

Continuous Code Review

Entwicklertag Karlsruhe
16. Juni 2016

Vortrag von Ben Romberg
und Georg Meyer

Ziele dieses Vortrags

- Code Reviews sind wichtig
 - Für die Code-Qualität
 - Zur Stärkung der Zusammenarbeit im Team
- Unser Ansatz zu Code Review
 - Extreme Code Review (analog zu XP)
 - Continuous Code Review
- Unsere Geschichte und Erfahrung mit Code Reviews

Wer sind wir?

- flaregames GmbH
 - Mobile Games Publisher in Karlsruhe (seit 2011)
 - circa 80 Mitarbeiter, 12 Softwareentwickler
 - Royal Revolt 2, Nonstop Knight, Olympus Rising
- Platform Team
 - Backend-Infrastruktur für Spiele mit Millionen von Spielern
- Ben Romberg
 - Product Owner, Entwickler
- Georg Meyer
 - Entwickler, Team Mentor



Was waren unsere Herausforderungen

- Heterogene Projektlandschaft (>20 Services, Java/JavaScript/Python/NodeJS)
 - Event API >1.000 requests/s, performancekritisch (Java)
 - Shop Server 1 request/min, ausfallkritisch (legacy NodeJS)
 - Photoshop Script (JavaScript)
- Kleines, heterogenes Team (7 Entwickler)
 - 4 Entwickler < 1 Jahr
- Gefahr von Wissensinseln
- Kein festgelegter Code-Review-Prozess
- Ziele
 - Collective Code Ownership
 - Continuous Delivery

Welche Entscheidungen haben wir getroffen

- Keine long-running feature branches
- Kein git-flow
 - Nur master branch
- Commit-Hash als einzige Versionsnummer
 - Nur eine Version ist live
 - Kein Maven Versioning
- Vereinheitlichung des Tech-Stacks
 - Neue Projekte nur noch in Java

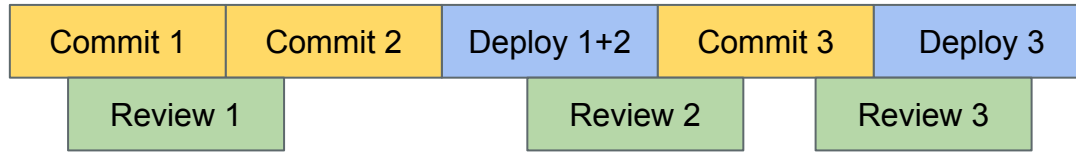
Welche Entscheidungen haben wir getroffen

- Pre- vs. Post-Merge Review
- Pre-Merge Review (Commit in Feature-Branch - Review - Merge in master)
 - Kein Feedback während der Entwicklung des Features
 - Kann erst mergen wenn Review erledigt ist
 - Größere Gefahr von Merge-Konflikten
 - Aber: Review jeder Änderung vor dem Merge

master branch				Merge 1+2	Deploy 1+2
feature branch	Commit 1	Commit 2	Review 1+2		

Welche Entscheidungen haben wir getroffen

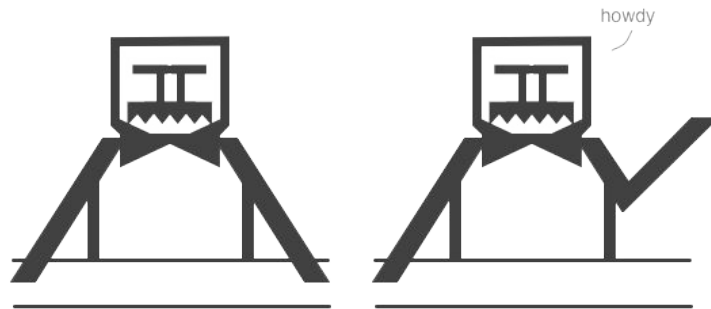
- Post-Merge Reviews (Commit - Review)
 - Asynchrones Reviewen
 - Viele Reviews einzelner Commits
 - Aber: Kein garantiertes Review vor Deployment
 -



- Entscheidung für Post-Merge Review

Barkeep

- OpenSource (> 1300 Github Stars ★)
- Ruby + MySQL/Redis
- E-Mail Notifications schlecht konfigurierbar
- Instabil bei großen Commits
- Tab-lastige Benutzung
- 2011 - 2015
- > 150 offene Github Issues























Limit to

e.g. "repos:barkeep authors:daniel, phil"

keywords: repos, authors, paths, branches. Use branches:all to search all branches.

