

Facebook内部工具：揭秘服务16亿 用户背后的高效率

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促进软件开发领域知识与创新的传播



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300,000,000 : 1



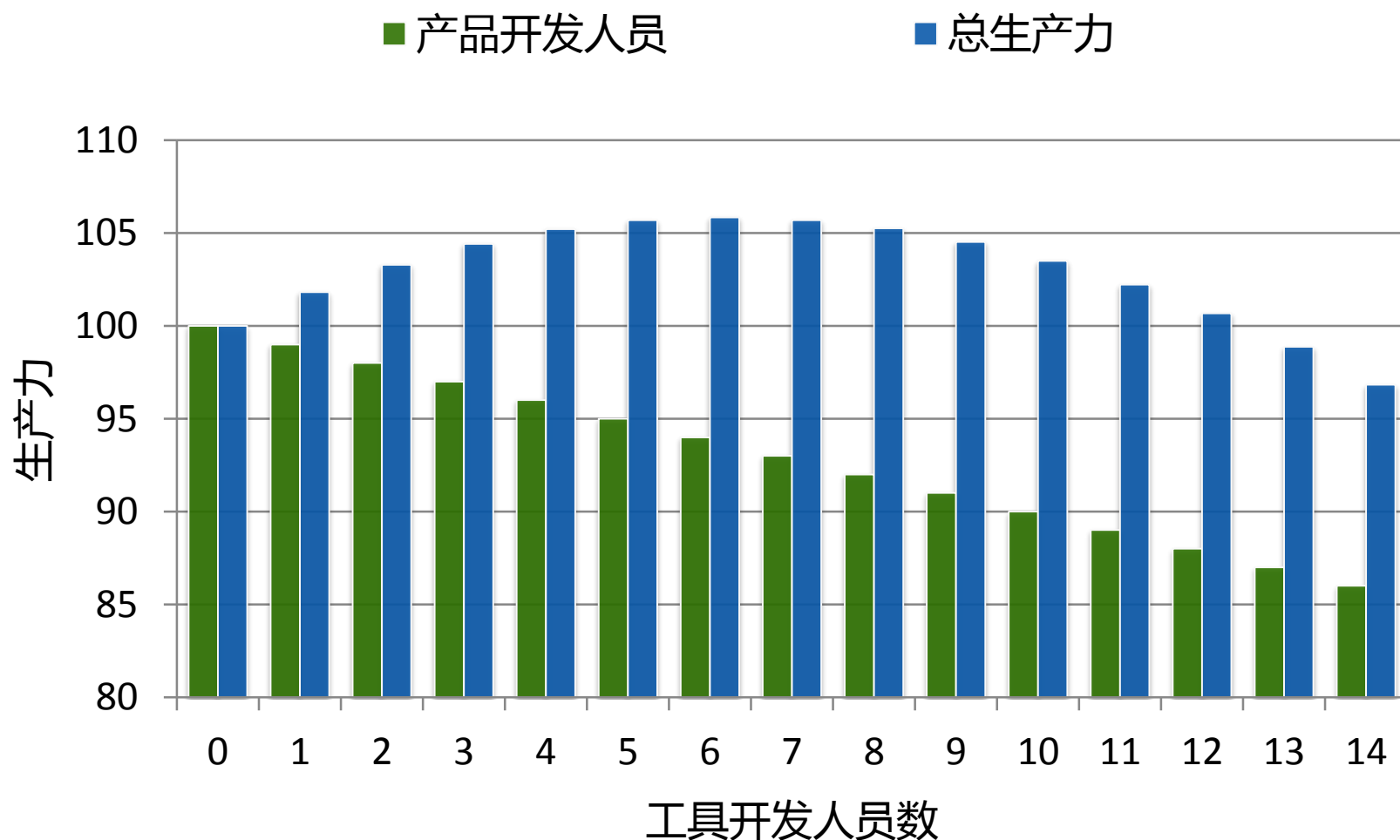
大纲

- 为什么
- 怎么做
 - 领域
 - 方法
- 具体案例
- 开发领域以外的扩展
- Q & A

为什么要重视工具 — 公司效率

- 工具开发人员会给其他开发人员提高效率
- 随着工具开发人员数的增加，单位效率提高会下降
- 一个简单化模型
 - D — 开发人员总数
 - T — 工具开发人员数
 - $(D - T) \times (1 + T \times 0.03 \times (D - T \times 5) \times 0.01)$

为什么要重视工具 — 公司效率



为什么要重视工具 — 开发人员

“The enjoyment of one's tools is an essential ingredient of successful work.”

