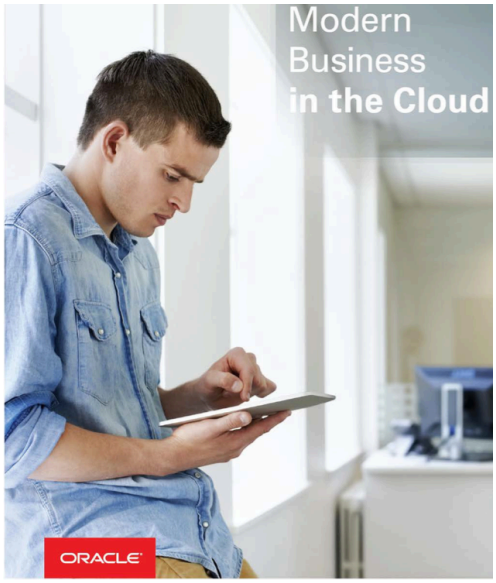

Oracle Public Cloud
Blueprint

Oracle Integration Cloud Service – On-Premise E-Business Suite Integration

Amit Verma

amit.kumar.verma@oracle.com

Cristian Anastasiu

cristian.anastasiu@oracle.com

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Introduction

This blueprint document showcases approaches using ICS SOAP adapters to integrate a custom application hosted in the cloud with on premise Oracle E-business Suite. ICS will act as a mediator, connecting to EBS over SOAP web services and exposing an inbound REST service. This is extremely useful when consuming EBS services in mobile applications or Mobile Cloud Service.

The objective is to create an end to end workflow. The scenario described here is to receive an order from a source system on the cloud (such as a mobile app, MCS or any other web application) and integrate it with the Order Management module of the Oracle E-Business suite system.

Please direct comments to: Amit Verma (amit.kumar.verma@oracle.com) or Cristian Anastasiu (cristian.anastasiu@oracle.com).

Objectives

- ☐ Integrate On-Premise Oracle E-business Suite with mobile applications or web applications hosted in the cloud.
- ☐ Show how to use SOAP adaptor for integration
- ☐ Expose inbound REST service from ICS

Required Artifacts

- ☐ Integration Cloud Service instance
- ☐ E-Business Suite instance in the same network with the ICS instance
- ☐ SOAP web service for on-premises EBS instance Sales Order Module
- ☐ REST client to test the exposed ICS REST service.

Outline

Oracle Integration Service – E-business Suite integration through REST and SOAP adapter

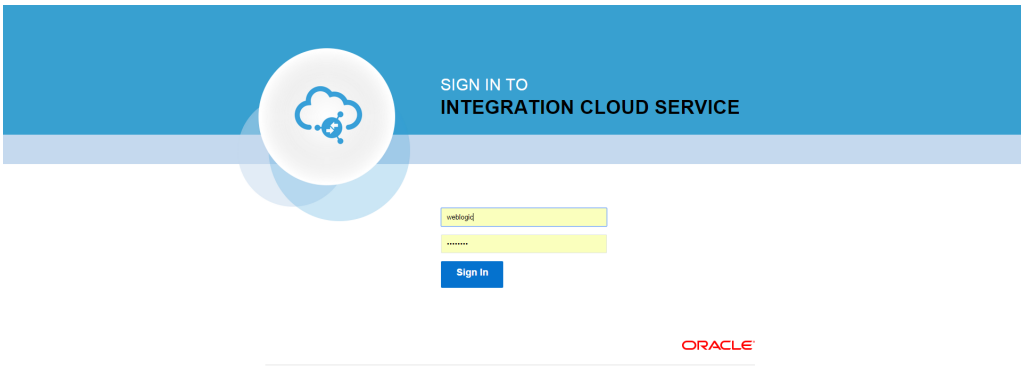
Scenario: You have a B2C custom application (Either Web or Mobile application) which allows retail customers to place orders for various products. The B2C application allows customers to submit orders and track their status. Once the order is submitted, the order fulfillment lifecycle is handled by your on premise E-business suite application. You need to integrate the hosted B2C application in the cloud with your On-premise E-business suite application using Integration Cloud Service.

Oracle Integration Cloud Service is a complete, secure, but lightweight integration solution that enables you to connect your applications in the cloud. It simplifies connectivity between your applications, and can connect your applications in the cloud to your applications that are on premises. Integration Cloud Service provides secure, enterprise-grade connectivity regardless of the applications you are connecting or where they reside.

Create Connections to EBS using SOAP adapter

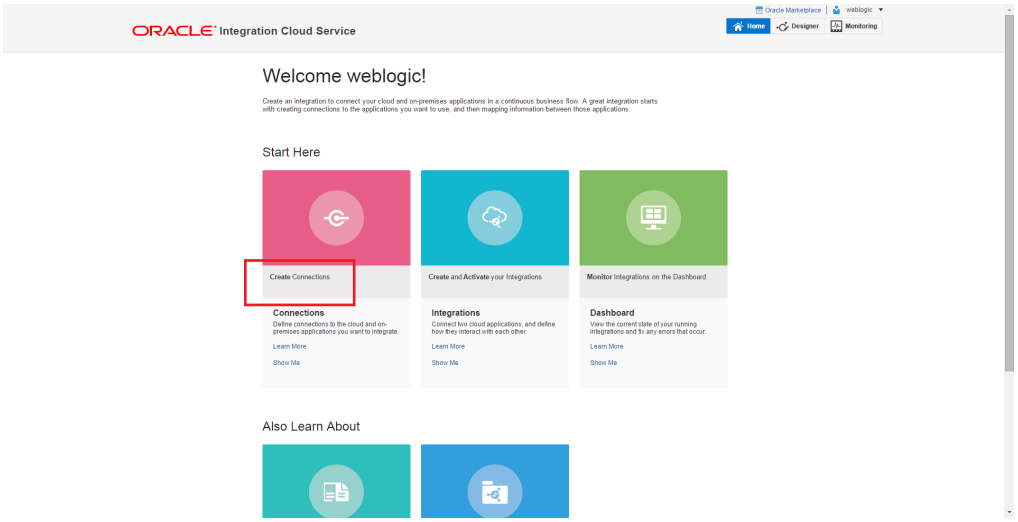
STEP 1: Sign in to your Integration Cloud Service (ICS Instance)