All commits for the barkeep repo

[Search options](#) **X** 

-   Caleb Spare `d53f023` Fix a test bug by not requiring test_helper directly. 10 hours ago [BARKEEP](#)
-   Caleb Spare `b6b366b` Allow a nil search time period for a new user. 10 hours ago [BARKEEP](#)
-   Caleb Spare `cbdf43f` Merge pull request #264 from 12 hours ago [BARKEEP](#)
-   Caleb Spare `6ed4423` Merge pull request #262 from dannluciano/patch-1 12 hours ago [BARKEEP](#)
-   Dann Luciano `27e53e0` Removing duplicate coffe-script gem 17 hours ago [BARKEEP](#)
-   Alberto Leal `d011084` Missing DB_PASSWORD constant a day ago [BARKEEP](#)
-   Daniel MacDougall `7505561` Set saved search time period to one year when creating demo user 3 days ago [BARKEEP](#)
-   Phil Crosby `16a16f1` Include two ruby paths because Vagrant has been known to use both. Jul 03, 2012 [BARKEEP](#)
-   Phil Crosby `dcf8b8c` Don't go through saved_search.user, because it has not been initialized from a cookie. Jul 01, 2012 [BARKEEP](#)
-   Phil Crosby `1436d67` Use "one year" instead of "all time". We can probably make this an available option for Jul 01, 2012 [BARKEEP](#)



d53f023f79221ec3cae969e92ce83c94016b2b90 | BARKEEP

[Approve Commit](#)

Fix a test bug by not requiring `test_helper` directly.

You need to require `(unit|integration)_test_helper` so that `pathological` is loaded and the paths are set up.

This only started breaking recently because of a naming change which changed the order that the unit tests were run. If a unit test with the proper `require` is loaded first, then `pathological` will already be in the environment for subsequent test runs.



Caleb Spare
cespare@gmail.com
10 hours ago

[Request Review](#)[View Side-By-Side](#)

test/unit/saved_search_test.rb

+ -

1 1

Total 1 1

test/unit/saved_search_test.rb

```
1 -require File.expand_path(File.join(File.dirname(__FILE__), "../test_helper.rb"))
  +require File.expand_path(File.join(File.dirname(__FILE__), "../unit_test_helper.rb"))
2 2 require "lib/git_helper"
3 3 require "ostruct"
4 4 require "nokogiri"
```

...

Add a comment















Cordon Bleu

- Eigenentwicklung
- Auf unseren Review-Prozess angepasst
- Übersichtliche Real-Time Ansicht
- Behebung der Barkeep Probleme
 - Sinnvolle Email-Notifications
 - Keine Probleme bei großen Commits
 - Einfache Bedienung ohne Tabs

All Repositories (39) ▾

All Authors (53) ▾

 Show Approved

	Daniel Kl...	71d047	a day	dashboard-api	
	Daniel Kl...	c12664	a day	dashboard-api	
	Zihan Lin	0ea0a6	a day	support-api	
	Nicolas F...	1848b4	a day	amplitude-b...	✓
	Marian S...	0ff158	a day	opswork-co...	
	Nicolas F...	6ca65d	a day	amplitude-b...	2 ✓
	Zihan Lin	89fbe8	a day	support-api	
	Georg M...	b9be57	a day	event-api	✓
	Georg M...	a44e96	a day	event-api	✓
	Sascha ...	1cbc7e	a day	user-api	✓
	Georg M...	1afd5f	a day	event-api	✓
	Marian S...	d91f27	a day	opswork-co...	
	Marian S...	0f207f	a day	opswork-co...	
	Georg M...	13d17d	a day	microservice...	✓

</> 6ca65dd5a154631b12b725d890c98fe190fb1f12

amplitude-backfill 📄 master

👤 Nicolas Frossard 🕒 a day ago

👍 by 👤 nicolasfrossard 🕒 4 hours ago

↺ Undo Approval

```

16 17 🗨 import javax.validation.ConstraintViolationException;
17 18 🗨
108 109 🗨     LOGGER.info("Freely defined properties written to {}", fileDownloader.getAbsolutePath());
109 110 🗨 }
110 111 🗨
111 112 🗨 @Override
112 113 🗨 public void process(String eventStr) {
113 114 🗨     public void process(Stream<String> events) {
114 115 🗨         events.forEach(this::process);
115 116 🗨     }
116 117 🗨 private void process(String eventStr) {

```

👤 ZihanLin 10 hours ago

I'm not sure if this is a good practice, maybe processOneString or something more specific would be better.

