
django-emojiwatch Documentation

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Matt Bogosian

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django-emojivatch is a bare bones Slack app for posting custom emoji updates to a designated channel. It is licensed under the [MIT License](#). See the [LICENSE](#) file for details.

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1.1 Introduction

`django-emojivatch` is a bare bones Slack app for posting custom emoji updates to a designated channel. It is implemented as a Django app. It was loosely inspired by Khan Academy's [emojivatch](#), which provides similar functionality, but for hosting on Google App Engine.

1.1.1 License

`django-emojivatch` is licensed under the [MIT License](#). See the [LICENSE](#) file for details. Source code is [available on GitHub](#).

1.1.2 Installation

Django

Installation can be performed via `pip` (which will download and install the [latest release](#)):

```
% pip install django-emojivatch
...
```

Alternately, you can download the sources (e.g., [from GitHub](#)) and run `setup.py`:

```
% git clone https://github.com/posita/django-emojiwatch
...
% cd django-emojiwatch
% python setup.py install
...
```

Now you can add it to your `DJANGO_SETTINGS_MODULE`:

```
INSTALLED_APPS = (
    # ...
    'emojiwatch',
)

EMOJIWATCH = {
    'slack_verification_token': '...',
}
```

And add it to your site-wide URLs:

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

urlpatterns = (
    # ...
    url(
        r'^emojiwatch/', # or wherever you want
        include('emojiwatch.urls'),
    ),
    # ...
)
```

If you haven't already, you'll also need to [enable the admin site](#) for your Django installation.

Configuring Token Encryption in Django's Database

Auth tokens and notes associated with a watcher are encrypted in the Django database using `django-fernet-fields`. By default, the encryption key is derived from the `SECRET_KEY` Django setting. To override this, use the `FERNET_KEYS` and `FERNET_USE_HKDF` settings. See [the docs](#) for details.

Slack App and Watcher Setup

1. Create a [new Slack app](#) or a [legacy Slack app](#).
2. Once created, navigate to the Basic Information settings section and copy the Verification Token (e.g., `NS3PYxg1QR117s2G0fRDZ8uK`):

App Credentials

These credentials allow your app to access the Slack API. They are secret. Please don't share your app credentials with anyone, include them in public code repositories, or store them in insecure ways.

Client ID


... ..

Client Secret

..... Show Regenerate

You'll need to send this secret along with your client ID when making your [oauth.access](#) request.

Verification Token

NS3PYxg1QR1I7s2G0fRDZ8uK  Regenerate

For interactive messages and events, use this token to verify that requests are actually coming from Slack. Slash commands and interactive messages will both use this verification token.

This is what you'll use as the `EMOJIWATCH['slack_verification_token']` Django setting.

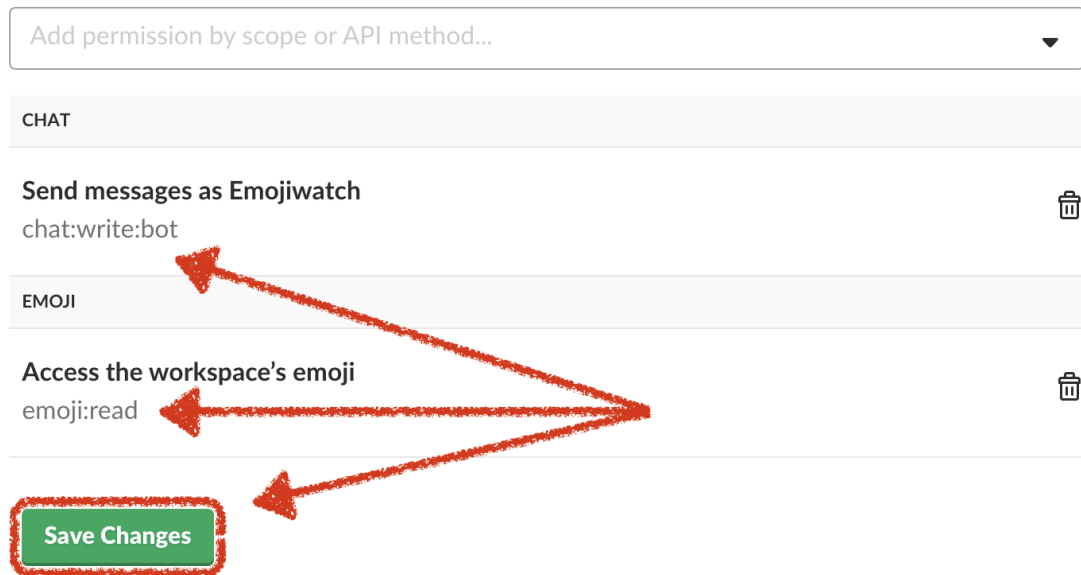
3. Add the `emoji:read` and `chat:write` (or `chat:write:bot` for legacy Slack apps) scopes to your app:

Scopes

[Scopes](#) define the [API methods](#) this app is allowed to call, and thus which information and capabilities are available on a workspace it's installed on. Many scopes are restricted to specific [resources](#) like channels or files.

If your app is submitted to the Slack App Directory, we'll review your reasons for requesting each scope. After your app is listed in the Directory, it will only be able to use permission scopes Slack has approved.

Select Permission Scopes



Add permission by scope or API method...

CHAT

Send messages as Emojiwatch
chat:write:bot

EMOJI

Access the workspace's emoji
emoji:read

Save Changes

4. Navigate to the OAuth & Permission features section. If necessary, click Install App to Workspace:

OAuth Tokens & Redirect URLs

These [OAuth Tokens](#) will be automatically generated when you finish connecting the app to your workspace. You'll use these tokens to authenticate your app.



Install App to Workspace

You'll be asked to authorize your new app in your workspace:

Access your workspace's emoji



Emojivatch will be able to access the names and images of custom emoji on posita.

Send messages as Emojivatch



Emojivatch will be able to send messages to posita.

Click Authorize.

5. Copy the OAuth Access Token (e.g., xoxp-3168...db0b5):

OAuth Tokens & Redirect URLs

Tokens for Your Workspace

These tokens were automatically generated when you installed the app to your team. You can use these to authenticate your app. [Learn more.](#)

OAuth Access Token

xoxp-316869823831-315935200709-320645037508-255f8a9cd856b56b96a15771

Copy

Reinstall App

This is what you'll use when creating the Slack Workspace Emoji Watcher below.

6. If you haven't already, install `emojivatch` into your Django project. (See the [Django](#) installation section above.) Navigate to your Django project's admin interface and add a new Slack Workspace Emoji Watcher with your Slack team ID, your OAuth access token, and the Slack channel ID to which you'd like Emojivatch to post messages:

Add Slack Workspace Emoji Watcher

Team ID:

T4P09SCHKT

Access Token:

xoxp-316869823831-315935200709-32064!

Channel ID:

C8VSYSEQ22

Icon Emoji:

:robot_face:

Your Slack team ID can be determined by navigating to any channel within your workspace, and looking at `boot_data.team_id` in your browser's JavaScript console:

