

Configuring a Data Quality SOAP Call Plan

This topic describes how to access a standard web service from a Data Quality (DQ) plan, which also includes a SOAP Call step. For more information on configuring DQ online services, see the How-to for *Creating, Testing, and Deploying a Data Quality Online Service*. For more information on configuring and using the SOAP Call step, refer to *DQ Tutorial 12.01 - SOAP Call*, which is included in iWay Data Quality Server (DQS).

This how-to includes the following components that are packaged in the *samples_soap.zip* archive:

- .IN_HELLO.csv.metaData Sample metadata file.
- JPSoapCallHello.plan Sample DQ plan file.
- IN_HELLO.csv Sample input CSV file.

Before accessing a standard web service from a DQ plan, ensure your web service is online and available.

This how-to includes the following topics:

- Creating a DQ Plan and Adding a SOAP Call Step
- Using a Text File Reader Step to Read the Input Name
- Using an Alter Format Step to Add Columns to Map the Response Output
- Configuring the SOAP Call Step
- Testing the SOAP Call
- Mapping the Output Columns
- Mapping an Input Field
- Running the SOAP Call Plan

Creating a DQ Plan and Adding a SOAP Call Step

Using iWay Data Quality Server (DQS), create a new DQ plan and add a SOAP Call step, as shown in the following image.



Using a Text File Reader Step to Read the Input Name

Once you create a new DQ plan, add and configure a Text File Reader step for your DQ plan that will read the *name* column from your sample input data.

Properties of Text File Reader (IN_HELLO)		
 Text File Reader Columns (1) 	Text File Reader	
 name:STRING Shadow Columns (0) 	🖲 General 🔵 Columns 😑 S	Shadow Columns 😑 Advanced
 Data Format Parameters Error Handling Strategy 	▼ General	
	Id:	IN_HELLO
	✓ Main	
	File Name*:	/11 SOA services/IN_HELLO.csv
	Encoding*:	ISO-8859-1

The following image shows the contents of a sample CSV document, which includes a name column with one row of data.

	name	
1	Bond, James Bond	

Using an Alter Format Step to Add Columns to Map the Response Output

An Alter Format step can be used to add columns to map the response output, as shown in the following image.

Properties of Alter Format (Alter Format)		
 Alter Format Added Columns (3) 	out_name:STRI	NG
 out_name:STRING SCORE:INTEGER ERROR:STRING Removed Columns (0) 	Name*: Type*:	out_name STRING

Configuring the SOAP Call Step

To configure the SOAP Call step:

1. Enter the WSDL URL (for example, <u>http://localhost:8888/Hello?wsdl</u>) in the corresponding field and click *Update*, as shown in the following image.

🛛 🔊 Soap Call 🔵 Name	Soap Call	<pre> XHL</pre>
😰 Attribi 🔵 Scorer	🝺 General 🍺 Output	Error Handling Advanced
 Data F Http R 	▼ General	
	Id:	Soap Call
	Url*: 🗳	Create
	Soap Action*: 🛛 😂	
	Soap Version*:	SOAP_1_1
		A
	Input Template*: 🛛	
		*
		۲
	→ Advanced	
	Namespaces:	list element
	WsdI Url:	http://localhost:8888/Hello?wsdl
		Update
	Comments (Hide)	
	Comments (<u>mue)</u>	

2. In the Update a Web Service Client dialog, select a service name from the Services list, as shown in the following image.

👍 Update a Web Service Client 📃 🔲 💌 🍽				
Select the web service to be used for this call.				
WSDL:	http://localhost:8888/Hello?wsdl	Browse,		
Services:				
Name	Soap Ver	rsion		
Hello	1.1			
?	< Back Next	> Finish Cancel		

This will interrogate the live service and return its available functions.

3. Click Next.

The Request XML template appears with sample data, as shown in the following image.

a Update a Web Service Client Set up the web service request message and how it maps to the input data. Request: <?xml version='1.0' encoding='UTF-8'?> <soapenv:Envelope xmlns:ns1="http://www.example.com/ws" xmlns:soapenv="http://sche</pre> <soapenv:Body> <ns1:Hello> <ns1:in> <ns1:src_full_name><prc_full_name</ns1:src_full_name> </ns1:in> </ns1:Hello> </soapenv:Body> </soapenv:Envelope>

You can hard code a value or map a parameter from the input file.

