



Непрерывная поставка с Gitlab CI

Лекция #20



План

- Непрерывная поставка ПО
- Gitlab CI для непрерывной поставки

Непрерывная поставка ПО

Процесс разработки и эксплуатации ПО, при котором каждое изменение может быть выкачено в боевую среду

Непрерывная поставка ПО

Нужны гарантии качества выпускаемого ПО

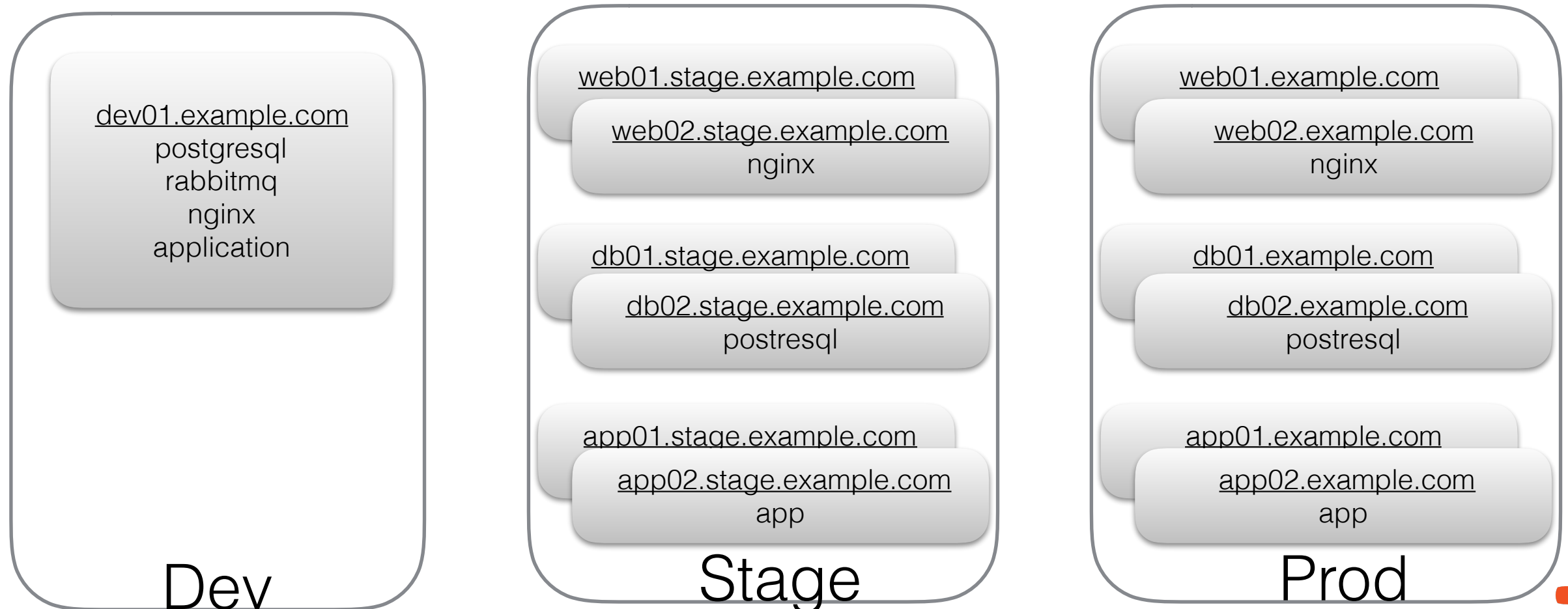
- CI в эталонном окружении
- Автотесты и анализаторы кода
- Одни и те же подходы для всех окружений
- Доступность команде мониторинга и логов ПО

Но на моем ноутбуке работало!



