

Cognizant Technology Solution

Exercises – Web Services

WebMethods Integration Workshop

WebMethods CoE

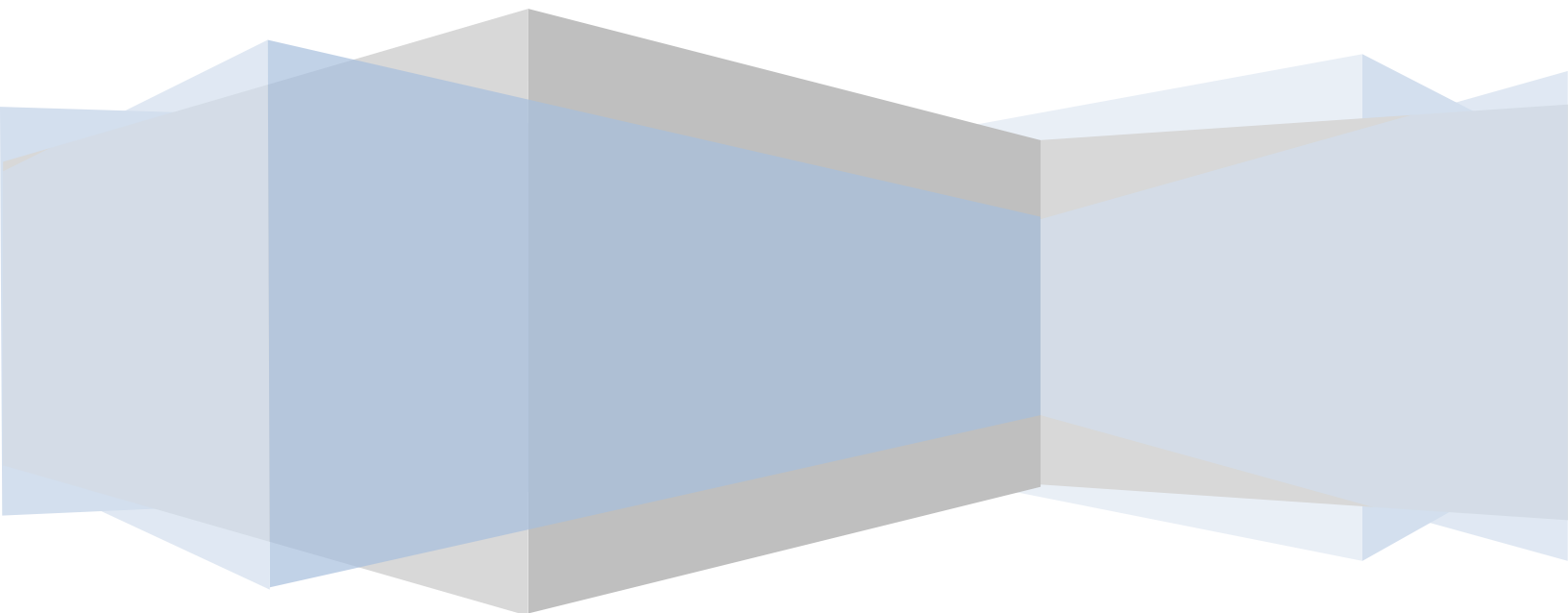


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Web Services

Introduction

Web services are building blocks for creating open, distributed systems. A Web service is a collection of functions that are packaged as a single unit and published to a network for use by other software programs. For example, you could create a Web service that checks a customer's credit or tracks delivery of a package. If you want to provide higher-level functionality, such as a complete order management system, you could create a Web service that maps to many different IS flow services, each performing a separate order management function.

Designer uses **Web service descriptors** to encapsulate information about Web services and uses **Web service connectors** to invoke Web services.

Web service descriptor

A **Web service descriptor (WSD)** is an element on Integration Server that defines a Web service in IS terms. The WSD encapsulates all the information required by the provider or the consumer (requester) of a Web service. The WSD contains the message formats, data types, transport protocols, and transport serialization formats that should be used between the consumer (requester) and the provider of the Web service. It also specifies one or more network locations at which a Web service can be invoked.

