Valitor SFRA

Version 19.1.0

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1. Summary

This cartridge enables Valitor as the Payment Service Provider (PSP) for storefronts using the reference architecture (SFRA) on the Salesforce Commerce Cloud (SFCC) platform. To enable Valitor as the PSP, the merchant needs to:

1. Sign a contract with Valitor
2. Install the int_valitor_sfra cartridge
3. Import 'valitor_sfra_metadata.xml'
4. Conduct tests of the payment flow before going live

Before going live, the merchant needs to conduct tests of the payment flow. Valitor provides a test setup for accepting card and alternative payments. The merchant can also use the Valitor cartridge to implement captures and releases of payments.

2. Component Overview

2.1 Actors

- **Customer:** The Buyer and payer of items at the web shop
- **Merchant:** Provides the web shop and items to be sold
- **Valitor:** Processes payment information and verifies payment information provided by the customer with help from an acquirer.

2.2 Functional Overview

The idea of the payment gateway is to allow your customers to perform secure payments without the feeling that they are leaving your web shop. This is possible because Valitor proxy the payment page from your website – keeping layout and visual identity. The Valitor Payment Gateway will inject a payment form which reflects the payment method (Credit Card, Bank Payment, etc.).

When doing the integration, you will typically be working against the test environment/gateway, and once the integration is ready it must be enabled for production. Valitor is using different subdomains for test and production, and this cartridge is using custom site preferences to define if the integration is pointing to either test or production gateway.

2.3 Use Cases

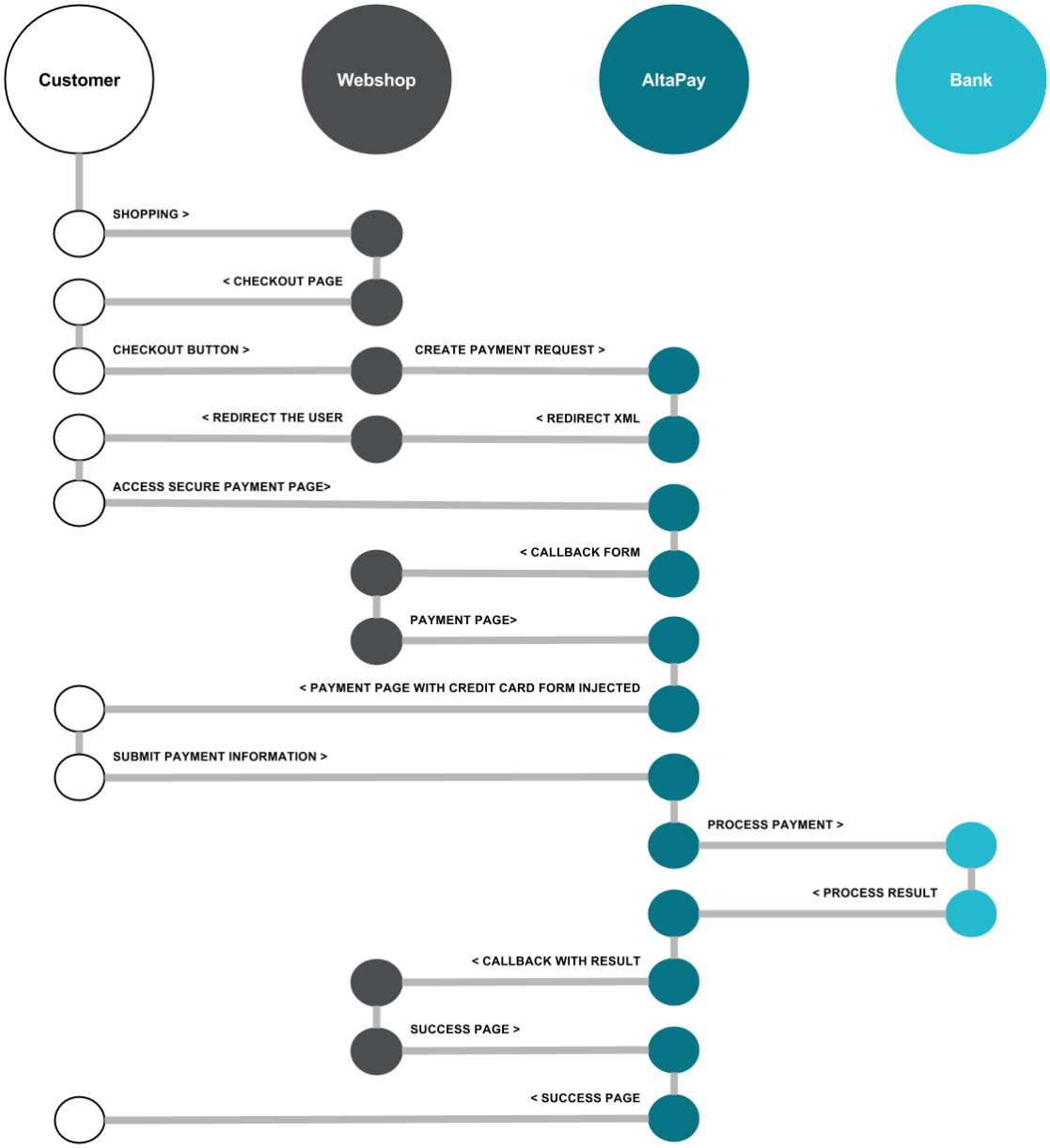
The check-out and payment flow are shown in the below diagram and are briefly described here.

