

# Continuous Delivery

and its design

YEGOR BUGAYENKO

Lecture #10 out of 16

80 minutes

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Continuous Integration

Continuous Delivery

Open Source in GitHub

Books, Venues, Call-to-Action

Chapter #1:

# Continuous Integration

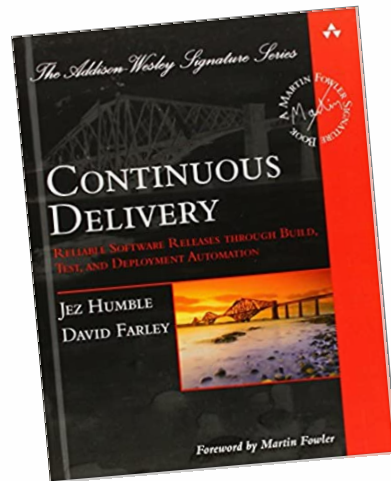
[ [CI](#) Pre-Flight ]

## How Continuous Integration (CI) works:



It doesn't work :(

[ CI Pre-Flight ]



“Crucially, if the build fails, the development team stops whatever they are doing and fixes the problem immediately”

— Jez Humble and David Farley. *Continuous Delivery: Reliable Software Releases Through Build, Test, and Deployment Automation*. Pearson Education, 2010.  
[doi:10.5555/1869904](https://doi.org/10.5555/1869904)

