ChatOps: Operations meet chat

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About me

I'm Jose Luis Salas

Work as SRE at peerTransfer

Open source contributor: josacar/chef-babushka, josacar/lita-campfire, josacar/lita-jobs, fog/fog, sethvargo/chefspec, rumblelabs/asset_sync, aetrion/chef-dnsimple, jesseadams/sphinx-cookbook, opscode-cookbooks/client-rekey, librato/papertrail-cookbook, sstephenson/ruby-build, hw-cookbooks/route53, josephruscio/twke, geokit/geokit, collectiveidea/tinder, berkshelf/berkshelf, librato/collectd-librato-cookbook, chef/ohai, opscode-cookbooks/rsyslog, peter-murach/github

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What is ChatOps

Doing Operations in a Chat tool

What does ChatOps provide?

1. Everyone sees all of that happen since their first day

2. Place tools in the middle of the conversation

3. Teaching by doing by making things visible

4. Communicate by doing

Questions I haven't asked since ChatOps

- How is the deployment doing?

- Should I deploy or are you deploying that?

- Can I deploy to this environment?

- Is the smoke suite green?

- Is anyone checking the sensu alert?

- Has CI passed in that branch?

- Is the system load ok?

ChatOps in practice

What do you need?

- A chat client: IRC, HipChat, Slack, Flowdock, and Campfire

- Chat bots (all FLOSS):

    - Hubot

    - Lita

    - Err

Hubot

- Written in CoffeeScript and JavaScript

- Runs on top of NodeJS

- Created and used by GitHub

- Supports multiple chats: Campfire, Slack, HipChat

- Storage (brain) : Redis, PostgreSQL, MySQL

- Supports chat and HTTP routes

pugme.coffee

```coffee
 1 module.exports = (robot) ->
 2
 3   robot.respond /pug me/i, (msg) ->
 4     msg.http("http://pugme.herokuapp.com/random")
 5       .get() (err, res, body) ->
 6         msg.send JSON.parse(body).pug
 7
 8   robot.respond /pug bomb( (\d+))?/i, (msg) ->
 9     count = msg.match[2] || 5
10     msg.http("http://pugme.herokuapp.com/bomb?count=" + count)
11       .get() (err, res, body) ->
12         msg.send pug for pug in JSON.parse(body).pugs
13
14   robot.respond /how many pugs are there/i, (msg) ->
15     msg.http("http://pugme.herokuapp.com/count")
16       .get() (err, res, body) ->
17         msg.send "There are #{JSON.parse(body).pug_count} pugs."
```

Lita

- Written in Ruby (requires Ruby $>=$ 2.0)

- Runs on top of MRI / JRuby / Rubinius

- Created by JimmyCuadra

- Supports multiple chats: Campfire, Slack, HipChat, IRC

- Storage: Redis

- Supports chat and HTTP routes

pugme.rb

```ruby
1  module Lita
2    module Handlers
3      class Pugbomb < Handler
4        route(/\bpug me\b/i, :pug, command: true, help: {
5          "pug me" => "Display a single pug"
6        })
7        route(/\bpug ?bomb( (\d+))?/i, :bomb, command: true, help: {
8          "pug bomb" => "Display five pugs", "pug bomb N" => "Display N pugs"
9        })
10       route(/how many pugs are there/i, :count, command: true, help: {
11         "how many pugs are there" => "Gets the current number of pugs"
12       })
13
14       BASE_URL = "http://pugme.herokuapp.com"
15
16       def pug(response)
17         data = MultiJson.load(http.get(BASE_URL + "/random").body)
18         response.reply data['pug']
19       end
20
```

```
21      def bomb(response)
22        count = response.matches[0][1] || 5
23        data = MultiJson.load(http.get(BASE_URL + "/bomb", count: count).body)
24        data['pugs'].each do |pug|
25          response.reply pug
26        end
27      end
28
29      def count(response)
30        data = MultiJson.load(http.get(BASE_URL + "/count").body)
31        pug_count = data['pug_count']
32        response.reply "There are #{pug_count} pugs."
33      end
34    end
35    Lita.register_handler(Pugbomb)
36  end
37 end
```

