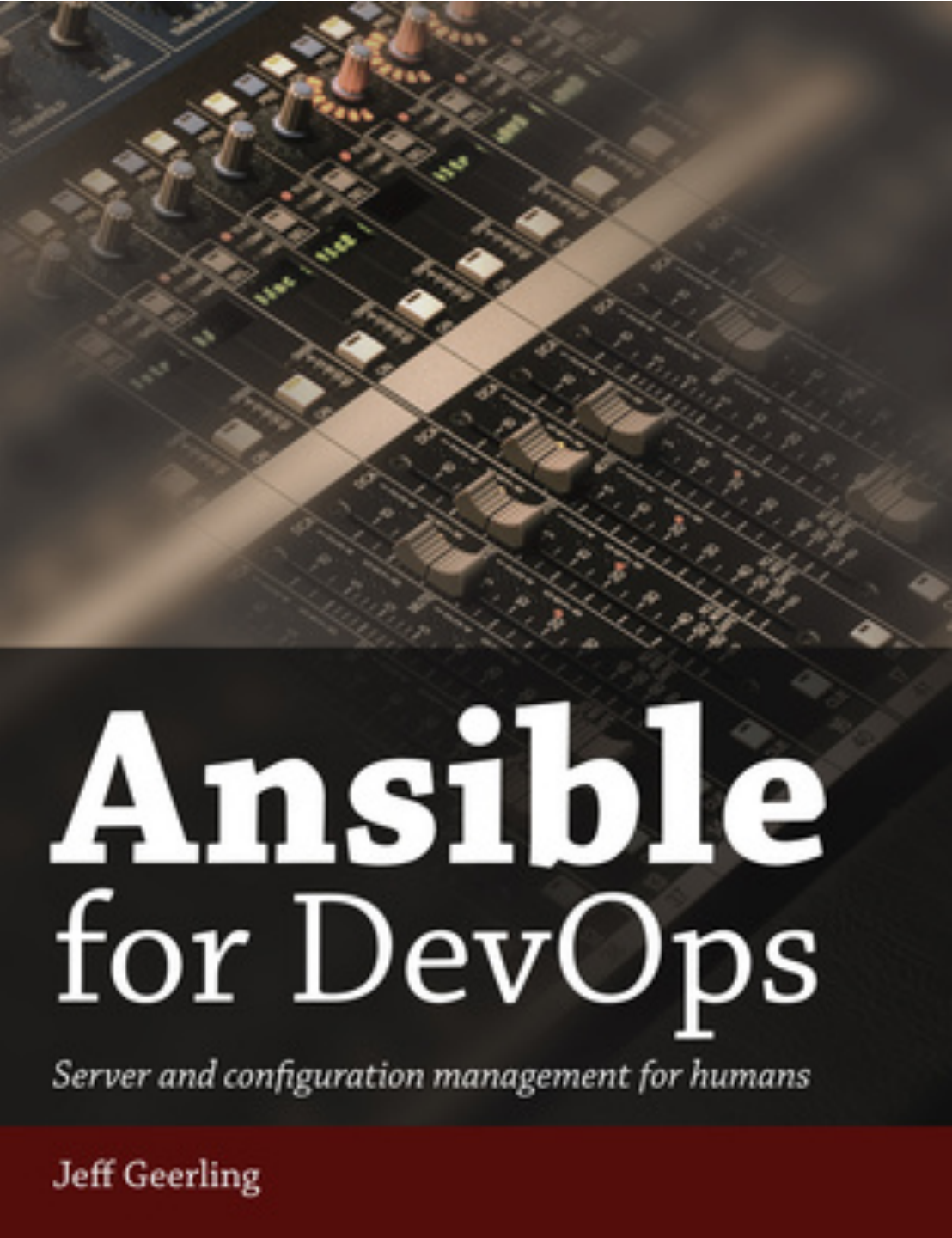


JENKINS



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. Configuration and Backup
3. Jenkins and Drupal

JENKINS

JENKINS

- Long, long time ago was 'Hudson'

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JENKINS

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- After Oracle: "Time for a new name!"



