Django Facebook Documentation

Release 6.0.6

Thierry Schellenbach

Contents

| 1 | Status | 1 |
|----|----------------------------|----------------------------------|
| 2 | News | 3 |
| 3 | Demo & About | 5 |
| 4 | Features | 7 |
| 5 | Documentation | 9 |
| 6 | 6.3 Advanced documentation | 11 12 17 22 24 33 |
| Ρv | vthon Module Index | 35 |

| | | | - 4 |
|-----|----|----|-----|
| CHA | PT | FF | ₹I |

Status

Django and Facebook are both rapidly changing at the moment. Meanwhile, I'm caught up in a startup and don't have much spare time. The library needs a good round of testing against the latest python, django and facebook graph API. Contributions are strongly appreciated. Seriously, give github a try, fork and get started:)

2 Chapter 1. Status

$\mathsf{CHAPTER}\, 2$

News

• django-facebook will be dropping support for django < 1.8 since django only supports versions 1.8 and above.

4 Chapter 2. News

CHAPTER 3

Demo & About

Django Facebook enables your users to easily register using the Facebook API. It converts the Facebook user data and creates regular User and Profile objects. This makes it easy to integrate with your existing Django application.

After registration Django Facebook gives you access to user's graph. Allowing for applications such as:

- Open graph/ Timeline functionality
- Seamless personalization
- Inviting friends
- Finding friends
- Posting to a users profile

Updates and tutorials can be found on my blog mellowmorning

CHAPTER 4

Features

• Access the Facebook API, from:

- Your website (Using javascript OAuth)
- Facebook canvas pages (For building facebook applications)
- Mobile (Or any other flow giving you a valid access token)
- Django User Registration (Convert Facebook user data into a user model)
- Store likes, friends and user data locally.
- Facebook FQL access
- OAuth 2.0 compliant
- Automated reauthentication (For expired tokens)
- Includes Open Facebook (stable and tested Python client to the graph API)

8 Chapter 4. Features

CHAPTER 5

Documentation

Basics

- Installation
- Customizing
- Settings
- Registration backends & Redirects

Open Facebook API

- Getting an OpenFacebook object
- Making calls

Advanced

- Mobile
- Celery
- Signals
- Canvas

CHAPTER 6

Contributing and Running tests

Tests are run from within the example project. You can run them yourself as follows:

install from git

facebook_example/manage.py test django_facebook

Vagrant

A vagrant development setup is included in the GIT repo. Assuming you have vagrant installed, simply type the following in your shell:

To have a working Django Facebook example up and running at 192.168.50.42:8000/facebook/example/. For the facebook login to work simply map that ip to vagrant.mellowmorning.com (Since Facebook checks the domain)

You can run the test suite by typing:

```
python manage.py test django_facebook
```

Basic documentation

Installation

0.) Create a Facebook App

You need a facebook app to use the open graph API and make the login process work. If you don't have a facebook app, now is the time to create one. You can create a facebook app at this url.

Facebook authentication only works if the domain you are working on matches your app domain. Be sure to configure the right app domain in your facebook application settings.

An example:

Your site is www.fashiolista.com, your app domain is set to fashiolista.com and you do your development at local. fashiolista.com. If you try to authenticate with Facebook from a different domain you will get an authentication error.

1.) Pip install

```
pip install django_facebook
```

2.) Settings

Define the following settings in your settings.py file:

```
FACEBOOK_APP_ID=str('<your app id>')
FACEBOOK_APP_SECRET = str('your app secret')
```

Context processor

add django facebook to your installed apps:

```
'django_facebook',
```

Add this line to EACH of your templates' context processors (TEMPLATES[*]['OPTIONS']['context_processors'] setting):

```
'django_facebook.context_processors.facebook',
# and add request if you didn't do so already
'django.core.context_processors.request',
```

The full setting on a new django 1.11 app looks like this

```
]
```

Auth backend

Add these to your AUTHENTICATION_BACKENDS setting:

```
'django_facebook.auth_backends.FacebookBackend',
'django.contrib.auth.backends.ModelBackend',
```

The full setting on a new django 1.11 app looks like this:

```
AUTHENTICATION_BACKENDS = (
   'django_facebook.auth_backends.FacebookBackend',
   'django.contrib.auth.backends.ModelBackend',
)
```

3.) Urls Now, add this line to your url config:

```
url(r'^facebook/', include('django_facebook.urls')),
url(r'^accounts/', include('django_facebook.auth_urls')), #Don't add this line if you_

→use django registration or userena for registration and auth.
```

4.) Update your models

The following step depends on your version of Django. Django versions before 1.5 need to use a custom profile model. Whereas Django 1.5 and up can use a custom user model.

A. Custom user model

If you don't already have a custom user model, simply uses the provided model by setting your AUTH USER MODEL to FacebookCustomUser:

```
AUTH_USER_MODEL = 'django_facebook.FacebookCustomUser'
```

Alternatively use the abstract model provided in django_facebook.models.FacebookProfileModel

Note: Please note that Django Facebook does not support custom user models with USERNAME_FIELD different than username.

B. Profile model

If you don't already have a custom Profile model, simply uses the provided model by setting your AUTH_PROFILE_MODULE to FacebookProfile:

```
AUTH_PROFILE_MODULE = 'django_facebook.FacebookProfile'
```

Be sure to sync the database via python manage.py migrate --run-syncdb after setting this up.

Otherwise Django Facebook provides an abstract model which you can inherit like this.

```
from django.db import models
from django.dispatch.dispatcher import receiver
from django_facebook.models import FacebookModel
from django.db.models.signals import post_save
from django_facebook.utils import get_user_model, get_profile_model
from your_project import settings
```

```
class MyCustomProfile(FacebookModel):
    user = models.OneToOneField(settings.AUTH_USER_MODEL)

    @receiver(post_save)
    def create_profile(sender, instance, created, **kwargs):
        """Create a matching profile whenever a user object is created."""
    if sender == get_user_model():
        user = instance
        profile_model = get_profile_model()
    if profile_model == MyCustomProfile and created:
        profile, new = MyCustomProfile.objects.get_or_create(user=instance)``
```

Remember to update AUTH_PROFILE_MODULE in settings to your new profile. Don't forget to update your database using syncdb or south after this step.