- Sign in to your ICS instance using your credentials

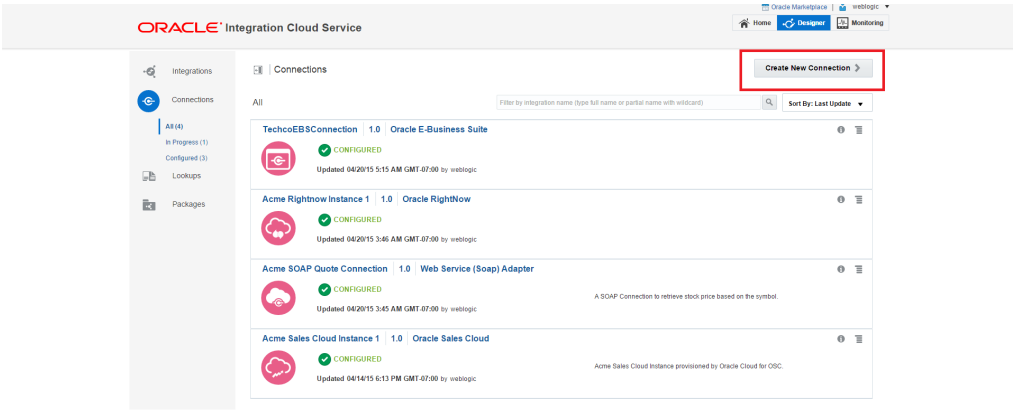


STEP 2: Create an Oracle E-Business Suite Connection using SOAP adapter

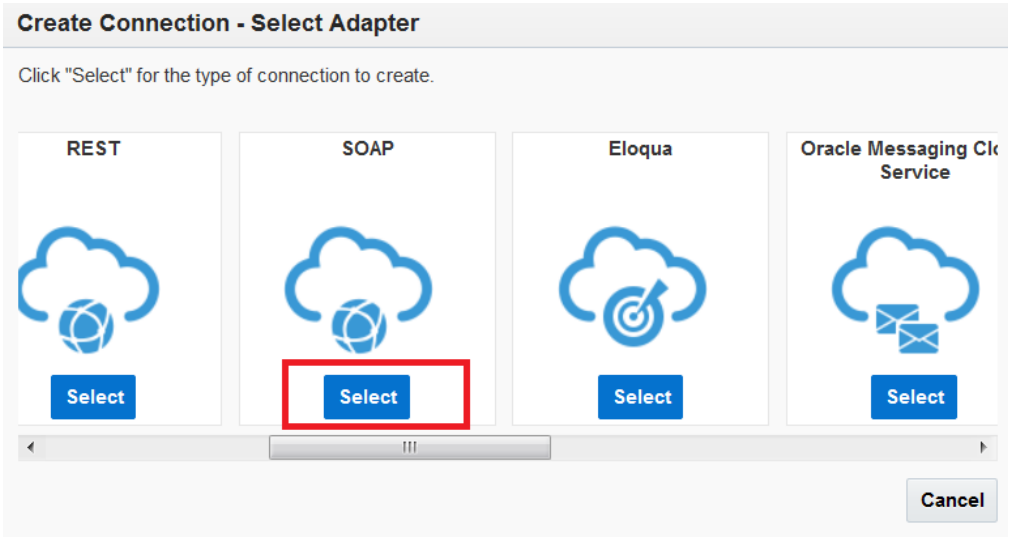
- Click on the Create Connections icon



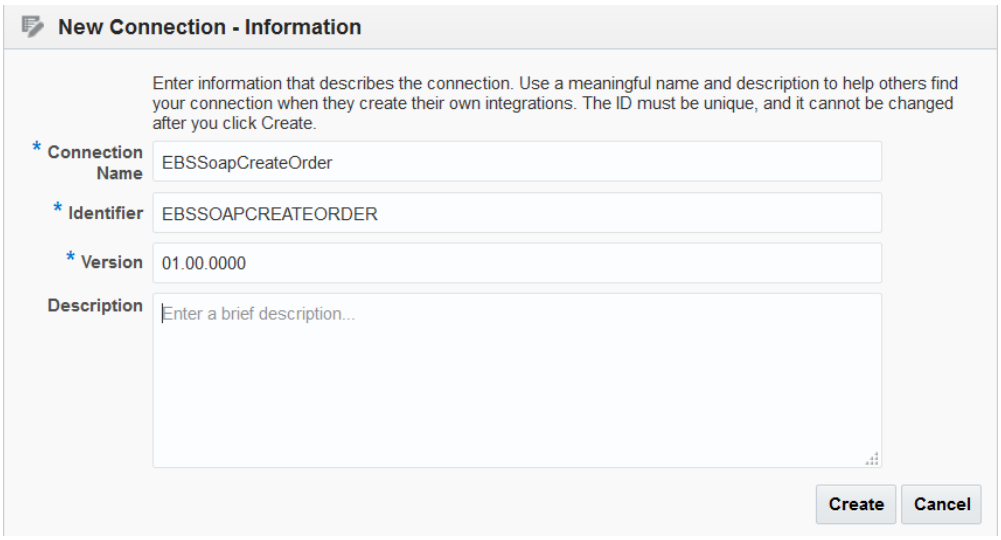
- Click on the Create New Connection button



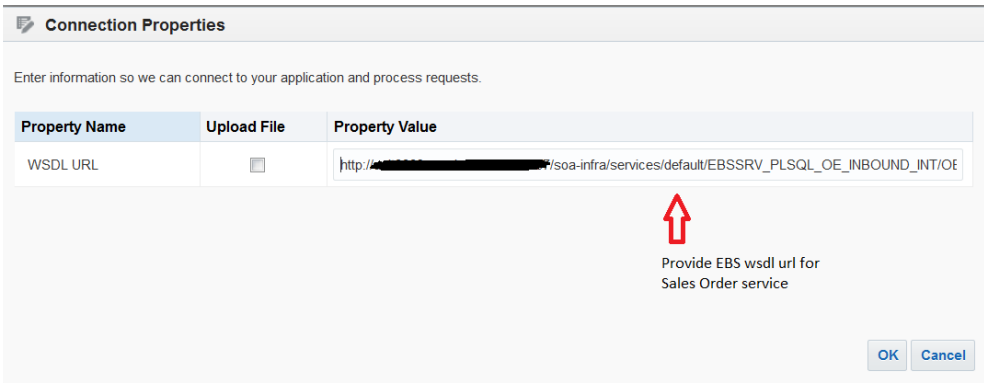
- The Create Connection – Select Connector dialog is displayed
- Select the Oracle SOAP Adapter



- Enter the information to describe the connection.
- Click on the Create button.

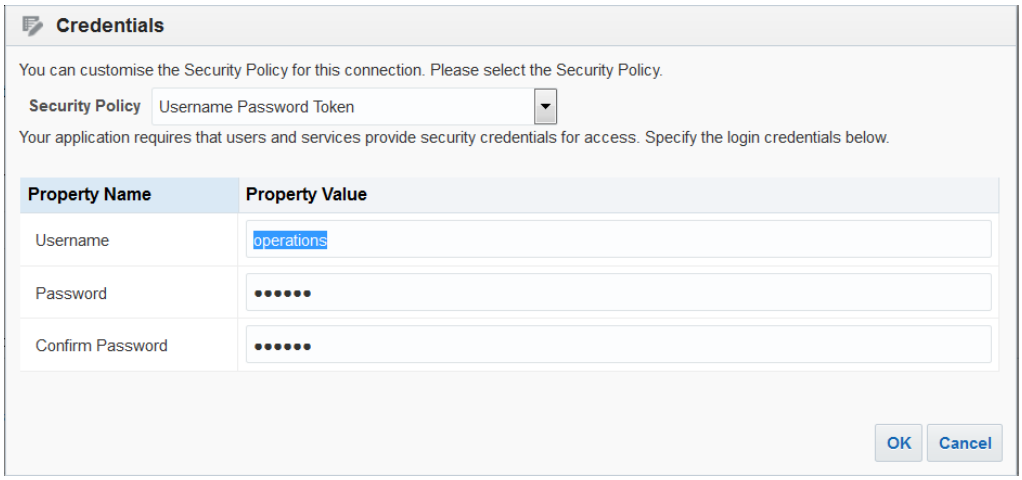


- Connection is created and you are now ready to configure connection details, such as email contact, connection properties, and connection login credentials.
- Click on the Configure Connectivity button.

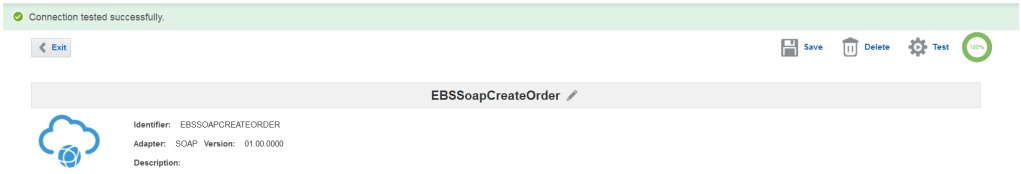


  - Click on the OK button

- Click on the Configure Credentials button
- Enter your login credentials and click OK. Make sure “Username Password Token” is selected as Security Policy and that the EBS SOAP web service is configured with the same policy type.



