ChatOps:

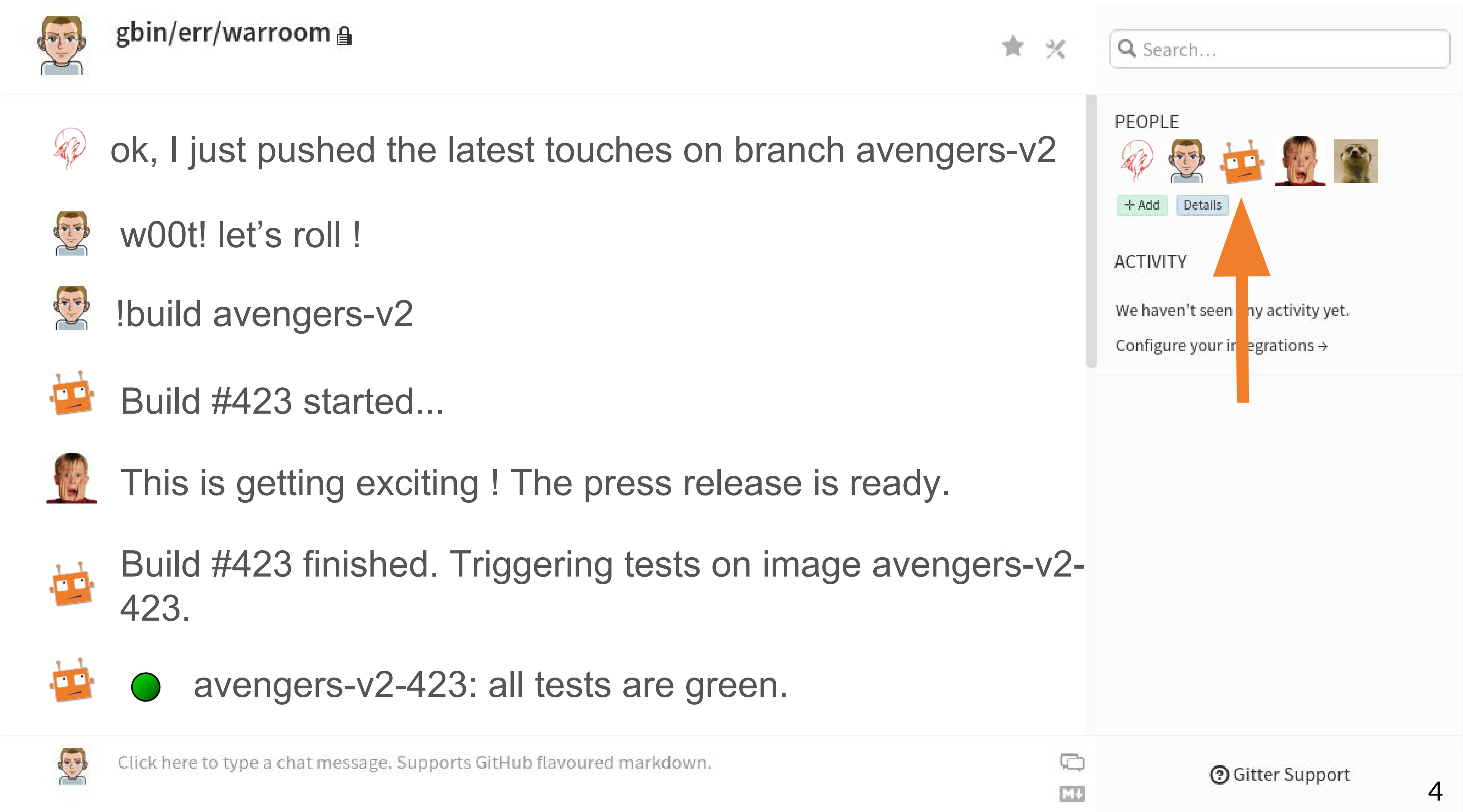
Getting started with Errbot !

Guillaume Binet • 2016.05.03

Overview

- ChatOps
- Setup
- Extend it
- Social aspect

Chat + DevOps


gbin/err/warroom
Search...
PEOPLE
+ Add
Details
ACTIVITY
We haven't seen any activity yet.
Configure your integrations →
Click here to type a chat message. Supports GitHub flavoured markdown.
Gitter Support

ok, I just pushed the latest touches on branch avengers-v2

w00t! let’s roll !