Note: You need a profile model attached to every user model. For new accounts this will get created automatically, but you will need to migrate older accounts.

Congratulations

Right now you should have a working registration/connect/login in flow available at /facebook/example/! (settings.DEBUG needs to be set to True) Test if everything is working and ensure you didn't miss a step somewhere. If you encounter any difficulties please open an issue.

Of course you now want to customize things like the login button, the page after registration etc. This is explained in the integration section.

Customizing

Now it's time to customize things a little. For a full example you can look at connect.html in the templates directory.

Login flow

1.) First load the css and javascript:

If you encounter issues here you probably don't have django static files setup correctly.

2.) Next design the form

You can control redirects using next, register next and error next.

Connect flow

Usually you'll also want to offer your users the ability to connect their existing account to Facebook. You can control this by setting connect_facebook=1. The default behaviour is not to connect automatically. (As this previously caused

users to connect their accounts to Facebook by accident)

Settings

Security settings

FACEBOOK_APP_ID

Your facebook app id

FACEBOOK_APP_SECRET

Your facebook app secret

FACEBOOK DEFAULT SCOPE

The default scope we should use, note that registration will break without email Defaults to ['email', 'user_about_me', 'user_birthday', 'user_website']

Customizing registration

FACEBOOK_REGISTRATION_BACKEND

Allows you to overwrite the registration backend class Specify a full path to a class (defaults to django_facebook.registration_backends.FacebookRegistrationBackend)

Likes and Friends

FACEBOOK_STORE_LIKES

If we should store likes

FACEBOOK_STORE_FRIENDS

If we should store friends

FACEBOOK_CELERY_STORE

If celery should be used to retrieve friends and likes

FACEBOOK_CELERY_TOKEN_EXTEND

Use celery for updating tokens, recommended since it's quite slow

Redirects

For most applications you can simply use the next, register next and error next parameters to control the post registration flow. The "next" parameter provides the default next page for login, connect, error or register actions. "register_next" and "error_next" allow you to customize the next page for those specific scenarios. This is usefull when you for instance want to show an introduction page to new users.

Flows

- Login (login next, next, default)
- Connect (connect_next, next, default)
- Register (register_next, next, default)
- Error (error next, next, default)

The default redirect is specified by the FACEBOOK_LOGIN_DEFAULT_REDIRECT setting.

If the default customizability isn't adequate for your needs you can also subclass the registration backend.

```
class <u>CustomBackend</u>(FacebookRegistrationBackend):
    def post_connect(action):
        # go as crazy as you want, just be sure to return a response
        response = HttpRedirect('/something/')
        if action is CONNECT_ACTIONS.LOGIN:
            response = HttpRedirect('/')
        return response
```

Registration Backends

Registration Backends

By default Django Facebook ships with its own registration system. It provides a basic manual registration flow and the option to connect with Facebook.

If you are looking for something more complicated it's possible to integrate with Userena or Django Registration. To add support for these systems we use the FACEBOOK_REGISTRATION_BACKEND setting.

Django Registration support Create a registration backend which subclasses both Django Facebook and Django Registration's registration backend. An example is included in facebook_example/registration_backends.py

Django Userena support

Django Userena is easier to work with than Django Registration. It is however hard to setup unittesting with Userena, so the integration between Django Facebook and Userena might not work. Please report any bugs you run into.

```
FACEBOOK_REGISTRATION_BACKEND = 'django_facebook.registration_backends.UserenaBackend'
```

Also have a look at the userena settings file in the facebook example project. It provides a clear example of how to configure Userena and Django Facebook to work together.

Other registration systems

Supporting any other registration system is quite easy. Adjust the above settings to point to your own code. Note that the form's save method needs to return the new user object.

Also have a look at the API docs for FacebookRegistrationBackend

Using the Open graph API

Getting a graph object

Now that you have Django Facebook up and running you'll want to make API calls to Facebook. The first step is getting an <code>OpenFacebook</code> object setup.

User object

For users which registered through Django Facebook, you'll have an access token stored in the database. Note that by default tokens expire quickly (couple of hours), Django Facebook will try to extend these to 60 days.

```
graph = user.get_offline_graph()
```

From the request

If you've just authenticated via Facebook you can get the graph from the request as such

```
# persistent (graph stored in session)
get_persistent_graph(request)
require_persistent_graph(request)

# not persistent
get_facebook_graph(request)
require_facebook_graph(request)
```

Typically you'll use the decorators in views where you access Facebook.

Access token

For mobile apps you'll sometimes get an access token directly

```
from open_facebook import OpenFacebook
graph = OpenFacebook (access_token)
```

Open Facebook API

Open Facebook allows you to use Facebook's open graph API with simple python code

Features

- Supported and maintained
- Tested so people can contribute
- Facebook exceptions are mapped
- Logging

Basic examples:

```
facebook = OpenFacebook(access_token)
# Getting info about me
facebook.get('me')
# Learning some more about fashiolista
facebook.get('fashiolista')
# Writing your first comment
facebook.set('fashiolista/comments', message='I love Fashiolista!')
# Posting to a users wall
facebook.set('me/feed', message='check out fashiolista',
             url='http://www.fashiolista.com')
# Liking a page
facebook.set('fashiolista/likes')
# Getting who likes cocacola
facebook.set('cocacola/likes')
# Use fql to retrieve your name
facebook.fql('SELECT name FROM user WHERE uid = me()')
# Executing fql in batch
facebook.batch_fql([
    'SELECT uid, name, pic_square FROM user WHERE uid = me()',
    'SELECT uid, rsvp_status FROM event_member WHERE eid=12345678',
])
# Uploading pictures
photo_urls = [
    'http://e.fashiocdn.com/images/entities/0/7/B/I/9/0.365x365.jpg',
    'http://e.fashiocdn.com/images/entities/0/5/e/e/r/0.365x365.jpg',
for photo in photo_urls:
   print facebook.set('me/feed', message='Check out Fashiolista',
                       picture=photo, url='http://www.fashiolista.com')
```

Getting an access token

Once you get your access token, Open Facebook gives you access to the Facebook API There are 3 ways of getting a facebook access_token and these are currently implemented by Django Facebook.