The customer visits the merchant's web shop and add items to the basket. Once the customer has completed the shopping of goods/services and is ready to pay, he or she proceeds to check-out. During the check-out flow details like name, e-mail, shipping- and billing address, voucher-codes is collected, and the customer is ready to pay for the goods/services. The customer selects a preferred payment method and clicks on the place order button to pay. All information about the payment is send to Valitor which will return a redirect URL to the payment page.

The customer accesses the payment page via Valitor's secure payment gateway. To ensure that the look'n'feel of the payment page is under your control Valitor fetch this from your server (using the 'Payment Page' callback URL which is possible to configure in a custom site preference. To ensure that this page is secure Valitor deliver it using SSL from the gateway and strips all JavaScript and other active content. To limit the work needed designing this page Valitor proxy all images, CSS, etc. and rewrite any links/forms such that the page works as if it was served directly to the customer.

Depending on the type of payment (credit card, invoice, paypal, etc.) the customer supplies the final payment information. Valitor will then reach out to the underlying service of the payment-method to validate this information.

Depending on the outcome of the payment Valitor returns the results to the web shop via a callback (Success/Failure/Open). Most acquires return the result of the payment immediately so typically “Success” and “Failure” is used. But for some, the acquirer can return the payment in an open state, meaning that the payment is neither success nor failed yet. The result is known later. If a payment is in an open state, Valitor will use the notification callback to notify when the result of the payment is known. The content returned by these callbacks are displayed to the customer, allowing you to display a message about his or her purchase. If the payment is successful or open the customer is redirected to the confirmation page, and if the payment failed the user is redirected back to check-out flow.



2.4 Limitations

- The merchant will need an Valitor test/production terminal.
- The merchant must implement their own look and feel on the payment page – otherwise standard page is shown.
- The merchant must implement their own logic to show error messages which are returned on unsuccessful payments.
- Asynchronous payments, which are completed as a successful or declined status at a later stage, the merchant is responsible to notify the customer.

2.5 Compatibility

The int_valitor_sfra cartridge is based on Commerce Cloud version 18.10.

The cartridge is presented as a LINK integration solution for Storefront Reference Architecture (SFRA) v3.2.0, which implies absence of changes to the app_storefront_base cartridge code.

2.6 Privacy, Payment

Information about payment method, debit/credit card data, items, shipping/billing addresses and amount is sent to Valitor and stored on orders in SFCC.

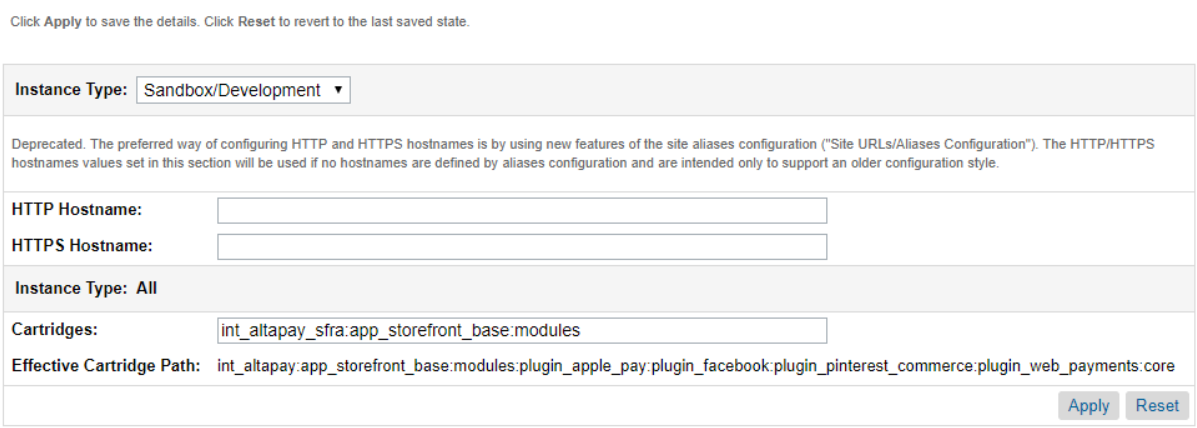
3. Implementation Guide

3.1 Setup

Download LINK_Valitor repository from Demandware LINK marketplace.

