

Creating, Configuring and Testing a Web Service Based on a Function Module



Applies to:

SAP EC6 6.0/7.0. For more information, visit the [Web Services homepage](#).

Summary

The article describes how to create a web service from function module.

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Author Bio



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Concepts

Web Service

A Web service is a software system designed to support interoperable machine-to-machine interaction over a network. Web services are frequently just Web APIs that can be accessed over a network, such as the Internet, and executed on a remote system hosting the requested services.

Or

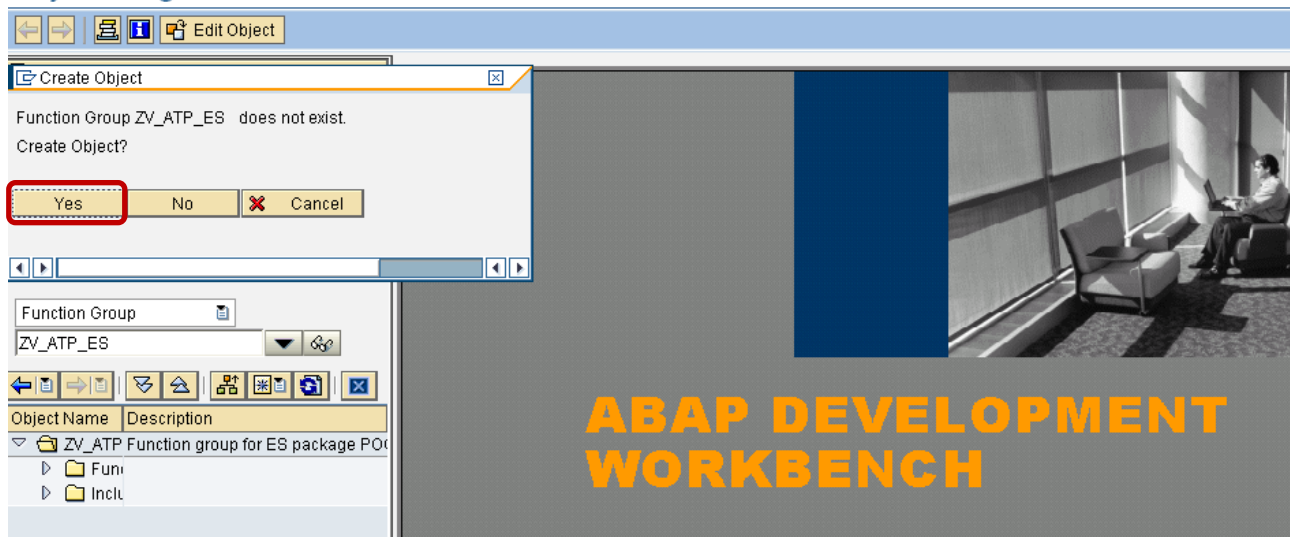
Web service can be defined as any service/functionality available over the internet and related transport protocols which uses a standardized XML messaging system (i.e. SOAP) is not tied to any operating system or programming language.

Creating Function Group

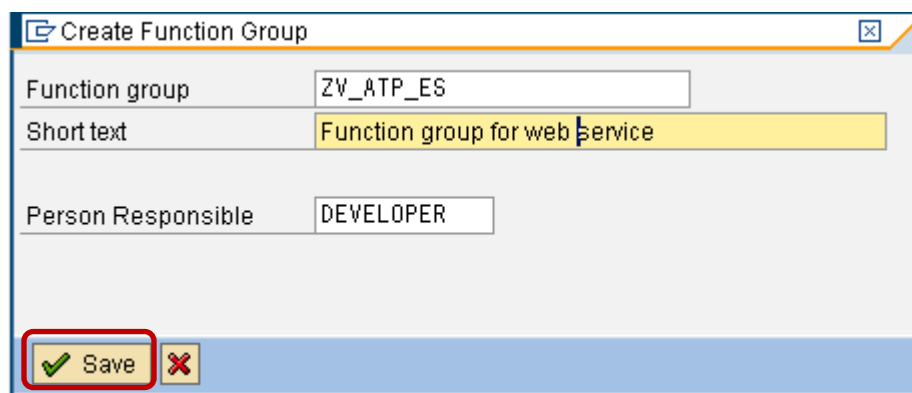
Transaction SE80

Select the “**Function Group**” in the Drop down box on left side plane in the **Object Navigator Screen** and then enter the Function Group name to be created in the input box below the drop down box and then press **ENTER** and click on “**Yes**” button on the pop up window for creating Function Group

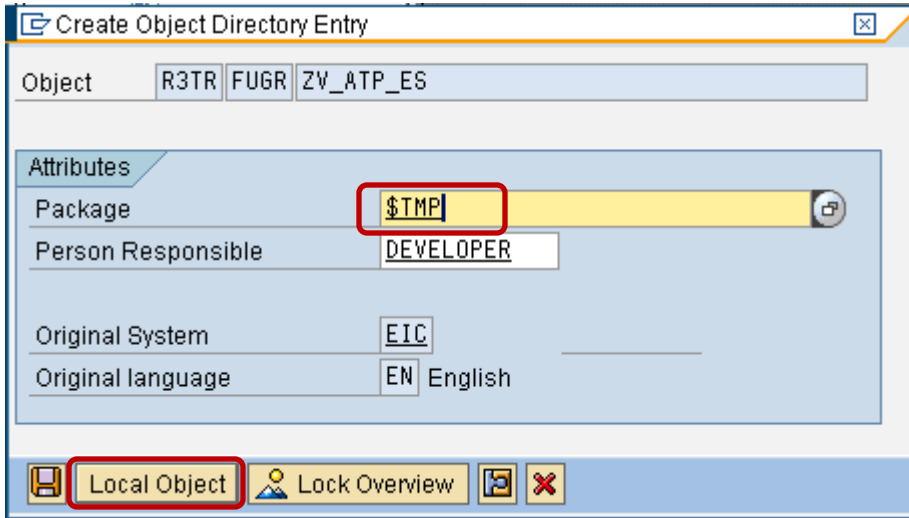
Object Navigator



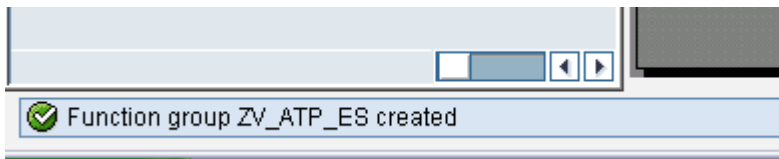
You will get pop up asking for entering short text for Function group, provide a meaningful short text and then “**SAVE**”.



While saving it will ask the package under you want to save, you can provide **\$TMP** (for Local Object) or the any package name as per your requirement. Then click on **"SAVE"**.



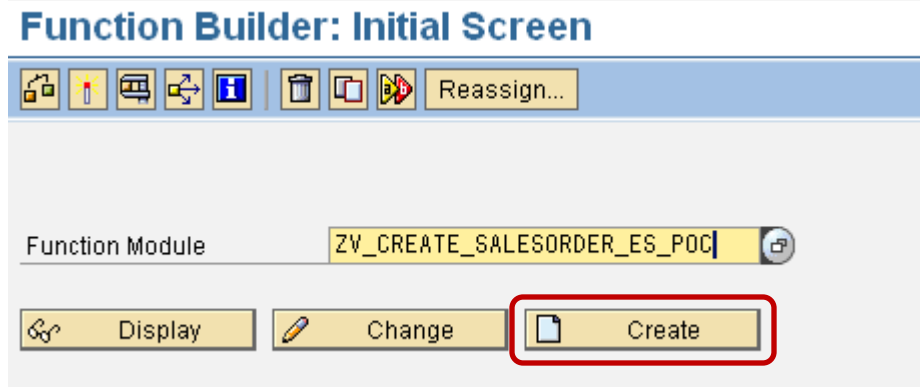
You will get a message saying Function Group has been created as per below screen shot



