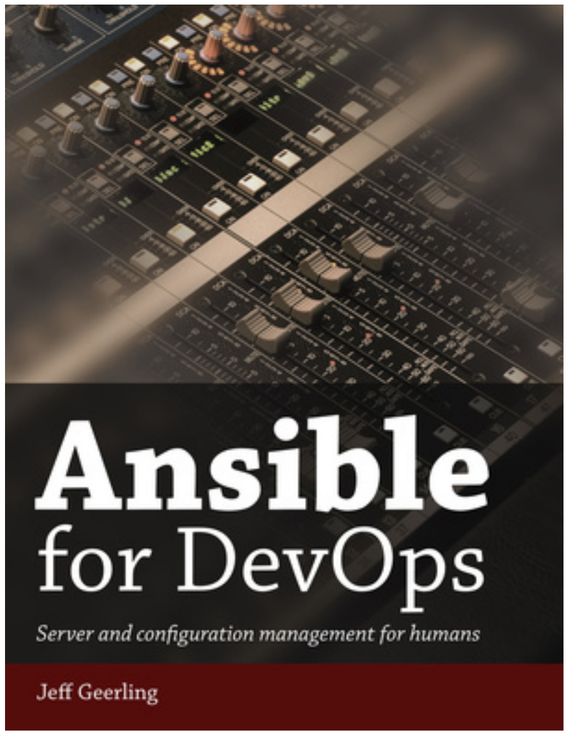
JENKINS

or: How I learned to stop worrying and love automation

#MidCamp 2018 – Jeff Geerling


Ansible
for DevOps
Server and configuration management for humans
Jeff Geerling

AGENDA

1. Installing Jenkins
2. Configuation and Backup
3. Jenkins and Drupal

JENKINS

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JENKINS

- Long, long time ago was 'Hudson'
- After Oracle: "Time for a new name!"
- Now under the stewardship of Cloudbees
- Used to be only name in the open source CI game
- Today: GitLab CI, Concourse, Travis CI, CircleCI, CodeShip...

RUNNING JENKINS

- **Server**:
  - RAM (Jenkins is a hungry butler!)
  - CPU (if jobs need it)
  - Disk (don't fill the system disk!)

RUNNING JENKINS

- Monitor RAM, CPU, Disk
- Monitor `jenkins` service if RAM is limited
  - `enforce-jenkins-running.sh`

INSTALLING JENKINS

- Install Java.
- Install Jenkins.
- Done!

Image source: https://medium.com/@ricardoespsanto/jenkins-is-dead-long-live-concourse-ce13f94e4975

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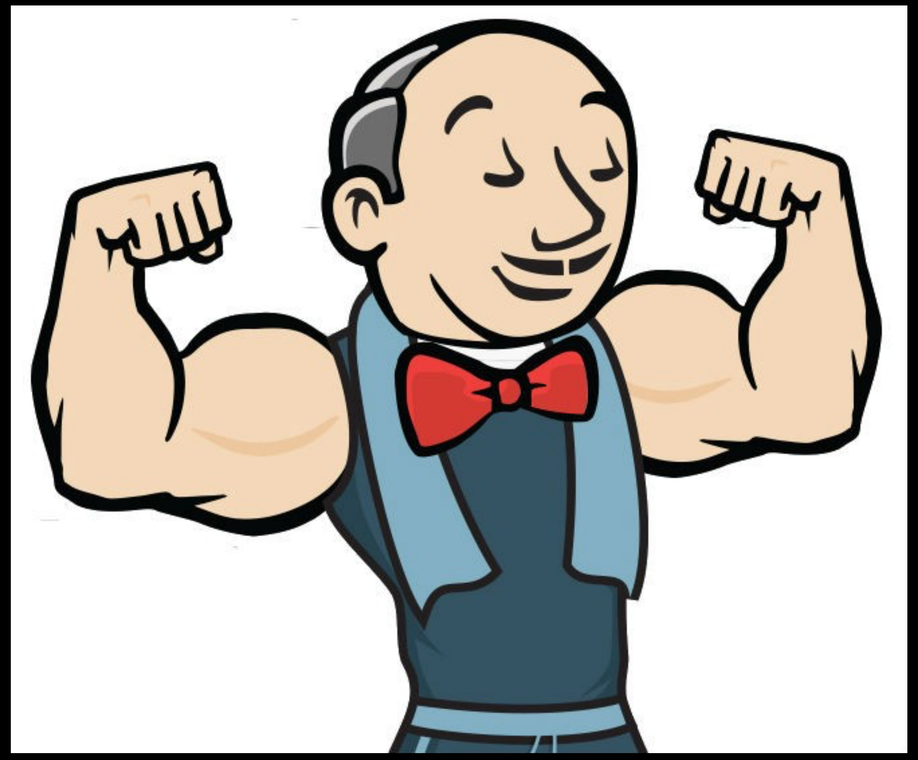

