WORLDLINE

For SAP Commerce Cloud & SAP Commerce

IMPLEMENATION GUIDE - SAFERPAY PLUGIN

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ABOUT DOCUMENT

Version No.	Prepared by	Version Changes	Date
V1.0	Christeena John, PIT Solutions Pvt Ltd	Prepared initial document version	17.08.2020
V1.1	Amaljanan, PIT Solutions Pvt Ltd	Logo updated	29.11.2021
V1.2	Amaljanan K & Sanjay Kumar S, PIT Solutions Pvt Ltd	Saferpay API upgradation from 1.19 to 1.25	14.07.2022
V1.3	Sanjay Kumar S & Mathew Roy, PIT Solutions Pvt Ltd	Saferpay API upgradation from 1.26 to 1.34	06-10-2023

1.0 Introduction

The purpose of providing an extension for Saferpay Payment Solution for SAP Commerce Cloud is to aid the integration of Saferpay into a SAP Commerce implementation. SAP Commerce Store accelerator will use the newly developed extension to interact with Saferpay. The extension will transform the SAP Commerce cart model to Saferpay data structures. The payment result from Saferpay is captured in SAP Commerce and relevant messages if any are displayed to the storefront.

The Saferpay Payment Solution for SAP Commerce Cloud extension provides a configurable spring component which helps shorten the implementation cycle and reduce system development, testing efforts and maintenance costs for payment integration. The extension package contains most of the backend code needed for integrating Saferpay into the SAP Commerce platform. The Merchants can use the Saferpay Payment Solution for SAP Commerce Cloud extension with their SAP Commerce project to integrate Saferpay.

This document describes the functionalities and Payment Integration of the Saferpay Payment Solution for SAP Commerce Cloud
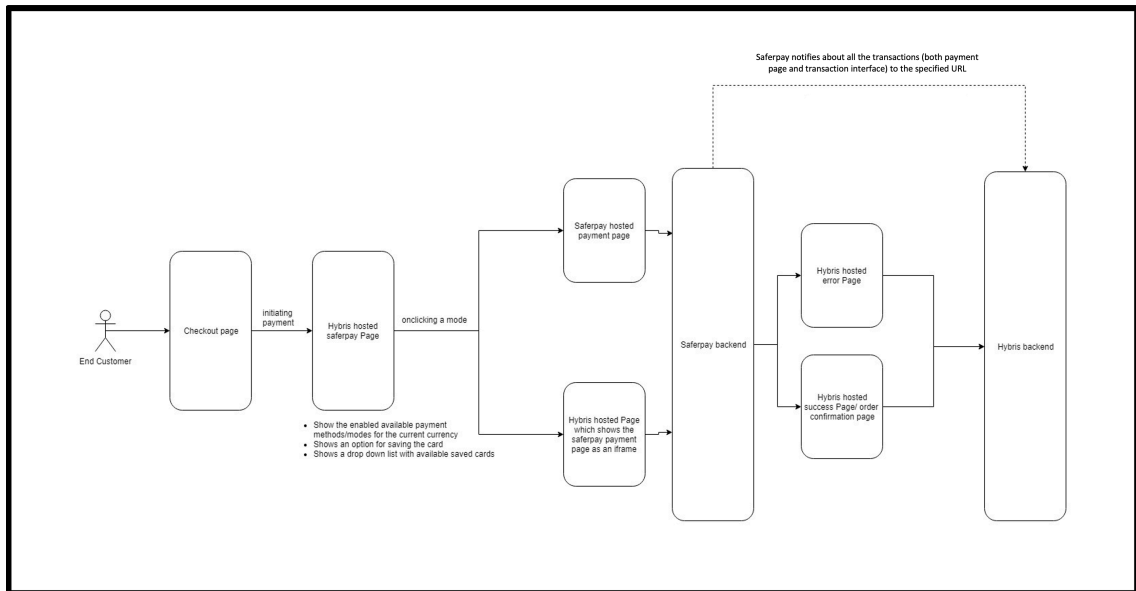
2.0 Functional Architecture

Figure 1: Functional Diagram

3.0 Technical Overview

This extension is built on top of SAP Commerce version 2211. Thus, make sure you have the project running with version 2211.

4.0 Technologies and Tools

The following table summarizes the proposed platform and software recommended for the system hosting.

Sl.No.	Component	Description
1	Operating Platform	Windows 11
2	Web Server	Tomcat
3	Technology	SAP Commerce

Table 1: Application Software

Sl. No	Component	Description
1	Development Environment	Intellij IDE
2	Source Control	Git

Table 2: Development Tools

5.0 Plugin Requirements Scope

The following functionalities are covered as part of the "Saferpay Payment Solution for SAP Commerce Cloud Plugin".

