
django-payments Documentation

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Installation

1. Install django-payments

```
$ pip install django-payments
```

2. Add the callback processor to your URL router:

```
# urls.py
from django.conf.urls import include, url

urlpatterns = [
    url('^payments/', include('payments.urls'))]
```

3. Define a Payment model by subclassing payments.models.BasePayment:

```
# mypaymentapp/models.py
from decimal import Decimal

from payments import PurchasedItem
from payments.models import BasePayment

class Payment(BasePayment):

    def get_failure_url(self):
        return 'http://example.com/failure/'

    def get_success_url(self):
        return 'http://example.com/success/'

    def get_purchased_items(self):
        # you'll probably want to retrieve these from an associated order
        yield PurchasedItem(name='The Hound of the Baskervilles', sku='BSKV',
                             quantity=9, price=Decimal(10), currency='USD')
```

The `get_purchased_items()` method should return an iterable yielding instances of `payments.PurchasedItem`.

4. Write a view that will handle the payment. You can obtain a form instance by passing POST data to `payment.get_form()`:

```
# mypaymentapp/views.py
from django.shortcuts import get_object_or_404, redirect
from django.template.response import TemplateResponse
from payments import get_payment_model, RedirectNeeded
```

```
def payment_details(request, payment_id):
    payment = get_object_or_404(get_payment_model(), id=payment_id)
    try:
        form = payment.get_form(data=request.POST or None)
    except RedirectNeeded as redirect_to:
        return redirect(str(redirect_to))
    return TemplateResponse(request, 'payment.html',
                            {'form': form, 'payment': payment})
```

Note: Please note that `Payment.get_form()` may raise a `RedirectNeeded` exception.

5. Prepare a template that displays the form using its *action* and *method*:

```
<!-- templates/payment.html -->
<form action="{{ form.action }}" method="{{ form.method }}">
    {{ form.as_p }}
    <p><input type="submit" value="Proceed" /></p>
</form>
```

6. Configure your `settings.py`:

```
# settings.py
INSTALLED_APPS = [
    # ...
    'payments']

PAYMENT_HOST = 'localhost:8000'
PAYMENT_USES_SSL = False
PAYMENT_MODEL = 'mypaymentapp.Payment'
PAYMENT_VARIANTS = {
    'default': ('payments.dummy.DummyProvider', {})}
```

Variants are named pairs of payment providers and their configuration.

Note: Variant names are used in URLs so it's best to stick to ASCII.

Note: `PAYMENT_HOST` can also be a callable object.

Making a payment

1. Create a Payment instance:

```
from decimal import Decimal

from payments import get_payment_model

Payment = get_payment_model()
payment = Payment.objects.create(
    variant='default', # this is the variant from PAYMENT_VARIANTS
    description='Book purchase',
    total=Decimal(120),
    tax=Decimal(20),
    currency='USD',
    delivery=Decimal(10),
    billing_first_name='Sherlock',
    billing_last_name='Holmes',
    billing_address_1='221B Baker Street',
    billing_address_2='',
    billing_city='London',
    billing_postcode='NW1 6XE',
    billing_country_code='UK',
    billing_country_area='Greater London',
    customer_ip_address='127.0.0.1')
```

2. Redirect the user to your payment handling view.

Payment amounts

The `Payment` instance provides two fields that let you check the total charged amount and the amount actually captured:

```
>>> payment.total
Decimal('181.38')

>>> payment.captured_amount
Decimal('0')
```

Payment statuses

A payment may have one of several statuses, that indicates its current state. The status is stored in `status` field of your `Payment` instance. Possible statuses are:

waiting Payment is waiting for confirmation. This is the first status, which is assigned to the payment after creating it.

input Customer requested the payment form and is providing the payment data.

preauth Customer has authorized the payment and now it can be captured. Please remember, that this status is only possible when the `capture` flag is set to `False` (see [Authorization and capture](#) for details).

confirmed Payment has been finalized or the funds were captured (when using `capture=False`).

rejected The payment was rejected by the payment gateway. Inspect the contents of the `payment.message` and `payment.extra_data` fields to see the gateway response.

refunded Payment has been successfully refunded to the customer (see [Refunding a payment](#) for details).

error An error occurred during the communication with the payment gateway. Inspect the contents of the `payment.message` and `payment.extra_data` fields to see the gateway response.