Err

- Written in Python

- Runs on top of Python 2.7 and 3.2+

- Created by Guillaume Binet

- Supports multiple chats: Campfire, HipChat, IRC

- Storage (brain) : File

- Supports chat and HTTP routes

hello.py

```
1 from errbot import BotPlugin, botcmd
2
3 class HelloWorld(BotPlugin):
4   """Example 'Hello, world!' plugin for Err"""
5
6   @botcmd
7   def hello(self, msg, args):
8     """Say hello to the world"""
9     return "Hello, world!"
```

Examples

Nagios

- bot nagios ack database01/mysqld

- bot nagios check database01/mysqld

- bot nagios status database01/mysqld

- bot nagios downtime database01/mysqld

- bot nagios mute database01/mysqld

- bot nagios unmute database01/mysqld

Deploying

- bot deploy myapp to prod/front01

- bot log me smoke front01

- bot status yellow Issue deploying.

- bot lbctl disable front01

- bot deploy myapp to prod/front01

- bot log me smoke front01

- bot status green Everything is ok.

- bot lbctl enable front01

More examples

- bot pingdom checks

- bot who is on call

- bot conns loadbalancer

- bot graph me -10min @collectd.load(rabbitmq*)

- bot procs unicorn

- bot whois 1.2.3.4

- bot ci status rails/rails

- bot log me hooks front01

ChatOps @ peerTransfer

Jokin Aspiazu 23:00
bot ci build platform

R2D2 BOT 23:00
Going ham on platform/master

bot BOT 23:16
Build #19655 of platform/master was successful
Janky
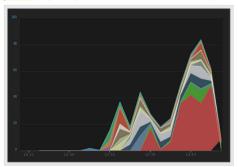http://strong-robot-2524.herokuapp.com/19655/output

Commit
db3e79f

Jose Luis Salas 22:00
bot pager incidents

R2D2 BOT 22:00
No open incidents

Jose Luis Salas 22:01
bot who is on call

R2D2 BOT 22:01
* Vicent Gozalbes is on call for On-call - https://peeralarm.pagerduty.com/schedules#PULUXNK

Jose Luis Salas 21:46
bot log me school/wadus

R2D2 BOT 21:46
"school/wadus" found 3 matches – https://papertrailapp.com/events?q=school/wadus

Apr 11 19:46:12 ext-front-payschool1.infra.peertransfer.com /data/payschool/shared/log/production.log: ActionController::RoutingError (No route matches [GET] "/school/wadus"):
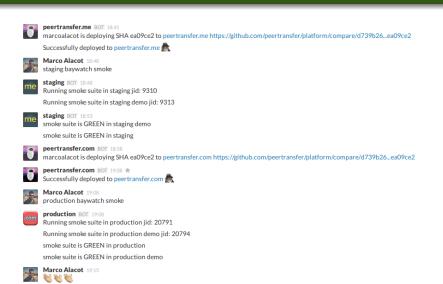Apr 11 19:46:12 ext-front-payschool1.infra.peertransfer.com /var/log/nginx/payschool.access.log: 10.230.42.125 - - [11/Apr/2015:19:46:06 +0000] "GET /school/wadus HTTP/1.1" 404 625 "-" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/41.0.2272.118 Safari/537.36" "90.161.233.142"
Apr 11 19:46:12 ext-front-payschool1.infra.peertransfer.com /var/log/nginx/payschool.access.log: 10.230.42.125 - - [11/Apr/2015:19:46:06 +0000] "GET /stylesheets/404.css HTTP/1.1" 200 454 "https://www.peertransfer.com/school/wadus" "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/41.0.2272.118 Safari/537.36" "90.161.233.142"

Jose Luis Salas 21:50
apache deploy list

apache BOT 21:50
Apache
Getting list of deployed issues (jid: 32105)

21:50 ⭐ - Merged 3016 : origin/feature/3016-random-testimonials
- Merged 3081 : origin/bug/3081-hide-cny-id-name-error
- Merged 3082 : origin/bug/3082_wrong_resources_links
- Merged 3084 : origin/chore/3084-fix-payease-offline

Jose Luis Salas 21:50
apache deploy 3080

apache BOT 21:50
Apache
Deploying incremental issues 3080 (jid: 32195)

apache BOT 21:56
Apache
Successfully incremental deploy issues 3080 (366.286240053 seconds)

Questions?