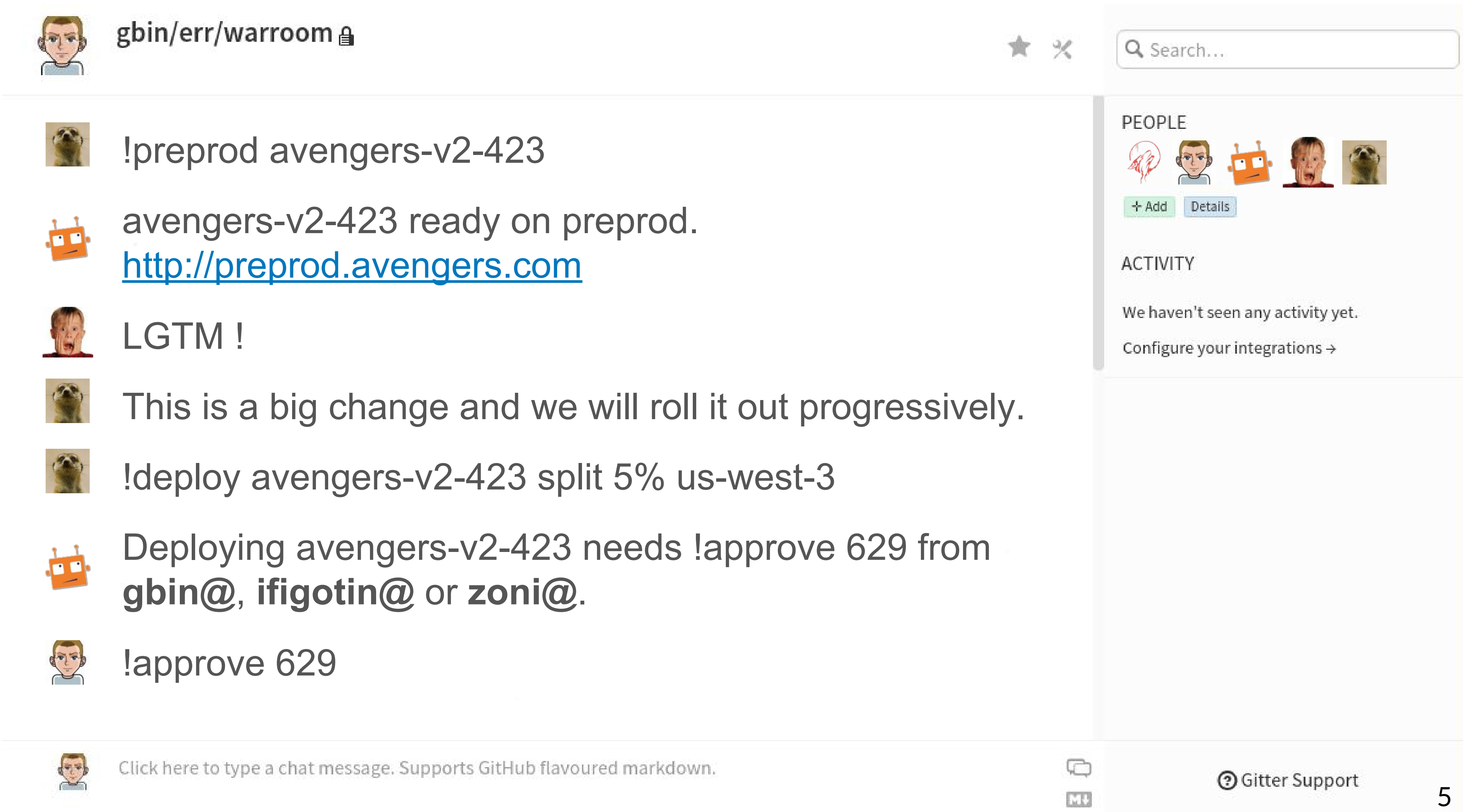
!build avengers-v2

Build #423 started...

This is getting exciting ! The press release is ready.

Build #423 finished. Triggering tests on image avengers-v2-423.

● avengers-v2-423: all tests are green.



!preprod avengers-v2-423

avengers-v2-423 ready on preprod. http://preprod.avengers.com

LGTM !

This is a big change and we will roll it out progressively.

!deploy avengers-v2-423 split 5% us-west-3

Deploying avengers-v2-423 needs !approve 629 from **gbin@**, **ifigotin@** or **zoni@**.

!approve 629

We haven't seen any activity yet.

Click here to type a chat message. Supports GitHub flavoured markdown.

Setup

Chat system

Setup

```
$ mkvirtualenv -p `which python3` errbotenv

(errbotenv) $ pip install errbot

[...]
```

Setup

config.py

```
BACKEND = 'Slack'

BOT_IDENTITY = {
    'token': 'xoxb-5537834321-aFM7ay7GXrnF8ar3Pk1nmbET',
}

BOT_ADMINS = ('@gbin', '@zoni')
```