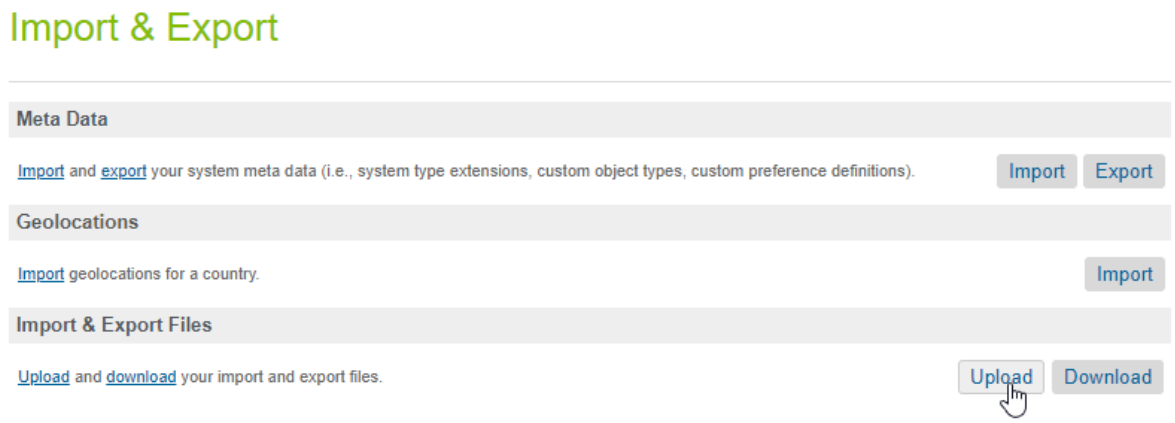
3.1.1 Import cartridge

1. Import the int_valitor _sfra cartridge into the SFCC Studio Workspace.
2. Open UX Studio.
3. Click File -> Import -> General -> Existing Projects into Workspace.
4. Browse to the directory where you saved the "int_valitor_sfra" cartridge.
5. Click “Finish”.
6. Click “OK” when prompted to link the cartridge to the sandbox.
7. Log into the SFCC Business Manager on your sandbox or PIG Instance.
8. Navigate to: Administration -> Manage Sites -> your site -> settings tab.
   Add "int_valitor_sfra" cartridge in the cartridge path and click the “Apply” button.

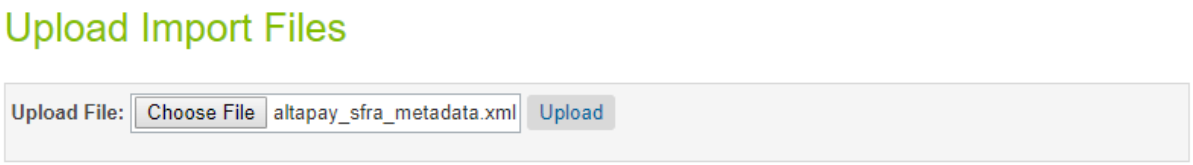


3.1.2 Metadata import

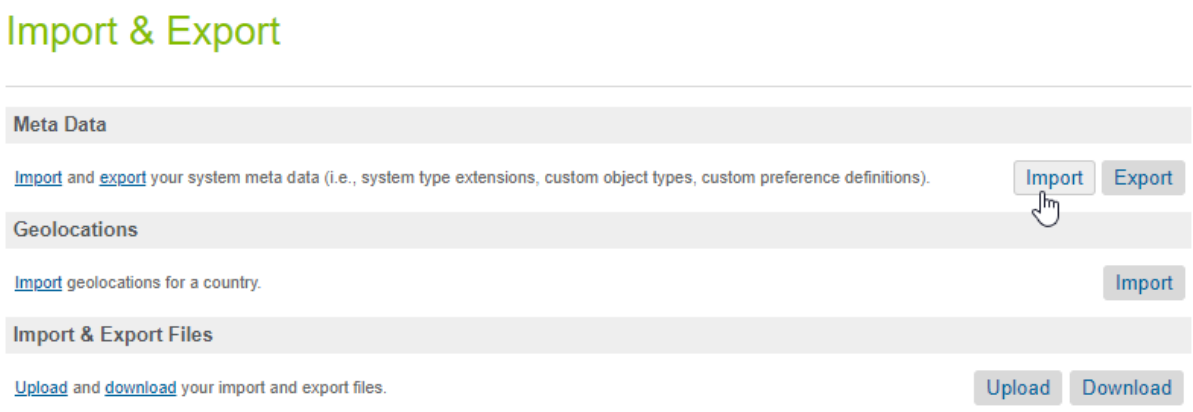
1. From the SFCC Business Manager.
2. Navigate to: Administration -> Site Development -> Import & Export.
3. In the “Import & Export Files” section, click the “Upload” link or button.