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(Your Jenkins server, 3 years later)

Image source: https://www.albany.edu/news/69224.php

INSTALLING JENKINS

- **Securely**:
  - Java
  - Jenkins
  - Nginx
  - Let's Encrypt

INSTALLING JENKINS

- **Repeatably**:
  - CI for Jenkins (CI-ception!)
  - Local or test Jenkins environment
    - You wouldn't develop a Drupal site in prod (*riiiiight?*), so why would you develop your automation in prod?!

INSTALLING JENKINS

(If you want to skip ahead...)

https://github.com/geerlingguy/drupal-jenkins-multisite

INSTALLING JENKINS

(If you want the easier, but expensive-r, route)

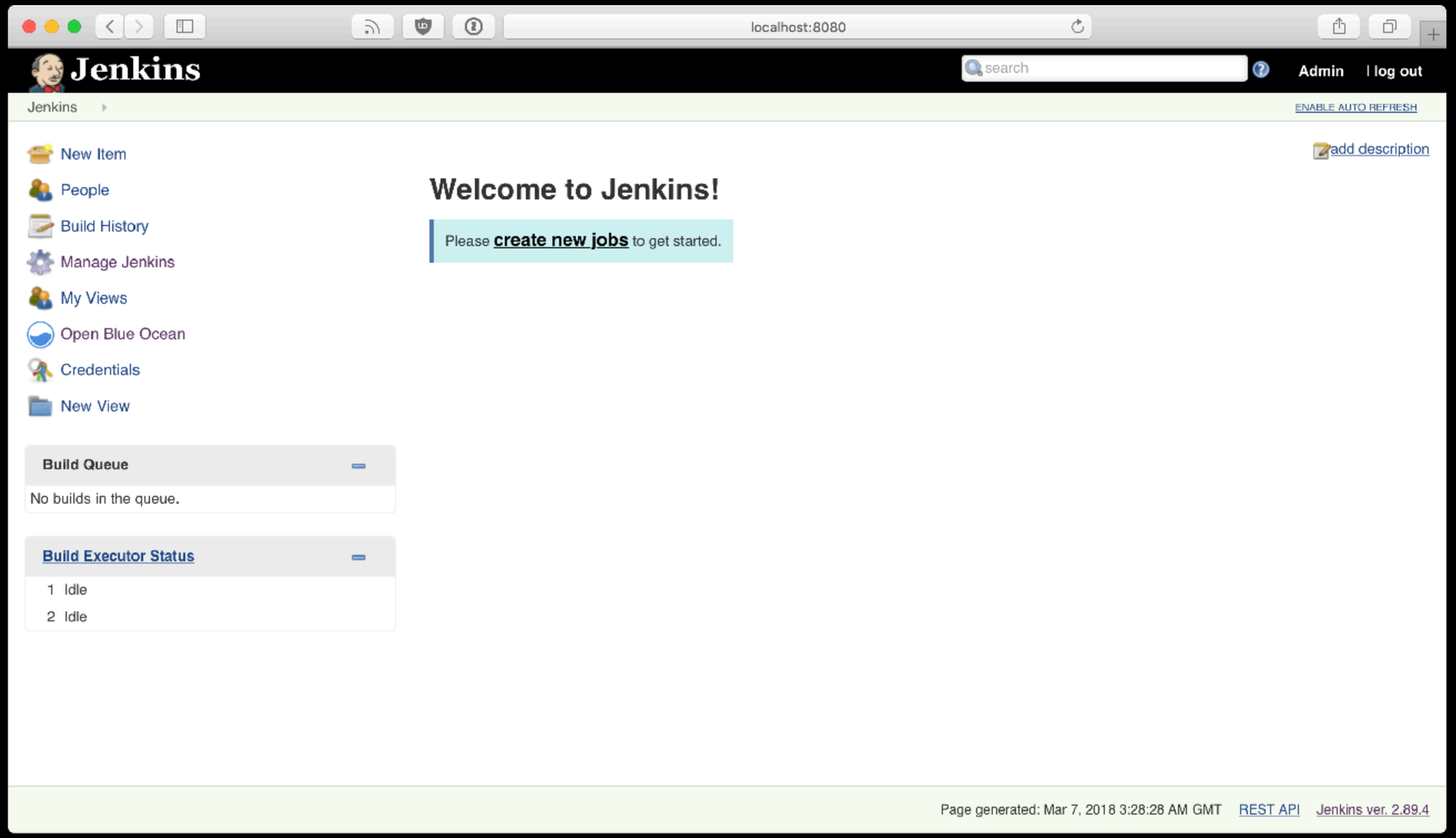
https://www.cloudbees.com/

INSTALLING JENKINS

(If you want it RIGHT NOW!)

```
docker run -d -p 8080:8080 jenkinsci/blueocean
```