Setup

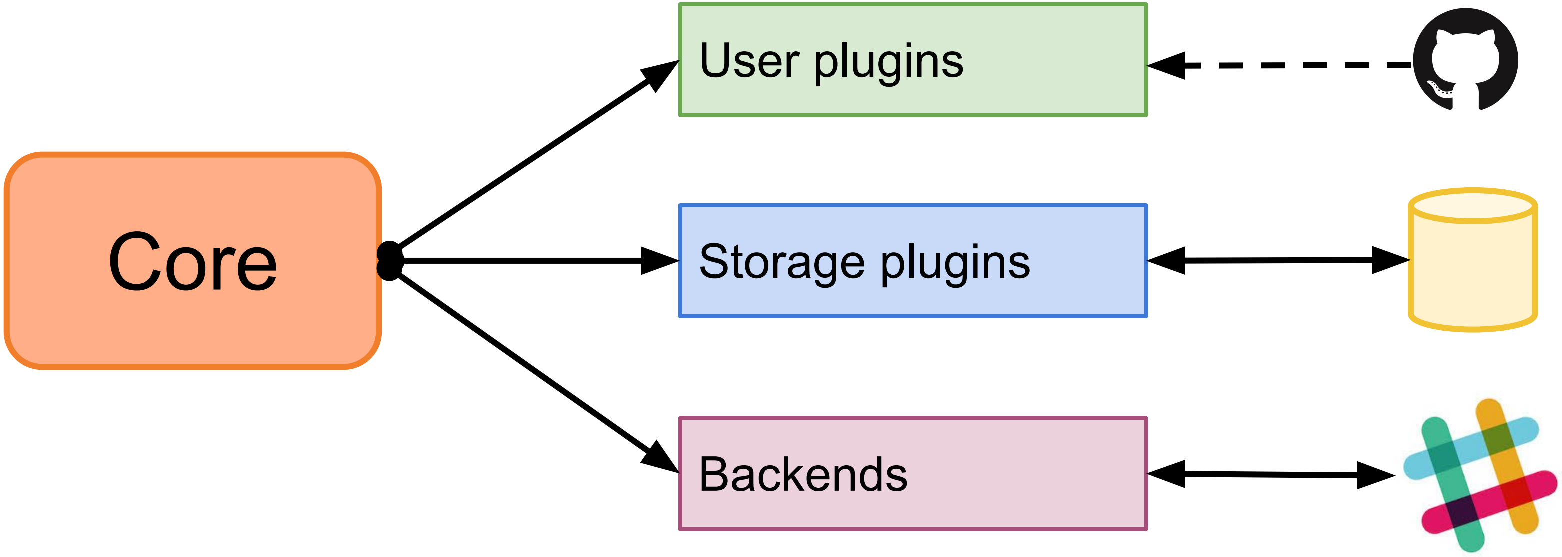
Manage your bot by talking !

```
!repos install errbotio/err-codebot
```

```
Installing errbotio/err-codebot...
```

Extend it

Architecture



User Plugins

Simple user plugin

simon.plug

```
[Core]
Name = Simon
Module = simon.py
```

simon.py

```python
from errbot import botcmd, BotPlugin

class SimonSays(BotPlugin):
    @botcmd
    def make(self, msg, args):
        return "NO! I won't make you %s." % args
```

Simple user plugin

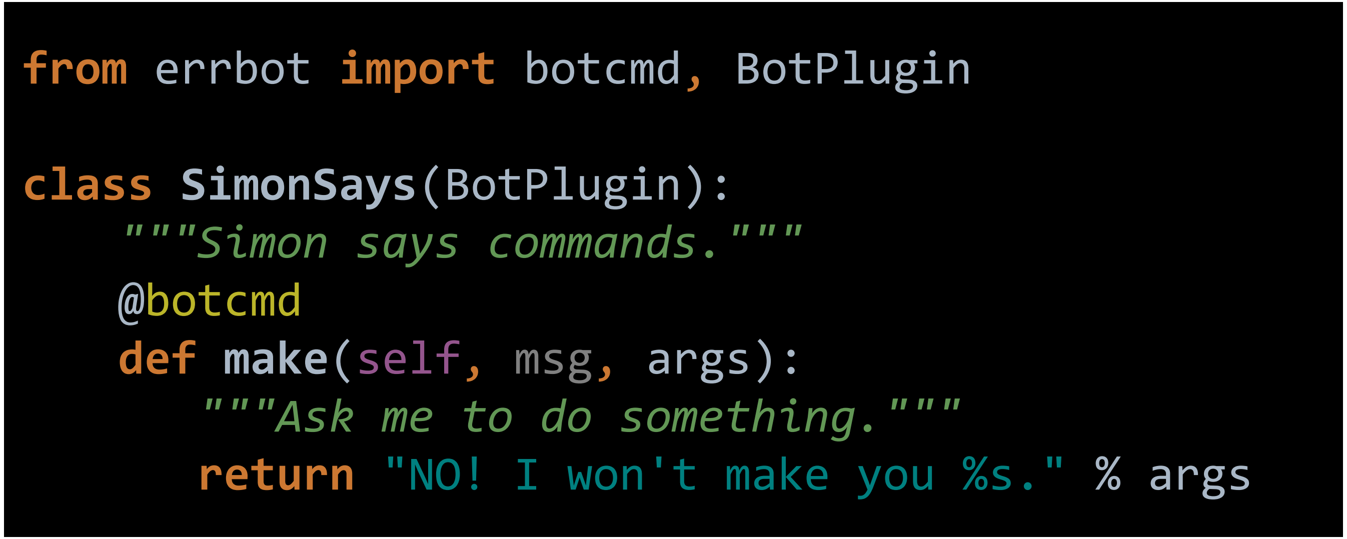
What will it do ?

❯ !make a sandwich

No I won't make you a sandwich.

Documentation

simon.py



```python
from errbot import botcmd, BotPlugin

class SimonSays(BotPlugin):
    """Simon says commands."""
    @botcmd
    def make(self, msg, args):
        """Ask me to do something."""
        return "NO! I won't make you %s." % args
```

Documentation

Auto-documented

!help

Simon

Simon says commands.