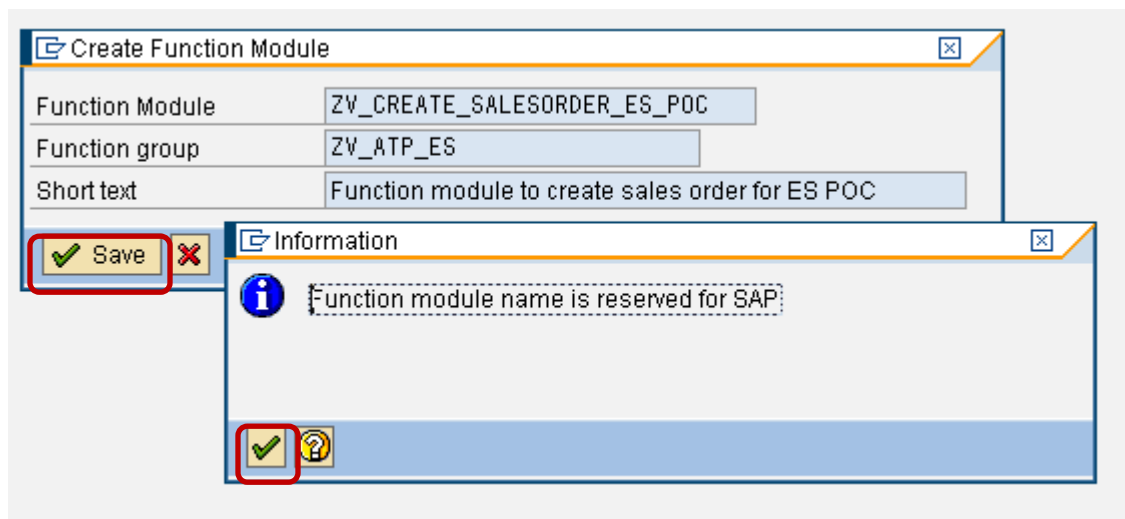
Creating Function module

Transaction SE37

Enter the Function Module name to be created and click on **“Create”**



Enter the **Function group** name and **Short text** for function module in the pop up window as per below screen and click on **“SAVE”**, then you will get a pop up saying **“Function module name is reserved for SAP”**, click on **“Continue”**.



Then it will take you to “**Function Builder**” screen as in below screen shot and enter meaningful values And a very important thing is to make the function module “**Remote-Enabled Module**”.

Function Builder: Change ZV_CREATE_SALESORDER_ES_POC

Function module: ZV_CREATE_SALESORDER_ES_POC Active

Attributes | **Import** | Export | Changing | Tables | Exceptions | Source code

Classification

Function Group: ZV_ATP_ES Function group for ES package POC

Short Text: Function module to create sales order for ES POC

Processing Type

Normal Function Module

Remote-Enabled Module

Update Module

Start immed.

Immediate Start, No Restart

Start Delayed

Coll.run

General Data

Person Responsible: DEVELOPER

Last Changed By: DEVELOPER

Changed on: 10.11.2008

Package: \$TMP

Program Name: SAPLZV_ATP_ES

INCLUDE Name: LZV_ATP_ESU01

Original Language: EN

Not released

Edit Lock

Global

Define the **Import parameters** for Function module

Function Builder: Change ZV_CREATE_SALESORDER_ES_POC

Function module: ZV_CREATE_SALESORDER_ES_POC Active

Attributes | **Import** | Export | Changing | Tables | Exceptions | Source code

Parameter Name	Typing	Associated Type	Default value	Opti.	Pas.	Short text	Lon.
CUSTOMER_NAME	TYPE	BNAME_V		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Name of orderer	
REQUIRED_DATE	TYPE	EDATU_VBAK	SY-DATUM	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Requested delivery date	
REQUIRED_TIME	TYPE	EZEIT_VBEP	SY-UZEIT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Arrival time	
PLANT	TYPE	WERKS_D		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Plant	
MATERIAL	TYPE	MATNR		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Material Number	
QUANTITY	TYPE	DZMENG		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Target quantity in sales units	
UOM	TYPE	DZIEME		<input type="checkbox"/>	<input checked="" type="checkbox"/>	Target quantity UoM	

Define the **Export parameters** for Function module

Function Builder: Change ZV_CREATE_SALESORDER_ES_POC

Parameter Name	Typing	Associated Type	Pass Val	Short text	Long Text
SALESDOCUMENT	TYPE	BAPIVBELN-VBELN	<input checked="" type="checkbox"/>	Sales Document	Crea...
			<input type="checkbox"/>		

Define the **tables** for Function module

Function Builder: Change ZV_CREATE_SALESORDER_ES_POC

Parameter Name	Typing	Associated Type	Optional	Short text	Long Text
RETURN	LIKE	BAPIRET2	<input type="checkbox"/>	Return Parameter	Crea...
			<input type="checkbox"/>		

One of the important things to be done is **commenting and maintaining header information** for the function module which gives information about the function module

Function Builder: Change ZV_CREATE_SALESORDER_ES_POC

```

FUNCTION ZV_CREATE_SALESORDER_ES_POC.
**
***Local Interface:
** IMPORTING
**   VALUE(CUSTOMER_NAME) TYPE  BNAME_V
**   VALUE(REQUIRED_DATE) TYPE  EDATU_VBAK DEFAULT SY-DATUM
**   VALUE(REQUIRED_TIME) TYPE  EZEIT_VBEP DEFAULT SY-UZEIT
**   VALUE(PLANT) TYPE  WERKS_D
**   VALUE(MATERIAL) TYPE  MATNR
**   VALUE(QUANTITY) TYPE  DZMENG
**   VALUE(UOM) TYPE  DZIEME
** EXPORTING
**   VALUE(SALESDOCUMENT) TYPE  BAPIVBELN-VBELN
** TABLES
**   RETURN STRUCTURE  BAPIRET2
**
*-----*
*&-----*
*&-----*
*&-----*
*& Program Name       : ZV_CREATE_SALESORDER_ES_POC
*& Author's Name      : Ajantha Ratnakaumar
*& Program Title       : FM to create SO in R/3
*& Description         : This FM will create a sales order in R/3, depending on the material
*&                     : availability slot selected by the user. The slots are return by the
*&                     : /SAPAPO/SDM_PARCRTIC webservice in APD
*&-----*
*&-----*

