
django-oscar-cch Documentation

Release 2.2.8.post18

Craig Weber <craig@crgwbr.com>

Jul 10, 2019

CONTENTS

1	Contents	3
1.1	Installation	3
1.1.1	Caveats	3
1.1.2	Installation Guide	3
1.2	Usage	4
1.2.1	Simple Integration	4
1.2.2	Custom Integration	5
1.3	Django Settings	5
1.3.1	Connection Settings	5
1.3.2	Transaction Settings	5
1.3.3	Product Taxation Settings	6
1.3.4	Other Settings	6
1.4	API Reference	6
1.4.1	PNP Installations	6
1.4.2	Models	7
1.5	Changelog	8
1.5.1	2.2.9	8
1.5.2	2.2.8	8
1.5.3	2.2.7	8
1.5.4	2.2.6	8
1.5.5	2.2.5	8
1.5.6	2.2.4	8
1.5.7	2.2.3	8
1.5.8	2.2.2	8
1.5.9	2.2.1	9
1.5.10	2.2.0	9
1.5.11	2.1.0	9
1.5.12	2.0.0	9
1.5.13	1.1.1	9
1.5.14	1.1.0	9
1.5.15	1.0.5	9
1.5.16	1.0.4	9
1.5.17	1.0.3	10
1.5.18	1.0.2	10
1.5.19	1.0.1	10
1.5.20	1.0.0	10
	Index	11

This package handles integration between django-oscar based e-commerce sites and the [CCH Sales Tax Office](#) SOAP API.

Full Documentation: <https://django-oscar-cch.readthedocs.io>

CONTENTS

1.1 Installation

1.1.1 Caveats

1. You must fork the *order* application from Oscar to enable tax calculation as part of placing an order.
2. Persistence of tax details, while optional, requires that your project uses PostgreSQL. It relies on the HStore field.

1.1.2 Installation Guide

1. Install the `django-oscar-cch` package.:

```
$ pip install django-oscar-cch
```

2. Add `oscarcch` to your `INSTALLED_APPS`:

```
# myproject/settings.py
...
INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.sites',
    'django.contrib.postgres',
    ...
    'oscarcch',
    ...
] + get_core_apps([
    ...
])
...
```

3. Add some attributes to `settings.py` to configure how the application should connect to CCH.:

```
# myproject/settings.py

# Add this is you need to connect to the SOAP API through an HTTP Proxy.
# See the instrumented-soap documentation for more details.
SOAP_PROXY_URL = ...
```

(continues on next page)

(continued from previous page)

```
# Configure the CCH WSDL location, entity, and division code
CCH_WSDL = ...
CCH_ENTITY = ...
CCH_DIVISION = ...

# Provide either a product SKU or a product group and item to send to CCH when
↪calculating taxes
CCH_PRODUCT_SKU = ...
CCH_PRODUCT_GROUP = ...
CCH_PRODUCT_ITEM = ...
```

- Alternative to setting CCH_PRODUCT_SKU, CCH_PRODUCT_GROUP, and CCH_PRODUCT_ITEM globally, you can set them per-product by creating ProductClass attributes with the same names (in lowercase).
- Install the necessary extra fields on `order.models.Order` and `order.models.Line` (see also [How to fork Oscar apps](#)):

```
# order/models.py

from oscarcch.mixins import CCHOrderMixin, CCHOrderLineMixin
from oscar.apps.order.abstract_models import AbstractOrder, AbstractLine

class Order(CCHOrderMixin, AbstractOrder):
    pass

class Line(CCHOrderLineMixin, AbstractLine):
    pass

from oscar.apps.order.models import * # noqa
```

- Create and run migrations for the `order` app:

```
$ python manage.py makemigrations order
$ python manage.py migrate
```

For usage, continue to [Usage](#).

