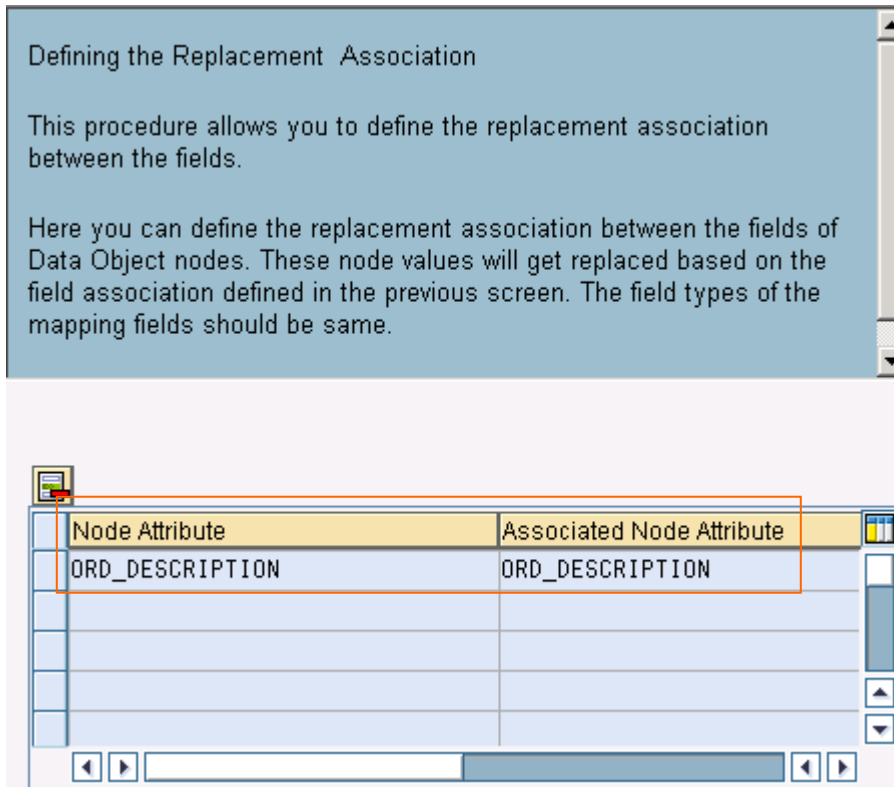
This procedure allows you to define the association between the fields.

Here you can define the association between the fields of Data Object nodes. These nodes will be mapped for the replacement association that you will define on the next screen. The field types of the mapping fields should be same.

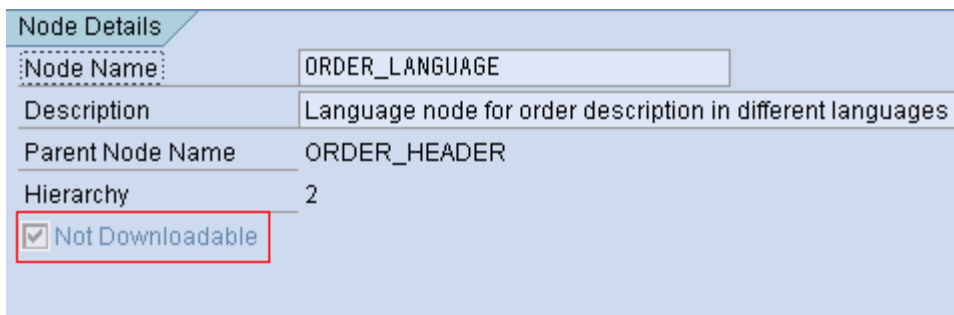
Node Attribute	Associated Node Attribute
ORDER_KEY	ORDER_KEY

4.2 Replacement Association

Next step is to define the replacement association which is explained in the following picture



Note: The child node ORDER_LANGUAGE should be set with the property '**Not Downloadable**' to client. By enabling this property, DOE will make sure the data won't go for child node. Only the corresponding ORD_DESCRIPTION will be changed in the root node and the root node data only go to the device based on the language of the device (Which reduces the amount of data transferred and lesser usage of bandwidth)