```

Code

For the example mentioned in document (i.e. creating a sales order) you can use this code or else the code will change as per your requirement

```

data : order_header_in  like bapisdhd1.

data : order_partners   like bapiparnr  occurs 0 with header line.
data : order_schedules_in like bapischd1 occurs 0 with header line.
data : order_items_in   like bapisditm  occurs 0 with header line.
data : WF_DOC_TYPE type AUART . "value 'OR'".

CALL FUNCTION 'CONVERSION_EXIT_AUART_INPUT'
  EXPORTING
    INPUT      = 'OR'
  IMPORTING
    OUTPUT     = WF_DOC_TYPE

* Fill header data
order_header_in-doc_type = WF_DOC_TYPE.
order_header_in-sales_org = '5000'.
order_header_in-distr_chan = '50'.
order_header_in-division = '50'.
order_header_in-name = customer_name.
order_header_in-purch_no_c = '1234'.
order_header_in-req_date_h = required_date.

* Fill order items data
order_items_in-itm_number = '000010'.
order_items_in-material = material.
order_items_in-plant = plant.
order_items_in-target_qty = quantity.
order_items_in-target_qu = uom.
append order_items_in.

* Fill order partners data
order_partners-partn_role = 'SP'.
order_partners-partn_num = customer_name.
append order_partners.

* Fill schedule line data
order_schedules_in-itm_number = '000010'.
order_schedules_in-sched_line = '000010'.
order_schedules_in-req_date = required_date.
order_schedules_in-req_qty = quantity.
order_schedules_in-date_type = '1'.
order_schedules_in-sched_type = 'CP'.
order_schedules_in-req_time = required_time.
append order_schedules_in.

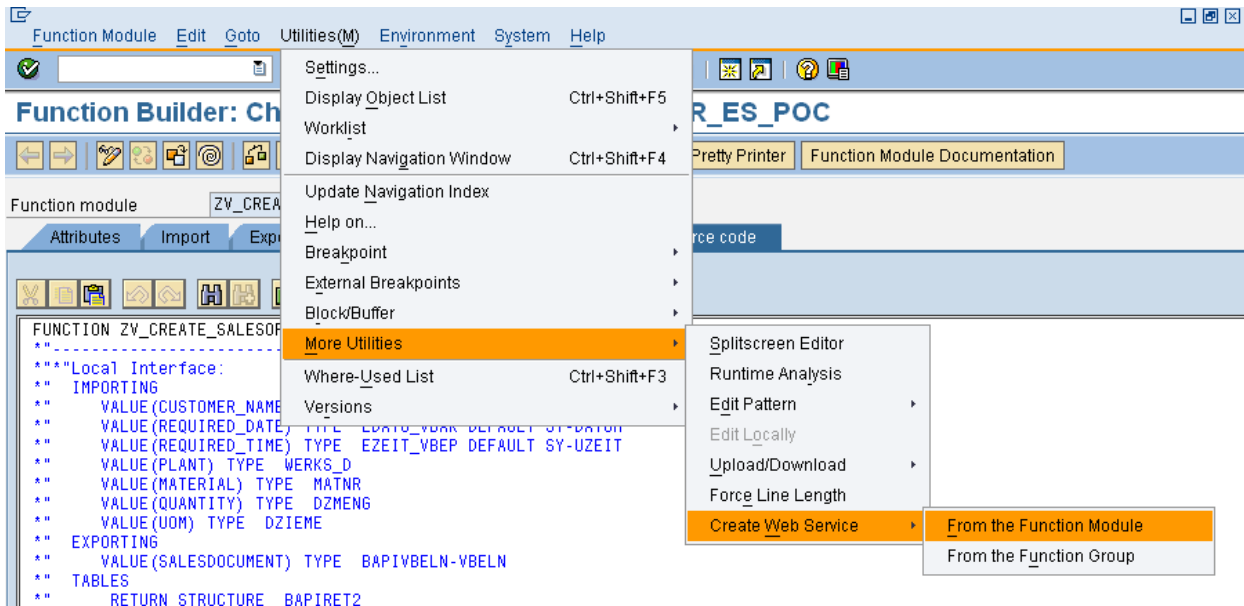
* Call BAPI to create Salesorder
call function 'BAPI_SALESORDER_CREATEFROMDAT2'
  exporting
    order_header_in = order_header_in
  *   convert        = 'X'
  importing
    salesdocument = salesdocument
  tables
    return        = return
    order_items_in = order_items_in
    order_partners = order_partners
    order_schedules_in = order_schedules_in.

* If salesorder is created successfully commit the changes to the database
if salesdocument is not initial.
  call function 'BAPI_TRANSACTION_COMMIT'
    exporting
      wait = 'X'.
endif.
ENDFUNCTION.

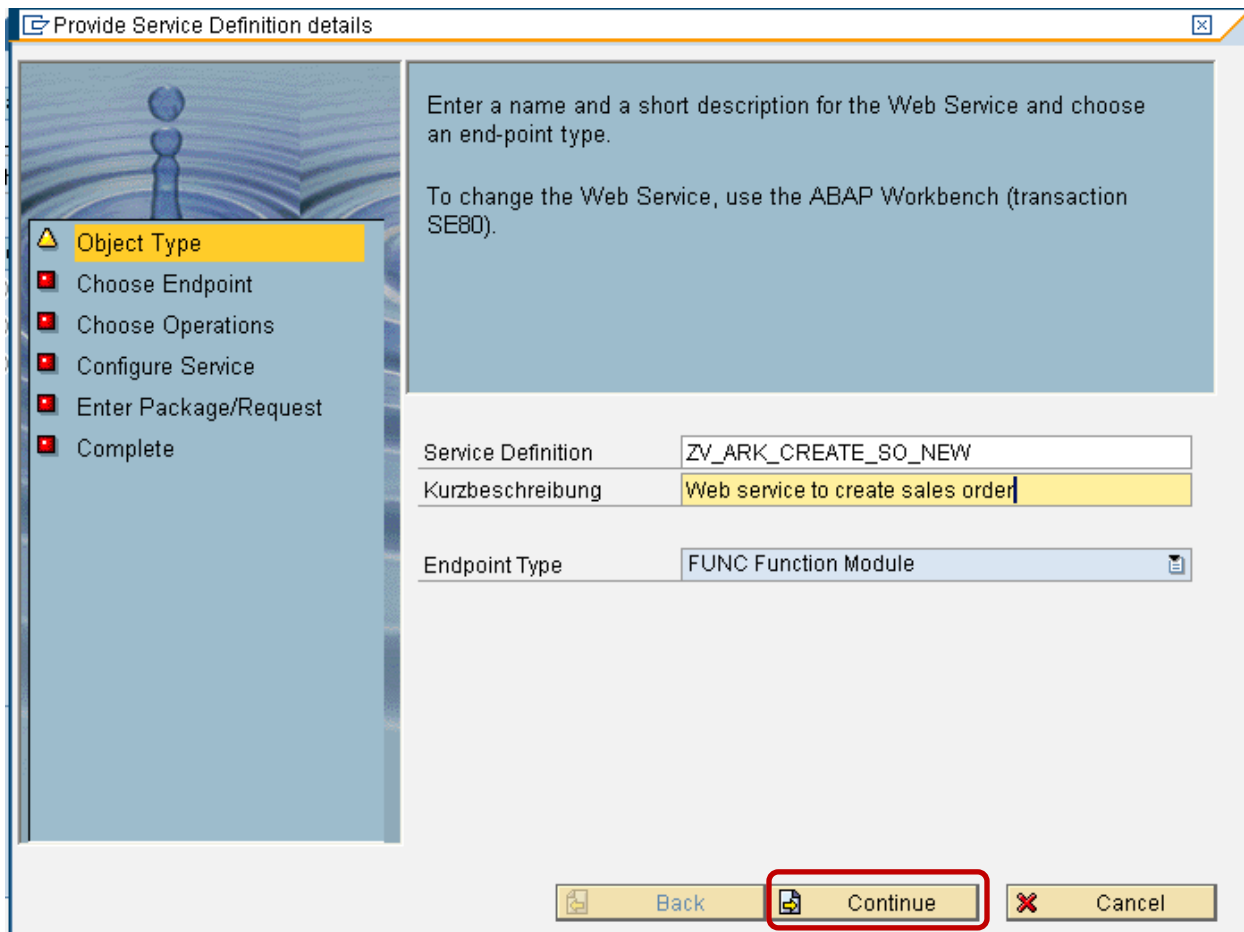
```


Create Web Service of Function Module

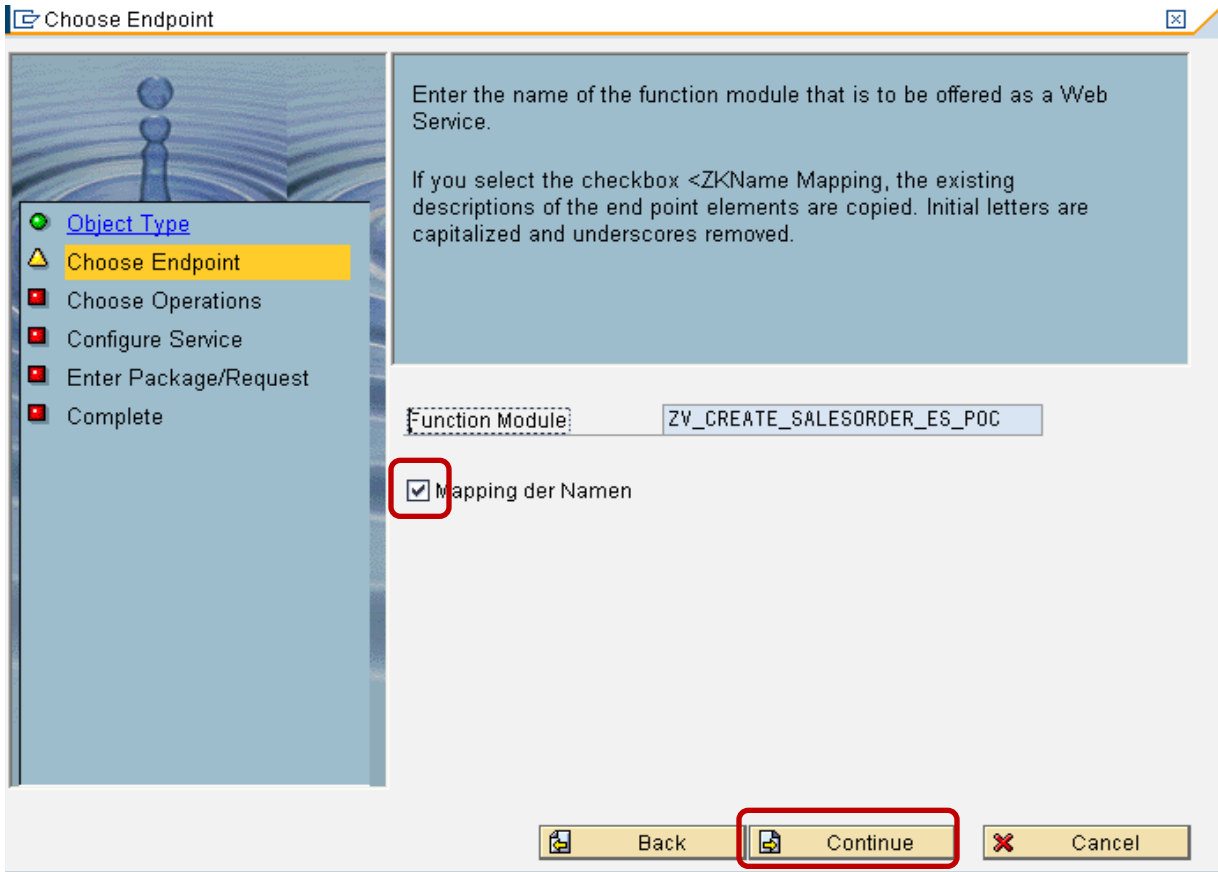
Go to utilities -> More Utilities -> Create Web Service -> From the Function Module



