

Week 2 Unit 1: Enriching Content by Calling OData Services

Enriching Content by Calling OData Services

Retrieve data via OData call (1)

Goals

Based on the incoming message, call an OData service to retrieve order data.

Fill the message body with the data returned from the OData service.

Input Message

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/">
  <soapenv:Header/>
  <soapenv:Body>
    <demo:OrderNumber_MT>
      <orderNumber>10249</orderNumber>
    </demo:OrderNumber_MT>
  </soapenv:Body>
</soapenv:Envelope>
```

Output Message

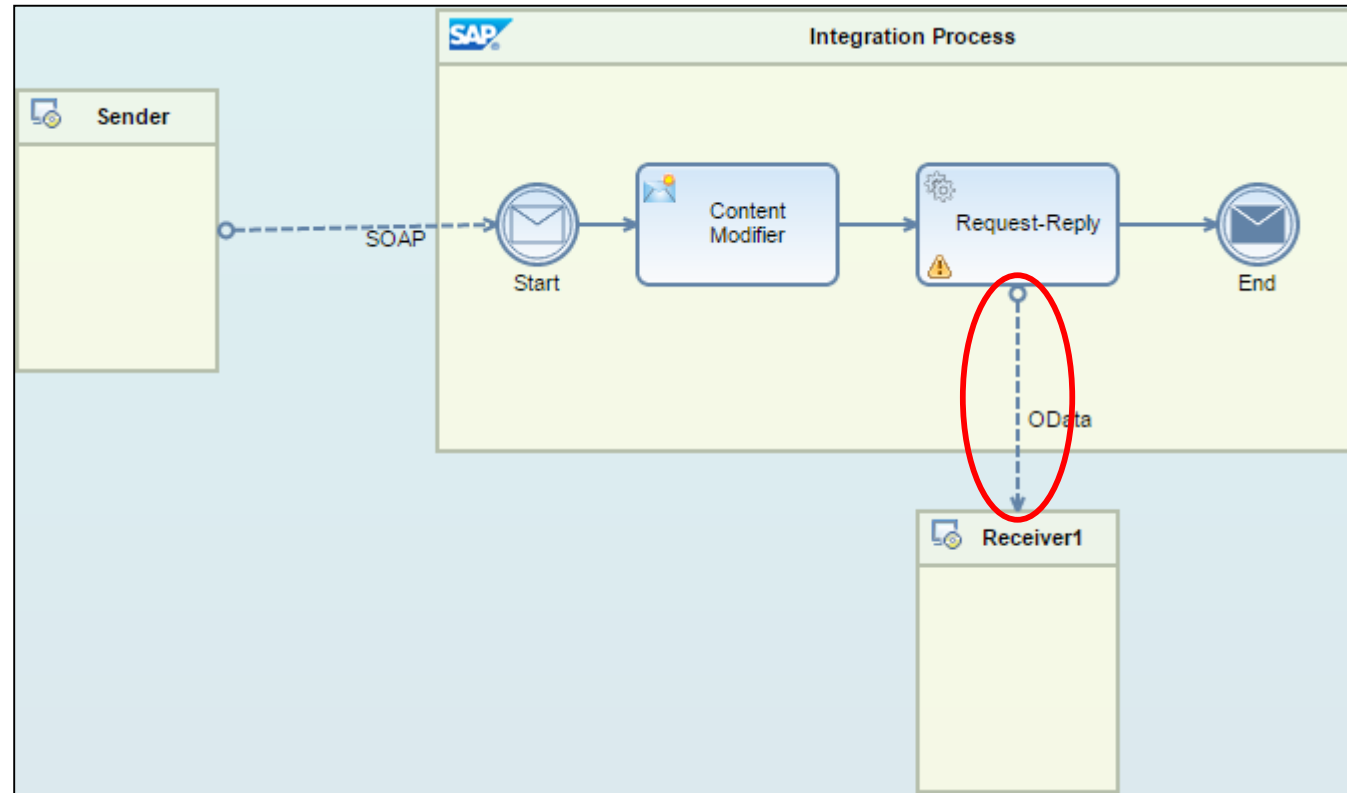
```
<soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/">
  <soap:Body>
    <Orders>
      <Order>
        <ShipPostalCode>44087</ShipPostalCode>
        <ShippedDate>1996-07-10T00:00:00</ShippedDate>
        <OrderID>10249</OrderID>
        <ShipCity>Münster</ShipCity>
        <ShipAddress>Luisenstr. 48</ShipAddress>
        <ShipCountry>Germany</ShipCountry>
        <ShipName>Toms Spezialitäten</ShipName>
      </Order>
    </Orders>
  </soap:Body>
</soap:Envelope>
```

Enriching Content by Calling OData Services

Retrieve data via OData call (2)

Goals

Based on the incoming message, call an OData service to retrieve the respective data.
Fill the message body with the data returned from the OData service.



Enriching Content by Calling OData Services

Retrieve data via OData call (3)

Goals

Based on the incoming message, call an OData service to retrieve the respective data.
Fill the message body with the data returned from the OData service.

Channel

CONNECTION DETAILS

Address: `http://services.odata.org/Northwind/Northwind.svc`

Authentication: None

PROCESSING DETAILS

Operation: Query(GET)

Resource Path: `Orders? $select=ShipCountry,ShipPostalCode,ShipCity,ShipAddress,ShipName,Ship
pedDate,OrderID&$filter=OrderID eq ${header.OrderNo}
&$orderby=OrderID`

EDMX: `edmx/services_odata_org_Northwind_Northwind_svc.xml`

Address of OData service

Query being executed by the OData service.
Created either manually or with the help of the Query Editor.

EDMX: XML file describing the service entities (Order, Customer, Product,...)
(EDM = Entity Data Model)

Enriching Content by Calling OData Services

Retrieve data via OData call – Query Editor (1)

← Query Editor

Choose Operation and Fields

Entity: **Categories** Sub-Levels: 0

Operation: Categories

Fields: CustomerDemographics

Customers

Employees

Order_Details

Orders

Products

Regions

← Query Editor

Orders?

\$select=ShipCountry,ShipPostalCode,ShipCity,ShipAddress,ShipName,ShippedDate,OrderID

Entity: Orders Sub-Levels: 0

Operation: Query(GET) Top: Skip:

Fields: ShipAddress ShipCity ShipPostalCode ShipCountry

☒ ShippedDate

☐ ShipVia

☐ Freight

☒ ShipName

☒ ShipAddress

☒ ShipCity

☐ ShipRegion

☒ ShipPostalCode

☒ ShipCountry

Enriching Content by Calling OData Services

Retrieve data via OData call – Query Editor (2)

← Query Editor

Orders?\$select=ShipCountry,ShipPostalCode,ShipCity,ShipAddress,ShipName,ShippedDate,OrderID &\$filter= OrderID eq \${header.OrderNo}

Filtering by Defining Where Clause

Filter by Operator Input Type Value

OrderID	eq	Header	OrderNo	AND	OR	⚙
		Text				
		Header				

Enriching Content by Calling OData Services

Retrieve data via OData call – Query Editor (3)