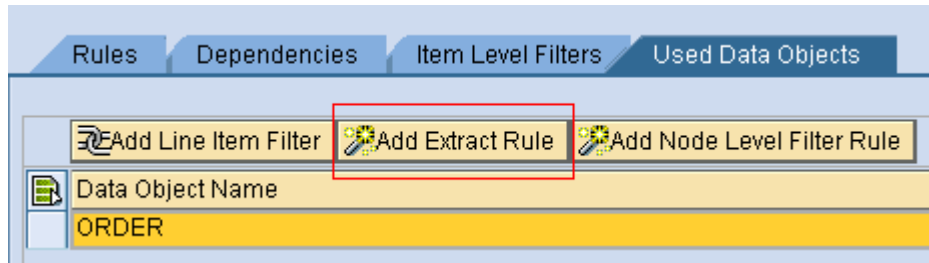


5. Defining Extract Rule

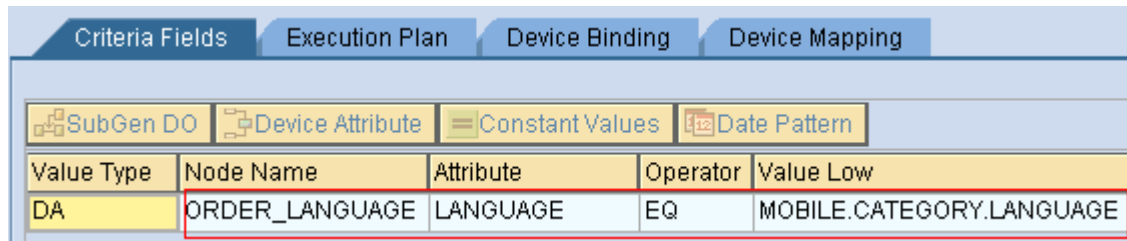
Before defining an extract rule the data object needs to have other rules like bulk rule or any other criteria rule on which the extract rule work to replace the text according in the root node based on device language.

The extract rule will define a rule based on which a device will receive the text in the particular language.

You can add a extract rule in the 'Used Data Objects' tab of the Distribution model screen by selecting the Data object in the table.



Rule should be defined by mapping data object attribute LANGUAGE to the LANGUAGE attribute of the receiver store 'MOBILE'.



6. How it Works

When ever a device is created with a specific language and assigned the particular DMSWCV it and enabled, it will calculate the corresponding subscription based on the language and will send the language specific data.

Let the model has 1 record in the ORDER_HEADER table for an order and two records corresponding to that particular order based on two different languages GERMAN and ITALIAN like explained by the following figure.

ORDER_HEADER – 1 record with ORDER_KEY = ORDER_1

CLIENT	ORDER_KEY	ORDER_PRIO	ORDER_STATUS	ORD_DESCRIPTION
000	ORDER_1	HIGH	NEW	ORDER FOR LAPTOP (DEFAULT TEXT)

ORDER_LANGUAGE – 2 records for German and Italian for the order key ORDER_1

CLIENT	ORDER_KEY	LANGUAGE	ORD_DESCRIPTION
000	ORDER_1	D	AUFTRAG FÜR LAPTOP (GERMAN TEXT)
000	ORDER_1	I	ORDINA PER NOTEBOOK (ITALIAN TEXT)

Once device (TEST_DEVICE_GERMAN) is created with language DE (German) and after assigning the particular Software component version (SWCV), distribution rule will be evaluated and the subscription for the device will be:

View Subscription Data

Device Details	
Device Name	TEST_DEVICE_GERMAN
Device ID	00145E5AC85C02DDA8974F46D5D1983B
Enabled	<input checked="" type="checkbox"/>

Subscription Details		
Distribution Rule	Data Object	Distribution Rule Criteria
DISTRIBUTE_ALL_ORDERS	ORDER	
DISTRIBUTE_ORDERS_BY_LANGUAGE	ORDER	ORDER_LANGUAGE - LANGUAGE EQ D ;

Base on the above values, device will get the following ORDER data to the device with the order description text in German.