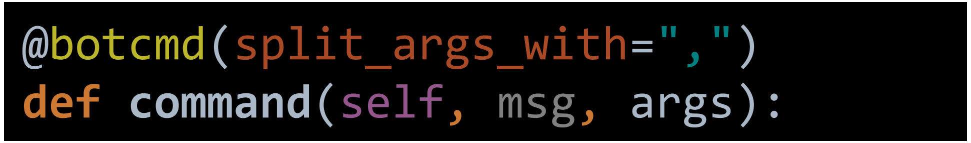
- **!make** ask me to do something.

Tons of features

- Markdown
- Templates
- Subcommands
- Arg Parsing
- Matching
- Storage
- Callbacks
- Webhooks
- Filters
- Flows

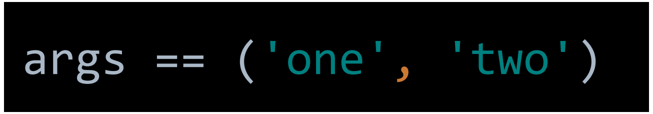
Args Parsing

Simple parsing



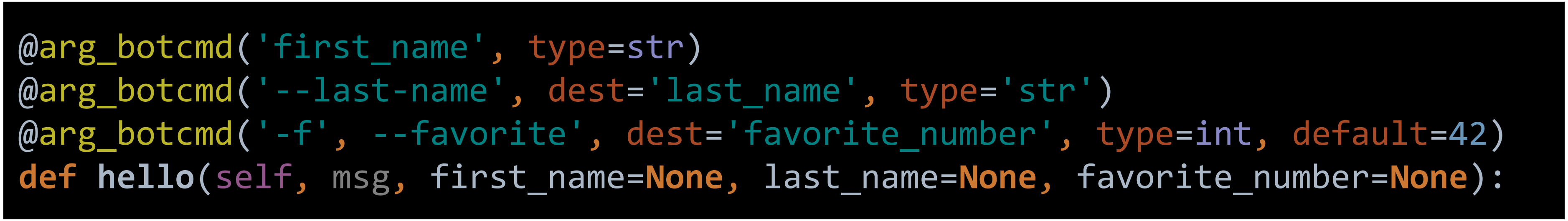
```
@botcmd(split_args_with=",")
def command(self, msg, args):
```

!make one, two



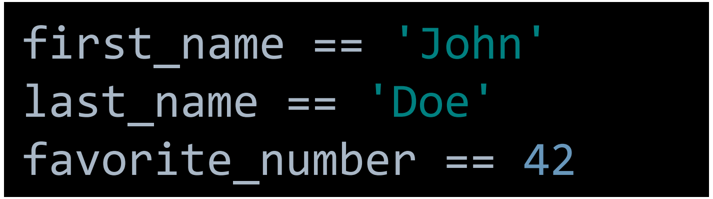
```
args == ('one', 'two')
```

Args Parsing



```python
@arg_botcmd('first_name', type=str)
@arg_botcmd('--last-name', dest='last_name', type='str')
@arg_botcmd('-f', --favorite', dest='favorite_number', type=int, default=42)
def hello(self, msg, first_name=None, last_name=None, favorite_number=None):
```

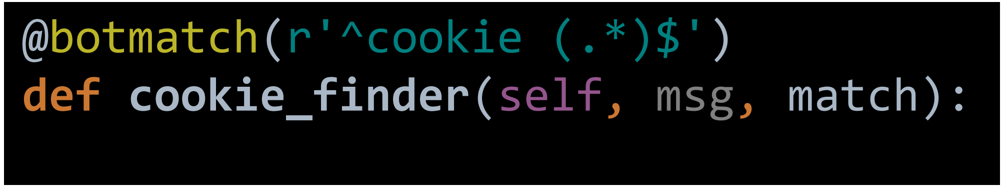
❯ !hello John -f 42 --last-name Doe



```
first_name == 'John'
last_name == 'Doe'
favorite_number == 42
```

