

# Using DevOps Tools to Achieve Continuous Integration





# Speakers

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Developer Support Engineer

@rgbkrk



**Ryan Richard, RHCA**

DevOps Automation Team Lead

@rackninja

# First, a precursor

# Why are we here?

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- We are all building up similar systems
- Similar configurations, minor tweaks
- Want:
  - More time for applications and business
  - Less time doing SysOps



# Keep Deploying!

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- Let's keep that product going
- Let's keep delivering!



# What can we do?

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- Write tests
- Use Continuous Integration
- Use version control, particularly git



**github**  
SOCIAL CODING



# Let's Test!



**Bernd Lörwald**  
@bloerwald

SUCCESS: 26/26 (100%) Tests passed  
[pic.twitter.com/Eh4tzKgiQV](https://pic.twitter.com/Eh4tzKgiQV)

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RETWEETS

1,676

FAVORITES

826



6:07 AM - 25 Mar 2014

Flag media



**PLEASE STAND BY**







# Downtime

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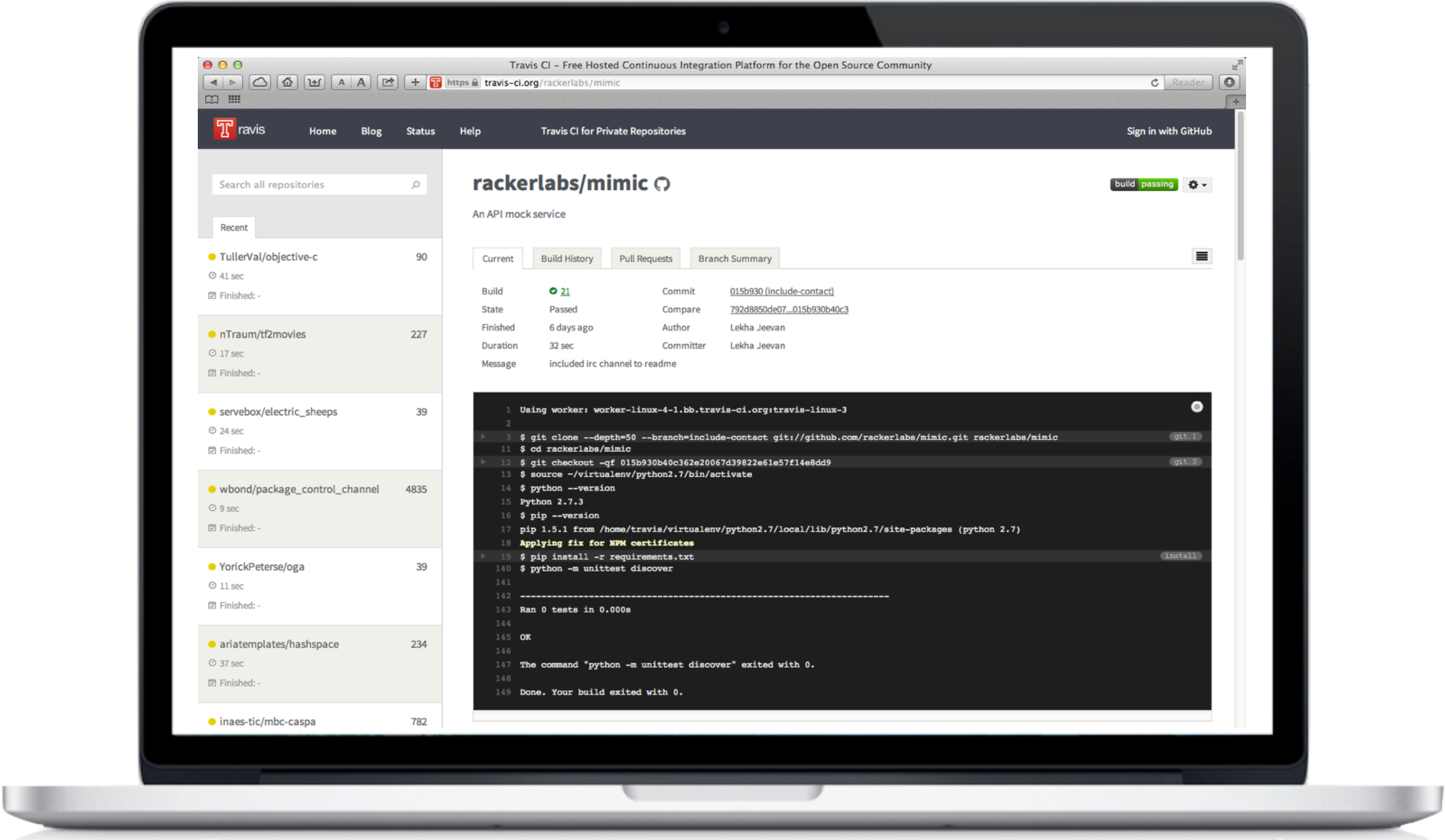


