Implementation Guide - Payment Connector + Example Site

This guide will walk you through the installation and implementation of the <u>Payment</u> <u>Connector</u>, either locally or via the commercetools Marketplace. Additionally, you'll be able to explore its implementation using the <u>Example Site</u>.

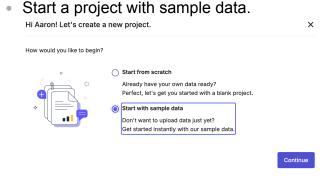
1. Project Setup

1.1. Create commercetools Project with Sample Data

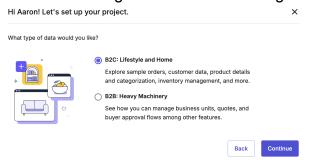
Before you start, ensure you have a commercetools project with API client details. If you don't already have a project, follow these steps:

Steps:

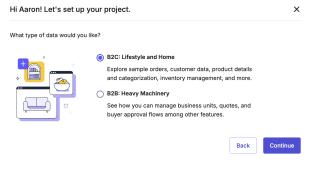
1. Create a project with sample data (optional):



We are selecting the B2C data for the guide.



Select the organization and name the project to be created.



2. API Client Configuration

You will need to create two API clients: one for the payment connector and another for the example site.

2.1. API Client for the Payment Connector

1. Create the API Client:

• Fill in the name and select the template "Payment Connector for commercetools Checkout".



2. Connector .env example:

```
CTP_PROJECT_KEY=connector-plus-example-site
CTP_CLIENT_SECRET=QBuW60PQ3KBkzSD7iLjdQzQT-raqCqU4
CTP_CLIENT_ID=tc9sUh8VukwevJZ7eB0Aujan
CTP_AUTH_URL=https://auth.us-central1.gcp.commercetools.com
CTP_API_URL=https://api.us-central1.gcp.commercetools.com
CTP_SCOPES=manage_payments:connector-plus-example-site
view_sessions:connector-plus-example-site introspect_oauth_tokens:connector-plus-example-site view_api_clients:connector-plus-example-site
manage_checkout_payment_intents:connector-plus-example-site
manage_orders:connector-plus-example-site
```

2.2. API Client for the Example Site

1. Create the API Client:

Fill in the name and select the template "Frontend B2C".



2. Example Site .env example:

```
CTP_PROJECT_KEY=connector-plus-example-site
CTP_CLIENT_SECRET=rt3wSXHqsuZllG_0fwQgtdif7Wt1h-P_
CTP CLIENT ID=yyujtVMw7FusXqPbj5QpYLkx
CTP_AUTH_URL=https://auth.us-central1.gcp.commercetools.com
CTP API URL=https://api.us-central1.gcp.commercetools.com
CTP SCOPES=view categories:connector-plus-example-site
create_anonymous_token:connector-plus-example-site
view_products:connector-plus-example-site
manage_staged_quotes:connector-plus-example-site
manage_order_edits:connector-plus-example-site
view tax categories:connector-plus-example-site
view standalone prices:connector-plus-example-site
view published products:connector-plus-example-site
view project settings:connector-plus-example-site
manage_orders:connector-plus-example-site view_sessions:connector-plus-
example-site view_cart_discounts:connector-plus-example-site
manage customers:connector-plus-example-site
manage shopping lists:connector-plus-example-site
view discount codes:connector-plus-example-site view types:connector-
plus-example-site view product selections:connector-plus-example-site
view shipping methods:connector-plus-example-site
```

3. Stripe Account Setup and Webhooks

To proceed, you'll need a Stripe account and a webhook endpoint to process payment events.

3.1. Required Stripe Information

1. Account ID:

- Navigate to Settings > Business > Account details.
- Example: acct_1P6Fr2Aw0TvR8PUy

2. Publishable Key:

- Navigate to Developers > API keys > Publishable key.
- Example:

pk_test_51P6F3kLPATvR8PUyWBp3jqt231GEKq51LC5JvLQi52mQm1rPTor0BdBsDMDqx0gZ614dbHEuVafo207cU6b008fjUMUYG

3. Stripe Private Key:

- Navigate to Developers > API keys > Secret key.
- Example:

sk_test_51P6F3kLPATv3tF3DLvA1Vwxktk1ANsDGWj6UUTSI2SYaS0RkfTbjFJG5MoEggQ5e3Y0N03F0vkUNj0vMN3T9v7wxDM400zYFFrx6l

4. Webhooks ID:

- This value is retrieved after creating the webhooks endpoint.
- Example: we_1p4qIaLPATvR8PUyhuW6B3E6

5. Webhooks Signing:

- This value is retrieved after creating the webhooks endpoint.
- Example: whsec_sBvf8NHTAA8b4RzF4hApAwNtLYEohEDn

3.2. Webhooks Endpoint URL Setup

If you're running the Payment Connector locally, you'll need to use NGROK on your machine to create a secure gateway that listens for and processes webhook events from Stripe. This allows you to effectively test and handle Stripe's webhook events during development.