Fraud statuses

Some gateways provide services used for fraud detection. You can check the fraud status of your payment by accessing `payment.fraud_status` and `payment.fraud_message` fields. The possible fraud statuses are:

unknown The fraud status is unknown. This is the default status for gateways, that do not involve fraud detection.

accept Fraud was not detected.

reject Fraud service detected some problems with the payment. Inspect the details by accessing the `payment.fraud_message` field.

review The payment was marked for review.

Refunding a payment

If you need to refund a payment, you can do this by calling the `refund()` method on your `Payment` instance:

```
>>> from payments import get_payment_model
>>> Payment = get_payment_model()
>>> payment = Payment.objects.get()
>>> payment.refund()
```

By default, the total amount would be refunded. You can perform a partial refund, by providing the `amount` parameter:

```
>>> from decimal import Decimal
>>> payment.refund(amount=Decimal(10.0))
```

Note: Only payments with the `confirmed` status can be refunded.

Authorization and capture

Some gateways offer a two-step payment method known as Authorization & Capture, which allows you to collect the payment manually after the buyer has authorized it. To enable this payment type, you have to set the `capture` parameter to `False` in the configuration of payment backend:

```
# settings.py
PAYMENT_VARIANTS = {
    'default': ('payments.dummy.DummyProvider', {'capture': False})}
```

Capturing the payment

To capture the payment from the buyer, call the `capture()` method on the `Payment` instance:

```
>>> from payments import get_payment_model
>>> Payment = get_payment_model()
>>> payment = Payment.objects.get()
>>> payment.capture()
```

By default, the total amount will be captured. You can capture a lower amount, by providing the `amount` parameter:

```
>>> from decimal import Decimal
>>> payment.capture(amount=Decimal(10.0))
```

Note: Only payments with the `preauth` status can be captured.

Releasing the payment

To release the payment to the buyer, call the `release()` method on your `Payment` instance:

```
>>> from payments import get_payment_model
>>> Payment = get_payment_model()
>>> payment = Payment.objects.get()
>>> payment.release()
```

Note: Only payments with the `preauth` status can be released.

Provided backends

Dummy

class `payments.dummy.DummyProvider`

This is a dummy backend suitable for testing your store without contacting any payment gateways. Instead of using an external service it will simply show you a form that allows you to confirm or reject the payment.

Example:

```
PAYMENT_VARIANTS = {
    'dummy': ('payments.dummy.DummyProvider', {})}
```

Authorize.Net

class `payments.authorizenet.AuthorizeNetProvider` (`login_id`, `transaction_key`[, `endpoint='https://test.authorize.net/gateway/transact.dll'`])

This backend implements payments using the Advanced Integration Method (AIM) from [Authorize.Net](#).

Parameters

- **login_id** – Your API Login ID assigned by Authorize.net
- **transaction_key** – Your unique Transaction Key assigned by Authorize.net
- **endpoint** – The API endpoint to use. For the production environment, use `'https://secure.authorize.net/gateway/transact.dll'` instead

Example:

```
# use staging environment
PAYMENT_VARIANTS = {
    'authorizenet': ('payments.authorizenet.AuthorizeNetProvider', {
        'login_id': '1234login',
        'transaction_key': '1234567890abcdef',
        'endpoint': 'https://test.authorize.net/gateway/transact.dll'})}
```

This backend does not support fraud detection.

Braintree

```
class payments.braintree.BraintreeProvider(merchant_id, public_key, private_key[, sandbox=True])
```

This backend implements payments using [Braintree](#).

Parameters

- **merchant_id** – Merchant ID assigned by Braintree
- **public_key** – Public key assigned by Braintree
- **private_key** – Private key assigned by Braintree
- **sandbox** – Whether to use a sandbox environment for testing

Example:

```
# use sandbox
PAYMENT_VARIANTS = {
    'braintree': ('payments.braintree.BraintreeProvider', {
        'merchant_id': '112233445566',
        'public_key': '1234567890abcdef',
        'private_key': 'abcdef123456',
        'sandbox': True})}
```

This backend does not support fraud detection.

