

## The WorldPay payment gateway and 4D Business Kit 2.2

### Useful informations

The Integration method chosen by 4D Business Kit to work with the WorldPay payment gateway is called "Select Junior". Select Junior is a HTML integration method.

Here is the way this integration method is described by WorldPay

(<https://support.worldpay.com/integrations/index.html>):

*Select Junior uses HTML forms to send information about each purchase to WorldPay. To integrate with this option you will need to have knowledge of HTML, including forms. If you wish to receive information back from WorldPay during the transaction, you will also find it useful to have an understanding of server-side capture scripts.*

The following documentation describes a way to do both : how to send information to WorldPay with a HTML form and how to receive information from WorldPay with a server-side script hosted by 4D Business Kit.

Information about the "Select Junior" integration method:

<https://support.worldpay.com/integrations/jnr/index.html>

You can download the " Select Junior Integration Guide " at this address. Most of the following implementation has been done using this guide (italic sentences come from this guide).

Other useful links:

WorldPay Administration Server Link:

<https://select.worldpay.com/wcc/admin>

WorldPay knowledgebase:

<https://support.worldpay.com/admin/index.html>

### Part I : How to send information to WorldPay with a HTML form

According to the Select Junior Integration Guide:

*"When a shopper is ready to pay for their goods, your shopping site should present them with a button or link that, when clicked, submits a HTML form, or "purchase token" describing the purchase to the WorldPay secure server".*

4D Business Kit provides an example page called "payment\_WorldPay.htm" (NB: This page is linked to the "TEST" shop).

This page describes a way to build this html form.

**Content of the "payment\_WorldPay.htm" html page:**

```
<!--#4DBK//Currency-->
<!--#4DBKVarSet/VT02=4DBKField/CdCurrency-->

<!--#4DBK//Amount-->
<!--#4DBKVarSet/VT01=4DBKField/PrOrderINV.4DBKVar/VT02,#####0.00-->

<!--#4DBK//WorldPay Installation ID-->
<!--#4DBKVarSet/VT20="86893"-->

<!--#4DBK//cartID-->
<!--#4DBKOrderCodeNew-->
<!--#4DBKVarSet/VT21=4DBKOrderCode-->

<!--#4DBK//Custom CallBack Parameters-->
<!--#4DBKVarSet/VT25=4DBKField/SessionID-->

<!--#4DBK//Customer Address-->
<!--#4DBKVarSet/VT04=4DBKField/CusStreetInvo-->
<!--#4DBKVarSet/VT04 +=&CR;-->
<!--#4DBKVarSet/VT04 += 4DBKField/CusZIPInvo-->
<!--#4DBKVarSet/VT04 +=&SPACE;-->
<!--#4DBKVarSet/VT04 += 4DBKField/CusCityInvo-->
<!--#4DBKVarSet/VT04 +=&CR;-->
<!--#4DBKVarSet/VT04 += 4DBKField/CusStateInvo-->
<!--#4DBKVarSet/VT04 +=&CR;-->
<!--#4DBKVarSet/VT04 += 4DBKField/CusCountryInvo-->

<!--#4DBK//MD5 Security Option-->
<!--#4DBKVarSet/VT30=secret-->
<!--#4DBKVarSet/VT30 +=:-->
<!--#4DBKVarSet/VT30 += 4DBKVar/VT01-->
<!--#4DBKVarSet/VT30 +=:-->
<!--#4DBKVarSet/VT30 += 4DBKVar/VT02-->
<!--#4DBKVarSet/VT30 +=:-->
<!--#4DBKVarSet/VT30 += 4DBKVar/VT21-->

<!--#4DBKVarSet/VT31=4DBKMD5/4DBKVar/VT30-->

<FORM action="https://select.worldpay.com/wcc/purchase" METHOD="POST">
  <input type=hidden name="instId" value="<!--#4DBKVar/VT20-->">
  <input type=hidden name="cartId" value="<!--#4DBKVar/VT21-->">
  <input type=hidden name="amount" value="<!--#4DBKVar/VT01-->">
  <input type=hidden name="currency" value="<!--#4DBKVar/VT02-->">

  <input type=hidden name="testMode" value="100">

  <input type="hidden" name="MC_custom" value="<!--#4DBKVar/VT25-->">

  <input type=hidden name="desc" value="<!--#4DBKField/Label-->">
  <input type=hidden name="name" value="<!--#4DBKField/CusLabelInvo-->">
  <input type=hidden name="address" value="<!--#4DBKVar/VT04-->">
  <input type=hidden name="postcode" value="<!--#4DBKField/CusZIPInvo-->">
  <input type=hidden name="country" value="<!--#4DBKField/CusCountryInvo,ISOCD2-->">
  <input type=hidden name="tel" value="<!--#4DBKField/CusPhone-->">
  <input type=hidden name="email" value="<!--#4DBKField/CusEmail-->">

  <input type=hidden name="signatureFields" value="amount:currency:cartId">
  <input type=hidden name="signature" value="<!--#4DBKVar/VT31-->">

  <input type="submit" value="Switch to payment gateway">
</FORM>
```

