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ABAP

Consuming a web service in ABAP

July 21, 2017

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***Consuming a
WebService***

Let's start:

In this exercise, we will look at how we can consume a web service using a client proxy using ABAP.

Why do we need a Web service Client Proxy:

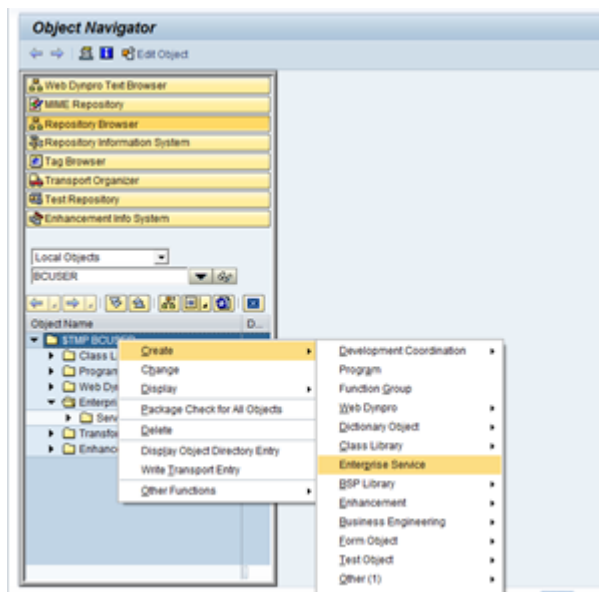




3. Creation of Valid SOAP messages and evaluation of received responses is taken care by the proxy.

So a developer can concentrate on the Business Application without bothering about the technical aspects that is how the SOAP messages are exchanged.

Step 1: To start the Service Wizard again, from SE80 right click and choose Create->Enterprise Service.



Step 2 : This time in the *Object Type* step of the Service Wizard, choose **Service Consumer**.

as we are at the consumer site.

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The screenshot shows the 'Object Type' selection dialog in the IBM Business Process Manager console. The left pane displays a tree view with the following items:

- Object Type (selected)
- Service Provider
- Select source
- Select source
- ESR Object
- Enter Package/Request
- ServiceGroup
- Object Type
- Choose Endpoint
- Choose Operations
- Configure Service
- Enter Package/Request
- Complete

The right pane shows the 'Object Type' dialog with the following options:

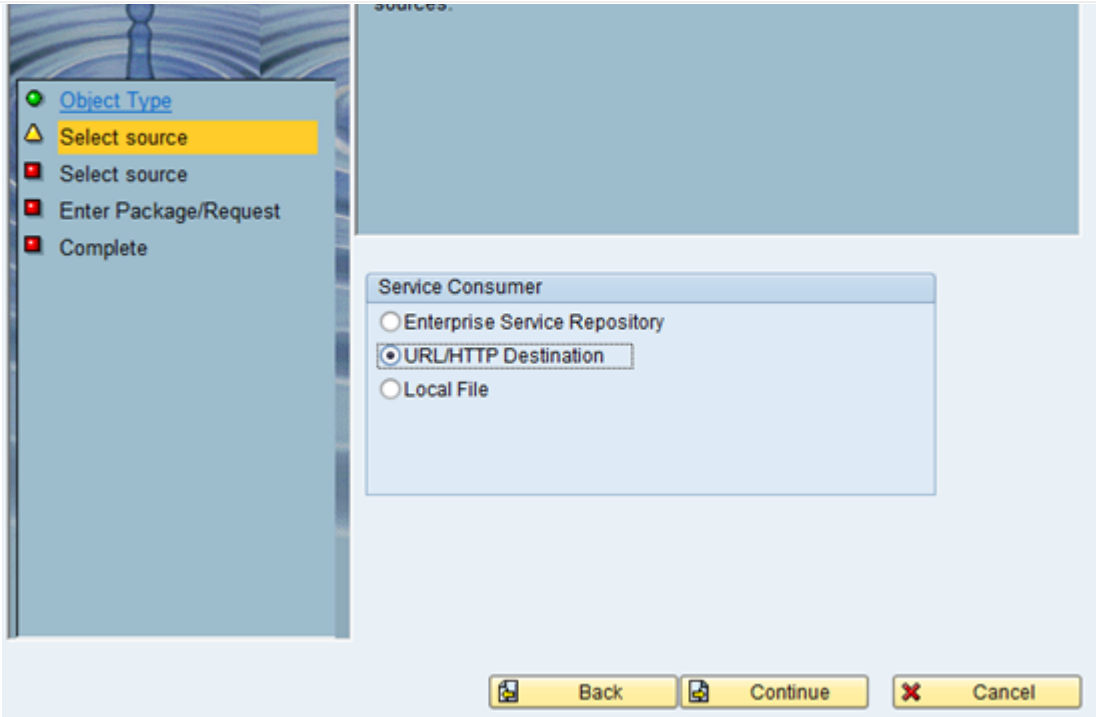
- ☐ ServiceGroup
- ☐ Service Provider
- ☐ Data Types
- ☐ Business Object
- ☐ Process Agents
- ☐ Exception Classes
- ☒ Service Consumer
- ☐ Data Types Enhancement
- ☐ Business Object Enhancement

