# **fbchat Documentation**

Release 1.3.9

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Release v1.3.9. (Installation) Facebook Chat (Messenger) for Python. This project was inspired by facebook-chat-api.

No XMPP or API key is needed. Just use your email and password.

Currently fbchat support Python 2.7, 3.4, 3.5 and 3.6:

*fbchat* works by emulating the browser. This means doing the exact same GET/POST requests and tricking Facebook into thinking it's accessing the website normally. Therefore, this API requires the credentials of a Facebook account.

**Note:** If you're having problems, please check the FAQ, before asking questions on Github

**Warning:** We are not responsible if your account gets banned for spammy activities, such as sending lots of messages to people you don't know, sending messages very quickly, sending spammy looking URLs, logging in and out very quickly... Be responsible Facebook citizens.

**Note:** Facebook now has an official API for chat bots, so if you're familiar with node.js, this might be what you're looking for.

If you're already familiar with the basics of how Facebook works internally, go to *Examples* to see example usage of *fbchat* 

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## CHAPTER 1

Overview

## 1.1 Installation

## 1.1.1 Pip Install fbchat

To install fbchat, run this command:

```
$ pip install fbchat
```

If you don't have pip installed, this Python installation guide can guide you through the process.

## 1.1.2 Get the Source Code

fbchat is developed on GitHub, where the code is always available.

You can either clone the public repository:

```
$ git clone git://github.com/carpedm20/fbchat.git
```

#### Or, download a tarball:

```
$ curl -OL https://github.com/carpedm20/fbchat/tarball/master # optionally, zipball is also available (for Windows users).
```

Once you have a copy of the source, you can embed it in your own Python package, or install it into your site-packages easily:

```
$ python setup.py install
```

## 1.2 Introduction

fbchat uses your email and password to communicate with the Facebook server. That means that you should always store your password in a seperate file, in case e.g. someone looks over your shoulder while you're writing code. You should also make sure that the file's access control is appropriately restrictive

## 1.2.1 Logging In

Simply create an instance of Client. If you have two factor authentication enabled, type the code in the terminal prompt (If you want to supply the code in another fasion, overwrite Client.on2FACode):

```
from fbchat import Client
from fbchat.models import *
client = Client('<email>', '<password>')
```

Replace <email> and <password> with your email and password respectively

**Note:** For ease of use then most of the code snippets in this document will assume you've already completed the login process Though the second line, from fbchat.models import \*, is not strictly necessary here, later code snippets will assume you've done this

If you want to change how verbose *fbchat* is, change the logging level (in *Client*)

Throughout your code, if you want to check whether you are still logged in, use Client.isLoggedIn. An example would be to login again if you've been logged out, using Client.login:

```
if not client.isLoggedIn():
    client.login('<email>', '<password>')
```

When you're done using the client, and want to securely logout, use Client.logout:

```
client.logout()
```

#### 1.2.2 Threads

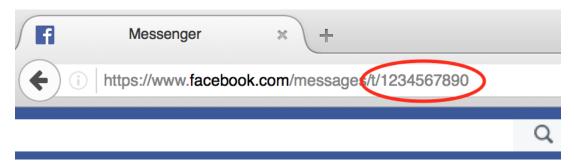
A thread can refer to two things: A Messenger group chat or a single Facebook user

models. ThreadType is an enumerator with two values: USER and GROUP. These will specify whether the thread is a single user chat or a group chat. This is required for many of *fbchat*'s functions, since Facebook differentiates between these two internally

Searching for group chats and finding their ID can be done via. Client.searchForGroups, and searching for users is possible via. Client.searchForUsers. See Fetching Information

You can get your own user ID by using Client.uid

Getting the ID of a group chat is fairly trivial otherwise, since you only need to navigate to https://www.facebook.com/messages/, click on the group you want to find the ID of, and then read the id from the address bar. The URL will look something like this: https://www.facebook.com/messages/t/1234567890, where 1234567890 would be the ID of the group. An image to illustrate this is shown below:



The same method can be applied to some user accounts, though if they've set a custom URL, then you'll just see that URL instead

Here's an snippet showing the usage of thread IDs and thread types, where <user id> and <group id> corresponds to the ID of a single user, and the ID of a group respectively:

```
client.send(Message(text='<message>'), thread_id='<user id>', thread_type=ThreadType.

→USER)
client.send(Message(text='<message>'), thread_id='<group id>', thread_type=ThreadType.

→GROUP)
```

Some functions (e.g. Client.changeThreadColor) don't require a thread type, so in these cases you just provide the thread ID:

```
client.changeThreadColor(ThreadColor.BILOBA_FLOWER, thread_id='<user id>')
client.changeThreadColor(ThreadColor.MESSENGER_BLUE, thread_id='<group id>')
```

## 1.2.3 Message IDs

Every message you send on Facebook has a unique ID, and every action you do in a thread, like changing a nickname or adding a person, has a unique ID too.

Some of *fbchat*'s functions require these ID's, like *Client.reactToMessage*, and some of then provide this ID, like *Client.sendMessage*. This snippet shows how to send a message, and then use the returned ID to react to that message with a emoji:

## 1.2.4 Interacting with Threads

fbchat provides multiple functions for interacting with threads

Most functionality works on all threads, though some things, like adding users to and removing users from a group chat, logically only works on group chats

The simplest way of using *fbchat* is to send a message. The following snippet will, as you've probably already figured out, send the message *test message* to your account:

You can see a full example showing all the possible thread interactions with *fbchat* by going to *Examples* 

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## 1.2.5 Fetching Information

You can use *fbchat* to fetch basic information like user names, profile pictures, thread names and user IDs

You can retrieve a user's ID with Client.searchForUsers. The following snippet will search for users by their name, take the first (and most likely) user, and then get their user ID from the result:

```
users = client.searchForUsers('<name of user>')
user = users[0]
print("User's ID: {}".format(user.uid))
print("User's name: {}".format(user.name))
print("User's profile picture url: {}".format(user.photo))
print("User's main url: {}".format(user.url))
```

