



SITE RELIABILITY ENGINEERING AT DROPBOX

@tammybutow, SRE MANAGER



Tammy Bütow Retweeted



Jamie Wilkinson @jaqx0r · 5h

I like that [@tammybutow](#) is talking about her team first when talking about Dropbox infrastructure. Humans>computers [#lca2016](#)



2



6



Tammy Bütow Retweeted



Adam Harvey @LGnome · 5h

Enjoyed [@tammybutow](#)'s [#lca2016](#) talk on database infrastructure at Dropbox — a real grab bag of tools and ideas to go read about!



3



7



Tammy Bütow Retweeted



Nathan @shwep · 5h

If you were in a bad mood before going to [@tammybutow](#)'s talk you'll be enthused and excited now. [#awesomeSpeakers](#) [#LCA2016](#)



2



5

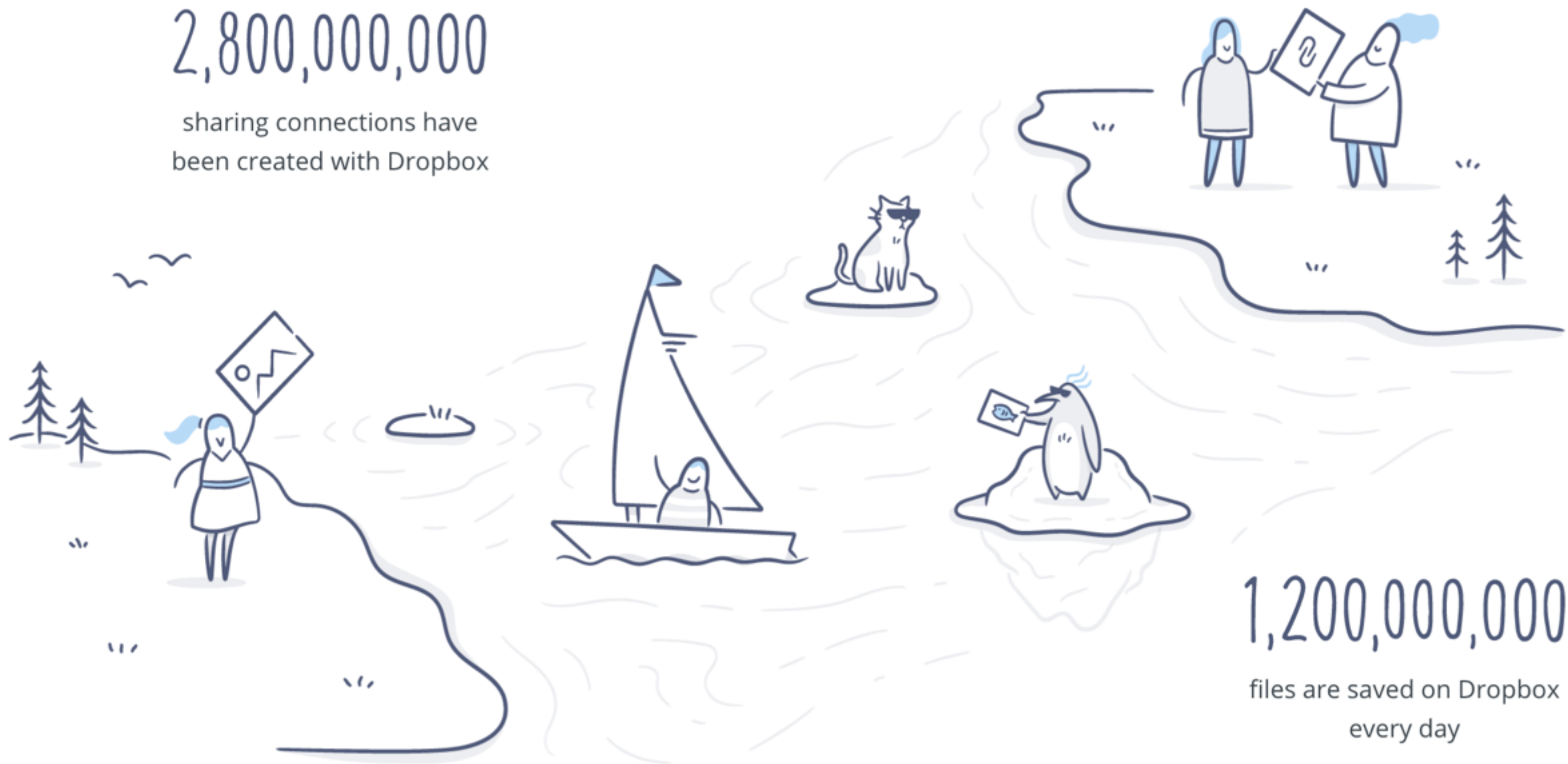


TODAY

LET'S
INVENT A
BETTER
FUTURE.

2,800,000,000

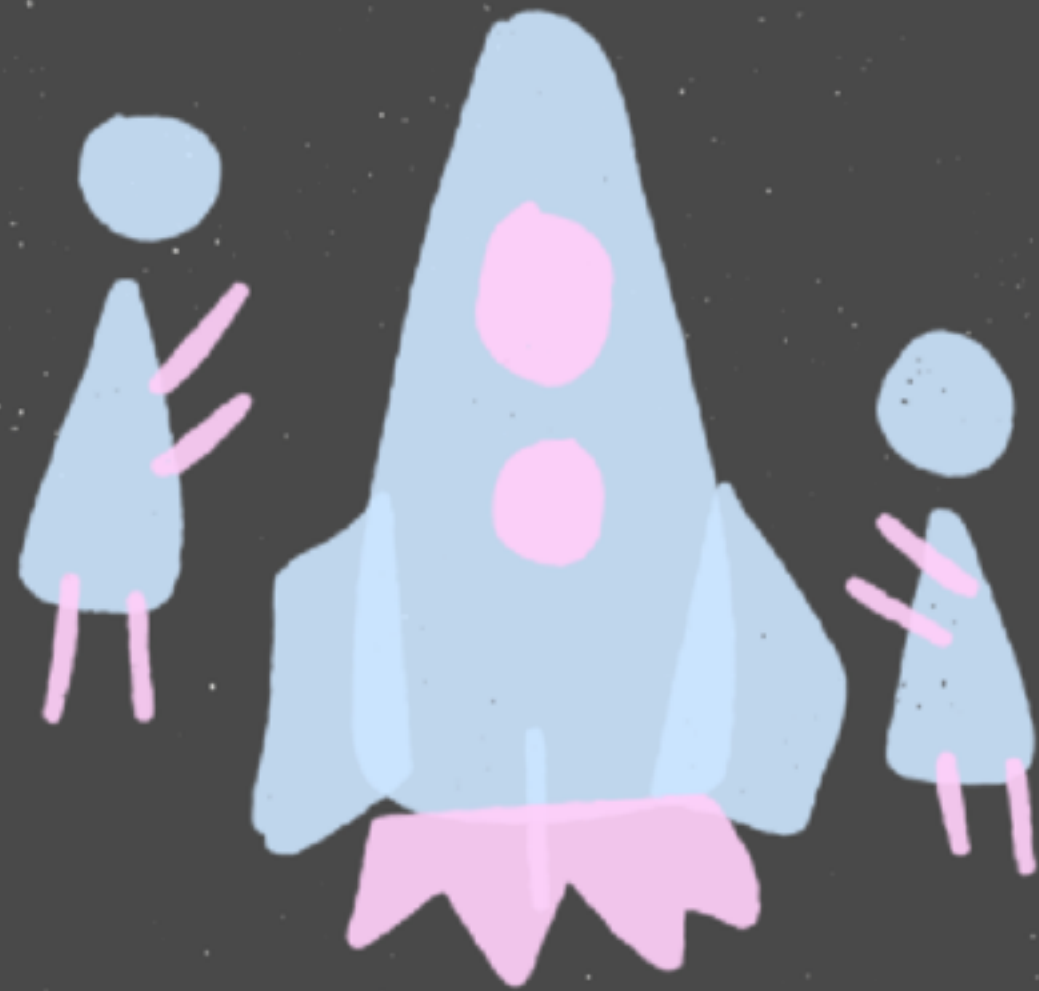
sharing connections have
been created with Dropbox