- It's going to happen
- Assume failure
- Have a rollback strategy
  - for your application



# Testing with Open Source Tools



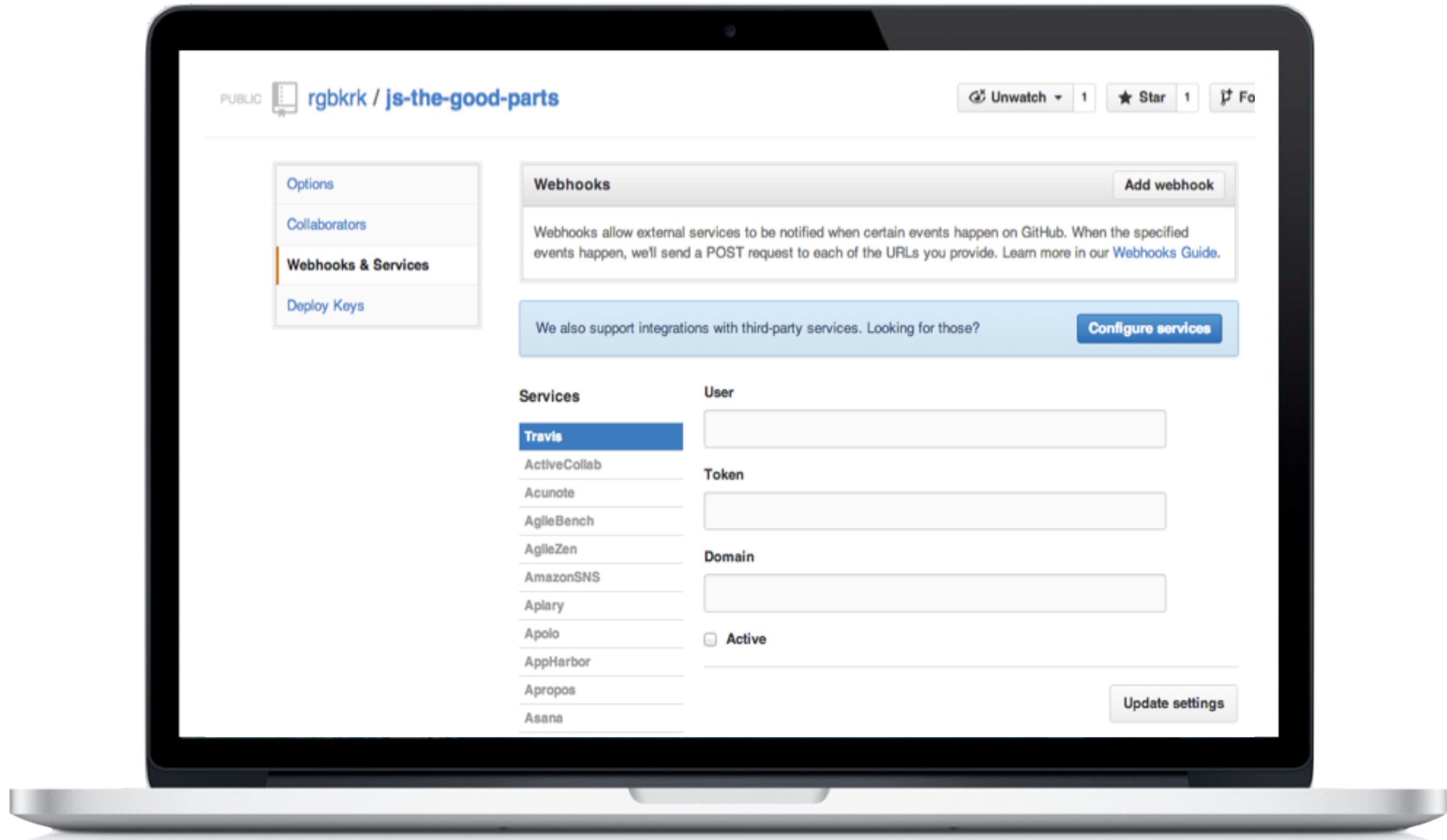




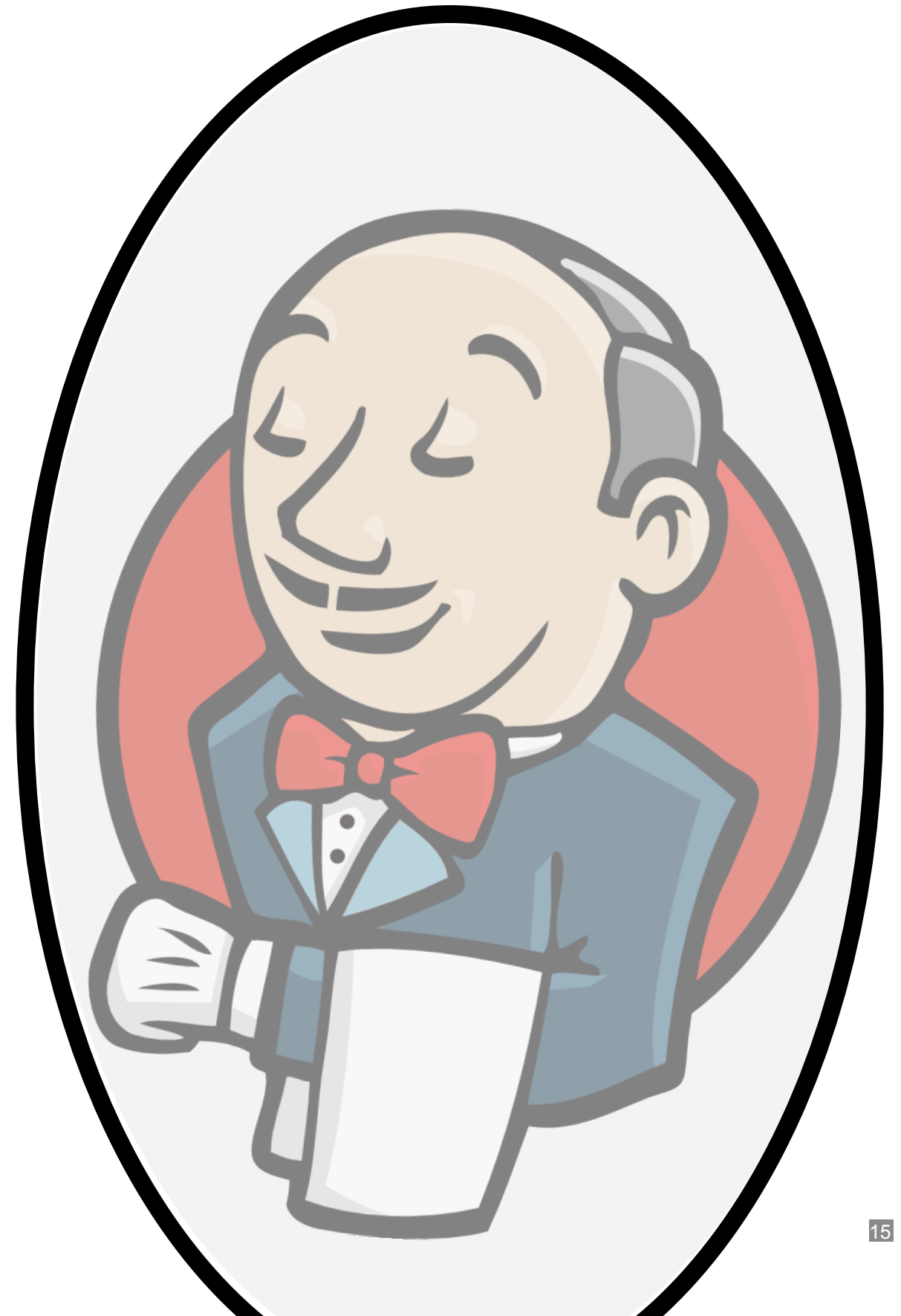
# Minimal .travis.yml

---

```
language: python
python:
  - "2.6"
  - "2.7"
  - "3.2"
  - "3.3"
# install dependencies
install: "pip install ."
# run tests
script: nosetests
```



# Need more build power?







**Daniel Roy Greenfeld** @pydanny · Mar 26

Recruiter: "Looking for a senior devopser with at least five years Salt Stack experience."