Since this uses Facebook's search functions, you don't have to specify the whole name, first names will usually be enough

You can see a full example showing all the possible ways to fetch information with *fbchat* by going to *Examples* 

#### 1.2.6 Sessions

*fbchat* provides functions to retrieve and set the session cookies. This will enable you to store the session cookies in a seperate file, so that you don't have to login each time you start your script. Use *Client.getSession* to retrieve the cookies:

```
session_cookies = client.getSession()
```

Then you can use Client.setSession:

```
client.setSession(session_cookies)
```

Or you can set the session\_cookies on your initial login. (If the session cookies are invalid, your email and password will be used to login instead):

```
client = Client('<email>', '<password>', session_cookies=session_cookies)
```

Warning: You session cookies can be just as valueable as you password, so store them with equal care

## 1.2.7 Listening & Events

To use the listening functions *fbchat* offers (like *Client.listen*), you have to define what should be executed when certain events happen. By default, (most) events will just be a *logging.info* statement, meaning it will simply print information to the console when an event happens

Note: You can identify the event methods by their on prefix, e.g. onMessage

The event actions can be changed by subclassing the Client, and then overwriting the event methods:

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```
pass
client = CustomClient('<email>', '<password>')
```

**Notice:** The following snippet is as equally valid as the previous one:

```
class CustomClient(Client):
    def onMessage(self, message_object, author_id, thread_id, thread_type, **kwargs):
        # Do something with message_object here
        pass
client = CustomClient('<email>', '<password>')
```

The change was in the parameters that our *onMessage* method took: message\_object and author\_id got swapped, and mid, ts, metadata and msg got removed, but the function still works, since we included \*\*kwargs

**Note:** Therefore, for both backwards and forwards compatability, the API actually requires that you include \*\*kwargs as your final argument.

View the *Examples* to see some more examples illustrating the event system

## 1.3 Examples

These are a few examples on how to use *fbchat*. Remember to swap out *<email>* and *<password>* for your email and password

### 1.3.1 Basic example

This will show basic usage of fbchat

```
# -*- coding: UTF-8 -*-

from fbchat import Client
from fbchat.models import *

client = Client('<email>', '<password>')

print('Own id: {}'.format(client.uid))

client.send(Message(text='Hi me!'), thread_id=client.uid, thread_type=ThreadType.USER)

client.logout()
```

## 1.3.2 Interacting with Threads

This will interract with the thread in every way *fbchat* supports

```
# -*- coding: UTF-8 -*-

from fbchat import Client

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```

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```
from fbchat.models import *
client = Client("<email>", "<password>")
thread_id = '1234567890'
thread_type = ThreadType.GROUP
# Will send a message to the thread
client.send(Message(text='<message>'), thread_id=thread_id, thread_type=thread_type)
# Will send the default `like` emoji
client.send(Message(emoji_size=EmojiSize.LARGE), thread_id=thread_id, thread_
→type=thread_type)
# Will send the emoji ``
client.send(Message(text='', emoji_size=EmojiSize.LARGE), thread_id=thread_id, thread_
→type=thread_type)
# Will send the sticker with ID `767334476626295`
client.send(Message(sticker=Sticker('767334476626295')), thread_id=thread_id, thread_
→type=thread_type)
# Will send a message with a mention
client.send(Message(text='This is a @mention', mentions=[Mention(thread_id, offset=10,
→ length=8)]), thread_id=thread_id, thread_type=thread_type)
# Will send the image located at `<image path>`
client.sendLocalImage('<image path>', message=Message(text='This is a local image'),_
→thread_id=thread_id, thread_type=thread_type)
# Will download the image at the url `<image url>`, and then send it
client.sendRemoteImage('<image url>', message=Message(text='This is a remote image'),_
→thread_id=thread_id, thread_type=thread_type)
# Only do these actions if the thread is a group
if thread_type == ThreadType.GROUP:
   # Will remove the user with ID `<user id>` from the thread
   client.removeUserFromGroup('<user id>', thread_id=thread_id)
    # Will add the user with ID `<user id>` to the thread
   client.addUsersToGroup('<user id>', thread_id=thread_id)
    # Will add the users with IDs `<1st user id>`, `<2nd user id>` and `<3th user id>
\hookrightarrow ` to the thread
   client.addUsersToGroup(['<1st user id>', '<2nd user id>', '<3rd user id>'],...
→thread_id=thread_id)
# Will change the nickname of the user `<user_id>` to `<new nickname>`
client.changeNickname('<new nickname>', '<user id>', thread_id=thread_id, thread_
→type=thread_type)
# Will change the title of the thread to `<title>`
client.changeThreadTitle('<title>', thread_id=thread_id, thread_type=thread_type)
# Will set the typing status of the thread to `TYPING`
```

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## 1.3.3 Fetching Information

This will show the different ways of fetching information about users and threads

```
# -*- coding: UTF-8 -*-
from fbchat import Client
from fbchat.models import *
client = Client('<email>', '<password>')
# Fetches a list of all users you're currently chatting with, as `User` objects
users = client.fetchAllUsers()
print("users' IDs: {}".format(user.uid for user in users))
print("users' names: {}".format(user.name for user in users))
# If we have a user id, we can use `fetchUserInfo` to fetch a `User` object
user = client.fetchUserInfo('<user id>')['<user id>']
# We can also query both mutiple users together, which returns list of `User` objects
users = client.fetchUserInfo('<1st user id>', '<2nd user id>', '<3rd user id>')
print("user's name: {}".format(user.name))
print("users' names: {}".format(users[k].name for k in users))
# `searchForUsers` searches for the user and gives us a list of the results,
# and then we just take the first one, aka. the most likely one:
user = client.searchForUsers('<name of user>')[0]
print('user ID: {}'.format(user.uid))
print("user's name: {}".format(user.name))
print("user's photo: {}".format(user.photo))
print("Is user client's friend: {}".format(user.is_friend))
# Fetches a list of the 20 top threads you're currently chatting with
threads = client.fetchThreadList()
# Fetches the next 10 threads
threads += client.fetchThreadList(offset=20, limit=10)
print("Threads: {}".format(threads))
```

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```
# Gets the last 10 messages sent to the thread
messages = client.fetchThreadMessages(thread_id='<thread_id>', limit=10)
# Since the message come in reversed order, reverse them
messages.reverse()
# Prints the content of all the messages
for message in messages:
   print (message.text)
# If we have a thread id, we can use `fetchThreadInfo` to fetch a `Thread` object
thread = client.fetchThreadInfo('<thread id>')['<thread id>']
print("thread's name: {}".format(thread.name))
print("thread's type: {}".format(thread.type))
# `searchForThreads` searches works like `searchForUsers`, but gives us a list of ...
→threads instead
thread = client.searchForThreads('<name of thread>')[0]
print("thread's name: {}".format(thread.name))
print("thread's type: {}".format(thread.type))
# Here should be an example of `getUnread`
```

