# listenclosely Documentation

***Release 0.1.1***

**Juan Madurga**

January 15, 2016

Contents

Contents:

CHAPTER 1

# listenclosely

CI: PyPI: Docs: Listenclosely is a django-app that works as a middleman to connect instant messaging clients. Think on a Call Center/Customer Service using using instant messaging... exactly what it does.

- It is simple, connects *Askers* with online *Agents* until the *Chat* is considered as terminated and the *Agent* is released to attend other *Asker* chats.
- It is flexible, so you can define your own strategies to assign *Agents* to *Askers* and your own messaging backend services.

Messaging Services integrated:

- Whatsapp https://github.com/jlmadurga/listenclosely-whatsapp
- Telegram https://github.com/jlmadurga/listenclosely-telegram

## 1.1 Documentation

The full documentation is at https://listenclosely.readthedocs.org.

- Asker1 is chatting with the Busy Agent
- Asker2 try to chat but no free Agent was free so is waiting with a Pending chat to be attended by an agent
- Asker3 is opening a chat and Online Agent will be assigned to the chat

## 1.2 Quickstart

Install listenclosely:

```
pip install listenclosely
```

Then use it in a project:

```
import listenclosely
```

Add it to django apps and migrate:

```
INSTALLED_APPS = [
        ...
'listenclosely',
...
```

```
]
python manage.py migrate
```

Select, install and configure service backend

```
LISTENCLOSELY_MESSAGE_SERVICE_BACKEND = "listenclosely_telegram.service.TelegramMessageServiceBackend
```

Define your agent strategy or define your own:

```
LISTENCLOSELY_AGENT_STRATEGY = 'listenclosely.strategies.first_free.FirstFreeAgentStrategy'
```

Add step to your celery app:

```
from listenclosely.celery import ListenCloselyAppStep
app.steps['worker'].add(ListenCloselyAppStep)
```

Start your celery app usign gevent:

```
celery --app=demo_app.celery:app worker -P gevent
```

Call listen task or define a celery scheduler to execute:

```
from listenclosely import tasks
tasks.listen.delay()
```

## 1.3 Features

- Connects *Askers* and *Agents* in chats to establish a *Chat*
- Strategies to find *Agent* to attend new *Asker* chat. Define your own strategies
- Messaging Service Backend: Define your own messaging service backend implementations.
- Cron tasks for attending pending chats and to terminate obsolete chats to release *Agents*

## 1.4 Running Tests

Does the code actually work?

```
source <YOURVIRTUALENV>/bin/activate
(myenv) $ pip install -r requirements/test.txt
(myenv) $ make test
```

CHAPTER 2

# Installation

At the command line:

```
$ pip install listenclosely
```

Or, if you have virtualenvwrapper installed:

```
$ mkvirtualenv listenclosely
$ pip install listenclosely
```

CHAPTER 3

# Usage

Then use it in a project:

```
import listenclosely
```

Add it to django apps and migrate:

```
INSTALLED_APPS = [
        ...
'listenclosely',
...
]
python manage.py migrate
```

Select, install and configure service backend

```
LISTENCLOSELY_MESSAGE_SERVICE_BACKEND = "listenclosely_telegram.service.TelegramMessageServiceBackend
```

Define your agent strategy or define your own:

```
LISTENCLOSELY_AGENT_STRATEGY = 'listenclosely.strategies.first_free.FirstFreeAgentStrategy'
```

Add step to your celery app:

```
from listenclosely.celery import ListenCloselyAppStep
app.steps['worker'].add(ListenCloselyAppStep)
```

Start your celery app usign gevent:

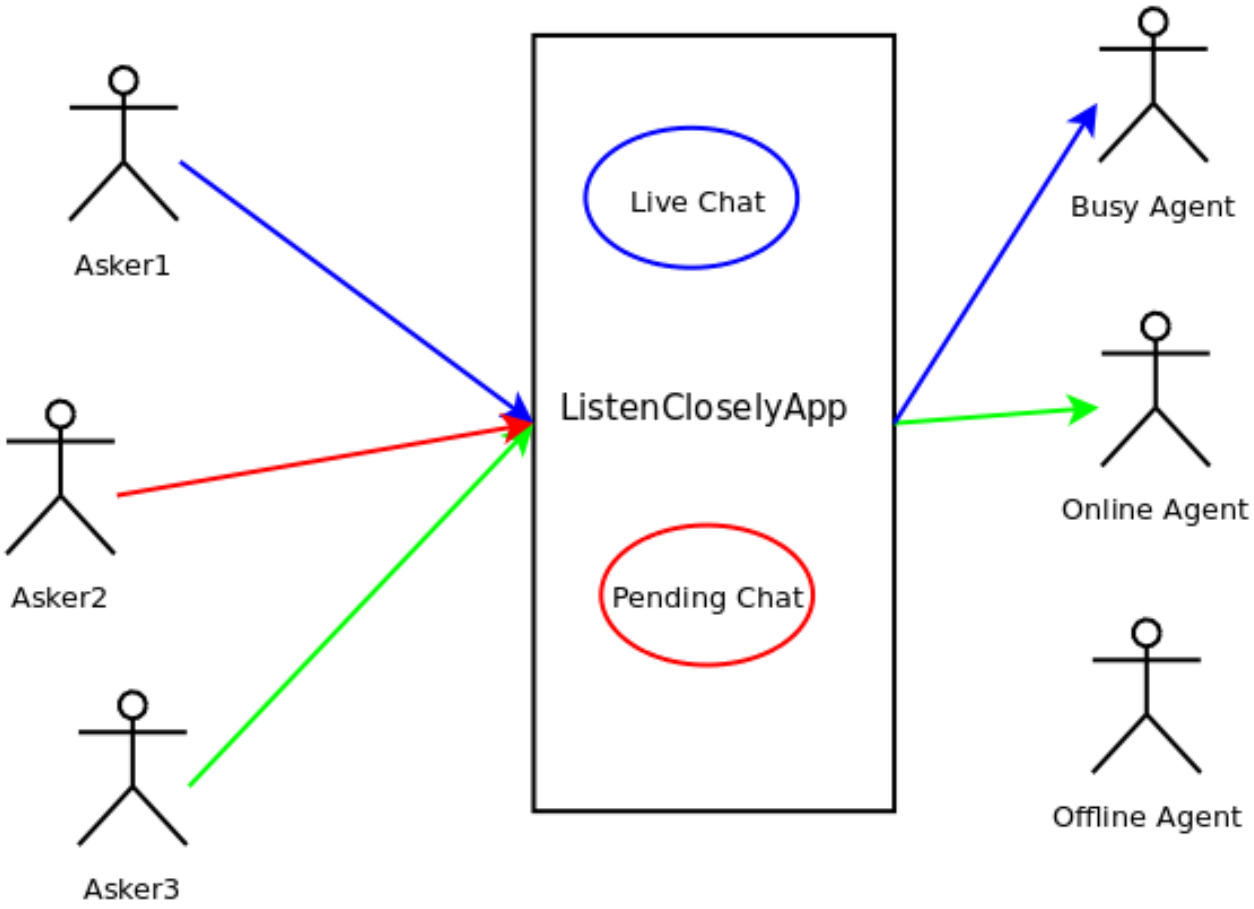
```
celery --app=demo_app.celery:app worker -P gevent
```

Call listen task or define a celery scheduler to execute:

```
from listenclosely import tasks
tasks.listen.delay()
```