Coinbase

```
class payments.coinbase.CoinbaseProvider(key, secret[, endpoint='sandbox.coinbase.com'])
```

This backend implements payments using [Coinbase](#).

Parameters

- **key** – Api key generated by Coinbase
- **secret** – Api secret generated by Coinbase
- **endpoint** – Coinbase endpoint domain to use. For the production environment, use 'coinbase.com' instead

Example:

```
# use sandbox
PAYMENT_VARIANTS = {
    'coinbase': ('payments.coinbase.CoinbaseProvider', {
        'key': '123abcd',
        'secret': 'abcd1234',
        'endpoint': 'sandbox.coinbase.com'})}
```

This backend does not support fraud detection.

Cybersource

```
class payments.cybersource.CyberSourceProvider(merchant_id, password[, org_id=None,
                                             fingerprint_url='https://h.online-
                                             metrix.net/fp/', sandbox=True, cap-
                                             ture=True])
```

This backend implements payments using [Cybersource](#).

Parameters

- **merchant_id** – Your Merchant ID
- **password** – Generated transaction security key for the SOAP toolkit
- **org_id** – Provide this parameter to enable Cybersource Device Fingerprinting
- **fingerprint_url** – Address of the fingerprint server
- **sandbox** – Whether to use a sandbox environment for testing
- **capture** – Whether to capture the payment automatically. See [Authorization and capture](#) for more details.

Example:

```
# use sandbox
PAYMENT_VARIANTS = {
    'cybersource': ('payments.cybersource.CyberSourceProvider', {
        'merchant_id': 'example',
        'password': '1234567890abcdef',
        'capture': False,
        'sandbox': True})}
```

This backend supports fraud detection.

Merchant-Defined Data

Cybersource allows you to pass Merchant-Defined Data, which is additional information about the payment or the order, such as an order number, additional customer information, or a special comment or request from the customer. This can be accomplished by passing your data to the Payment instance:

```
>>> payment.attrs.merchant_defined_data = {'01': 'foo', '02': 'bar'}
```

Dotpay

```
class payments.dotpay.DotpayProvider(seller_id, pin[, channel=0, lock=False, lang='pl', end-
                                     point='https://ssl.dotpay.pl/test_payment/'])
```

This backend implements payments using a popular Polish gateway, [Dotpay.pl](#).

Due to API limitations there is no support for transferring purchased items.

Parameters

- **seller_id** – Seller ID assigned by Dotpay
- **pin** – PIN assigned by Dotpay
- **channel** – Default payment channel (consult reference guide)

- **lang** – UI language
- **lock** – Whether to disable channels other than the default selected above
- **endpoint** – The API endpoint to use. For the production environment, use 'https://ssl.dotpay.pl/' instead

Example:

```
# use defaults for channel and lang but lock available channels
PAYMENT_VARIANTS = {
    'dotpay': ('payments.dotpay.DotpayProvider', {
        'seller_id': '123',
        'pin': '0000',
        'lock': True,
        'endpoint': 'https://ssl.dotpay.pl/test_payment/'})}
```

This backend does not support fraud detection.

Google Wallet

```
class payments.wallet.GoogleWalletProvider(seller_id, seller_secret[, library='https://sandbox.google.com/checkout/inapp/lib/buy.js'])
```

This backend implements payments using [Google Wallet](#) for digital goods API.