- 1. code is passed as request parameter and traded for an access_token using the api
- 2. code is passed through a signed cookie and traded for an access_token
- 3. access_token is passed directly (retrieved through javascript, which would be bad security, or through one of the mobile flows.)

If you are looking to develop your own flow for a different framework have a look at Facebook's documentation: http://developers.facebook.com/docs/authentication/

Also have a look at the FacebookRequired decorator and $get_persistent_graph$ () function to understand the required functionality

Api docs:

The main api class, initialize using

Example:

```
graph = OpenFacebook(access_token)
print(graph.get('me'))
```

batch_fql (queries_dict)

queries_dict a dict with the required queries returns the query results in:

Example:

```
response = facebook.batch_fql({
    name: 'SELECT uid, name, pic_square FROM user WHERE uid = me()',
    rsvp: 'SELECT uid, rsvp_status FROM event_member WHERE eid=12345678',
})
# accessing the results
response['fql_results']['name']
response['fql_results']['rsvp']
```

Parameters queries_dict - A dictiontary of queries to execute

Returns dict

```
delete (path, *args, **kwargs)
```

Delete the given bit of data

Example:

```
graph.delete(12345)
```

Parameters path – the id of the element to remove

```
fql (query, **kwargs)
```

Runs the specified query against the Facebook FQL API.

Example:

```
open_facebook.fql('SELECT name FROM user WHERE uid = me()')
```

Parameters

- query The query to execute
- **kwargs** Extra options to send to facebook

Returns dict

```
get (path, version=None, **kwargs)
```

Make a Facebook API call

Example:

```
open_facebook.get('me')
open_facebook.get('me', fields='id,name')
```

Parameters path – The path to use for making the API call

Returns dict

```
get_many (*ids, **kwargs)
```

Make a batched Facebook API call For multiple ids

Example:

```
open_facebook.get_many('me', 'starbucks')
open_facebook.get_many('me', 'starbucks', fields='id,name')
```

Parameters path – The path to use for making the API call

Returns dict

```
get_request_url (path='', old_api=False, version=None, **params)
```

Gets the url for the request.

```
has_permissions (required_permissions)
```

Validate if all the required_permissions are currently given by the user

Example:

```
open_facebook.has_permissions(['publish_actions','read_stream'])
```

Parameters required_permissions - A list of required permissions

Returns bool

is authenticated()

Ask facebook if we have access to the users data

Returns bool

me()

Cached method of requesting information about me

```
my_image_url (size='large')
```

Returns the image url from your profile Shortcut for me/picture

Parameters size – the type of the image to request, see facebook for available formats

Returns string

permissions()

Shortcut for self.get('me/permissions') with some extra parsing to turn it into a dictionary of booleans

Returns dict

```
set (path, params=None, version=None, **post_data)
```

Write data to facebook

Example:

```
open_facebook.set('me/feed', message='testing open facebook')
```

Parameters

- path The path to use for making the API call
- params A dictionary of get params

• post_data - The kwargs for posting to facebook

Returns dict

class open_facebook.api.FacebookAuthorization

Methods for getting us an access token

There are several flows we must support * js authentication flow (signed cookie) * facebook app authentication flow (signed cookie) * facebook oauth redirect (code param in url) These 3 options need to be converted to an access token

Also handles several testing scenarios * get app access token * create test user * get_or_create_test_user

classmethod convert_code (code, redirect_uri='http://local.mellowmorning.com:8000/facebook/connect/')
Turns a code into an access token

Example:

FacebookAuthorization.convert_code(code)

Parameters

- code The code to convert
- redirect uri The redirect uri with which the code was requested

Returns dict

 ${\bf classmethod\ create_test_user}\ (app_access_token, permissions=None, name=None)$

Creates a test user with the given permissions and name

Parameters

- app_access_token The application's access token
- permissions The list of permissions to request for the test user
- name Optionally specify the name

classmethod extend_access_token (access_token)

https://developers.facebook.com/roadmap/offline-access-removal/ We can extend the token only once per day Normal short lived tokens last 1-2 hours Long lived tokens (given by extending) last 60 days

Example:

FacebookAuthorization.extend_access_token(access_token)

Parameters access_token - The access_token to extend

Returns dict

classmethod get app access token()

Get the access_token for the app that can be used for insights and creating test users application_id = retrieved from the developer page application_secret = retrieved from the developer page returns the application access_token

There is no supported way of get or creating a test user However - creating a test user takes around 5s - you an only create 500 test users So this slows your testing flow quite a bit.

This method checks your test users Queries their names (stores the permissions in the name)

classmethod parse_signed_data (signed_request, secret='0aceba27823a9dfefa955f76949fa4b4')

Thanks to http://stackoverflow.com/questions/3302946/how-to-base64-url-decode-in-python and http://sunilarora.org/parsing-signedrequest-parameter-in-python-bas

```
class open_facebook.api.FacebookConnection
```

Shared utility class implementing the parsing of Facebook API responses

```
classmethod is server error(e, response)
```

Checks an HTTPError to see if Facebook is down or we are using the API in the wrong way Facebook doesn't clearly distinguish between the two, so this is a bit of a hack

```
classmethod match_error_code (error_code)
```

Return the right exception class for the error code

classmethod raise_error (error_type, message, error_code=None)

Lookup the best error class for the error and raise it

Example:

```
FacebookConnection.raise_error(10, 'OAuthException')
```

Parameters

- error_type the error type from the facebook api call
- message the error message from the facebook api call
- error_code optionally the error code which facebook send

classmethod request (path='', post_data=None, old_api=False, **params)

Main function for sending the request to facebook

Example:: FacebookConnection.request('me')

Parameters

- path The path to request, examples: /me/friends/, /me/likes/
- post_data A dictionary of data to post
- parms The get params to include

Advanced documentation

Mobile usage

You can get an access token by using the native Facebook SDK. Subsequently send this token to your Django based API. In the view you can use the token to get a user.

```
from django_facebook.connect import connect_user
access_token = request.POST['access_token']
action, user = connect_user(request, access_token)
```

Celery, Performance and Optimization

Facebook APIs can take quite some time to respond. It's very common that you will wait between 1-3 seconds for a single API call. If you need multiple calls, pages can quickly become very sluggish.