At the bottom of the console, there are three buttons: 'Back', 'Continue', and 'Cancel'.

Step 3:

For the source of the Service Consumer, you can choose between the Enterprise Service Repository, a URL to a WSDL or the local file location of a WSDL, a UDDI, and the Service Registry. Please choose **URL/HTTP Destination**.





Step 4: Enter the URL of WSDL file which we had created in an earlier exercise.

<http://sapignite.com/create-a-web-service-in-10-minutes/>

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Object Type

Select source

Select source

Enter Package/Request

Complete

URL/HTTP

URL

http://ajay.sap.com:8000/sap/bc/srt/wSDL/sdef_ZW\$

HTTP

Destination

Path Suffix

Back

Continue

Cancel

Fill in the necessary details in the wizard.

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Object Type

Select source

Select source

Enter Package/Request

Complete

Enter Package & Prefix

Package

Z_ABAP_B00K

Prefix

ZWS

Request/Task

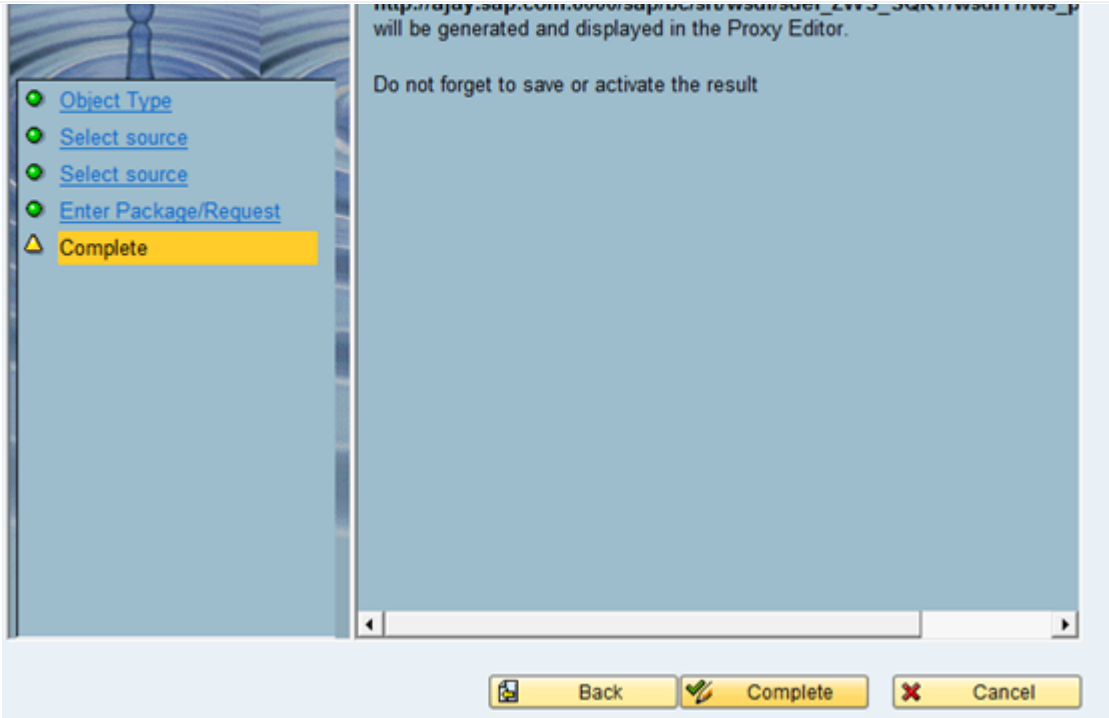
☐ Local Object

Back

Continue

Cancel

On the final step, you can press **Complete** to start the Proxy object generation.



You will be promoted for your login User name and Password.