Непрерывная поставка ПО

Корректность работы ПО должна быть проверена в окружении максимально приближенном к production stage / preview / beta / prelive



Непрерывная поставка ПО

Больше коллаборации

- Изменения происходят часто и быстро
- Окружения стандартные, разработка лучше понимает в каких условиях ПО работает в production



У приложения появился новый файл конфигурации, нужно подставить значения переменных для production среды

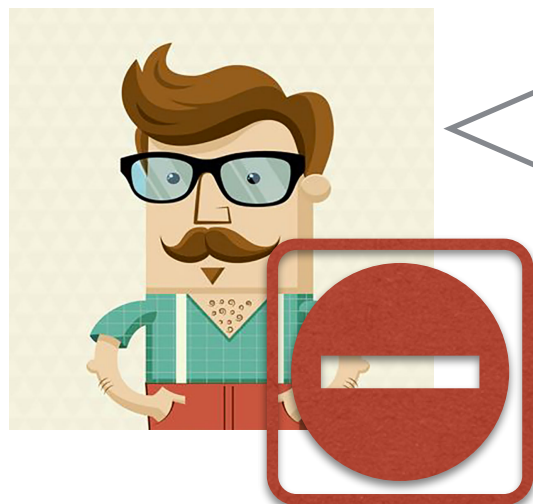
Непрерывная поставка ПО

Уменьшение рисков и стресса

Небольшие и частые изменения

Меньше изменений за раз – проще откаты

Проще отлаживать проблемы и разбирать инциденты



Всю ночь деплоили релиз, который готовили три месяца и что-то сломалось. В релиз вошли 421 фича и 19 хотфиксов в 15 компонентах и базах, ждем логов с продакшена.

Непрерывная поставка ПО

Continuous delivery vs Continuous deployment

Go Live! – решение бизнеса

“Готово” теперь значит, что код работает в бою

Gitlab CI для CD

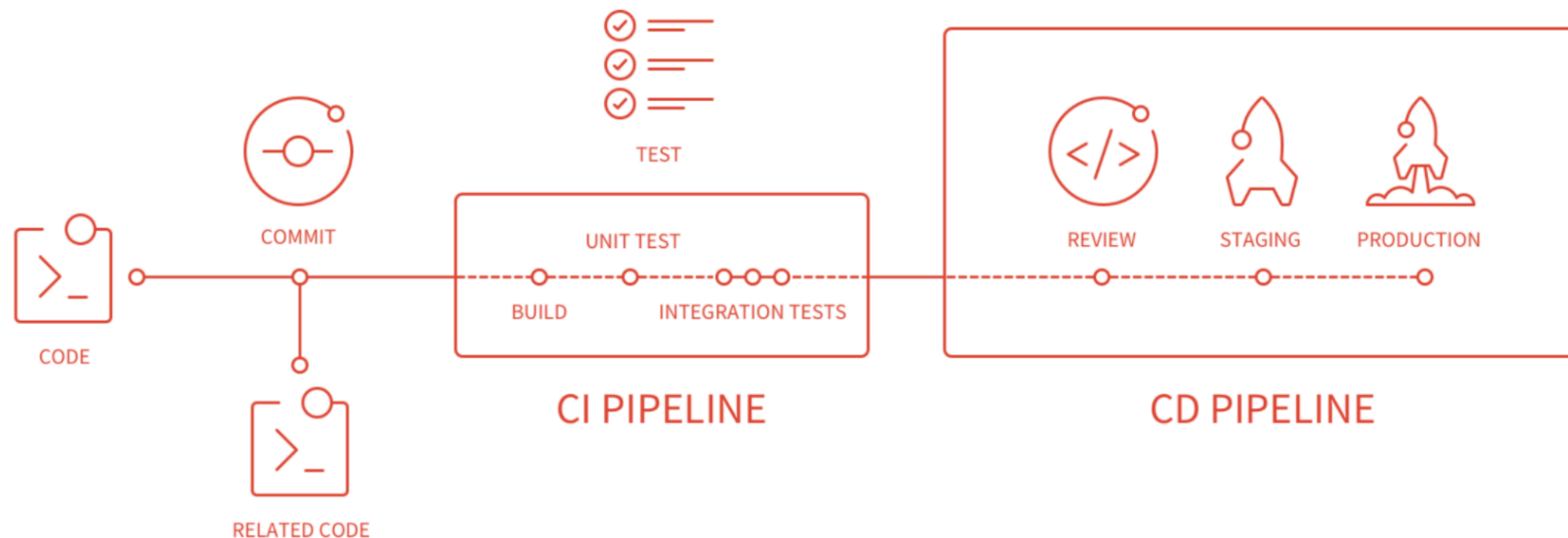
- Описание Pipeline с деплоем в .gitlab-ci.yml
- Окружения
- Интеграция в работу команды и обратная связь

