

THE SUPER SPECTACULAR AMAZING  
MAGNIFICENT STUNNING

SEAGL 2017  
LIGHTNING TALKS



MOLLY DE BLANC

# MY LEAST FAVORITE PHRASES IN FREE SOFTWARE



SeaGL

# My least favorite phrases in free software

(In no particular order)

1. “I want to make a free  
software license...”



2. “Have you checked out the documentation?”



3. “How do you make  
money on free software?”



# 4. “But Twitter is...”



5. “But Facebook is...”



6. “We’re not here to make things easy for people—freedom is more important than making things easy for people.”



7. “I want to make a free software license, but...”



## Bonus

Me: Well, I'm not technical...

Some dude: <talks in depth about the technical aspects of what they do / are into.”

Bonus  
Names that are ridiculous / offensive

**Thanks!**

SIRIRAM RAMKRISHNA

# THE TRIUMPH OF COMMUNITY



# Triumph of Community GNOME Trademark Battle

Sriram Ramkrishna



# Houston, We Got Problems

Groupon had a point of sale  
product called G-NOME



# Things Gets Murky

Needed \$60k to fight off the trademark applications



# OMG! We Need Help!

**GNOME reached out to the Internet for help – raise money to fight off the applications**



Holy Smokes! It worked?!

Raised over 100k in 3 days

All trademark applicants  
canceled

Legal Precedent established



We Will Mess You Up!

Don't Mess with Free  
Software

Our Community is Watching



# Thank You!



**GNOME™**

BENNO RICE

# THE TRAGEDY OF SYSTEMD



SeaGL

# THE TRAGEDY OF SYSTEMD

**SYSTEM THE  
SOFTWARE**

**SYSTEM THE  
CONCEPT**

# CHANGE

**CHANGE IS HARD**



poettering commented on Jun 29

Owner

Yes, as you found out "0day" is not a valid username. I wonder which tool permitted you to create it in the first place. Note that not permitting numeric first characters is done on purpose: to avoid ambiguities between numeric UID and textual user names.

systemd will validate all configuration data you drop at it, making it hard to generate invalid configuration. Hence, yes, it's a feature that we don't permit invalid user names, and I'd consider it a limitation of xinetd that it doesn't refuse an invalid username.

So, yeah, I don't think there's anything to fix in systemd here. I understand this is annoying, but still: the username is clearly not valid.

I hope that makes sense?



40



poettering closed this on Jun 29



poettering added the **not-a-bug** label on Jun 29



poettering commented on Jul 2

Owner

Just to summarize things:

1. systemd is not the one coming up with the restrictions on user names, and while some distributions are less restrictive, many do enforce the same restrictions as we do. In order to make systemd unit files portable between systems we'll hence enforce something that resembles more the universally accepted set, rather than accept the most liberal set possible.
2. User= in unit files is about system users, not regular users, and I am pretty sure we should enforce a stricter regime about system users than regular users.
3. In systemd we generally follow the rule that when we encounter a unit setting that does not validate syntax-wise we'll log about it and ignore it, for compat reasons. We do the same for User= here as for all other options. Note that if you specify a valid user name but where the user doesn't exist, then we'll instead fail the service on start, because in that case there's not just something wrong with the syntax the service author used but actually something inconsistent on the system, and that should be considered fatal.

# THE TRAGEDY

E. DUNHAM

WHERE'S  
THE  
CLOUD?



SeaGL

# Where's The Cloud?

**seagl2017@edunham.net**

**@QEDunham**

**talks.edunham.net/seagl2017**



Happy  
Sysadmin  
Day



<http://imgur.com/7HBXMX2>, <https://en.wikipedia.org/wiki/Tux#/media/File:Tux.png>



Photo by Edmund Garman, <https://www.flickr.com/photos/3cl/5975465375>

# cloud

/kloud/ 

*verb*

2. make or become less clear or transparent.

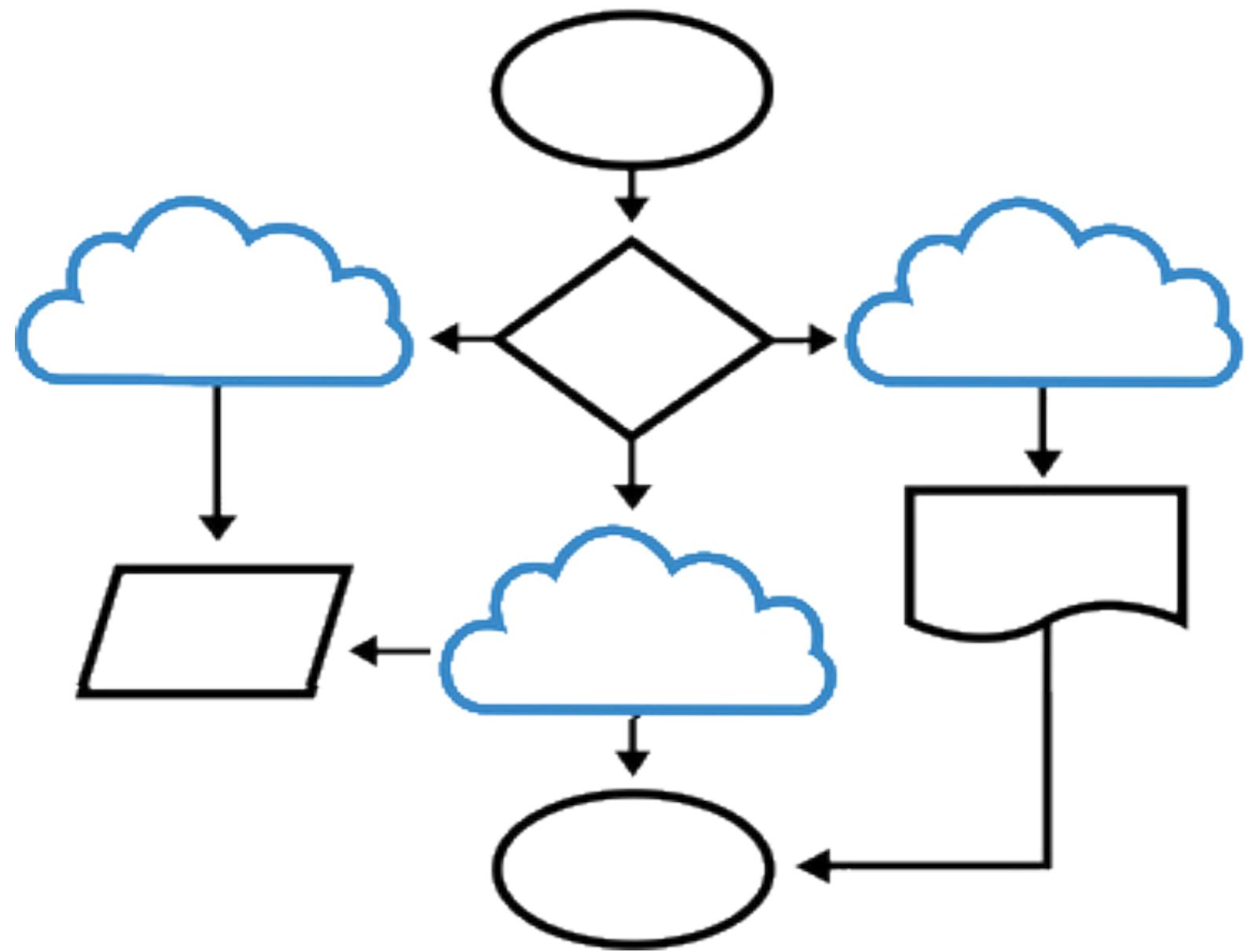
"blood pumped out, clouding the water"

*synonyms:* make cloudy, make murky, **dirty**, **darken**, **blacken**

"the sand is churned up, clouding the water"