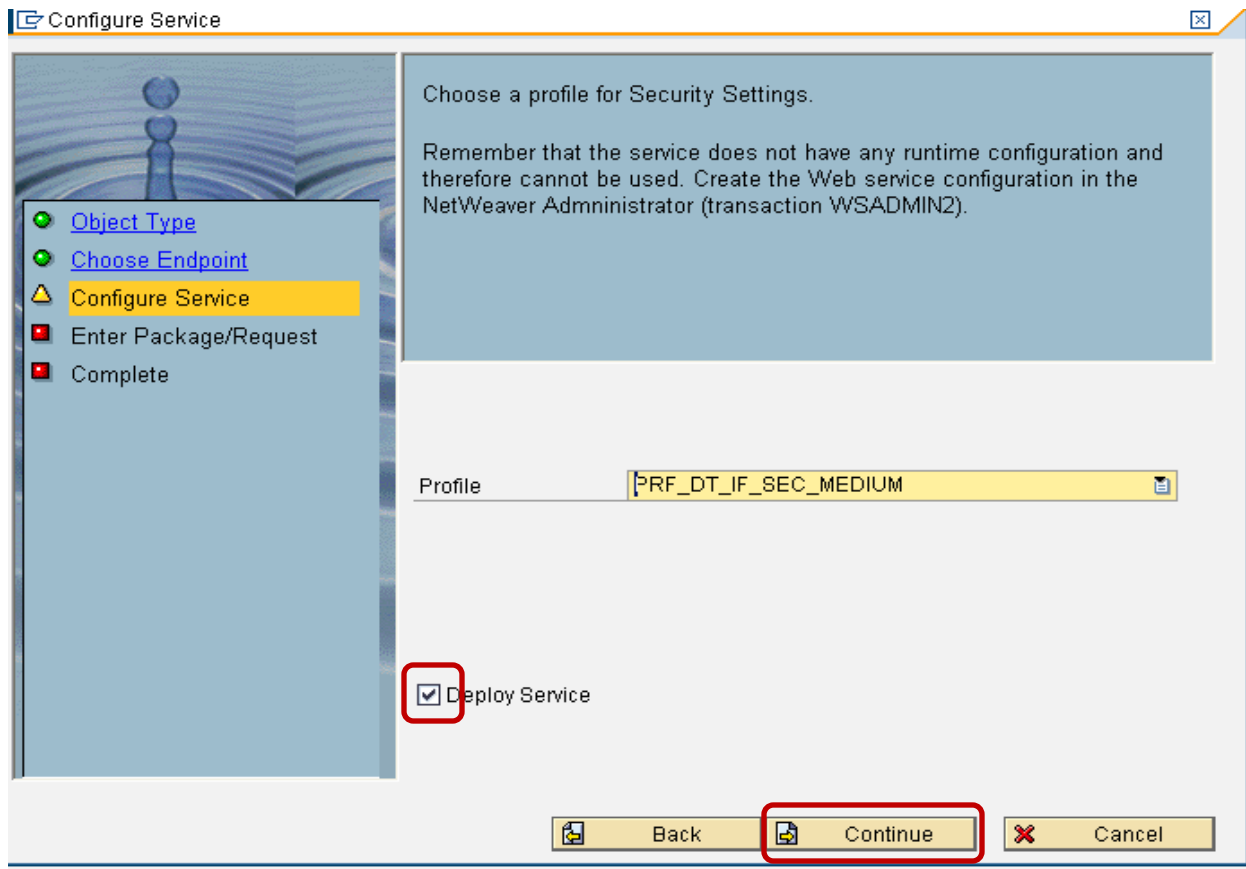
Enter **Name** and **Short text** for Service definition and the click on “**Continue**”



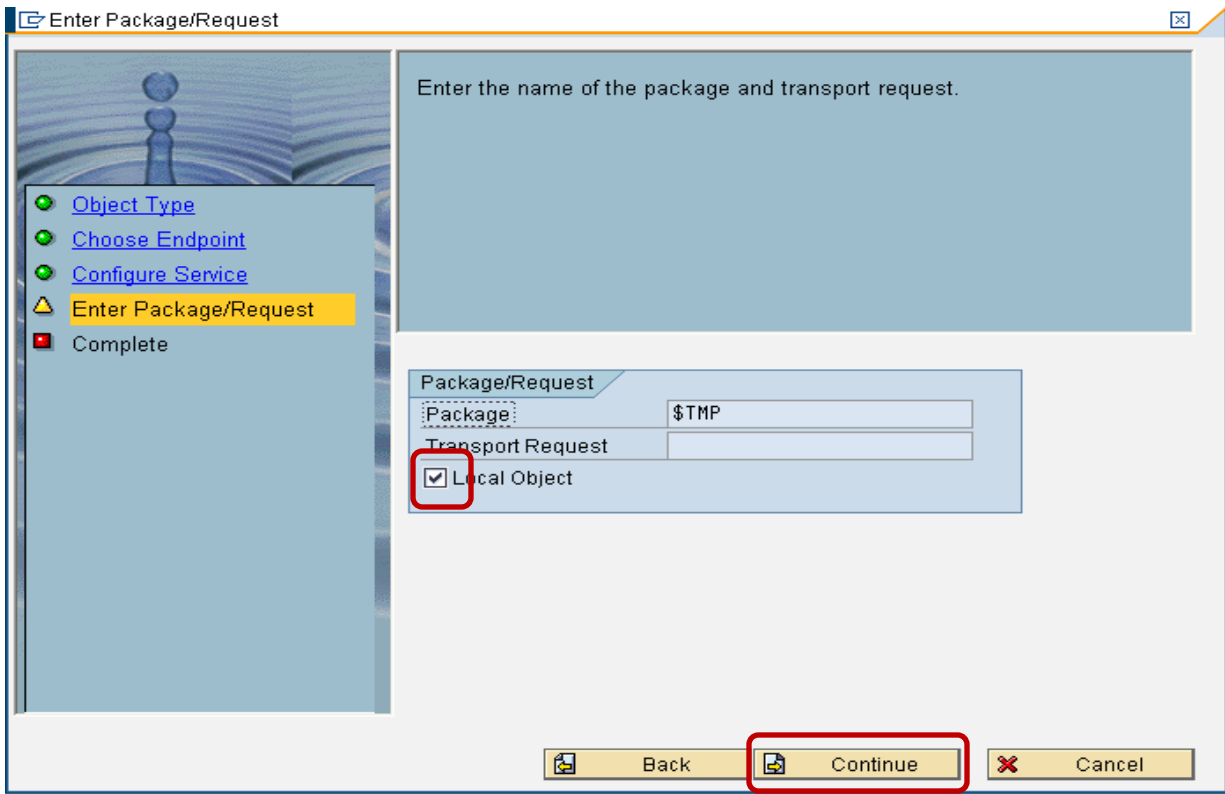
Check the Check box for **Mapping** so that the import and export parameters of Function Module are mapped with that of the Web Service to be created.