👤 nicolasfrossard 9 hours ago

fixed in c3c654

Reply

📧 Feedback

Etablierung unseres Prozesses

- Tägliches Review
 - Im Schnitt ca. 15 Minuten
- Zulosung des zu Reviewenden nach dem Daily Stand-Up
- 100% Review-Abdeckung
- Fokus auf technisches Review
 - (vs fachliches Review)
- Kommentieren oder Approven
 - Bei Kommentar Email Notification
- Best Practices
 - Je kleiner der Commit, desto einfacher der Review
 - Aussagekräftige Commit Messages



Beispiele

- Viele Parameter
- Naming
- Bug
- Potentieller Bug
- Wissenstransfer
- Lob
- Humor

Beispiel: Zu viele Parameter

</> 52b0145bead1c0ef3c7a4a196005ef379392a047 Undo Approval

shop-api PLATFORM-1397-cloudwatch-logging

Artem Volk 4 months ago by BenRomberg 4 months ago

```
154 161  gameConfiguration.getDenyReceiptsOlderThan();
155 162  return new ReceiptValidationService(receiptValidationServices, products
156 163  transactionDao, gameId, trackingApiClient, configuration.getTrack
157     storePurchaseTimestampValidator);
164     storePurchaseTimestampValidator, cloudWatchLogReporter);
```

BenRomberg 4 months ago

9 constructor parameters is a little hefty. Can we decompose this in any way? Maybe splitting up the service?

ArtemVolk 4 months ago

Not sure what to do here, because this will lead to a quite big refactoring of ShopAPI.

BenRomberg 4 months ago

I've edited PLATFORM-1374 accordingly.

Beispiel: Naming

</> 6f1139f38e73c49331e1197d76cb388929305d51 Undo Approval

event-api PLATFORM-1407-event_time

Artem Volk 4 months ago by ArtemVolk 3 months ago

```
566 // Some events (like register and user_churn) do not have event_properties
```

JoachimEckert 4 months ago

Maybe better change the name of this assert helper. It shouldn't need a comment.

ArtemVolk 3 months ago

It just a clarification and a reminder, I don't see the way to squeeze this into a method name. I can remove the comment though.

JoachimEckert 3 months ago

What about `assertAmplitudeEventWithSessionForEventsWithoutEventProperties` ?

ArtemVolk 3 months ago

Fixed in <https://git.flaregames.net/flak/event-api/commit/2860d4239d6211cc0330d30e9e5542aa27405814>

Beispiel: Bug

</> 1ade2017b80a6c7038edddc56e8d974ae61681e9 Undo Approval

publishing-hub master

Ben Romberg 5 months ago by BenRomberg 5 months ago

```
13 12  public void configure(Binder binder) {
14 13  binder.install(new CoreTestModule());
15 14  binder.install(new PromotionFrontendTestModule());
14 15  binder.install(new MessagingFrontendTestModule());
15 15  binder.install(new MessagingFrontendTestModule());
```

BenjaminMetzger 5 months ago

Two times the same module, no more promo frontend module? Is this intended?

BenRomberg 5 months ago

Good catch! :-) No this was not intended and cost me ~30 minutes to find this issue yesterday. Has already been fixed in [849a86](#) :-)

Please review earlier next time :D

Beispiel: Potentieller Bug

</> 74c16717269ce44f60e2f64d10eac3da7896df25 Undo Approval

store-api PLATFORM-1303-FacebookSupport

Sascha Hinlang 5 months ago by SaschaHinlang 5 months ago

```
51 @GET
52 @Path("/product/{productId}")
53 @Produces(MediaType.TEXT_HTML)
54 public FacebookProductView getFacebookProduct(@PathParam("gameId") gameId
55 @PathParam("productId") facebookProductId, @QueryF
56 return new FacebookProductView(facebookProductService.getFacebookProdu
```

JoachimEckert 5 months ago

No User Auth here?