5.1 Payment Page

The Payment Page Interface provides a simple and easy integration of Saferpay into e-commerce web shop. The Saferpay Payment Page can be used with a Saferpay e-commerce license as well as with a Saferpay Business license. It allows the processing of all payment methods that are available with Saferpay.

- The process begins with the Payment Page Initialize request. With this request, you forward all data necessary for the payment to Saferpay and generates the RedirectUrl for the Payment Page.
- Token that is generated from Payment Page Initialize request is cached for subsequent processing of the transaction.
- Redirect to the RedirectUrl.
- Return to Return Url depending on the outcome of the transaction.
- If the payment capture status is differed, enable manual capture.
- Depending on the information about the payment, finalize or cancel the transaction.
- We have considered support for these payment methods: Visa/Mastercard, Maestro, American Express, Bancontact, Diners/Discover, JCB, MyOne, PayPal, Przelewy, eps, iDEAL, Sofort, TWINT, UnionPay, Google Pay, Apple Pay, Klarna, WL Crypto payments, Postfinance card & eFinance, SEPA ELV.

5.2 Transaction Interface (Only for Business license)

The Transaction Interface is an extension to Payment Page. Credit card payments can be seamlessly integrated into the merchant's shop with the Transaction Interface.

- The process begins with Transaction Initialize. With this request, forward all data necessary for the payment to Saferpay and generates the RedirectUrl for the iframe Integration.
- Open the RedirectUrl inside an HTML-iframe, to show the hosted card entry form, which can be used to capture sensitive card details in a PCI-compliant manner.
- Return to Return Url depending on the outcome of the 3-D Secure procedure.
- Authorize the card and finalize or cancel the transaction.
- If the payment capture status is differed, enable manual capture.
- We have considered only these payment methods:
  - VISA, Mastercard, Maestro, American Express, Bancontact, Diners/Discover, JCB, MyOne.

o   Wallet: Masterpass, Saferpay Fields.

5.3 Refund & Cancellation

Refunds are basically normal transactions where instead of debiting the cardholders account, you are crediting it. That means, that refunds go through the same authorization-steps as a normal (debit) authorization. The refund amount value can differ from the originally authorized debited amount. It is also possible to do multiple refunds on one transaction via Payment page & Transaction interface.

- We have considered only these payment methods AmericanExpress, Bancontact, Diners/Discover, JCB, Visa, Maestro, Mastercard, MyOne, PayPal, Przelewy, iDEAl, Sofort, TWINT, Paydirect (COD), Saferpay Fields, Klarna, WL Crypto payments, Postfinance card & eFinance, EPS, Apple pay and Google Pay.

5.4 3D Secure & DCC

- 3D Secure – 3DS for short is used to make fraud free transactions and liability shift mechanism in transaction. 3DS have the following options.
- Manual: Transactions with Liability Shift: false are not captured, but held inside the transaction overview, so the merchant can capture, or cancel them to his liking. (This should be default!).
- Auto cancel: Transactions with Liability Shift: false are cancelled automatically.
- Auto capture: Transactions with liability shift : false and true are captured automatically

Dynamic Currency Conversion (DCC) is a dynamic currency converter that allows international customers to pay the purchase price in the local currency or their home currency.

5.5 Tokenization

Tokenization allows your customer to save the credit card information in his account and to use for the future payments.

Saferpay Secure Card Data or SCD in short, is a service for saving sensitive payment means information in the certified Saferpay data centre. By using SCD, the payment data is separated from the merchant application and no longer comes in contact with it. The stored Secure Card Data can be referred from future payments initiated via "Transaction" interface.

This feature is available for payment methods that supports secure card data. Sensitive payment data is stored only in certified Saferpay data centre. If the settings 'Is Save Card Available?' is Active in Payment method configuration page, then logged in customers can save and use their card for future transactions. Also, they can update or delete the saved card data.

6.0 Additional Features Considered

We have considered the following additional features:

- Possibility to Switch between productive and test systems.
- Pre-selection of payment means in the shop.
- Possibility to choose between direct or delayed capture (adjustable for every mean of payment) depends on payment methods feature.
- Plugin must work on most common browsers by supported the shop-system
- Error Handling, validation of License, Credentials & Error log etc.
- Currencies: Payment methods can be activated and deactivated per Currency/Currencies can be applied to a given Payment Method. The shop then filters, if a currency is used, that is not configured for a payment method, so the shop does not access this method, if the currency is not available.
- Provide Safer pay full access to place it on its own portals: Can be provided as ZIP fie.