Steps:

- 1. Create the NGROK gateway on your local machine:
 - Command: ngrok http 8080
 - Example URL: https://fb93-104-129-159-229.ngrok-free.app

2. Create the Webhooks endpoint in Stripe:

- Select the events to be used in the Payment Connector processor:
 - charge.refunded
 - charge.succeeded
 - payment_intent.canceled
 - payment_intent.payment_failed
 - payment_intent.requires_action
 - payment_intent.succeeded

3. Fill in the live "Endpoint URL":

- Use the created URL with NGROK and add /stripe/webhooks to the end.
- Example: https://fb94-14-169-149-229.ngrok-free.app/stripe/webhooks

4. Run the Connector

4.1. Locally

To run the connector locally, configure the respective Lenv files for the processor and the enabler.

4.1.1. Example of the .env Processor File:

```
CTP AUTH URL=https://auth.us-central1.gcp.commercetools.com
CTP API URL=https://api.us-central1.gcp.commercetools.com
CTP SESSION URL=https://session.us-central1.gcp.commercetools.com
CTP_CLIENT_ID=tc9sUh8VukwevJZ7eB0Aujan
CTP CLIENT SECRET=QBuW60PQ3KBkzSD7iLjdQzQT-ragCqU4
CTP PROJECT KEY=connector-plus-example-site
CTP JWKS URL=http://localhost:9000/jwt/.well-known/jwks.json
CTP JWT ISSUER=https://mc-api.us-central1.gcp.commercetools.com
MERCHANT RETURN URL=[Merchant-website-return-url]
STRIPE SECRET KEY=sk test 51P6F3kLPATv3tF3DLvA1Vwxktk1ANsDGWj6UUTSI2SYaS0Rkf
TbjFJG5MoEggQ5e3Y0N03F0vkUNj0vMN3T9v7wxDM400zYFFrx6l
STRIPE_CAPTURE_METHOD=automatic
STRIPE APPEARANCE PAYMENT ELEMENT=
STRIPE APPEARANCE EXPRESS CHECKOUT=
STRIPE WEBHOOK SIGNING SECRET=whsec sBvf8NHTAA8b4RzF4hApAwNtLYEohEDn
STRIPE WEBHOOK ID=we 1p4gIaLPATvR8PUyhuW6B3E6
```

4.1.2. Example of the .env Enabler File:

```
VITE_CTP_AUTH_URL=https://auth.us-central1.gcp.commercetools.com
VITE_CTP_API_URL=https://api.us-central1.gcp.commercetools.com
VITE_CTP_SESSION_URL=https://session.us-central1.gcp.commercetools.com
VITE_CTP_CLIENT_ID=tc9sUh8VukwevJZ7eB0Aujan
VITE_CTP_CLIENT_SECRET=QBuW60PQ3KBkzSD7iLjdQzQT-raqCqU4
VITE_CTP_CLIENT_SECRET=QBuW60PQ3KBkzSD7iLjdQzQT-raqCqU4
VITE_CTP_PROJECT_KEY=connector-plus-example-site
VITE_PROCESSOR_URL=http://localhost:8080
VITE_STRIPE_PUBLISHABLE_KEY=pk_test_51P6F3kLPATvR8PUyWBp3jqt231GEKq51LC5JvLQ
i52mQm1rPTor0BdBsDMDqx0gZ614dbHEuVafo207cU6b008fjUMUYG
```

4.1.3. Run the Command:

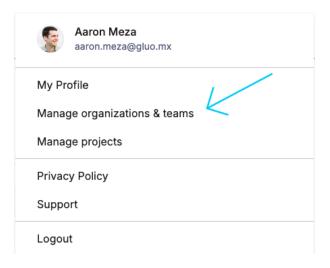
- Processor:
 - 1. Install dependencies:
 - npm install
 - 2. Build the application:
 - npm run build
 - 3. Run the processor:
 - npm run start
- Enabler:
 - 1. Install dependencies:
 - npm install
 - 2. Build the application:
 - npm run build
 - Run the enabler:
 - npm run start

This process will enable the JavaScript module to be implemented and listen to any webhooks event through the NGROK URL created on your local machine.