**FOR LEASE**

**127.0.0.1**

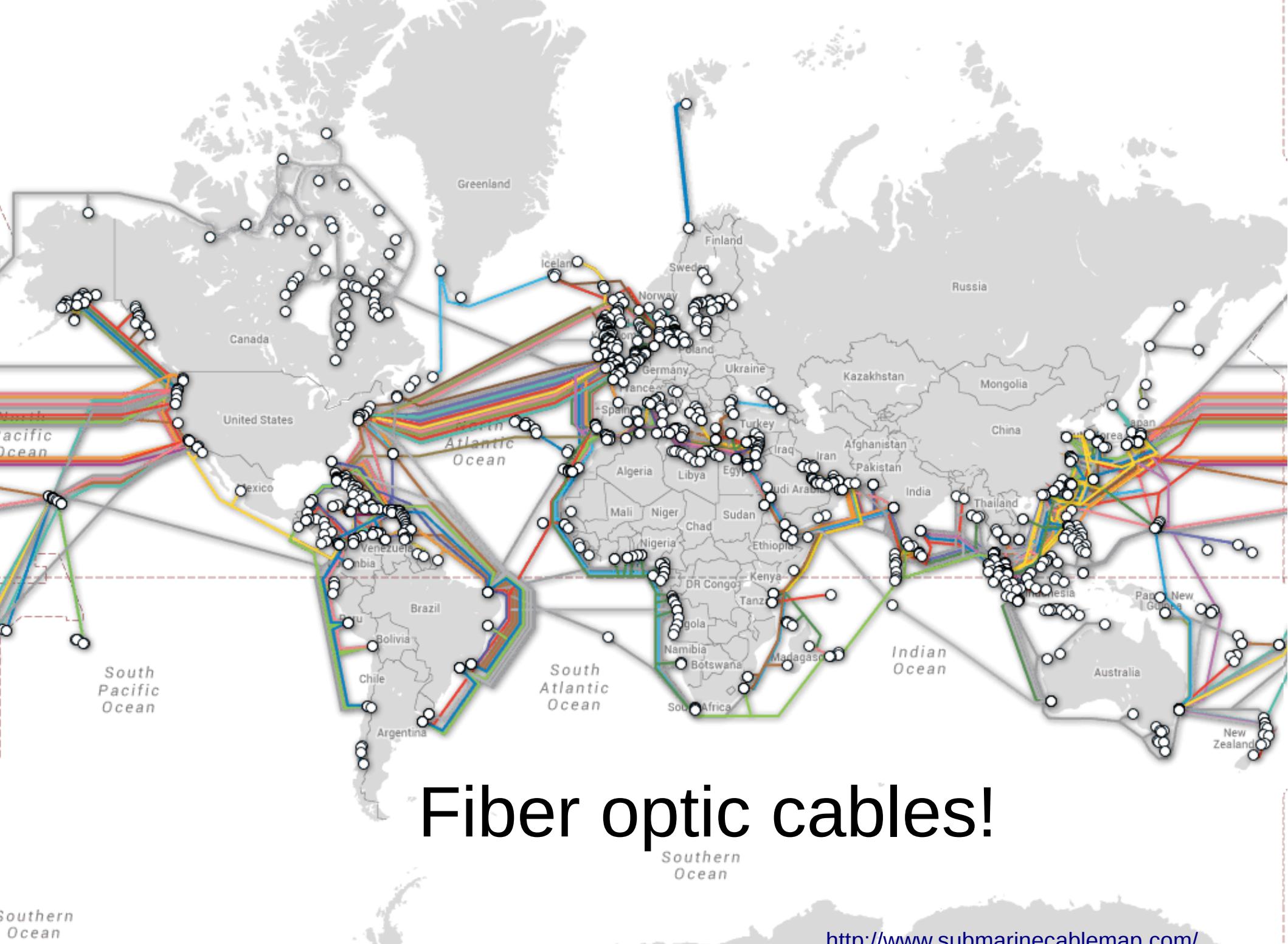






This image is the property of Leonardo Rizzi. [www.flickr.com/photos/29479498@N05/](http://www.flickr.com/photos/29479498@N05/)

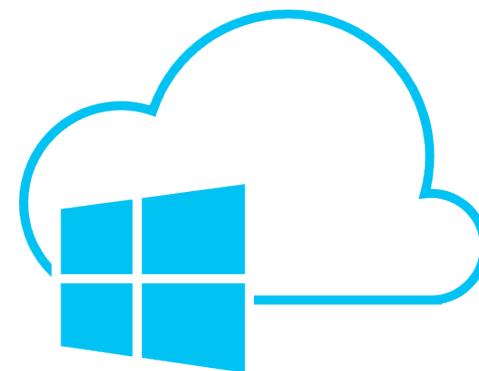
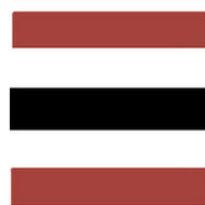
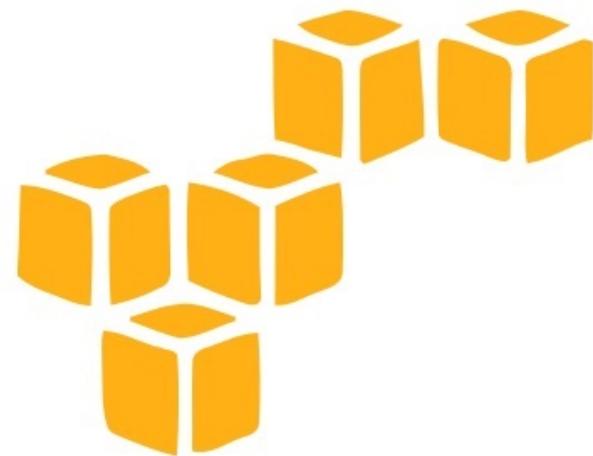
The original image can be seen at the url: [www.flickr.com/photos/stars6/4381851322/](http://www.flickr.com/photos/stars6/4381851322/)



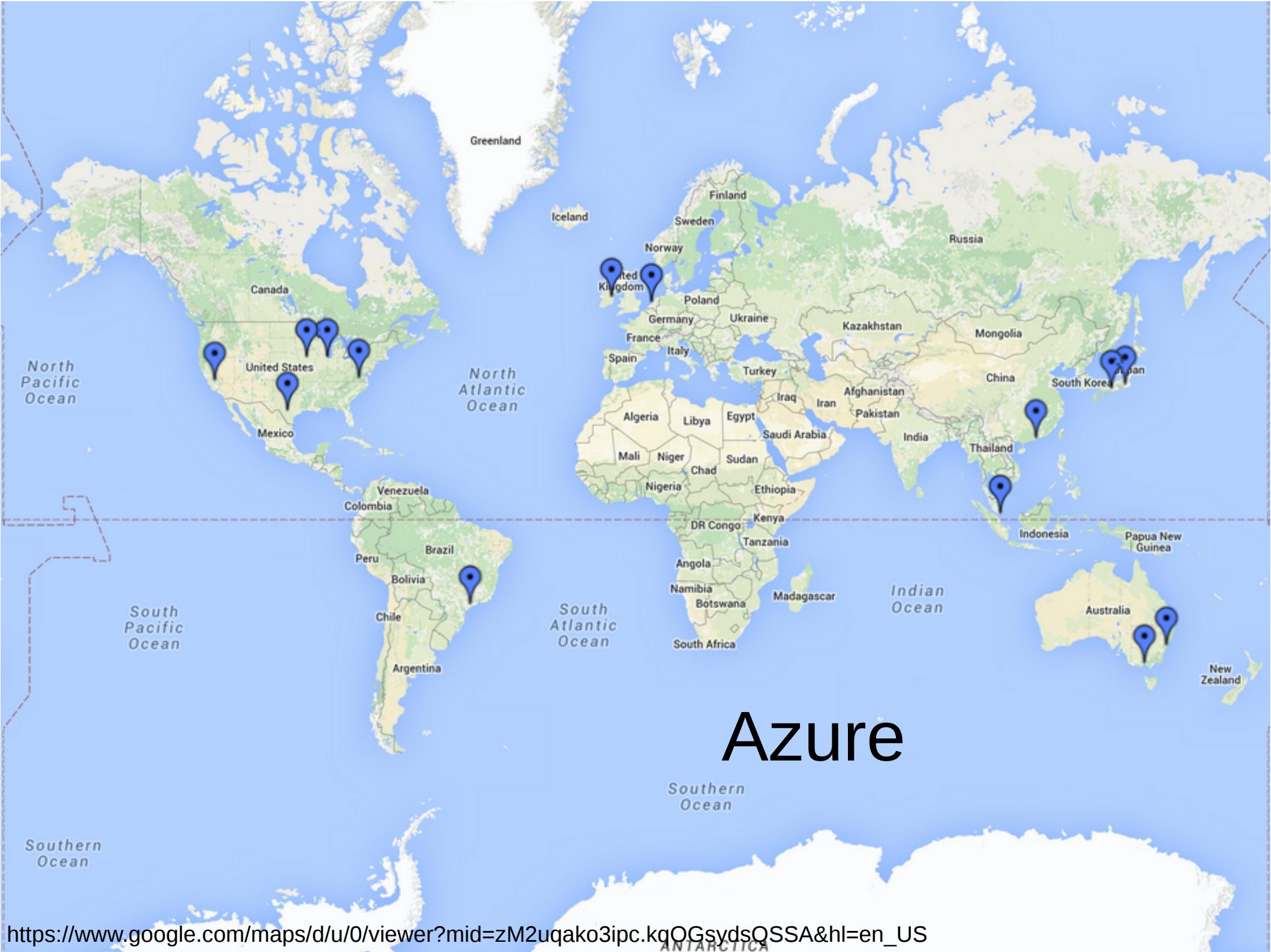


Karl Magnus with a test-packet.