1,200,000,000

files are saved on Dropbox
every day

4000M

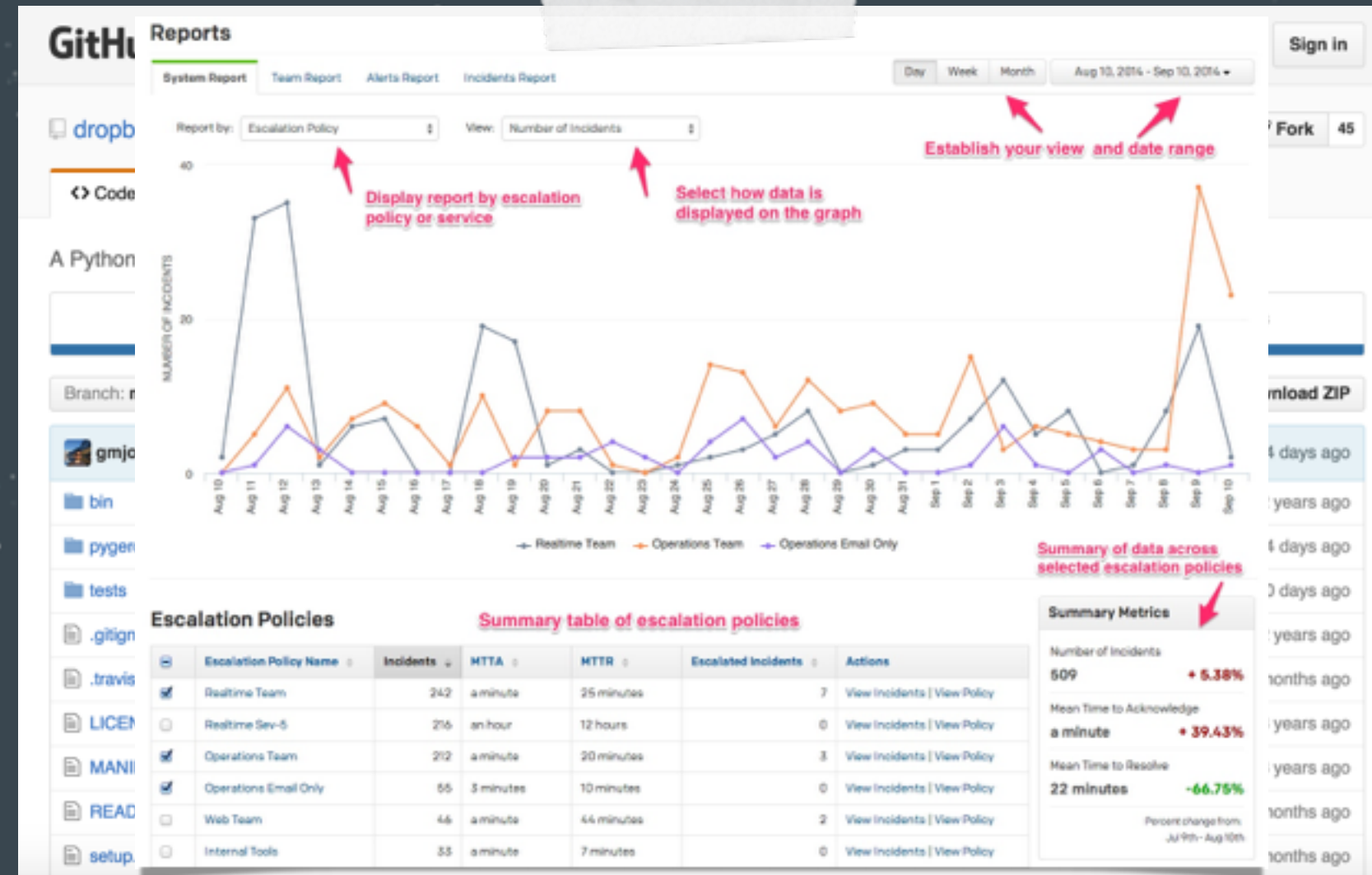


SITE RELIABILITY ENGINEERS



SWEAT THE DETAILS

AUTOMATION



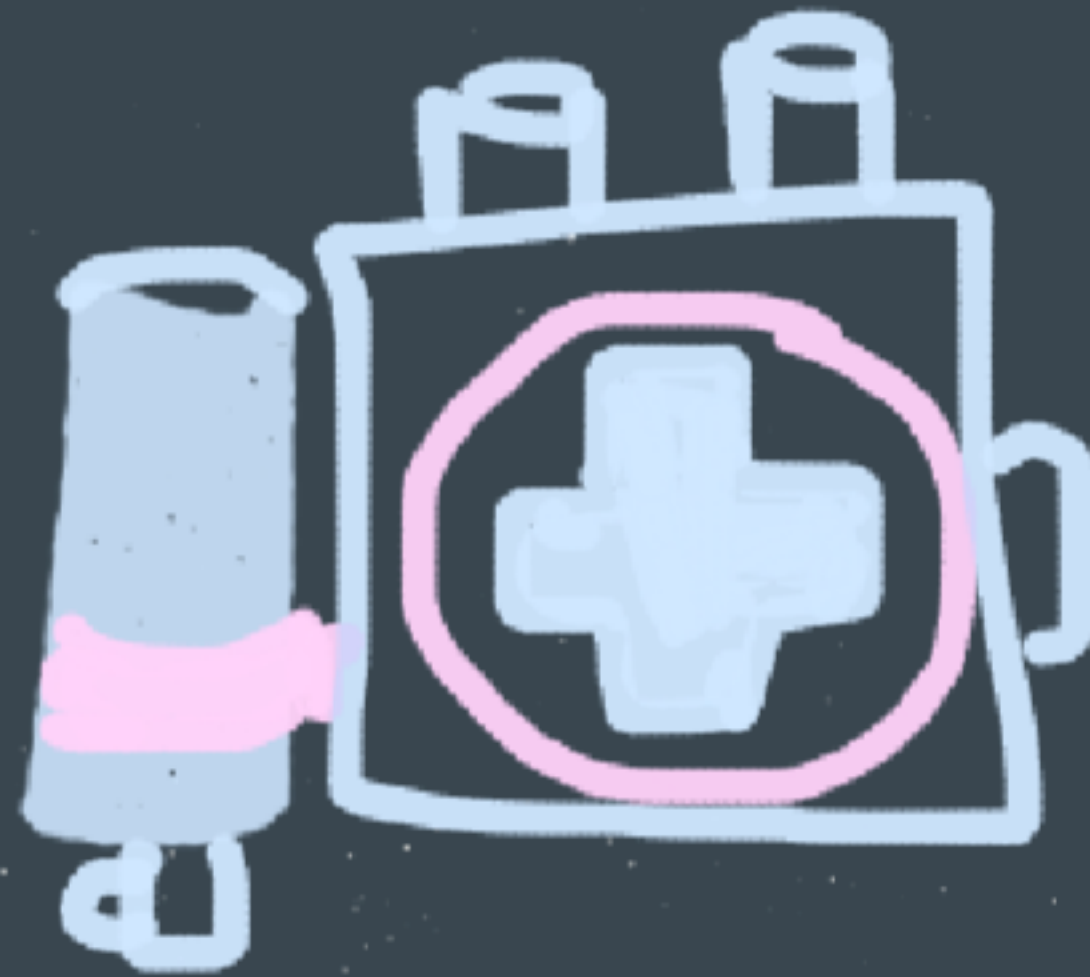
PYGERDUTY

REDUCE PAGES BY 10x



MONITORING & ALERTING

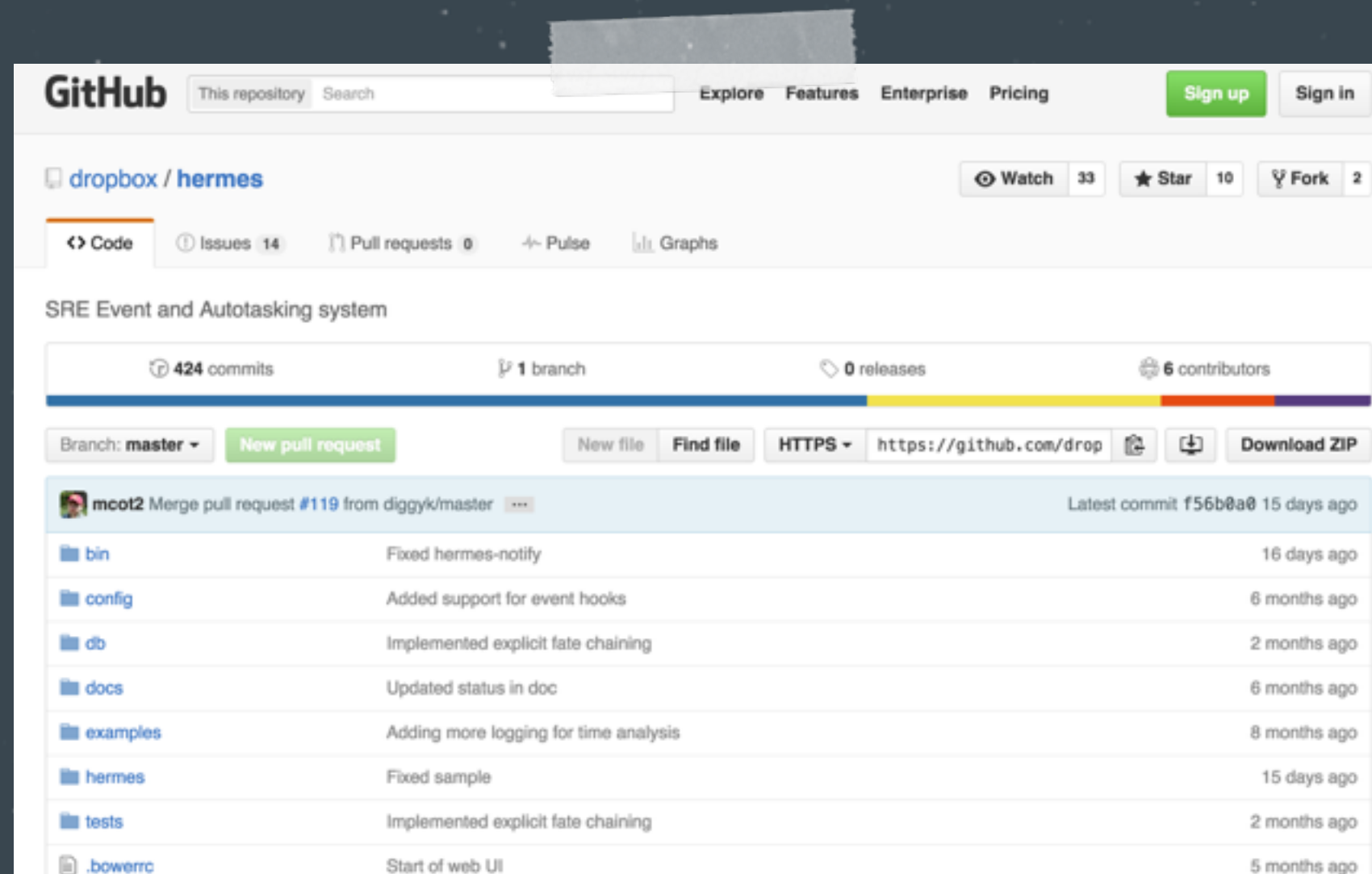
IT'S OK TO SNOOZE



SCRIPTING & AUTO-REMEDIATION

SELF-HEALING SYSTEMS

TOOLS



HERMES

QUESTS & LABORS

Missing BackupsS3BackupsTopology

source hostto hardware (valentine) or desEasy clone

Source host(s)

Hardware classany

Not in job queueYes

Operating system(e.g., 'Ubuntu-10.04')

Kernel version *(e.g., '2.6.35', '2.5-2.6')

MySQL version *(e.g., '5.1.68', '5.1-5.5')

Owner(e.g., 'thance')

Master/slave---

Number of (registered) siblings(e.g., '0', '1-2')

Number of (registered) children---

Number of (total) siblings *(e.g., '0', '1-2')

Number of (total) children *(e.g., '0', '1-2')