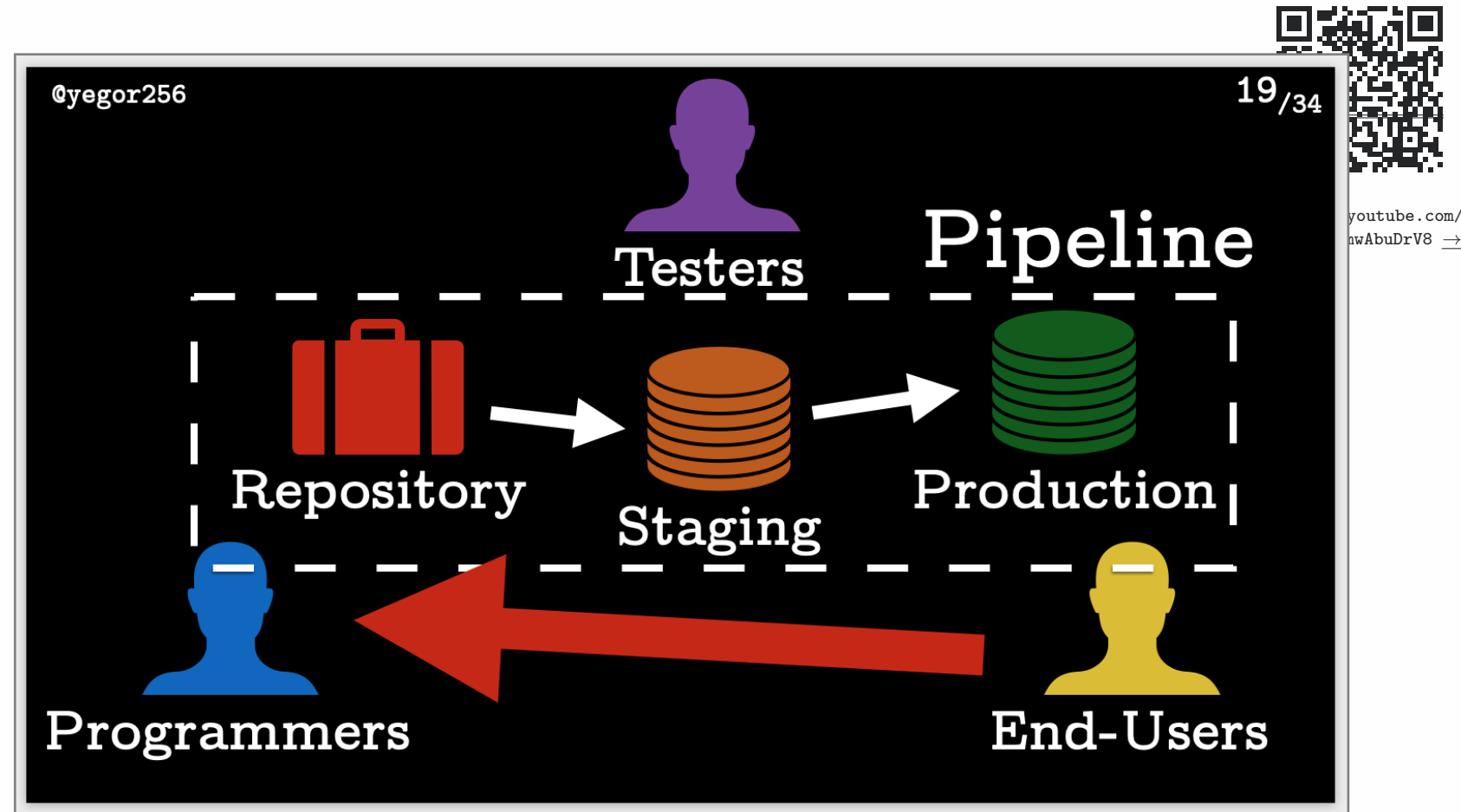
## Pre-Flight Builds



Master branch is “read-only”!

Chapter #2:

# Continuous Delivery



Joker Conf 2018, *Quality vs Quantity*, in Russian





“Each stage of a build pipeline is looking for reasons to reject the build. Tests failed? Reject it. Lint complains? Reject it. Build fails integration tests in staging? Reject it. Finished archive smells funny? Reject it.”

— Michael Nygard. *Release It!: Design and Deploy Production-Ready Software*. Pragmatic Bookshelf, 2007. doi:[10.5555/1200767](https://doi.org/10.5555/1200767)

[ [Wall](#) Targets Versions Tools Blue/Green ]

## Quality Wall

Linters

Static analyzers

Unit tests

Integration tests

Test coverage control

Mutation coverage control

Manual code review(s)

## Target Platforms

Static web site: GitHub Pages

Library: Maven Central, RubyGems.org, Npm.org, etc.

Small web app: Heroku or Dokku

Bigger web app: AWS Elastic Beanstalk

Mobile app: TestFlight

# Versioning

snapshot, alpha, beta, final

semver.org: 1.4.17

0ver.org: 0.43.3

CI [CD](#) GitHub B.V.C.

13/22

[ Wall Targets Versions [Tools](#) Blue/Green ]