[http://www.bug.linux.no/rfc1149/vegard\\_bilder/](http://www.bug.linux.no/rfc1149/vegard_bilder/)







# Azure

Southern  
Ocean



# DigitalOcean

Southern  
Ocean



# Google Cloud

Southern  
Ocean



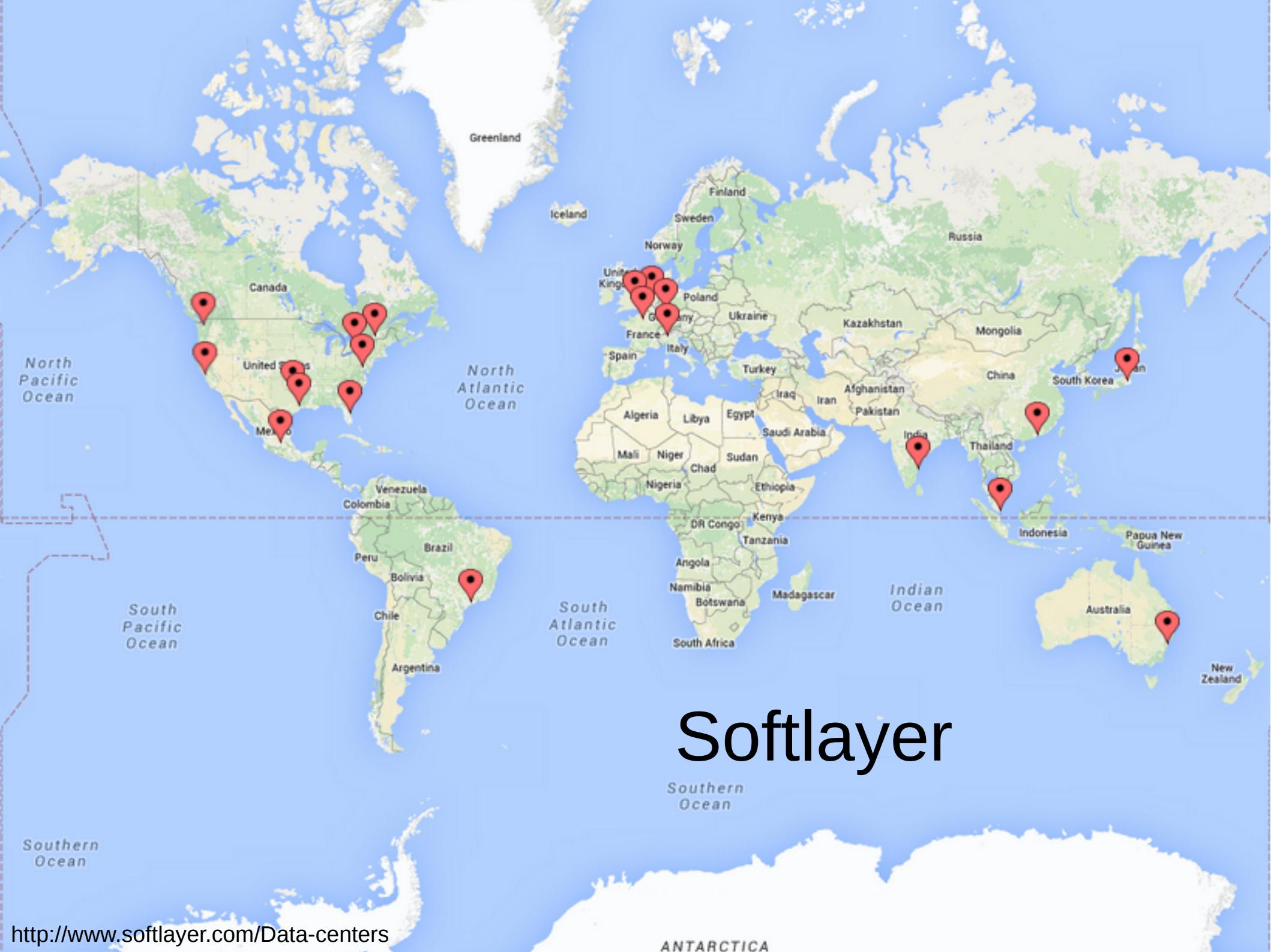
# Linode



# Rackspace

Southern  
Ocean

ANTARCTICA



# Softlayer

Southern  
Ocean

seagl2017@edunham.net

@QEDunham

talks.edunham.net/seagl2017



JOHN DULANEY

# HOW A TRIPLE EXPANSION STEAM ENGINE WORKS



Sea GL



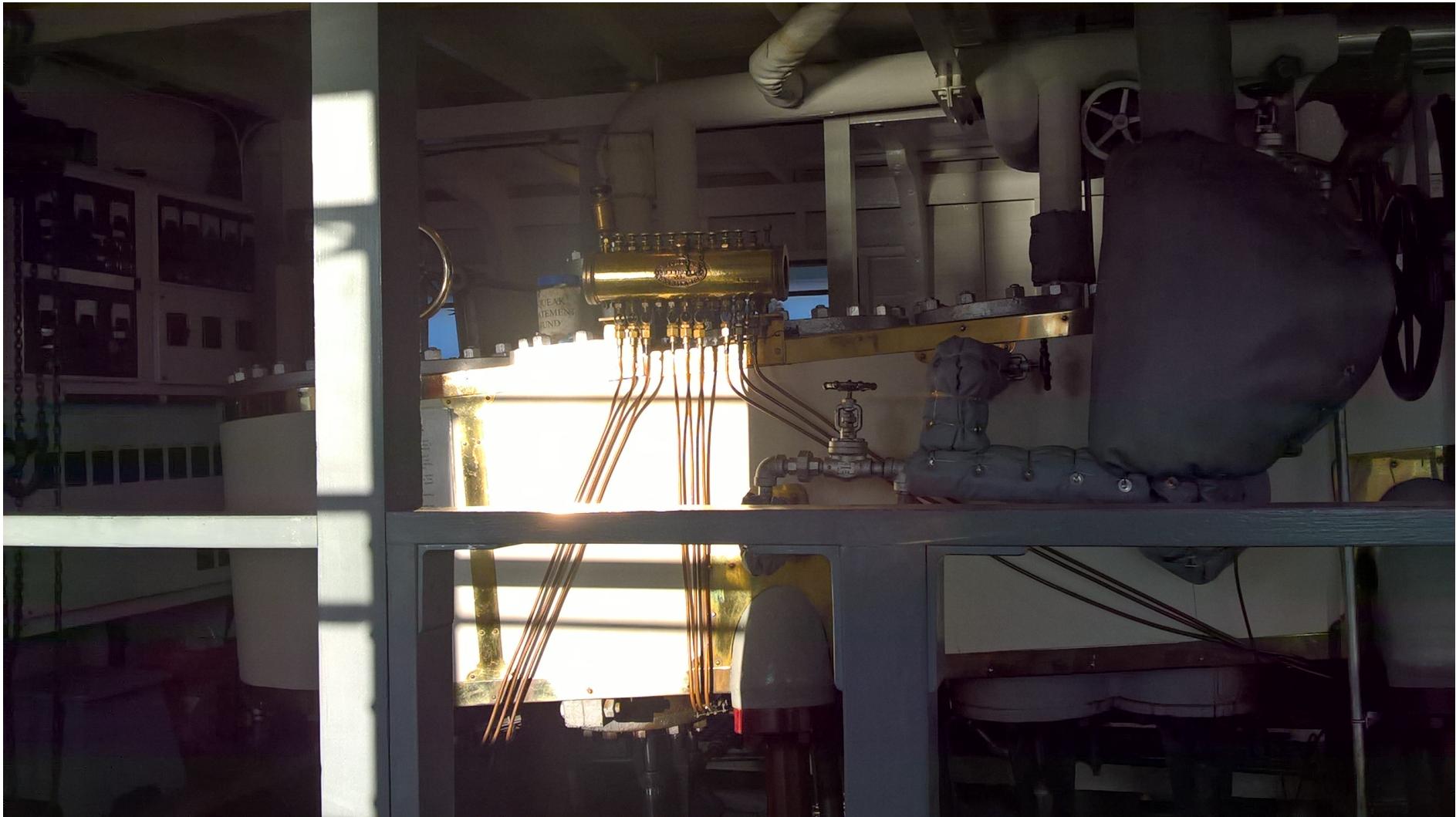
# **How a Triple Expansion Steam Engine Works**

