

Cleo Integration Cloud™ | Clarify

Chapter | **Web Services Provider REST**

Overview | This topic demonstrates how to create a Web Service Consumer and related Clarify objects that requests/processes information made available by the Web Service Provider as detailed in the *Web Services Provider REST* demo.

In that demo, a few Clarify objects were created to process requests for purchase order information from Consumers.

In this demo, a few Clarify objects are created to specify a purchase order number for which to request information, and to process the Provider's response message.

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Scenario

In the Provider's database, the *HEADER* table is populated as here.

PO_NUMBER	DATE	CONTACTNAME	PHONE	EMAIL	LINES	QUANTITY	COST	PROCESSED	DATEPROCESSED
BestValue_22	1/1/2013	BOB SMITH	(555) 555-5555	BSMITH@BVGS.COM	2	1100	3875 U		(null)
GoodStuff_303	1/2/2013	SUSAN JOHNSON	(555) 555-6666	SJOHNSON@BVGS.COM	3	190	2380 U		(null)
FV-2013_0047	1/3/2013	BOB SMITH	(555) 555-5555	BSMITH@BVGS.COM	1	1	375 U		(null)

This demo shows how to request information about the *BestValue_22* purchase order. That information is returned in a JSON file.

The request must be properly formatted. That format consists of the *Internal Service URL* or the *Internal SSL Service URL*, followed by a question mark and one or more Parameter/Value pairs. In this demo, the *Internal SSL Service URL* is identified in the Web Service Consumer object, while the lone Parameter/Value pair is specified in the Business Process.

Resources

The resources needed to accomplish this transformation are meant to provide a basic understanding of how Clarify objects work together. All resources are created and defined on the *Clarify Workbench* perspective's *Project Explorer* view.

- Project [**com.training.demo09.restconsumer**] – A Project is a directory within the Workspace.
 - Package [**com.training.demo09.restconsumer**] – A Package is a directory within a Project.
 - File Adapter [**WriteFA**] – This File Adapter sends the response message's data out of Clarify.
 - Web Service Consumer [**OrdersWSC**] – This Web Service Consumer object identifies the Provider's service.
 - Business Process [**OrdersResponseBPS**] – This Business Process assembles the request message, connects to the Web Service Provider, and writes the response message to a flat file.
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Project: **com.training.demo09.restconsumer**

Select *File* | *New* | *Clarify Project*.

Type **com.training.demo09.restconsumer** in the *Project name* field.

Click **Finish**.

When Clarify creates a Project, it automatically creates a Package named the same as the Project.

File Adapter: WriteFA

Select the Package.

Select *File* | *New* | *File Adapter*.

Choose *Write* and click **Next**.

Type **WriteFA** in the *Name* field.

Click **Finish**. The object is created, and its editor appears.

Click in the *File Path* field. Click the **Browse For Folder** button, locate/select the *C:\Clarify_demos\demo09\out* folder, and click **OK**.

Type **OrdersResponse.txt** in the *File name* field.

Select *Generate Unique Name* from the *Collision Action* field's dropdown.

Save the object and close the editor.

Web Service Consumer: OrdersWSC

Select the Package.

Select *File* / *New* / *Web Service Consumer*.

Choose *REST* and click **Next**.

Type **OrdersWSC** in the *Name* field.

Click **Finish**. The object is created, and its editor appears.

Type **http://localhost:8081/OrdersWSPRest** in the *URL* field, as this is the Provider's *Internal Service URL* value.

Save the object and close the editor.

Business Process: OrdersResponseBPS

Select the Package.

Select *File | New | Business Process*.

Choose *No Template* and click **Next**.

Type **OrdersResponseBPS** in the *Name* field.

Click **Finish**. The object is created, and its editor appears.

This Business Process requires three tasks to (1) assemble the request message, (2) connect to the Web Service Provider, and (3) write the response message.

Task 1: Assemble the request message

In this example, the Parameter/Value pair identifying the purchase order number for which information is requested is hard-wired. However, several alternate Clarify methods to make this Business Process more flexible are available. Also, some Providers require multiple pairs, but this demo requires only one.