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Resource	SAP Web Application Server [NSF]
Client	001
User name	ajay
Password	*****
Language	EN

OK Cancel

The generated proxy class is now displayed. Click on save and activate.

Change Service Consumer ZWS_SQRT

Service Consumer (external definition) ZWS_SQRT New (Revised)

Properties Name Problems External View Internal View Used Objects Configuration Warnings

External Key

Type Service Interface Source External WSDL

Name ZWS_SQRT

Namespace urn:sap-com:document:sap:soap:functions:mc-style

Description

Direction Outbound

Proxy

Proxy Name ZWSO_ZWS_SQRT Prefix ZWS

Description Proxy Class (generated)

General Data

Package Z ABAP_BOOK

Original Language EN English

Created by BCUSER on 25.08.2010 20:07:40

Changed by BCUSER on 25.08.2010 20:07:40

Go back to transaction **SOAMANAGER** and in order to setup a Logical Port for our new Service Provider.

Logical Ports are used to configure runtime features of a web service.

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A consumer proxy never stores any details regarding the URL server which are specific to one system.

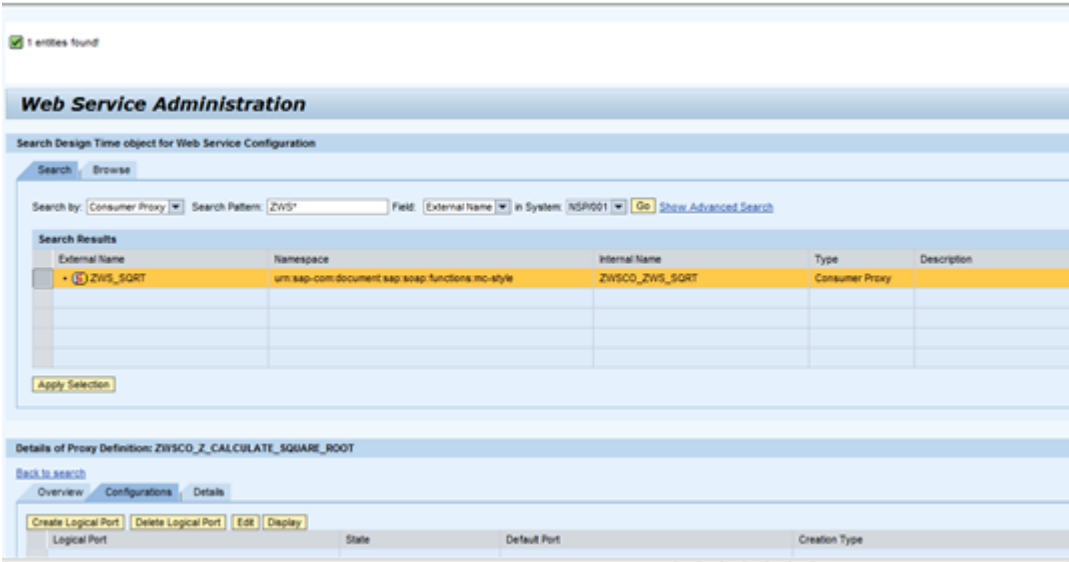
These details need to be configured through logical ports and endpoints.