—Donald Knuth, *The Art of Computer Programming*



怎样做？

寻找合适领域, 进行适量效率优化





寻找适合领域

1. 源代码控制
2. 编译
3. 测试
4. 任务，bug 跟踪系统
5. 代码审核
6. 推送，部署
7. 监测，预警
8. 新的产品方向
9. 产品组自己合适的方向

思路和方法

1. 内部代码共享
2. 工具互相连接，集成
3. 随时比较投入和回报
4. 避免不必要的流程
5. 利用开源
6. 避免任务切换
7. 注重有趣性



案例一：Phabricator





Differential

Inspect Riggins

4



Maniphest

Bilge rats



Diffusion

Hide ye Treasures



Audit

Inspect ye Work of Yore

4



Phriction

Sea Log



Projects

Straighten yer gig



Applications

Explore More Applications

Customize Menu...

Welcome

Welcome

[Phabricator](#) is built here, by [Phacility](#). For an overview of how the upstream works, see the [Welcome](#) page. For help with reporting bugs, requesting features, or getting support see [Support Resources](#). For installation instructions see [Installation Guide](#).

This is not a demo or test install. Please don't make a mess! You can launch a demo install on [Phacility](#) if you want to poke around and try things out.

Recent Tasks

⚙ Differential > D114

⚙ Fix 'Transcript' links in Differential

✓ Closed

👤 All Users



Authored by **jungejason** on Apr 7 2011, 6:56 PM.

Details

Reviewers ☐ epriestley
☐ tuomaspelkonen

Maniphest Tasks [T84: Fix "Transcript" links in Differential](#)

Commits [rPcca849c762db: Fix 'Transcript' links in Differential](#)

Apply Patch [arc patch D114](#)

☰ SUMMARY

add filtering for MetaMTA transcripts, add Herald transcripts, also fixed PhabricatorObjectHandleData to support commits. Note that paging in the transcripts pages will be in a different diff.

📄 TEST PLAN

- ✎ Edit Revision
- ↕ Update Diff
- ⬇ Download Raw Diff
- ⚙ Edit Related Revisions...
- 🔗 Edit Related Objects...
- ✓ Automatically Subscribed
- 🏆 Award Token
- 🚩 Flag For Later

Tags

None

Diff Detail

Lint

★ Lint Skipped

Unit

★ Unit Tests Skipped

Changes from before your most recent comment are hidden. [Show Older Changes](#)

 **jungejason** scrawled. Apr 8 2011, 12:31 AM

Hi Evan, thanks a lot for the review! One question inline.

 **src/applications/metamta/controller/list/PhabricatorMetaMTAListController.php**

↩ 24–31

Is there a good way to add a `$where_clause` and escape it correctly to `loadAllWhereQueryfx_all()` above? (`qsprintf()` needs a connection object which makes it hard to us

 **epriestley** accepted this revision. Apr 8 2011. 12:56 AM

```
18
19 class PhabricatorMetaMTAListController extends PhabricatorMetaMTAController {
20
21     public function processRequest() {
```

```
22         $mails = id(new PhabricatorMetaMTAMail())->loadAllWhere(
23             '1 = 1 ORDER BY id DESC LIMIT 100');
```

```
18
19 class PhabricatorMetaMTAListController extends PhabricatorMetaMTAController {
20
21     public function processRequest() {
22         $related_phid = $this->getRequest()->getStr('phid');
23
24         if ($related_phid) {
25             $mails = id(new PhabricatorMetaMTAMail())->loadAllWhere(
```

epriestley

Done

If there's no PHID, we should retain the current behavior of showing all messages. You can get to the "all messages" view by clicking "MetaMTA" from the homescreen.

```
26         'relatedPHID = %s ORDER BY id DESC LIMIT 100',
27         $related_phid);
28     } else {
29         $mails = id(new PhabricatorMetaMTAMail())->loadAllWhere(
30             '1 = 1 ORDER BY id DESC LIMIT 100');
31     }
```

jungejason

Author

Done

Is there a good way to add a \$where_clause and escape it correctly to loadAllWhere() like we did for queryfx_all() above?

Leap Into Action!

- Lint was skipped when generating these changes.
- Unit tests were skipped when generating these changes.