TEST_DEVICE_GERMAN

```
<?xml version="1.0" encoding="utf-8" ?>
- <Msg type="I">
  <ORDER_HEADER C1="ORDER_1" C2="HIGH" C3="NEW" C4="AUFTRAG FÜR LAPTOP ( GERMAN TEXT )"
    CO="00145E5AC85C02DDA8975E3A40AE496E" ty="I" tv="00145E5AC85C02DDA8975E0EAF9FC96D" />
</Msg>
```

In the same way if the device created (TEST_DEVICE_ITALIAN) with language IT (Italian) and after assigning the particular Software component version (SWCV), distribution rule will be evaluated and the subscription for the device will be:

View Subscription Data

Device Details		
Device Name	TEST_DEVICE_ITALIAN	
Device ID	00145E5AC85C02DDA8975620578C584D	
Enabled	<input checked="" type="checkbox"/>	

Subscription Details		
Distribution Rule	Data Object	Distribution Rule Criteria
DISTRIBUTE_ALL_ORDERS	ORDER	
DISTRIBUTE_ORDERS_BY_LANGUAGE	ORDER	ORDER_LANGUAGE - LANGUAGE EQ I ;

Base on the above values, device will get the following ORDER data to the device with the order description text in Italian.

TEST_DEVICE_ITALIAN

```
<?xml version="1.0" encoding="utf-8" ?>
- <Msg type="I">
  <ORDER_HEADER C1="ORDER_1" C2="HIGH" C3="NEW" C4="ORDINA PER NOTEBOOK ( ITALIAN TEXT )"
    CO="00145E5AC85C02DDA8975E3A40AE496E" ty="I" tv="00145E5AC85C02DDA8975E0EAF9FC96D" />
</Msg>
```

And if the device got created with a language which is not specified in the language node list it won't replace any text and will get the root node default text.

View Subscription Data

Device Details		
Device Name	TEST_DEVICE_ENGLISH	
Device ID	00145E5AC85C02EDA897D6622B861405	
Enabled	<input checked="" type="checkbox"/>	

Subscription Details		
Distribution Rule	Data Object	Distribution Rule Criteria
DISTRIBUTE_ALL_ORDERS	ORDER	
DISTRIBUTE_ORDERS_BY_LANGUAGE	ORDER	ORDER_LANGUAGE - LANGUAGE EQ E ;

TEST_DEVICE_ENGLISH

```
<?xml version="1.0" encoding="utf-8" ?>
- <Msg type="I">
  <ORDER_HEADER C1="ORDER_1" C2="HIGH" C3="NEW" C4="ORDER FOR LAPTOP ( DEFAULT TEXT )"
    C0="00145E5AC85C02DDA8975E3A40AE496E" ty="I" tv="00145E5AC85C02DDA8975E0EAF9FC96D" />
</Msg>
```

Now if the device changes its language from ENGLISH to GERMAN the subscription will change to German and the data which is related to German will be distributed to device by sending a UPDATE for the order description in the root node ORDER_HEADER.

View Subscription Data

Device Details		
Device Name	TEST_DEVICE_ENGLISH	
Device ID	00145E5AC85C02EDA897D6622B861405	
Enabled	<input checked="" type="checkbox"/>	

Subscription Details		
Distribution Rule	Data Object	Distribution Rule Criteria
DISTRIBUTE_ALL_ORDERS	ORDER	
DISTRIBUTE_ORDERS_BY_LANGUAGE	ORDER	ORDER_LANGUAGE - LANGUAGE EQ D ;

```
<?xml version="1.0" encoding="utf-8" ?>
- <Msg type="I">
  <ORDER_HEADER C1="ORDER_1" C4="AUFTRAG FÜR LAPTOP ( GERMAN TEXT )" C0="00145E5AC85C02DDA8975E3A40AE496E"
    ty="U" tv="00145E5AC85C02DDA8975E0EAF9FC96D" />
</Msg>
```

Note: By observing the XML message which won't contain the ORDER_LANGUAGE node because we set the property of **'Not Downloadable'** to the language node and when the device changes the language it will send a update if you observe the above XML message task is a update (ty = U) and (ty = I) which is a task insert for the before XML messages. C4 is the generated field name for the field ORDER_DESCRIPTION.

Related Content

For more information, visit the [Mobile homepage](#).

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