Web service Connectors

Integration Server creates a **Web service connector (WSC)** for each operation in the Web service. A Web service connector is a flow service with an input and output signature that corresponds to the input and output messages of the Web service operation. A Web service connector contains the information and logic needed to invoke an operation defined in the WSDL document used to create the consumer Web service descriptor.

Theory

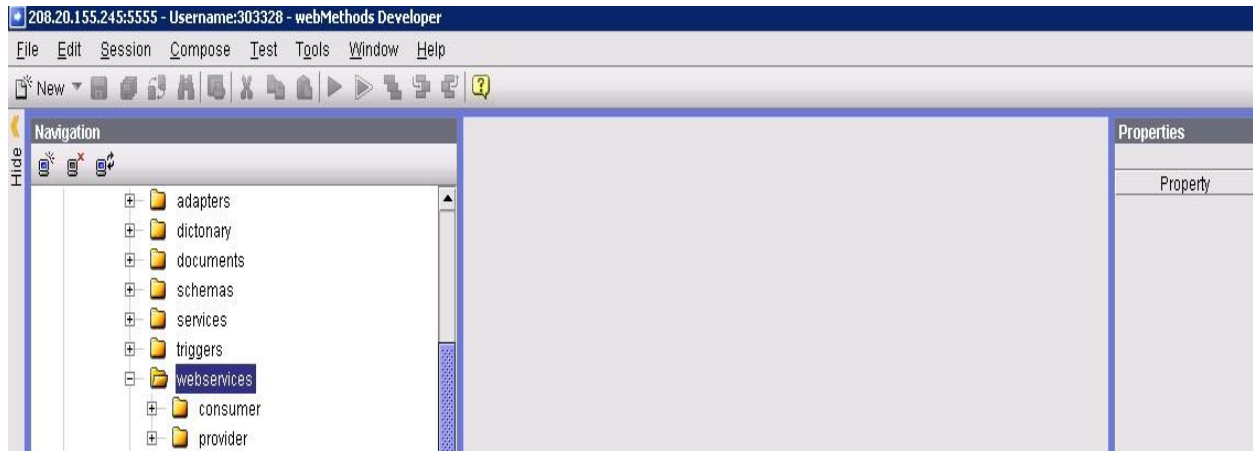
- 8-2-SP1_Service_Development_Help

Practical

Web Service Creation

Steps to create a web service in Developer

Under webservice folder create two folders for consumer and provider.