WE'RE IN

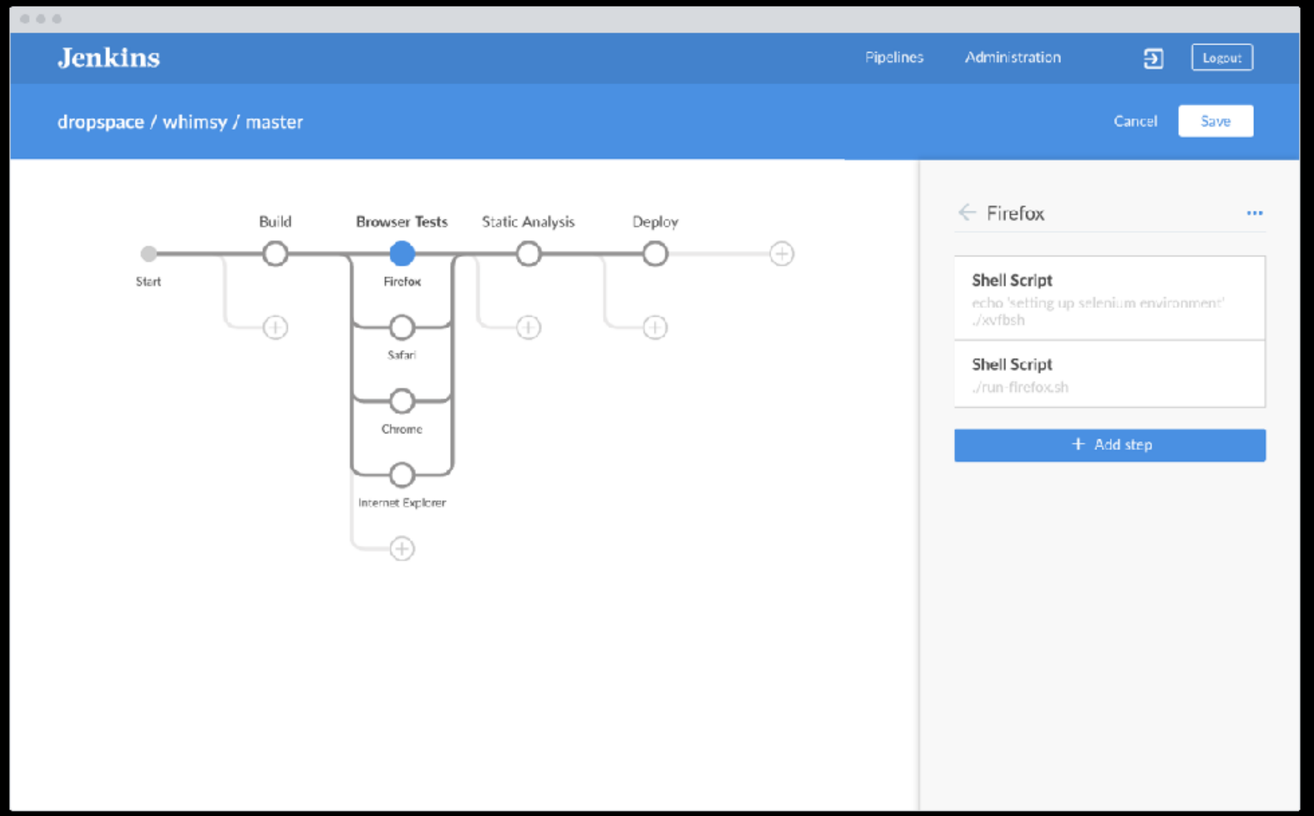

localhost:8080
Jenkins
search
Admin
log out
Jenkins
ENABLE AUTO REFRESH
New Item
People
Build History
Manage Jenkins
My Views
Open Blue Ocean
Credentials
New View
add description
Welcome to Jenkins!
Please create new jobs to get started.
Build Queue
No builds in the queue.
Build Executor Status