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RETWEETS

4

FAVORITES

9



2:59 PM - 26 Mar 2014 · [Details](#)



**Alex Seubert** @alex\_seubert · Mar 26

@pydanny does it count if config management has aged me 5 years?

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# How the DevOps Automation Service tests our cookbooks

# Practical examples with Chef

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- Our pipeline for testing cookbooks
- Testing your chef powered infrastructure



# Our CI pipeline for Chef cookbooks

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Jenkins

CI server

# Our CI pipeline for Chef cookbooks

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# Our CI pipeline for Chef cookbooks

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# Our CI pipeline for Chef cookbooks

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# Our CI pipeline for Chef cookbooks

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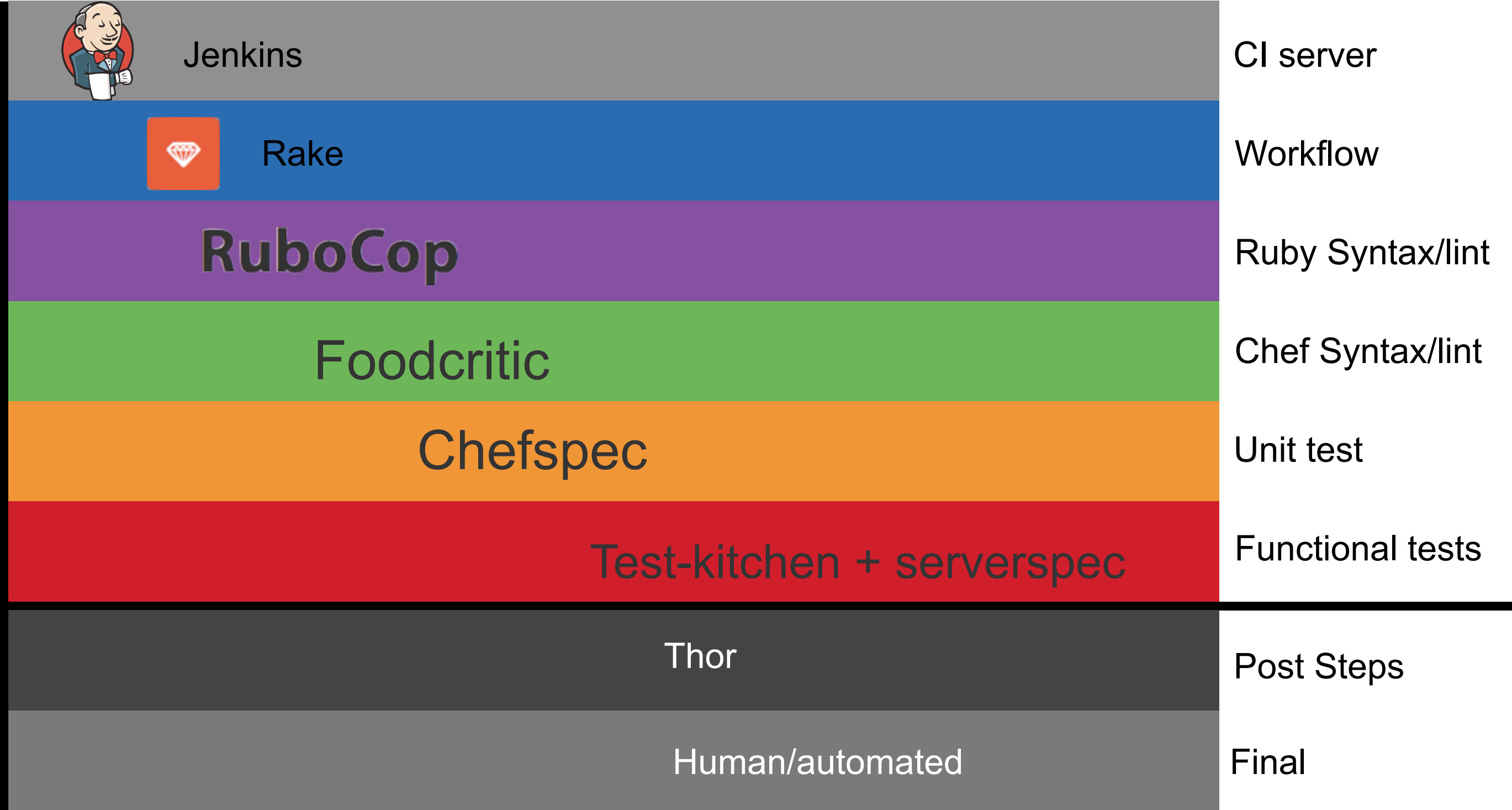