## Explanations about the hidden fields used in this form:

Some parameters are mandatory for the payment gateway, they are:

- instID : Your WorldPay Installation ID.
- currency : The currency of the purchase.
- desc : A description of the purchase.
- cartId : A reference you assign to help you identify the purchase.
- amount : The total cost of the purchase.

We need to define a custom field called "MC\_custom" in order to store the client's session ID. This way, the gateway will send us back this session ID with the result of the transaction and we will be able to acknowledge the payment.

Note about Custom parameters in the Select Junior Integration Guide:

*Custom parameters that you want to return to yourself in a callback should have names starting with "M\_" while fields to be used in the shopper's page should start with "C\_". To use a field for both, use a prefix of "MC\_" or "CM\_".*

## Security option: MD5 and Select Junior

*This feature enables select Junior customers to add an encrypted signature to each purchase form they send to WorldPay, using the MD5 message-digest algorithm. This protects the purchase information from unauthorised tampering.*

In the configuration settings for the installation on the Customer Management System, a secret string has been set in the *MD5 secret for transactions* box.

Note: if you have specified a secret in CMS, you must sign all transactions correctly otherwise they will be rejected. If you wish to disable the MD5 functionality at any point, you should reset the value of the *MD5 secret for transactions* box as blank.

According to the Select Junior Integration Guide, here are the steps to follow:

- Add a new parameter named *signatureFields* to the purchase form. This parameter should list the fields you want to include in the encrypted signature as a colon separated list.
- Construct a string consisting of the secret and the values of the parameters you want to encrypt.
- Calculate n MD5 signature from this string and include the signature in the purchase form. This digital signature should be included in the purchase form as the value of a parameter name *signature*.

## Part II : How to receive information back from WorldPay

### The Customer Management System (CMS)

Some settings have to be done in the installation. Those settings are available through the Customer Management System.

Installations for 4D Deutschland GmbH - Company ID 50620			
Installation ID	File Management	Payment Page Editor	Configuration options
86771 - test account (Select Junior)			
86893 (Select Junior)			

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[shopper@worldpay.com](mailto:shopper@worldpay.com)