The recommended solution is to use Celery. Celery is a task queueing system which allows you to run the API requests outside of the request, response cycle.

Step 1 - Install Celery

Step 2 - Enable Tasks

```
# use celery for storing friends and likes
FACEBOOK_CELERY_STORE = True
# use celery for extending tokens
FACEBOOK_CELERY_TOKEN_EXTEND = True
```

When writing your own Facebook functionality you will see a big speedup by using @facebook_required_lazy instead of @facebook_required

Signals

Django-facebook ships with a few signals that you can use to easily accommodate Facebook related activities with your project.

facebook_user_registered signal is sent whenever a new user is registered by Django-facebook, for example:

```
from django_facebook.utils import get_user_model
from django_facebook import signals

def fb_user_registered_handler(sender, user, facebook_data, **kwargs):
    # Do something involving user here

signals.facebook_user_registered.connect(user_registered, sender=get_user_model())
```

facebook_pre_update signal is sent just before Django-facebook updates the profile model with Facebook data. If you want to manipulate Facebook or profile information before it gets saved, this is where you should do it. For example:

```
from django_facebook import signals
from django_facebook.utils import get_user_model

def pre_facebook_update(sender, user, profile, facebook_data, **kwargs):
    profile.facebook_information_updated = datetime.datetime.now()
    # Manipulate facebook_data here

signals.facebook_pre_update.connect(pre_facebook_update, sender=get_user_model())
```

facebook_post_update signal is sent after Django-facebook finishes updating the profile model with Facebook data. You can perform other Facebook connect or registration related processing here.

```
from django_facebook import signals
from django_facebook.utils import get_user_model

def post_facebook_update(sender, user, profile, facebook_data, **kwargs):
    # Do other stuff

signals.facebook_post_update.connect(post_facebook_update, sender=get_user_model())
```

facebook_post_store_friends signal is sent after Django-facebook finishes storing the user's friends.

```
from django_facebook import signals
from django_facebook.utils import get_user_model
```

```
def post_friends(sender, user, friends, current_friends, inserted_friends, **kwargs):
    # Do other stuff
facebook_post_store_friends.connect(post_friends, sender=get_user_model())
```

facebook_post_store_likes signal is sent after Django-facebook finishes storing the user's likes. This is usefull if you want to customize what topics etc to follow.

```
from django_facebook import signals
from django_facebook.utils import get_user_model

def post_likes(sender, user, likes, current_likes, inserted_likes, **kwargs):
    # Do other stuff

facebook_post_store_likes.connect(post_likes, sender=get_user_model())
```

Canvas Application

In order to use build a facebook canvas application, you should add this to your MIDDLEWARE_CLASSES setting:

```
'django_facebook.middleware.FacebookCanvasMiddleWare'
```

This middleware will check for the signed_request parameter in the url and take the appropriate action:

- redirect to app authorization dialog if user has not authorized the app, some permission is missing or any other error.
- login the current facebook user in django's system and store the access token.

API documentation

Django Facebook

API

```
class django_facebook.api.FacebookUserConverter(open_facebook)
```

This conversion class helps you to convert Facebook users to Django users

Helps with - extracting and prepopulating full profile data - invite flows - importing and storing likes

```
facebook_profile_data()
```

Returns the facebook profile data, together with the image locations

```
facebook_registration_data(username=True)
```

Gets all registration data and ensures its correct input for a django registration

```
get_and_store_friends(user)
```

Gets and stores your facebook friends to DB Both the get and the store run in a async task when FACE-BOOK_CELERY_STORE = True

```
get and store likes (user)
```

Gets and stores your facebook likes to DB Both the get and the store run in a async task when FACE-BOOK_CELERY_STORE = True

```
get friends(limit=5000)
```

Connects to the facebook api and gets the users friends

```
get_likes (limit=5000)
```

Parses the facebook response and returns the likes

```
registered_friends (user)
```

Returns all profile models which are already registered on your site and a list of friends which are not on your site

```
store_friends (user, friends)
```

Stores the given friends locally for this user Quite slow, better do this using celery on a secondary db

```
store_likes (user, likes)
```

Given a user and likes store these in the db Note this can be a heavy operation, best to do it in the background using celery

```
django_facebook.api.get_facebook_graph(request=None, access_token=None, redi-
rect uri=None, raise = False)
```

given a request from one of these - js authentication flow (signed cookie) - facebook app authentication flow (signed cookie) - facebook oauth redirect (code param in url) - mobile authentication flow (direct access_token) - offline access token stored in user profile

returns a graph object

redirect path is the path from which you requested the token for some reason facebook needs exactly this uri when converting the code to a token falls back to the current page without code in the request params specify redirect_uri if you are not posting and recieving the code on the same page

```
django_facebook.api.get_persistent_graph(request, *args, **kwargs)
```

Wraps itself around get facebook graph But stores the graph in the session, allowing usage across multiple pageviews. Note that Facebook session's expire at some point, you can't store this for permanent usage Atleast not without asking for the offline_access permission

```
django_facebook.api.require_facebook_graph(request, *args, **kwargs)
```

Just like get_facebook graph, but instead of returning None raise an OpenFacebookException if we can't access facebook

```
django_facebook.api.require_persistent_graph(request, *args, **kwargs)
```

Just like get_persistent graph, but instead of returning None raise an OpenFacebookException if we can't access facebook

AUTH BACKENDS

Connect

Given a request either

- •(if authenticated) connect the user
- •login
- •register

```
django_facebook.connect.update_connection(request, graph)
```

A special purpose view for updating the connection with an existing user - updates the access token (already done in get_graph) - sets the facebook_id if nothing is specified - stores friends and likes if possible

Decorators

Decorator which makes the view require the given Facebook perms, redirecting to the log-in page if necessary.