7.0 Implementation Guide

The purpose of providing an extension for Saferpay is to aid integration of Saferpay into a SAP Commerce implementation. This document describes how to install and configure the extension to work with any SAP Commerce implementation.

As SAP Commerce is built on the spring framework this makes it highly customizable and extensible. The extension also utilizes this framework, so can also be easily extended to add specific behavior if required.

Please note that this document uses OOTB electronics site as reference. So, you may need to change the catalog versions and so to your own data.

7.1 Prerequisite

This extension is built on top of SAP Commerce version 2211. Thus, make sure you have the project running with version 2211 or later.

7.2 Installation and usage

The plugin is supplied as a zip file. Take the following steps to include the extension into your SAP Commerce application:

1. Unzip the supplied zip file saferpay_2211.zip.
2. Copy the extracted folder saferpayextensions to ${HYBRIS_CUSTOM_DIR} of your SAP Commerce installation directory.
3. Add the Saferpayextensions on your *localextensions.xml* file.

   <extension name='saferpaycustombackoffice'/>

   <extension name='saferpay' />
   <extension name='saferpaycustomaddon' />

   <extension name='saferpayfulfilmentprocess'/>

4. Install *saferpaycustomaddon* to the storefront in order to make the changes applicable to the storefront.

   ant addoninstall -Daddonnames="saferpaycustomaddon" -DaddonStorefront.yacceleratorstorefront="xxxstorefront"

5. To make use of Saferpay extension, we have to alter the checkout flow

which can be done in 'multi-step-checkout-config.xml'. we have to remove the payment method and billing address steps from the xml. Please refer to the attached file - multi-step-checkout-config.pdf for reference (file available in the folder - 'saferpay_documents').

6. Add the Saferpay credentials into project data :
   ~\saferpay\resources\impex\projectdata_saferpay.impex
7. Run the 'ant clean updatesystem'command from your **${HYBRIS_PLATFORM_DIR}.**
8. Run the./hybrisserver.sh or hybrisserver.bat to startup the SAP Commerce server.
9. Import the project data of the Saferpayextension from hac.

10.Or skip the steps from 6-9 and do ant initialize and SAP Commerce server up.

Note: *You can add more accounts in to the system via backoffice. But that won't be available in all other environments unless created manually to them also.*

7.3 Configuring the properties

Saferpay uses some properties in order to manage the process. Those properties can be seen in the project.properties. Some of the main properties are listed below:

```
successURL=checkout/multi/summary/saferpay-response/
returnURL=response/return/
#notifyURL=http://103.107.143.101/saferpay/
successNotifyUrl=https://electronics.displayme.net/saferpay/success/
# sourceUrl is given for demo purpose. Multiple sourceUrl can be given comma separated
sourceUrls=https://electronics.displayme.net/electronics,https://electronics.displayme.net/electronics
failNotifyUrl=https://electronics.displayme.net/saferpay/failure/
notifyUrl=https://electronics.displayme.net/saferpay/
aliasInsertURL=my-account/payment-details/alias
secureCardData=true
saferpay.fraudIntelligence.result=true
specVersion=1.34
clientInfo=hybris-1808:PITs-1.10
shopInfo=hybris-1808:PITs-1.10
osInfo=osinfotest
productionUrl=https://www.saferpay.com/api
testUrl=https://test.saferpay.com/api
saferpayFieldsTestJsLibraryUrl=https://test.saferpay.com/Fields/lib/1.5/saferpay-fields.js
saferpayFieldsProductionJsLibraryUrl=https://www.saferpay.com/Fields/lib/1.5/saferpay-fields.js

#KLARNA payment page initialize request
saferpay.paymentPage.orderItemType = DIGITAL
saferpay.paymentPage.deliveryType = HOMEDELIVERY
saferpay.paymentPage.shippingType = SHIPPINGFEE
```

E.g. In our context, it is ShopInfo:clientInfo = SAP Commerce_2211,2211:PITs_1.10

Those properties have names that speak for itself.

Note: Important point to note is that about the saferpay.notify.url. This property holds the URL to which the Shop will be notified of a successful transaction, by Saferpay. This URL needs to be available to reach from Saferpay servers.

The properties **saferpay.paymentPage.orderItemType,**

saferpay.paymentPage.deliveryType hold the values for product type, delivery type for KLARNA payments.

Possible values for **DeliveryType** include: EMAIL, SHOP, HOMEDELIVERY, PICKUP, HQ,

Possible values for **OrderItemType** include: DIGITAL, PHYSICAL, SERVICE, GIFTCARD, DISCOUNT, SHIPPINGFEE, SALESTAX, SURCHARGE.