## 1.3.4 Echobot

This will reply to any message with the same message

#### 1.3.5 Remove Bot

This will remove a user from a group if they write the message Remove me!

```
# -*- coding: UTF-8 -*-
from fbchat import log, Client
from fbchat.models import *
class RemoveBot (Client):
   def onMessage(self, author_id, message_object, thread_id, thread_type, **kwargs):
        # We can only kick people from group chats, so no need to try if it's a user,
→ chat
        if message_object.text == 'Remove me!' and thread_type == ThreadType.GROUP:
            log.info('{} will be removed from {}'.format(author_id, thread_id))
            self.removeUserFromGroup(author_id, thread_id=thread_id)
        else:
            # Sends the data to the inherited onMessage, so that we can still see,
→when a message is recieved
            super(RemoveBot, self).onMessage(author_id=author_id, message_
→object=message_object, thread_id=thread_id, thread_type=thread_type, **kwargs)
client = RemoveBot("<email>", "<password>")
client.listen()
```

## 1.3.6 "Prevent changes"-Bot

This will prevent chat color, emoji, nicknames and chat name from being changed. It will also prevent people from being added and removed

```
# -*- coding: UTF-8 -*-
from fbchat import log, Client
from fbchat.models import *
# Change this to your group id
old_thread_id = '1234567890'
# Change these to match your liking
old_color = ThreadColor.MESSENGER_BLUE
old_emoji = ''
old_title = 'Old group chat name'
old_nicknames = {
   '12345678901': "User nr. 1's nickname",
   '12345678902': "User nr. 2's nickname",
    '12345678903': "User nr. 3's nickname",
    '12345678904': "User nr. 4's nickname"
class KeepBot (Client):
    def onColorChange(self, author_id, new_color, thread_id, thread_type, **kwargs):
        if old_thread_id == thread_id and old_color != new_color:
            log.info("{} changed the thread color. It will be changed back".
→format(author_id))
            self.changeThreadColor(old_color, thread_id=thread_id)
    def onEmojiChange(self, author_id, new_emoji, thread_id, thread_type, **kwargs):
        if old thread id == thread id and new emoji != old emoji:
            log.info("{} changed the thread emoji. It will be changed back".
→format(author_id))
```

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```
self.changeThreadEmoji(old_emoji, thread_id=thread_id)
   def onPeopleAdded(self, added_ids, author_id, thread_id, **kwargs):
        if old_thread_id == thread_id and author_id != self.uid:
            log.info("{} got added. They will be removed".format(added_ids))
            for added_id in added_ids:
                self.removeUserFromGroup(added_id, thread_id=thread_id)
   def onPersonRemoved(self, removed_id, author_id, thread_id, **kwargs):
        # No point in trying to add ourself
        if old_thread_id == thread_id and removed_id != self.uid and author_id !=_
⇒self.uid:
            log.info("{} got removed. They will be re-added".format(removed_id))
            self.addUsersToGroup(removed_id, thread_id=thread_id)
   def onTitleChange(self, author_id, new_title, thread_id, thread_type, **kwargs):
        if old_thread_id == thread_id and old_title != new_title:
            log.info("{} changed the thread title. It will be changed back".
→format(author_id))
            self.changeThreadTitle(old_title, thread_id=thread_id, thread_type=thread_

→type)

    def onNicknameChange(self, author_id, changed_for, new_nickname, thread_id,_
→thread_type, **kwargs):
        if old_thread_id == thread_id and changed_for in old_nicknames and old_
→nicknames[changed_for] != new_nickname:
            log.info("{} changed {}'s' nickname. It will be changed back".
→format(author_id, changed_for))
            self.changeNickname(old_nicknames[changed_for], changed_for, thread_
→id=thread_id, thread_type=thread_type)
client = KeepBot("<email>", "<password>")
client.listen()
```

## 1.4 Testing

To use the tests, copy tests/data.json to tests/my\_data.json or type the information manually in the terminal prompts.

- email: Your (or a test user's) email / phone number
- password: Your (or a test user's) password
- group\_thread\_id: A test group that will be used to test group functionality
- user\_thread\_id: A person that will be used to test kick/add functionality (This user should be in the group)

Please remember to test all supported python versions. If you've made any changes to the 2FA functionality, test it with a 2FA enabled account.

If you only want to execute specific tests, pass the function names in the commandline (not including the *test\_* prefix). Example:

```
$ python tests.py sendMessage sessions sendEmoji
```

**Warning:** Do not execute the full set of tests in too quick succession. This can get your account temporarily blocked for spam! (You should execute the script at max about 10 times a day)

## 1.5 Full API

If you are looking for information on a specific function, class, or method, this part of the documentation is for you.

#### 1.5.1 Client

This is the main class of *fbchat*, which contains all the methods you use to interract with Facebook. You can extend this class, and overwrite the events, to provide custom event handling (mainly used while listening)

#### **Parameters**

- email Facebook *email*, *id* or *phone number*
- password Facebook account password
- **user\_agent** Custom user agent to use when sending requests. If *None*, user agent will be chosen from a premade list (see *utils.USER\_AGENTS*)
- max\_tries (int) Maximum number of times to try logging in
- **session\_cookies** (*dict*) Cookies from a previous session (Will default to login if these are invalid)
- logging\_level (int) Configures the logging level. Defaults to INFO

Raises FBchatException on failed login

addUsersToGroup (user\_ids, thread\_id=None)

Adds users to a group.

#### **Parameters**

- user\_ids (list) One or more user IDs to add
- thread\_id Group ID to add people to. See *Threads*

Raises FBchatException if request failed

**changeNickname** (*nickname*, *user\_id*, *thread\_id=None*, *thread\_type=ThreadType.USER*)

Changes the nickname of a user in a thread

#### **Parameters**

- nickname New nickname
- user\_id User that will have their nickname changed
- thread\_id User/Group ID to change color of. See *Threads*
- thread\_type (models.ThreadType) See Threads

Raises FBchatException if request failed

#### changeThreadColor (color, thread\_id=None)

Changes thread color

#### **Parameters**

- color (models.ThreadColor) New thread color
- thread\_id User/Group ID to change color of. See *Threads*

Raises FBchatException if request failed

## changeThreadEmoji (emoji, thread\_id=None)

Changes thread color

Trivia: While changing the emoji, the Facebook web client actually sends multiple different requests, though only this one is required to make the change

#### **Parameters**

- color New thread emoji
- thread\_id User/Group ID to change emoji of. See *Threads*

Raises FBchatException if request failed

#### changeThreadTitle (title, thread\_id=None, thread\_type=ThreadType.USER)

Changes title of a thread. If this is executed on a user thread, this will change the nickname of that user, effectively changing the title

#### **Parameters**

- title New group thread title
- thread\_id Group ID to change title of. See *Threads*
- thread\_type (models.ThreadType) See Threads

Raises FBchatException if request failed

#### doOneListen(markAlive=True)

Does one cycle of the listening loop. This method is useful if you want to control fbchat from an external event loop

**Parameters markAlive** (bool) – Whether this should ping the Facebook server before running

**Returns** Whether the loop should keep running

Return type bool

```
eventReminder (thread id, time, title, location=", location id=")
```

Sets an event reminder