Note we don't actually query the permissions, we just try in the view and upon a permission error redirect to login_url Querying the permissions would slow down things

```
authenticate (fn, request, *args, **kwargs)
```

Authenticate the user

There are three options a.) We have permissions, proceed with the view b.) We tried getting permissions and failed, abort... c.) We are about to ask for permissions

```
authentication failed(fn, request, *args, **kwargs)
```

Execute the view but don't pass the graph to indicate we couldn't get the right permissions

```
get_redirect_uri(request)
```

return the redirect uri to use for oauth authorization this needs to be the same for requesting and accepting the token

```
oauth_redirect (oauth_url, redirect_uri, e=None)
```

Redirect to Facebook's oAuth dialog

Decorator which makes the view require the given Facebook perms, redirecting to the log-in page if necessary.

Based on exceptions instead of a permission check Faster, but more prone to bugs

Use this in combination with require_persistent_graph

Decorator which makes the view require the given Facebook perms, redirecting to the log-in page if necessary.

Note we don't actually query the permissions, we just try in the view and upon a permission error redirect to login_url Querying the permissions would slow down things

```
django_facebook.decorators.facebook_required_lazy(fn=None, *decorator_args, **deco-
rator kwargs)
```

Decorator which makes the view require the given Facebook perms, redirecting to the log-in page if necessary.

Based on exceptions instead of a permission check Faster, but more prone to bugs

Use this in combination with require_persistent_graph

Exceptions

```
exception django_facebook.exceptions.AlreadyConnectedError(users)
```

Raised when another user account is already connected to your Facebook id

```
{\bf exception} \; {\tt django\_facebook.exceptions.AlreadyRegistered}
```

Raised if you try to register when there's already an account with the given email or facebook id

```
exception django_facebook.exceptions.FacebookException
```

Base class for Facebook related exceptions

```
exception django_facebook.exceptions.IncompleteProfileError
```

Raised when we get insufficient data to create a profile for a user. One example is a Facebook token, without permissions to see the email.

```
exception django_facebook.exceptions.MissingPermissionsError
Raised if we lack permissions
```

Forms

Forms and validation code for user registration.

Verifiy that the values entered into the two password fields match. Note that an error here will end up in non_field_errors() because it doesn't apply to a single field.

clean_email()

Validate that the supplied email address is unique for the site.

clean username()

Validate that the username is alphanumeric and is not already in use.

Models

Registration backends

```
class django_facebook.registration_backends.FacebookRegistrationBackend
```

A backend compatible with Django Registration It is extremly simple and doesn't handle things like redirects etc (These are already handled by Django Facebook)

```
register (request, form=None, **kwargs)
```

Create and immediately log in a new user.

```
class django_facebook.registration_backends.NooptRegistrationBackend
```

Noopt backends forms the basis of support for backends which handle the actual registration in the registration form

```
get_form_class(request)
```

Returns the form class to use for registration

Parameters request - the request object

```
get_registration_template()
```

Returns the template to use for registration

```
post_connect (request, user, action)
          Handles the redirect after connecting
     post_error (request, additional_params=None)
          Handles the redirect after connecting
     register (request, form=None, **kwargs)
          Implement your registration logic in this method
              Parameters
                  • request – the request object
                  • form – the form with the users data
                  • kwargs - additional data
Tasks
Utils
class django_facebook.utils.ScriptRedirect(redirect_to, show_body=True)
     Redirect for Facebook Canvas pages
django_facebook.utils.cleanup_oauth_url(redirect_uri)
     We have to maintain order with respect to the queryparams which is a bit of a pain TODO: Very hacky will
     subclass QueryDict to SortedQueryDict at some point And use a decent sort function
django_facebook.utils.clear_persistent_graph_cache (request)
     Clears the caches for the graph cache
django_facebook.utils.error_next_redirect(request, default='/', additional_params=None,
                                                      next_key=None,
                                                                       redirect_url=None,
                                                      vas=False)
     Short cut for an error next redirect
django_facebook.utils.get_class_for(purpose)
     Usage: conversion_class = get_class_for('user_conversion')
django facebook.utils.qet class from string(path, default=None)
     Return the class specified by the string.
     IE: django.contrib.auth.models.User Will return the user class or cause an ImportError
django_facebook.utils.get_django_registration_version()
     Returns new, old or None depending on the version of django registration Old works with forms New works
     with backends
django_facebook.utils.get_form_class(backend, request)
     Will use registration form in the following order: 1. User configured RegistrationForm 2.
     end.get_form_class(request) from django-registration 0.8 3. RegistrationFormUniqueEmail from django-
     registration < 0.8
django_facebook.utils.get_instance_for (purpose, *args, **kwargs)
     Usage:
     conversion_instance = get_instance_for(
```

django_facebook.utils.get_migration_data()

'facebook_user_conversion', user=user)