1.2 Usage

1.2.1 Simple Integration

The library includes a mix-in class that can be added to `order.utils.OrderCreator` to enable tax calculation as part of the order placement process. Override `oscar.apps.order.utils.OrderCreator` in `order/utils.py` and add the mix-in directly before the super class:

```
from oscarcch.mixins import CCHOrderCreatorMixin
from oscar.apps.order import utils

class OrderCreator(CCHOrderCreatorMixin, utils.OrderCreator):
    pass
```


1.2.2 Custom Integration

For more complicated needs, you can interface with the tax calculation API directly. `CCHTaxCalculator` is used to apply taxes to a user's basket.:

```
from oscarccch.calculator import CCHTaxCalculator
from oscarccch.models import OrderTaxation

# Take a basket and the customer's shipping address and apply taxes to the basket. We
# can optionally
# tolerate a failure to connect to the CCH server. In such a case, tax will be set to
# 0 and the method
# will return none. In normal cases, the method will return the details of the taxes
# applied.
cch_response = CCHTaxCalculator().apply_taxes(basket, shipping_address, ignore_cch_
# fail=True)
is_tax_known = (cch_response is not None)

# ...
# Do other things necessary to convert the basket into an order
# ...

# Take the tax details generated earlier and save them into the DB.
if is_tax_known:
    OrderTaxation.save_details(order, cch_response)
```

1.3 Django Settings

All settings in `oscarccch.settings` can be overridden by in your Django project's settings file.

1.3.1 Connection Settings

`oscarccch.settings.CCH_WSDL = 'file:///home/docs/checkouts/readthedocs.org/user_builds/django-oscar-cch/checkouts/2.2.8.post18'`
Full URL of the CCH WSDL.

`oscarccch.settings.CCH_MAX_RETRIES = 2`
Max number of times to retry to calculate tax before giving up.

`oscarccch.settings.CCH_ENTITY = 'TESTSANDBOX'`
Default entity code to send to CCH.

`oscarccch.settings.CCH_DIVISION = '42'`
Default division code to send to CCH.

`oscarccch.settings.CCH_SOURCE_SYSTEM = 'Oscar'`
Name of the source system to send to CCH. Defaults to *Oscar*.

1.3.2 Transaction Settings

`oscarccch.settings.CCH_TEST_TRANSACTIONS = True`
Whether or not to set the test flag in CCH requests. Defaults to the same value as Django's `DEBUG` setting.

`oscarccch.settings.CCH_TRANSACTION_TYPE = '01'`
CCH Transaction Type Code. Defaults to 01.

```
oscarcch.settings.CCH_CUSTOMER_TYPE = '08'
```

CCH Customer Type. Defaults to 08.

```
oscarcch.settings.CCH_PROVIDER_TYPE = '70'
```

CCH Provider Type. Defaults to 70.

```
oscarcch.settings.CCH_FINALIZE_TRANSACTION = False
```

Whether or not to set the CCH finalize transaction flag. Defaults to False.

1.3.3 Product Taxation Settings

```
oscarcch.settings.CCH_PRODUCT_SKU = 'ABC123'
```

Default CCH Product SKU. Can be overridden by creating and setting a Product attribute called `cch_product_sku`.

```
oscarcch.settings.CCH_PRODUCT_GROUP = ''
```

Default CCH Product Group Code. Can be overridden by creating and setting a Product attribute called `cch_product_group`.

```
oscarcch.settings.CCH_PRODUCT_ITEM = ''
```

Default CCH Product Item Code. Can be overridden by creating and setting a Product attribute called `cch_product_item`.

1.3.4 Other Settings

```
oscarcch.settings.CCH_TOLERATE_FAILURE_DURING_PLACE_ORDER = True
```

When using the *Simple Integration*, this controls whether or not to allow placing an order when the call to CCH for tax calculation fails or times out. Defaults to True. When False and an error occurs, `OrderCreator.place_order` will raise an Exception.

```
oscarcch.settings.CCH_PRECISION = Decimal('0.01')
```

Decimal precision to use when sending prices to CCH. Defaults to two-decimal places.

```
oscarcch.settings.CCH_POSTALCODE_LENGTH = 5
```

Max length of postal-codes to send to CCH. Defaults to 5. All digits and characters after this limit will be clipped in the SOAP request.

```
oscarcch.settings.CCH_TIME_ZONE = <DstTzInfo 'America/New_York' LMT-1 day, 19:04:00 STD>
```

Timezone to use for date times sent to CCH. Defaults to UTC.