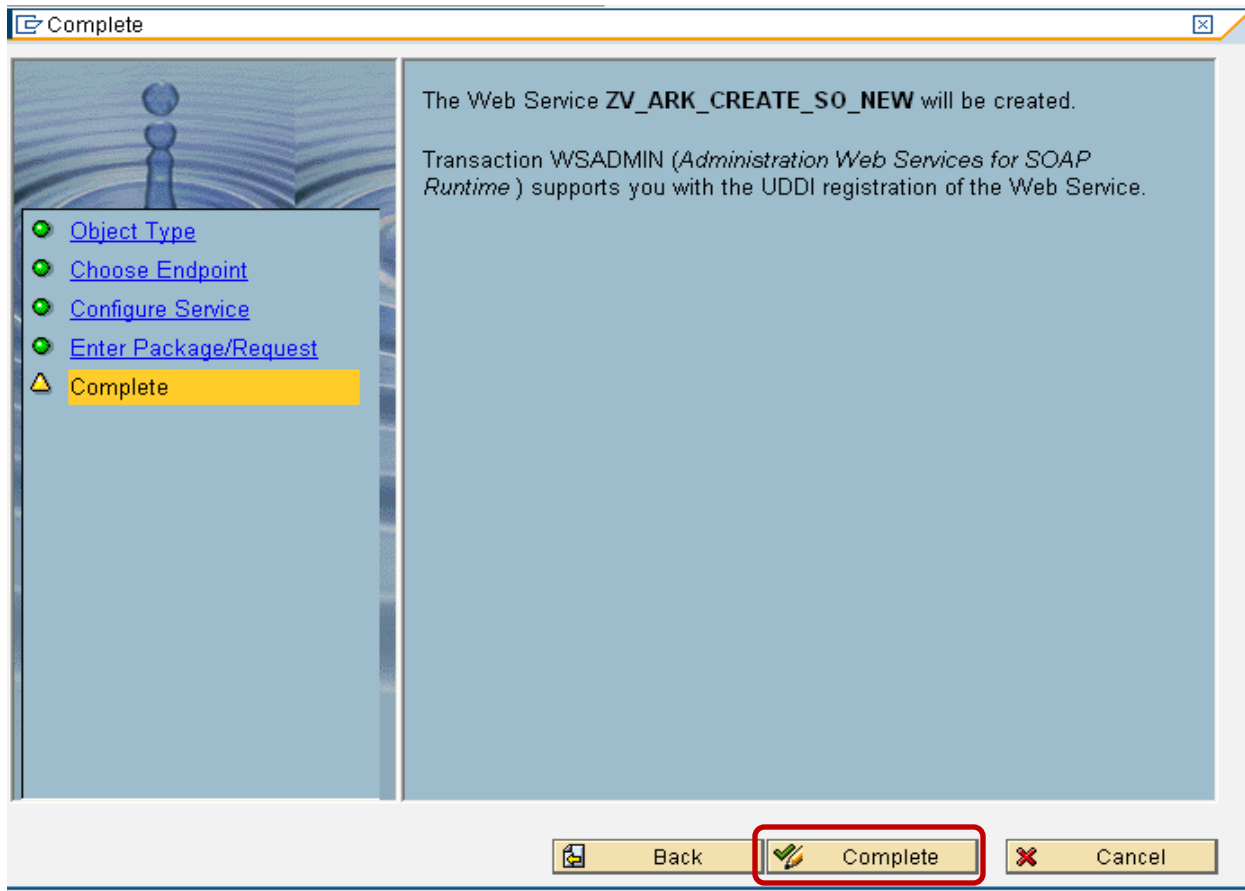
Check the **Deploy** check box for the service to be available in SOAMANAGER for further processing



Here you can select where you want to save the object , In this case I am saving it as local object- \$TMP



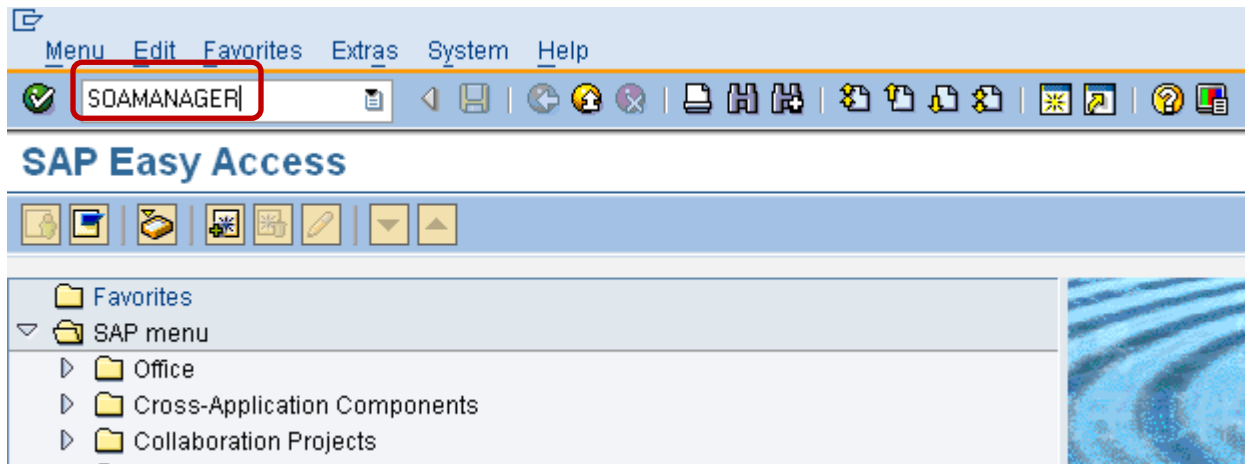
Click on “**Completed**” to completed the process of Web Service creation



Then you will a message that **web service has been created**.

Executing Web Service from Web Service Navigator

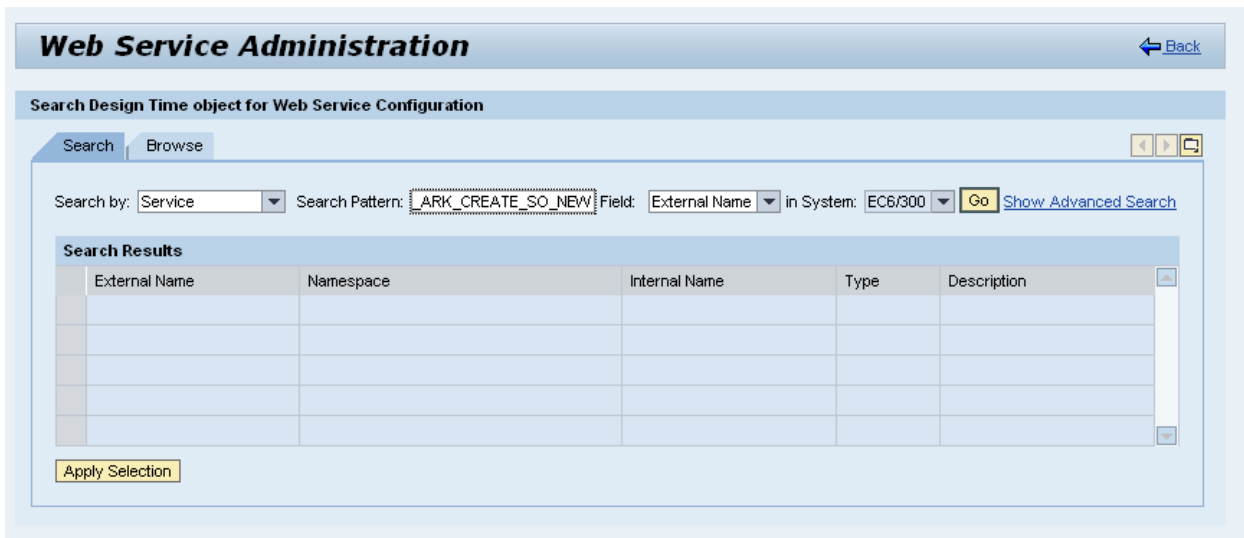
Transaction SOAMANAGER



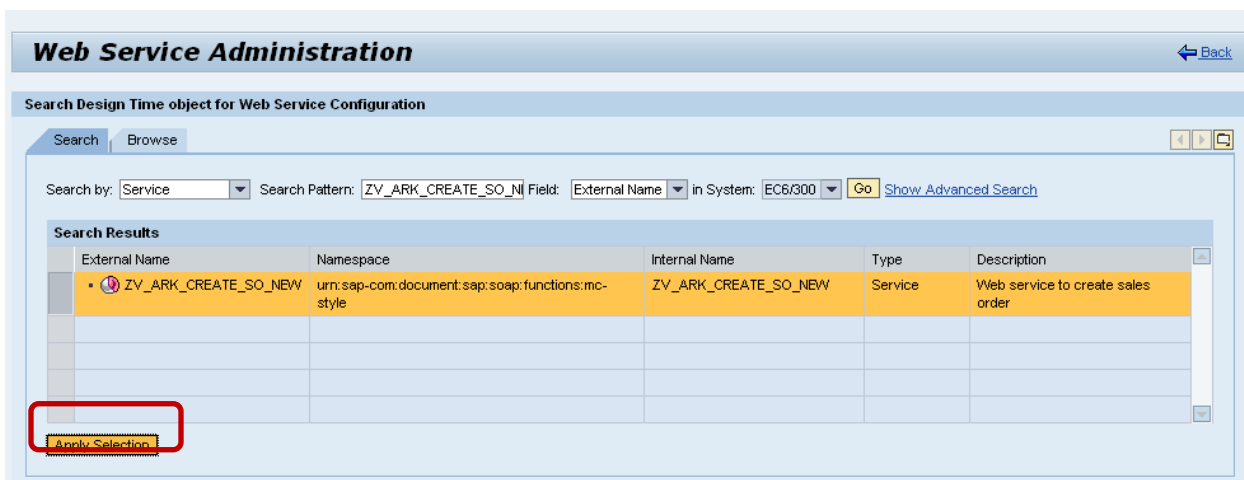
Click on the tab “**Application and Scenario Communication**”