Support for Django custom user models See this blog post for inspiration

```
http://kevindias.com/writing/django-custom-user-models-south-and-reusable-apps/
                                                                                       https://github.com/
     stephenmcd/mezzanine/blob/master/mezzanine/core/migrations/0005 auto chg field sitepermission user
     del unique sitepermission user.py
django_facebook.utils.get_oauth_url(scope, redirect_uri, extra_params=None)
     Returns the oAuth URL for the given scope and redirect uri
django facebook.utils.get profile(user)
     Get profile
django_facebook.utils.get_profile_from_user(user)
     Tries to get the profile according to the class configured on AUTH_PROFILE_MODULE
django_facebook.utils.get_profile_model()
     Get the profile model if present otherwise return None
django_facebook.utils.get_registration_backend()
     Ensures compatability with the new and old version of django registration
django_facebook.utils.get_url_field()
     This should be compatible with both django 1.3, 1.4 and 1.5 In 1.5 the verify_exists argument is removed and
     always False
django_facebook.utils.get_user_model()
     For Django < 1.5 backward compatibility
django_facebook.utils.mass_get_or_create(*args, **kwargs)
     Updates the data by inserting all not found records Doesnt delete records if not in the new data
     example usage >>> model class = ListItem #the class for which you are doing the insert >>> base query set
     = ListItem.objects.filter(user=request.user, list=1) #query for retrieving currently stored items >>> id_field
     = 'user_id' #the id field on which to check >>> default_dict = {'12': dict(comment='my_new_item'),
     '13': dict(comment='super')} #list of default values for inserts >>> global_defaults = dict(user=request.user,
     list id=1) #global defaults
django_facebook.utils.parse_scope (scope)
     Turns 'email,user_about_me' or ('email','user_about_me') into a nice consistent ['email','user_about_me']
django_facebook.utils.parse_signed_request(signed_request_string)
     Just here for your convenience, actual logic is in the FacebookAuthorization class
```

django_facebook.utils.queryset_iterator(queryset, chunksize=1000, getfunc=<built-in func-

" Iterate over a Django Queryset ordered by the primary key

This method loads a maximum of chunksize (default: 1000) rows in it's memory at the same time while django normally would load all rows in it's memory. Using the iterator() method only causes it to not preload all the classes.

Note that the implementation of the iterator does not support ordered query sets.

```
django_facebook.utils.replication_safe(f)
```

Usually views which do a POST will require the next page to be read from the master database. (To prevent issues with replication lag).

However certain views like login do not have this issue. They do a post, but don't modify data which you'll show on subsequent pages.

This decorators marks these views as safe. This ensures requests on the next page are allowed to use the slave dh

django_facebook.utils.response_redirect (redirect_url, script_redirect=False) Abstract away canvas redirects

django_facebook.utils.simplify_class_decorator(class_decorator)

Makes the decorator syntax uniform Regardless if you call the decorator like

Decorator examples:: @decorator or @decorator() or @decorator(staff=True)

Complexity, Python's class based decorators are weird to say the least: http://www.artima.com/weblogs/viewpost.jsp?thread=240845

This function makes sure that your decorator class always gets called with

Methods called:

```
__init__(fn, *option_args, *option_kwargs)
__call__()
  return a function which accepts the *args and *kwargs intended
  for fn
```

django_facebook.utils.to_bool(input, default=False)

Take a request value and turn it into a bool Never raises errors

Convert the given input to an integer or return default

When trying to convert the exceptions given in the exception parameter are automatically catched and the default will be returned.

The regexp parameter allows for a regular expression to find the digits in a string. When True it will automatically match any digit in the string. When a (regexp) object (has a search method) is given, that will be used. When a string is given, re.compile will be run over it first

The last group of the regexp will be used as value

```
django_facebook.utils.update_user_attributes (user, profile, attributes_dict, save=False)
Write the attributes either to the user or profile instance
```

Views

```
django_facebook.views.connect(*args, **kwargs)
```

Exception and validation functionality around the _connect view Separated this out from _connect to preserve readability Don't bother reading this code, skip to _connect for the bit you're interested in :)

```
django_facebook.views.disconnect(request)
```

Removes Facebook from the users profile And redirects to the specified next page

Open Facebook

Exceptions

Facebook error classes also see http://fbdevwiki.com/wiki/Error_codes#User_Permission_Errors

```
exception open_facebook.exceptions.AliasException
```

When you send a request to a non existant url facebook gives this error instead of a 404....

```
exception \verb| open_facebook.exceptions.FacebookUnreachable|\\
```

Timeouts, 500s, SSL errors etc

```
exception open_facebook.exceptions.FeedActionLimit
```

When you posted too many times from one user acount

```
exception open facebook.exceptions.OpenFacebookException
     BaseClass for all open facebook errors
     classmethod codes list()
          Returns the codes as a list of instructions
     classmethod range ()
          Returns for how many codes this Exception, matches with the eventual goal of matching an error to the
          most specific error class
exception open_facebook.exceptions.OpenGraphException
     Raised when we get error 3502, representing a problem with facebook open graph data on the page
exception open_facebook.exceptions.ParameterException
     100-189 190 and up are oauth errors
exception open_facebook.exceptions.ParseException
     Anything preventing us from parsing the Facebook response
exception open_facebook.exceptions.PermissionException
     200-300
exception open_facebook.exceptions.UnknownException
     Raised when facebook themselves don't know what went wrong
open_facebook.exceptions.convert_unreachable_exception(e,
                                                                                            er-
                                                                      ror format=u'Facebook
                                                                      is unreachable %s')
     Converts an SSLError, HTTPError or URLError into something subclassing FacebookUnreachable allowing
     code to easily try except this
open_facebook.exceptions.map_unreachable_exception(e)
     We always raise the original and new subclass to
            • preserve backwards compatibility
Utils
open_facebook.utils.base64_url_decode_php_style(inp)
     PHP follows a slightly different protocol for base64 url decode.
                                                                         For a full explanation see:
     http://stackoverflow.com/questions/3302946/how-to-base64-url-decode-in-python
                                                                                      http://sunilarora.
                                                                               and
     org/parsing-signedrequest-parameter-in-python-bas
open_facebook.utils.camel_to_underscore(name)
     Convert camelcase style naming to underscore style naming
     e.g. SpamEggs -> spam_eggs
open_facebook.utils.encode_params(params_dict)
     Take the dictionary of params and encode keys and values to ascii if it's unicode
open_facebook.utils.import_statsd()
     Import only the statd by wolph not the mozilla statsd TODO: Move to mozilla statds which is more widely used
open_facebook.utils.is_json(content)
     Unfortunately facebook returns 500s which mean they are down Or 500s with a nice error message because you
     use open graph wrong
```

6.4. API documentation

So we have to figure out which is which:)

```
class open facebook.utils.memoized(func)
```

Decorator. Caches a function's return value each time it is called. If called later with the same arguments, the cached value is returned (not reevaluated).