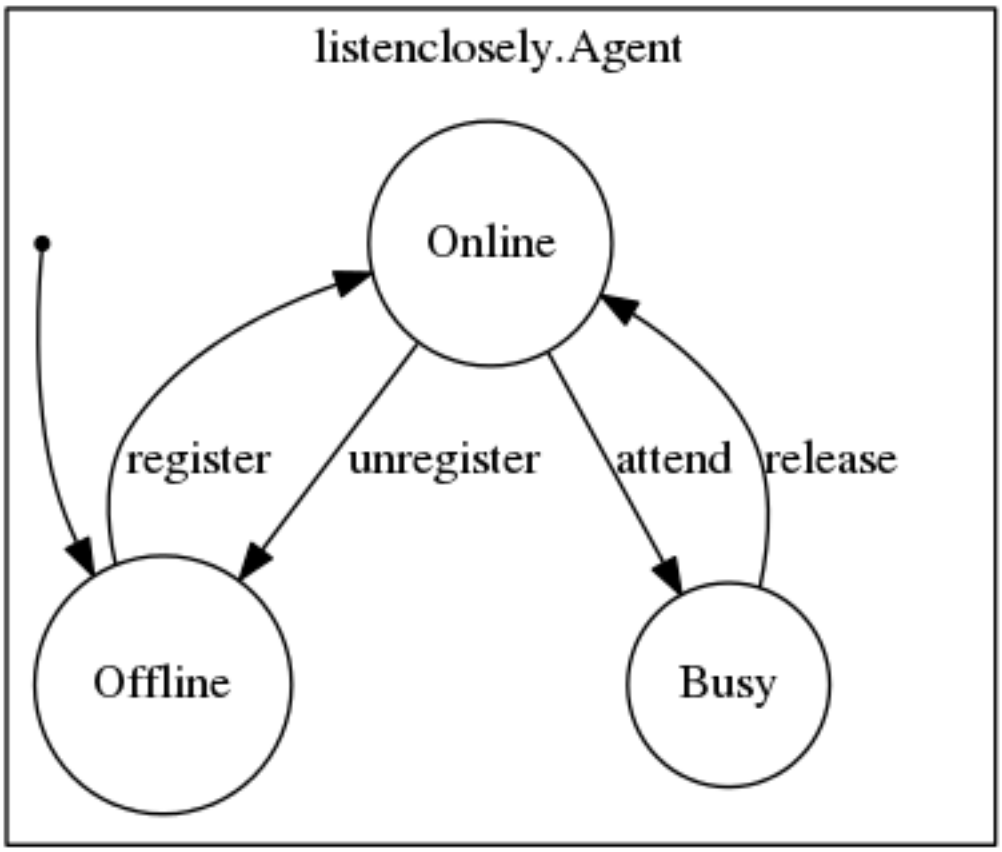
**NOTE:** listenclosely comes with a demo with celery configuration example.