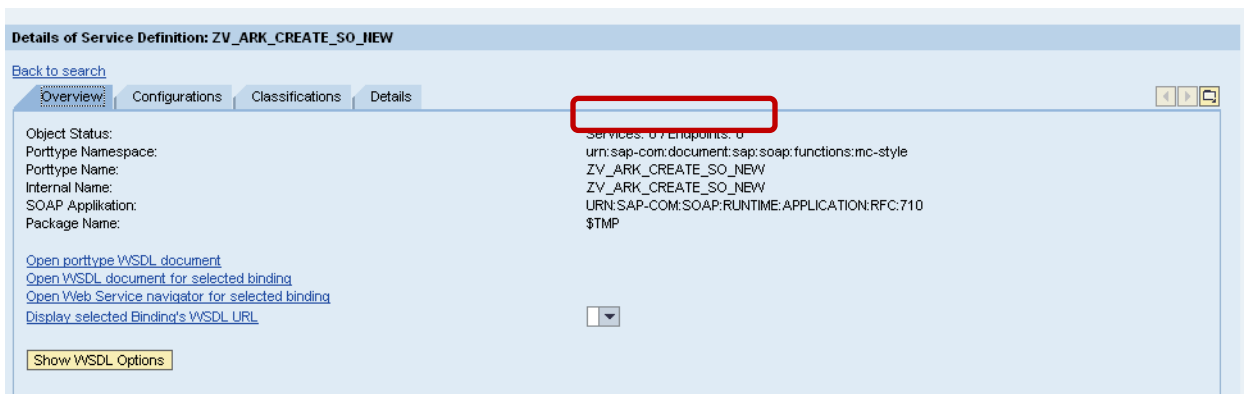
Then click on “**Single Service Administration**” you will get the below screen where you can enter the service definition name in the Search Pattern. In our case the name will be “ZV_ARK_CREATE_SO_NEW” The click on “**GO**”.



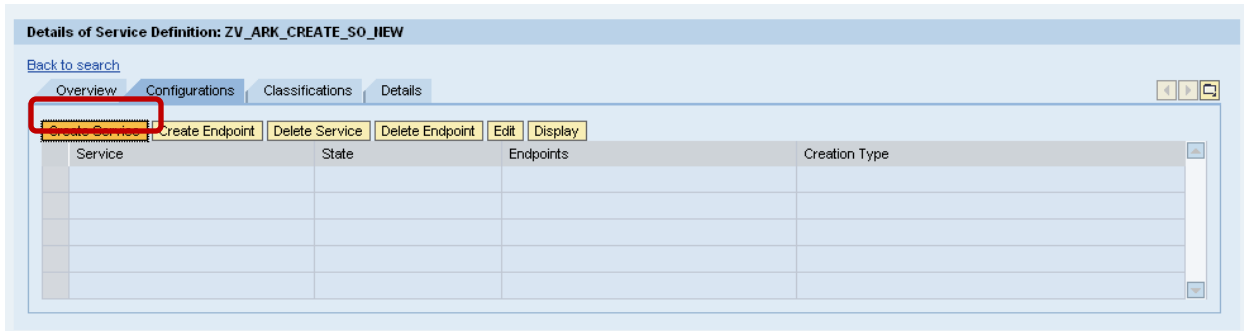
You will get the service in the search Results column. Select the service and then click on “**Apply Selection**”



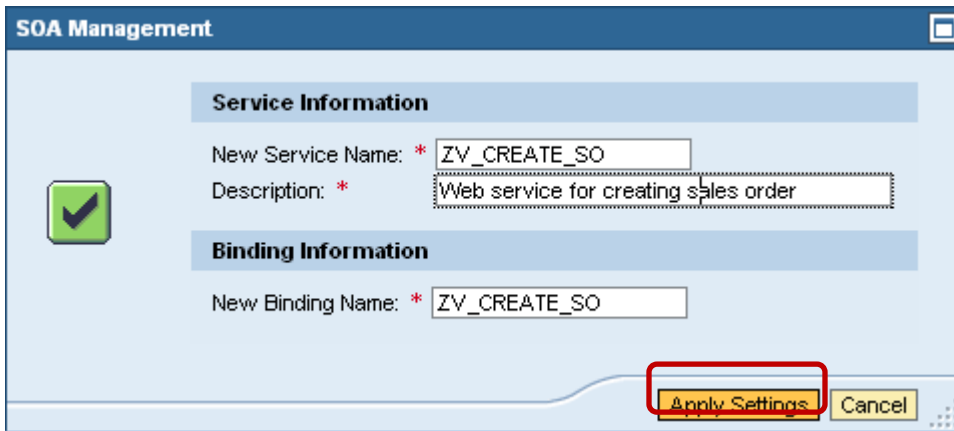
You can see as per the below screen shots, the **service = 0/ Endpoints = 0** for the web service definition selected by us



Now click on **Configurations** tab and then click on **“Create Service”**



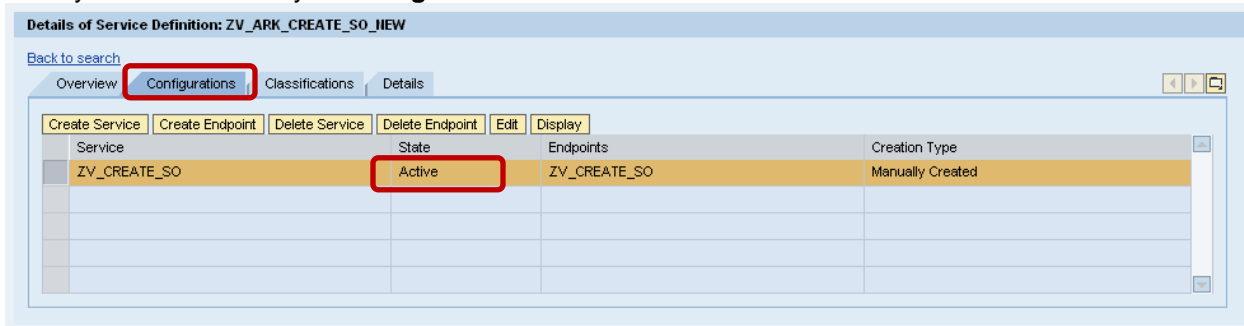
You will get a pop up asking for service **name**, **description** and **binding name** for it. Enter the values and click on **“Apply Settings”**



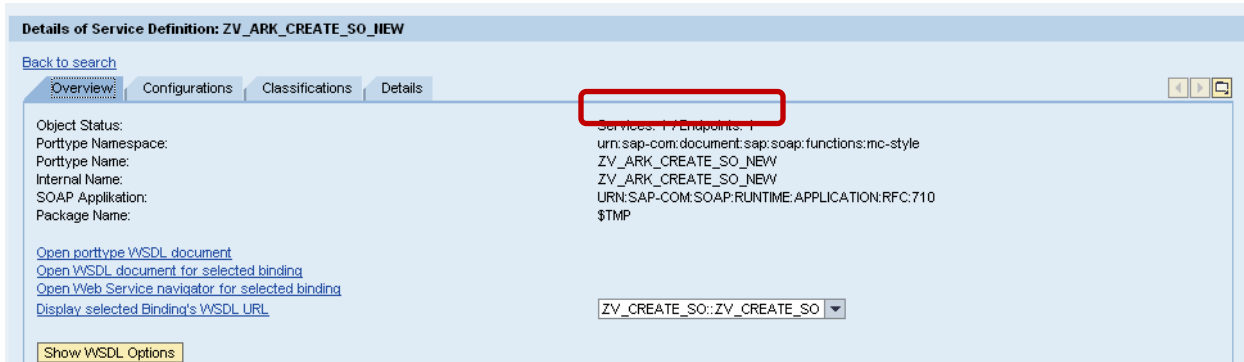
Then you return to the below mentioned screen where you need to save