open_facebook.utils.merge_urls (generated_url, human_url)

merge the generated_url with the human_url following this rules: params introduced by generated_url are kept final params order comes from generated_url there's an hack to support things like this http://url?param¶m=value

```
>>> gen = "http://mysite.com?p1=a&p2=b&p3=c&p4=d"
>>> hum = "http://mysite.com?p4=D&p3=C&p2=B"
>>> merge_urls(gen, hum)
u'http://mysite.com?p1=a&p2=B&p3=C&p4=D'
```

```
>>> gen = "http://mysite.com?id=a&id_s=b&p_id=d"
>>> hum = "http://mysite.com?id=A&id_s=B&p_id=D"
>>> merge_urls(gen, hum)
u'http://mysite.com?id=A&id_s=B&p_id=D'
```

```
>>> gen = "http://mysite.com?pl=a&p2=b&p3=c&p4=d"
>>> hum = "http://mysite.com"
>>> merge_urls(gen, hum)
u'http://mysite.com'
```

```
>>> gen = "http://ad.zanox.com/ppc/?18595160C2000463397T&zpar4=scrapbook&

->zpar0=e2494344_c4385641&zpar1=not_authenticated&zpar2=unknown_campaign&

->zpar3=unknown_ref&ULP=http://www.asos.com/ASOS/ASOS-MARS-Loafer-Shoes/Prod/

->pgeproduct.aspx?iid=1703516&cid=4172&sh=0&pge=2&pgesize=20&sort=-1&clr=Black&

->affId=2441"

>>> hum = "http://ad.zanox.com/ppc/?18595160C2000463397T&zpar3=scrapbook&

->ULP=http://www.asos.com/ASOS/ASOS-MARS-Loafer-Shoes/Prod/pgeproduct.aspx?

->iid=1703516&cid=4172&sh=0&pge=2&pgesize=20&sort=-1&clr=Black&affId=2441"

>>> merge_urls(gen, hum)

u'http://ad.zanox.com/ppc/?18595160C2000463397T&zpar4=scrapbook&zpar0=e2494344_

->c4385641&zpar1=not_authenticated&zpar2=unknown_campaign&zpar3=scrapbook&

->ULP=http://www.asos.com/ASOS/ASOS-MARS-Loafer-Shoes/Prod/pgeproduct.aspx?

->iid=1703516&cid=4172&sh=0&pge=2&pgesize=20&sort=-1&clr=Black&affId=2441'
```

```
>>> gen = "http://mysite.com?invalidparam&p=2"
>>> hum = "http://mysite.com?p=1"
>>> merge_urls(gen, hum)
u'http://mysite.com?invalidparam&p=1'
```

open_facebook.utils.**send_warning** (*message*, *request=None*, *e=None*, **extra_data)

Uses the logging system to send a message to logging and sentry

```
open_facebook.utils.smart_str(s, encoding='utf-8', strings_only=False, errors='strict')
Adapted from django, needed for urlencoding Returns a bytestring version of 's', encoded as specified in 'encoding'. If strings_only is True, don't convert (some) non-string-like objects.
```

```
open_facebook.utils.start_statsd(path)
    Simple wrapper to save some typing

open_facebook.utils.validate_is_instance(instance, classes)
    Usage validate_is_instance(10, int) validate_is_instance('a', (str, unicode))
```

Indices and tables

- genindex
- modindex
- search

6.5. Indices and tables 33

| Dianna Facebook Decumentation Balance 6.0.6 | | | | |
|--|--|--|--|--|
| Django Facebook Documentation, Release 6.0.6 | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Python Module Index

d

```
django_facebook.api, 24
django_facebook.connect, 25
django_facebook.decorators, 26
django_facebook.exceptions, 26
django_facebook.forms, 27
django_facebook.registration_backends, 27
django_facebook.settings, 15
django_facebook.utils, 28
django_facebook.views, 30

O

open_facebook.api, 17
open_facebook.exceptions, 30
open_facebook.utils, 31
```

36 Python Module Index

Index

| A | D |
|--|--|
| AliasException, 30 | delete() (open_facebook.api.OpenFacebook method), 19 |
| AlreadyConnectedError, 26 | disconnect() (in module django_facebook.views), 30 |
| AlreadyRegistered, 26 | django_facebook.api (module), 24 |
| authenticate() (django_facebook.decorators.FacebookRequ | indiango_facebook.connect (module), 25 |
| method), 26 | django_facebook.decorators (module), 26 |
| authentication_failed() (django_facebook.decorators.Faceb | |
| method), 26 | django_facebook.forms (module), 27 |
| D | django_facebook.registration_backends (module), 27 |
| В | django_facebook.settings (module), 15 |
| base64_url_decode_php_style() (in module | django_facebook.utils (module), 28 |
| open_facebook.utils), 31 | django_facebook.views (module), 30 |
| batch_fql() (open_facebook.api.OpenFacebook method), | E |
| 19 | |
| C | encode_params() (in module open_facebook.utils), 31 |
| | error_next_redirect() (in module django_facebook.utils), |
| camel_to_underscore() (in module open_facebook.utils), | 28 |
| 31 | extend_access_token() (open_facebook.api.FacebookAuthorization |
| clean() (django_facebook.forms.FacebookRegistrationForm | nUniqueEmalass method), 21 |
| method), 27 clean_email() (django_facebook.forms.FacebookRegistrati | o Form Unique Empil |
| method), 27 | |
| clean_username() (django_facebook.forms.FacebookRegis | facebook_profile_data() (django_facebook.api.FacebookUserConverter |
| method), 27 | facebook_registration_data() |
| cleanup_oauth_url() (in module django_facebook.utils), | (django_facebook.api.FacebookUserConverter |
| 28 | method), 24 |
| | facebook_required() (in module |
| django_facebook.utils), 28 | django_facebook.decorators), 26 |
| codes_list() (open_facebook.exceptions.OpenFacebookExc | ceptien book_required_lazy() (in module |
| class method), 31 | django_facebook.decorators), 26 |
| connect() (in module django_facebook.views), 30 | FacebookAuthorization (class in open_facebook.api), 21 |
| connect_user() (in module django_facebook.connect), 25 | FacebookConnection (class in open_facebook.api), 22 |
| convert_code() (open_facebook.api.FacebookAuthorization | ¹ FacebookException, 26 |
| class method), 21 | FacebookRegistrationBackend (class in |
| convert_unreachable_exception() (in module | django_facebook.registration_backends), |
| open_facebook.exceptions), 31 | 27 |
| create_test_user() (open_facebook.api.FacebookAuthorizat | ipacebookRegistrationFormUniqueEmail (class in |
| class method), 21 | diango, facebook forms) 27 |