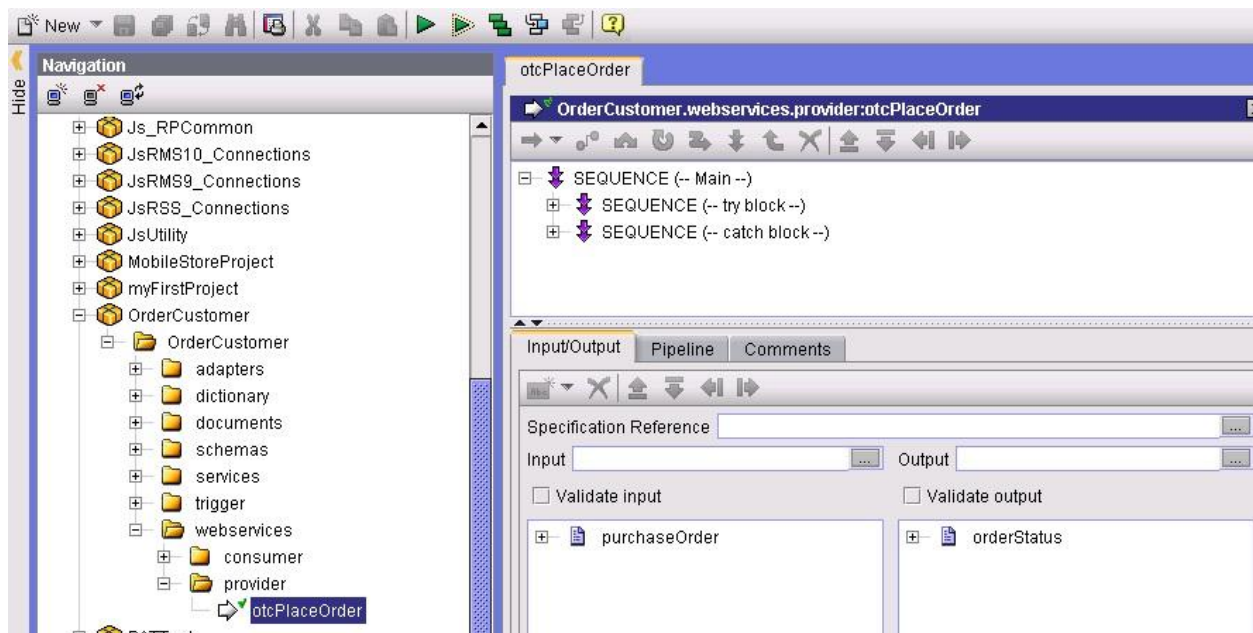


Creating a Provider Web Service Descriptor

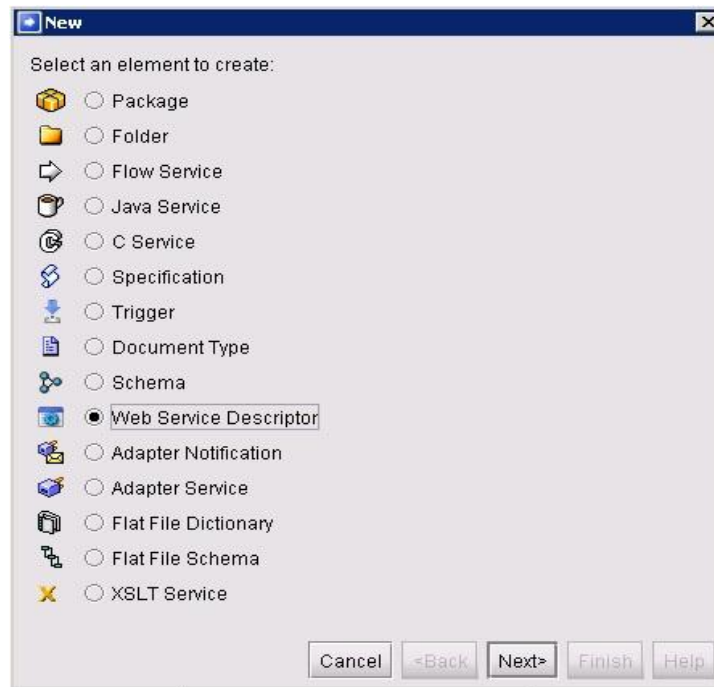
You can create a provider Web service descriptor from:

- One or more existing IS services.
- A WSDL document (selected locally, by specifying a URL, or by choosing a WSDL from a UDDI registry).

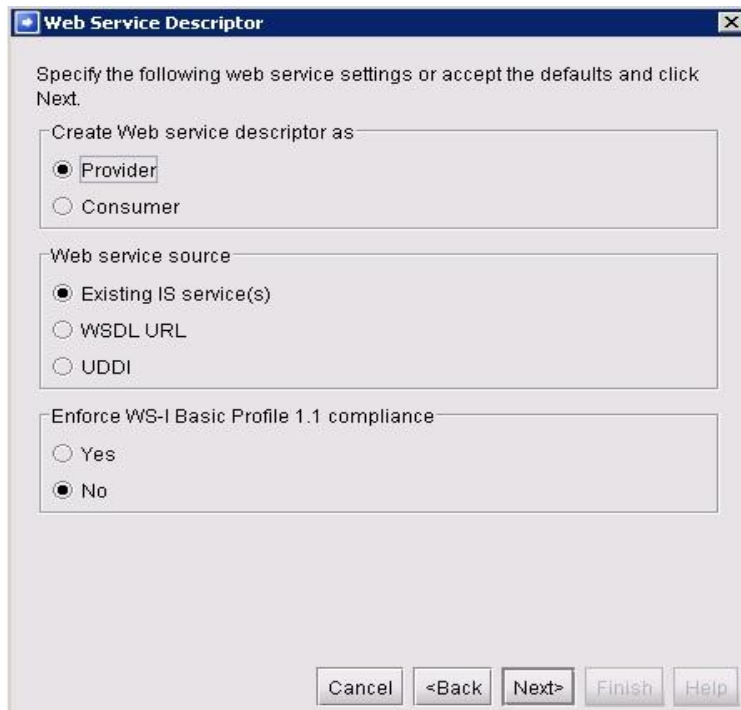
Creating WSD from existing service.