Action Scrawl

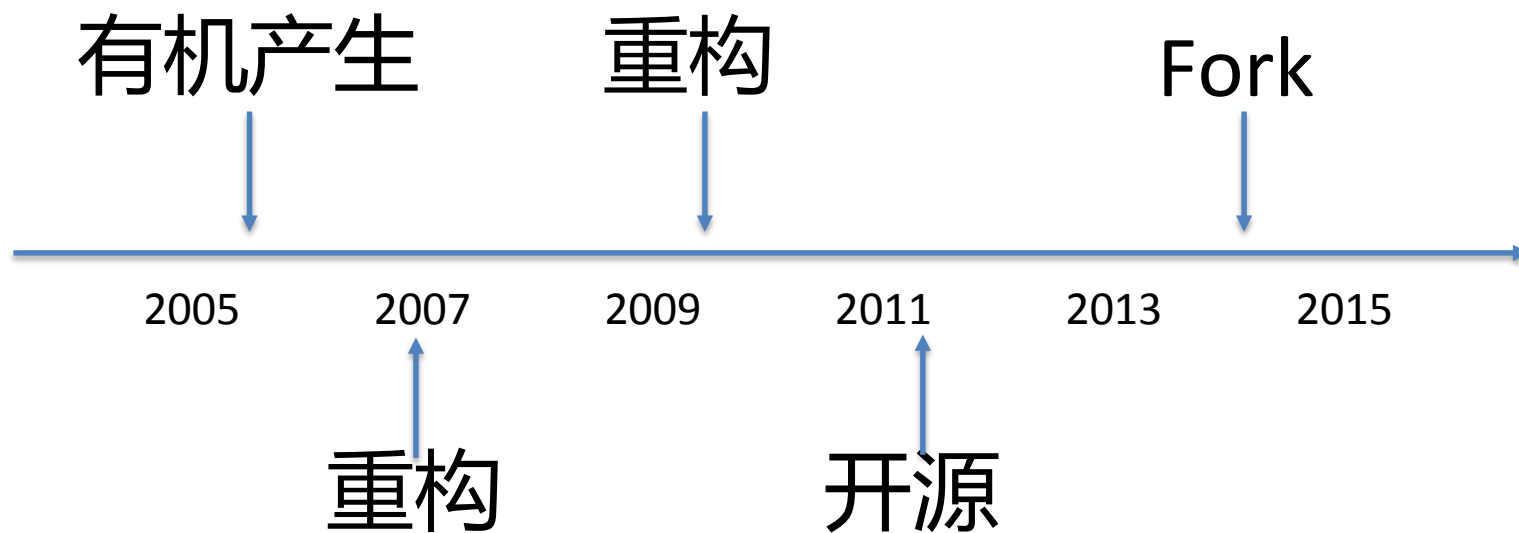
Scrawl



yaaay

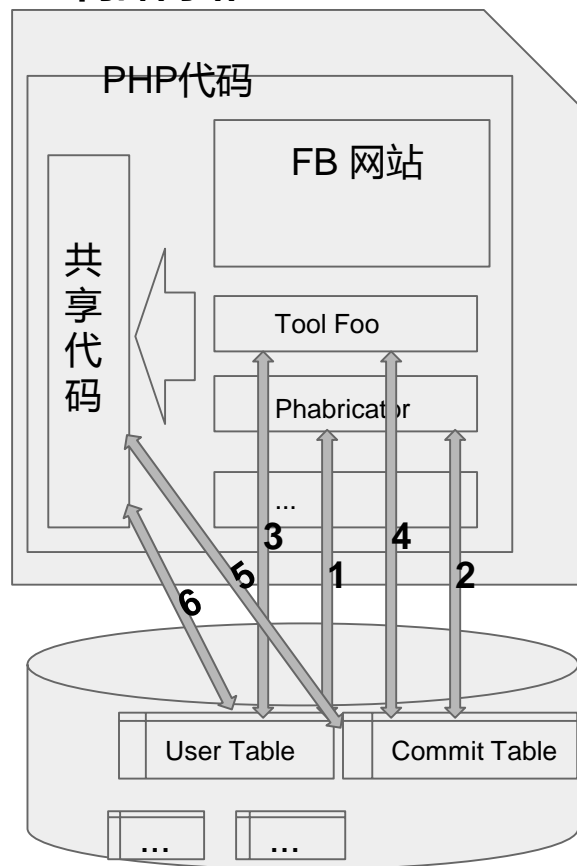
Aye!