John Dulaney

# About Me

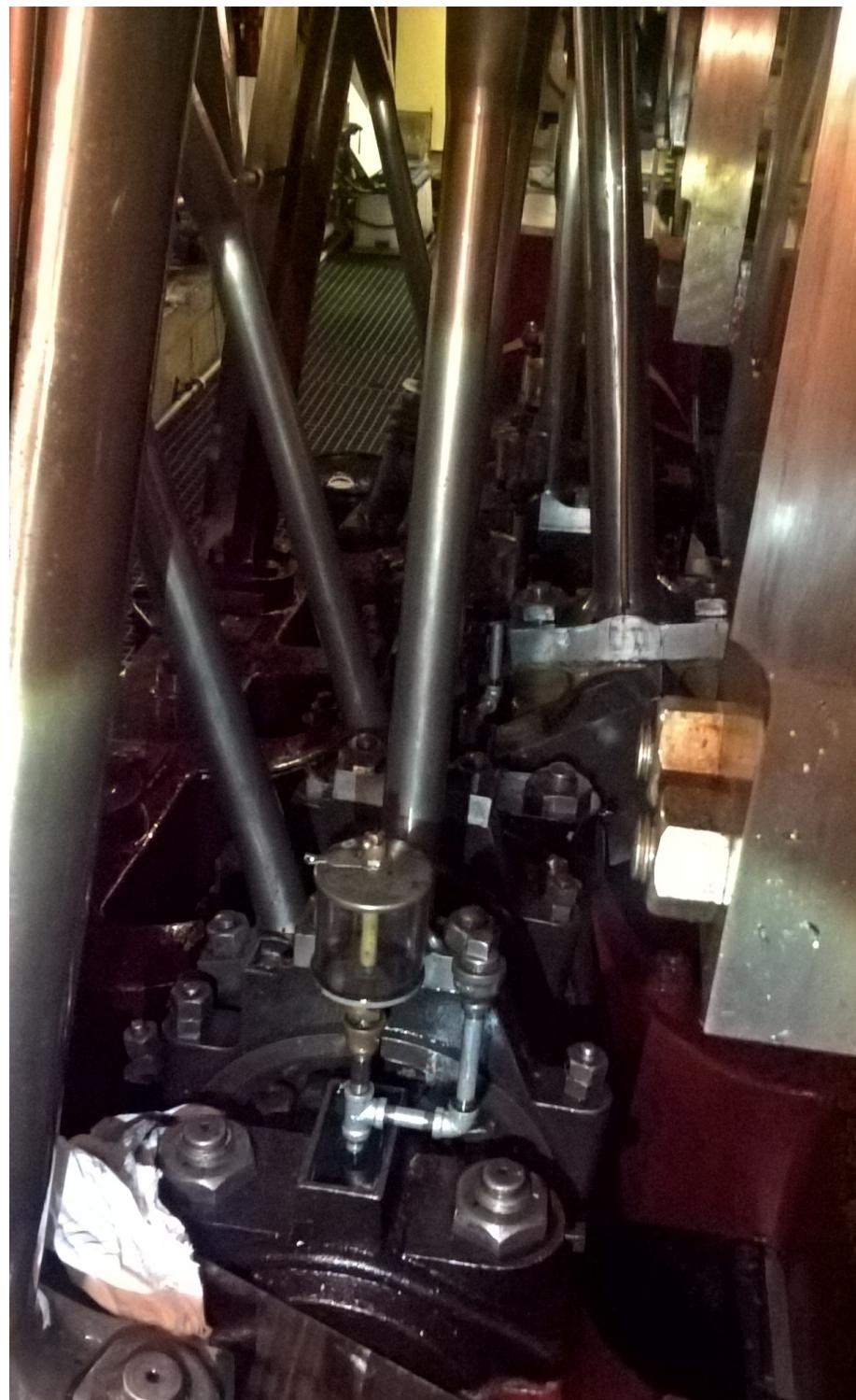
- Fire and Water Tender on the SS Virginia V



















BRENNNA FLOOD  
50 MINUTE  
JENKINSFILE  
DSL TALK  
IN 5 MINUTES  
OR LESS



SeaGL

# *JENKINSFILE*

# *50 MINUTE TALK IN*

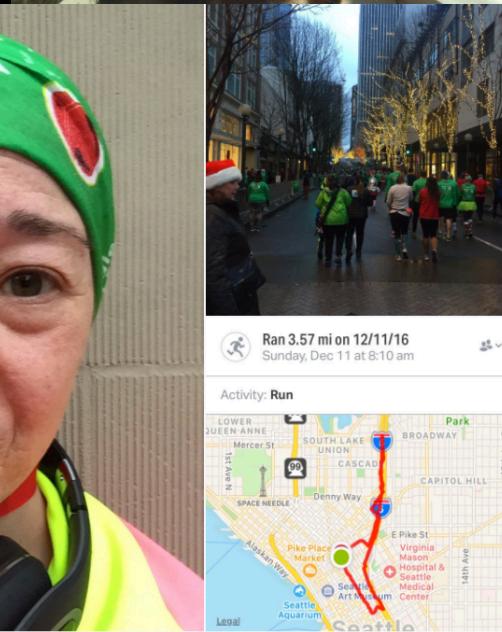
# *5 MINUTES*

*(WHAT COULD GO WRONG?!?)*

*Brenna Flood*

*Sr. Build & Delivery Engineer*

# *About me*



# WARNINGS



This talk is intended  
for mid-level Jenkins  
users

Content flux









<i>Freestyle</i>	<i>Pipeline</i>
Pre-Build	<b>Agent Environment Tools</b>
Build	<b>Stage</b>
Post-Build	<b>Post (postbuild) Notifications</b>

# *Benefits*

- Repository-driven
- Runs will survive a Jenkins Leader restart
- Groovy users rejoice!\*
- Groovy newcomers rejoice!



# *Anatomy of a Pipeline Block*

```
pipeline {  
/* insert Declarative Pipeline  
here */ }
```



- Stages
- Agent
- Environment
- Options
- Tools
- Post
  - Notifications

# *Stages*



```
pipeline {  
    agent {  
        node {  
            label 'bde_rhel_agent'  
        }  
    }  
    stages {  
        stage('Build') {  
            steps {  
                echo 'Building...'  
            }  
        }  
        stage('Test') {  
            steps {  
                echo 'Testing...'  
            }  
        }  
    }  
}
```

# *Agent*



```
pipeline {  
    agent {  
        node {  
            label 'bde_rhel_agent'  
        }  
    }  
    stages {  
        stage('Build') {  
            steps {  
                echo 'Building...'  
            }  
        }  
        stage('Test') {  
            steps {  
                echo 'Testing...'  
            }  
        }  
    }  
}
```

# *Environment*



```
pipeline {  
    agent {  
        node {  
            label 'bde_rhel_agent'  
        }  
    }  
    environment {  
        key1 = 'value1'  
        key2 = 'value2'  
    }  
    stages {  
        stage('Build') {  
            steps {  
                echo 'Building...'  
            }  
        }  
    }  
}
```

# *Options*



```
pipeline {  
    options {  
        timeout(time:1, unit: 'HOURS')  
    }  
    agent {  
        node {  
            label 'bde_rhel_agent'  
        }  
    }  
    stages {  
        stage('Build') {  
            steps {  
                echo 'Building...'  
            }  
        }  
    }  
}
```

# Tools



```
pipeline {  
    tools {  
        maven 'apache-maven-3.0.1'  
    }  
    agent {  
        node {  
            label 'bde_rhel_agent'  
        }  
    }  
    stages {  
        stage('Version') {  
            steps {  
                sh 'mvn --version'  
            }  
        }  
    }  
}
```

# Post



```
pipeline {  
    agent {  
        node {  
            label 'bde_rhel_agent'  
        }  
    }  
    stages {  
        stage('Build') {  
            steps {  
                echo 'Building...'  
            }  
        }  
    }  
    post {  
        always {  
            echo 'I came here to generate builds  
and chew bubblegum.'  
        }  
    }  
}
```

# *Notifications - email*

```
pipeline {  
    agent {  
        node {  
            label 'bde_rhel_agent'  
        }  
    }  
    stages {  
        stage('Build') {  
            steps {  
                echo 'Building...'  
            }  
        }  
    }  
    post {  
        failure {  
            mail to: 'team@example.com',  
            subject: "Failed Pipeline: ${currentBuild.displayName}",  
            body: "Something is wrong with ${env.BUILD_URL}"  
        }  
    }  
}
```

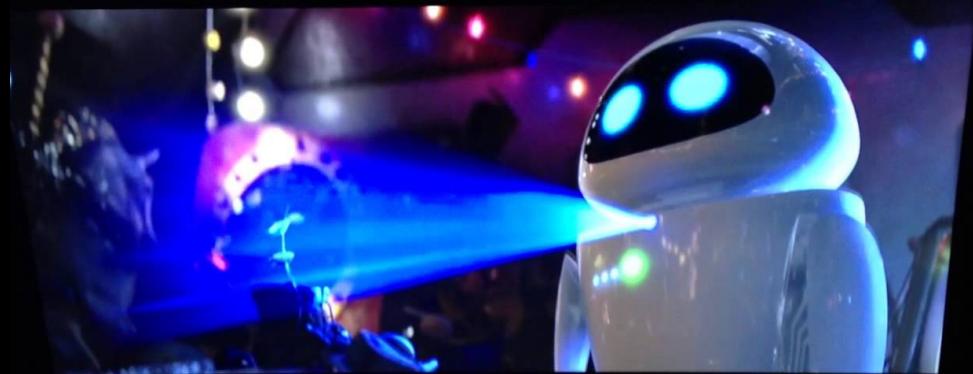


# *Notifications - Slack*

```
pipeline {  
    agent {  
        node {  
            label 'bde_rhel_agent'  
        }  
    }  
    stages {  
        stage('Build') {  
            steps {  
                echo 'Building...'  
            }  
        }  
    }  
    post {  
        success {  
            slackSend channel: '#best_team_ever',  
            color: 'good',  
            message: "The pipeline ${currentBuild.displayName} completed successfully."  
        }  
    }  
}
```