```
..warning:: Does not work in Python2.7
```

..todo:: Make this work in Python2.7

#### **Parameters**

- thread\_id User/Group ID to send event to. See *Threads*
- time Event time (unix time stamp)
- title Event title
- location Event location name
- location id Event location ID

Raises FBchatException if request failed

#### fetchAllUsers()

Gets all users the client is currently chatting with

Returns models. User objects

Return type list

Raises FBchatException if request failed

#### fetchGroupInfo(\*group\_ids)

Get groups' info from IDs, unordered

**Parameters** group\_ids - One or more group ID(s) to query

**Returns** models. Group objects, labeled by their ID

Return type dict

Raises FBchatException if request failed

#### fetchImageUrl(image id)

Fetches the url to the original image from an image attachment ID

**Parameters**  $image_id(str)$  – The image you want to fethc

Returns An url where you can download the original image

Return type str

Raises FBChatException if request failed

#### fetchPageInfo(\*page\_ids)

Get pages' info from IDs, unordered

Warning: Sends two requests, to fetch all available info!

**Parameters** page\_ids - One or more page ID(s) to query

Returns models.Page objects, labeled by their ID

Return type dict

Raises FBchatException if request failed

#### fetchThreadInfo(\*thread\_ids)

Get threads' info from IDs, unordered

**Warning:** Sends two requests if users or pages are present, to fetch all available info!

**Parameters** thread\_ids - One or more thread ID(s) to query

Returns models. Thread objects, labeled by their ID

Return type dict

Raises FBchatException if request failed

**fetchThreadList** (offset=None, limit=20, thread\_location=ThreadLocation.INBOX, before=None) Get thread list of your facebook account

#### **Parameters**

- offset Deprecated. Do not use!
- limit (int) Max. number of threads to retrieve. Capped at 20
- thread\_location models.ThreadLocation: INBOX, PENDING, ARCHIVED or OTHER
- before (int) A timestamp (in milliseconds), indicating from which point to retrieve threads

Returns models. Thread objects

Return type list

Raises FBchatException if request failed

#### fetchThreadMessages (thread\_id=None, limit=20, before=None)

Get the last messages in a thread

#### **Parameters**

- thread\_id User/Group ID to get messages from. See *Threads*
- limit (int) Max. number of messages to retrieve
- **before** (*int*) A timestamp, indicating from which point to retrieve messages

Returns models. Message objects

Return type list

Raises FBchatException if request failed

#### fetchUnread()

Get the unread thread list

**Returns** List of unread thread ids

Return type list

Raises FBchatException if request failed

#### fetchUnseen()

Get the unseen (new) thread list

**Returns** List of unseen thread ids

Return type list

Raises FBchatException if request failed

#### fetchUserInfo(\*user\_ids)

Get users' info from IDs, unordered

Warning: Sends two requests, to fetch all available info!

**Parameters** user\_ids – One or more user ID(s) to query

Returns models. User objects, labeled by their ID

Return type dict

Raises FBchatException if request failed

#### friendConnect (friend\_id)

**Todo:** Documenting this

## getSession()

Retrieves session cookies

Returns A dictionay containing session cookies

Return type dict

#### graphql\_request (query)

Shorthand for graphql\_requests(query)[0]

Raises FBchatException if request failed

graphql\_requests(\*queries)

**Todo:** Documenting this

Raises FBchatException if request failed

#### isLoggedIn()

Sends a request to Facebook to check the login status

Returns True if the client is still logged in

Return type bool

#### listen (markAlive=True)

Initializes and runs the listening loop continually

**Parameters markAlive** (bool) – Whether this should ping the Facebook server each time the loop runs

#### listening = False

Whether the client is listening. Used when creating an external event loop to determine when to stop listening

login (email, password, max\_tries=5)

Uses email and password to login the user (If the user is already logged in, this will do a re-login)

#### **Parameters**

- email Facebook email or id or phone number
- password Facebook account password
- max\_tries (int) Maximum number of times to try logging in

Raises FBchatException on failed login

#### logout()

Safely logs out the client

Parameters timeout - See requests timeout

**Returns** True if the action was successful

#### Return type bool

#### markAsDelivered (thread\_id, message\_id)

Mark a message as delivered

#### **Parameters**

- thread id User/Group ID to which the message belongs. See *Threads*
- message\_id Message ID to set as delivered. See *Threads*

Returns Whether the request was successful

Raises FBchatException if request failed

#### markAsRead(thread id)

Mark a thread as read All messages inside the thread will be marked as read

Parameters thread\_id - User/Group ID to set as read. See Threads

Returns Whether the request was successful

Raises FBchatException if request failed

markAsSeen()

**Todo:** Documenting this

#### on2FACode()

Called when a 2FA code is needed to progress

#### onChatTimestamp (buddylist=None, msg=None)

Called when the client receives chat online presence update

#### **Parameters**

- buddylist A list of dicts with friend id and last seen timestamp
- msg A full set of the data recieved

onColorChange (mid=None, author\_id=None, new\_color=None, thread\_id=None, thread\_type=ThreadType.USER, ts=None, metadata=None, msg=None)

Called when the client is listening, and somebody changes a thread's color

#### **Parameters**

- mid The action ID
- ${\tt author\_id}$  The ID of the person who changed the color
- $\bullet$   $\verb"new_color"\xspace(\texttt{models.ThreadColor})-\xspace$  The new color
- thread\_id Thread ID that the action was sent to. See *Threads*
- thread\_type (models.ThreadType) Type of thread that the action was sent to. See *Threads*
- ts A timestamp of the action
- metadata Extra metadata about the action
- msg A full set of the data recieved

onEmojiChange (mid=None, author\_id=None, new\_emoji=None, thread\_id=None, thread\_type=ThreadType.USER, ts=None, metadata=None, msg=None)

Called when the client is listening, and somebody changes a thread's emoji

#### **Parameters**

- mid The action ID
- author\_id The ID of the person who changed the emoji
- new\_emoji The new emoji
- thread id Thread ID that the action was sent to. See *Threads*
- thread\_type (models.ThreadType) Type of thread that the action was sent to. See *Threads*
- ts A timestamp of the action
- metadata Extra metadata about the action
- msg A full set of the data recieved

#### onFriendRequest (from\_id=None, msg=None)

Called when the client is listening, and somebody sends a friend request

#### **Parameters**

- **from\_id** The ID of the person that sent the request
- msg A full set of the data recieved

onInbox (unseen=None, unread=None, recent\_unread=None, msg=None)

Todo: Documenting this

#### **Parameters**

- unseen --
- unread --
- recent\_unread --
- msg A full set of the data recieved

#### onListenError(exception=None)

Called when an error was encountered while listening

Parameters exception – The exception that was encountered

**Returns** Whether the loop should keep running

#### onListening()

Called when the client is listening

#### onLoggedIn (email=None)

Called when the client is successfully logged in

Parameters email - The email of the client

#### onLoggingIn (email=None)

Called when the client is logging in

#### **Parameters** email – The email of the client

**onMarkedSeen** (*threads=None*, *seen\_ts=None*, *ts=None*, *metadata=None*, *msg=None*)

Called when the client is listening, and the client has successfully marked threads as seen

#### **Parameters**

- threads The threads that were marked
- author\_id The ID of the person who changed the emoji
- **seen\_ts** A timestamp of when the threads were seen
- ts A timestamp of the action
- metadata Extra metadata about the action
- msg A full set of the data recieved

#### **Parameters**

- mid The message ID
- author\_id The ID of the author
- message (deprecated. Use message\_object.text instead)
- message\_object (models.Message) The message (As a Message object)
- thread\_id Thread ID that the message was sent to. See *Threads*
- thread\_type (models.ThreadType) Type of thread that the message was sent to. See *Threads*
- **ts** The timestamp of the message
- metadata Extra metadata about the message
- msg A full set of the data recieved

 $\begin{tabular}{ll} \begin{tabular}{ll} \textbf{onMessageDelivered} & (msg\_ids=None, & delivered\_for=None, & thread\_id=None, \\ & thread\_type=ThreadType.USER, ts=None, metadata=None, msg=None) \\ \begin{tabular}{ll} \textbf{Called when the client is listening, and somebody marks messages as delivered} \end{tabular}$ 

#### **Parameters**

- msg\_ids The messages that are marked as delivered
- **delivered\_for** The person that marked the messages as delivered
- thread id Thread ID that the action was sent to. See *Threads*
- thread\_type (models.ThreadType) Type of thread that the action was sent to. See *Threads*
- **ts** A timestamp of the action
- metadata Extra metadata about the action
- msg A full set of the data recieved

onMessageError (exception=None, msg=None)

Called when an error was encountered while parsing recieved data

#### **Parameters**

- exception The exception that was encountered
- msg A full set of the data recieved

Called when the client is listening, and somebody marks a message as seen

#### **Parameters**

- seen\_by The ID of the person who marked the message as seen
- thread id Thread ID that the action was sent to. See *Threads*
- thread\_type (models.ThreadType) Type of thread that the action was sent to. See *Threads*
- seen\_ts A timestamp of when the person saw the message
- ts A timestamp of the action
- metadata Extra metadata about the action
- msg A full set of the data recieved

Called when the client is listening, and somebody changes the nickname of a person

#### **Parameters**

- mid The action ID
- author id The ID of the person who changed the nickname
- changed\_for The ID of the person whom got their nickname changed
- new\_nickname The new nickname
- thread\_id Thread ID that the action was sent to. See *Threads*
- thread\_type (models.ThreadType) Type of thread that the action was sent to. See *Threads*
- ts A timestamp of the action
- metadata Extra metadata about the action
- msg A full set of the data recieved

Called when the client is listening, and somebody adds people to a group thread

#### **Parameters**

- mid The action ID
- added ids The IDs of the people who got added
- author\_id The ID of the person who added the people
- thread\_id Thread ID that the action was sent to. See *Threads*
- ts A timestamp of the action
- msq A full set of the data recieved

Called when the client is listening, and somebody removes a person from a group thread

#### **Parameters**

- mid The action ID
- removed\_id The ID of the person who got removed
- author\_id The ID of the person who removed the person
- thread id Thread ID that the action was sent to. See *Threads*
- ts A timestamp of the action
- msg A full set of the data recieved

onQprimer (ts=None, msg=None)

Called when the client just started listening

#### **Parameters**

- **ts** A timestamp of the action
- msg A full set of the data recieved

onTitleChange (mid=None, author\_id=None, new\_title=None, thread\_id=None, thread\_type=ThreadType.USER, ts=None, metadata=None, msg=None)

Called when the client is listening, and somebody changes the title of a thread

#### **Parameters**

- mid The action ID
- author id The ID of the person who changed the title
- new title The new title
- thread\_id Thread ID that the action was sent to. See *Threads*
- thread\_type (models.ThreadType) Type of thread that the action was sent to. See *Threads*
- **ts** A timestamp of the action
- metadata Extra metadata about the action
- msg A full set of the data recieved

**onTyping** (*author\_id=None*, *status=None*, *thread\_id=None*, *thread\_type=None*, *msg=None*) Called when the client is listening, and somebody starts or stops typing into a chat

#### **Parameters**

- author\_id The ID of the person who sent the action
- **status** The typing status
- thread\_id Thread ID that the action was sent to. See *Threads*
- thread\_type (models.ThreadType) Type of thread that the action was sent to. See *Threads*
- msg A full set of the data recieved

#### onUnknownMesssageType (msg=None)

Called when the client is listening, and some unknown data was recieved

## Parameters msg - A full set of the data recieved

#### reactToMessage (message\_id, reaction)

Reacts to a message

#### **Parameters**

- message\_id Message ID to react to
- reaction (models.MessageReaction) Reaction emoji to use

Raises FBchatException if request failed

#### removeFriend(friend\_id=None)

Removes a specifed friend from your friend list

Parameters friend\_id - The id of the friend that you want to remove

**Returns** Returns error if the removing was unsuccessful, returns True when successful.

#### removeUserFromGroup (user\_id, thread\_id=None)

Removes users from a group.

#### **Parameters**

- user\_id User ID to remove
- thread\_id Group ID to remove people from. See *Threads*

Raises FBchatException if request failed

#### resetDefaultThread()

Resets default thread

#### searchForGroups (name, limit=1)

Find and get group thread by its name

#### **Parameters**

- name Name of the group thread
- limit The max. amount of groups to fetch

**Returns** models. Group objects, ordered by relevance

Return type list

Raises FBchatException if request failed

#### searchForPages (name, limit=1)

Find and get page by its name

**Parameters** name – Name of the page

**Returns** models.Page objects, ordered by relevance

Return type list

Raises FBchatException if request failed

#### searchForThreads (name, limit=1)

Find and get a thread by its name

#### **Parameters**

- name Name of the thread
- limit The max. amount of groups to fetch

**Returns** models. User, models. Group and models. Page objects, ordered by relevance

Return type list

Raises FBchatException if request failed

searchForUsers (name, limit=1)

Find and get user by his/her name

#### **Parameters**

- name Name of the user
- limit The max. amount of users to fetch

**Returns** *models.User* objects, ordered by relevance

Return type list

Raises FBchatException if request failed

**send** (*message*, *thread\_id=None*, *thread\_type=ThreadType.USER*)
Sends a message to a thread

#### **Parameters**

- message (models.Message) Message to send
- thread\_id User/Group ID to send to. See *Threads*
- thread\_type (models.ThreadType) See Threads

Returns Message ID of the sent message

Raises FBchatException if request failed

sendEmoji (emoji=None, size=EmojiSize.SMALL, thread\_id=None, thread\_type=ThreadType.USER)
Deprecated. Use fbchat.Client.send instead

**sendLocalImage** (*image\_path*, *message=None*, *thread\_id=None*, *thread\_type=ThreadType.USER*)
Sends a local image to a thread

#### **Parameters**

- image\_path Path of an image to upload and send
- message Additional message
- thread\_id User/Group ID to send to. See *Threads*
- thread type (models.ThreadType) See Threads

**Returns** *Message ID* of the sent image

Raises FBchatException if request failed

 ${\tt sendMessage}\ (\textit{message}, \textit{thread\_id} = None, \textit{thread\_type} = ThreadType.USER)$ 

Deprecated. Use fbchat.Client.sendinstead

**sendRemoteImage** (*image\_url*, *message=None*, *thread\_id=None*, *thread\_type=ThreadType.USER*)

Sends an image from a URL to a thread

#### **Parameters**

• image\_url - URL of an image to upload and send