- Click on the Test button to test the connection, a success message should be displayed on the screen.



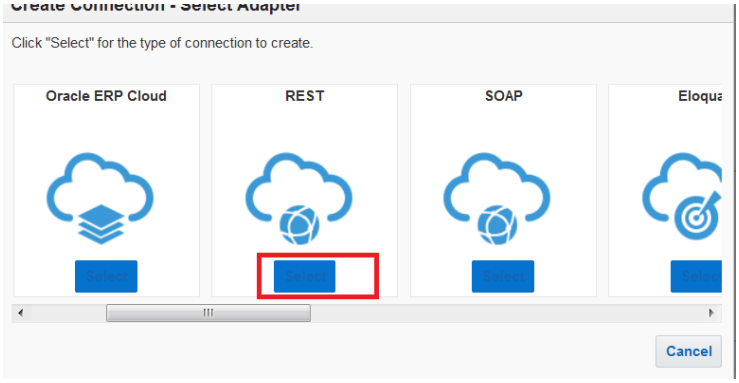
- Click on the Save button to save the connection.
- You have now configured SOAP connector pointing to your on-premise E-Business suite instance on the Integration Cloud Service.

Create Connections for ICS inbound REST Service

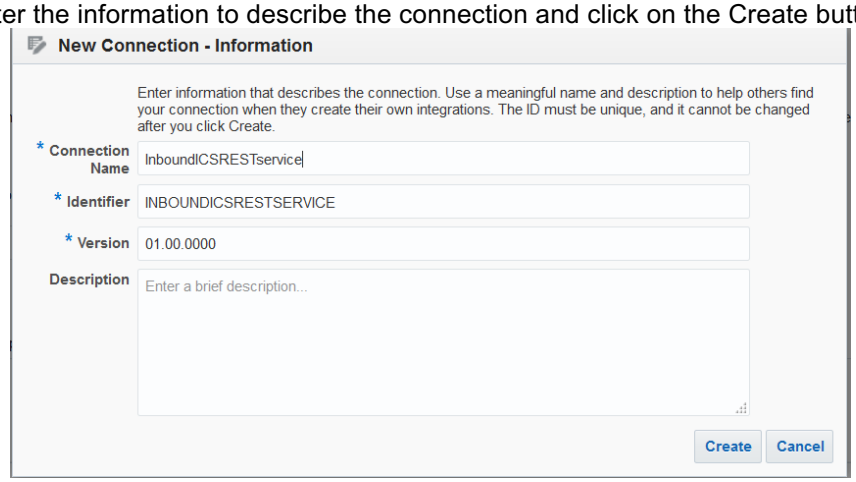
STEP 3: Create an ICS inbound REST adapter

This connection will be used by the integration flow to expose an inbound REST service which can be used by external clients to call the integration. This step is needed only in the current ICS version, the next releases will enable users to add a Generic Rest Adapter directly from the integration design page.

- Click on the Create New Connection button
- The Create Connection – Select Connector dialog is displayed
- Select the Oracle REST Adapter



- Enter the information to describe the connection and click on the Create button



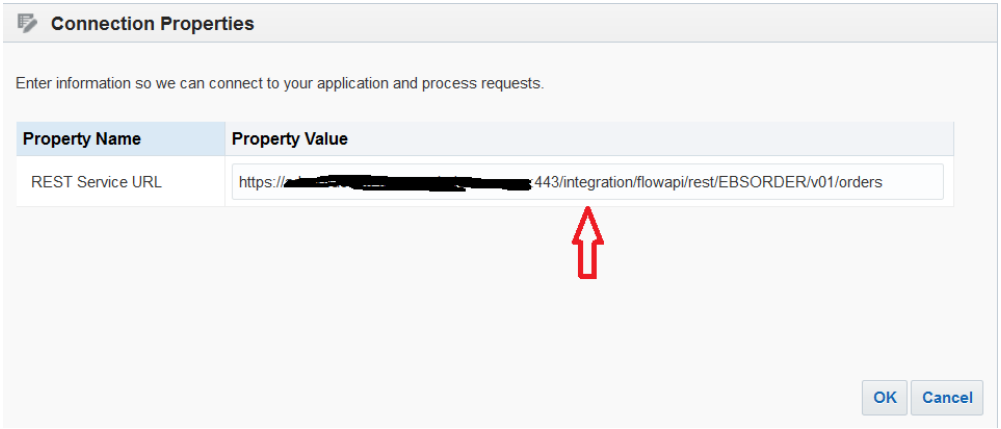
- Connection is created and you are now ready to configure connection details, such as email contact, connection properties, and connection login credentials. **These details however will not be used because we will use the connector for the inbound REST service definition. In the current ICS release this details are mandatory fields and have to be added in order to activate a connection.**
- Click on the Configure Connectivity button and provide REST service URL in following format:

```
http://host:port/integrations/flowapi/rest/INTEGRATION_NAME/v01/orders
```

where:

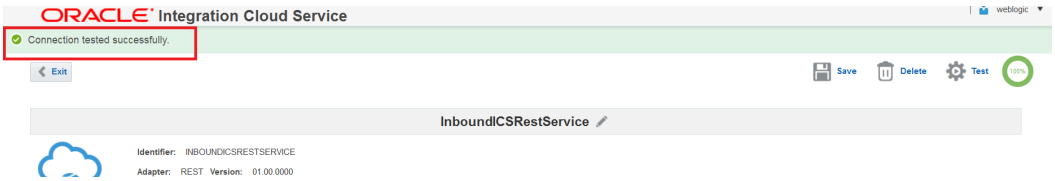
INTEGRATION_NAME: will be the name given at the time of source integration creation (EBSOORDER) in this case

Order: end point of relative resource URI which you will provide during integration source creation.



- Click on the OK button
- Select “No Security Policy” in Configure Credentials section

- Click on the Test button to test the connection, a success message will be displayed on the screen.



- Click on the Save button to save the connection.
- You have now configured REST Adapter which will be used to expose ICS as REST service and can be used by external applications.

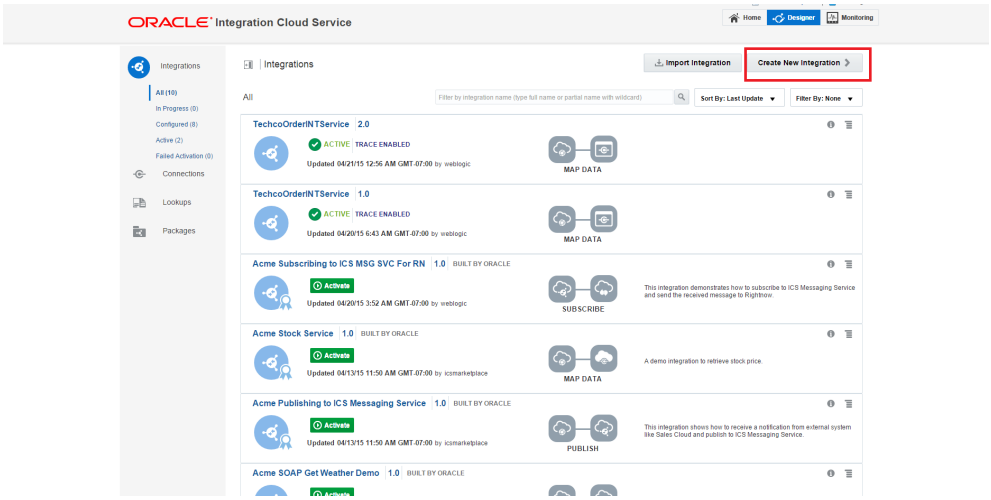
Create Integration using connections

STEP 4: Create an ICS Integration using the adapters created above.