# *Local Linting*

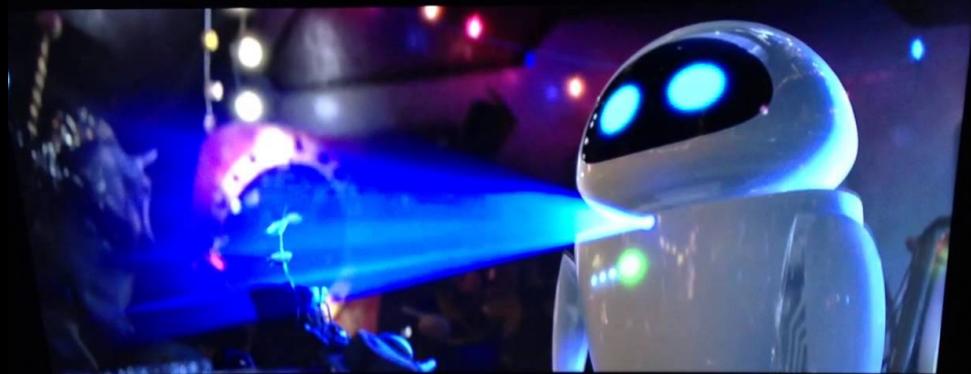


```
curl -O $jenkins_base_url/jnlpJars/jenkins-cli.jar
```

```
java -jar jenkins-cli.jar -s $jenkins_base_url login --username $username --password $password
```

```
java -jar jenkins-cli.jar -s $jenkins_base_url declarative-linter<Jenkinsfile
```

# *Local Linting*

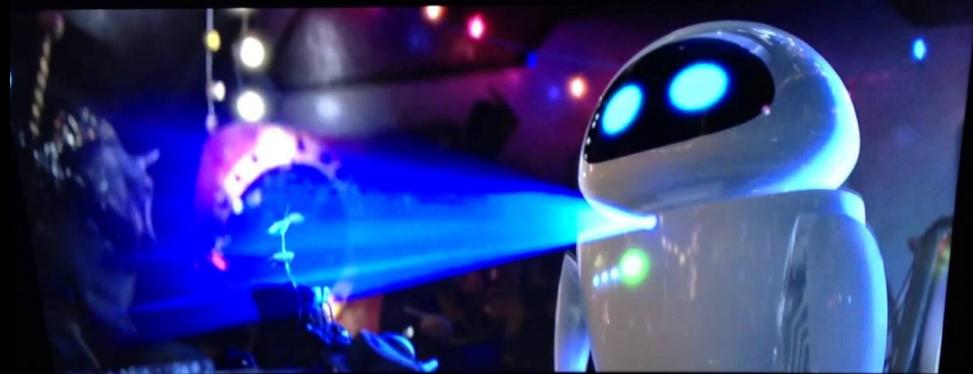


```
curl -O $jenkins_base_url/jnlpJars/jenkins-cli.jar
```

```
java -jar jenkins-cli.jar -s $jenkins_base_url login  
--username $username --password $password
```

```
java -jar jenkins-cli.jar -s $jenkins_base_url declarative-linter<Jenkinsfile
```

# *Local Linting*



```
curl -O $jenkins_base_url/jnlpJars/jenkins-cli.jar
```

```
java -jar jenkins-cli.jar -s $jenkins_base_url login --username $username --password $password
```

```
java -jar jenkins-cli.jar -s $jenkins_base_url declarative-linter<Jenkinsfile
```

# *Tips!*

- Use stages wisely
- Run jobs on Jenkins agents
- Keep stage declaration under node declaration
- Declare Cleanup Steps



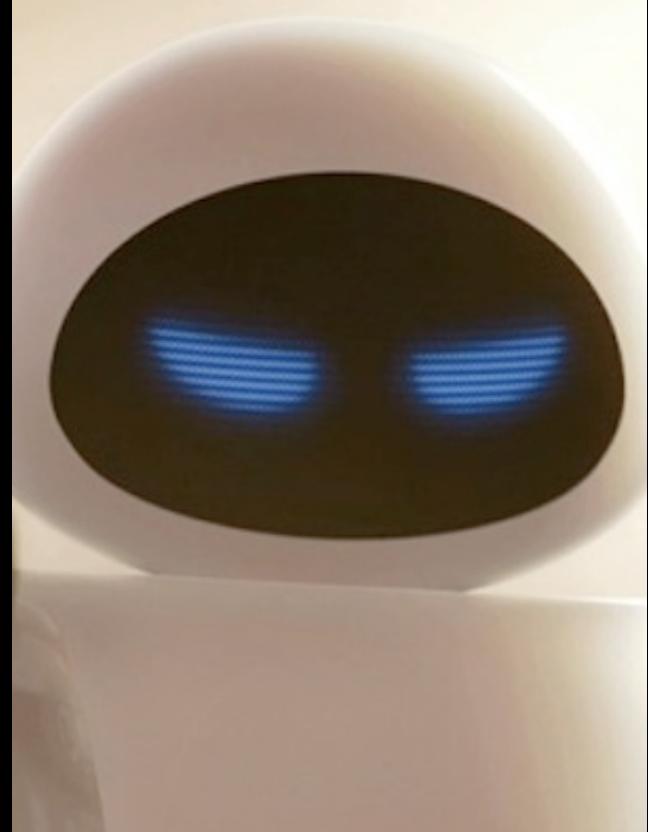
# *Gotchas!*

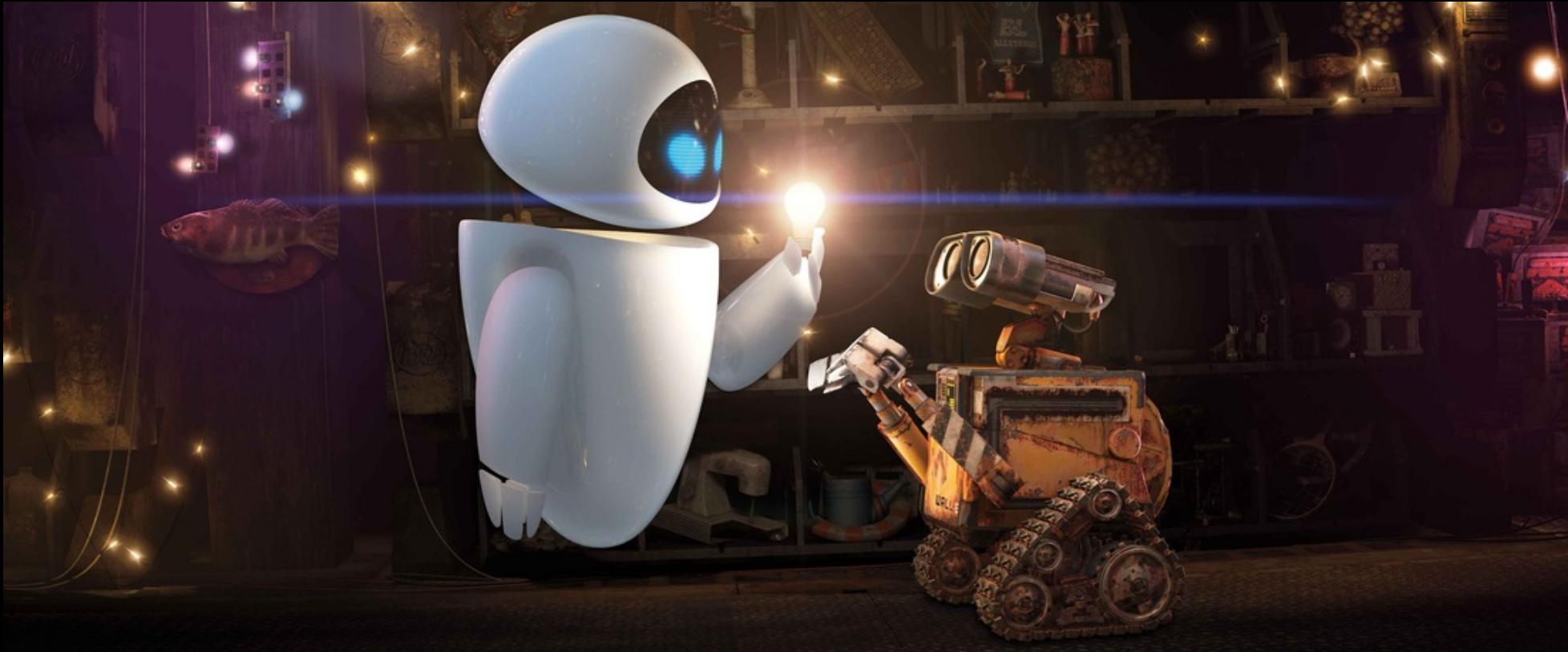
- Cannot run a parallel block across stage blocks
- Not all plugins have Jenkinsfile support
- Use JsonSlurperClassic instead of XmlSlurper or JsonSlurper
- Shell script exit codes