- 1) Right click on the provider folder select **New** -> **All choices**. Developer opens the **New** wizard.
- 2) Click **Web service descriptor**, then click **Next**. The wizard displays the Web service descriptor panel.



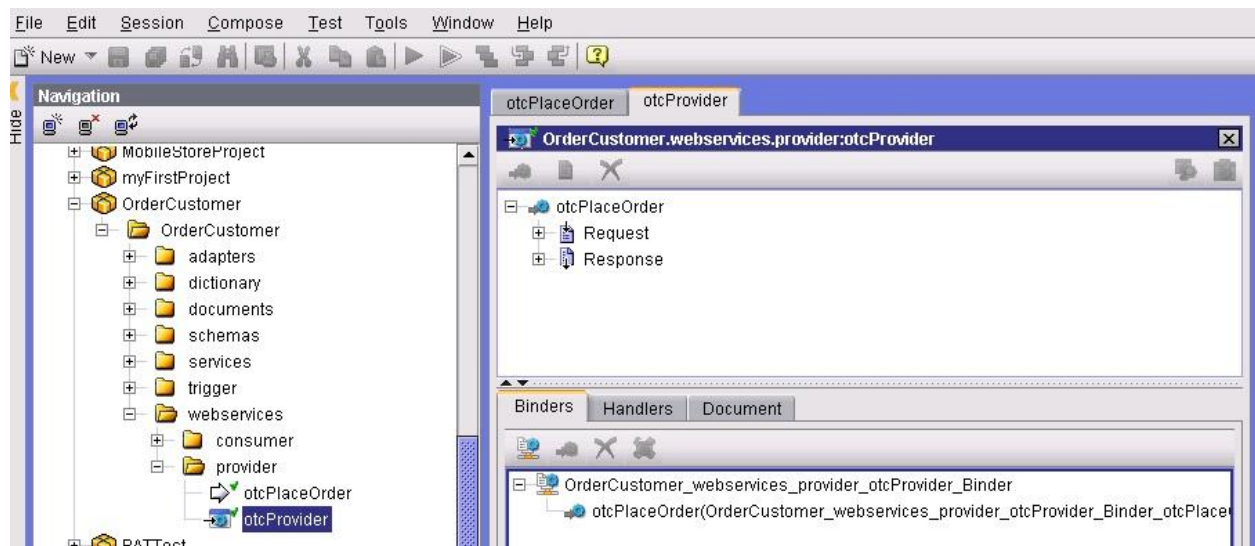
- 3) Under **Create Web Service Descriptor as**, select **Provider**.
- 4) Under **Web Service Source**, select any one of three as per situation.



