

Python在豆瓣的应用

2011.12

About Me

- 洪强宁 / hongqn
- 2002年开始接触Python
- 2004年开始完全使用Python工作
- 2006年加入豆瓣，现任首席架构师
- <http://www.douban.com/people/hongqn/>



Python and Douban

[python-chinese] 用python开 ×

www.zeuux.org/pipermail/zeuux-...

[python-chinese] 用python开发的网站开始公测

Bo Yang [boyang at mac.com](mailto:boyang@mac.com)
Sun Mar 6 16:55:10 HKT 2005

- Previous message: [Re: 答复: \[python-chinese\] ANN:joit卓越奖提名python也有啊](#)
- Next message: [\[python-chinese\] ~{SC~}python~{?*7"5DMx~} ~{U>?*J<9+2b~}](#)
- Messages sorted by: [\[date \]](#) [\[thread \]](#) [\[subject \]](#) [\[author \]](#)

欢迎到<http://douban.com>使用豆瓣的读书者网络和书价比较。

豆瓣全部使用python开发。网站后台的搜索引擎基于Twisted, GUI基于Quixote. 还用到了cElementTree, MySQLdb和 PIL. 除了这些豆瓣基本是从头开发(一个人四、五个月)完成。

如果你有爱读书或爱写书评的朋友, 也欢迎推荐豆瓣给他们。最好的方式是通过豆瓣的邀请功能。

谢谢!

-bo

- Previous message: [Re: 答复: \[python-chinese\] ANN:joit卓越奖提名python也有啊](#)
- Next message: [\[python-chinese\] ~{SC~}python~{?*7"5DMx~} ~{U>?*J<9+2b~}](#)
- Messages sorted by: [\[date \]](#) [\[thread \]](#) [\[subject \]](#) [\[author \]](#)

[More information about the python-chinese mailing list](#)

浏览器地址栏: 欢迎来Python/小组, www.douban.com/group/topic/1000001/

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欢迎来Python小组

 2005-03-09 20:28:02 来自: 阿北(Tyranny of the Timeline)

Python是豆瓣的主要开发语言。也是我最喜欢的编程语言。

欢迎在这儿讨论豆瓣对python语言的使用、python的web应用、或者有关python的书、Monty Python电影。

一般的python语言和应用可以在中文python社区 (<http://python.cn>)讨论。

> 禁止回应 > 删除 > 置顶

推荐 95人 78人喜欢  喜欢

 2006-05-19 19:02:57 阿古拉变变变 (无情的隐身中...)

一年后的回应.....