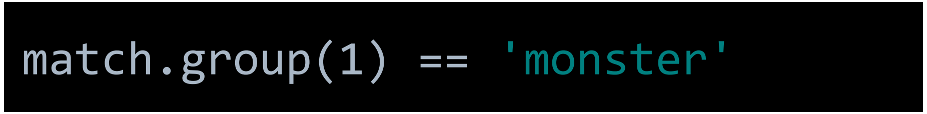
Regexp Matching

Simple matching



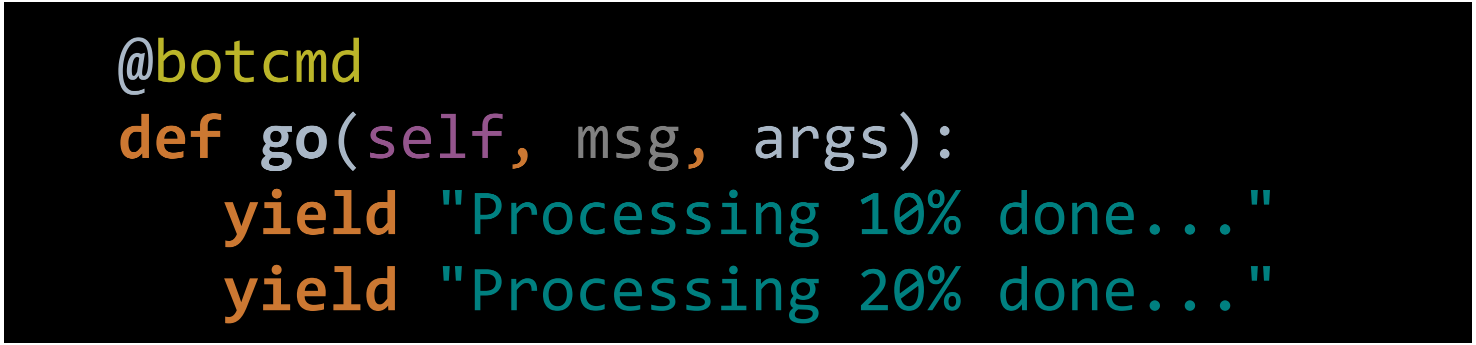
```
@botmatch(r'^cookie (.*)$')
def cookie_finder(self, msg, match):
```

❯ cookie monster



```
match.group(1) == 'monster'
```

Yield



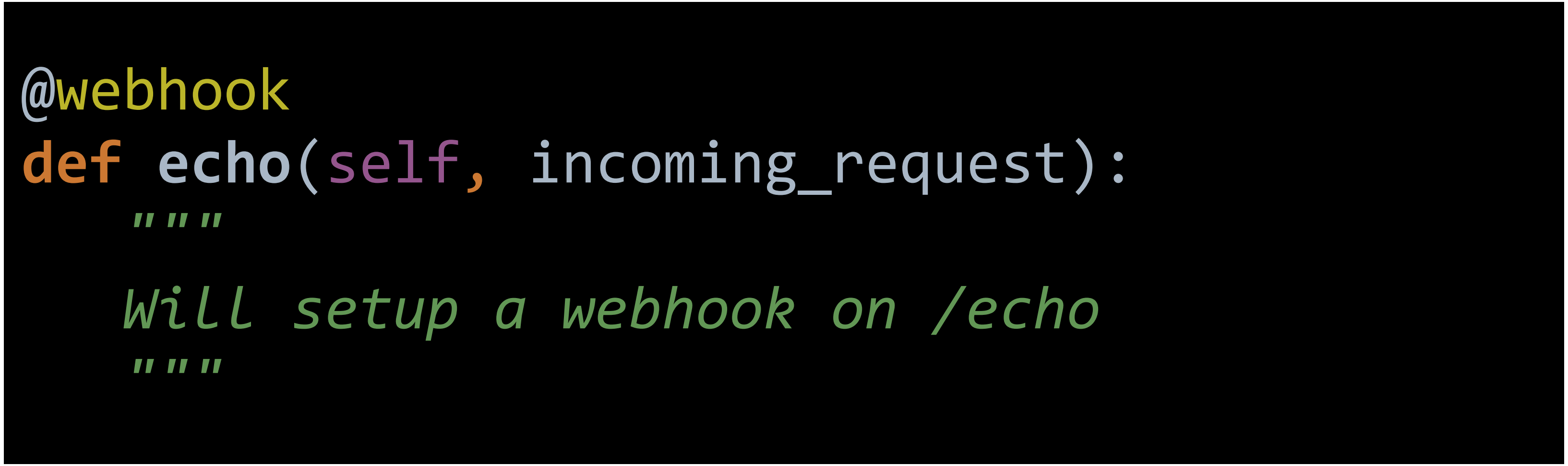
```
@botcmd
def go(self, msg, args):
    yield "Processing 10% done..."
    yield "Processing 20% done..."
```

!go

Processing: 10% done...

Processing: 20% done...

Webhooks

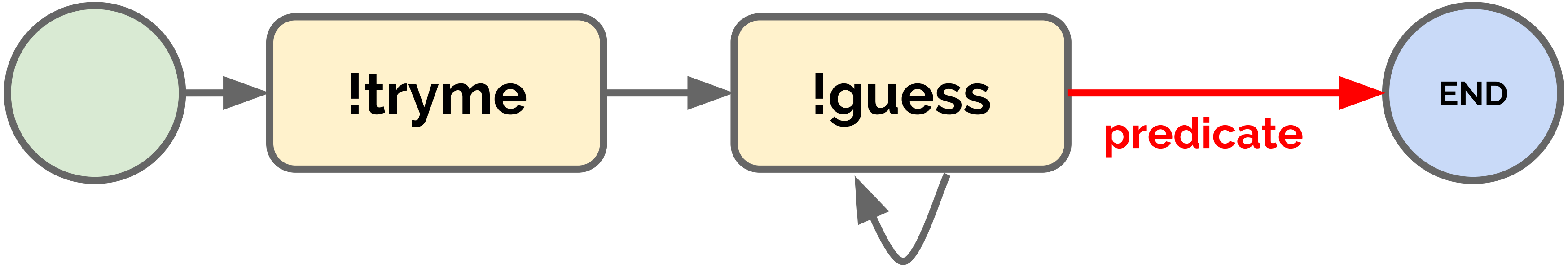


```
@webhook
def echo(self, incoming_request):
   """
   Will setup a webhook on /echo
   """
```