## Configuration settings for the installation :

WorldPay		ADMINISTRATION SERVER	
		SELECT LANGUAGE	English
Configuration Options			
Installation ID:	86893		
Company ID:	50620		
Company Name:	4D Deutschland GmbH		
Description	<input type="text"/>		
Customer description (for payment pages)	<input type="text"/>		
Integration type	Select Junior		
Use 3D Secure Authentication?	no		
Use Mastercard SPA?	no		
Merchant's shop URL	<input type="text" value="http://194.98.194.112"/>		
Store-builder used	<input type="text" value="Other - please specify below"/>	Use default:	<input type="checkbox"/>
store-builder: if other - please specify	<input type="text" value="4D Business Kit"/>	Use default:	<input type="checkbox"/>
Callback URL	<input type="text" value="http://194.98.194.112/4daction/4DE"/>	Use default:	<input type="checkbox"/>
Callback enabled?	<input checked="" type="checkbox"/>	Use default:	<input type="checkbox"/>
FuturePay callback Enabled? (Requires standard Callback enabled)	<input type="checkbox"/>	Use default:	<input type="checkbox"/>
Use callback response?	<input type="checkbox"/>	Use default:	<input type="checkbox"/>
Callback suspended?	<input type="checkbox"/>	Use default:	<input type="checkbox"/>
Callback failure count	<input type="text" value="0"/>		
Callback Failure Alert email address	<input type="text" value="vincentlaluque@4d.fr"/>	Use default:	<input type="checkbox"/>
FuturePay daily reports?	<input type="checkbox"/>	Use default:	<input type="checkbox"/>
Info servlet password	<input type="text"/>	Confirm:	<input type="text"/> Use default: <input type="checkbox"/>
Callback password	<input type="text"/>	Confirm:	<input type="text"/> Use default: <input type="checkbox"/>
MD5 secret for transactions	<input type="text" value="••••••••"/>	Confirm:	<input type="text" value="••••••••"/> Use default: <input type="checkbox"/>

The Administration Server interface allows to set a call-back URL. This URL will be used by the payment gateway to warn 4D Business Kit of the result of a transaction.

The callback URL used to send the result of the transaction is:

[http://194.98.194.112/4daction/4DBKHttpPostCallBack/MC\\_custom/payment\\_WorldPay\\_cb.htm/1](http://194.98.194.112/4daction/4DBKHttpPostCallBack/MC_custom/payment_WorldPay_cb.htm/1)

About parameters used with the 4DBKHttpPostCallBack entry point:

- « MC\_Custom » : this is the name of the field posted by the payment gateway in which the session ID is stored.
- « payment\_WorldPay\_cb.htm » : this is the name of the script that will be triggered by the 4DBKHttpPostCallBack entry point.

- « 1 » : this parameter means that 4D Business Kit will create a debug file associated to the execution of the script. This file will be found in a subfolder "Gateway" of the "Logs" folder of the current site.

### Important point:

The default POST sent by the WorldPay payment gateway is not fully compatible with 4D Business Kit because two fields are always default added in the callback query string. For the POST to be fully compatible with 4D Business Kit, a request has to be done to WorldPay Technical Support ([support@worldpay.com](mailto:support@worldpay.com)).

An explanation is given in the Select Junior Integration Guide :

*To turn off the insertion of msgType and installation within the callback query string, contact World Pay Technical Support (quoting the installation Id) to request "Use literal callback?" is enabled.*

### **Content of the script " payment\_WorldPay\_cb.htm " that will be executed with the callback**

```
<!--#4DBKStoreSet/TEST-->

<!--#4DBKVarSet/VT10=4DBKHttpPostParms/transStatus-->
transStatus : <!--#4DBKVar/VT10-->
<!--#4DBKVarSet/VT11=4DBKHttpPostParms/instId-->
instId : <!--#4DBKVar/VT11-->
<!--#4DBKVarSet/VT12=4DBKHttpPostParms/transTime-->
transTime : <!--#4DBKVar/VT12-->
<!--#4DBKVarSet/VT13=4DBKHttpPostParms/country-->
country : <!--#4DBKVar/VT13-->
<!--#4DBKVarSet/VT14=4DBKHttpPostParms/amount-->
amount : <!--#4DBKVar/VT14-->
<!--#4DBKVarSet/VT15=4DBKHttpPostParms/installation-->
installation : <!--#4DBKVar/VT15-->

<!--#4DBKIf ("4DBKVar/VT10"="Y")-->
// Validate order
<!--#4DBKOrderValidate-->
// Empty basket (as this is not done by default in the TEST shop)
<!--#4DBKOrderClear-->
<!--#4DBKEndIf-->
// An acknowledgement has to be sent to the gateway
<!--#4DBKHttpPostResponse/OK-->
```

### Explanations about what is done in this script file:

First, we use the 4DBKHttpPostParms command to get the value of some of the fields send by the payment gateway through its POST.