```
• message – Additional message
```

- thread id User/Group ID to send to. See Threads
- thread\_type (models.ThreadType) See Threads

Returns Message ID of the sent image

Raises FBchatException if request failed

#### setDefaultThread(thread id, thread type)

Sets default thread to send messages to

#### **Parameters**

- thread\_id User/Group ID to default to. See *Threads*
- thread\_type (models.ThreadType) See Threads

#### setSession (session\_cookies)

Loads session cookies

Parameters session\_cookies (dict) - A dictionay containing session cookies

**Returns** False if session\_cookies does not contain proper cookies

Return type bool

## setTypingStatus (status, thread\_id=None, thread\_type=None)

Sets users typing status in a thread

#### **Parameters**

- status (models.TypingStatus) Specify the typing status
- thread\_id User/Group ID to change status in. See *Threads*
- thread\_type (models.ThreadType) See Threads

Raises FBchatException if request failed

#### ssl\_verify = True

Verify ssl certificate, set to False to allow debugging with a proxy

#### startListening()

Start listening from an external event loop

Raises FBchatException if request failed

## stopListening()

Cleans up the variables from startListening

#### uid = None

The ID of the client. Can be used as *thread\_id*. See *Threads* for more info.

Note: Modifying this results in undefined behaviour

#### **1.5.2 Models**

These models are used in various functions, both as inputs and return values. A good tip is to write from fbchat. models import \* at the start of your source, so you can use these models freely