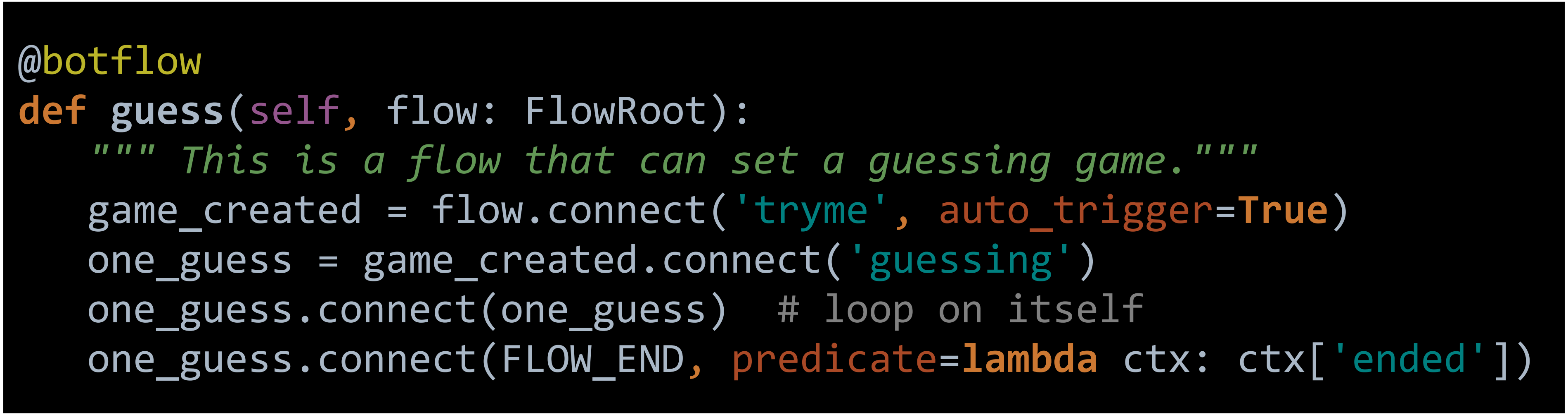
Callbacks

```
def callback_message(self, msg):
     [...]
def callback_presence(self, presence):
     [...]
def callback_mention(self, msg, people):
     [...]
```

Conversational Flows



Conversational Flow



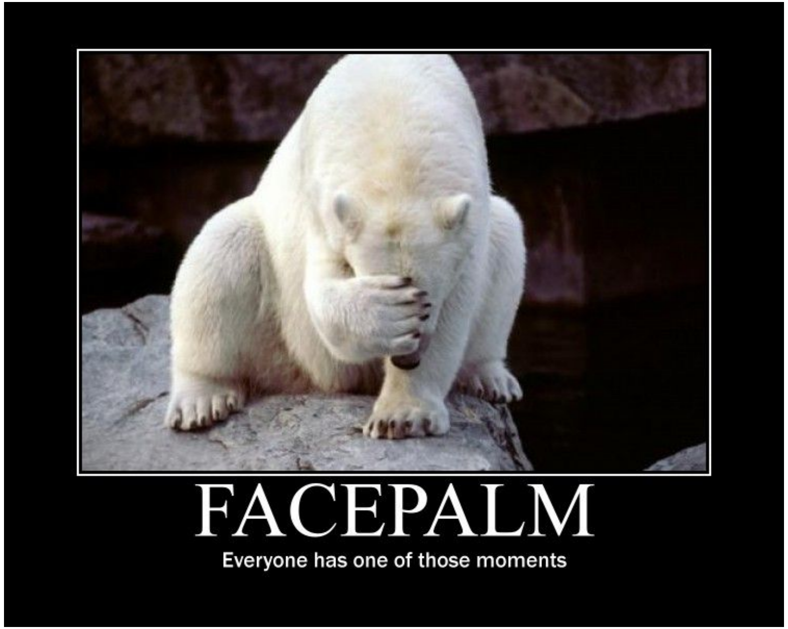
```
@botflow
def guess(self, flow: FlowRoot):
    """ This is a flow that can set a guessing game."""
    game_created = flow.connect('tryme', auto_trigger=True)
    one_guess = game_created.connect('guessing')
    one_guess.connect(one_guess)  # loop on itself
    one_guess.connect(FLOW_END, predicate=lambda ctx: ctx['ended'])
```