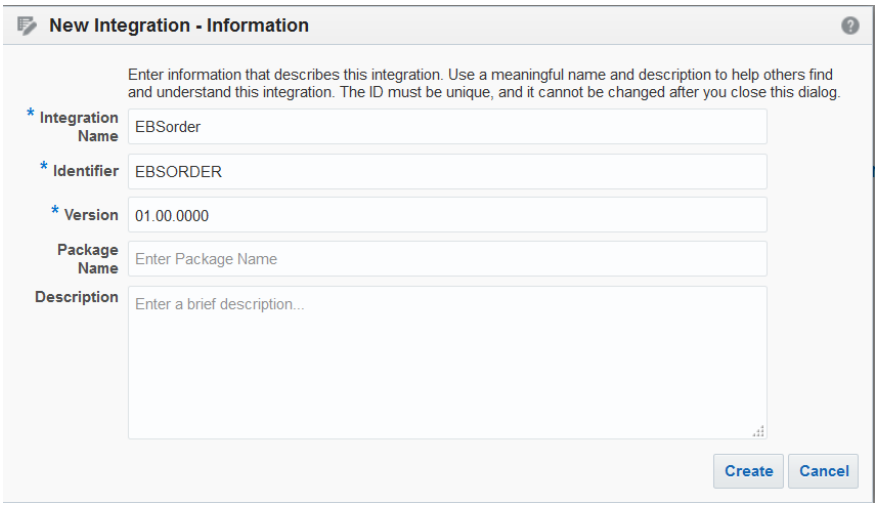
Creating an integration includes defining the source and target application connections, and defining how data is mapped between the two payloads. The procedure below describes the steps for creating the integration. As you perform each step, the progress indicator will let you know how close you are to completing the integration.

- In the Integration Cloud Service toolbar, click Designer.

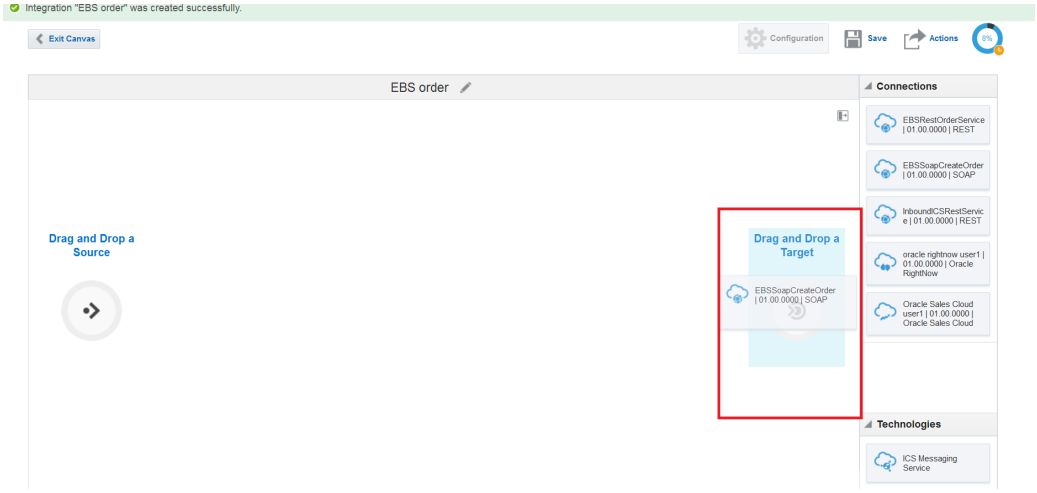
- Above the Integrations list, click on Create New Integration



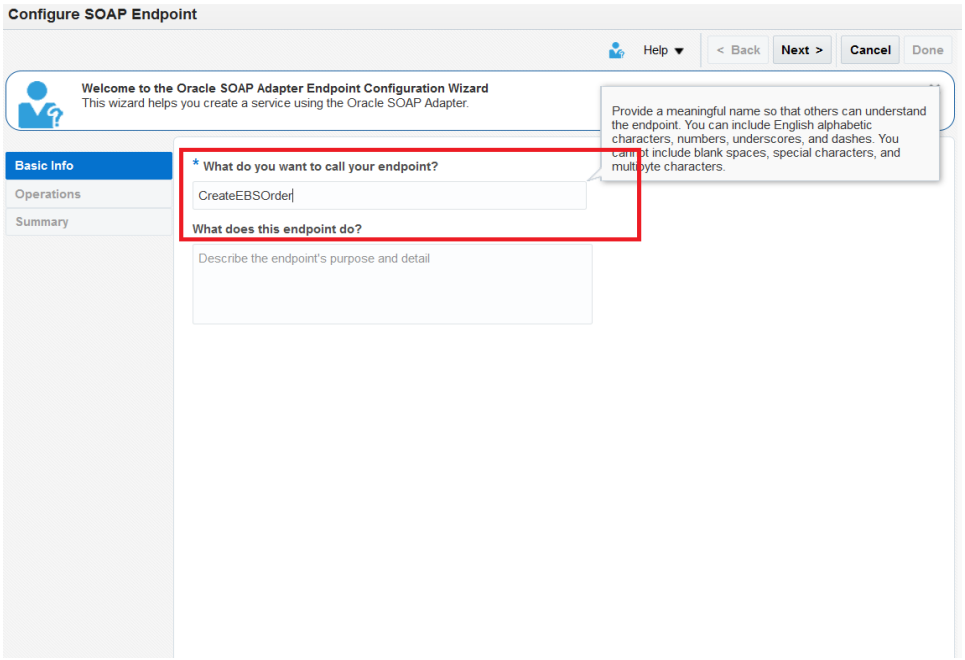
- Enter the integration description details and click on create. Since we are building an Integration service to Interface orders with E-Business suite, we are naming it EBSorder.



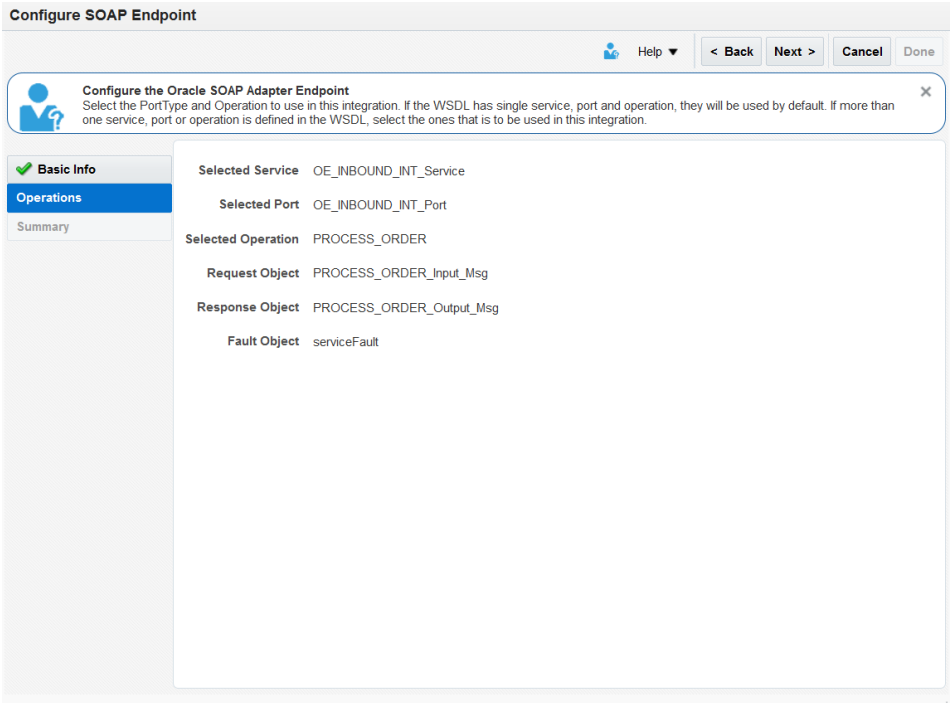
- Click on the EBSSoapCreateOrder adapter which you have created in Step# 1 and drop in Target panel on the right side of your screen. In this case target will be EBS system.