Testing the SOAP Call

To test the SOAP call:

1. In the Update a Web Service Client dialog, click *Invoke Service*, as shown in the following image.

Update a Web Serv	ice Client
Set the web service re	sponse which will be used for mapping the message to the data flow.
esponse:	
<pre>(?xml version='1 (soapenv:Envelop</pre>	.0' encoding='UTF-8'?> e xmlns:ns1="http://www.example.com/ws" xmlns:soapenv="http://s y> loResponse> :out> src full name
<td>1:out> lloResponse> dy> pe></td>	1:out> lloResponse> dy> pe>
efined namespaces:	
Prefix soapenv	URL http://schemas.xmlsoap.org/soap/envelope/
2 ns1	http://www.example.com/ws Delete
	*
(•

The Web Service Test dialog opens and displays the Request pane, as shown in the following image.

Å	9 Web Service Test
	Request:
	xml version='1.0' encoding='UTF-8'? <soapenv:envelope xmlns:ns1="http://www.example.com/ws" xmlns:soa<br=""><soapenv:body> <ns1:hello> <ns1:in> </ns1:in> </ns1:hello> </soapenv:body> </soapenv:envelope>
	۰ III ۲
	Send Request

2. Specify a value for the <*n1:src_full_name>* element (for example, type any name), and then click *Send Request*.

The response is returned, as shown in the following image.

(w))	
	Response:
<pre>>> www.example.com/ws" xmlns:soa</pre>	<pre><?xml version='1.0' encoding='UTF-8'?> <soap:Envelope xmlns:ns1="http://www.example.com/ws" xmlns:soap='</td></pre>
ond, James bond <td><pre></pre></td>	<pre></pre>
•	۲ III کې ا
Send Request Cancel Request	V Use the response data for response mapping

3. Click OK.

You are returned to the Update a Web Service Client dialog, as shown in the following image.

ê ., I	Jpdate a Web Servi	ce Client	
Se	the web service re	sponse which will be used for mapping the message to the data flow.	
Re	sponse:		
<:	<pre>?xml version='1. soap:Envelope xr <soap:body> <ns1:hellore: <ns1:out> </ns1:out> </ns1:hellore: </soap:body></pre>	<pre>.0' encoding='UTF-8'?> nlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:ns1="http: sponse> _full_name>Hello Bond, James bond ! esponse></pre>	Invoke Service Build Message
<	/soap:Envelope>	* 4 III	
De	fined namespaces:	lini	
-	Prelix	bttp://chemas.vm/coap.org/coap./epu/opa/	Extract from Response
2	ns1	http://www.example.com/ws	Delete
3	soapenv	http://schemas.xmlsoap.org/soap/envelope/	
-		× 1 4	
(*	?)	< Back Next > Fini	sh Cancel

4. Click Next.

Mapping the Output Columns

With the response now displayed, you must specify where it will go in your output. To map the output columns:

1. Select the response and navigate to the required field (for example, *src_full_name*), as shown in the following image.

👍 Update a Web	Service Client	
Set up how the	web service response will be mapped to the data flow.	
Root XML path:	/soapenv:Envelope/soapenv:Body/ns1:HelloResponse	
XML tree:		
▲ ns1:HelloRe ▲ ns1:out ns1:s	sponse rc_full_name = Hello src_full_name !	Add Mapping Auto Map
Mappings:		
Column Name	XPath	Delete Mapping Up

2. Click Add Mapping.

The XPath identifying the element that will be mapped into the output column is automatically inserted. For example:

/ns1:out/ns1:src_full_name

👍 Update a Web Serv	ice Client	
Set up how the web	ervice response will be mapped to the data flow.	
Root XML path: /soa	penv:Envelope/soapenv:Body/ns1:HelloResponse	
XML tree:		
 ns1:HelloRespon ns1:out ns1:src_ft 	se II_name = Hello Bond, James Bond !	Add Mapping Auto Map
Mappings:		
Column Name 1 src_full_name *	XPath ns1:out/ns1:src_full_name	Delete Mapping Up

3. Change the output Column Name (for example, *out_name*), and then click *Finish*.

Mappings:					
Column Name	XPath				
1 out_name	ns1:out/ns1:src_full_name				
*					

The Select or Create Server dialog opens, as shown in the following image.