LifecycleAllocated

Database type(e.g., 'user', 'edgestore')

Free /mnt space (gb) *(e.g., '0-2.5')

Total /mnt space (gb) *(e.g., '0-2.5')

Hostname(e.g., 'ant-re8-1c, ant-dbs')

MDB tags/attributes(e.g., 'db-intern +row=b')

* relies on topology info

Filter

Destination host(s)

Hardware classmachoman/virgil

Not in job queueYes

Operating system(e.g., 'Ubuntu-10.04')

Kernel version *(e.g., '2.6.35', '2.5-2.6')

MySQL version *(e.g., '5.1.68', '5.1-5.5')

Ownerteam-server+database-01

Master/slave---

Number of (registered) siblings---

Number of (registered) children---

Number of (total) siblings *(e.g., '0', '1-2')

Number of (total) children *(e.g., '0', '1-2')

LifecycleFree

Database type---

Free /mnt space (gb) *(e.g., '0-2.5')

Total /mnt space (gb) *(e.g., '0-2.5')

Hostname(e.g., 'ant-re8-1c, ant-dbs')

MDB tags/attributes(e.g., 'db-intern +row=b')

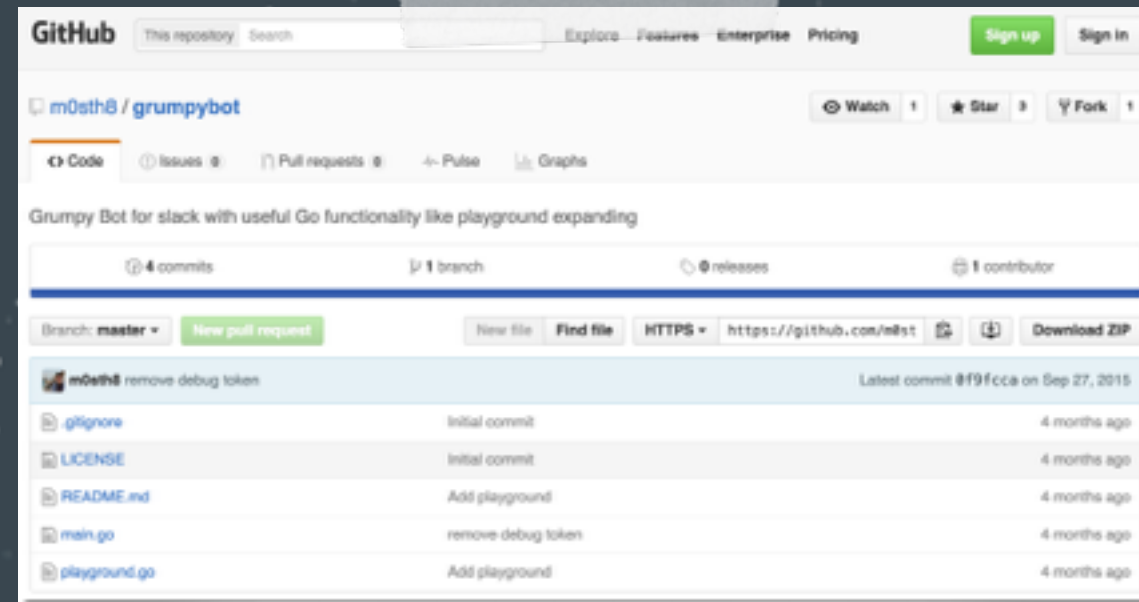
* relies on topology info


Filter


Clone1 machines into 1 machines.