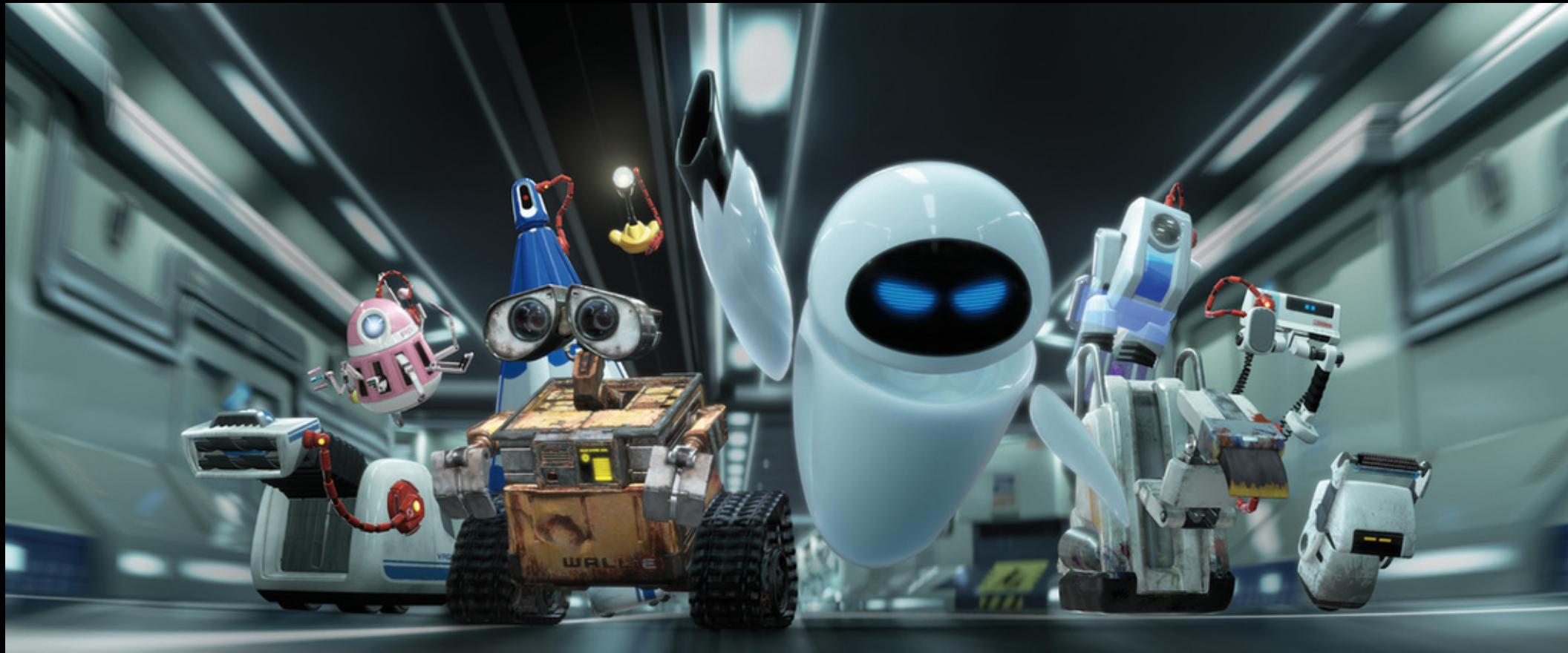
`$%^&@*s!`

- Documentation
- Changes Jenkinsfile DSL over time
- Groovy Security Approval
- Comprehensive Testing Constraints
- Console Output
- Agent Build Logs









# REFERENCES

OFFICIAL JENKINS CI DSL REFERENCE

<https://jenkins.io/doc/book/pipeline/syntax/>

BEST PRACTICES / TIPS / TRICKS

<https://jenkins.io/blog/2017/02/01/pipeline-scalability-best-practice/>

[https://github.com/jenkinsci/pipeline-examples/blob/master/docs/BEST\\_PRACTICES.md](https://github.com/jenkinsci/pipeline-examples/blob/master/docs/BEST_PRACTICES.md)

<http://www.pierre-beitz.eu/2017/01/17/Writing-a-Jenkinsfile-Tips-and-Tricks.html>

TALKS / VIDEO

Jenkinsworld 2016 talk on the feature:

<https://www.youtube.com/watch?v=ALvg4KK25JU>

SOLID Principles – Kerri Miller (start @ 8:00)

[https://www.youtube.com/watch?v=7U3e1MB\\_CQg](https://www.youtube.com/watch?v=7U3e1MB_CQg)

SAM KITAJIMA-KIMBREL

YOU BIKE

\*HOW FAR\*?!



SeaGL



FREEWAY  
ENTRANCE

California  
1

SOUTH



YOU BIKE HOW FAR?

# A BRIEF HISTORY OF HIV/AIDS

---

1900s: Earliest human SIV cases

1960s: HIV spreads out of Africa

1970s: Early confirmed cases

1980s: Epidemic begins in earnest

[https://en.wikipedia.org/wiki/Timeline\\_of\\_HIV/AIDS](https://en.wikipedia.org/wiki/Timeline_of_HIV/AIDS)

# A BRIEF HISTORY OF HIV/AIDS

---

1985: Reagan finally talks about AIDS

1985: ELISA test approved!

1987: AZT approved!

1990s: ART improves rapidly;

Death rates fall (in developed countries)

[https://en.wikipedia.org/wiki/Timeline\\_of\\_HIV/AIDS](https://en.wikipedia.org/wiki/Timeline_of_HIV/AIDS)

# A BRIEF HISTORY OF HIV/AIDS

---

2005: PEP standardized

2014-present: PrEP approved

[https://en.wikipedia.org/wiki/Timeline\\_of\\_HIV/AIDS](https://en.wikipedia.org/wiki/Timeline_of_HIV/AIDS)

A photograph of a cyclist in dark cycling gear and a helmet riding a road bike on a paved road. The road curves to the right, set against a backdrop of rolling hills covered in green and yellow vegetation under a cloudy sky.

PEOPLE ARE  
LIVING WITH HIV

# LIVING WITH HIV

---

Life expectancy “near normal”  
due to treatment advances

(<http://www.bbc.com/news/health-39872530>)

A wide-angle photograph of a coastal landscape. The foreground is a dry, yellowish-brown field with some low-lying green shrubs. Beyond the field is a dark blue sea with small white waves. In the background, there are dark, hazy mountains under a sky filled with wispy white clouds.

---

**WE ARE REDUCING  
INFECTION RATES**

# PREP EFFICACY

---

92-99% transmission risk reduction for those who follow daily regimen

<https://men.prepfacts.org/the-basics/>

A scenic view of a mountain range under a clear blue sky. The mountains have dark, rocky peaks and green, grassy slopes. A winding road or path is visible on the left side of the frame.

**NEEDS TODAY ARE DIFFERENT**

---

# HIV/AIDS RESPONSE IN 2017

---

Testing

Education

Case management

Risk reduction

Advocacy

**SAN  
FRANCISCO'S  
AIDS  
FOUNDATION**



**LOS  
ANGELES  
LGBT  
CENTER**

---

# AIDS/LifeCycle®



**SF TO LA • END AIDS • 545 MILES**

A road bike with red handlebars and a white frame is leaning against a concrete barrier on a paved road. The background shows a lush green hillside and a valley below. A metal guardrail runs along the side of the road.