	Select or Create Server	er	
	Select or Create Serv		
	URL has to be defined i	n a server.	
8	HELLO1		
	Create new server		
	Implementation:	Generic	~
	Name:	HELLO11	
	URL:	http://localhost:8888/Hello	
	User;		
	Password:		
	?		OK Cancel

4. Select *Use existing server* with the default value selected, and then click *OK*.

Mapping an Input Field

The configuration of the SOAP call plan is basically complete. However, you probably would like to have the option of changing the input every time you run the plan instead of reusing and resending the same hard-coded value.

Soap Call					
General	Output	Error Handling Advanced			
▼ Genera	i i				
Id:		Soap Call 2			
Url*:		HELLO1			
Soap A	Action*:	Hello			
Soap V	/ersion*:	SOAP_1_1			
Input Template*:		<pre><?xml version='1.0' encoding='UTF-8'?> <soapenv:Envelope xmlns:ns1="http://www.example.com/ws" xmlns:soapenv="http://scher</td></pre>			
- Advanc	ed				
Name	spaces:	list element			
WsdI U	Jrl:	http://localhost:8888/Hello?wsdl			

In the request template, you can use the {in_column} notation to specify a dynamic value. For example, the input file has a single column called *name*, as shown in the following image.

Soap Version*:	SOAP_1_1	ſ
Input Template*:	<pre><?xml version='1.0' encoding='UTF-8'?> <soapenv:Envelope xmlns:ns1="http://www.example.com/ws" xmlns:soapenv="http://schemas.xml</td><td></td></pre>	

The value of this field will be mapped into the request input.

Running the SOAP Call Plan

Before you run the SOAP call plan, it is recommended that you create a new Score column and Explanation column, as shown in the following image.

Soap Call							γų×
😑 Gener	ral 😑 Output 😑 Error Handlin	g 😑 Adva	nced				
▼ Gene	eral						
Sco	orer*:						
Sci	ore Column: SCORE						Create
Exp	planation Column: ERROR	Score	Explain	Explain As	Explanation Colu	Description	Create
1	WLA_NO_ROOT_EL_FOUND	1000	V	WLA_NO_ROOT_EL_FOUND			
2	WLA_SOAP_FAULT	1000	V	WLA_SOAP_FAULT			
3	WLA_TIMEOUT	1000	1	WLA_TIMEOUT			
4	WLA_UNKNOWN_RESPONSE	1000	1	WLA_UNKNOWN_RESPONSE			
•							+
						Check All	Jncheck All

- 1. In the Error Handling tab of the SOAP Call step, create a new Score column called *SCORE* and a new Explanation Column called *ERROR*. Click the *Create* button to add these columns if they have not already been added in the Alter Format step.
- 2. In the Advanced tab, set arbitrary scores so you can add logic to test for errors (for example, if a timeout occurs), as shown in the following image.

Soap Call						
😑 General 😑 Output 👄 Error Handling 👄 Advanced						
▼ General						
Data Format Parameters*:	composite element					
Timeout Ms*:	1000 <mark>0</mark>					
Encoding*:	utf-8					
Delay Between Requests Ms*:						
Http Request Headers:	list element					
▼ Debug						
Debug Response File Name:						
Debug Request File Name:						
- Other						

- 3. Increase the default timeout from 1 second (1,000 ms) to 10 seconds (10,000 ms), and then click *OK*.
- 4. Run the SOAP call plan.

The following output should be returned to the test plan. The input is concatenated with a greeting, as shown in the following image.

	name	out_name	SCORE	ERROR
1	Bond, James Bond	Hello Bond, James Bond !		

Any errors would be reflected in the SCORE and ERROR columns.