> 删除

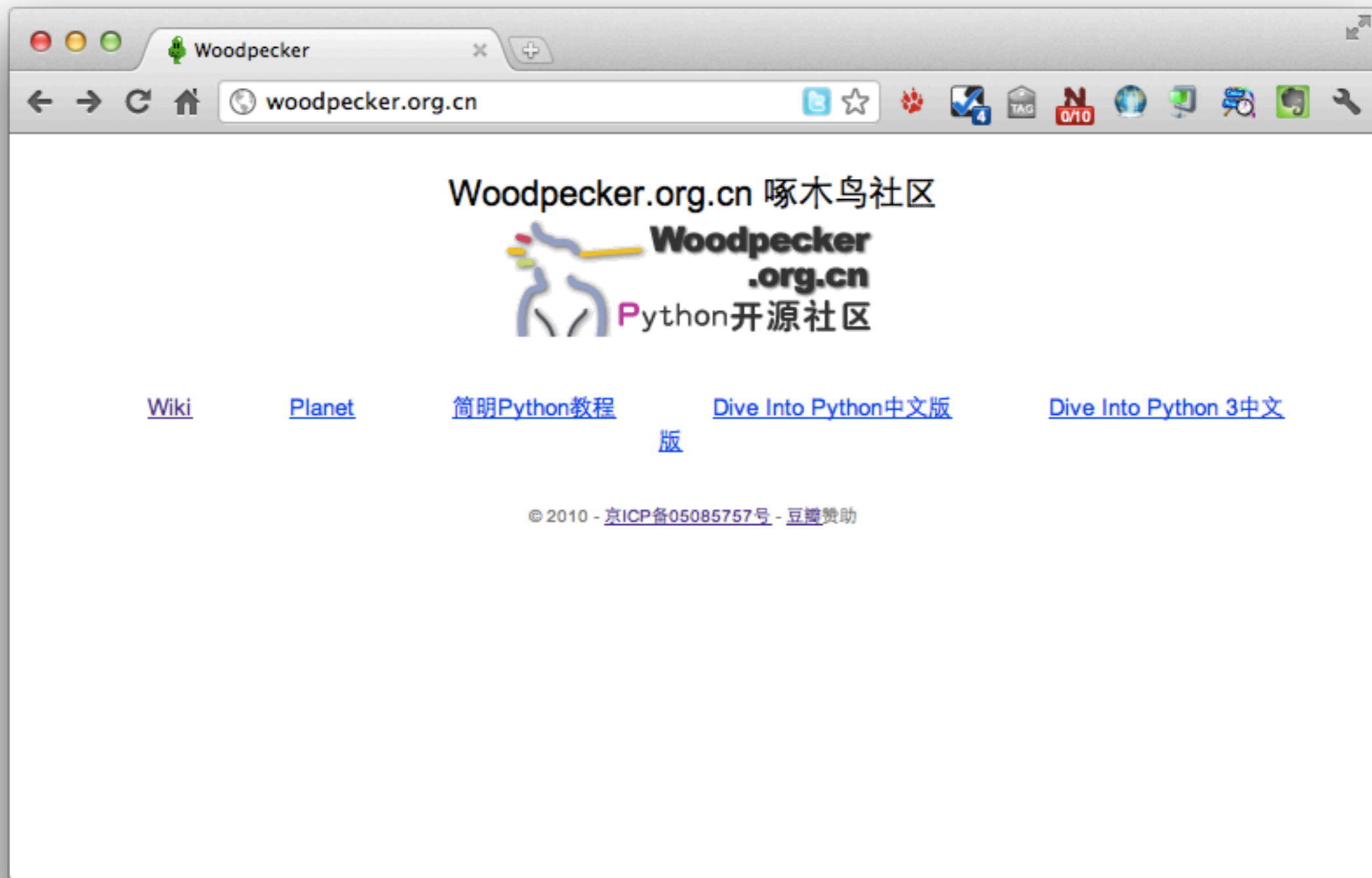
> 回Python编程小组

海尔冰吧•我的U鲜品质生



来自 西瓜瓜

DIY你的乐享环保袋吧~



Python于Web 2.0网站的应用 - QCon Beijing 2010 1 year ago Edit

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Python
于Web 2.0网站的应用

洪强宁
QCon Beijing 2010

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Qiangning Hong
30197 views, 247 favs, 37 embeds more Analytics

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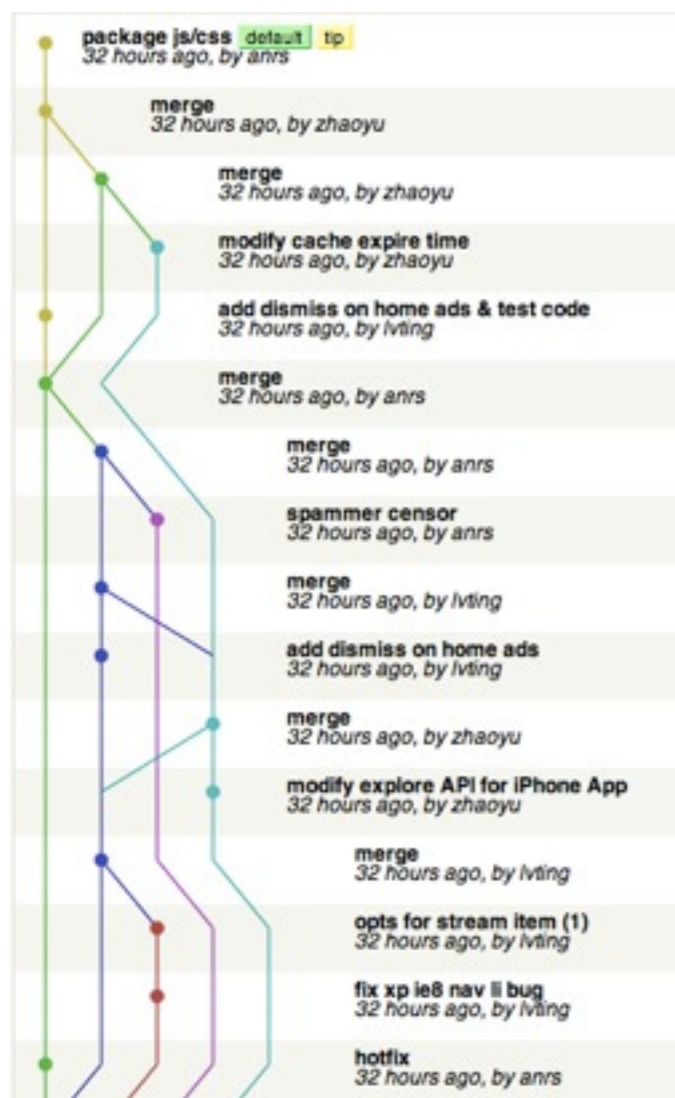
Remove related content

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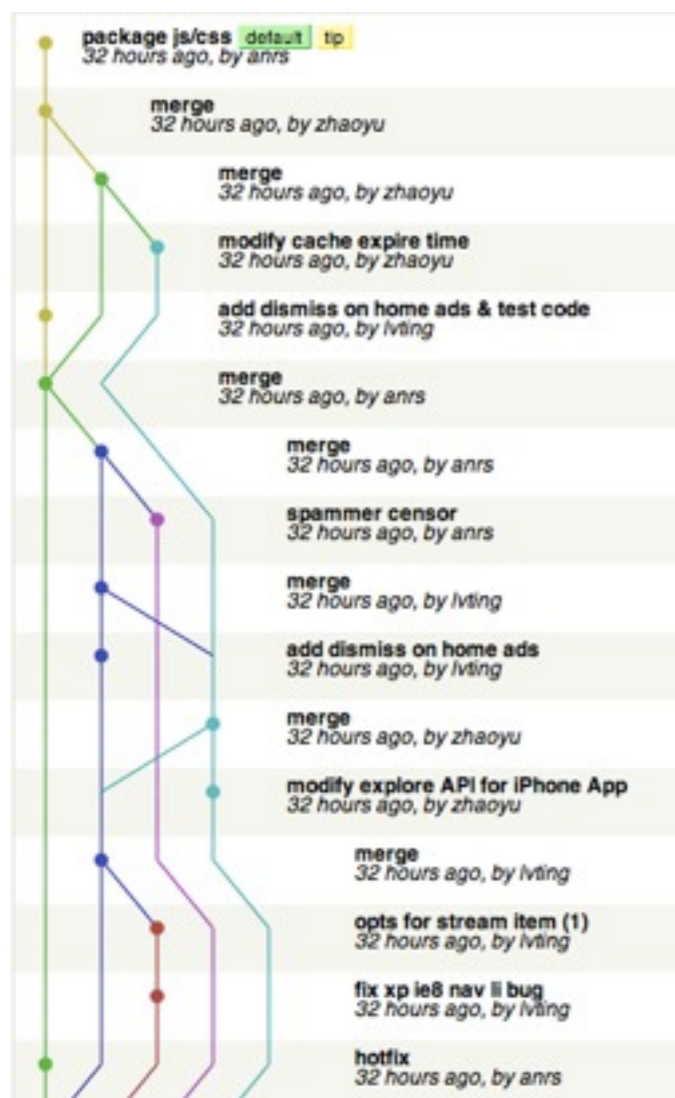
BEFORE AFTER