SF TO LA - 545 MILES

**2500 RIDERS**





---

**\$16,000,000/YEAR**

# IMPACT AND MEASUREMENTS

---

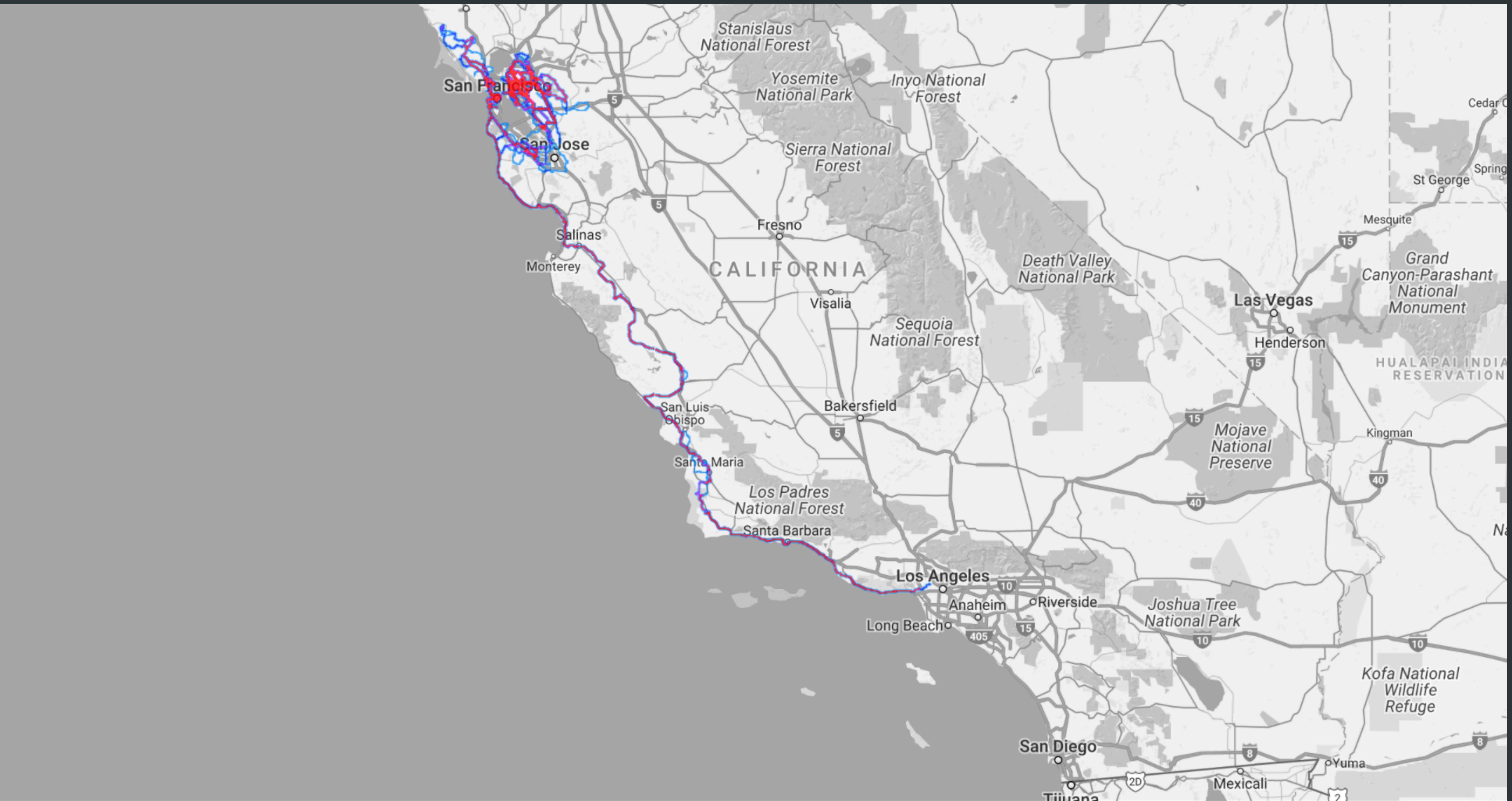
\$50k: substance use counselor for 40 clients

\$15k: HIV/STI tests, treatment, education for 100 clients

\$2500: Safe and stable housing for 4 HIV+ people for a month

\$150: 1000 syringes for exchange programs

\$10: 143 condoms











A scenic landscape featuring a range of mountains under a blue sky with scattered white clouds. In the foreground, there's a paved road with a metal guardrail on the left, leading towards a field of tall, dry grass. The background shows rolling hills and more mountainous terrain.

**ACTIVISM:  
GO BEYOND PROTESTS**



**FIND "THE RIDE"  
FOR YOU**

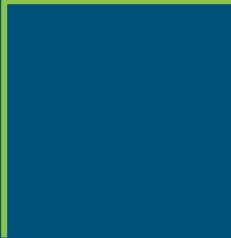
---



RACHEL KELLY

# BACKUPS





# Why Even A Backups

---

*Rachel Kelly - SeaGL  
7 October 2017*



# *About Rachel*

---

Oops, Devops

Python

Running

McElroys

# *Why back up?*

---

Analysis

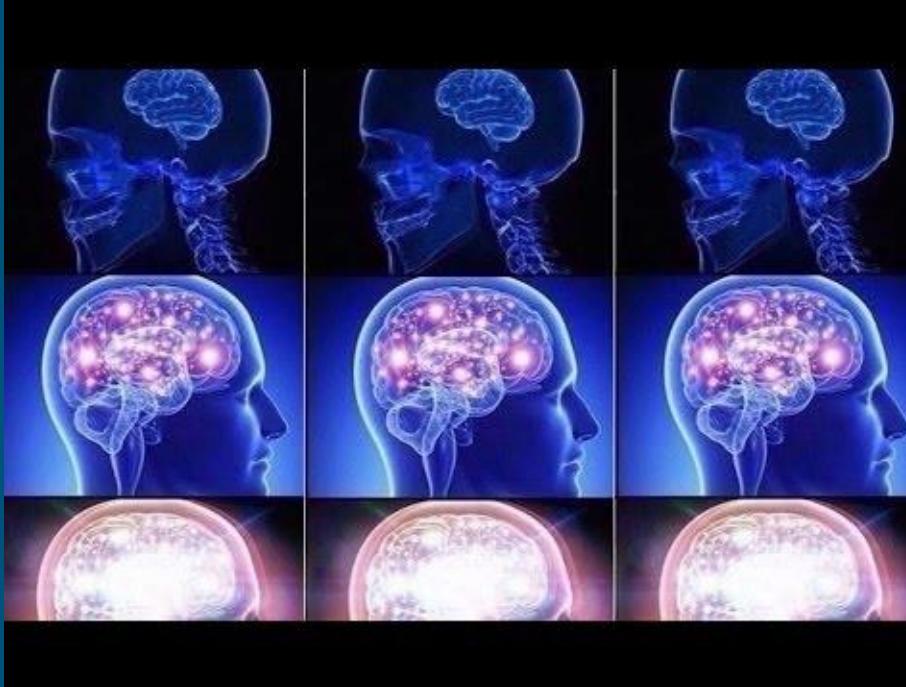
Compliance

Safety

Service Agreement

# *Analysis*

---



“how do people even use this anyway”

# *Compliance*

---



HIPAA, PCI-DSS, &c

# *Safety*

---



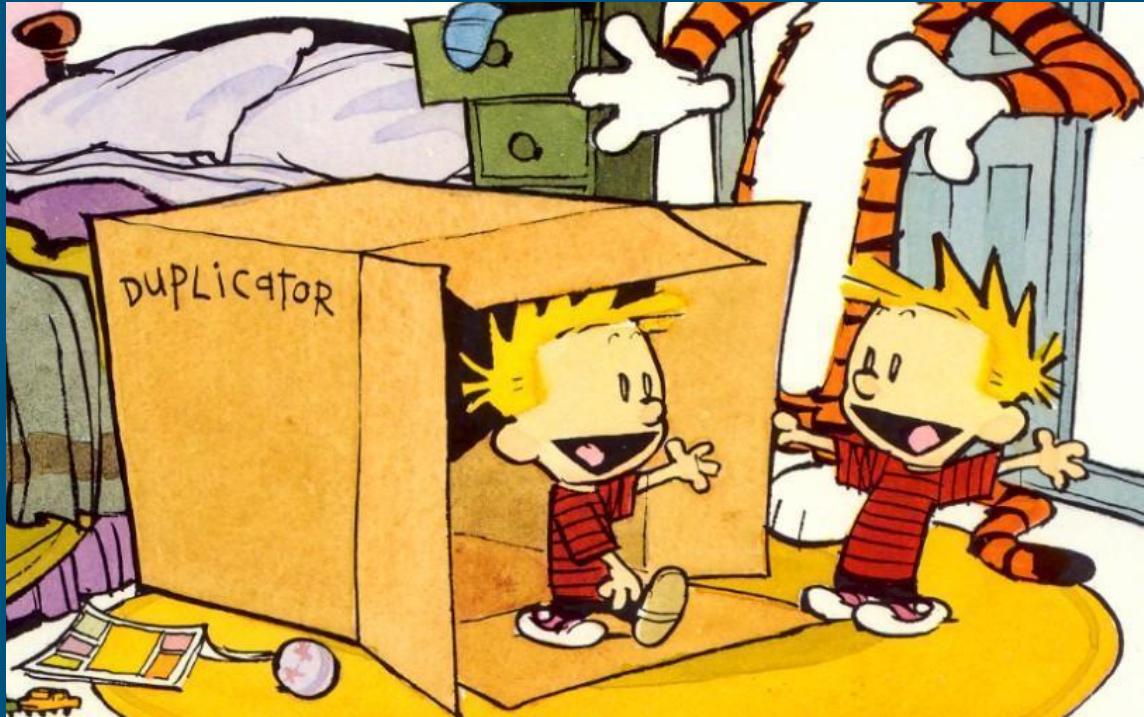
“spinning up a new server is a pain”  
gotta insulate against multiple vectors