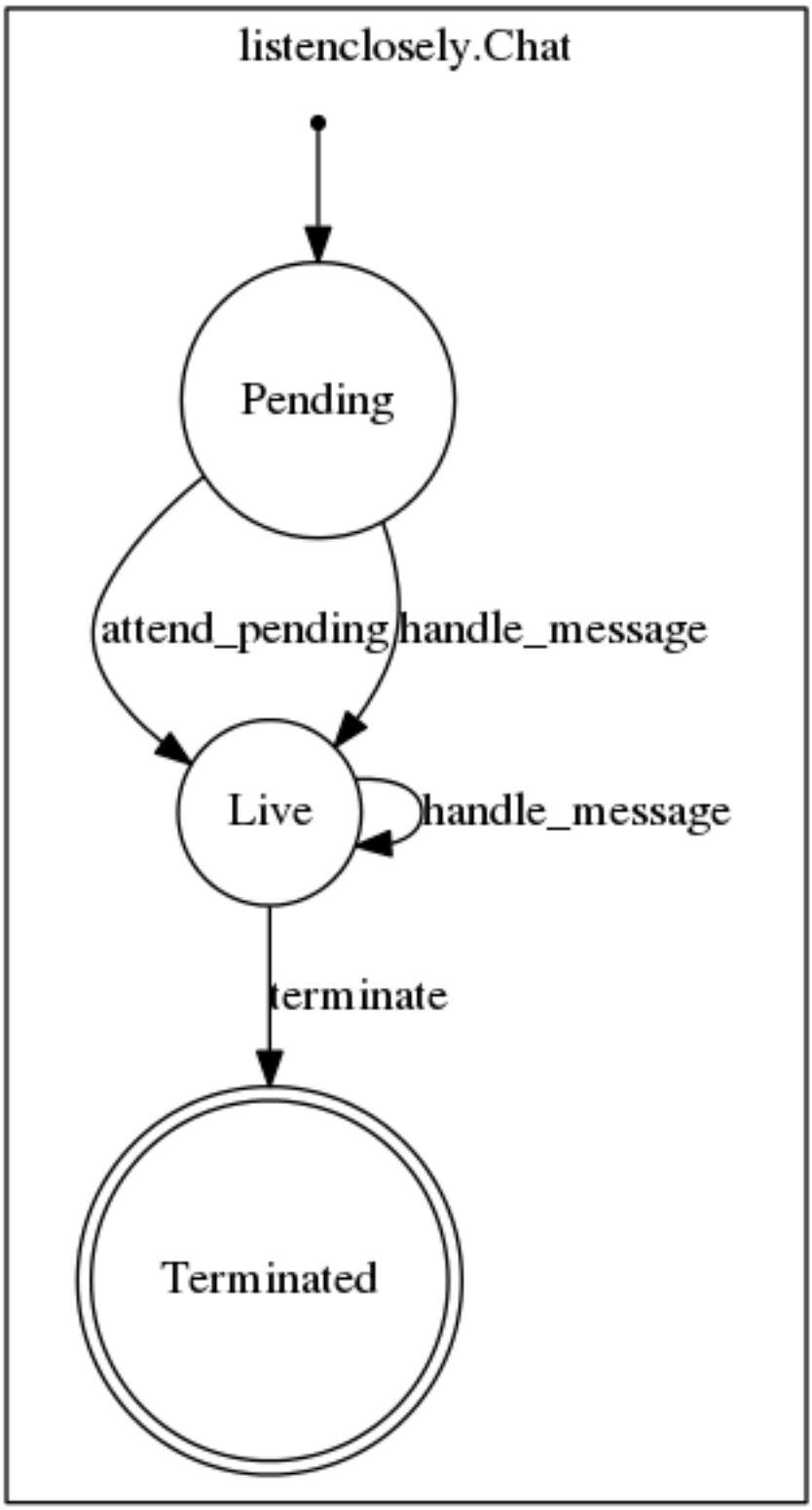
## 3.1 How it works




- Asker1 is chatting with the Busy Agent
- Asker2 try to chat but no free Agent was free so is waiting with a Pending chat to be attended by an agent
- Asker3 is opening a chat and Online Agent will be assigned to the chat

State machines of *Agent* and *Chat*:


listenclosely.Agent
Online
register
unregister
attend
release
Offline
Busy


listenclosely.Chat
Pending
attend_pending
handle_message
Live
handle_message
terminate
Terminated

CHAPTER 4

# Customization

Listenclosely is easy to be customized with your own requirements

## 4.1 Agent stategy

Just extend *strategies.base.BaseAgentStrategy* and define your own *free_agent* function:

```
class FirstFreeAgentStrategy(BaseAgentStrategy):
"""
Choose first free agent
"""

def free_agent(self):
        free_agents = Agent.online.all()
        if free_agents:
        return free_agents[0]
        return None
```

Then configure settings:

```
LISTENCLOSELY_AGENT_STRATEGY = 'your_strategy.YourAgentStrategy'
```