```
class fbchat.models.Attachment (uid=None)
```

Represents a Facebook attachment

```
uid = None
          The attachment ID
class fbchat.models.AudioAttachment (filename=None,
                                                              url=None,
                                                                          duration=None.
                                                                                          au-
                                             dio_type=None, **kwargs)
     Represents an audio file that has been sent as a Facebook attachment
     audio_type = None
         Audio type
     duration = None
         Duration of the audioclip in milliseconds
     filename = None
          Name of the file
     url = None
         Url of the audio file
class fbchat.models.EmojiSize
     Used to specify the size of a sent emoji
     LARGE = '369239383222810'
     MEDIUM = '369239343222814'
     SMALL = '369239263222822'
class fbchat.models.Enum
     Used internally by fbchat to support enumerations
exception fbchat.models.FBchatException
     Custom exception thrown by fbchat. All exceptions in the fbchat module inherits this
exception fbchat.models.FBchatFacebookError(message,
                                                                          fb_error_code=None,
                                                       fb_error_message=None,
                                                                                           re-
                                                       quest_status_code=None)
     fb_error_code = None
          The error code that Facebook returned
     fb_error_message = None
          The error message that Facebook returned (In the user's own language)
     request_status_code = None
          The status code that was sent in the http response (eg. 404) (Usually only set if not successful, aka. not
exception fbchat.models.FBchatUserError
     Thrown by fbchat when wrong values are entered
class fbchat.models.FileAttachment(url=None, size=None, name=None, is_malicious=None,
                                            **kwargs)
     Represents a file that has been sent as a Facebook attachment
     is malicious = None
          Whether Facebook determines that this file may be harmful
     name = None
         Name of the file
     size = None
```

Size of the file in bytes

#### url = None

Url where you can download the file

Represents a Facebook group. Inherits *Thread* 

#### color = None

A ThreadColor. The groups's message color

#### emoji = None

The groups's default emoji

#### nicknames = None

A dict, containing user nicknames mapped to their IDs

#### participants = None

Unique list (set) of the group thread's participant user IDs

class fbchat.models.ImageAttachment(original\_extension=None, width=None, height=None,

is\_animated=None, thumbnail\_url=None, preview=None, large\_preview=None, ani-

mated\_preview=None, \*\*kwargs)

Represents an image that has been sent as a Facebook attachment To retrieve the full image url, use: fbchat. Client.fetchImageUrl, and pass it the uid of the image attachment

#### animated\_preview\_height = None

Height of the animated preview image

#### animated\_preview\_url = None

URL to an animated preview of the image (eg. for gifs)

#### animated preview width = None

Width of the animated preview image

#### height = None

Height of original image

### is\_animated = None

Whether the image is animated

## large\_preview\_height = None

Height of the large preview image

#### large\_preview\_url = None

URL to a large preview of the image

#### large\_preview\_width = None

Width of the large preview image

## original\_extension = None

The extension of the original image (eg. 'png')

## preview\_height = None

Height of the medium preview image

## preview\_url = None

URL to a medium preview of the image

#### preview\_width = None

Width of the medium preview image

#### thumbnail\_url = None

URL to a thumbnail of the image

```
width = None
         Width of original image
class fbchat.models.Mention(thread_id, offset=0, length=10)
     Represents a @mention
     length = None
         The length of the mention
     offset = None
         The character where the mention starts
     thread id = None
         The thread ID the mention is pointing at
class fbchat.models.Message (text=None, mentions=None, emoji_size=None, sticker=None, attach-
                                  ments=None)
     Represents a Facebook message
     attachments = None
         A list of attachments
     author = None
         ID of the sender
     emoji size = None
         A EmojiSize. Size of a sent emoji
     is read = None
         Whether the message is read
     mentions = None
         A list of Mention objects
     reactions = None
         A dict with user's IDs as keys, and their MessageReaction as values
     sticker = None
         A Sticker
     text = None
         The actual message
     timestamp = None
         Timestamp of when the message was sent
     uid = None
         The message ID
class fbchat.models.MessageReaction
     Used to specify a message reaction
     ANGRY = ''
     LOVE = ''
     NO = ''
     SAD = ''
     SMILE = ''
     WOW = ''
```

YES = ''

```
class fbchat.models.Page (uid, url=None, city=None, likes=None, sub_title=None, category=None,
                                **kwargs)
     Represents a Facebook page. Inherits Thread
     category = None
         The page's category
     city = None
         The name of the page's location city
     likes = None
          Amount of likes the page has
     sub_title = None
          Some extra information about the page
     url = None
         The page's custom url
class fbchat.models.Room(uid, admins=None, approval_mode=None, approval_requests=None,
                               join_link=None, privacy_mode=None, **kwargs)
     Represents a Facebook room. Inherits Group
     admins = None
     approval_mode = None
     approval_requests = None
     join_link = None
     privacy_mode = None
class fbchat.models.ShareAttachment(**kwargs)
     Represents a shared item (eg. URL) that has been sent as a Facebook attachment - Currently Incomplete!
class fbchat.models.Sticker(*args, **kwargs)
     Represents a Facebook sticker that has been sent to a Facebook thread as an attachment
     frame_rate = None
          The frame rate the spritemap is intended to be played in
     frames_per_col = None
          The amount of frames present in the spritemap pr. coloumn
     frames_per_row = None
          The amount of frames present in the spritemap pr. row
     height = None
          Height of the sticker
     is animated = False
          Whether the sticker is animated
     label = None
          The sticker's label/name
     large_sprite_image = None
          URL to a large spritemap
     medium_sprite_image = None
          URL to a medium spritemap
     pack = None
          The sticker-pack's ID
```