Thanks to the Select Junior Integration Guide, we know the name of every fields sent back by the payment Gateway (this can be found in the Appendix A of this guide : " WorldPay parameters: Payment Response " ).

Here we are checking the value of the " transStatus" parameter which can be "Y" for a successful payment transaction and "C" for a cancelled payment. According to this value, we will validate or unvalidate the order.

Note that we use also the 4DBKVar command in order to have the values of these fields written in the debug file that will be created in the "Gateway" subfolder (juste in case of). Another option could be to use a 4DBKMail command in this script file to send thoses values by email.

## Shopper's Response Page

Once a transaction has been processed, one of two response page is returned to the shopper: a successful transaction page or a cancelled transaction page. By default, WorldPay sends out a file called resultY.html for a successful transaction and resultC.html for a cancelled transaction.

You can upload your own versions of the resultY.html and resultC.html files to the WorldPay server to replace the default WorldPay pages.

This upload can be done through the Customer Management System:

The screenshot shows the WorldPay Administration Server interface. At the top, there is a logo for WorldPay and the text 'ADMINISTRATION SERVER'. Below this, there is a 'SELECT LANGUAGE' dropdown menu set to 'English'. The main section is titled 'File Manager' and contains an 'Upload file:' section with a text input field and a 'Parcourir...' button. Below this is a 'Name of file at WorldPay:' section with another text input field. A note states: 'Only letters, numbers, dot (.), minus (-) and underscore (\_) are allowed. If you don't give a filename here, we will try to use the same name as the original file, but with some types of browser this is not possible, so we recommend you always complete this field. Any illegal character will be replaced by \'\_\'. There is an 'UPLOAD' button with a right arrow icon. Below this is a section titled 'Files for Installation 86893' with a note: 'Click on the filename to view the file. It will be opened in another browser window. To delete a file, check the box and click the 'DELETE FILE(S)' button. You will be taken to another page to confirm the deletion.' Below this is a table with the following columns: 'Filename', 'Size', 'Last Modified', and 'Check to delete'. The table contains two rows: one for 'resultC.html' (503 Bytes, Thu Dec 18 14:16:09 GMT+00:00 2003) and one for 'resultY.html' (632 Bytes, Thu Dec 18 14:15:51 GMT+00:00 2003). There are checkboxes in the 'Check to delete' column for both files. At the bottom right, there is a 'DELETE FILE(S)' button with a right arrow icon.

Below is a description of the content of these HTML pages.

Note that we use the "MC\_Custom" field that was previously defined in our HTML form. This field stores the customer Session ID. 4D Business Kit will be able to identify the customer when he will go back to the shop.

### resultY.html page

```
<html>
<head>
<title>Thank you for your payment</title>
</head>
<WPDISPLAY FILE=header.html
<h1>My Company Ltd.</h1>
<WPDISPLAY ITEM=name>, thank you for your payment of
<WPDISPLAY ITEM=amountString> for <WPDISPLAY ITEM=desc>. Your goods will be
shipped to you within three working days.<br><br>
<a href="http://194.98.194.112/TEST_Site/WebPagesUS/home.htm<WPDISPLAY
ITEM=MC_custom">>Click here to return to my homepage</a>
<WPDISPLAY ITEM=banner>
<WPDISPLAY FILE=footer.html">
</html>
```

***resultC.html page***

```
<html>
<head>
<title>Payment Cancelled</title>
</head>
<WPDISPLAY FILE=header.html>
<h1>My Company Ltd.</h1>
<br>Your order has been cancelled<br><br>
<a href="http://194.98.194.112/TEST_Site/WebPagesUS/home.htm<WPDISPLAY
ITEM=MC_custom">>Click here to return to my homepage</a>
<WPDISPLAY ITEM=banner>
<WPDISPLAY FILE=footer.html">
</html>
```