Go back to transaction **SOAMANAGER** and in order to setup a Logical Port for our new Service Provider.

We will navigate to the same location as the last exercise – the *Service Administration* tab and then click the link named *Single Service Administration*.

This time when you search in the *Web Service Administration*, choose to Search by **Consumer Proxy**. Don't forget to press the *Apply Selection* button after highlighting your proxy.

From the Configurations tab, choose to Create Logical Port.





definition. Finally, you will again need to supply the WSDL URL for the services you are calling (hopefully you still have that browser window open). You also must supply your system User name and Password to access the WSDL.

SOA Management

General Configuration Settings

Logical Port Name: Logical Port is Default: ☒

Description:

Configuration Type: ☒ WSDL Based Configuration
☐ Manual Configuration
☐ Process Integration Runtime

WSDL Access Settings

WSDL Base: ☒ Via HTTP Access
☐ Via File

WSDL Location

URL for WSDL Access:

WSDL Access User:

WSDL Access User Password:

Show/Hide Proxy Settings

Apply Settings Cancel

If successful, you will be returned to the *Configuration for Logical Port* screen. From here you can further define the settings for this logical port. For now, you need to embed user credentials for calling this Enterprise Service. So once again input your User name and Password and then Save the Logical Port.

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Configuration for Logical Port 'ZP00'

Consumer Security | Additional Information | Messaging | Transport settings | Operation specific

Configuration of Consumer Settings additional to WSDL Document Information LP-ZP00

User ID/Password

User Name:

Password:

Properties from WSDL Document

Authentication

Authentication Method: sapsp:HTTPBasic

Transport Security

Secure Communications:	SSL
Signature Expected:	false
Encryption Expected:	false
Add signature:	false
Encryption:	false

You can now return to the ABAP workbench in the package ZPROXIES and the definition of your Service Consumer and test it.

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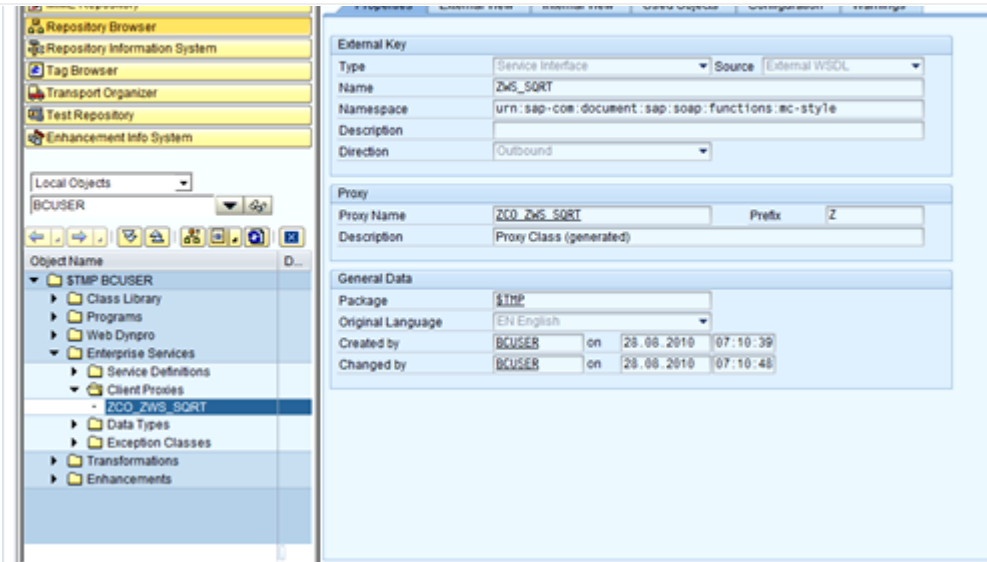
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On the Test Service Consumer options dialog , choose ZSQR

Method Name. Finally execute the test.