1.4 API Reference

1.4.1 PNP Installations

```
class oscarcch.calculator.CCHTaxCalculator
```

Simple interface between Python and the CCH Sales Tax Office SOAP API.

```
    apply_taxes(basket, shipping_address, ignore_cch_fail=False)
```

Apply taxes to a Basket instance using the given shipping address.

Pass return value of this method to *OrderTaxation.save_details* to persist the taxation details, CCH transaction ID, etc in the database.

Parameters

- **basket** – Basket instance

- **shipping_address** – ShippingAddress instance
- **ignore_cch_fail** – When *True*, allows CCH to fail silently

Returns SOAP Response.

client

Lazy constructor for SOAP client

estimate_taxes (*basket*, *shipping_address*)

DEPRECATED. Use *CCHTaxCalculator.apply_taxes* instead.

1.4.2 Models

class oscar.cch.models.**OrderTaxation** (*args, **kwargs)

Persist top-level taxation data related to an Order.

exception DoesNotExist

exception MultipleObjectsReturned

messages

Message text returned by CCH

order

One-to-one foreign key to order.Order.

classmethod **save_details** (*order*, *taxes*)

Given an order and a SOAP response, persist the details.

Parameters

- **order** – Order instance
- **taxes** – Return value of *CCHTaxCalculator.apply_taxes*

total_tax_applied

Total Tax applied to the order

transaction_id

Transaction ID returned by CCH

transaction_status

Transaction Status returned by CCH

class oscar.cch.models.**LineItemTaxation** (*args, **kwargs)

Persist taxation details related to a single order line.

exception DoesNotExist

exception MultipleObjectsReturned

country_code

Country code used to calculate taxes

line_item

One-to-one foreign key to order.Line

state_code

State code used to calculate taxes

total_tax_applied

Total tax applied to the line

```
class oscarcch.models.LineItemTaxationDetail(*args, **kwargs)
    Represents a single type tax applied to a line.

    exception DoesNotExist
    exception MultipleObjectsReturned

    data
        HStore of data about the applied tax

    taxation
        Many-to-one foreign key to LineItemTaxation
```

1.5 Changelog

1.5.1 2.2.9

- Internationalization

1.5.2 2.2.8

- Fix a few more Django 2.0 deprecation warnings that were missed in 2.2.7.

1.5.3 2.2.7

- Fix Django 2.0 Deprecation warnings.

1.5.4 2.2.6

- Add support for Oscar 1.5 and Django 1.11.

1.5.5 2.2.5

- Detect 9-digit ZIP codes in shipping a warehouse addresses and, instead of truncating the last 4 digits, send them in the *Plus4* field of the SOAP request.

1.5.6 2.2.4

- [Important] Fix bug causing order lines to get deleted is the corresponding basket or basket line is deleted.

1.5.7 2.2.3

- Handle bug occurring when a basket contained a zero-quantity line item.

1.5.8 2.2.2

- Upgrade dependencies.

1.5.9 2.2.1

- Simplified retry logic and fixed infinite loop issue.

1.5.10 2.2.0

- Improved documentation.
- **Added ability to retry CCH transactions when requests raises a `ConnectionError`, `ConnectTimeout`, or `ReadTimeout`.**
 - Added new setting, `CCH_MAX_RETRIES`, to control how many retries to attempt after an initial failure. Defaults to 2.

1.5.11 2.1.0

- Remove caching functionality from `CCHTaxCalculator.estimate_taxes` since miss rate was almost 100%.
- Fix bug in tax calculation causing taxes to be calculated based on pre-discounted prices instead of post-discounted prices.
- Add optional basket line quantity override by checking for property `BasketLine.cch_quantity`. Falls back to standard quantity if property doesn't exist.

1.5.12 2.0.0

- Renamed package to *oscarcch* for consistency. Set `db_table` option on models to prevent requiring table rename.
- Move tests inside *oscarcch* package.

1.5.13 1.1.1

- Fix bug where calculator could throw exception even when `ignore_cch_error` flag was set.

1.5.14 1.1.0

- Add the ability to set CCH product SKU, item, and group per-product in addition to globally.

1.5.15 1.0.5

- Add `CCH_TIME_ZONE` setting.
- Send time zone aware ISO format date as `CalculateRequest InvoiceDate` node. Formerly just sent the date.