## CI/CD Tools

Jenkins

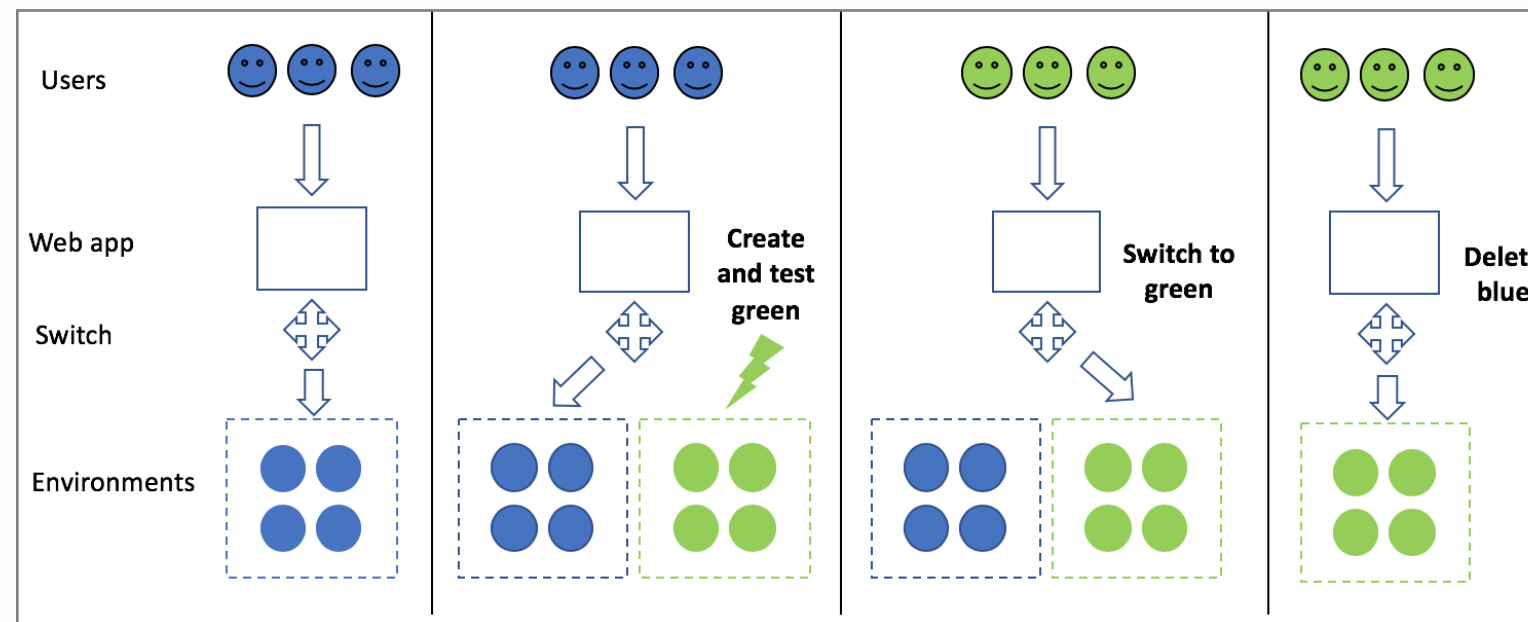
1000+ Hosted Services like Travis

GitHub Actions

Rultor.com

[ Wall Targets Versions Tools [Blue/Green](#) ]

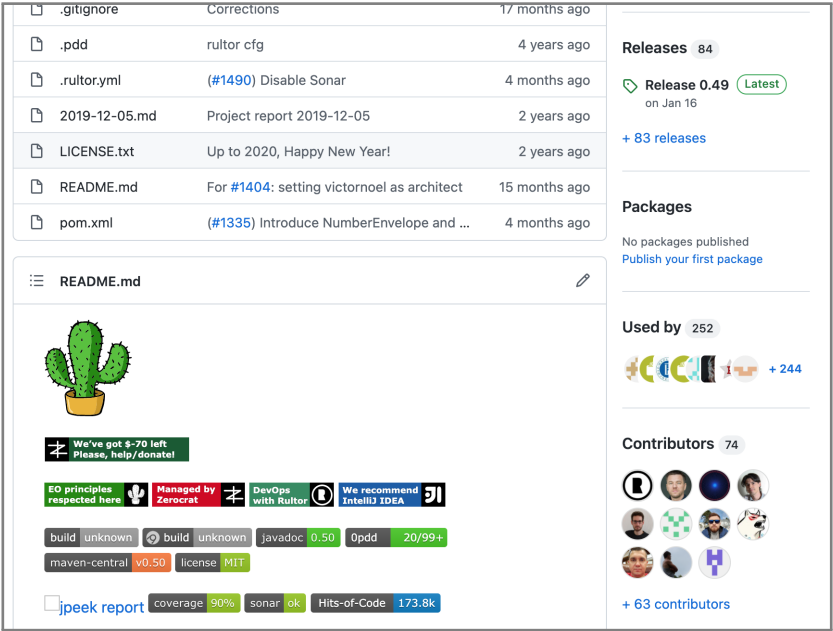
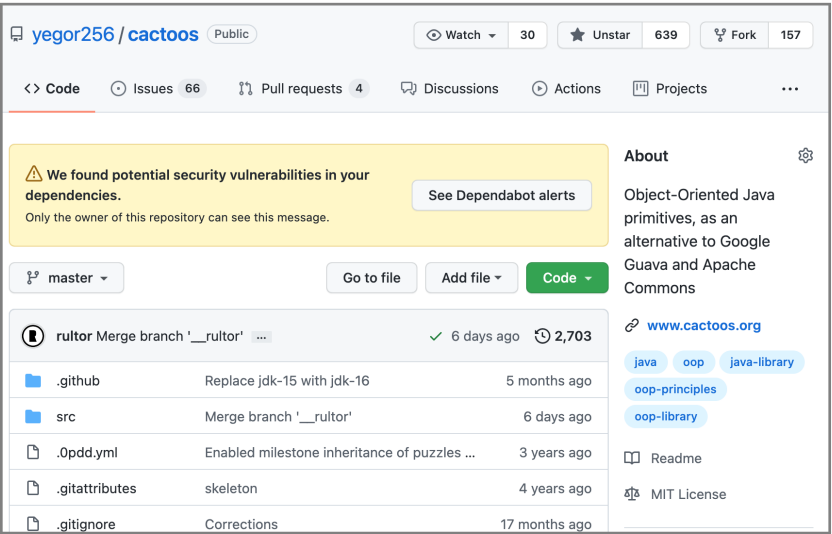
## Blue/Green Deployment