4. Upload the file “valitor_sfra_metadata.xml” from the LINK_Valitor repository and navigate back.



5. In the “Meta Data” section, click the “Import” link or button.

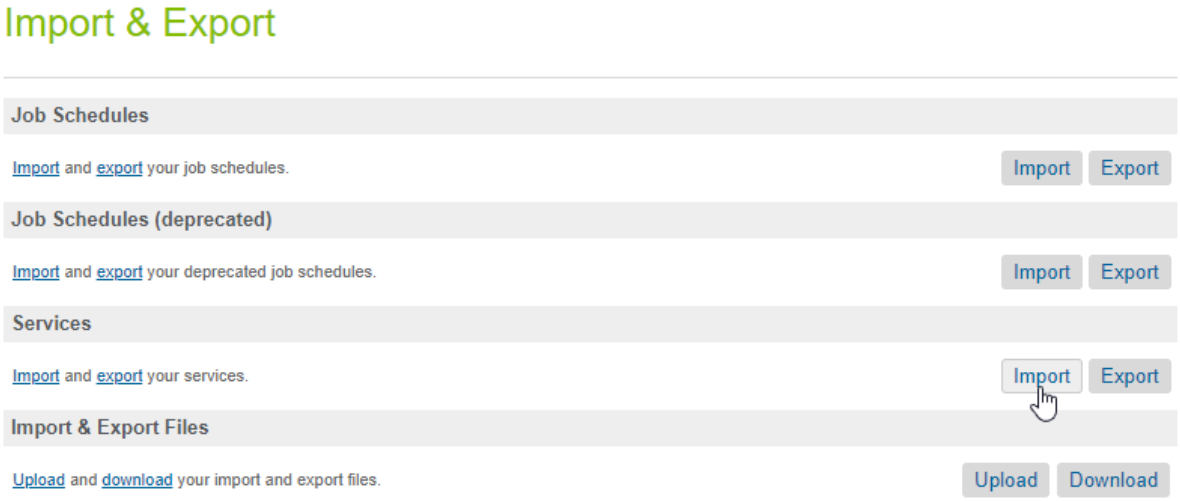


6. Select “valitor_sfra_metadata.xml” and click the “Next” button.
7. Wait for validation has completed and click the “Import” button.

3.1.3 Web Service Import

The Valitor integration is using the web service framework to create web service calls to Valitor and must therefore be imported to the Sandbox.

1. From the SFCC Business Manager.
2. Navigate to: Administration -> Operations -> Import & Export
3. In the “Import & Export Files” section, click the “Upload” link or button.
4. Upload the file “valitor_sfra_webservice.xml” from the LINK_Valitor repository.
5. In the “Services” section, click the “Import” button.



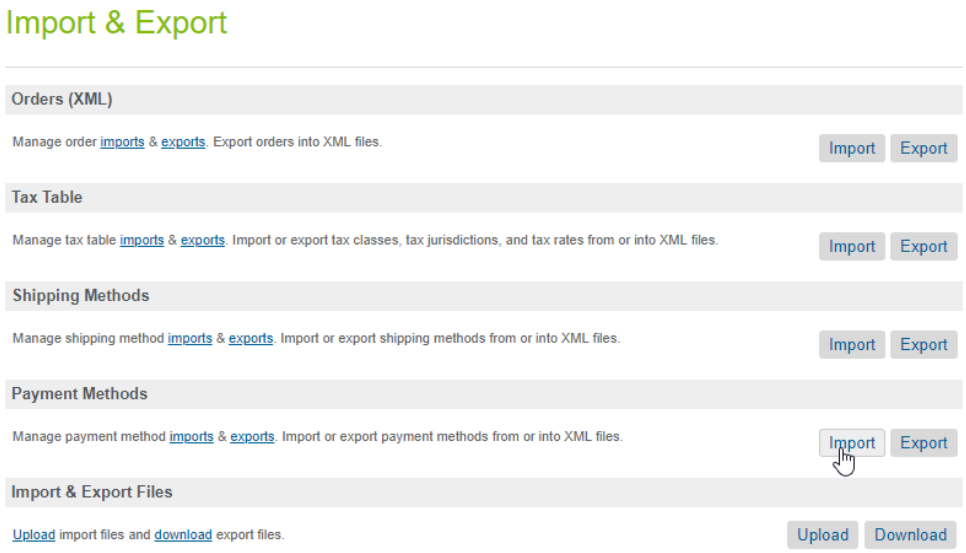
6. Select “valitor_sfra_webservice.xml” and click the “Next” button.
7. Wait for validation and click the “Next” button.
8. Leave “Merge” selected as the import mode and click the “Import” button.