1 Idle
2 Idle
Page generated: Mar 7, 2018 3:28:28 AM GMT
REST API
Jenkins ver. 2.89.4

CONFIGURING JENKINS

- **Plugins**:
  - Very much like Drupal modules
  - (This has good and bad implications 😛)

CONFIGURING JENKINS

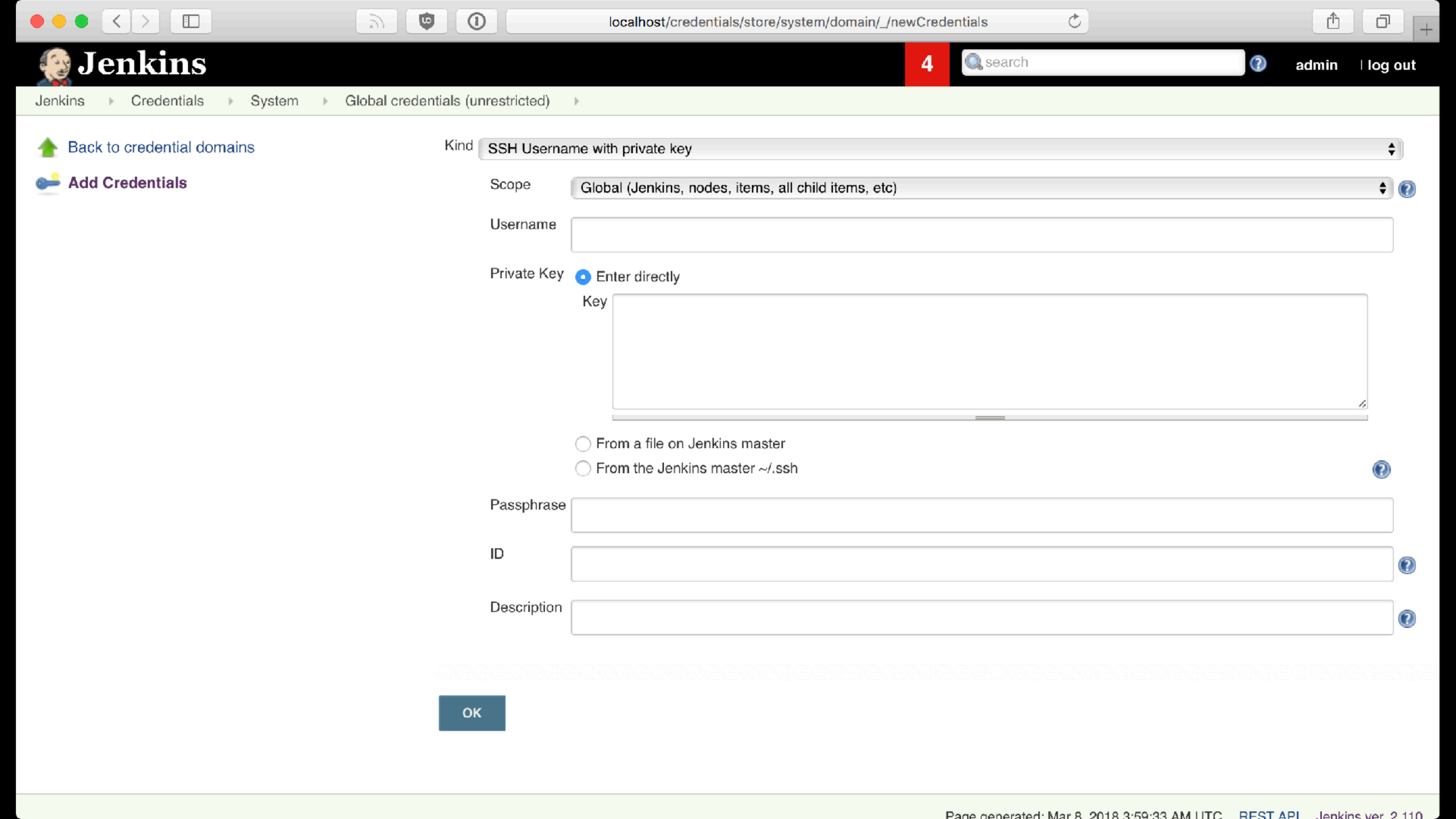
- **Blue Ocean**:
  - No more 00's UI!
  - Follow this issue for setting it as default