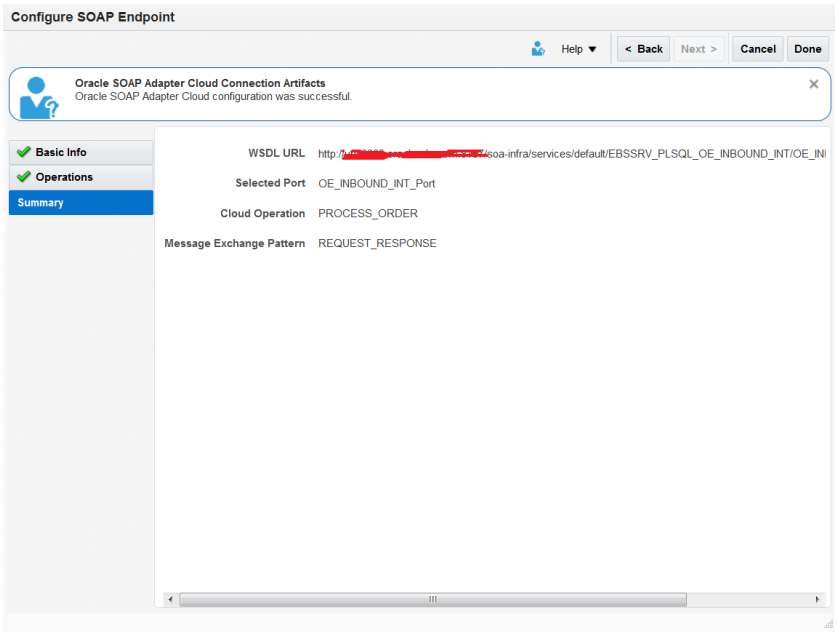
- Provide required information in “Basic Info” tab. Enter “CreateEBSOrder” as Name and click next.



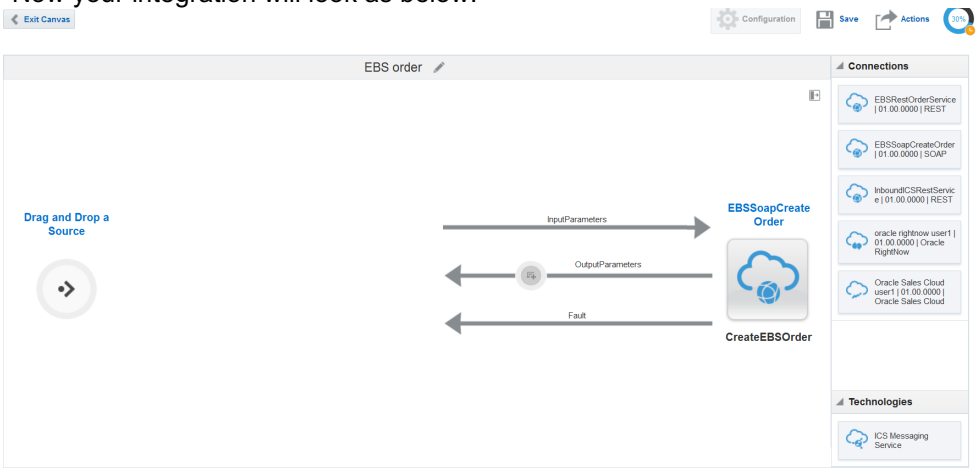
- Once you click on next, it will retrieve the WSDL information and display as below:



- Click next and then on summary page click done.

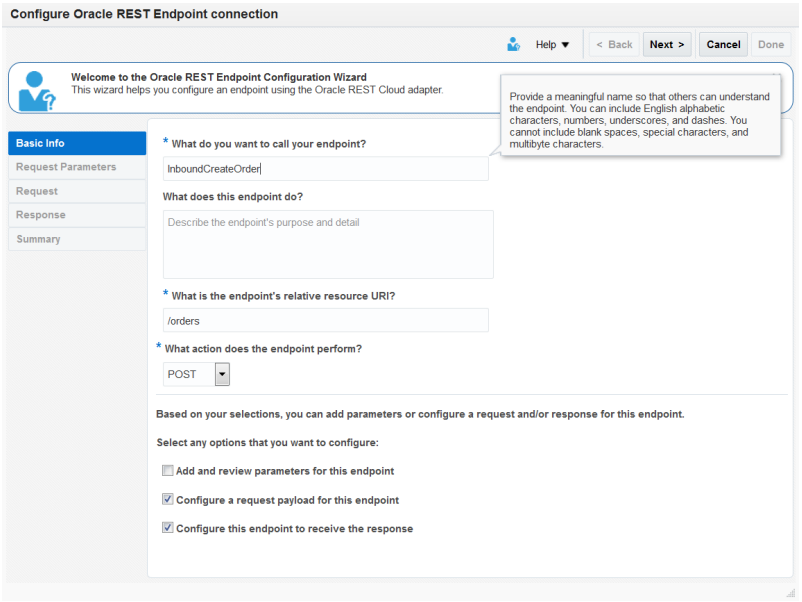


- Now your integration will look as below:

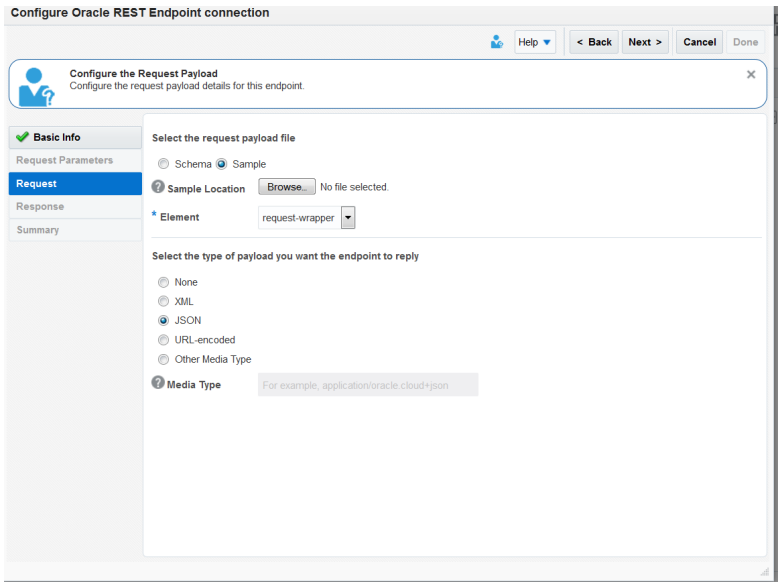


- Now we have to configure Source section. For that drag and drop InBoundICSREST service adapter to Source section and provide details as below

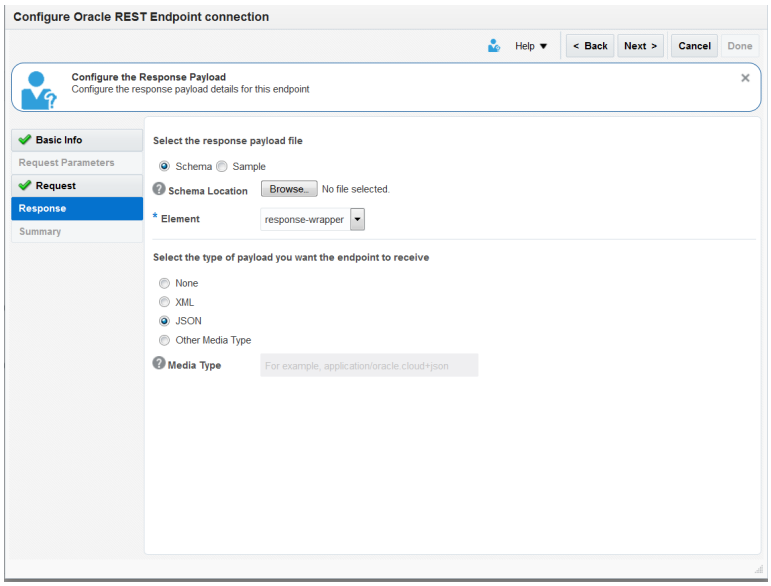
  - Endpoint name: InboundCreateOrder
  - Endpoint Relative URI: /orders
  - Action to be performed: POST
  - Select check boxes for "Configure a request payload for this endpoint" and "configure this endpoint to receive the response" (if you want to receive the response as well). Click on next.