DBMANAGER

AUTOMATING DATABASE OPERATIONS



 **slava** 15:33
<https://play.golang.org/p/duRF5gXJEP>

 **grumpybot** BOT 15:33

```
package main

import "fmt"

func main() {
    fmt.Println("Hello, playground")
}
```

Result:

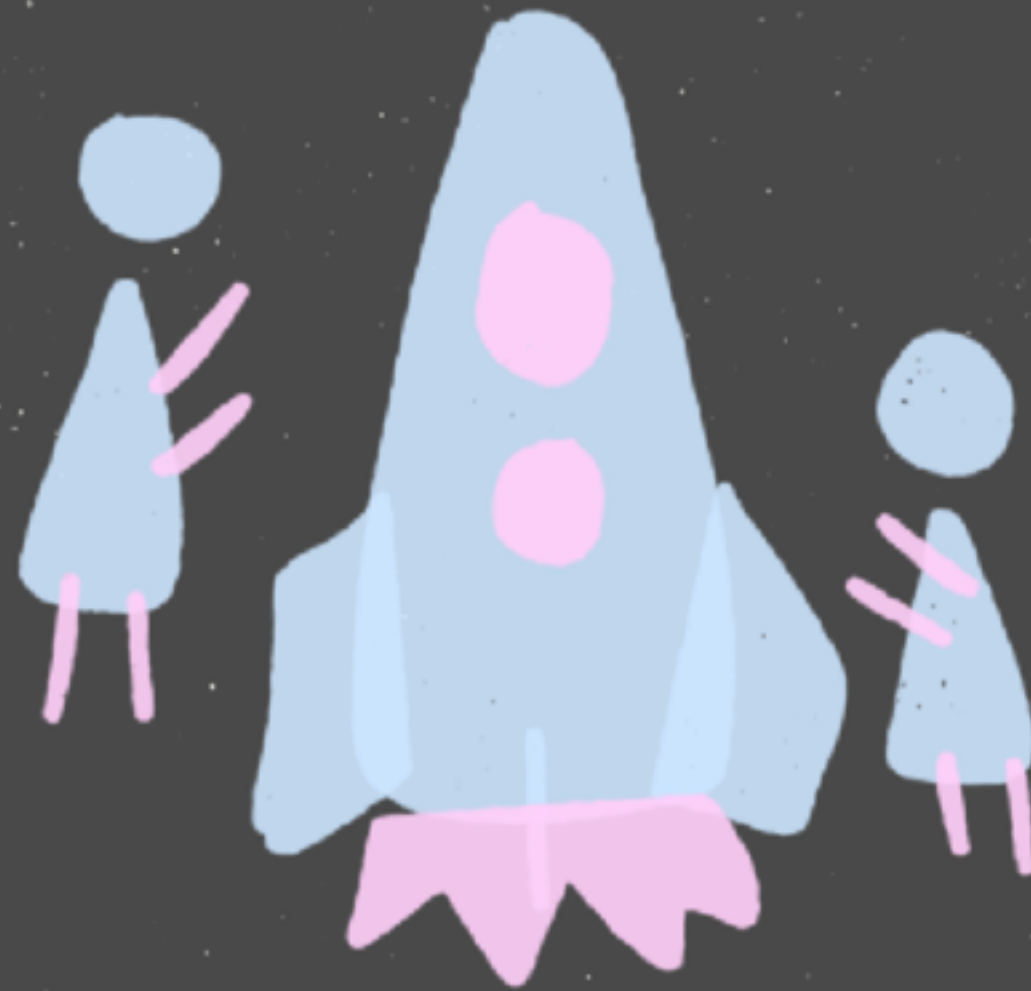
```
Hello, playground
```



SLACKBOTS

WE MAKE CHAT BOTS IN GO & PYTHON

AIM HIGHER



ROADMAP

DECIDE ON WHERE TO GO, BUT STAY FLEXIBLE



DISTRIBUTED TEAMS

FOLLOW THE SUN



KTLO
RELIABILITY & AVAILABILITY



CAPTAIN'S LOG

POST MORTEM FOR EVERY PAGE



DISASTER RECOVERY TESTING

FREQUENT & CROSS-TEAM



FAULT INJECTION

WHAT ARE THE UNKNOWN UNKNOWNs?



**WE NOT I
CELEBRATE ACHIEVEMENTS**

**AIM HIGHER. SWEAT THE
DETAILS. REDUCE PAGES.
INVENT TOOLS. AUTOMATE.
SCRIPT. AUTO-REMEDIATE.
TRIGGER FAULTS. MONITOR.
ALERT. SNOOZE.**

**CREATE TIME TO BUILD. PLAN.
ROADMAP. TRACK. CELEBRATE.**

HACK

ALWAYS BE CODING

Q&A