CONFIGURING JENKINS

- Secrets:
  - SSH keys
  - API keys
  - AWS credentials

Image source: https://livinghiv.com/2014/09/07/least-secret-secret/


localhost/credentials/store/system/domain/_/newCredentials
Jenkins
4
search
admin
log out
Jenkins
Credentials
System
Global credentials (unrestricted)
Back to credential domains
Add Credentials
Kind
SSH Username with private key
Scope
Global (Jenkins, nodes, items, all child items, etc)
Username
Private Key
Enter directly
Key
From a file on Jenkins master
From the Jenkins master ~/.ssh
Passphrase
ID
Description
OK
Page generated: Mar 8, 2018 3:59:33 AM UTC
REST API
Jenkins ver. 2.110

CONFIGURING JENKINS

Image source: http://ru.memegenerator.net/instance/69770876/overly-excited-oprah-you-get-root-you-get-root-everyone-gets-root

CONFIGURING JENKINS

- **Access Control**:
  - Use the Role Strategy Plugin
  - BUT, be careful, and TEST after upgrades!

Image source: https://livinghiv.com/2014/09/07/least-secret-secret/

BACKING UP JENKINS

Back up `JENKINS_HOME` to Amazon S3

tl;dr: jenkins-backup.yml

JENKINS & DRUPAL

What can we do with them?

JENKINS & DRUPAL

- Quite a lot, actually!
  - Run tests (PHPUnit, Behat, etc.)
  - Build dependencies (Composer, npm/yarn)
  - Run cron
  - Deploy new sites
  - Deploy updates to existing sites

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- [Mac - Quick Resizer](#)
- [Mac - Visibility](#)
- [PHP - Imap](#)
- [PHP - Ping](#)
- [PHP - Request](#)
- [iOS - JJGWebView](#)