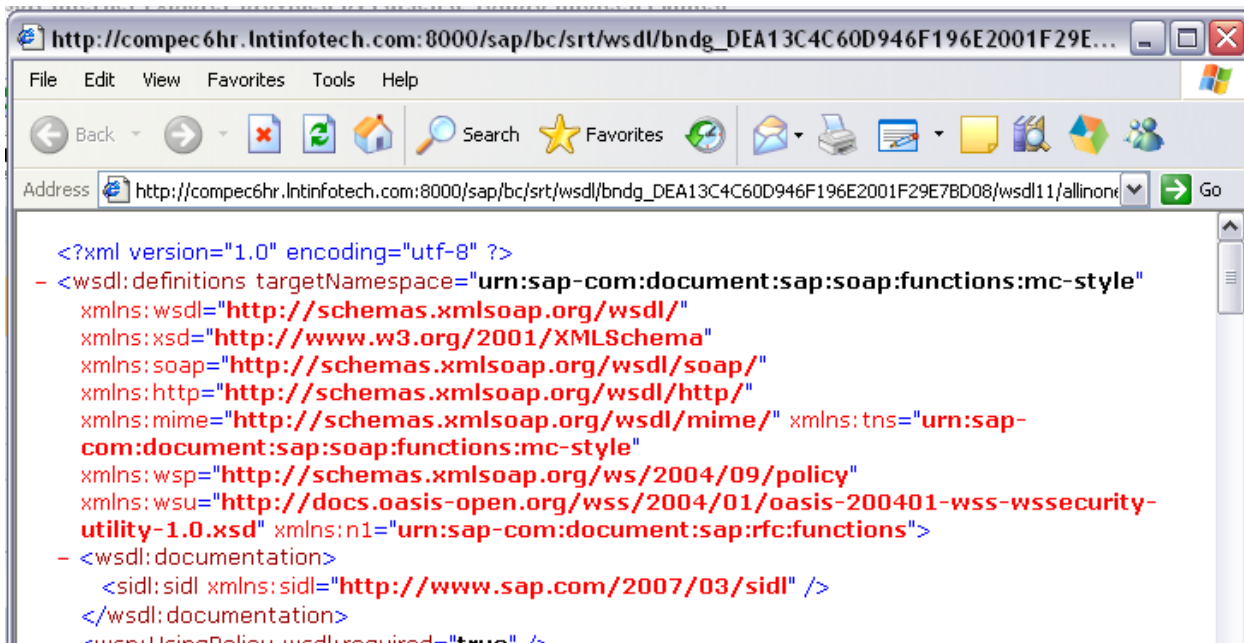
Then you can see a entry in **Configurations** tab. The state of service should be **Active**.



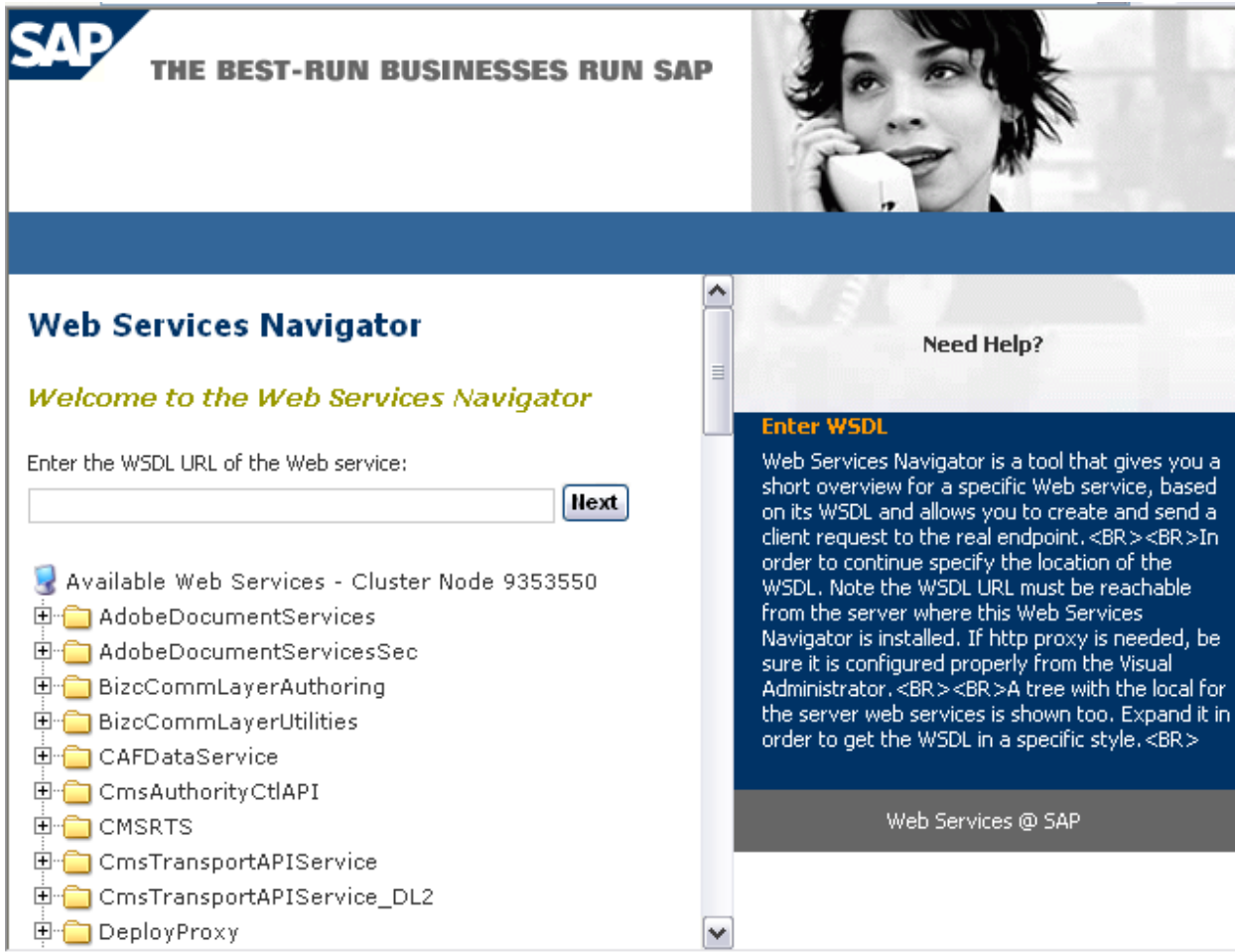
Now click on **Overview** tab you can see the **service =1/ Endpoint=1**



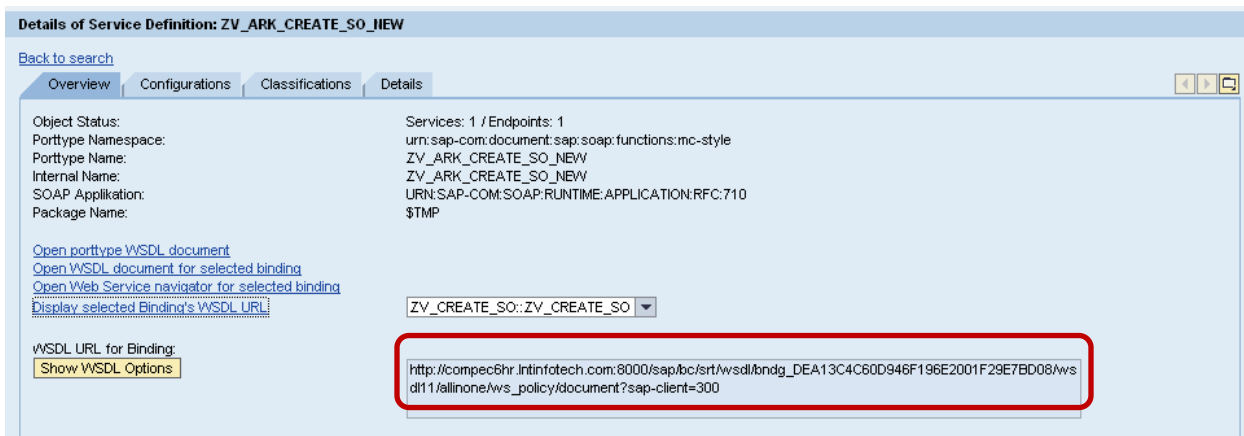
If you click on the **“Open WSDL document for selected binding”** you can see the WSDL of the Web service in XML format



In order to execute the web service through web service navigator click on **“Open Web Service navigator for selected binding”** it will take you to above screen



Then click on **“Display selected Binding's WSDL URL”** link to get the WSDL URL. You will get a URL displayed on the right and side of the screen



Copy – paste the link in the “Web service Navigator “screen in the input box below “Enter the WSDL URL of the Web service: “and click on “Next”.

SAP THE BEST-RUN BUSINESSES RUN SAP

Web Services Navigator

Welcome to the Web Services Navigator

Enter the WSDL URL of the web service:

J8/wsd11/allinone/ws_policy/document?sap-client=300 **Next**

Available Web Services - Cluster Node 9353550

- [-] AdobeDocumentServices
- [-] AdobeDocumentServicesSec
- [-] BizcCommLayerAuthoring
- [-] BizcCommLayerUtilities
- [-] CAFDataService
- [-] CmsAuthorityCtlAPI
- [-] CMSRTS
- [-] CmsTransportAPIService
- [-] CmsTransportAPIService_DL2
- [-] DeployProxy

Need Help?

Enter WSDL

Web Services Navigator is a tool that gives you a short overview for a specific Web service, based on its WSDL and allows you to create and send a client request to the real endpoint.

In order to continue specify the location of the WSDL. Note the WSDL URL must be reachable from the server where this Web Services Navigator is installed. If http proxy is needed, be sure it is configured properly from the Visual Administrator.

A tree with the local for the server web services is shown too. Expand it in order to get the WSDL in a specific style.