Python in Douban

协同开发环境



协同开发环境



项目进展状态

[查看项目进度](#) | [回产品首页](#)

项目状态:

项目阶段:

My Active Tickets

Ticket	Summary	Status	Type	Priority
No tickets found				

[查看此项目我的全部tickets](#)

项目 Active Tickets列表

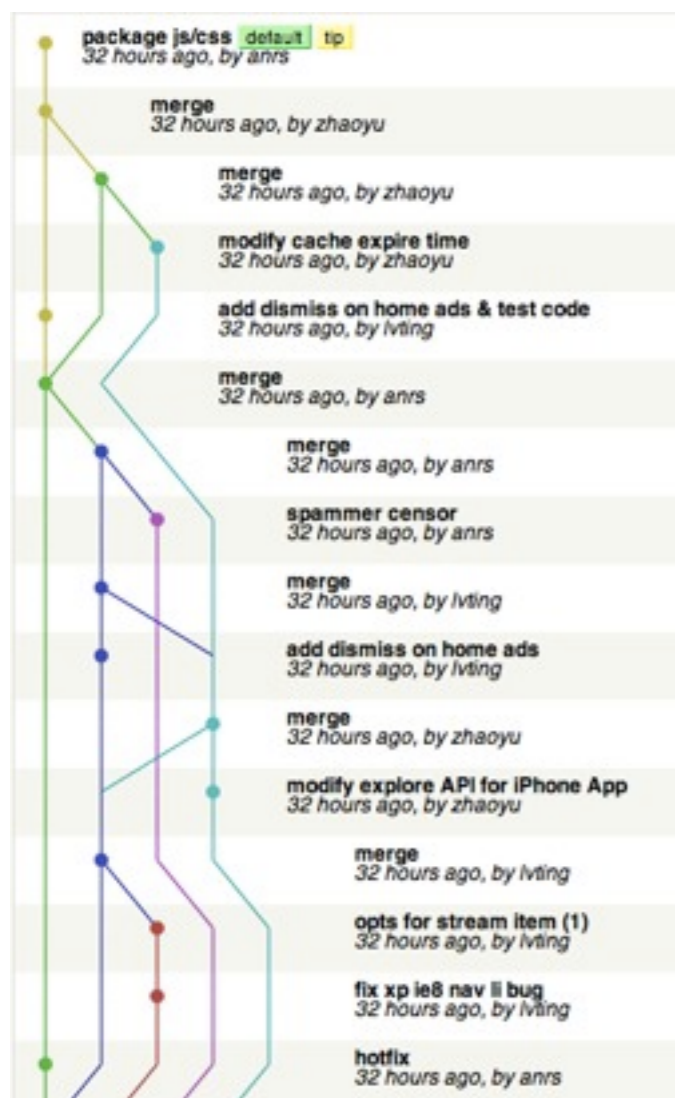
Ticket	Summary	Status
#14166	[Android]耳机拔出时, 根据提示选择继续播放, 无法转入正常的播歌状态	new
#13919	Android版增加清空缓存功能设计	new
#13967	客户端加上"分享到XXX"功能	new
#13985	IOS代码重构	new
#14062	乐iphone机器上设置显示文字重叠	new
#14156	[iPhone]接电话过程中, 音乐会突然响起来	new
#14167	[Android]每次播歌开始都出现"开始同步离线歌曲"的提示	new
#14201	ANDROID 重构	new
#13776	[android暂停]有wifi是登出, 偶尔会crash	new
#13781	[android暂停]有wifi切换频道时, 偶尔会crash	new
#13986	MAC桌面客户端BUG FIX	new
#14045	[iPhone红心]播放过程中某些时候会出现歌曲狂跳的问题	assigned
#14046	[iPhone 之红心] 某些情况下歌曲播放一首就停住了	assigned
#14066	IOS, 听红心兆赫的时候 有电话进来时 不会自动关掉音乐	assigned
#14097	[iPhone红心]某些情况下后台一会儿就没有声音了	assigned
#14108	[iPhone红心]登录页: 光标输入框中, 背景提示文字不消失,	new
#14109	[iPhone红心]某些情况下会出现音频播放但是展示界面全部消失	new
#14120	[Android]wifi下仍然提示用户是否要用3G	new
#14143	[Mac客户端]睡眠唤醒后播放无反映	new



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协同开发环境



项目进展状态

[查看项目进度](#) | [回产品首页](#)

项目状态:

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#14143	[Mac客户端]睡眠唤醒后播放无反映	new

[17:50:28] <xyb> xieshi: 着急吗? 要不我先把他们的上了再

[17:50:46] <xieshi> 马上

[17:50:50] <xieshi> 提交中

[17:54:09] <xyb> xieshi: 一分钟倒计时……

[17:54:51] <xieshi> xyb: 提交了

[17:55:15] <xyb> xieshi: 赶点提交容易出bug呀

[17:55:44] <ircbot> >>>> ALL! 开始第3次上线, 版本: 91920

[17:55:45] <ircbot> release [diff:trunk@91881:91920 ;