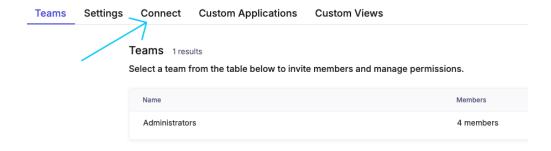
4.2. commercetools Merchant Center Marketplace

4.2.1. Install the connector to the project connect dashboard

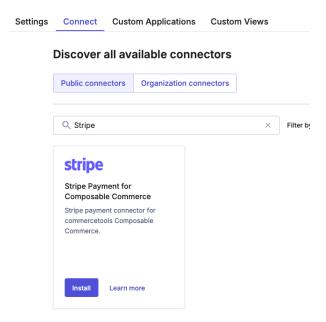
1. Navigate to "Manage Organizations & Teams" in the commercetools dashboard.



2. Select your organization, go to "Connect".

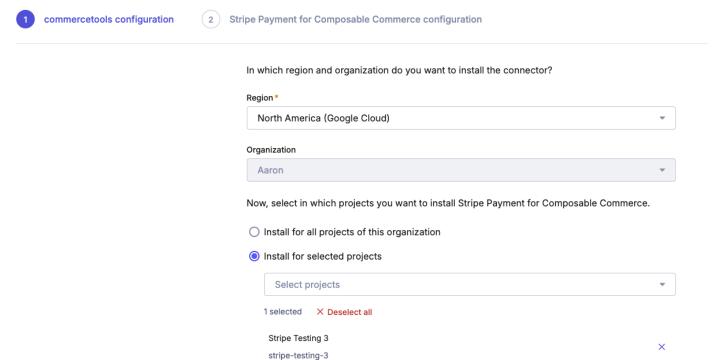


3. Search for "Stripe" and click the "Install" button.



4. Choose the region and project to install the connector.

Installing Stripe Payment for Composable Commerce



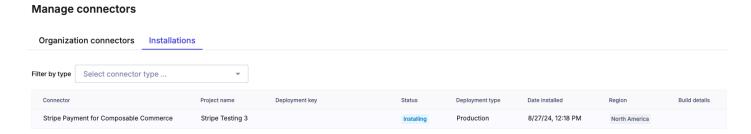
- 5. Complete the configuration required to run the connector.
 - CTP_PROJECT_KEY: The key of commercetools composable commerce project.
 - CTP_SCOPE: The scope constrains the endpoints to which the commercetools client has access, as well as the read/write access right to an endpoint.
 - CTP_AUTH_URL: The URL for authentication in commercetools platform. It is used
 to generate OAuth 2.0 token which is required in every API call to commercetools
 composable commerce. The default value is https://auth.europe-west1.gcp.commercetools.com. For details, please refer to documentation here.
 - CTP_API_URL: The URL for commercetools composable commerce API. Default value is https://api.europe-west1.gcp.commercetools.com.
 - CTP_SESSION_URL: The URL for session creation in commercetools platform.
 Connectors relies on the session created to be able to share information between enabler and processor. The default value is https://session.europe-west1.gcp.commercetools.com.
 - CTP_JWKS_URL: The URL which provides JSON Web Key Set (set the region of your project): https://mc-api.{region}.commercetools.com/.well-known/jwks.json
 - CTP_JWT_ISSUER: The issuer inside JSON Web Token which is required in JWT validation process (set the region of your project): https://mc-api.
 (region).commercetools.com
 - STRIPE_CAPTURE_METHOD: Stripe capture method (manual or automatic), default value: automatic.

- STRIPE_APPEARANCE_PAYMENT_ELEMENT: Stripe Elements supports visual customization, which allows you to match the design of your site with the appearance option. This value has the specific appearance of the Payment Element component.
- STRIPE_APPEARANCE_EXPRESS_CHECKOUT: Stripe Elements supports visual customization, which allows you to match the design of your site with the appearance option. This value has the specific appearance of the Express Checkout Element component.
- CTP_CLIENT_SECRET: The client secret of commercetools composable commerce user account. It is used in commercetools client to communicate with commercetools composable commerce via SDK.
- CTP_CLIENT_ID: The client ID of your commercetools composable commerce user account. It is used in commercetools client to communicate with commercetools composable commerce via SDK.
- STRIPE_SECRET_KEY: Stripe authenticates your API requests using your account's API keys
- STRIPE_WEBHOOK_ID: Stripe unique identifier for the <u>Webhook Endpoints</u>
- STRIPE_WEBHOOK_SIGNING_SECRET: Stripe Secret key to verify webhook signatures using the official libraries. This key is created in the <u>Stripe dashboard</u> Webhook.