# *Service Agreement*



“guaranteed 99.99999999999999 uptime”

*~ \* ~ storyyy tiiiiime ~ \* ~*



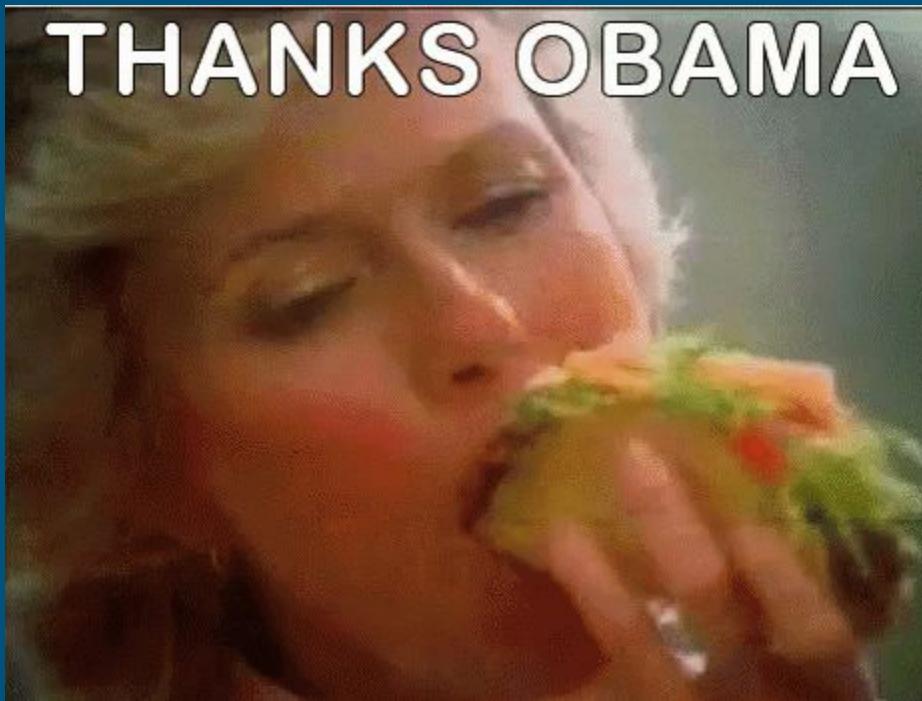
Duply, a giant  
shell script

Full or  
Partial Backups?

Full system?

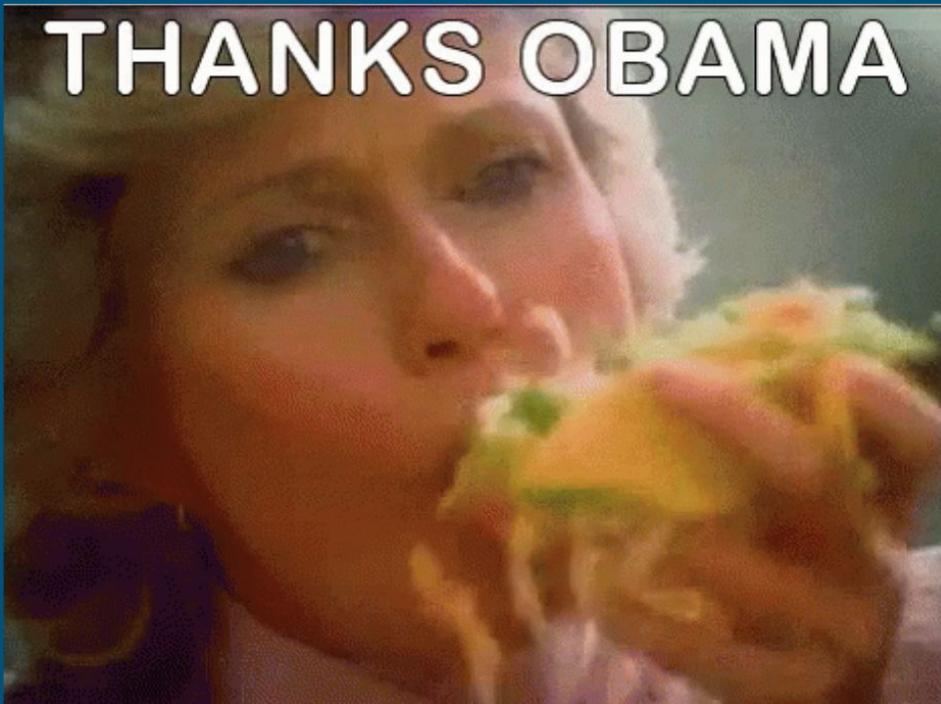
Oh no tho

---



# Oh no tho

---



Access to full system?

FULL backups??

Incremental.. FOREVER

But did they work.

story - erroneous  
automated emails

# So what do???

---



Rachel Kelly - @wholemilk - Backups

# “Follow all the rules and ...”

---



# Or just do the d&#n thing



cron to all  
backups (tar and s3  
sync) every night  
  
look for >8wk, delete  
tool to get full/file

# Descriptive, not prescriptive

---

real life solutions are rarely perfect

probably don't do what we did

—

# Thank you!

JOHN "GENEHACK" ANDERSON

#SPEAKERLIFE



SeaGL

# #speakerlife

john sj anderson | **@genehack** | seagl 2017 | PAR-TAY

hi!  
I'm  
John



i do  
this  
a lot

# **partial list of conferences i've spoken at:**

ohio linuxfest, pittsburgh perl workshop, yapc/tpc,  
oscon, dc-baltimore perl workshop, openwest,  
scale, seagl, linux fest northwest, perl oasis,

**beer city code**



i'm a  
pro  
now!



i'm a  
pro  
now!

i'm not braggin'  
i'm just sayin'

i do  
this  
a lot

it would be  
great  
if more people  
did it too

it's good  
for you

it's good  
for us

but how do  
you get  
started?

# 1. figure out your story.

you have a story.  
find it.

1. figure out your story.

**2. write your proposal.**

**[https://github.com/vmbrasseur/Public\\_Speaking](https://github.com/vmbrasseur/Public_Speaking)**

1. figure out your story.
2. write your proposal.

**3. submit it.**

submit it  
all out

1. figure out your story.
2. write your proposal.
3. submit it.

4. GOT TO 1.

**you will get  
rejected.**

**you will get rejected**

**a lot.**

**dirty secret #1:  
everybody  
gets rejected.**

in 2017, i am speaking at  
nine confs.

i've been  
rejected  
by ten.



**dirty secret #2**

**successful established  
speakers always submit  
multiple proposals.**

my  
overall  
stats....

**11 acceptances.  
50 rejections.**

0.4220

don't be  
discouraged.

recycle  
your proposals.

ask for  
feedback.

#public\_speaking  
(freenode)

keep  
trying.

**established  
speakers:**

announce  
your  
rejections.

keep announcing  
acceptances too!

# #speakerlife

thanks!

THANK YOU

FUNDING  
SPONSORS





C ▶ S A T S



COMCAST   
TECHNOLOGY SOLUTIONS

 ExtraHop  
*See IT run.*



REDFIN



# SEATTLE CENTRAL COLLEGE

*One of the Seattle Colleges*

THANK YOU

COMMUNITY  
SPONSORS





**LinuxFest  
Northwest**



VANCOUVER, BC  
**PyCascades**  
-2018-  
JANUARY 22-23





**FREE SOFTWARE  
FOUNDATION**

[www.fsf.org](http://www.fsf.org)

THANK YOU

VOLUNTEERS



SeaGL

- **Organizing Committee**
  - Deb Nicholson, VM Brasseur, Wm Salt Hale, Adam Monsen, Lisa Sandoval, Rob Smith, Walter Whittle
- **Program Committee**
  - John SJ Anderson, VM Brasseur, Emily Dunham, Wm Salt Hale, Tiberius Hefflin, Emma Humphries, Deb Nicholson, Wale Ogundipe, Jeremy Tanner
- **Onsite Volunteers**
  - Adrienne Cohea, Brenna Flood, Scott Foster, Garrett Honeycutt, Sam Kitajima-Kimbrel, Tony Knapp, Spencer Krum, Robert M, Dave Nash, Soyoung Park, Justin Rush, Andrew Schwartzmeyer, Ashina Sipiora, Maryna Yesakova
- **Cascadia Builder Award Committee**
  - Deb Bryant, Michael Dexter, Emily Dunham, Mark Frischmuth, Benjamin Mako Hill, Deb Nicholson
- **Other friends who have helped us get here**
  - Mark Atwood, Nick Durkee, Gareth Greenaway, Aurilee Gamboa, Bizhan Hoomin, Jesse Keating, Tessa Mero, Chris Petersen, Corey Quinn, Jose Antonio Rey
- Thanks to all of our **speakers** and our **keynotes!** **Lightning talks** too!
- Thanks to our pals at the **FSF!**
  - Molly DeBlanc, Jasimin Huang, Don Robertson, Jeanne Rasata, John Sullivan