[17:55:46] <ircbot> * biz产品线

[17:55:47] <ircbot> - r91916 biz: for #14065 调整按钮

[17:55:48] <ircbot> * fm产品线

[17:55:49] <ircbot> - r91890 fm: #14222 解决百度合作艺术

[17:55:50] <ircbot> - r91895 fm: remove unused variab

[17:55:51] <ircbot> - r91896,r91901,r91905,r91906,r9

[17:55:52] <ircbot> - r91911,r91913 fm: remove unuse

[17:55:53] <ircbot> * location产品线

[17:55:54] <ircbot> - r91919 location: admin feature

[17:55:55] <ircbot> * qa产品线

[17:55:56] <ircbot> - r91918 qa: auto-package static

[17:55:57] <ircbot> * safe产品线

[17:55:58] <ircbot> - r91914 safe:修改相册审核拿图逻辑,附

[17:55:59] <ircbot> * sns产品线

[17:56:00] <ircbot> - r91920 sns: 传图工具增加只支持flas

[18:03:31] <ircbot> >>>> ALL! 上线完毕, 目前版本: 91920

[18:05:15] <xyb> mengwei, guojing, xieshi, satoru

[18:05:42] <guojing> 我这里没问题, 小的改动



+



+



协同开发环境



package js/css default tip
32 hours ago, by anrs

merge
32 hours ago, by zhaoyu

merge
32 hours ago, by zhu

modify cache expir
32 hours ago, by zhu

add dismiss on hom
32 hours ago, by lvli

merge
32 hours ago, by anr

merge
32 hours ago

spammer ce
32 hours ago

merge
32 hours ago

add dismiss
32 hours ago

merge
32 hours ago

modify expl
32 hours ago

merge
32 ho

opts f
32 ho

fix xp
32 ho

hotfix
32 ho

项目讲屏状态

[17:50:28] xvhs xiashi: 着急吗? 要不我先把他们的上了再

中

hi: 一分钟倒计时……

提交了

hi: 赶点提交容易出bug呀

ALL! 开始第3次上线, 版本: 91920

ase [diff:trunk@91881:91920 ;