Pipelines

Шаги непрерывной интеграции

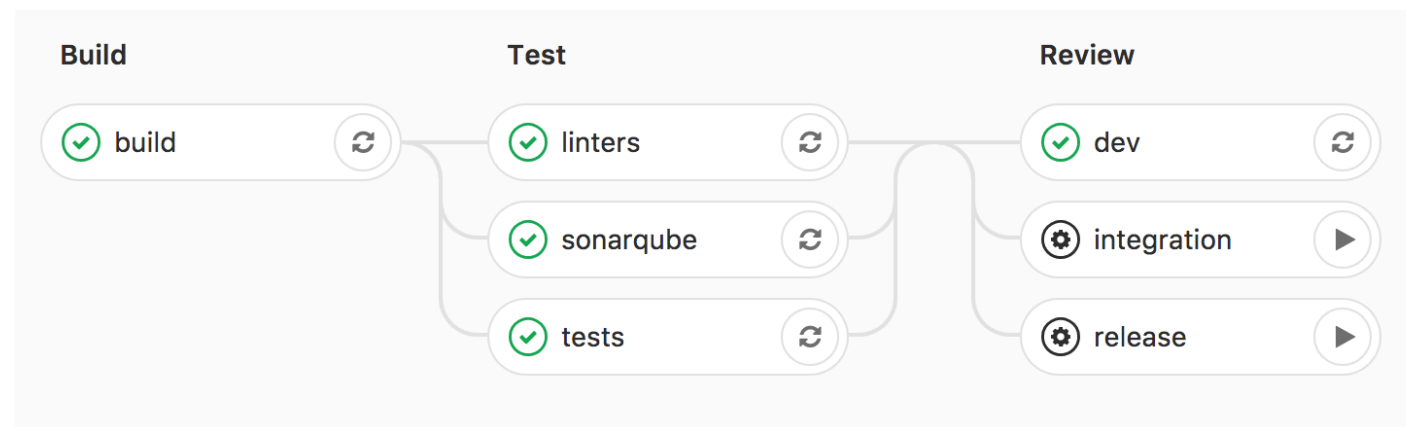
Последовательный деплой на test, stage и production

Взаимосвязи между проектами

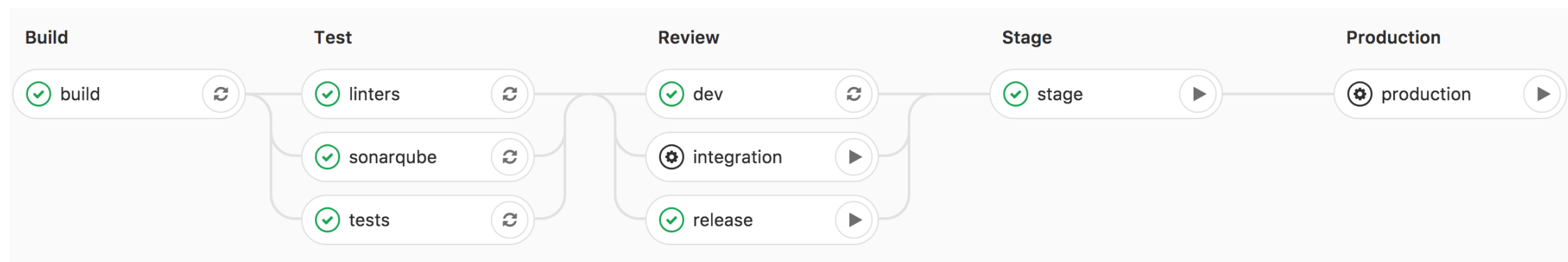


Не каждое изменение нужно выкатывать на все окружения

```
git commit -a -m 'Add more comments for code from make it more readable'  
git push
```





















```
git commit -a -m 'New login page design'  
git tag 2.1.0  
git push --tags
```