Web Services @ SAP

It will take u to login screen you need to use the same login as used for SAP logon



Web Services Navigator

Authorization

The selected endpoint requires basic authentication. Please, enter correct username and password:

Username:

Password:

On this screen, Click on "Test"



Web Services Navigator

Overview

WSDL:

http://compec6hr.Intinfotech.com:8000/sap/bc/srt/wsd/bndg_DEA13C4C60D946F196E2001F29E7BD08/wsd11/allinone/ws_policy/document?sap-client=300

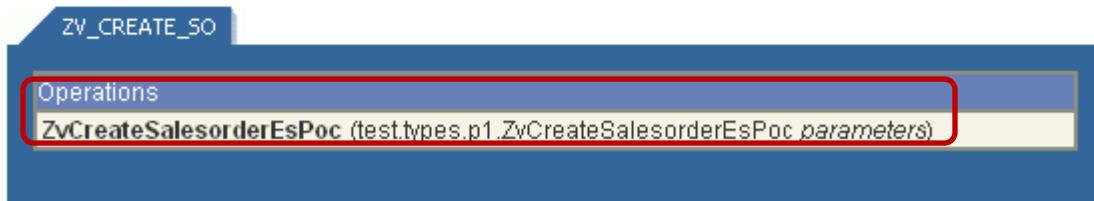
Description:

The click on the “ZvCreateSalesorderEsPoc (test.types.p1.ZvCreateSalesorderEsPoc parameters)”



Web Services Navigator

Test



Enter the values for creating sales order



ZvCreateSalesorderEsPoc

- parameters (test.types.p1.ZvCreateSalesorderEsPoc)
 - CustomerName (String)
 - Material (String)
 - Plant (String)
 - Quantity (java.math.BigDecimal)
 - RequiredDate (String) SKIP
 - RequiredTime (String) SKIP
 - Return (test.types.p1.Bapiret2[])
 - element1 (test.types.p1.Bapiret2)
 - Uom (String)

Timeout (seconds):

After entering the mandatory values for creating sales order, click on **“Send”** .



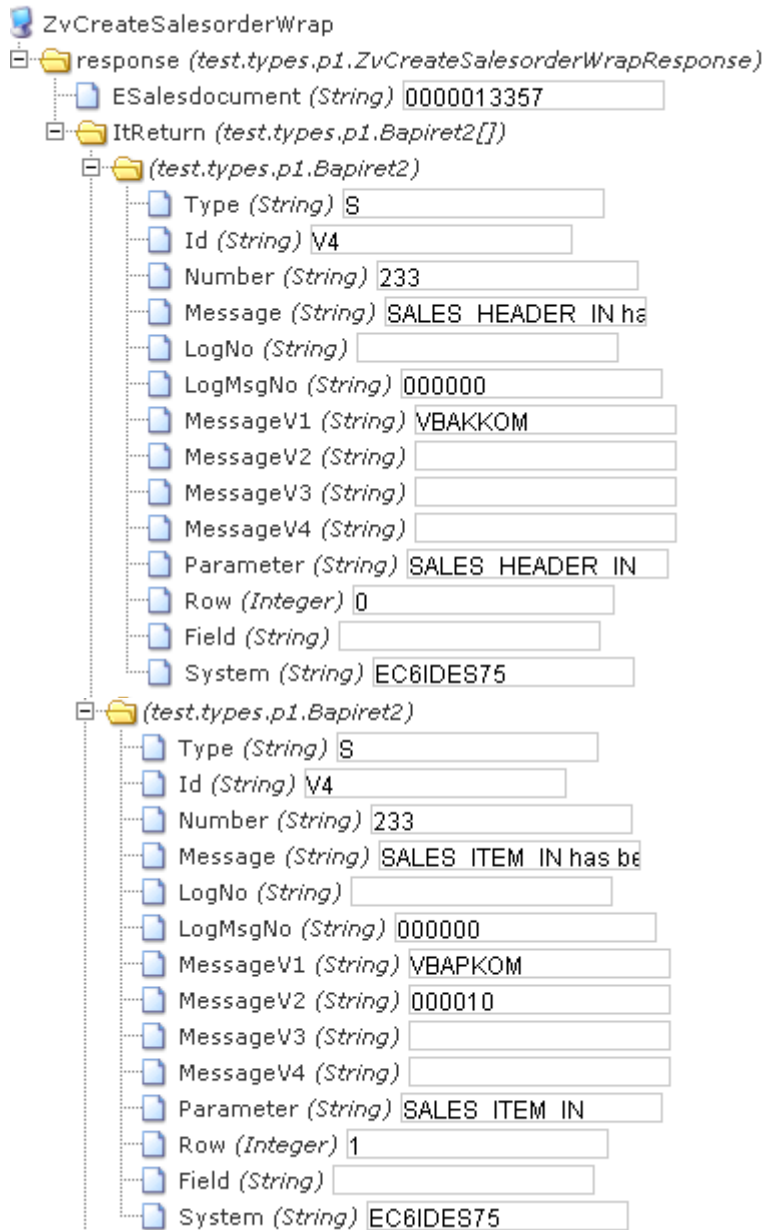
ZvCreateSalesorderEsPoc

- parameters (test.types.p1.ZvCreateSalesorderEsPoc)
 - CustomerName (String)
 - Material (String)
 - Plant (String)
 - Quantity (java.math.BigDecimal)
 - RequiredDate (String) SKIP
 - RequiredTime (String) SKIP
 - Return (test.types.p1.Bapiret2[])
 - Uom (String)

Timeout (seconds):

Then you will see the output in the same format

Response



```

ZvCreateSalesorderWrap
├── response (test.types.p1.ZvCreateSalesorderWrapResponse)
│   ├── ESalesdocument (String) 0000013357
│   └── ItReturn (test.types.p1.Bapiret2[])
│       ├── (test.types.p1.Bapiret2)
│       │   ├── Type (String) S
│       │   ├── Id (String) V4
│       │   ├── Number (String) 233
│       │   ├── Message (String) SALES HEADER IN ha
│       │   ├── LogNo (String)
│       │   ├── LogMsgNo (String) 000000
│       │   ├── MessageV1 (String) VBAKKOM
│       │   ├── MessageV2 (String)
│       │   ├── MessageV3 (String)
│       │   ├── MessageV4 (String)
│       │   ├── Parameter (String) SALES HEADER IN
│       │   ├── Row (Integer) 0
│       │   ├── Field (String)
│       │   └── System (String) EC6IDES75
│       └── (test.types.p1.Bapiret2)
│           ├── Type (String) S
│           ├── Id (String) V4
│           ├── Number (String) 233
│           ├── Message (String) SALES ITEM IN has be
│           ├── LogNo (String)
│           ├── LogMsgNo (String) 000000
│           ├── MessageV1 (String) VBAPKOM
│           ├── MessageV2 (String) 000010
│           ├── MessageV3 (String)
│           ├── MessageV4 (String)
│           ├── Parameter (String) SALES ITEM IN
│           ├── Row (Integer) 1
│           ├── Field (String)
│           └── System (String) EC6IDES75
    
```

Summary

Web Service can be used in Adobe Flex or any other web-based application to access / communicate with SAP data. ABAP web services can be created when you have custom requirements. There are also standard web services provided by SAP which comes as a part of Enhancement Packages. These standard web service represent standard SAP functionalities like APO ATP check, SO create/change/delete, PO create/change/delete and many more. When more than one web service combined to meet new requirements encapsulating enterprise functionality and exposing it as a reusable business service then that is called as an Enterprise Service.

Related Content

<https://wiki.sdn.sap.com/wiki/display/ESpackages/Home>

<http://www.sdn.sap.com/irj/sdn/explore-es?rid=/webcontent/uuid/f272e75d-0501-0010-1786-ab6ed3496bb1>

<http://www.sdn.sap.com/irj/sdn/soa>

[http://www.sdn.sap.com/irj/sdn/enterprisesoa;jsessionid=\(J2EE3417400\)ID1961175350DB10082480365165855639End?rid=/webcontent/uuid/f07d8153-7edd-2910-aeac-fb940ff1ff71](http://www.sdn.sap.com/irj/sdn/enterprisesoa;jsessionid=(J2EE3417400)ID1961175350DB10082480365165855639End?rid=/webcontent/uuid/f07d8153-7edd-2910-aeac-fb940ff1ff71)

[http://www.sdn.sap.com/irj/sdn/enterprisesoa;jsessionid=\(J2EE3417400\)ID1961175350DB10082480365165855639End?rid=/webcontent/uuid/e044d87c-ebab-2a10-6482-cd4ff5fa4828](http://www.sdn.sap.com/irj/sdn/enterprisesoa;jsessionid=(J2EE3417400)ID1961175350DB10082480365165855639End?rid=/webcontent/uuid/e044d87c-ebab-2a10-6482-cd4ff5fa4828)

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