```
url = None
         URL to the sticker's image
    width = None
         Width of the sticker
class fbchat.models.Thread(_type, uid, photo=None, name=None, last_message_timestamp=None,
                                message count=None)
    Represents a Facebook thread
    last_message_timestamp = None
         Timestamp of last message
    message_count = None
         Number of messages in the thread
    name = None
         The name of the thread
    photo = None
         A url to the thread's picture
    type = None
         Specifies the type of thread. Can be used a thread_type. See Threads for more info
    uid = None
         The unique identifier of the thread. Can be used a thread_id. See Threads for more info
class fbchat.models.ThreadColor
    Used to specify a thread colors
    BILOBA FLOWER = '#a695c7'
    BRILLIANT ROSE = '#ff5ca1'
    CAMEO = '#d4a88c'
    DEEP_SKY_BLUE = '#20cef5'
    FERN = '#67b868'
    FREE_SPEECH_GREEN = '#13cf13'
    GOLDEN_POPPY = '#ffc300'
    LIGHT CORAL = '#e68585'
    MEDIUM SLATE BLUE = '#7646ff'
    MESSENGER BLUE = '#0084ff'
    PICTON_BLUE = '#6699cc'
    PUMPKIN = '#ff7e29'
    RADICAL_RED = '#fa3c4c'
    SHOCKING = '#d696bb'
    VIKING = '#44bec7'
class fbchat.models.ThreadLocation
    Used to specify where a thread is located (inbox, pending, archived, other).
    ARCHIVED = 'ARCHIVED'
    INBOX = 'INBOX'
```

```
OTHER = 'OTHER'
     PENDING = 'PENDING'
class fbchat.models.ThreadType
     Used to specify what type of Facebook thread is being used. See Threads for more info
     GROUP = 2
     PAGE = 3
     ROOM = 4
     USER = 1
class fbchat.models.TypingStatus
     Used to specify whether the user is typing or has stopped typing
     STOPPED = 0
     TYPING = 1
class fbchat.models.User(uid, url=None, first_name=None, last_name=None, is_friend=None,
                               gender=None, affinity=None, nickname=None, own_nickname=None,
                               color=None, emoji=None, **kwargs)
     Represents a Facebook user. Inherits Thread
     affinity = None
         From 0 to 1. How close the client is to the user
     color = None
         A ThreadColor. The message color
     emoji = None
         The default emoji
     first_name = None
         The users first name
     gender = None
         The user's gender
     is friend = None
         Whether the user and the client are friends
     last name = None
         The users last name
     nickname = None
         The user's nickname
     own nickname = None
         The clients nickname, as seen by the user
     url = None
         The profile url
class fbchat.models.VideoAttachment(size=None,
                                                          width=None,
                                                                         height=None,
                                                                                        dura-
                                             tion=None, preview_url=None, small_image=None,
                                             medium_image=None, large_image=None, **kwargs)
     Represents a video that has been sent as a Facebook attachment
     duration = None
         Length of video in milliseconds
```

#### height = None

Height of original video

#### large\_image\_height = None

Height of the large preview image

#### large\_image\_url = None

URL to a large preview image of the video

#### large\_image\_width = None

Width of the large preview image

## medium\_image\_height = None

Height of the medium preview image

#### medium\_image\_url = None

URL to a medium preview image of the video

#### medium\_image\_width = None

Width of the medium preview image

#### preview url = None

URL to very compressed preview video

#### size = None

Size of the original video in bytes

#### small\_image\_height = None

Height of the small preview image

#### small\_image\_url = None

URL to a small preview image of the video

#### small\_image\_width = None

Width of the small preview image

#### width = None

Width of original video

## 1.5.3 Utils

These functions and values are used internally by fbchat, and are subject to change. Do **NOT** rely on these to be backwards compatible!

## class fbchat.utils.ReqUrl

A class containing all urls used by fbchat

fbchat.utils.USER\_AGENTS = ['Mozilla/5.0 (Macintosh; Intel Mac OS X 10\_10\_2) AppleWebKit/5. Default list of user agents

fbchat.utils.random()  $\rightarrow$  x in the interval [0, 1).

## 1.6 Todo

This page will be periodically updated to show missing features and documentation

## 1.6.1 Missing Functionality

- Implement Client.searchForMessage
  - This will use the graphql request API
- Implement chatting with pages properly
- Write better FAQ
- · Explain usage of graphql

## 1.6.2 Documentation

**Todo:** Documenting this

(The original entry is located in /home/docs/checkouts/readthedocs.org/user\_builds/fbchat/checkouts/v1.3.9/fbchat/client.py:docstring of fbchat.Client.friendConnect, line 1.)

**Todo:** Documenting this

(The original entry is located in /home/docs/checkouts/readthedocs.org/user\_builds/fbchat/checkouts/v1.3.9/fbchat/client.py:docstring of fbchat.Client.graphql\_requests, line 1.)

**Todo:** Documenting this

(The original entry is located in /home/docs/checkouts/readthedocs.org/user\_builds/fbchat/checkouts/v1.3.9/fbchat/client.py:docstring of fbchat.Client.markAsSeen, line 1.)

**Todo:** Documenting this

(The original entry is located in /home/docs/checkouts/readthedocs.org/user\_builds/fbchat/checkouts/v1.3.9/fbchat/client.py:docstring of fbchat.Client.onInbox, line 1.)

## 1.7 FAQ

## 1.7.1 Version X broke my installation

We try to provide backwards compatability where possible, but since we're not part of Facebook, most of the things may be broken at any point in time

Downgrade to an earlier version of fbchat, run this command

\$ pip install fbchat==<X>

Where you replace <X> with the version you want to use

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## 1.7.2 Will you be supporting creating posts/events/pages and so on?

We won't be focusing on anything else than chat-related things. This API is called fbCHAT, after all;)

## 1.7.3 Submitting Issues

If you're having trouble with some of the snippets, or you think some of the functionality is broken, please feel free to submit an issue on Github. You should first login with logging\_level set to logging.DEBUG:

```
from fbchat import Client
import logging
client = Client('<email>', '<password>', logging_level=logging.DEBUG)
```

Then you can submit the relevant parts of this log, and detailed steps on how to reproduce

**Warning:** Always remove your credentials from any debug information you may provide us. Preferably, use a test account, in case you miss anything

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