z产品线

1916 biz: for #14065 调整按钮

产品线

1890 fm: #14222 解决百度合作艺术

1895 fm: remove unused variab

1896,r91901,r91905,r91906,r9

1911,r91913 fm: remove unuse

cation产品线

1919 location: admin feature

产品线

1918 qa: auto-package static

fe产品线

1914 safe:修改相册审核拿图逻辑,附

s产品线

1920 sns: 传图工具增加只支持flas

ALL! 上线完毕, 目前版本: 91920

wei, guojing, xieshi, satoru

没问题, 小的改动

Face to Face

+



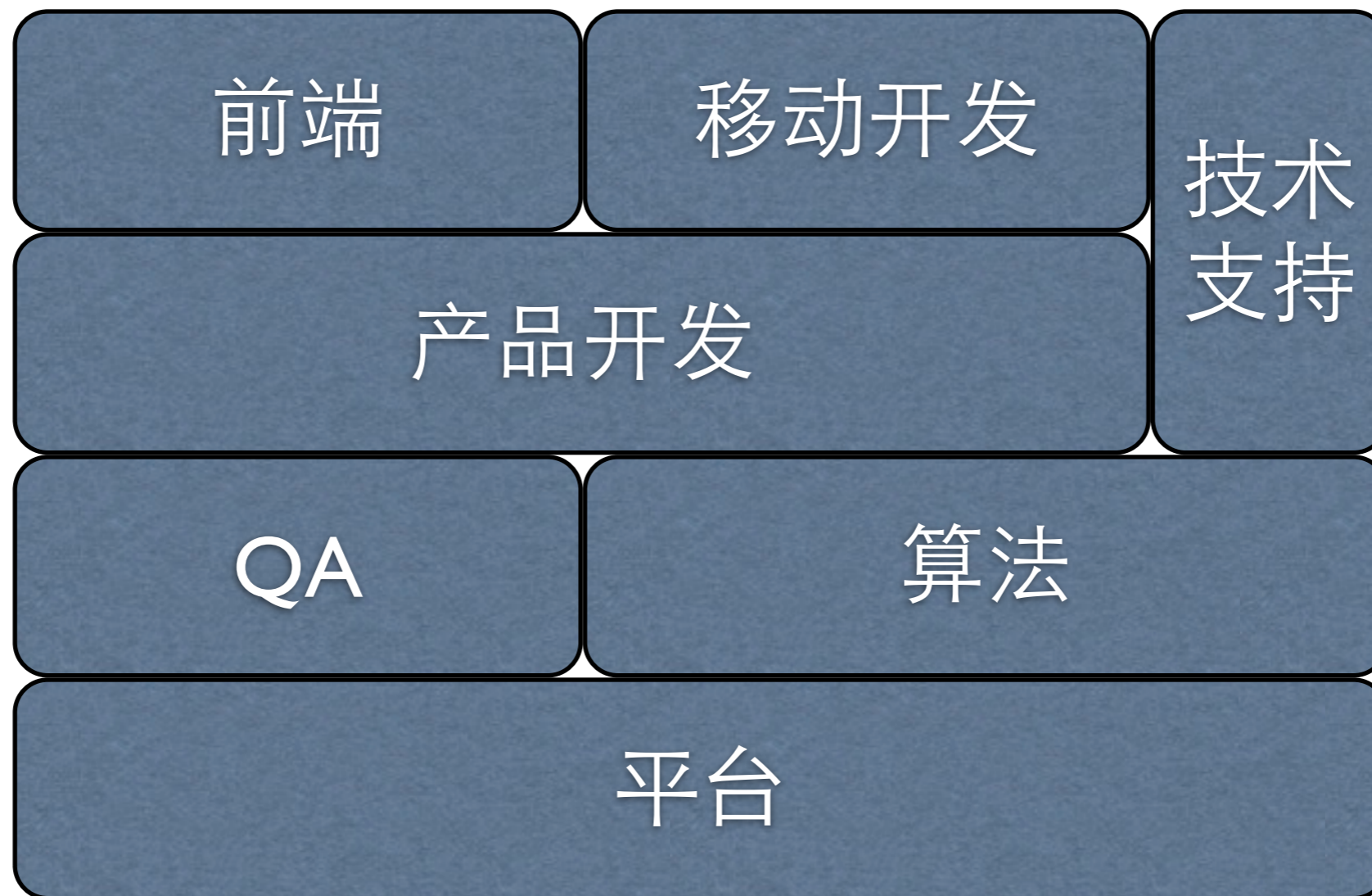
+

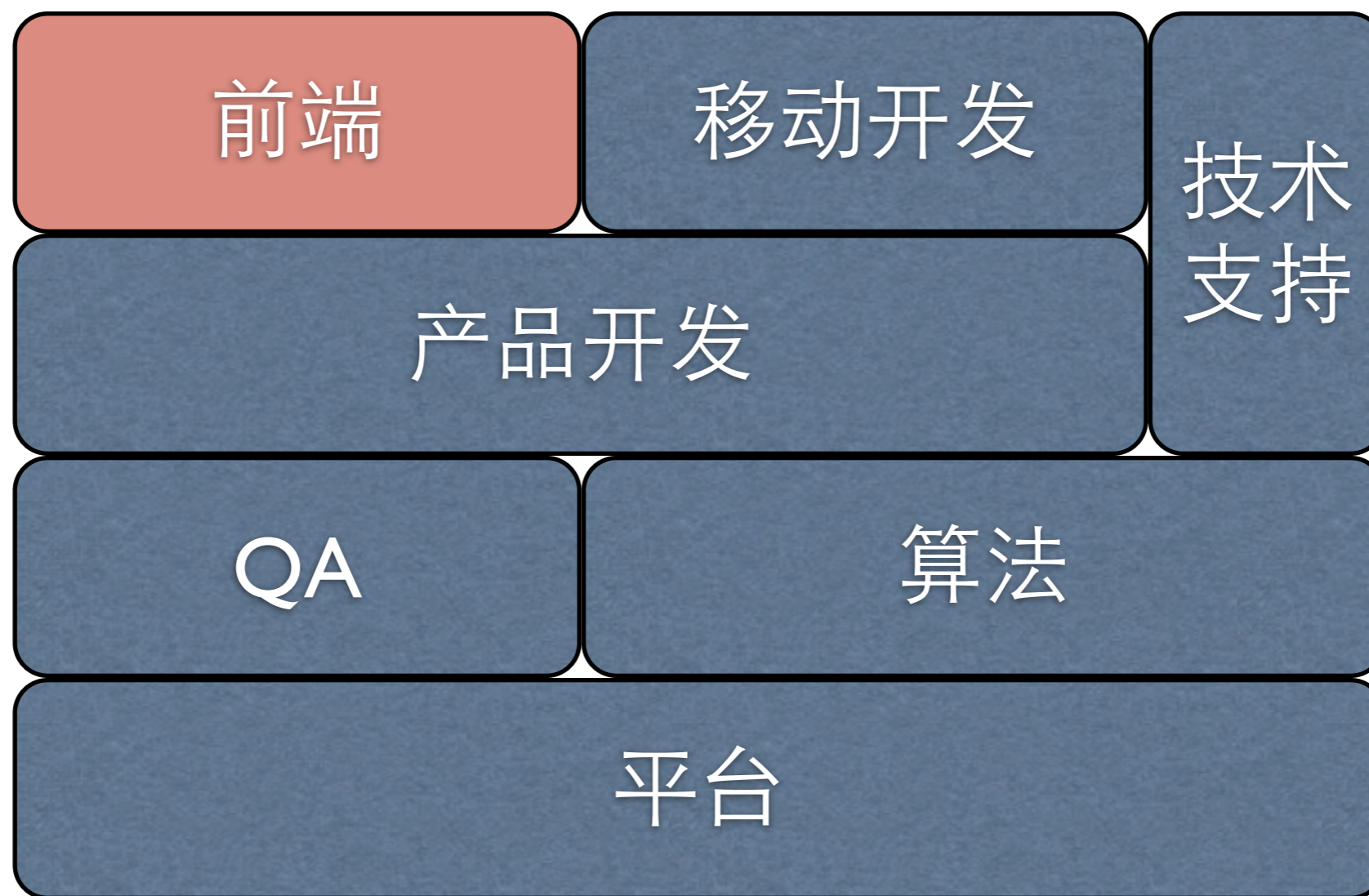


+



豆瓣技术团队





Mako

```
<%!  
from static import static  
from socket import gethostname  
from corelib.cdn import image_url  
from corelib.utils import client_class  
from corelib.config import DOUBAN  
%>\n<%namespace name="dui" file="/douban_ui/ui.html" inheritable="True"/>\n<%namespace name="utils" file="/utils.html"/>\n<%namespace name="nav" file="/nav.html"/>\n<!DOCTYPE html>  
<html lang="zh-CN" class="{client_class(request)}">  
<head>  
  <meta http-equiv="Content-Type" content="text/html; charset=utf-8">  
  
  <title>{self.title(True)}</title>  
  <%include file="/widgets/anti_hijack.html"/>  
  {self.doc_head()}  
  <link rel="shortcut icon" href="{image_url('/favicon.ico')}" type="image/x-icon">  
</head>  
<body>
```

Mako

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</head>  
<body>
```

- A very fast template engine

Mako

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</head>  
<body>
```

- A very fast template engine
- Mako IS Python

静态文件处理

`static()`: 自动处理静态文件URL

```
<link href="{static('/css/douban.css')}"  
rel="stylesheet" type="text/css">
```

静态文件处理

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开发环境下: <http://dev.douban.com/css/douban.css>

静态文件处理

`static()`: 自动处理静态文件URL

```
<link href="{static('/css/douban.css')}"  
rel="stylesheet" type="text/css">
```

开发环境下: <http://dev.douban.com/css/douban.css>

线上环境下: http://img3.douban.com/css/packed_douban9922754105.css

内联

```
...html code...  
<script>  
${istatic('/js/sns/tribe/manage_members.js')}  
</script>
```

