SAP Commerce 1905 Connector R7.0 - B2B Technical Implementation Guide

Reader's guide

This technical implementation guide will cover the use of Worldpay as a payment provider in a B2B context.

B2B Technical Implementation Guide

The Worldpay B2B AddOn supports a payment scheme using Worldpay client-side encryption (CSE) and tokenizing of cards.

New B2B Accelerator Checkout Flow

The Worldpay B2B AddOn implements some changes to the OOB Hybris B2B checkout flow, changes in business processes in handling orders and finally additional request for the security code on card payment.
For reference see the OOB B2B checkout and order process is described here: B2B Checkout and Order Process

Card Payment flow

The figure below shows the different steps on the checkout page in the responsive UI experience. It is possible to checkout using card or account payment. The AddOn only changes the semantic of the card payment flow, the account payment is left untouched.

As shown in the figure above one of the main difference is when to execute payment operations. In the OOB solution, all card payments are initiated with an authorisation after the card details are entered. This is also the case for replenishment orders that are scheduled for later. The AddOn handles this by moving the authorisation of the payment transaction until the order scheme is known and selected after the final review of the order.

- If the customer is buying now by placing the order then the payment transaction is authorised.
- If the customer schedules a replenishment, the authorisation is handled by the generated Hybris cronjob, that is triggered according to the schedule. This authorisation is handled by a separate merchant configuration.

Handling of 3D Secure

The Worldpay B2B AddOn handles 3D secure in the B2B card payment flows. The supported scenario is:

1. Place an order immediately from the order review step on the checkout page. The "buy now" scenario.

The unsupported scenario is:

1. A scheduled replenishment order created from a cronjob (no customer is present here for the 3D secure challenge).

The sequence diagram below shows the interactions between the customer's browser, a Hybris installation with the Worldpay B2B AddOn installed, Worldpay and the card issuer.

The 3D secure flow is started in the WorldpaySummeryCheckoutController /placeOrder endpoint in the buy now scenario. The result is a redirect to a page that auto submits a form to the card issuer. This form is implemented in the jsp page autoSubmit3DSecure.jsp. Besides the data needed by the card issuer, the form contains a return URL where the flow will continue after 3D secure.
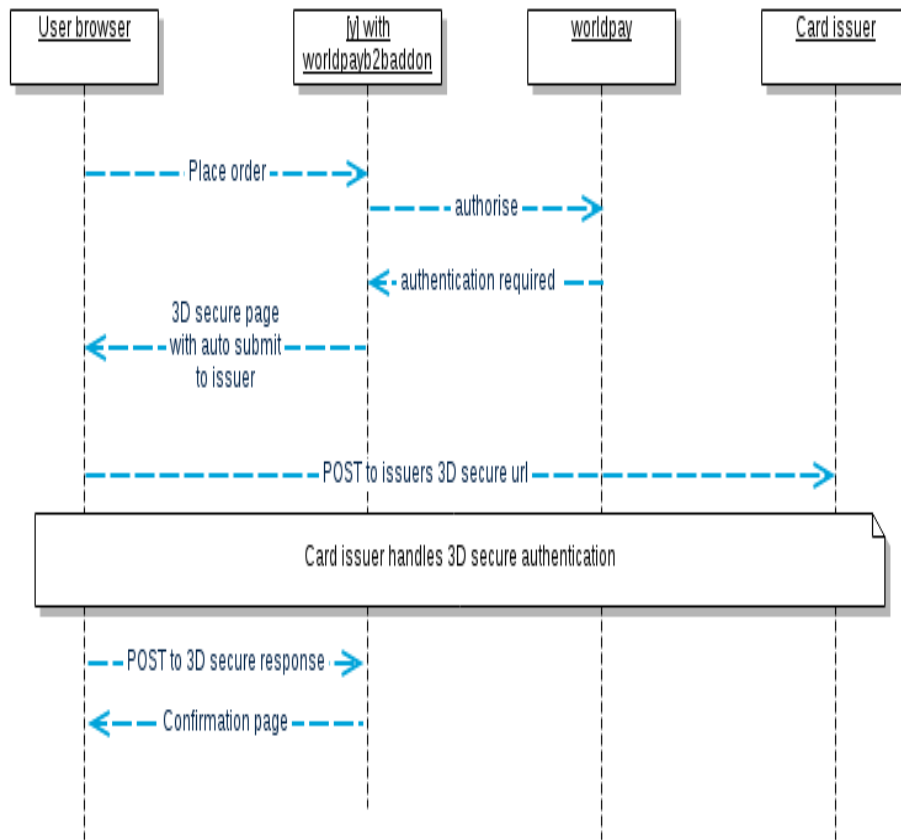
Requesting Security Code (CVV) on card payment