1.5.16 1.0.4

- Truncate ZIP codes so that CCH doesn't choke when the user supplies a full 9-digit ZIP code.

1.5.17 1.0.3

- Improve unit tests by mocking all requests and responses. This allows running tests without a connection to an actual CCH server instance.
- Fixed bug where floats from SOAP response weren't properly converted into quantized decimals when saving *OrderTaxation* and *LineTaxation* models.

1.5.18 1.0.2

- Made *instrumented-soap* dependency optional.
- Moved gitlab testing from the shell executor to the docker executor.
- Added better usage documentation.

1.5.19 1.0.1

- Fixed an exception when *raven* isn't installed.

1.5.20 1.0.0

- Initial release.

INDEX

A

`apply_taxes()` (*oscarcch.calculator.CCHTaxCalculator* method), 6

C

`CCH_CUSTOMER_TYPE` (*in module oscarcch.settings*), 6
`CCH_DIVISION` (*in module oscarcch.settings*), 5
`CCH_ENTITY` (*in module oscarcch.settings*), 5
`CCH_FINALIZE_TRANSACTION` (*in module oscarcch.settings*), 6
`CCH_MAX_RETRIES` (*in module oscarcch.settings*), 5
`CCH_POSTALCODE_LENGTH` (*in module oscarcch.settings*), 6
`CCH_PRECISION` (*in module oscarcch.settings*), 6
`CCH_PRODUCT_GROUP` (*in module oscarcch.settings*), 6
`CCH_PRODUCT_ITEM` (*in module oscarcch.settings*), 6
`CCH_PRODUCT_SKU` (*in module oscarcch.settings*), 6
`CCH_PROVIDER_TYPE` (*in module oscarcch.settings*), 6
`CCH_SOURCE_SYSTEM` (*in module oscarcch.settings*), 5
`CCH_TEST_TRANSACTIONS` (*in module oscarcch.settings*), 5
`CCH_TIME_ZONE` (*in module oscarcch.settings*), 6
`CCH_TOLERATE_FAILURE_DURING_PLACE_ORDER` (*in module oscarcch.settings*), 6
`CCH_TRANSACTION_TYPE` (*in module oscarcch.settings*), 5
`CCH_WSDL` (*in module oscarcch.settings*), 5
`CCHTaxCalculator` (*class in oscarcch.calculator*), 6
`client` (*oscarcch.calculator.CCHTaxCalculator* attribute), 7
`country_code` (*oscarcch.models.LineItemTaxation* attribute), 7

D

`data` (*oscarcch.models.LineItemTaxationDetail* attribute), 8

E

`estimate_taxes()` (*oscarcch.calculator.CCHTaxCalculator* method), 7

L

`line_item` (*oscarcch.models.LineItemTaxation* attribute), 7
`LineItemTaxation` (*class in oscarcch.models*), 7
`LineItemTaxation.DoesNotExist`, 7
`LineItemTaxation.MultipleObjectsReturned`, 7
`LineItemTaxationDetail` (*class in oscarcch.models*), 7
`LineItemTaxationDetail.DoesNotExist`, 8
`LineItemTaxationDetail.MultipleObjectsReturned`, 8

M

`messages` (*oscarcch.models.OrderTaxation* attribute), 7

O

`order` (*oscarcch.models.OrderTaxation* attribute), 7
`OrderTaxation` (*class in oscarcch.models*), 7
`OrderTaxation.DoesNotExist`, 7
`OrderTaxation.MultipleObjectsReturned`, 7

S

`save_details()` (*oscarcch.models.OrderTaxation* class method), 7
`state_code` (*oscarcch.models.LineItemTaxation* attribute), 7

T

`taxation` (*oscarcch.models.LineItemTaxationDetail* attribute), 8
`total_tax_applied` (*oscarcch.models.LineItemTaxation* attribute), 7
`total_tax_applied` (*oscarcch.models.OrderTaxation* attribute), 7
`transaction_id` (*oscarcch.models.OrderTaxation* attribute), 7
`transaction_status` (*oscarcch.models.OrderTaxation* attribute), 7