## 4.2 Message Service Backend

Extend *services.base.BaseMessageServiceBackend*. You must implement some methods:

```
def listen(self):
    """
    Connect to service and listen for receive messages.
    To implement in concrete services
    """
    raise NotImplementedError('subclasses of BaseMessageServiceBackend must override listen() method

def send_message(self, id_service, content):
    """
    Send message to a instant messages service
    To implement in concrete services
    :rtype string message_id: identifier for message service
    """
    raise NotImplementedError('subclasses of BaseMessageServiceBackend must override send_message() m
```

```
def disconnect(self):
    """
    Disconnect to service.
    To implement in concrete services
    """
    raise NotImplementedError('subclasses of BaseMessageServiceBackend must override disconnect() met
```

**Use other services as example. At the moment:**

- Whatsapp: https://github.com/jlmadurga/listenclosely-whatsapp
- Telegram: https://github.com/jlmadurga/listenclosely-telegram

CHAPTER 5

# Contributing

Contributions are welcome, and they are greatly appreciated! Every little bit helps, and credit will always be given.

You can contribute in many ways:

## 5.1 Types of Contributions

### 5.1.1 Report Bugs

Report bugs at https://github.com/jlmadurga/listenclosely/issues.

If you are reporting a bug, please include:

- Your operating system name and version.
- Any details about your local setup that might be helpful in troubleshooting.
- Detailed steps to reproduce the bug.

### 5.1.2 Fix Bugs

Look through the GitHub issues for bugs. Anything tagged with "bug" is open to whoever wants to implement it.

### 5.1.3 Implement Features

Look through the GitHub issues for features. Anything tagged with "feature" is open to whoever wants to implement it.

### 5.1.4 Write Documentation

listenclosely could always use more documentation, whether as part of the official listenclosely docs, in docstrings, or even on the web in blog posts, articles, and such.

### 5.1.5 Submit Feedback

The best way to send feedback is to file an issue at https://github.com/jlmadurga/listenclosely/issues.

If you are proposing a feature:

- Explain in detail how it would work.
- Keep the scope as narrow as possible, to make it easier to implement.
- Remember that this is a volunteer-driven project, and that contributions are welcome :)

## 5.2 Get Started!

Ready to contribute? Here's how to set up *listenclosely* for local development.

1. Fork the *listenclosely* repo on GitHub.
2. Clone your fork locally:

```
$ git clone git@github.com:your_name_here/listenclosely.git
```

3. Install your local copy into a virtualenv. Assuming you have virtualenvwrapper installed, this is how you set up your fork for local development:

```
$ mkvirtualenv listenclosely
$ cd listenclosely/
$ python setup.py develop
```

4. Create a branch for local development:

```
$ git checkout -b name-of-your-bugfix-or-feature
```

Now you can make your changes locally.

5. When you're done making changes, check that your changes pass flake8 and the tests, including testing other Python versions with tox:

```
$ flake8 listenclosely tests
$ python setup.py test
$ tox
```

To get flake8 and tox, just pip install them into your virtualenv.

6. Commit your changes and push your branch to GitHub:

```
$ git add .
$ git commit -m "Your detailed description of your changes."
$ git push origin name-of-your-bugfix-or-feature
```

7. Submit a pull request through the GitHub website.

## 5.3 Pull Request Guidelines

Before you submit a pull request, check that it meets these guidelines:

1. The pull request should include tests.
2. If the pull request adds functionality, the docs should be updated. Put your new functionality into a function with a docstring, and add the feature to the list in README.rst.
3. The pull request should work for Python 2.6, 2.7, and 3.3, and for PyPy. Check https://travis-ci.org/jlmadurga/listenclosely/pull_requests and make sure that the tests pass for all supported Python versions.

## 5.4 Tips

To run a subset of tests:

```
$ python -m unittest tests.test_listenclosely
```

CHAPTER 6

# Credits

## 6.1 Development Lead

- Juan Madurga <jlmadurga@gmail.com>

## 6.2 Contributors

None yet. Why not be the first?

CHAPTER 7

# History

## 7.1 0.1.0 (2016-01-14)

- First release on PyPI.