# Our CI pipeline for Chef cookbooks

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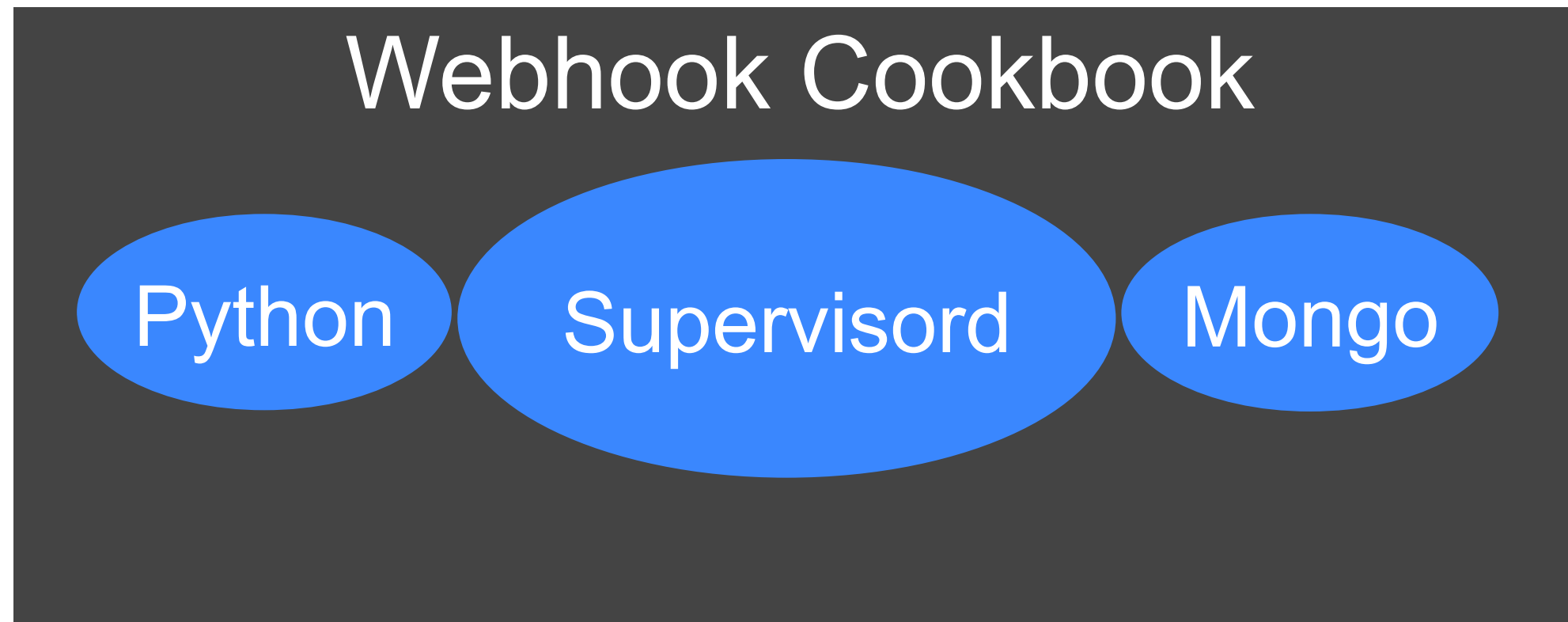
# Our CI pipeline for Chef cookbooks



# Two modes of application delivery

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- Build an application cookbook that can deploy latest version of the application/artifact (chef specific)