3.1.4 Create Valitor Payment Processor

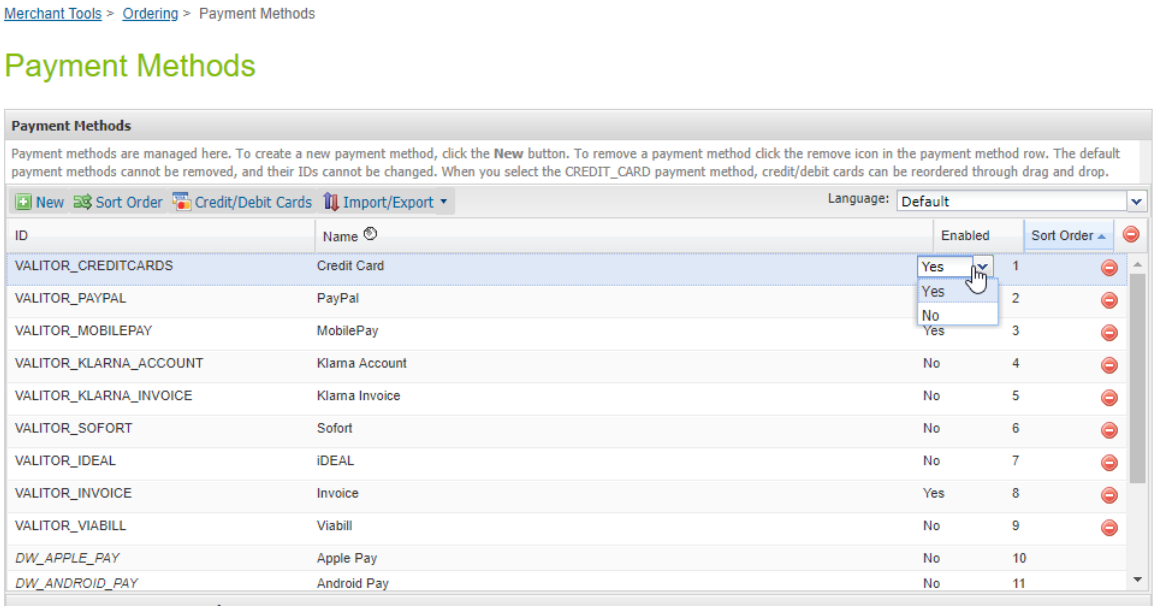
1. From the SFCC Business Manager.
2. Select your site from the list in the top navigation bar.
3. Navigate to: Merchant Tools -> Ordering -> Payment Processors.
4. Click the “New” button.
5. For the ID, enter VALITOR in all capital letters.
6. For the Description, enter “Valitor Checkout”.
7. Click the “Apply” button.

3.1.5 Payment Methods Import

1. From the SFCC Business Manager.
2. Select your site from the list in the top navigation bar.
3. Navigate to: Merchant Tools -> Ordering -> Import & Export
4. In the “Import & Export Files” section, click the “Upload” link or button.
5. Upload the file “valitor_sfra_paymentmethods.xml” from the LINK_Valitor repository.
6. In the “Payment Methods” section, click the “Import” button.



7. Select “valitor_sfra_paymentmethods.xml” and click the “Next” button.
8. Wait for validation and click the “Next” button.
9. Leave “Merge” selected as the import mode and click the “Import” button.
10. Navigate to: Merchant Tools -> Ordering -> Payment Methods.
11. In the “Payment Methods” section, notice that all Valitor payment methods is disabled so they not appear as an option in the normal Storefront check-out flow.
12. Enable the desired payment methods but be aware that some of them is limited to certain countries and currencies. Remember to disable all the normal storefront payment methods.



3.2 Configuration

3.2.1 Configure Valitor Site Preferences

1. From the SFCC Business Manager.
2. Select your site from the list in the top navigation bar.
3. Navigate to: Merchant Tools -> Site Preferences -> Custom Preferences -> Valitor:
   This is where the merchant can access and configure the Valitor integration.
4. Fill out the settings as desired. Descriptions of the site preferences are listed in the table below.

Preference	**Description**
Valitor Test Mode	Preference that defines if the testing mode should be enabled.
Valitor base Production URL	URL to the production gateway. E.g. https://yourname.pensio.com/
Valitor base Test URL	URL to the test gateway. E.g. https://testgateway.pensio.com/
Valitor Production Username	Username for the production gateway and terminals.
Valitor Production Password	Password for the production gateway and terminals.
Valitor Test Username	Username for the test gateway and terminals.
Valitor Test Password	Password for the test gateway and terminals.
Valitor Terminals	Mapping of payment methods in Salesforce and terminals in the Valitor payment gateway. A terminal can only contain one payment method and one currency, but it is possible to add all the relevant terminals. The setting must be structured as shown below.