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Logical Port Name	ZP00
Method Name	ZSQRT

Input

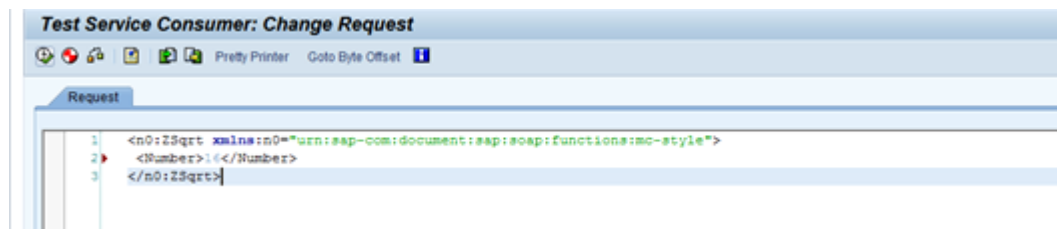
☒ Generate template data
 ☐ Generate initial template data
☐ xsi:nil for all Leaf Elements
 ☐ xsi:nil for nillable Leaf Elm.

☐ Deletion Indicator

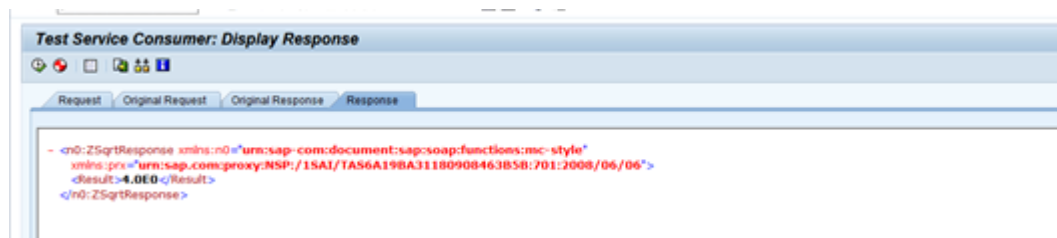
Processing

☐ Extended XML Handling
☐ Enforce stylesheet generation

Switch to the XML Editor and replace the number value with 16. You can go ahead and execute the request call.



The response should show the XML version of the squareroot



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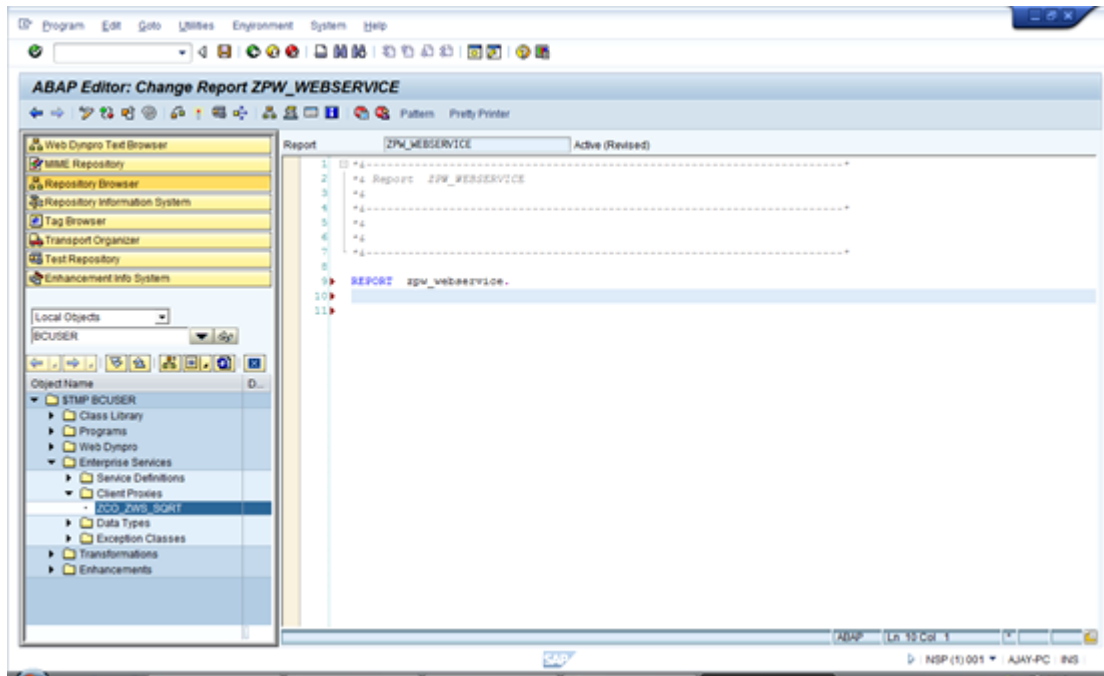
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Drag and Drop the proxy class ZCO_ZWS_SQRT and you get the template for consuming. This looks like as shown below.