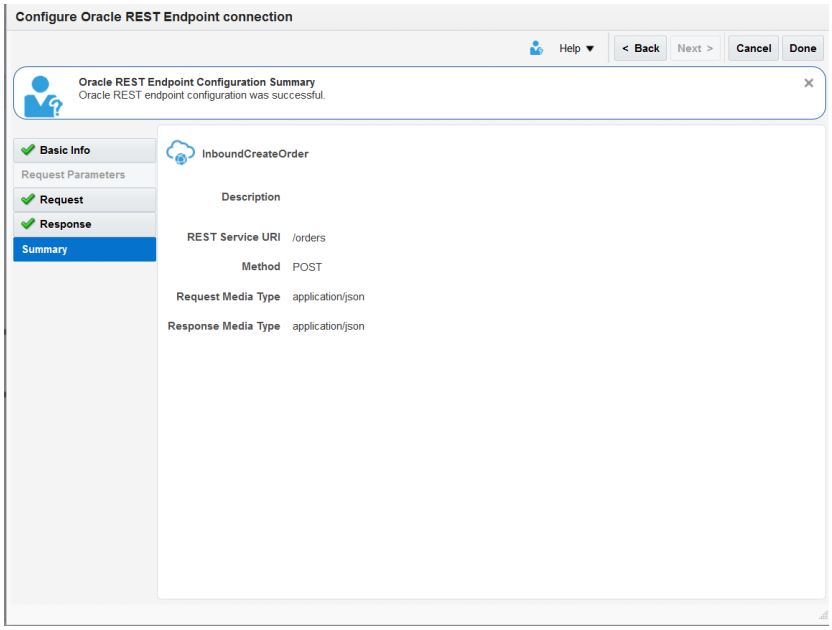
- Wizard to configure Request option will appear
  Provide following details:
  - Select sample payload and browse file.
  - Select payload type as JSON. For sample JSON payload, please check the end of the document.



- Click Next.
- Add the sample payload for the Response. Please check end of document for a sample response payload.



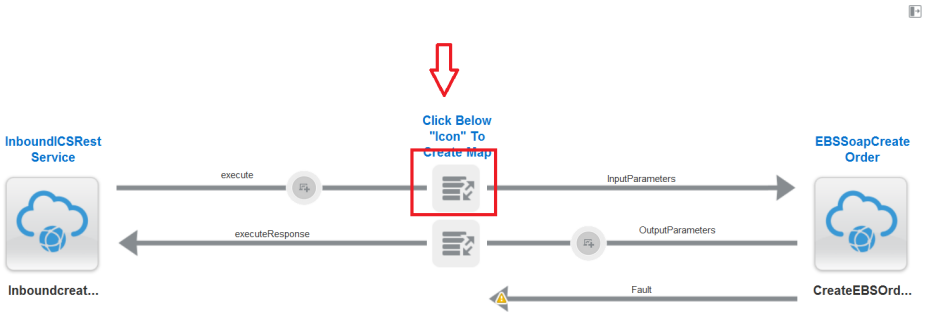
- Go to Summary page and click “Done”.



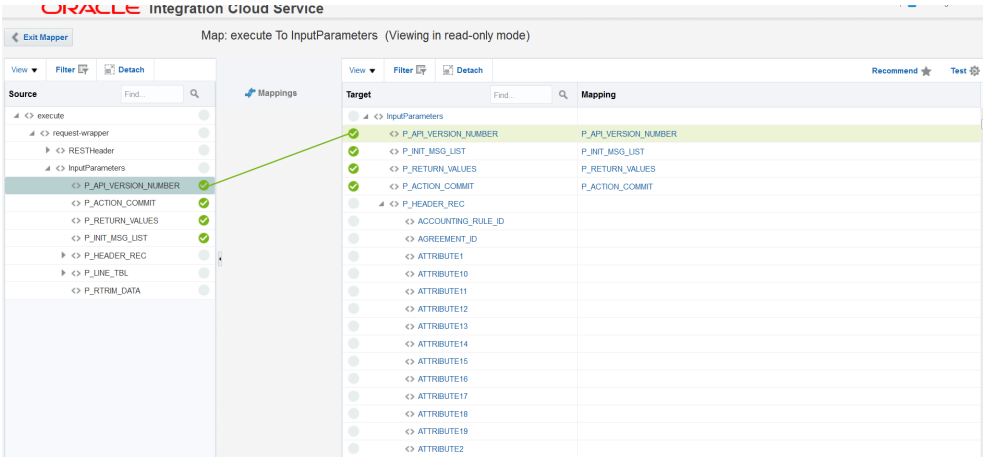
- Canvas will look as below:

STEP 5: Define the payload mapping

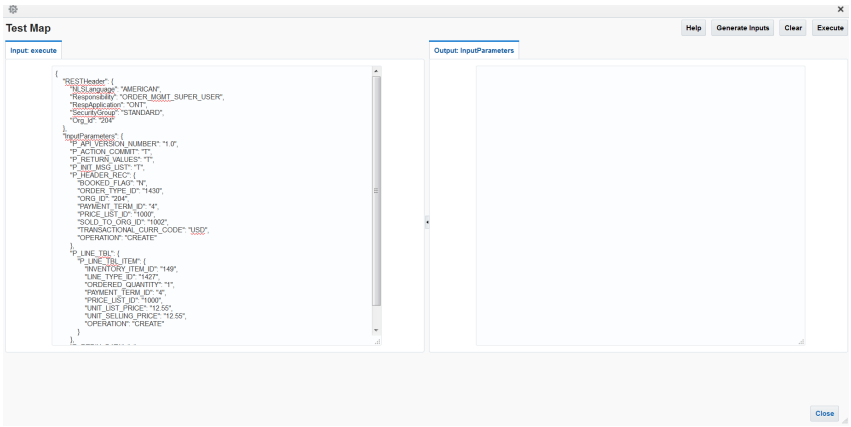
- Click on the Mapper icon to map the inputs from the source (ICS interface) to the Target (EBS Connector interface).
- You will map the order input document you are receiving from your E-Commerce application to the EBS Payload.



