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Q/A

CI tools in cloud

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Q/A

How to sell ideas?

`https://www.youtube.com/watch?v=sioZd3AxmnE`

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Q/A

Agenda

Agenda

Who we are

Automation

- development teams should have CI tools
  - yeah, but where?
- we've got cloud
  - sure, but devs are not ops, they don't know how.
- "DevOps" team could set it up
  - manually?
- no, they can automate it
  - yeah, but will they take care about maintanance?
- Let's automate maintanance!

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Q/A

Agenda

Completely new tool

A tool which you can use to start and configure whole new Jenkins instance with all settings in configuration files.

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Q/A

AWS feature

- it starts Jenkins master EC2
- it starts proper number of Jenkins slaves
- it runs user specific configurations on EC2s
- it puts proper ssh keys on machines
- it creates, formats and mounts EBS
- it configures security group
- it set up ELB and SSL for it
- it can start another AWS resourcees on demand

Jenkins features

- it installs specific Jenkins version
- it installs base set of plugins
- it installs additional sets of plugins chosen by user
- it configures LDAP, mail, credentials etc.
- it configures slaves
- it creates separate Gitlab user for that Jenkins

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Agenda

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Q/A

Ansible

Ansible is simple IT automation

Ansible

- it is written in Python
- it generates Python script, connects through ssh and executes it
- it has good AWS integration
- it has "dynamic inventory" feature
- it has ansible-vault

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Q/A

Rundeck

job scheduler and runbook automation

Rundeck

- "Jenkins for administrators" - not task oriented, but machine oriented
- it has good API
- it can has "dynamic inventory"

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Q/A

Puppet

Puppet - the shortest path to better software

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Q/A

Puppet

- most popular(?) configuration management tool
- decent XML management (Augeas)
- good separation of logic and data (Hiera)

myawesomejenkins

```
aws_agent_instance_type: "t2.small"
aws_agent_root_size: 10

jenkins:
  infra_version: master
  agent:
    count: 1
  admin: piotr.kurpik
  plugins_sets:
    - gitlab
    - workflow
```

jenkins server

```
- name: install application on master
  apt: >
    name={{item}}
    state=present
    update_cache=yes
  with_items:
    - openjdk-7-jdk
    - maven
```

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Q/A

custom plugins

```
"jenkins::plugins":
  'pam-auth':
    version: '1.2'
  'windows-slaves':
    version: '1.1'
  'antisamy-markup-formatter':
    version: '1.3'
  'external-monitor-job':
    version: '1.4'
  'chucknorris':
    version: '1.0'
```

additional deployment

```
additional_resources:
  rds:
    name: rds
    db_engine: MySQL
    size: 10
    instance_type: db.m1.small
    username: mysql_admin
    password: 1nsecure
```

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Q/A

Prod/blue/green/dev environments

- all instances started by Ansible
- always one "prod" instance
- it is one of two fully functional instance (blue and green)
- on demand it's possible to start dev instance

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Q/A

Development workflow

- all development on branch
- it is run and tested on dev instance
- gitlab merge request created when ready
- review
- merge and redeploy prod instance

Unit tests

- we try to test all functionalities
- tests started every night (and of course on demand)
- all test results on dashboard
- test examples:
    - start Jenkins, test http request, terminate jenkins
    - start RDS, create database, terminate RDS
    - test Ansible connection to different user and start whoami

Agenda