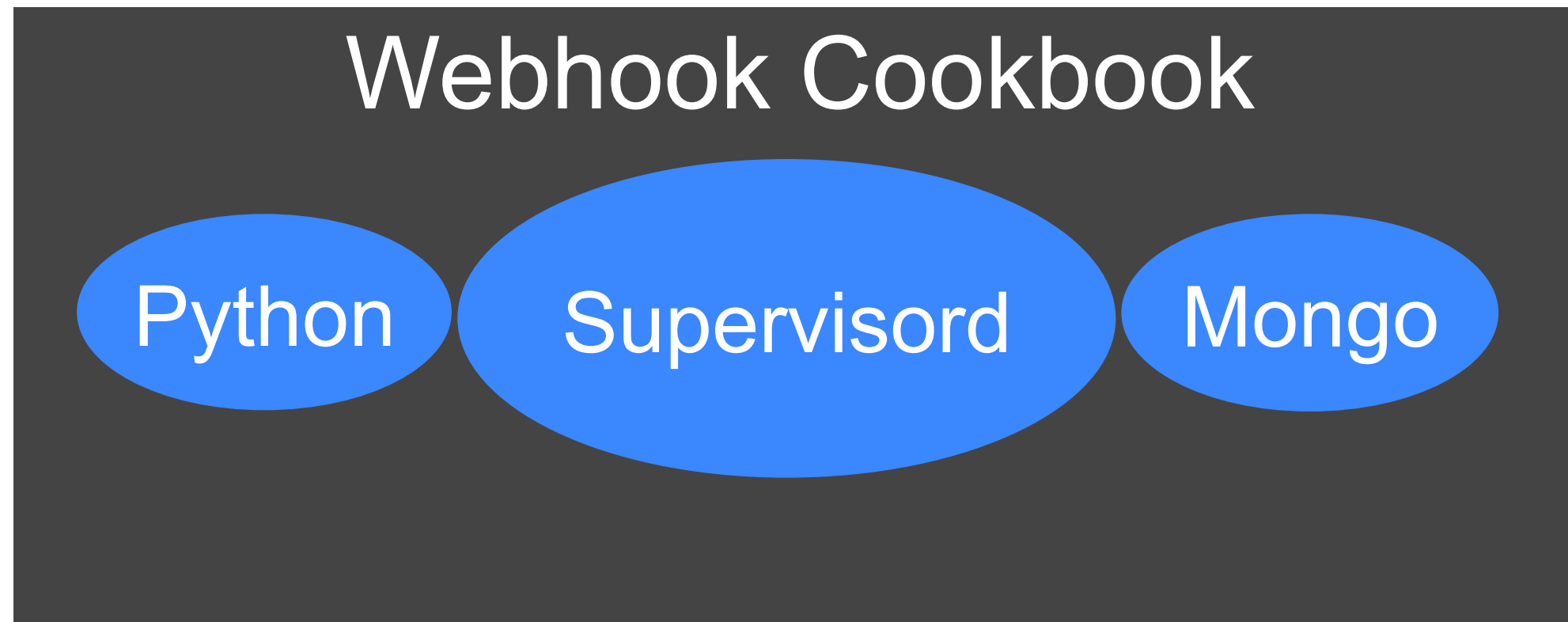




# Two modes of application delivery

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- Build an application cookbook that can deploy latest version of the application/artifact (chef specific)



- External workflow for application delivery
  - (Capistrano, fabric, etc).