JENKINS & DRUPAL

- **midwesternmac.com ('mm')**:
  - Drupal 7
  - Multisite, 6 sites total

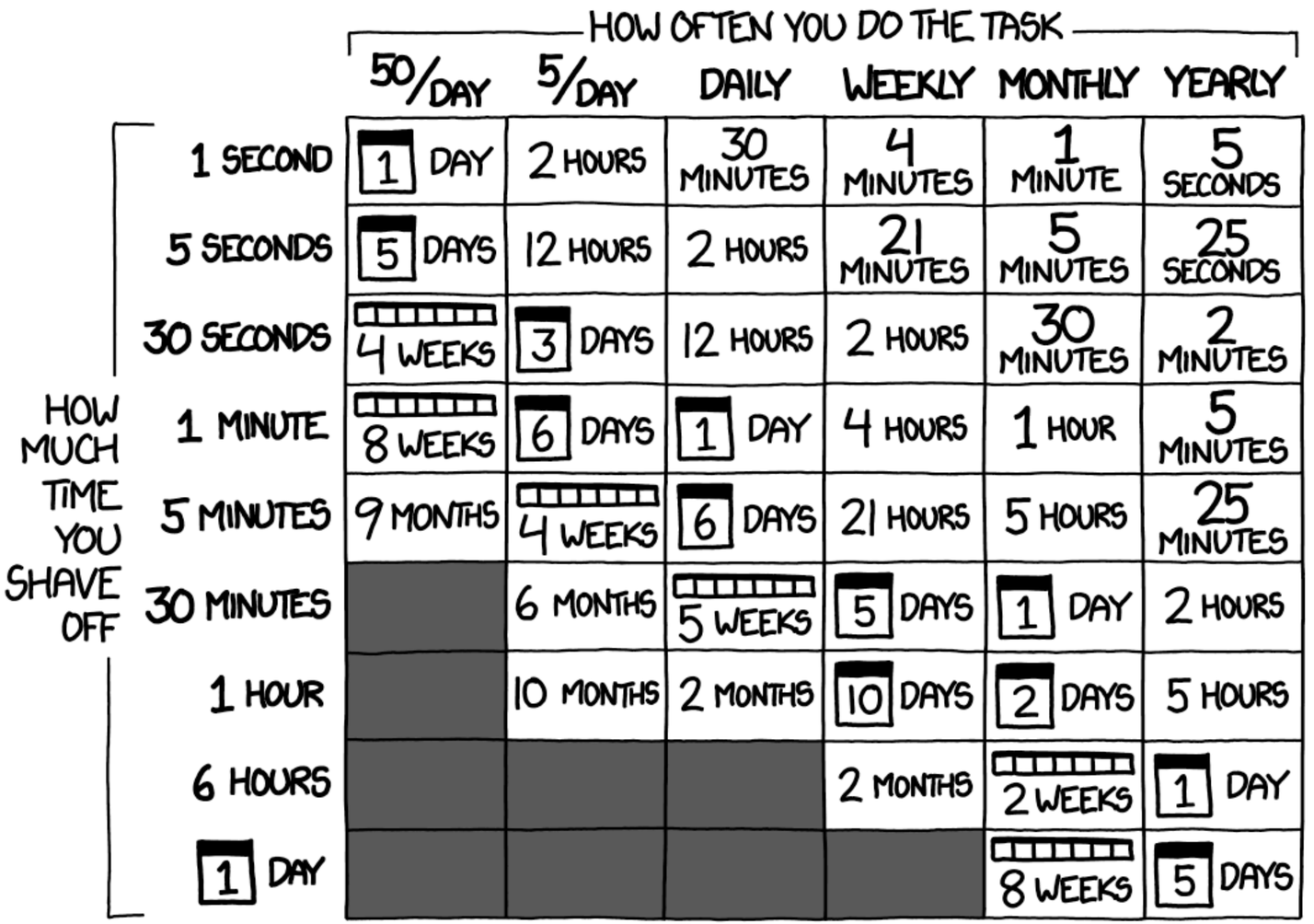
JENKINS & DRUPAL

(Demo)

Image source: Jack Moreh / freerangestock.com

HOW LONG CAN YOU WORK ON MAKING A ROUTINE TASK MORE EFFICIENT BEFORE YOU'RE SPENDING MORE TIME THAN YOU SAVE?

(ACROSS FIVE YEARS)



XKCD: 1205

OTHER SOURCES

- Tons of great tutorials on Drupal + Jenkins, e.g.:
  - Chromatic: D8 Deployments, Backups
  - Lullabot: One-click deployments
  - Phil Norton: Getting started

THANKS!

- Support my open source work on Patreon: https://www.patreon.com/geerlingguy