ORACLE[®]

JENKINS

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- Now under the stewardship of Cloudbees



ORACLE[®]

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...



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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!

INSTALLING JENKINS

- Install Java.
- Install Jenkins.
- Done!





(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 (*riiiiiight?*), 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

The screenshot shows the Jenkins web interface in a browser window. The browser's address bar displays 'localhost:8080'. The Jenkins logo is in the top left, and a search bar is in the top right. The main content area features a 'Welcome to Jenkins!' message with a call to action: 'Please **create new jobs** to get started.' On the left, there is a sidebar with navigation links: 'New Item', 'People', 'Build History', 'Manage Jenkins', 'My Views', 'Open Blue Ocean', 'Credentials', and 'New View'. Below the sidebar, there are two expandable panels: 'Build Queue' (showing 'No builds in the queue.') and 'Build Executor Status' (showing '1 Idle' and '2 Idle').

Jenkins

localhost:8080

search Admin | log out

Jenkins

ENABLE AUTO REFRESH

[add description](#)

Welcome to Jenkins!

Please **create new jobs** to get started.

- New Item
- People
- Build History
- Manage Jenkins
- My Views
- Open Blue Ocean
- Credentials
- New View

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

The screenshot displays the Jenkins Blue Ocean interface. At the top, the Jenkins logo is on the left, and 'Pipelines Administration' and 'Logout' are on the right. Below the header, the breadcrumb 'dropspace / whimsy / master' is shown, along with 'Cancel' and 'Save' buttons. The main area features a pipeline graph with stages: 'Start', 'Build', 'Browser Tests', 'Static Analysis', and 'Deploy'. The 'Browser Tests' stage is expanded to show sub-steps for 'Firefox', 'Safari', 'Chrome', and 'Internet Explorer'. The 'Firefox' step is selected, and a configuration panel on the right shows two 'Shell Script' steps with the following commands:

```
echo 'setting up selenium environment'
./xvfbsh

/run-firefox.sh
```

At the bottom of the configuration panel is a '+ Add step' button.

CONFIGURING JENKINS

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



[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

CONFIGURING JENKINS

YOU GET ROOT, YOU GET ROOT



CONFIGURING JENKINS

- **Access Control:**
 - Use the [Role Strategy Plugin](#)
 - BUT, be careful, and TEST after upgrades!

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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Services

- [Hosted Apache Solr](#)
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- [Web Development](#)
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Projects

- [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)



Hey, I do this more than one time ever... I should automate it!

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

		HOW OFTEN YOU DO THE TASK					
		50/DAY	5/DAY	DAILY	WEEKLY	MONTHLY	YEARLY
HOW MUCH TIME YOU SHAVE OFF	1 SECOND	1 DAY	2 HOURS	30 MINUTES	4 MINUTES	1 MINUTE	5 SECONDS
	5 SECONDS	5 DAYS	12 HOURS	2 HOURS	21 MINUTES	5 MINUTES	25 SECONDS
	30 SECONDS	4 WEEKS	3 DAYS	12 HOURS	2 HOURS	30 MINUTES	2 MINUTES
	1 MINUTE	8 WEEKS	6 DAYS	1 DAY	4 HOURS	1 HOUR	5 MINUTES
	5 MINUTES	9 MONTHS	4 WEEKS	6 DAYS	21 HOURS	5 HOURS	25 MINUTES
	30 MINUTES		6 MONTHS	5 WEEKS	5 DAYS	1 DAY	2 HOURS
	1 HOUR		10 MONTHS	2 MONTHS	10 DAYS	2 DAYS	5 HOURS
	6 HOURS				2 MONTHS	2 WEEKS	1 DAY
	1 DAY					8 WEEKS	5 DAYS

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>