预编译

@import

```
@import /js/do.js
@import /js/core/cookie.js
@import /js/core/show_login.js

Do(function(){
  @import /js/core/post_withck.js

  //link actions事件绑定
  $('html').click(function(e){
    var el = $(e.target),
        classname = el.attr('class');
    if (classname === '') {
      return;
    }
    $(classname.match(/a_(\w+)/gi)).each($.proxy(function(i, n){
      var fn = Douban[n.replace(/^a_/, 'init_')];
      if (typeof fn === 'function') {
```

预编译

@import

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Do(function(){
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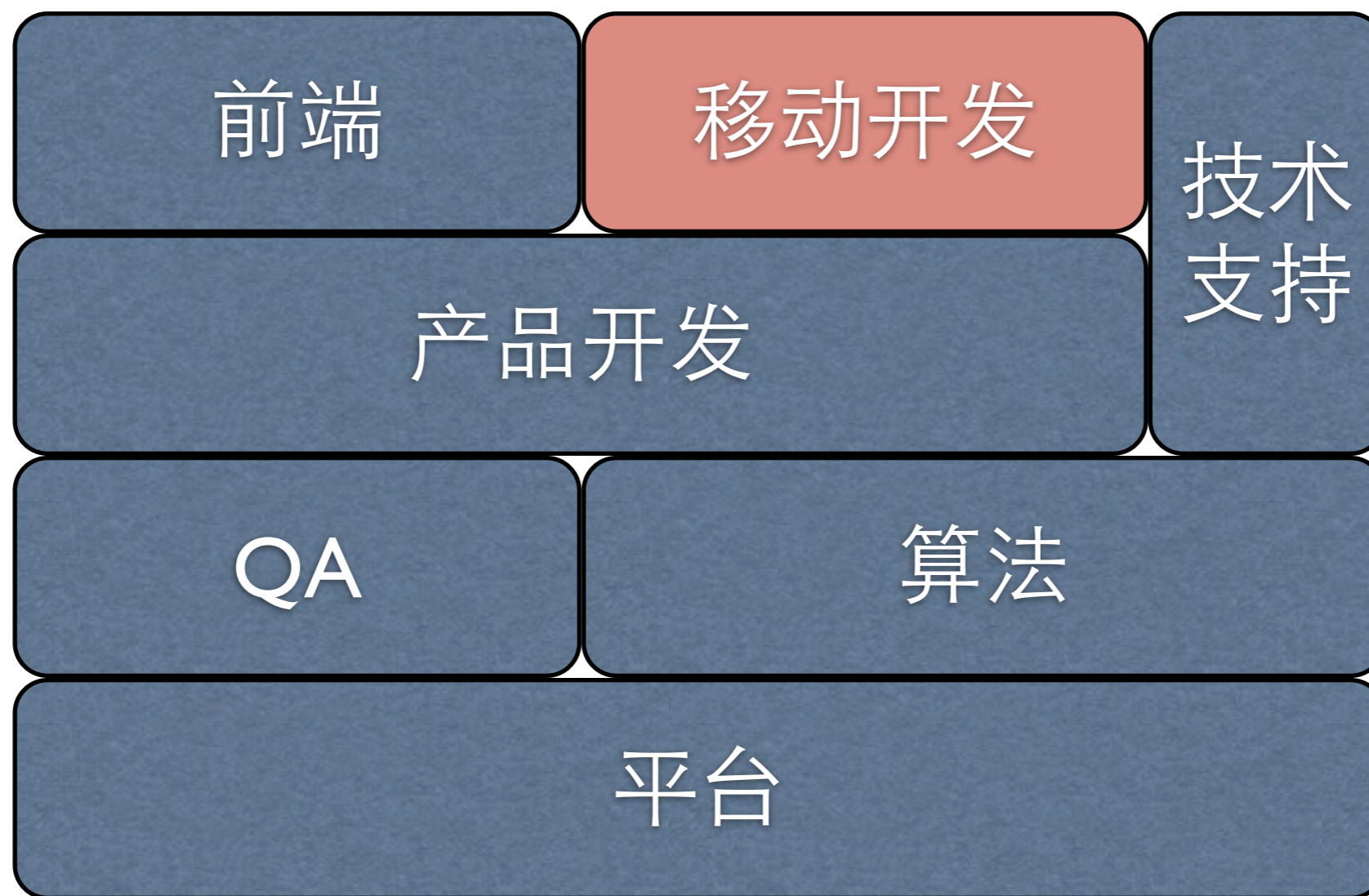
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        classname = el.attr('class');
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    $(classname.match(/a_(\w+)/gi)).each($.proxy(function(i, n){
      var fn = Douban[n.replace(/^a_/, 'init_')];
      if (typeof fn === 'function') {
```

pyScss

```
$blue: #3bbfce;
$margin: 16px;

