# WiFi: R1seV1lnius "Rise Vilnius"

# Amazing Stuff Workshop

CI/CD Pipeline Workshop



#### Who we are?

We are bearded and non-bearded, sex-agnostic hipster community, who are interested in best practices in development and IT industry.

Please join, even if you are not hipster, or bearded girl!

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"So, what do you do?"
```

-I Am Devloper

<sup>&</sup>quot;I'm lean"

<sup>&</sup>quot;What?"

<sup>&</sup>quot;I'm agile"

<sup>&</sup>quot;What?"

<sup>&</sup>quot;Fine. I make websites."

#### Coffee, snacks & stuff

Grab some **before** the actual workshop starts



# Intro

What is CI (Continuous Integration)?

What is CD (Continuous Deployment/Delivery)?

# Intro

#### What is CI (Continuous Integration)?

Continuous Integration is at its root a practice where you merge the work of all your developers several times a day. Each integration is verified by your automated tests and built.

#### What is CD (Continuous Deployment/Delivery)?

It means pushing the code/build to all your servers, backup the database, run database migrations and then restart whatever that needs to be restarted, without any human interaction.

### Why CI/CD matters?

- Find bugs earlier, fix bugs faster
- Deliver faster & more often
- Unblock developers
- Secure
- Focus on value not a deployment



#### Goal

Basic CI/CD pipeline example which you can take and use for any of your projects.

# Technologies used

Technology	Туре	Purpose
Jenkins	Automation server	Continuous integration server for orchestration
Python	Programming language	Language used for application development
AWS	Cloud computing services	Platform where application is going to be hosted
Terraform	Provisioning tool	Provisions resources in AWS



#### **Jenkins**

- Extensible automation server
  - Rich plugin ecosystem
  - Platform independent
- Free & open source
- A few alternatives:
  - TeamCity
  - CircleCI
  - Atlassian Bamboo









## **Python**

- Interpreted, object-oriented, high level programming language
- General purpose, easy to learn, emphasize readability
- A few alternatives:
  - Ruby
  - o Java







#### **AWS**

- Cloud services platform
- Compute power, networking, storage, databases and much more
- Flexibility, scalability, reliability
- Delivered on demand, pay-as-you-go
- Some alternatives:
  - Azure
  - o GCP
  - DigitalOcean
  - Many more









#### **Terraform**

- Infrastructure represented as code
  - Various components: compute, networks, storage and more
  - Software development practices can be applied
- Allows to create, change and evolve infrastructure
- Reproducible infrastructure
- A few alternatives:
  - CloudFormation
  - Azure Resource Manager
  - Google Cloud Deployment Manager



#### What we'll not focus on?

- 1. AWS capabilities
- 2. Application code
- 3. Deployment
- 4. Infrastructure as Code

#### What we'll focus on?

1. CI/CD process

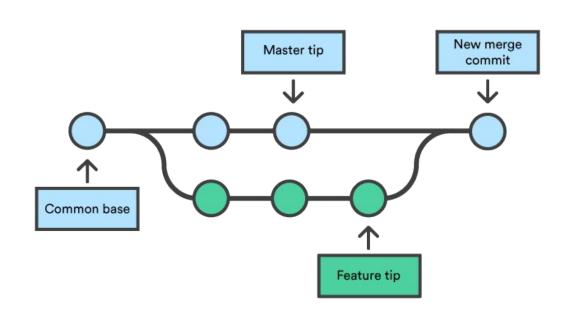
# **Workshop Onboarding**

- 1. Slack http://bit.ly/amazingstuffjoin
- 2. Login to Github account



#### Just before we start...

- Git?
- Github?
- Commit?
- Branch?
- Pull-request?



## **Workshop Onboarding**

Sign up @:

https://jenkins.amazingstuff.pro



Workshop is about to start...



# Wrap up

## What have you achieved?



# **Questions?**

## Feedback!

http://bit.ly/cicdworkshopfeedback

# You are awesome!