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Modify the template for invoking the web service with the below code.

REPORT zpw_webservice.

DATA: proxy TYPE REF TO zco_zws_sqr.

DATA : output TYPE zzsqr_response .

DATA : input TYPE zzsqr .

input-number = '1212'.

TRY.

CREATE OBJECT proxy

EXPORTING

logical_port_name = 'ZP00'.

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TRY.

CALL METHOD proxy->zsqrt

EXPORTING

input = input

IMPORTING

output = output.

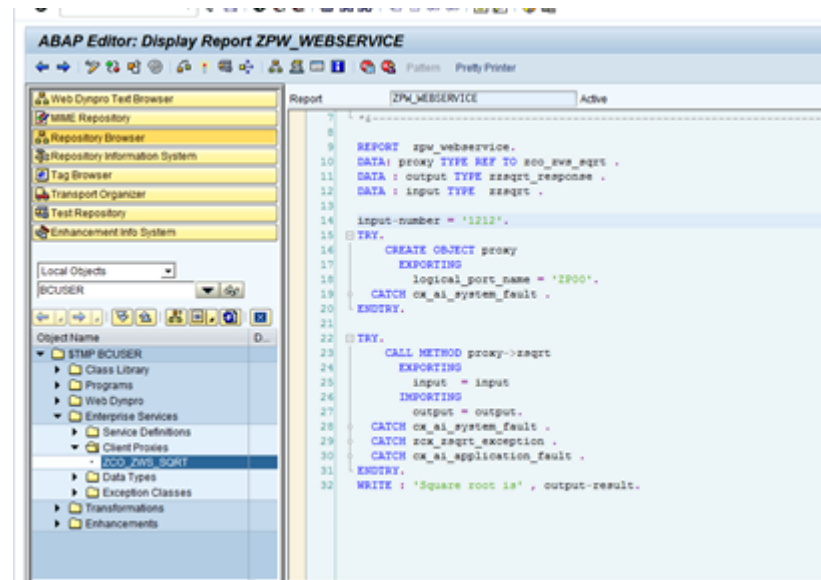
CATCH cx_ai_system_fault .

CATCH zcx_zsqrt_exception .

CATCH cx_ai_application_fault .

ENDTRY.

WRITE : 'Square root is' , output-result.



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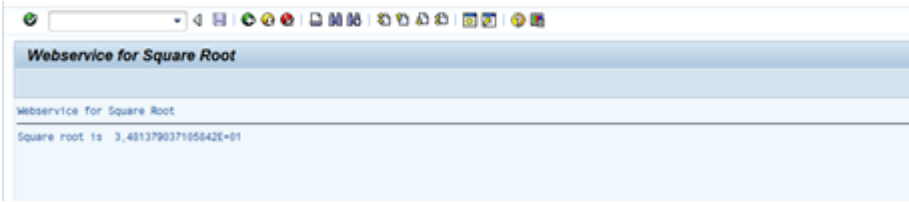
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Obviously, it's not the best kind of report to build, but I hope the basics fundamentals for consuming a web service would be clear by now.

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LEAVE A REPLY

Name *





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