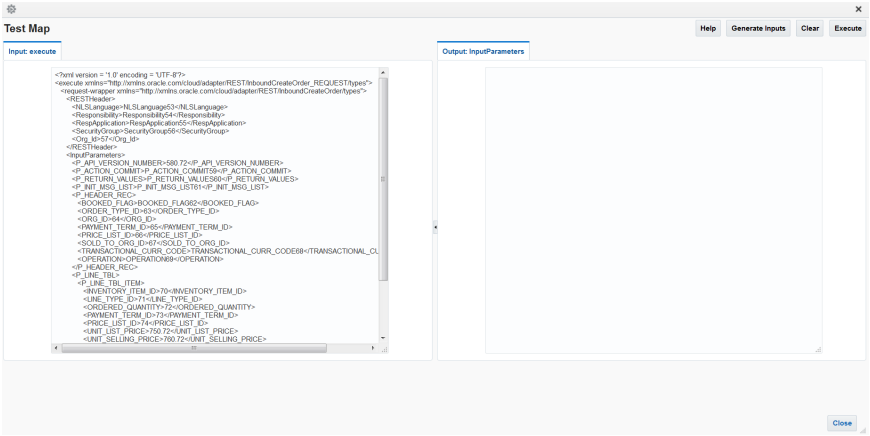
- Map the required elements from source to Target by drag and drop as shown below.



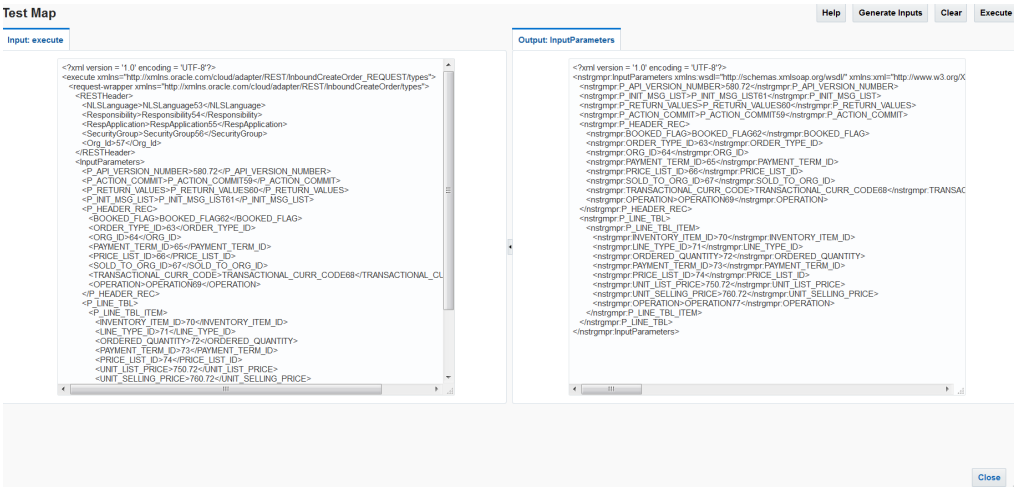
- Before exiting the mapper, you may want to test it. Click on “Test”. Below screen will appear, Put the payload in JSON format as below.



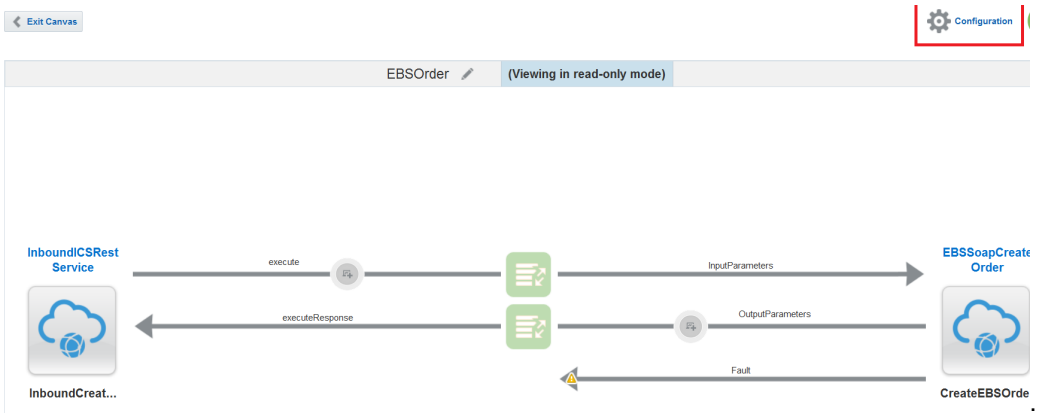
- Click on Generate input to convert to XML format



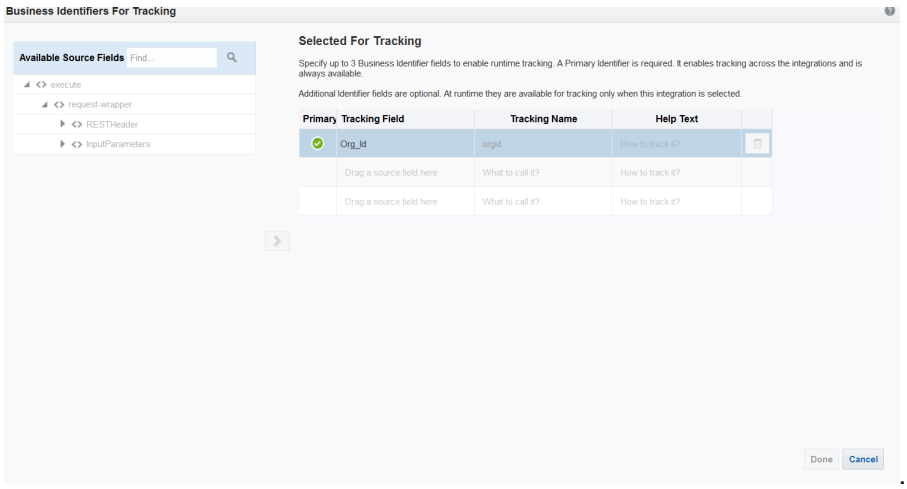
- Click on Execute and you will see order input parameters as below:



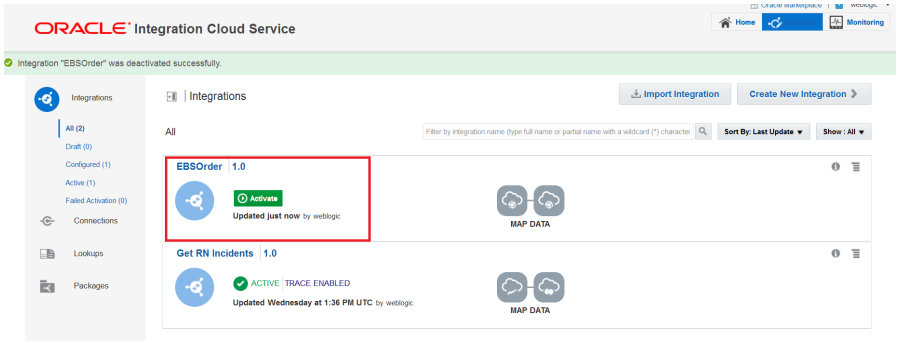
- Click on Close and then Exit Mapper icon to return to Canvas section.
- Click on Configuration icon to complete the configuration



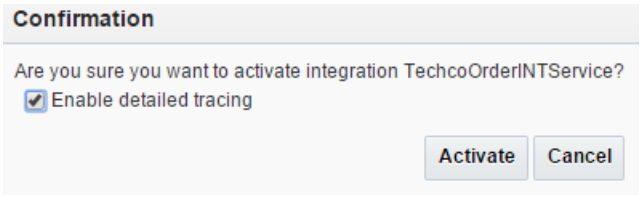
- Drag “Org_id” in Tracking Field and click done.