The Worldpay B2B AddOn requests security code from the customer in the following scenarios on credit card payment:

1. When entering card details.
2. When using a saved card the security code must always be entered on the final review step on the checkout page. This happens before the customer decides between: placing the order now or scheduling a replenishment order.
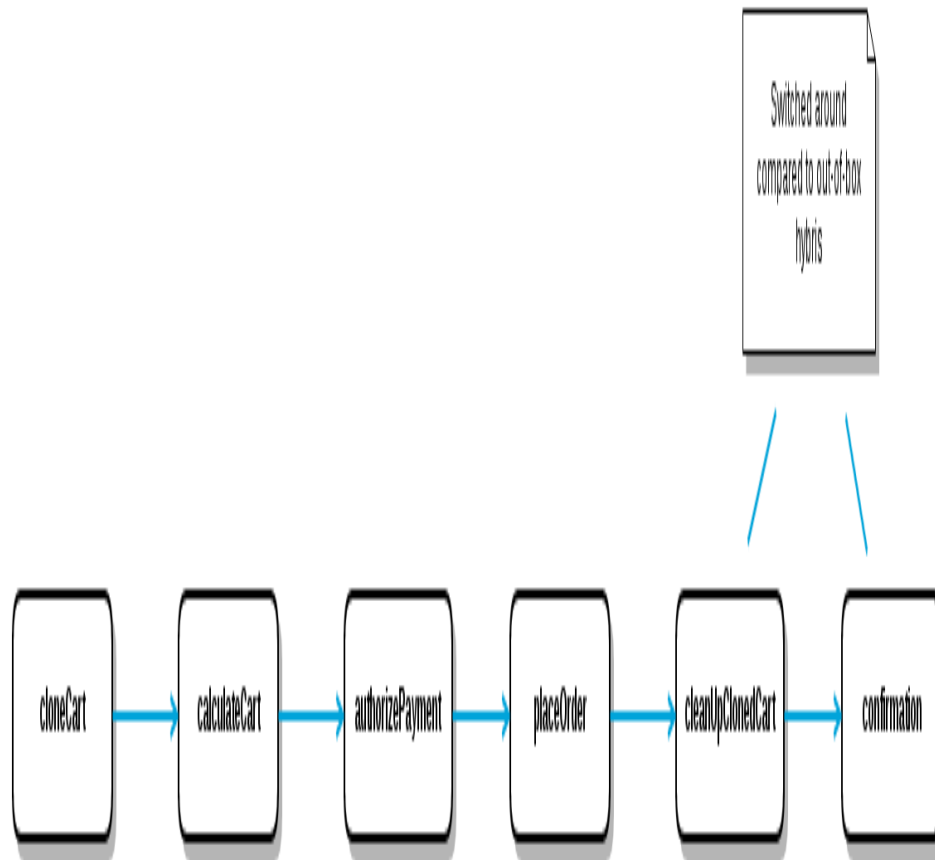
There is no customer present when replenishment orders are authorised within the generated cronjob, hence it is not possible to supply a security code in this scenario.

There is no validation of the security code within the AddOn, this is handled entirely by Worldpay.

Business processes

Replenishment business flow

When the "CartToOrderCronJob" runs in order to generate a new Order from the replenishment Cart, it triggers a business process: replenishmentOrderProcess.xml. In the Worldpay B2B AddOn this process has been customized in a worldpayReplenishmentOrderProcess.xml in order to fix a known concurrency issue in the OOB process when including the assistedservicefacades extension in the setup. The only change in the process flow is to remove the newly cloned Cart before executing the confirmationAction which triggers a new business process to send a confirmation mail to the customer.

Switched around compared to out-of-box hybris

cloneCart → calculateCart → authorizePayment → placeOrder → cleanUpClonedCart → confirmation

Two replenishment actions have been customized in the Worldpay B2B AddOn:

cloneCartAction - customized in WorldpayCloneCartAction:

The out-of-box CloneCartAction creates a new Cart from the cartToOrderCronJob and uses a single KeyGenerator to set both the code and guid of the newly created Cart. The Worldpay B2B AddOn uses the code of a Cart to generate a Worldpay order-code and for this to work, the code of the Cart needs to be on the normal orderCodeGenerator form. The customized WorldpayCloneCartAction enables specifying separate KeyGenerator for the code and guid.

authorizePaymentAction - customized in WorldpayAuthorizePaymentAction:

The WorldpayAuthorizePaymentAction uses the WorldpayDirectOrderFacade to authorize the payment against Worldpay. The authorize is done using a special replenishment Merchant (see SAP Commerce 2011 Connector R1.0 - Implementation Guide for configuration)