| FacebookRequired (class django_facebook.decorators), 26 | in | method), 27 get_request_url() (open_facebook.api.OpenFacebook |
|--|------------------|---|
| FacebookRequiredLazy (class django_facebook.decorators), 26 FacebookUnreachable, 30 | in | method), 20 get_url_field() (in module django_facebook.utils), 29 get_user_model() (in module django_facebook.utils), 29 |
| FacebookUserConverter (class in django_facebook 24 | k.api), | Н |
| FeedActionLimit, 30 fql() (open_facebook.api.OpenFacebook method), 1 | 19 | has_permissions() (open_facebook.api.OpenFacebook method), 20 |
| G | | I |
| get() (open_facebook.api.OpenFacebook method), 1 get_and_store_friends() (django_facebook.api.Facel method), 24 get_and_store_likes() (django_facebook.api.Facebook | bookUs | is_authenticated() (open_facebook.api.OpenFacebook |
| method), 24 get_app_access_token() (open_facebook.api.Facebo class method), 21 | ookAuth | is_json() (in module open_facebook.utils), 31 105izetiver_error() (open_facebook.api.FacebookConnection |
| get_class_for() (in module django_facebook.utils), 2 get_class_from_string() (in m | 28 iodule | M |
| django_facebook.utils), 28 | odule | map_unreachable_exception() (in module open_facebook.exceptions), 31 mass_get_or_create() (in module django_facebook.utils), |
| get_facebook_graph() (in module django_facebook | _ | 29 |
| get_form_class() (django_facebook.registration_bac method), 27 | ckends.l | match_error_code() (open_facebook.api.FacebookConnection NooptRegistrationBackend ₂₂ me() (open_facebook.api.OpenFacebook method), 20 |
| get_form_class() (in module django_facebook.utils) get_friends() (django_facebook.api.FacebookUserC method), 24 | onverte | memoized (class in open facebook utils) 31 |
| <pre>get_instance_for() (in module django_facebook.util get_likes() (django_facebook.api.FacebookUserCon</pre> | | my_image_url() (open_facebook.api.OpenFacebook method), 20 |
| get_many() (open_facebook.api.OpenFacebook me | thod), | N |
| get_migration_data() (in module django_facebook. 28 | | NooptRegistrationBackend (class in django_facebook.registration_backends), 27 |
| <pre>get_oauth_url() (in module django_facebook.utils), get_or_create_test_user()</pre> | 29 | 0 |
| (open_facebook.api.FacebookAuthorization class method), 21 | | oauth_redirect() (django_facebook.decorators.FacebookRequired method), 26 |
| get_persistent_graph() (in module django_facebook 25 | k.api), | open_facebook.api (module), 17 |
| django_facebook.utils), 29 get_profile_model() (in module django_facebook. | odule | open_facebook.exceptions (module), 30 open_facebook.utils (module), 31 OpenFacebook (class in open_facebook.api), 18 OpenFacebookException, 30 OpenGraphException, 31 |
| 29 get_redirect_uri() (django_facebook.decorators.Face | ebookR | eppired |
| method), 26 get_registration_backend() (in m django_facebook.utils), 29 get_registration_template() (django_facebook.registration_backends.1 | nodule NooptR | ParameterException, 31 parse_scope() (in module django_facebook.utils), 29 parse_signed_data() (open_facebook.api.FacebookAuthorization egistrationBlackengthod), 21 |

38 Index

```
parse_signed_request()
                                                         update_connection()
                                               module
                                                                                         (in
                                                                                                         module
                                                                   django facebook.connect), 25
         django facebook.utils), 29
ParseException, 31
                                                         update user attributes()
                                                                                                         module
PermissionException, 31
                                                                   django_facebook.utils), 30
permissions()
                     (open_facebook.api.OpenFacebook
         method), 20
post_connect() (django_facebook.registration_backends.NoonRegistrationBackendin module open_facebook.utils),
         method), 27
post_error() (django_facebook.registration_backends.NooptRegistrationBackend
         method), 28
Q
queryset iterator() (in module django facebook.utils), 29
R
raise_error()
               (open_facebook.api.FacebookConnection
         class method), 22
range() \, (open\_facebook.exceptions. OpenFacebook Exception
         class method), 31
register() (django_facebook.registration_backends.FacebookRegistrationBackend
         method), 27
register() (django_facebook.registration_backends.NooptRegistrationBackend
         method), 28
registered_friends() (django_facebook.api.FacebookUserConverter
         method), 25
replication safe() (in module django facebook.utils), 29
request() (open facebook.api.FacebookConnection class
         method), 22
require_facebook_graph()
                                               module
                                   (in
         django_facebook.api), 25
require_persistent_graph()
                                               module
                                   (in
         django_facebook.api), 25
response_redirect() (in module django_facebook.utils),
S
ScriptRedirect (class in django_facebook.utils), 28
send_warning() (in module open_facebook.utils), 32
set() (open facebook.api.OpenFacebook method), 20
simplify class decorator()
                                   (in
                                               module
         django facebook.utils), 29
smart_str() (in module open_facebook.utils), 32
start statsd() (in module open facebook.utils), 32
store friends()(django facebook.api.FacebookUserConverter
         method), 25
store_likes() (django_facebook.api.FacebookUserConverter
         method), 25
Т
to bool() (in module diango facebook.utils), 30
to_int() (in module django_facebook.utils), 30
U
UnknownException, 31
```

Index 39