SaschaHinlang 5 months ago

Yes, this is the public URL that facebook uses to fetch products

Beispiel: Wissenstransfer

</> 36fce1f0653f8646f5d7e31e3e2a55937a59a8b6 Undo Approval

dashboard-api PLATFORM-1387-single-value-widgets-using-amplitude-api

Georg Meyer 3 months ago by BenRomberg 3 months ago

```
17 AmplitudeBucketingParameter (int value) {  
18     this.value = value;  
19 }  
20  
21 @JsonValue
```

BenRomberg 3 months ago

How useful! Didn't know this would work on Enums - good to know! :-)

GeorgMeyer 3 months ago Delete Edit

We also use this feature in the ShopAPI for `StoreId` s. It's quite handy there as well.

Reply

```
22 public int getValue() {
```

Beispiel: Lob

</> b64e59d8c331bbf81efcf9218f4853590cf38b96 Undo Approval

shop-api master

Sascha Hinlang 7 months ago by SaschaHinlang 6 months ago

```
223     }
224
225     private TransactionCreationResult handleValidReceipt(Transaction transaction) {
226         Receipt receipt = transaction.getReceipt();
227         FlareProductId flareProductId = null;
228         StoreReceiptId storeReceiptId = null;
229
230         if (receipt.getStoreProductId().isPresent()) {
231             storeReceiptId = receipt.getStoreReceiptId().orElse(null);
232             flareProductId = getFlareProductId(receipt.getStoreProductId().get())
233         }
234
235         return new TransactionCreationResult.Builder().withFlareProductId(flare
236             .withStoreProductId(getStoreProductId(transaction)).withTransacti
237             .withStoreReceiptId(storeReceiptId).withValidity(transaction.getV
```

GeorgMeyer 7 months ago Delete Edit

I like it, good refactoring.

Beispiel: Humor

</> [74c16717269ce44f60e2f64d10eac3da7896df25](#) Undo Approval

store-api [PLATFORM-1303-FacebookSupport](#)

Sascha Hinlang 5 months ago 👍 by SaschaHinlang 5 months ago

```
56   public String getImage() {  
57       return "http://blubbeldiblubbel/" + product.getImage();  
}
```

JoachimEckert 5 months ago

Blubbeldiblubbel just realized that his father Blabbeldibabbel married his cousin Bliibbeldibibbel. That might have been the reason for his second forehead and his third leg... or maybe it wasn't a leg?

SaschaHinlang 5 months ago

Apparently I couldn't register the TLD "blubbeldiblubbel", so I fixed this in [0f7b1c](#)

JoachimEckert 5 months ago

That makes me so sad :(

Auswirkungen

- Verstärkte Collective Code Ownership
- Kurzer Feedback Loop
 - Geändertes Mindset (garantiertes Review am nächsten Tag)
 - Hochwertigere Commits
- Einhaltung der Code-Konventionen
- Verstärkte Design-Diskussionen
- Verbesserung der Code Qualität
- Positive Review-Kultur

	Barkeep	Cordon Bleu
Zeitraum	8 Monate	7 Monate
Kommentare / Tag	6,9	10,5 (+52%)
Approves / Tag	16,6	29,0 (+75%)

Ausblick

- Team Statistiken
- Integration
 - Von Build-Server Ergebnissen
 - Von statischer Code Analyse (Sonar)
- Automatische Verteilung der Commits zum Reviewen
 - Statt Zahlenspiel
- Kategorisierung der Kommentare
 - Issue, Question, Praise
- Cloud Version

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- Gefahr von Wissensinseln ✓
- Kein festgelegter Code-Review-Prozess ✓
- Ziele
 - Collective Code Ownership ✓
 - Continuous Delivery ✓

Danke

Ben Romberg

Ben@flaregames.com

Georg Meyer

GeorgMeyer@flaregames.com

Barkeep

getbarkeep.org

Cordon Bleu

cordonbleu.io

Live Demo

flaregames.com/jobs/



Beispiel: Humor (I)

<> 5b78334377524366d4618f19809b1a5b08418cc1 Undo Approval

event-api master

Benjamin Metzger 5 months ago by DanielKleinert 4 months ago

Fix for stuuuuupid mistake

src/main/java/com/flaregames/platform/event/api/model/processing/ExistingPlatformUserMigrat

```
44 44 }
45 45
46 46 @Override
47 47 public GameId getGameId() {
48 48     return getGameId();
```

DanielKleinert 4 months ago

Nice! ;)

Reply

```
48 48     return gameId;
49 49 }
```