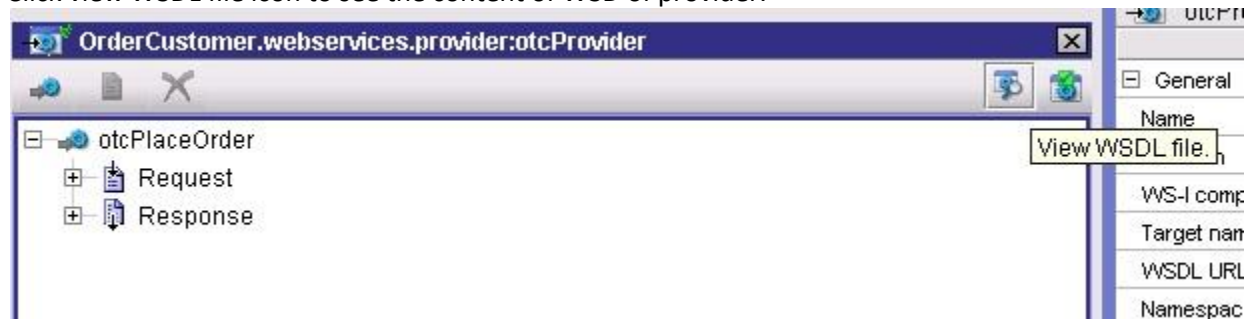
- 5) If you selected **Existing IS Service** under **Web Service Source**, Select one or more services to include as operations in the provider Web service descriptor. Then click **Next** and specify **End Point, Directive** and **Target namespace**.



The provider WSD should look like this.

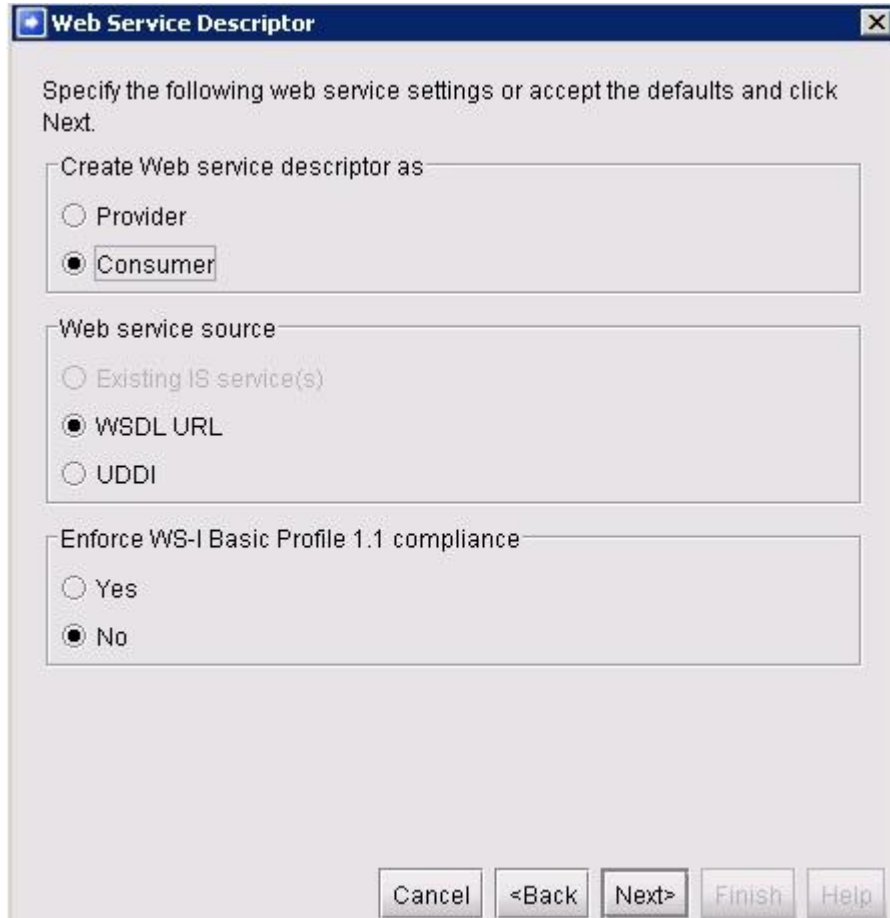


Click view WSDL file icon to see the content of WSD of provider.



Creating a Consumer Web Service Descriptor

- 1) Right click on the provider folder select New -> All choices. Developer opens the New wizard.
- 2) Click **Web Service Descriptor**, then click **Next**. The wizard displays the Web service descriptor panel.
- 3) Under **Create Web Service Descriptor as**, select **Consumer**.