Installing Stripe Payment for Composable Commerce 2 Stripe Payment for Composable Commerce configuration commercetools configuration Now, let's configure the connector in the configured projects In this step, you have to enter the information the connector requires to configure it within the project. If you've selected several projects, you need to configure the connector in each. For more information, you can consult this article ♂. Selected projects (1) processor configuration Stripe Testing 3 CTP API URL* Commercetools API URL CTP AUTH URL * Commercetools Auth URL CTP_JWKS_URL* JWKs url CTP_JWT_ISSUER* JWT Issuer for jwt validation

4.2.2. Retrieve Payment Connector deployment URL

After installation, you can access the Managed Connectors dashboard to monitor the installation status.



Once the installation is complete, you can view the application type, the configuration details you provided, and the deployment URL by selecting the Connector project. Be sure to copy and save the deployment URLs for the enabler and processor applications.

Stripe Payment connector - stripe-testing-3 Installed North America **≧** Uninstall Apps App logs **Build details** enabler Stripe Payment connector apps (2) Application type enabler > assets processor > URL https://assets-31f4a21e-1a79-4ffc-a255-31c449660a Uninstall App logs **Build details** Apps After saving, the secret is no longer visible for security reasons, but is still active unless you overwrite it with a new value. Commercetools client secret STRIPE_SECRET_KEY * After saving, the secret is no longer visible for security reasons, but is still active unless you overwrite it with a new value. Stripe secret key • • • • • • • • • • STRIPE_WEBHOOK_SIGNING_SECRET * After saving, the secret is no longer visible for security reasons, but is still active unless you overwrite it with a new value. Stripe Webhook signing secret Application type service URL

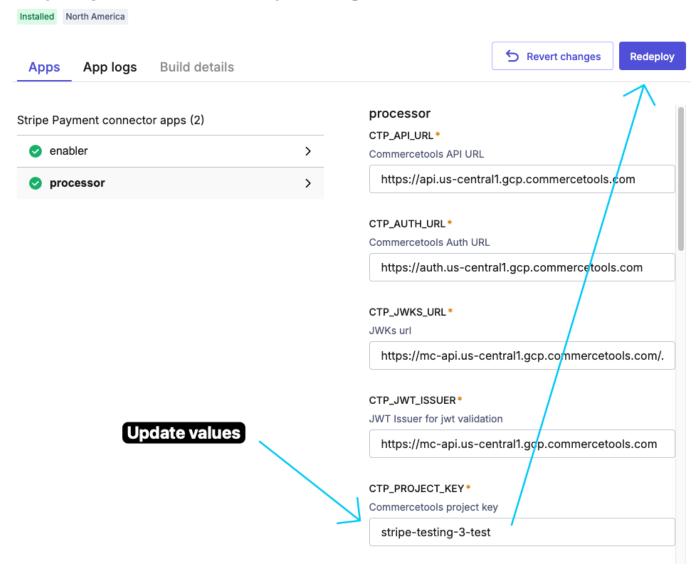
4.2.3. Update configurations

If we need to modify some values from the connector configuration, we need to enter to the Managed Connectors dashboard and select the connector we want to update.

https://service-14a18a7f-c667-4018-af23-ca4fa961f

After modifying the configuration values, you'll see a 'Redeploy' button. Click it to redeploy the connector and apply the updated values.

Stripe Payment connector - stripe-testing-3

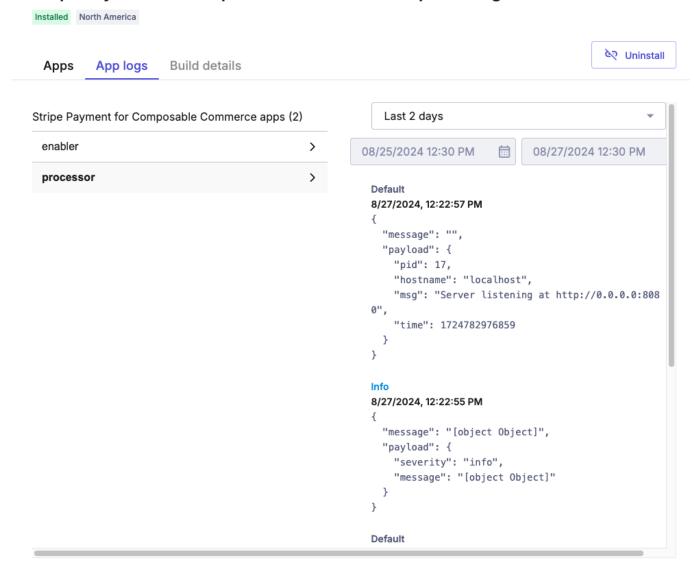


4.2.4. Connector Logs

To check the logs of an application, go to the Managed Connectors dashboard, select the app, and then navigate to the 'App Logs' tab. Here, you can view the logs generated by the

application.