.content-navigation {
  border-color: $blue;
  color:
    darken($blue, 9%);
}

.border {
  padding: $margin / 2;
  margin: $margin / 2;
  border-color: $blue;
}
```



APNS Agent

APNS Agent

- 代理多个应用和 Apple Push Notification Service (APNS) 的通讯

APNS Agent

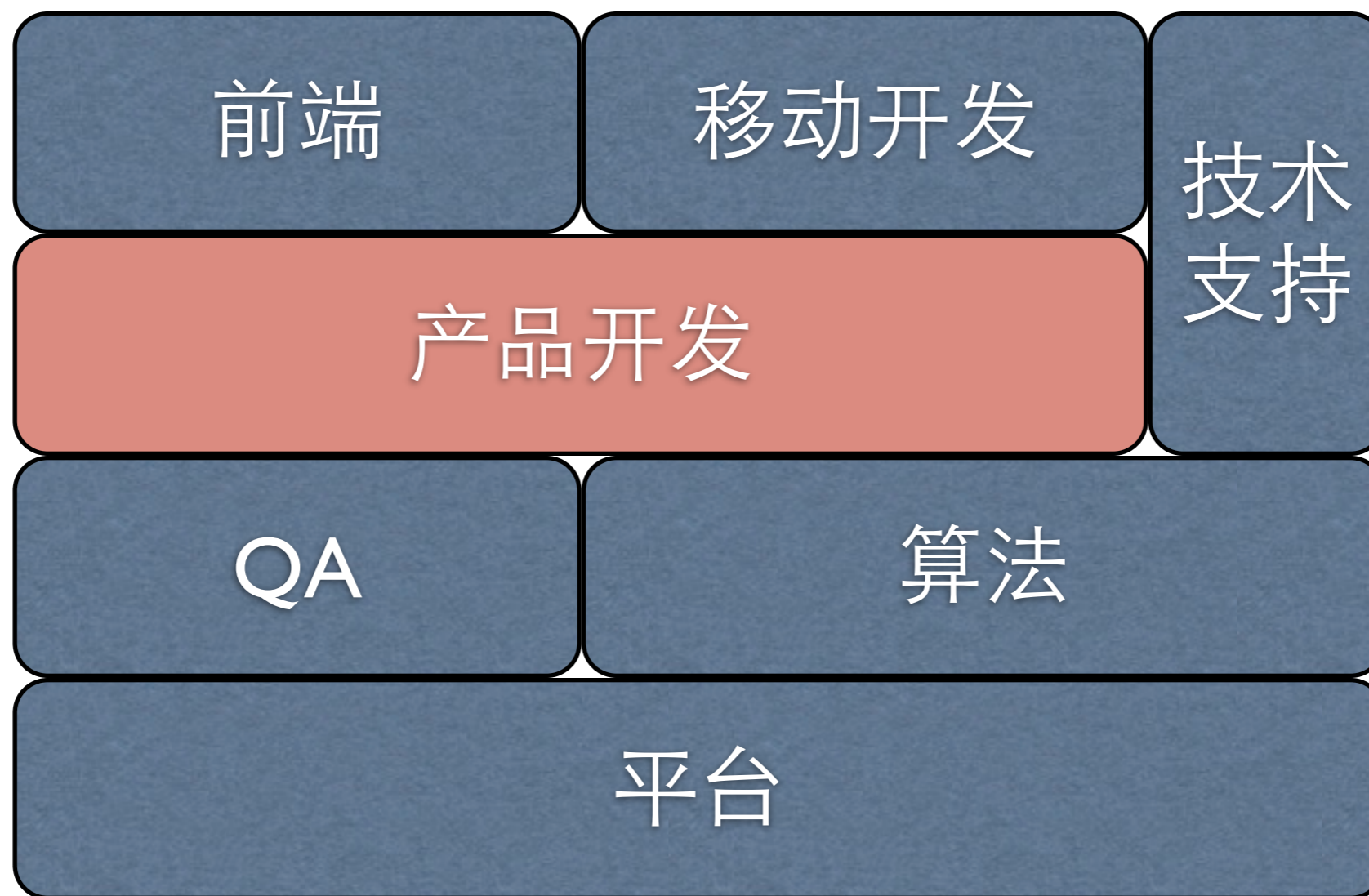
- 代理多个应用和 Apple Push Notification Service (APNS) 的通讯
- gevent

APNS Agent

- 代理多个应用和 Apple Push Notification Service (APNS) 的通讯
- gevent
- bottle

APNS Agent

- 代理多个应用和 Apple Push Notification Service (APNS) 的通讯
- gevent
- bottle
- APNSWrapper



Quixote

Quixote

- Pretty old (we are using version 1.2)

Quixote