Social aspect

Team & Social aspect

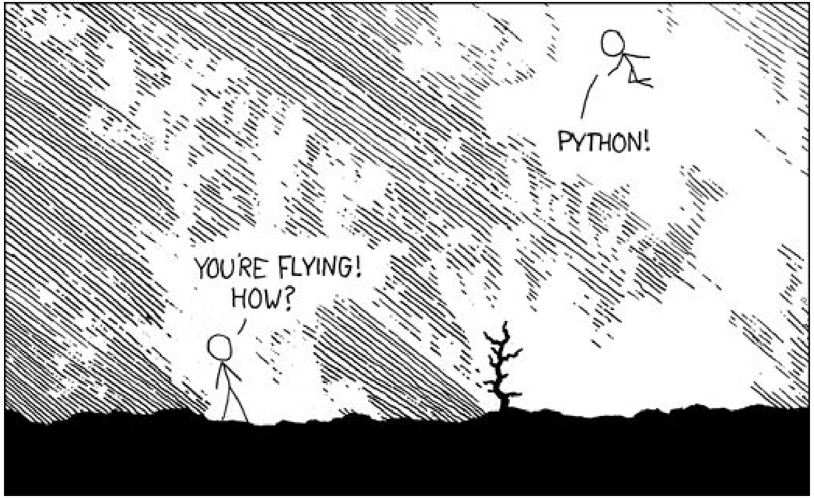
Keep it fun !

- !facepalm

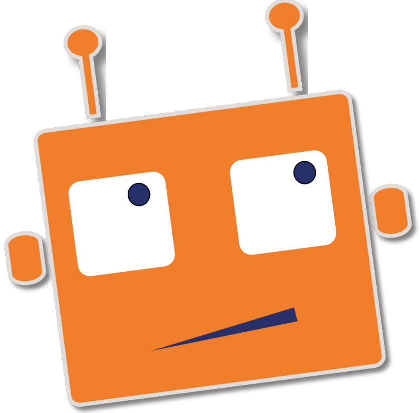


Make it your own !

Python is for everyone !



More info



Special thanks to:

Google

@ifigotin

@seriesoftubes

@dufton

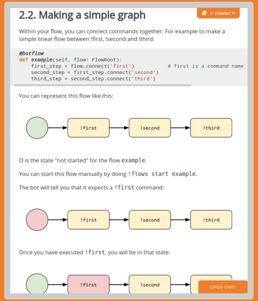
zoni

sijis

djiit

… and all the community !

http://errbot.io



2.2. Making a simple graph

v: master

Within your flow, you can connect commands together. For example to make a simple linear flow between !first, !second and !third:

```
@botflow
def example(self, flow: FlowRoot):
    first_step = flow.connect('first')          # first is a command name
    second_step = first_step.connect('second')
    third_step = second_step.connect('third')
```

You can represent this flow like this:

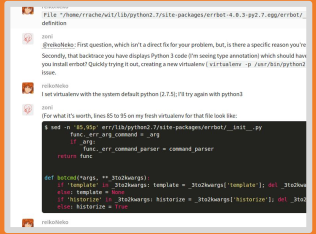
O is the state "not started" for the flow `example`.

You can start this flow manually by doing `!flows start example`.

The bot will tell you that it expects a `!first` command:

Once you have executed `!first`, you will be in that state:

https://gitter.im/errbotio/errbot



reikoNeko

```
File "/home/rrache/wit/lib/python2.7/site-packages/errbot-4.0.3-py2.7.egg/errbot/_
```

definition

zoni

@reikoNeko: First question, which isn't a direct fix for your problem, but, is there a specific reason you're

Secondly, that backtrace you have displays Python 3 code (I'm seeing type annotation) which should have you install errbot? Quickly trying it out, creating a new virtualenv (`virtualenv -p /usr/bin/python2` issue.

reikoNeko

I set virtualenv with the system default python (2.7.5); I'll try again with python3

zoni

(For what it's worth, lines 85 to 95 on my fresh virtualenv for that file look like:

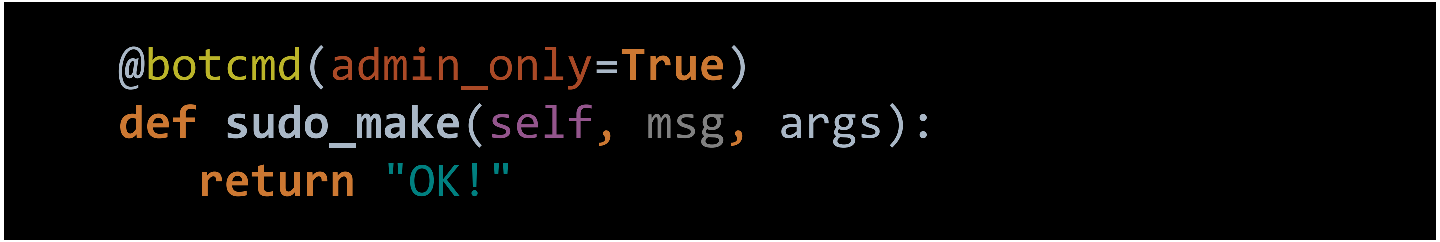
```
$ sed -n '85,95p' err/lib/python2.7/site-packages/errbot/__init__.py
        func._err_arg_command = _arg
        if _arg:
            func._err_command_parser = command_parser
    return func


def botcmd(*args, **_3to2kwargs):
    if 'template' in _3to2kwargs: template = _3to2kwargs['template']; del _3to2kwa
    else: template = None
    if 'historize' in _3to2kwargs: historize = _3to2kwargs['historize']; del _3to2
    else: historize = True
```

reikoNeko

Graveyard

Args Parsing

Subcommands



```
@botcmd(admin_only=True)
def sudo_make(self, msg, args):
    return "OK!"
```