Stripe Payment for Composable Commerce - Stripe Testing 3



5. Run the Example Site Locally

To run the site locally, configure the .env files in the main folder and the client folder.

5.1. Example of the Configuration in the Main Folder:

Variable	Description	Localhost e.g.
REACT_APP_SK	Stripe Private Key	sk_test_51P6F3kLPATv3tF3DLvA1Vw
REACT_APP_ADMIN	Stripe Account ID	acct_1P6Fr2AwOTvR8PUy

Variable	Description	Localhost e.g.
REACT_APP_PORT	Port to run the server	8081
REACT_APP_BASE_URL	Base URL of the server	http://localhost:8081
REACT_APP_CT_PROJECT_KEY	commercetools Project Key	connector-plus-example-site
REACT_APP_CT_CLIENT_ID	commercetools Client ID	tc9sUh8VukwevJZ7eB0Aujan
REACT_APP_CT_SECRET	commercetools Secret Key	QBuW6OPQ3KBkzSD7iLjdQzQT-raqC
REACT_APP_CT_API_URL	commercetools API URL	https://api.us-central1.gcp.commercetc
REACT_APP_CT_AUTH_URL	commercetools Auth URL	https://auth.us-central1.gcp.commerce

5.2. Example of the Configuration in the Client Folder:

Variable	Description	Localhost e.g.
REACT_APP_PK	Stripe Publishable Key	pk_test_51P6F3kLPATvR8PUyWB
REACT_APP_BASE_URL	Base URL of the server example site	http://localhost:8081
REACT_APP_PROJECT_KEY	commercetools Project Key	connector-plus-example-site
REACT_APP_CTP_CLIENT_ID	commercetools Client ID	tc9sUh8VukwevJZ7eB0Aujan
REACT_APP_CLIENT_SECRET	commercetools Secret Key	QBuW6OPQ3KBkzSD7iLjdQzQT-r
REACT_APP_SESSION_URL	commercetools API session url	https://api.us-central1.gcp.commer
REACT_APP_AUTH_URL	commercetools Auth URL	https://auth.us-central1.gcp.comme
REACT_APP_ENABLER_BUILD_URL	URL of the Connector enabler	local - http://localhost:3000/connec Marketplace - https://assets-mba1e

Variable	Description deployed in commercetools or local	Localhost e.g.
REACT_APP_PROCESOR_URL	URL of the Connector Processor deployed in commercetools or local	local - http://localhost:8080 Marketplace - https://service-mwze
REACT_APP_MODE	Flag to add header to Ngrok CORS	dev

5.3. Instructions to Run the Example Site

1. Install dependencies:

 Run npm install in both the main and client folders to install the necessary dependencies.

2. Start the server:

- In the main folder, run npm run build && npm run start to start the backend server.
- In the client folder, run npm run start to start the frontend development server.

3. Navigate to the Example Site:

- Open your browser and go to http://localhost:3006 | http://localhost:3000.
- You should see the Example Site running locally, allowing you to interact with the integration.

6. Testing and Debugging

6.1. Testing the Integration

1. Place an Order:

- Go to the Example Site and add items to the cart.
- Proceed to checkout and complete the payment process.

2. Complete the Payment:

• Use Stripe's test card numbers for testing (e.g., 4242 4242 4242 4242 for a successful payment).

3. Verify the Order in commercetools:

 Log in to your commercetools account and check that the order has been created and that the payment status reflects the correct state.

6.2. Debugging Common Issues

1. Webhooks Events Not Received:

 Ensure that your NGROK tunnel is active and that the URL configured in Stripe's webhooks settings matches the current NGROK URL.

2. Authentication Issues:

 Double-check that the API client secrets and IDs are correctly set in the _env files for both the connector and the example site.

3. Stripe Payment Errors:

 Verify that the Stripe keys are correct and that you're using the appropriate environment (test or live) for the keys.

8. Conclusion

This guide provides comprehensive steps to implement and test a payment connector using commercetools and Stripe. By following the instructions, you can set up a local environment, thoroughly test the integration. Ensure that all environment variables and API keys are kept secure, and regularly monitor your deployed systems to catch any issues early.

Note: For further information or troubleshooting, refer to the official documentation for commercetools and Stripe, or seek help from the respective support communities.