May not work with databases :(

Chapter #3:

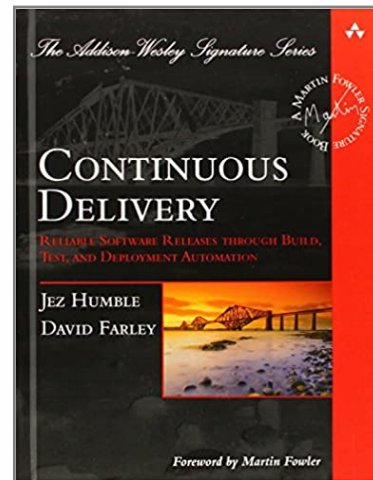
# Open Source in GitHub



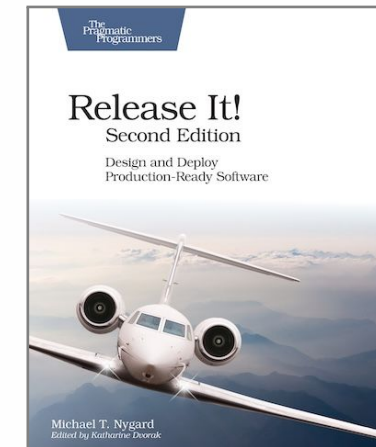


Chapter #4:

## Books, Venues, Call-to-Action



Jez Humble and David Farley. *Continuous Delivery: Reliable Software Releases Through Build, Test, and Deployment Automation*. Pearson Education, 2010. doi:[10.5555/1869904](https://doi.org/10.5555/1869904)



Michael Nygard. *Release It!: Design and Deploy Production-Ready Software*. Pragmatic Bookshelf, 2007. doi:[10.5555/1200767](https://doi.org/10.5555/1200767)

Where to go:

Collect 1000 stars on GitHub for your product.

## Call to Action:

Setup continuous delivery pipeline in your application so that it is released to production automatically on each commit to `master` branch.

## Still unresolved issues:

- How to parallelize tests?
- How to speed up merging into “master”?
- How to generate tests automatically?
- How to enforce quality for legacy code base?

# Bibliography

Jez Humble and David Farley. *Continuous Delivery: Reliable Software Releases Through Build, Test, and Deployment*

*Automation*. Pearson Education, 2010.  
doi:[10.5555/1869904](#).

Michael Nygard. *Release It!: Design and Deploy Production-Ready Software*. Pragmatic Bookshelf, 2007.  
doi:[10.5555/1200767](#).