	{
	"terminals": {
	"production": {
	"GBP": [
	{
	"id": "VALITOR_CREDITCARDS_GBP",
	"name": "Shopname CC GBP",
	"allowedlocales": ["en_GB"]
	}, {
	"id": "VALITOR_PAYPAL_GBP",
	"name": "Shopname PayPal Wallet GBP",
	"allowedlocales": ["en", "en_GB"]
	}
	]
	},
	"test": {
	"GBP": [
	{
	"id": "VALITOR_CREDITCARDS_GBP",
	"name": "Shopname Test Terminal",
	"allowedlocales": ["en", "en_GB"]
	}, {
	"id": "VALITOR_PAYPAL_GBP",
	"name": "Shopname PayPal Wallet Test Terminal",
	"allowedlocales": ["en", "en_GB"]
	}
	]
	}
	}
	}
	The attribute 'id' must correspond with the payment method added in: Merchant Tools -> Ordering -> Payment Methods plus the preferred currency. The attribute 'name' is the name and identifier of the Valitor terminal. The attribute 'allowedlocales' defines which locales that can use the terminal.

Valitor Payment Page URL	URL for controlling the payment form page which is shown to the customer. It is possible to customize the payment page by changing the callbackform.isml template.

Valitor Payment Success URL	When a payment is accepted, this callback URL is called, and the data received from Valitor is validated.
Valitor Payment Fail URL	In case a payment fails this callback is called. This can be due to incorrect card details, declined by the bank etc.
Valitor Payment Open URL	To support an asynchronous payment (e.g. wallet payments) where the provider not always accept the payment upfront this callback is called. To indicate this event an open payment contains the confirmation status 'Not confirmed'.
Valitor Payment Notification URL	In case a payment has not returned an answer (e.g. customer closes window prior to returning to the shop), or when an open payment is accepted/declined. When an answer arrives, this callback is called. This does not apply to card payments.
Valitor Whitelisted IP's	List of IP addresses that Valitor is communicating from. Used to secure that only request from Valitor is handled. You are advised to verify that the following IP addresses is added: - 91.199.134.160 - 91.199.134.161 - 91.199.134.162 - 91.199.134.163 - 91.199.134.164 - 91.199.134.165 - 91.199.134.166 - 91.199.134.167 - 91.199.134.160/29

3.2.2 Select language

As part of the setup, the language selection for the check-out process is also on the check list.
Navigate to: Merchant Tools -> Site Preferences -> Locales -> select the web shops local language.

Valitor supports the following languages:

Code	**Language**
CS	Czech
DA	Danish
DE	German
EN	English
ES	Spanish
FI	Finnish
FR	French
JA	Japanese
LT	Lithuanian
NL	Dutch
NO	Norwegian
NB*	Norwegian (Bokmål) – converted to no
NN	Norwegian (Nynorsk) – converted to no
PL	Polish
SV	Swedish

TH	Thai
TR	Turkish
ZH	Chinese
EE*	Estonian – converted to ET
ET	Estonian
IT	Italian
PT	Portuguese
RU	Russian

If the merchant uses an unsupported language the payment page is shown in English as default.

3.3 Install sgmf-scripts

Salesforce has released an NPM node called sgmf scripts to compile CSS and JS scripts for your storefront.

You can install sgmf scripts with the following command:

npm install sgmf-scripts

After installing sgmf scripts, compile JS scripts with the following command:

npm run compile:js

3.4 External Interfaces

The Valitor cartridge communicates with Valitor's backend where customer data etc. is sent, to verify a transaction. Banks and acquirers make the verification. Valitor relays the response to the cartridge.

3.5 Credit card tokenization

It's possible to save the customer credit card after a successful transaction. The credit card number is saved securely inside Valitor payments gateway. To enable this functionality contact Valitor to enable the credit card token in your terminal.

The credit card terminal must be configured to support credit card tokens. Also, the credit card form template must be set to form_dynamic_div_with_save_cc. This setup is done inside Valitor payments gateway. Please contact Valitor to setup your terminal.

If the terminal is configured correctly the customer will have the option to save the credit card information during checkout. Also, a previous saved credit card will appear with a mask in the checkout page.

3.6 Reconciliation setup

Follow the steps below to setup the reconciliation identifier.

1. Navigate to: int_valitor_sfra/cartridge/scripts/valitor/createRequestParameters.js.

2. Find the Reconciliation Identifier section and remove the comments.

```
/*
//Reconciliation Identifier
parameterArr.push(['sale_reconciliation_identifier', 'Insert reconciliation
identifier here'].join('='));
*/
```

3. Replace “Insert the reconciliation identifier here” with the reconciliation identifier that is needed by the ERP system.

3.7 Testing

In general, the merchant can use any card number when testing against the test gateway and they will be accepted. Designated card numbers to trigger different scenarios (3D Secure, failures etc.) can be found here. A Test bank is also available if the merchant needs to test PayPal, iDEAL, or other alternative payment methods.