The screenshot displays the SAP Query Editor interface. At the top, the title bar reads "Query Editor". Below it, a red rectangular box highlights the final OData query string: `Orders?$select=ShipCountry,ShipPostalCode,ShipCity,ShipAddress,ShipName,ShippedDate,OrderID &$filter=OrderID eq ${header.OrderNo} &$orderby= OrderID`. A callout line points from this box to a label "Final Query String". Below the query string, there are three circular icons: a cube with a plus sign, a funnel, and a blue circle with two white arrows pointing in opposite directions. A callout line points from the blue circle icon to a label "Sorting by Defining Order-By Clause". Below these icons is a button labeled "Order By". At the bottom, there is a table with two columns: "Field" and "Desc". The "Field" column contains the text "OrderID", and the "Desc" column contains an unchecked checkbox.

Query Editor

Orders?\$select=ShipCountry,ShipPostalCode,ShipCity,ShipAddress,ShipName,ShippedDate,OrderID &\$filter=OrderID eq \${header.OrderNo} &\$orderby= OrderID

Final Query String

Sorting by Defining Order-By Clause

Order By

Field	Desc
OrderID	<input type="checkbox"/>

Enriching Content by Calling OData Services

Demo

DEMO

Enriching Content by
Calling OData Services



Enriching Content by Calling OData Services

What you've learned in this unit

- How to benefit from the Content Enricher pattern to build a reply message by calling an external data source
- How to use the Request-Reply step for retrieving additional data from an OData source
- How to use the Query Editor to conveniently formulate the query string being sent to the OData service for data retrieval





Thank you

Contact information:

open@sap.com

open**SAP**

© 2016 SAP SE or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP SE or an SAP affiliate company.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP SE (or an SAP affiliate company) in Germany and other countries. Please see <http://global12.sap.com/corporate-en/legal/copyright/index.epx> for additional trademark information and notices.

Some software products marketed by SAP SE and its distributors contain proprietary software components of other software vendors.

National product specifications may vary.

These materials are provided by SAP SE or an SAP affiliate company for informational purposes only, without representation or warranty of any kind, and SAP SE or its affiliated companies shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP SE or SAP affiliate company products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

In particular, SAP SE or its affiliated companies have no obligation to pursue any course of business outlined in this document or any related presentation, or to develop or release any functionality mentioned therein. This document, or any related presentation, and SAP SE's or its affiliated companies' strategy and possible future developments, products, and/or platform directions and functionality are all subject to change and may be changed by SAP SE or its affiliated companies at any time for any reason without notice. The information in this document is not a commitment, promise, or legal obligation to deliver any material, code, or functionality. All forward-looking statements are subject to various risks and uncertainties that could cause actual results to differ materially from expectations. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of their dates, and they should not be relied upon in making purchasing decisions.