Parameters

- **seller_id** – Seller ID assigned by Google Wallet
- **seller_secret** – Seller secret assigned by Google Wallet
- **library** – The API library to use. For the production environment, use 'https://wallet.google.com/inapp/lib/buy.js' instead

Example:

```
# use sandbox
PAYMENT_VARIANTS = {
    'wallet': ('payments.wallet.GoogleWalletProvider', {
        'seller_id': '112233445566',
        'seller_secret': '1234567890abcdef',
        'library': 'https://sandbox.google.com/checkout/inapp/lib/buy.js'})}
```

This backend requires js files that should be added to the template using `{{ form.media }}` e.g:

```
<!-- templates/payment.html -->
<form action="{{ form.action }}" method="{{ form.method }}">
    {{ form.as_p }}
    <p><input type="submit" value="Proceed" /></p>
</form>
{{ form.media }}
```

To specify the *postback URL* at the Merchant Settings page use direct url to *process payment view* in conjunction with your *variant name*:

E.g: `https://example.com/payments/process/wallet`

This backend does not support fraud detection.

PayPal

```
class payments.paypal.PaypalProvider(client_id, secret[, endpoint='https://api.sandbox.paypal.com', capture=True])
```

This backend implements payments using [PayPal.com](#).

Parameters

- **client_id** – Client ID assigned by PayPal or your email address
- **secret** – Secret assigned by PayPal
- **endpoint** – The API endpoint to use. For the production environment, use `'https://api.paypal.com'` instead
- **capture** – Whether to capture the payment automatically. See [Authorization and capture](#) for more details.

Example:

```
# use sandbox
PAYMENT_VARIANTS = {
    'paypal': ('payments.paypal.PaypalProvider', {
        'client_id': 'user@example.com',
        'secret': 'iseedeadpeople',
        'endpoint': 'https://api.sandbox.paypal.com',
        'capture': False})}
```

```
class payments.paypal.PaypalCardProvider(client_id, secret[, endpoint='https://api.sandbox.paypal.com'])
```

This backend implements payments using [PayPal.com](#) but the credit card data is collected by your site.

Parameters are identical to those of `payments.paypal.PaypalProvider`.

Example:

```
PAYMENT_VARIANTS = {
    'paypal': ('payments.paypal.PaypalCardProvider', {
        'client_id': 'user@example.com',
        'secret': 'iseedeadpeople'})}
```

This backend does not support fraud detection.

Sage Pay

```
class payments.sagepay.SagepayProvider(vendor, encryption_key[, endpoint='https://test.sagepay.com/Simulator/VSPFormGateway.asp'])
```

This backend implements payments using [SagePay.com](#) Form API.

Purchased items are not currently transferred.

Parameters

- **vendor** – Your vendor code
- **encryption_key** – Encryption key assigned by Sage Pay

- **endpoint** – The API endpoint to use. For the production environment, use `'https://live.sagepay.com/gateway/service/vspform-register.vsp'` instead

Example:

```
# use simulator
PAYMENT_VARIANTS = {
    'sage': ('payments.sagepay.SagepayProvider', {
        'vendor': 'example',
        'encryption_key': '1234567890abcdef',
        'endpoint': 'https://test.sagepay.com/Simulator/VSPFormGateway.asp'})}
```

This backend does not support fraud detection.

Sofort.com

```
class payments.sofort.SofortProvider(key, id, project_id[, endpoint=
                                     'https://api.sofort.com/api/xml'])
```

This backend implements payments using *sofort.com* <<https://www.sofort.com/>> API.

Parameters

- **id** – Your sofort.com user id
- **key** – Your secret key
- **project_id** – Your sofort.com project id
- **endpoint** – The API endpoint to use.

Example:

```
PAYMENT_VARIANTS = {
    'sage': ('payments.sofort.SofortProvider', {
        'id': '123456',
        'key': '1234567890abcdef',
        'project_id': '654321',
        'endpoint': 'https://api.sofort.com/api/xml'})}
```

This backend does not support fraud detection.

Stripe

```
class payments.stripe.StripeProvider(secret_key, public_key)
```

This backend implements payments using [Stripe](#).

Parameters

- **secret_key** – Secret key assigned by Stripe.
- **public_key** – Public key assigned by Stripe.
- **name** – A friendly name for your store.
- **image** – Your logo.

Example:

```
# use sandbox
PAYMENT_VARIANTS = {
    'stripe': ('payments.stripe.StripeProvider', {
        'secret_key': 'sk_test_123456',
        'public_key': 'pk_test_123456'})}
```

This backend does not support fraud detection.

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