Args Parsing

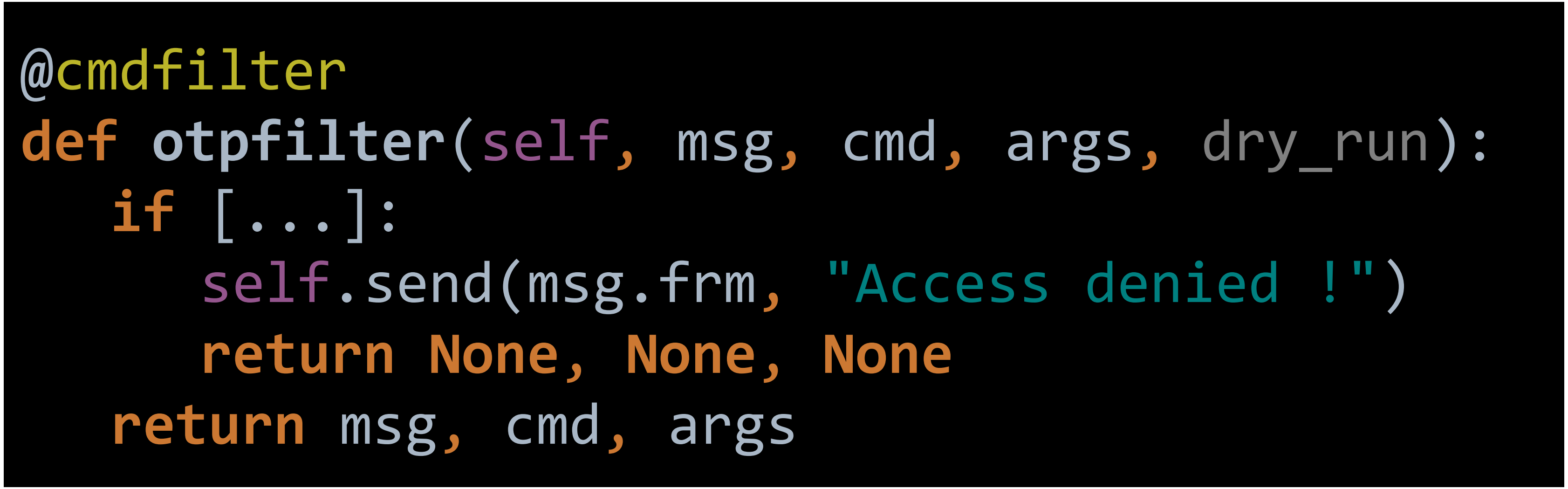
What will it do ?

› !sudo make a sandwich

OK!

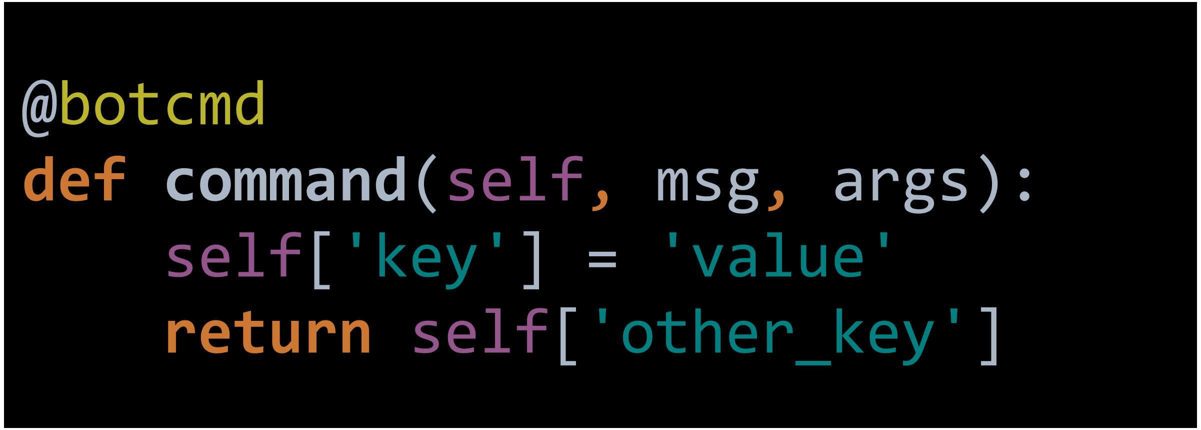
Command Filters

Implement custom security



```
@cmdfilter
def otpfilter(self, msg, cmd, args, dry_run):
    if [...]:
        self.send(msg.frm, "Access denied !")
        return None, None, None
    return msg, cmd, args
```

Storage



```python
@botcmd
def command(self, msg, args):
    self['key'] = 'value'
    return self['other_key']
```

Existing Plugins

300+ public plugins