# Application Cookbook Workflow



# Application Cookbook Workflow





# Application Cookbook Workflow



# Deployment Workflow Model

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Jenkins

Test-kitchen + serverspec  
Do not destroy instance

CI server

Chef Workflow

# Deployment Workflow Model

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Jenkins

Test-kitchen + serverspec  
Do not destroy instance

Deployment workflow executed

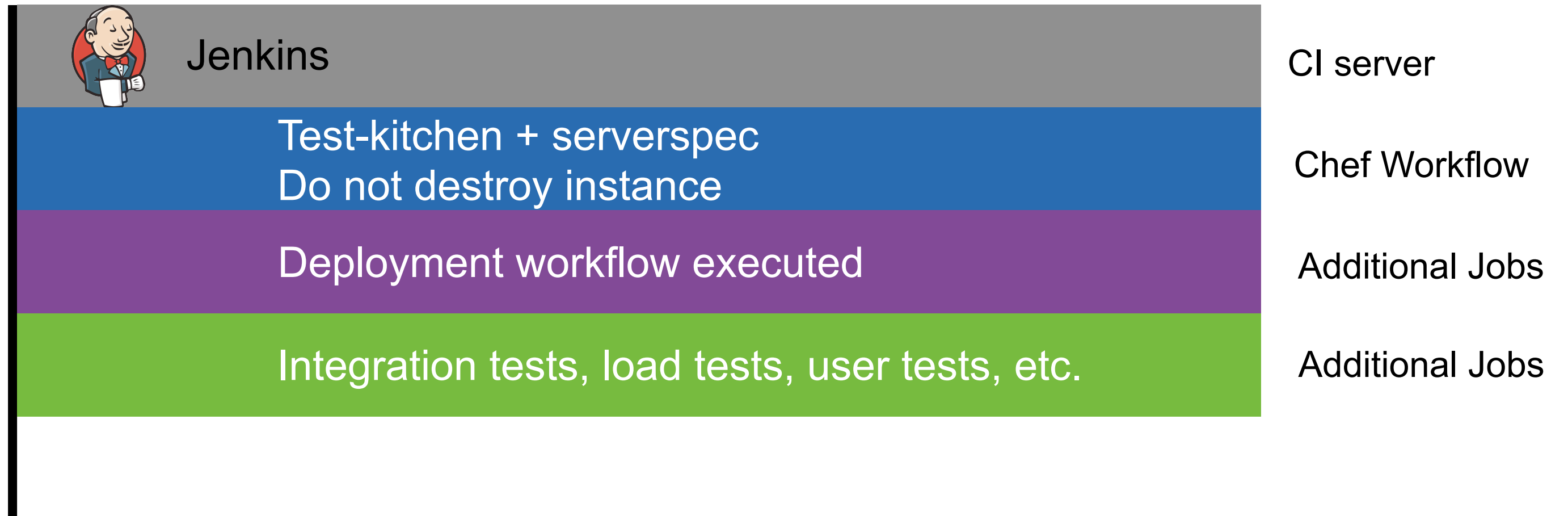
CI server

Chef Workflow

Additional Jobs

# Deployment Workflow Model

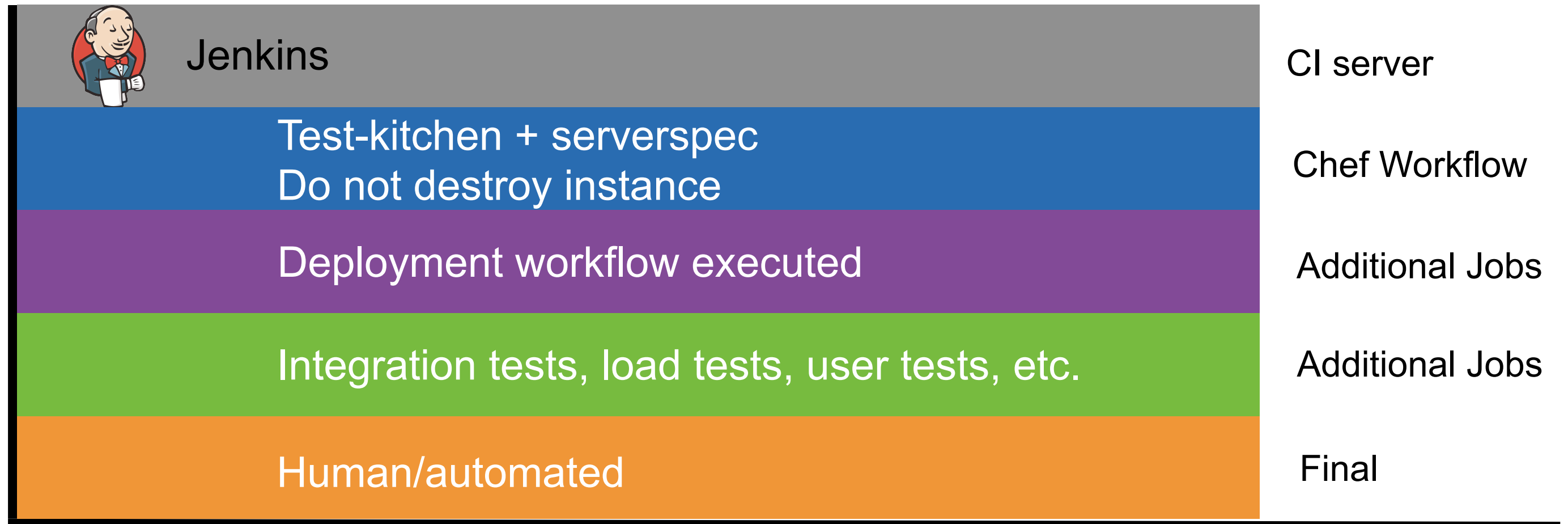
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# Deployment Workflow Model

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# THANK YOU



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