Phabricator 的演化



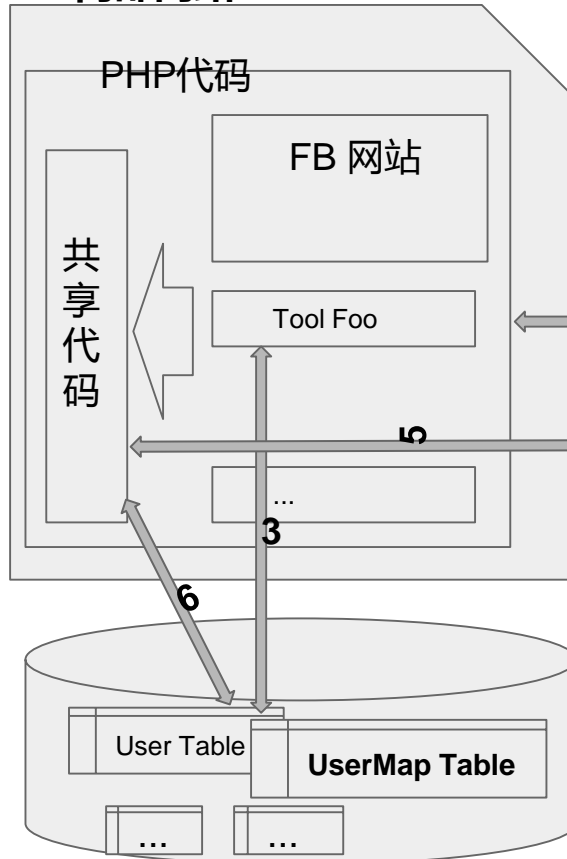
Phabricator 的开源重构

FB 内部网站

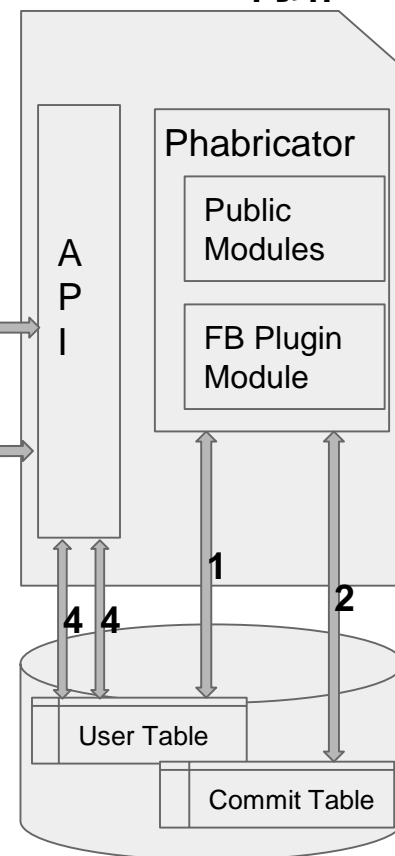


开源

FB 内部网站



Phabricator 网站



案例二：Image Macro



```
43 .differential-revision-actions span {
44     background-position: 8px center;
45     background-repeat: no-repeat;
46     display: block;
47     padding: 4px 4px 4px 32px;
48 }
49
50 .differential-revision-actions span.unavailable {
51     color: #666666;
52     font-style: italic;
53 }
54
55 .differential-revision-actions .subscribe-rem {
56     background-image: url(/rsrc/image/icon/unsubscribe.png);
57 }
58
59 .differential-revision-actions .subscribe-add {
60     background-image: url(/rsrc/image/icon/subscribe.png);
61 }
62
63 .differential-revision-actions .revision-edit {
64     background-image: url(/rsrc/image/icon/tango/edit.png);
65 }
66
67 .differential-revision-actions .attach-manifest {
68     background-image: url(/rsrc/image/icon/tango/attachment.png);
69 }
70
71 .differential-revision-actions .transcripts-metamta {
72     background-image: url(/rsrc/image/icon/tango/log.png);
73 }
```

Leap Into Action!

- Lint was skipped when generating these changes.
- Unit tests were skipped when generating these changes.

案例三：部署

- CI & CD
- 详细流程支持多个频率 (weekly, daily, hotfix)
- 与其他工具的集成
- 高效的内部测试和反馈

关于部署的资源

- Chuck Rossi 讲座：
 - 网站推送
<https://www.youtube.com/watch?v=5pgqoV0AshE>
 - 手机服务推送
<https://www.youtube.com/watch?v=Nffzkkdq7GM>



注意事项

- FB 经验适用范围
- 避免过度优化 (20/80 原则)
- 开发新工具还是改进原有工具
- 预测将来会出现的问题



开发领域以外的扩展

- 墙上的地图工具, 日历工具, 会议室前面的平板电脑
- 免费食物, 公车, 理发店, 牙医, 旅行助手



总结

- 为什么
- 怎么做
 - 领域
 - 方法
- 寻找合适领域, 进行适量效率优化

Q&A

关于工具维护

- 自然选择
- 开发人员自发维护
- 利用开源资源

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我的微信：