```
>> boot_data.team_id
"T4P09SCHKT"
```

Your Slack channel ID can be found in the URL when navigating to that channel:

```
https://<workspace-name>.slack.com/messages/C8VSYSEQ22/details/
          ^^^^^^^^^^^
```

7. Once your Slack Workspace Emoji Watcher is saved, you should be able to test your configuration by faking a minimalist `emoji_changed` event via `curl`:

```
curl --verbose --data '{
  "token": "NS3PYxg1QR1l7s2G0fRDZ8uK",
  "team_id": "T4P09SCHKT",
  "type": "event_callback",
  "event": {
    "type": "emoji_changed",
    "subtype": "add",
    "name": "faked-new-emoji",
    "value": "<some-img-url>"
  }
}' https://<django-project-base>/emojiwatch/event_hook
```

`<django-project-base>` is your domain, and optionally any path to your top-level Django project. If your Django project provides your root path, this will just be a domain name. Assuming everything has been set up correctly so far, this should result in a post to your Slack channel (e.g., C8VSYSEQ22):

**Emojiwatch** APP 2:52 PMadded `:faked_new_emoji:`

(66 kB) ▾



If not, examine the output from your `curl` call for any clues as to what went wrong. See the [Troubleshooting](#) section below for additional suggestions.

8. Now you're ready to start receiving events. Navigate to your Slack app's `Event Subscriptions` features section. Turn events on and add your Django project's publicly-visible HTTPS URL. (This is the same URL you used with your `curl` command above.) Slack will attempt to post to that URL to verify its accessibility. Once verified, subscribe to the `emoji:read` event and click `Save Changes`.

Enable Events

Your app can subscribe to be notified of events in Slack (for example, when a user adds a reaction or creates a file) at a URL you choose. [Learn more.](#)

Request URL **Verified** ✓

We'll send HTTP POST requests to this URL when events occur. As soon as you enter a URL, we'll send a request with a `challenge` parameter, and your endpoint must respond with the challenge value. [Learn more.](#)

Subscribe to Workspace Events

To subscribe to an event, your app must have access to the related [OAuth permission scope](#).

Event Name	Description	Required Scope	
emoji_changed	A custom emoji has been added or changed	<code>emoji:read</code>	

9. That's it! You should now get notices to your designated channel whenever you add or remove custom Emojis to your workspace.

Troubleshooting

If your `curl` command is succeeding, but you're still unable to see a post to your Slack channel, try turning on logging output via your Django settings. Here's a minimalist configuration if you don't already have one:

```
import logging
LOGGING = {
    'version': 1,
    'disable_existing_loggers': False,
    'formatters': {
        'standard': {
            'format': '%(asctime)s %(levelname)s %(name)s %(filename)s:
→ %(lineno)d %(message)s',
        },
    },
    'handlers': {
```

```
'default': {
    'class': 'logging.StreamHandler',
    'level': 'DEBUG',
    'formatter': 'standard',
},
},
'loggers': {
    '': {
        'handlers': ['default'],
        'level': 'DEBUG',
        'propagate': False,
    },
    'django': {
        'level': 'INFO',
        'propagate': True,
    },
},
}
```

Try your `curl` command again. The Django console log should provide some clue as to what's wrong.

Some common causes are:

- Not properly adding or configuring the `emojiwatch` app in your Django project.
- Omitting or using an incorrect value for your `EMOJIWATCH['slack_verification_token']` Django setting.
- Using an incorrect URL for your Django project instance or the `django-emojiwatch` event handler. (Note: Slack requires event handlers to support HTTPS.)
- Not creating (or neglecting to save) your Slack Workspace Emoji Watcher object via your Django project's admin interface.
- Using incorrect values for your team ID, access token, or channel ID.
- Failing to properly format a faked `emoji_changed` event when invoking `curl`.

1.1.3 Requirements

You'll need a Slack account (and admin approval) for setting up your Slack app. A modern version of Python is required:

- `cPython` (2.7 or 3.4+)
- `PyPy` (Python 2.7 or 3.4+ compatible)

`django-emojiwatch` has the following dependencies (which will be installed automatically):

- `Django` (1.8 or higher)
- `django-fernet-fields`
- `future`
- `slacker`

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1.2 Contributing to django-emojivatch

There are several ways you can contribute.

1.2.1 Filing Issues

You can [file new issues](#) as you find them. Please avoid duplicating issues. “[Writing Effective Bug Reports](#)” by Elisabeth Hendrickson (PDF) may be helpful.

1.2.2 Submission Guidelines

If you’re willing and able, consider [submitting a pull request](#) (PR) with a fix. There are only a few guidelines:

- If it isn’t already there, please add your name (and optionally your GitHub username, email, website address, or other contact information) to the [CREDITS](#) file:

```
...
* `Gordon the Turtle <https://github.com/GordonTheTurtle>`_
...
```

- Try to follow the source conventions as you observe them. (Note: I have purposely avoided aspects of [PEP8](#), in part because I have adopted conventions developed from my experiences with other languages, but mostly because I’m growing older and more stubborn.)
- Provide tests where feasible and appropriate. At the very least, existing tests should not fail. (There are exceptions, but if there is any doubt, they probably don’t apply.)

Unit tests live in `./tests`. Tests can be run with `tox [-e TOX_ENV]` (requires [Tox](#)) or `"${PYTHON:-python}" setup.py test`.

There are two helper scripts that may be of interest. To set up a virtual environment (via `virtualenv`) for development and to run unit tests using [Tox](#) from that virtual environment, you can do the following:

```
( . ./helpers/venvsetup.sh && ./helpers/runtests.sh [-e TOX_ENV] )
```

- If you need me, mention me ([@posita](#)) in your comment, and describe specifically how I can help.
- If you want feedback on a work-in-progress (WIP), create a PR and prefix its title with something like, “NEED FEEDBACK –”.
- If your PR is still in progress, but you aren’t blocked on anything, prefix the title with something like, “WIP –”.
- Once you’re ready for a merge, resolve any merge conflicts, squash your commits, and provide a useful commit message. ([This](#) and [this](#) may be helpful.) Then prefix the PR’s title to something like, “READY FOR MERGE –”. I’ll try to get to it as soon as I can.

1.3 LICENSE

1.3.1 The MIT License (MIT)

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