To create this task, click the **Add** button in the *Script* section. Click that step's *Click to select task* entry. In the list of available tasks, type **prop** in the *Filter* field to restrict the display to tasks containing that text. Double-click *SetProperty* to select that Clarify-supplied task.

To define this task, click the *Properties* view tab.

This task has three parameters; all are mandatory.

Click in the *Properties File* parameter's field. This parameter represents the Parameter/Value pair (or, Properties) to be passed to the Provider. In the list of available parameters and variables, click **New Variable**. Select *Properties* as the type for this variable. *newVariable* appears in the *Properties* view and in the *Variables* section, with its name pre-selected, ready for a name change. Type **pair1** and press **Enter** to rename this variable. This new name is reflected in the *Properties* view.

Click in the *Property Name* parameter's field. This parameter represents the property for which to get the value. In the list of available parameters and variables, click the *String Literal* tab, type **PO_NUMBER**, and press **Enter**.

Click in the *Value* parameter's field. This parameter represents the purchase order number for which information is requested. In the list of available parameters and variables, click **New Variable**. *newVariable* appears in the *Properties* view and in the *Variables* section, with its name pre-selected, ready for a name change. Type **requestPONUMBER** and press **Enter** to rename this variable. This new name is reflected in the *Properties* view. Click in this new variable's *Initial Value* field, type **BestValue_22**, and press **Enter**.

Task 2: Connect to the Web Service Provider

Clarify needs to connect to the Web Service Provider.

To create this task, click the **Add** button in the *Script* section. Click that step's *Click to select task* entry. In the list of available tasks, type **wsc** in the *Filter* field to restrict the display to tasks containing that text. Double-click *OrdersWSC* to select that user-defined object.

To define this task, click the *Properties* view tab.

This task has several parameters, but only two must be defined here.

Click in the *Request Parameters* parameter's field. This parameter represents the Parameter/Value pair of the request. In the list of available parameters and variables, double-click the previously-defined *pair1* variable.

Click in the *Response Body* parameter's field. This parameter represents the content of the response message. In the list of available parameters and variables, click **New Variable**. *newVariable* appears in the *Properties* view and in the *Variables* section, with its name pre-selected, ready for a name change. Type **responseMESSAGE** and press **Enter** to rename this variable. This new name is reflected in the *Properties* view.

Task 3: Write the response message

Clarify outputs the response message to the local file system.

To create this task, click the **Add** button in the *Script* section. Click that step's *Click to select task* entry. In the list of available tasks, type **write** in the *Filter* field to restrict the display to tasks containing that text. Double-click *WriteFA* to select that user-defined object.

To define this task, click the *Properties* view tab.

This task has 1 parameter.

Click in the *storageNodes* parameter's field. This parameter represents the AdapterPayload (the data to be written to the target file). In the list of available parameters and variables, double-click the previously-defined *responseMESSAGE* variable, as the data processed by the second task is the data to be written.

Save the object and close the editor.

Deploy/Launch

The Web Service Consumer can perform its duty only if its Business Process is deployed and then launched.

Deploy

Access *Admin Console | Projects*.

In the *Workspace* section, expand the *com.training.demo09.restconsumer* Project, and then expand its *Package* node. Drag the *OrdersResponseBPS* object to the *Selected Scenarios* section.

Start the *Local Test* server by ensuring that it is displayed in the *Server Environment* dropdown and then click the **Start** button. The *Server Projects* section shows all installed objects.

When fully-expanded, the *Server Projects* section shows all installed objects.

Launch

A Web Service Consumer can only connect to active Provider services. As this demo consumes the service provided by the Web Service Provider as detailed in the *Web Services Provider REST* demo, ensure that that service is deployed and active.

Access *Admin Console | Business Process*.

Select *OrdersResponseBPS* and click the **Launch** button.

The response message for the *BestValue_22* purchase order is written to a file in the *C:\Clarify_demos\demo09\out* folder. That file's contents appear as below.