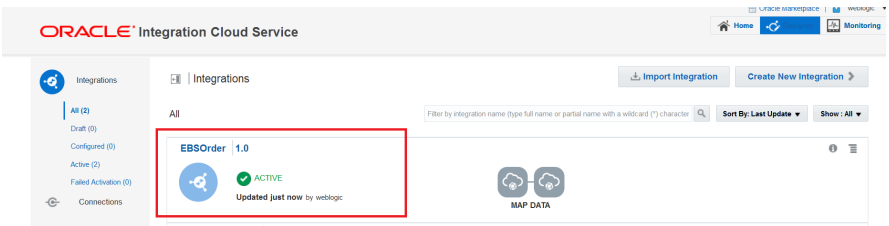
- The ICS Integration flow is now 100% complete.
- Click on Save and Exit Canvas.
- Locate the newly created Integration
- Click Activate to activate the flow.



- Click Activate to confirm the activation.



- The ICS integration service is now active and ready to process requests



Test and Monitor Integration

STEP 6: Test the ICS Integration

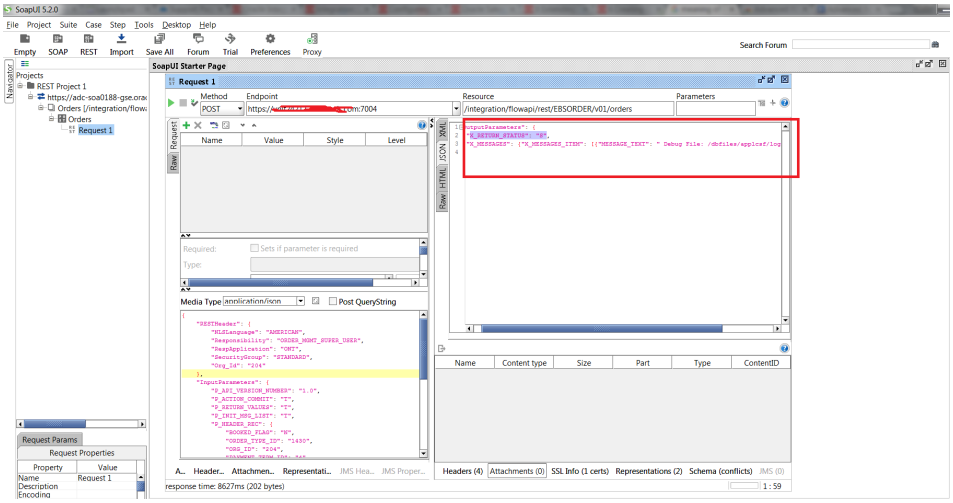
- We are using SOAP UI 5.2.0 to POST the payload through REST. To check the enpoint URL, first call the following REST service using GET:

```
https://{{host}}:{{port}}/icsapis/v1/integrations
```

Where:
host and *port* match your ICS instance.

- This will give you back all the integration details, including the endpoint for your REST inbound service
- Call the REST endpoint using the POST method

```
https:// {{host}}:{{port}}/integration/flowapi/rest/EBSORDER/v01/orders
```

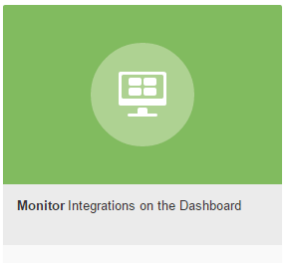


- You can see in the response the X_RETURN_STATUS": "S" which indicates all the operations got completed.

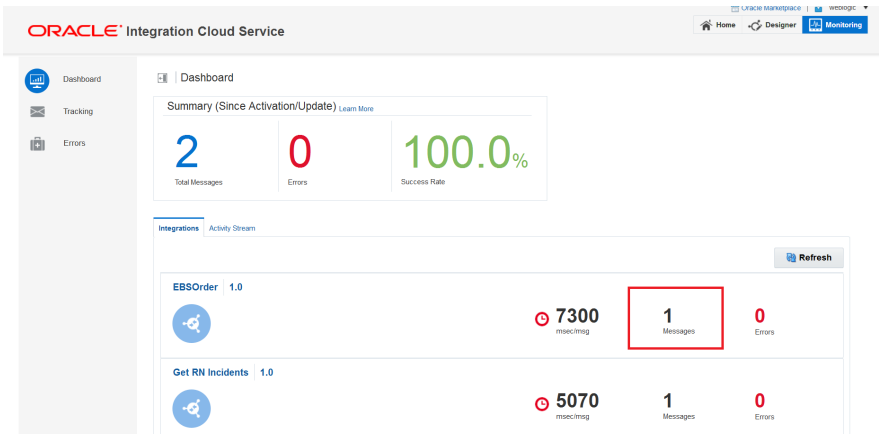
Note:

- Sample payload is in the reference section in JSON format.

- Navigate back to the ICS home page and click on the Monitor Integrations icon

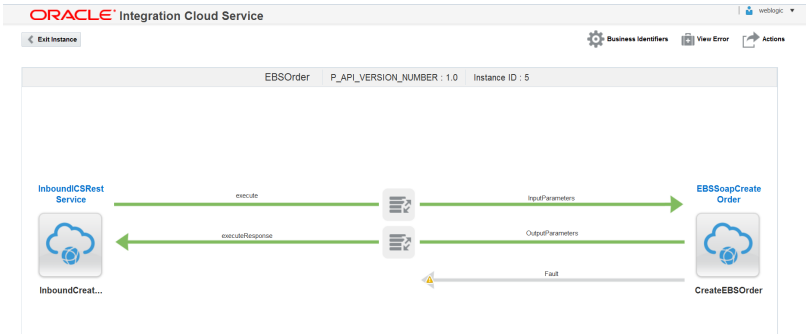


- You will see the message under EBSorder



- Click on the training tab on left side and you can see the message with Business identifier:

- Click on the messages and you will see the message flow path in green.



Appendix 1 – Sample JSON Request Payload


```
{
   "RESTHeader": {
      "NLSLanguage": "AMERICAN",
      "Responsibility": "ORDER_MGMT_SUPER_USER",
      "RespApplication": "ONT",
      "SecurityGroup": "STANDARD",
      "Org_Id": "204"
   },
   "InputParameters": {
      "P_API_VERSION_NUMBER": "1.0",
      "P_ACTION_COMMIT": "T",
      "P_RETURN_VALUES": "T",
      "P_INIT_MSG_LIST": "T",
      "P_HEADER_REC": {
         "BOOKED_FLAG": "N",
         "ORDER_TYPE_ID": "1430",
         "ORG_ID": "204",
         "PAYMENT_TERM_ID": "4",
         "PRICE_LIST_ID": "1000",
         "SOLD_TO_ORG_ID": "1002",
         "TRANSACTIONAL_CURR_CODE": "USD",
         "OPERATION": "CREATE"
      },
      "P_LINE_TBL": {
         "P_LINE_TBL_ITEM": {
            "INVENTORY_ITEM_ID": "149",
            "LINE_TYPE_ID": "1427",
            "ORDERED_QUANTITY": "1",
            "PAYMENT_TERM_ID": "4",
            "PRICE_LIST_ID": "1000",
            "UNIT_LIST_PRICE": "12.55",
            "UNIT_SELLING_PRICE": "12.55",
            "OPERATION": "CREATE"
         }
      },
      "P_RTRIM_DATA": "n"
   }
}
```

Appendix 2 – Sample JSON Response Payload


```
{
  "OutputParameters": {
    "@xmlns:xsi": "http://www.w3.org/2001/XMLSchema-instance",
    "@xmlns":
"http://xmlns.oracle.com/apps/ont/rest/GseSalesOrder01/process_order/",
    "X_RETURN_STATUS": "E",
    "X_MESSAGES": {
      "X_MESSAGES_ITEM": [{
        "MESSAGE_TEXT": "Header ID does not exist on this record or does not
match ID specified on header record. You require a valid header ID if the operation is
Create."
      }, {
        "MESSAGE_TEXT": "Debug File: /dbfiles/applcsf/log/l0047537.dbg"
      }]
    }
  }
}
```