Environments

Список окружений





















homework > example > Pipelines > Environments

<div>Available 6 Stopped 0</div>					New environment
Environment	Deployment	Job	Commit	Updated	
integration	#10 by 	integration #64	 f2d10d92 New login page design	about an hour ago	 Re-deploy
production	#9 by 	production #67	 f2d10d92 New login page design	about an hour ago	 Re-deploy
release	#22 by 	release #143	 99a5b0c9 #5 update ruby version to 2.4.2	7 minutes ago	 Re-deploy
review	#21 by 	dev #141	 99a5b0c9 #5 update ruby version to 2.4.2	7 minutes ago	 Re-deploy
stage	#23 by 	stage #144	 99a5b0c9 #5 update ruby version to 2.4.2	7 minutes ago	 Re-deploy
test	#3 by 	test #42	 12a889cb New site design	about 2 hours ago	 Re-deploy

Environments

История деплоев

homework > example > Environments > stage

stage				View deployment		Monitoring	Edit
ID	Commit	Job	Created				
#26	 2.2.0  f49c2a23  add urls	stage (#160) by 	about a minute ago	 ▾	Re-deploy		
#23	 2.1.1  99a5b0c9  #5 update ruby version to 2.4.2	stage (#144) by 	28 minutes ago	 ▾	Rollback		
#17	 2.0.2  f1eee135  #4 fix landing page feedback for...	stage (#112) by 	34 minutes ago	 ▾	Rollback		
#8	 2.0.0  f2d10d92  New login page design	stage (#66) by 	about 2 hours ago	 ▾	Rollback		

Environments

.gitlab-ci.yml

```
dev:
  stage: review
  script:
    - cap deploy dev
  environment:
    name: dev
    url: http://dev.example.com
```

Динамические окружения

```
feature:
  stage: review
  script:
    - cap deploy $SCI_COMMIT_REF_NAME
  environment:
    name: review/$SCI_COMMIT_REF_NAME
    url: https://$SCI_ENVIRONMENT_SLUG.example.com
```

Динамические окружения

Пример: задача по новому функционалу

homework > example > Pipelines > #34

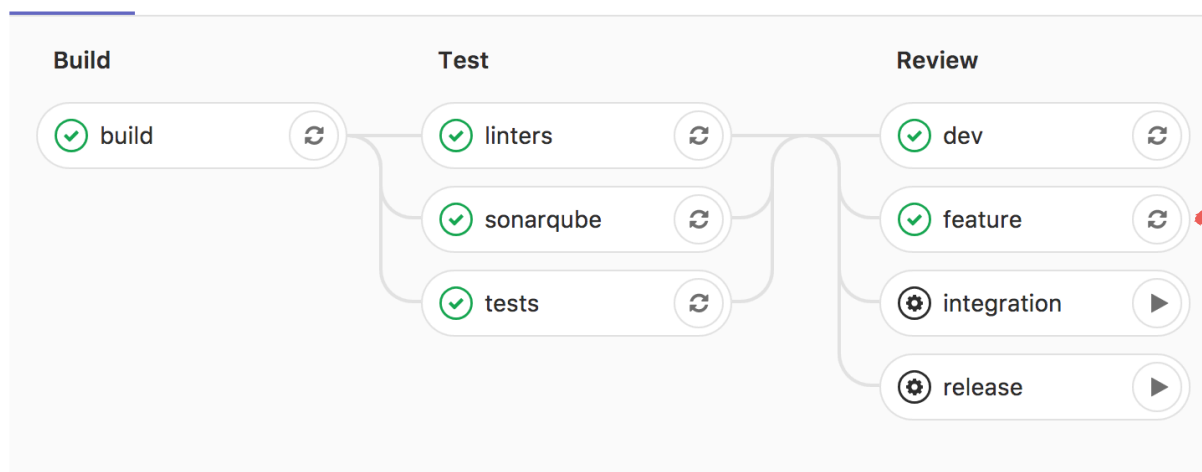
✓ passed Pipeline #34 triggered less than a minute ago by Administrator

#15 api for payment systems

🕒 8 jobs from [feature/15-payment-system-integration](#) (queued for 1 second)

🔗 30a79b36 ... 📄

Pipeline Jobs 8



Динамические окружения

The screenshot displays the GitLab CI/CD Environments page. The left sidebar contains navigation links: Overview, Repository, Issues (2), Merge Requests (0), CI / CD (selected), Pipelines, Jobs, Schedules, Environments (selected), Charts, Wiki, Snippets, and Settings. The main content area shows a table of environments:

Environment	Deployment	Job	Commit	Updated
integration	#10 by [user]	integration #64	f2d10d92 New login page design	about 2 hours ago
production	#27 by [user]	production #161	f49c2a23 add urls	13 minutes ago
release	#22 by [user]	release #143	99a5b0c9 #5 update ruby version to 2.4.2	39 minutes ago
▼ review 4				
review/2.4.0	#29 by [user]	feature #168	b60c1b59 review	5 minutes ago
review/featur...	#33 by [user]	feature #186	30a79b36 #15 api for payment systems	2 minutes ago
review/master	#31 by [user]	feature #178	b60c1b59 review	5 minutes ago
Show all				
stage	#26 by [user]	stage #160	f49c2a23 add urls	13 minutes ago
test	#3 by [user]	test #42	12a889cb New site design	about 3 hours ago

A red arrow points to the 'review/feature...' environment. A URL bar at the top right shows 'https://review-feature-15-nwp6ut.example.com'.

Обратная связь

homework > example > Merge Requests > !3

Merged Opened 9 minutes ago by Administrator

Edit

#4 contact text is 100% correct now

Request to merge `feature/4-contacts-typo-fix` into `master`

✓ Pipeline #40 ✓✓✓ passed for 1e196839.

- ✓ Deployed to `review/3.0.1` on `review-3-0-1-q52u9z.example.com` 7 minutes ago
- ✓ Deployed to `stage` on `beta.example.com` about a minute ago
- ✓ Deployed to `production` on `example.com` less than a minute ago
- ✓ Deployed to `review` on `dev.example.com`
- ✓ Deployed to `review/master` on `review-master-wihqux.example.com` less than a minute ago
- ✓ Deployed to `review/feature/4-contacts-typo-fix` on `review-feature-4-kkmk!`

✓ Merged by Administrator 2 minutes ago Revert Cherry-pick

The changes were merged into `master`

You can remove source branch now Remove Source Branch

Mentions #4 (closed)

✓ Deployed to `production`
Готово!



Gitlab APP 5:42 PM

Administrator pushed to branch `master` of `homework/example` (Compare changes)

14077dc5: Merge branch '5-update-ruby-to-2-4-2' into 'master'

Resolve "Update ruby to 2.4.2"

Closes #5 [Show more...](#)

root merged !3 #4 contact text is 100% correct now in `homework/example`: #4 contact text is 100% correct now

5:43 ☆ Administrator pushed to branch `master` of `homework/example` (Compare changes)

1e196839: #4 contact text is 100% correct now






- Yury Ignatov

f60f5232: Merge branch 'feature/4-contacts-typo-fix' into 'master' [Show more...](#)

`homework/example`: Pipeline #39 of tag 3.0.1 by Administrator passed in 01:31

Cycle Analytics

Измерения для непрерывных улучшений

Pipeline Health			
15 New Issues	24 Commits	5 Deploys	Last 30 days
Stage ?	Median ?	Related Issues ?	Total Time ?
Issue	7 days	Time before an issue gets scheduled	
Plan	8 days	 Cycle Analytics: Consequatur dolor dolore voluptat... #15 · Opened 34 minutes ago by Dr. Catherine Schultz	7 days 12 hr
Code	8 days	 Cycle Analytics: Ut omnis suscipit optio animi nesciu... #14 · Opened 34 minutes ago by Administrator	7 days
Test	about 5 hours	 Cycle Analytics: Quaerat eos eius quo dolor ut et mol... #13 · Opened 34 minutes ago by Administrator	6 days 12 hr
Review	16 days	 Cycle Analytics: Quia assumenda temporibus ut omn... #12 · Opened 34 minutes ago by Jamal Hirthe	6 days
Staging	7 days	 Cycle Analytics: Veniam ex mollitia saepe nobis qui a... #11 · Opened 34 minutes ago by Curtis Franecki	5 days 12 hr
Production	about 1 month		

Спасибо

- Ждем ваших вопросов
- О доступности домашнего задания #20 сообщим в Slack
- Проверка домашнего задания #19 по теме CI @yignatov