Preconditions for the following test scenarios:

1. Imported ‘valitor_sfra_metadata.xml’
    a. Updated the ‘Custom Site Preferences’ with Valitor user with API access rights
    b. Added terminals for credit card and/or alternative payment
2. Items available in the storefront
3. That the payment method for cards connects with a terminal that is configured to receive cards. An alternative payment method must be connected to a terminal that accepts that payment method.

3.7.1 Successful card payment

1. Add an item to the cart.
2. Click “View cart”.
3. When shopping cart is shown, click on “Checkout” button.
4. Select either Guest checkout or login.
    a. If guest checkout.
        i. Fill in the information.
5. Select shipping method.
6. Click on “Next: Payment” button.
7. Fill in remaining information
8. Select “Credit Card” as payment method
9. Click on “Next: Place Order” button.
10. The payment page appears. Ensure it is a payment page for card payments.
11. Enter card details (use random numbers) and click on “Submit” button.
12. Verify that the confirmation page is shown with correct information and without any error message. Take a note of the order number.
13. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Confirmation Status” = confirmed.
14. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Check that the amount corresponds with the information in Business manager and ensure that the status of the payment is “preauth”.

3.7.2 Failed card payment

1. Repeat step 1-10 in Successful card payment.
2. Enter card details – use the following payment information.
    a. Card number: 4180000000000566
    b. Expire month: 05
    c. Expire year: 2019
    d. CVC: 444
3. Click on “Submit” button.
1. Ensure that the user is redirected back to the Checkout flow. Error messages is returned from the Valitor controller but as described in the limitations section, the Merchant will have to implement custom functionality to show these messages.
4. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Order Status” = failed. Take a note of the order number.
5. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Ensure that the status of the order is “preauth_failed”.

3.7.3 3D Secure card payment

1. Repeat step 1-10 in Successful card payment.
2. Enter card details – use the following payment information.
    a. Card number: 4170000000000568
    b. Expire month: 05
    c. Expire year: 2019
    d. CVC: 444
3. Click on “Submit” button.
4. The user is redirected to the issuing bank 3D Secure confirmation page. Enter the correct validation information. If you are testing against the test gateway, a mock-up 3D Secure page is shown. Click “Redirect” button.
5. Verify that the confirmation page is shown with correct information and without any error message. Take a note of the order number.
6. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Confirmation Status” = confirmed.
7. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Check that the amount corresponds with the information in Business manager and ensure that the status of the payment is “preauth” and “3D Secure result” is successful.

3.7.4 3D Secure failed card payment

2. Repeat step 1-10 in Successful card payment.
3. Enter card details – use the following payment information.
    a. Card number: 4170000000000568
    b. Expire month: 05
    c. Expire year: 2019
    d. CVC: 444

4. The user is redirected to the issuing bank 3D Secure confirmation page. Enter the correct validation information. If you are testing against the test gateway, a mock-up 3D Secure page is shown. Click “Redirect” button.
5. Ensure that the user is redirected back to the Checkout flow. Error messages is returned from the Valitor controller but as described in the limitations section, the Merchant will have to implement custom functionality to show these messages.
6. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Order Status” = failed. Take a note of the order number.
7. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Ensure that the status of the order is “preauth_failed”.

3.7.5 Successful alternative payment

1. Add an item to the cart.
2. Click “View cart”.
3. When shopping cart is shown, click on “Checkout” button.
4. Select either Guest checkout or login.
    a. If guest checkout.
        i. Fill in the information.
5. Select shipping method.
6. Click on “Next: Payment” button.
7. Fill in remaining information
8. Select preferred “alternative“ payment option as payment method
9. Click on “Next: Place Order” button.
10. Verify that the customer is redirected to the alternative payment provider webpage. Verify the pending payment.
11. If you are testing against the test gateway a mock-up for bank and alternative payment solutions will be shown. If that is the case, click “Sign in” (No credentials needed) and “Accept”.
12. Verify that the confirmation page is shown with correct information and without any error message. Take a note of the order number.
13. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Confirmation Status” = confirmed.
14. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Check that the amount corresponds with the information in Business manager and ensure that the status of the payment is “preauth” or “bank_payment_finalized”, depending on the acquirer.

3.7.6 Failed alternative payment (Customer cancel)

1. Repeat step 1-10 in Successful alternative payment
2. If you are testing against the test gateway a mock-up for bank and alternative payment solutions will be shown. If that is the case, click “Developer options” and “Cancel”.
3. Ensure that the user is redirected back to the Checkout flow. Error messages is returned from the Valitor controller but as described in the limitations section, the Merchant will have to implement custom functionality to show these messages.

4. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Order Status” = failed.
5. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Check that the amount corresponds with the information in Business manager and ensure that the status of the payment is “epayment_cancelled” or “preauth_failed”, depending on the acquirer.

3.7.7 Failed alternative payment

1. Repeat step 1-10 in Successful alternative payment
2. If you are testing against the test gateway a mock-up for bank and alternative payment solutions will be shown. If that is the case, click “Developer options” and “Declined”.
3. Ensure that the user is redirected back to the Checkout flow. Error messages is returned from the Valitor controller but as described in the limitations section, the Merchant will have to implement custom functionality to show these messages.
4. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Order Status” = failed.
5. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Check that the amount corresponds with the information in Business manager and ensure that the status of the payment is “epayment_declined” or “preauth_failed”, depending on the acquirer.

3.7.8 Successful alternative payment notification

1. Repeat step 1-10 in Successful alternative payment
2. Verify that the customer is redirected to the alternative payment provider webpage. Verify the pending payment.
3. If you are testing against the test gateway a mock-up for bank and alternative payment solutions will be shown. If that is the case, click “Developer options” and “Open” (Opens in a new window). Do not close the test bank page.
4. Verify that the confirmation page is shown with correct information and without any error message. Take a note of the order number.
5. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Confirmation Status” = Not confirmed.
6. Go back to the test bank page and click ‘Call success notification now’. It can take a couple of minutes before the actual notification is triggered via the API.
7. Repeat step 5 and verify that the status has changed from “Not confirmed” to “Confirmed”.
8. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Check that the amount corresponds with the information in Business manager and ensure that the status of the payment is “preauth” or “bank_payment_finalized”, depending on the acquirer.

3.7.9 Failed alternative payment notification

1. Repeat step 1-10 in Successful alternative payment
2. Verify that the customer is redirected to the alternative payment provider webpage. Verify the pending payment.

3. If you are testing against the test gateway a mock-up for bank and alternative payment solutions will be shown. If that is the case, click “Developer options” and “Open” (Opens in a new window). Do not close the test bank page.
4. Verify that the confirmation page is shown with correct information and without any error message. Take a note of the order number.
5. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Confirmation Status” = Not confirmed.
6. Go back to the test bank page and click ‘Call declined notification now’. It can take a couple of minutes before the actual notification is triggered via the API.
7. Repeat step 5 and verify that the status has changed from “Not confirmed” to “Cancelled

3.7.10 Fraud checking (accepted credit card)

1. Repeat step 1-10 in Successful card payment.
2. Use a credit card number enabled for fraud checking and that returns the “Accept” status.
    a. For example: 4170000000000006
3. Verify that the confirmation page is shown with correct information and without any error message. Take a note of the order number.
4. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Confirmation Status” = Confirmed.
5. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Check that the amount corresponds with the information in Business manager and ensure that the status of the payment is “preauth”.
6. Repeat with a credit card that returns the ‘Challenge’ status.
    a. For example: 5250000000000121
7. Repeat with a credit card that returns the ‘Unknown’ status
    a. For example: 5110000000000113

3.7.10 Fraud checking (denied credit card)

1. Repeat step 1-10 in Successful card payment.
2. Use a credit card number enabled for fraud checking and that returns the ‘Deny’ status.
    a. For example: 4170000000000105
3. Ensure that the user is redirected back to the Checkout flow. Error messages is returned from the Valitor controller but as described in the limitations section, the Merchant will have to implement custom functionality to show these messages.
4. From the SFCC Business Manager navigate to: Merchant tools -> Ordering -> Orders. Locate and select the order and verify that the order has been handled correctly – “Order Status” = Failed.
5. Login in to https://testgateway.pensio.com and locate the order by the order number via the search box in the top right corner. Check that the amount corresponds with the information in Business manager and ensure that the status of the payment is “preauth”.

4. Operations, Maintenance

4.1 Data Storage

Information about payment method, debit/credit card data, items, shipping/billing addresses and amount is sent to Valitor and stored on orders in SFCC.

4.2 Availability

If you experience any problems with the gateway or payments, please contact Valitor support. Please supply as much information as possible such as order/Payment ID, payment method, terminal name etc.

4.3 Support

If there is any problem with the payments or integration, please contact Valitor support on support@valitor.com or +45 70 20 00 56 - option 1 (support).

5. User Guide

5.1 Roles, Responsibilities

The merchant must have access to Valitor's test terminals before the integration can be completed. The merchant must set up terminals and user credentials correctly on 'Custom preference site' and perform tests on the test environment before going live for each shop.

Valitor also need to verify that the test setup works prior to go-live. Please send customer access details to Valitor support when the shop is ready for review.

5.2 Business Manager

No new features.

5.3 Storefront Functionality

Accept payments with different payment methods. For more information about what Valitor can offer, please contact Valitor at info@valitor.com.