The image shows a Windows-style dialog box titled "Web Service Descriptor". It contains three sections of radio button options. The first section, "Create Web service descriptor as", has "Consumer" selected. The second section, "Web service source", has "WSDL URL" selected. The third section, "Enforce WS-I Basic Profile 1.1 compliance", has "No" selected. At the bottom are five buttons: "Cancel", "<Back", "Next>", "Finish", and "Help".

Web Service Descriptor

Specify the following web service settings or accept the defaults and click Next.

Create Web service descriptor as

☐ Provider

☒ Consumer

Web service source

☐ Existing IS service(s)

☒ WSDL URL

☐ UDDI

Enforce WS-I Basic Profile 1.1 compliance

☐ Yes

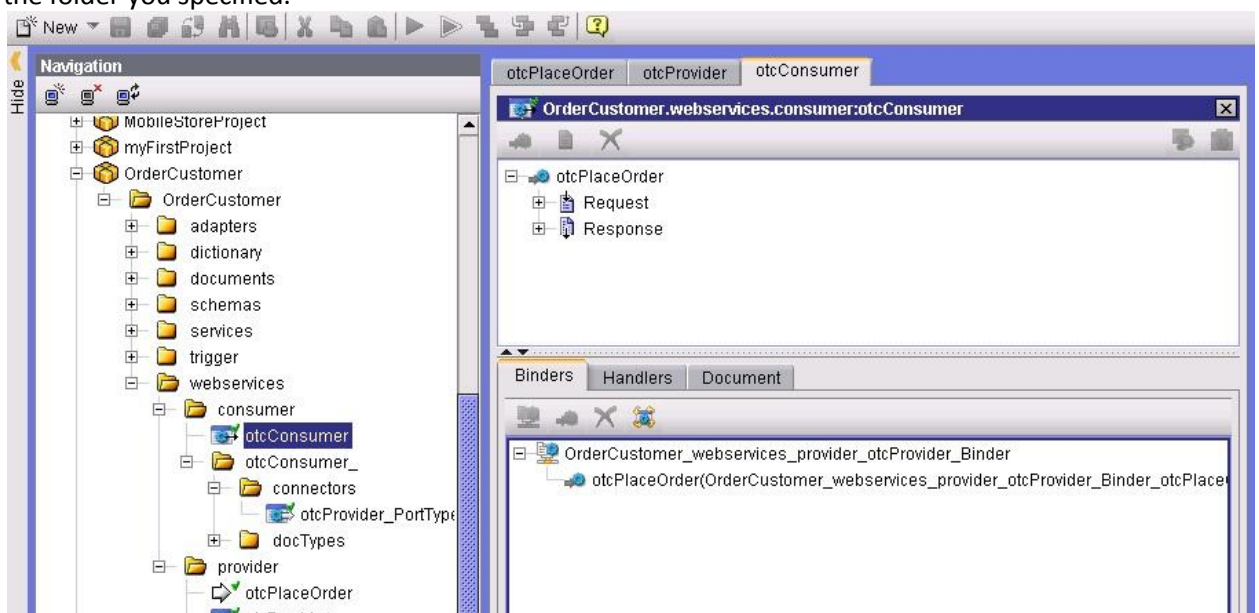
☒ No

Cancel <Back Next> Finish Help

- 4) If you selected **WSDL URL** under **Web Service Source**, Developer displays the New Web service descriptor from WSDL dialog box. Either type the URL for the document (it should begin with http:// or https://) or click to navigate to and select a WSDL document on your local file system.



- 5) Click **Finish**. Developer validates the WSDL document you selected, creates the Web service descriptor, the Web service connector(s), and other supporting IS elements and saves them to the folder you specified.



Testing the Connector

Use the connector in the service at consumer end flow service and set values for **user** and **pass** under **auth** document of Service In and map input and output in Pipeline.