- Pretty old (we are using version 1.2)
- Simple

Quixote

- Pretty old (we are using version 1.2)
- Simple
- Fast

Quixote

- Pretty old (we are using version 1.2)
- Simple
- Fast
- Stable

Quixote

- Pretty old (we are using version 1.2)
- Simple
- Fast
- Stable
- Traversal based

Traversal

<http://www.douban.com/group/python/members>

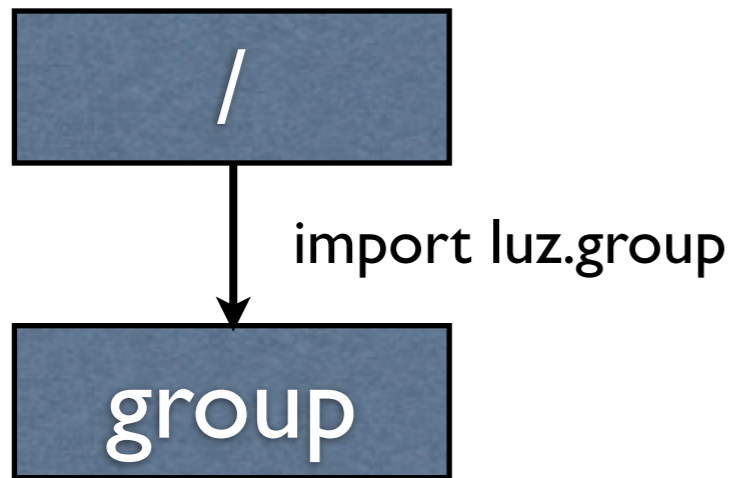
Traversal

<http://www.douban.com/group/python/members>



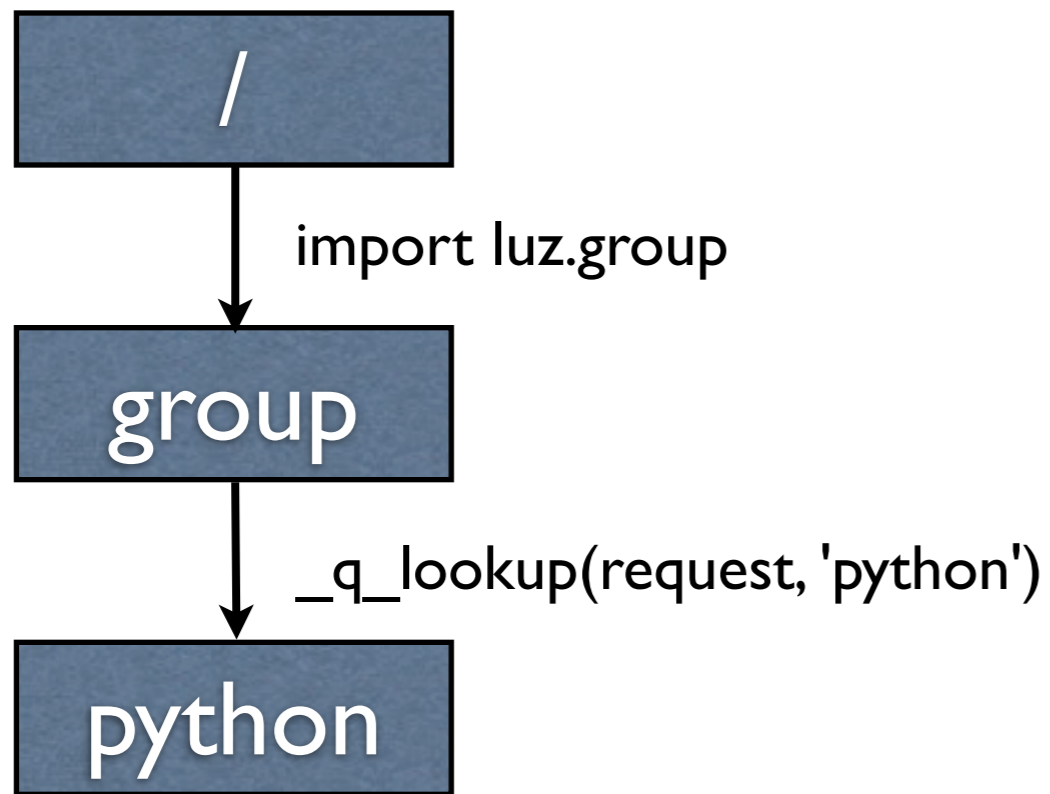
Traversal

<http://www.douban.com/group/python/members>



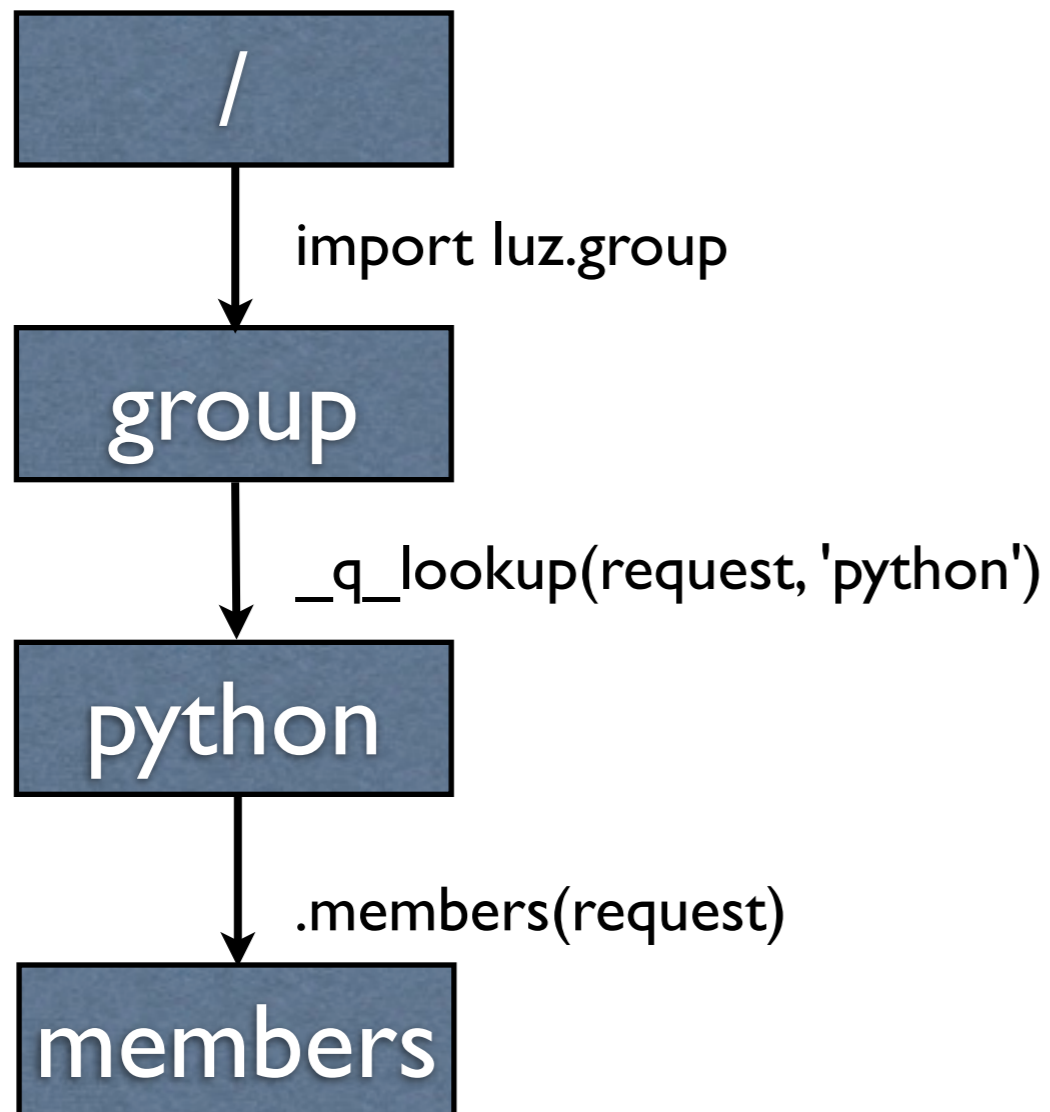
Traversal

<http://www.douban.com/group/python/members>



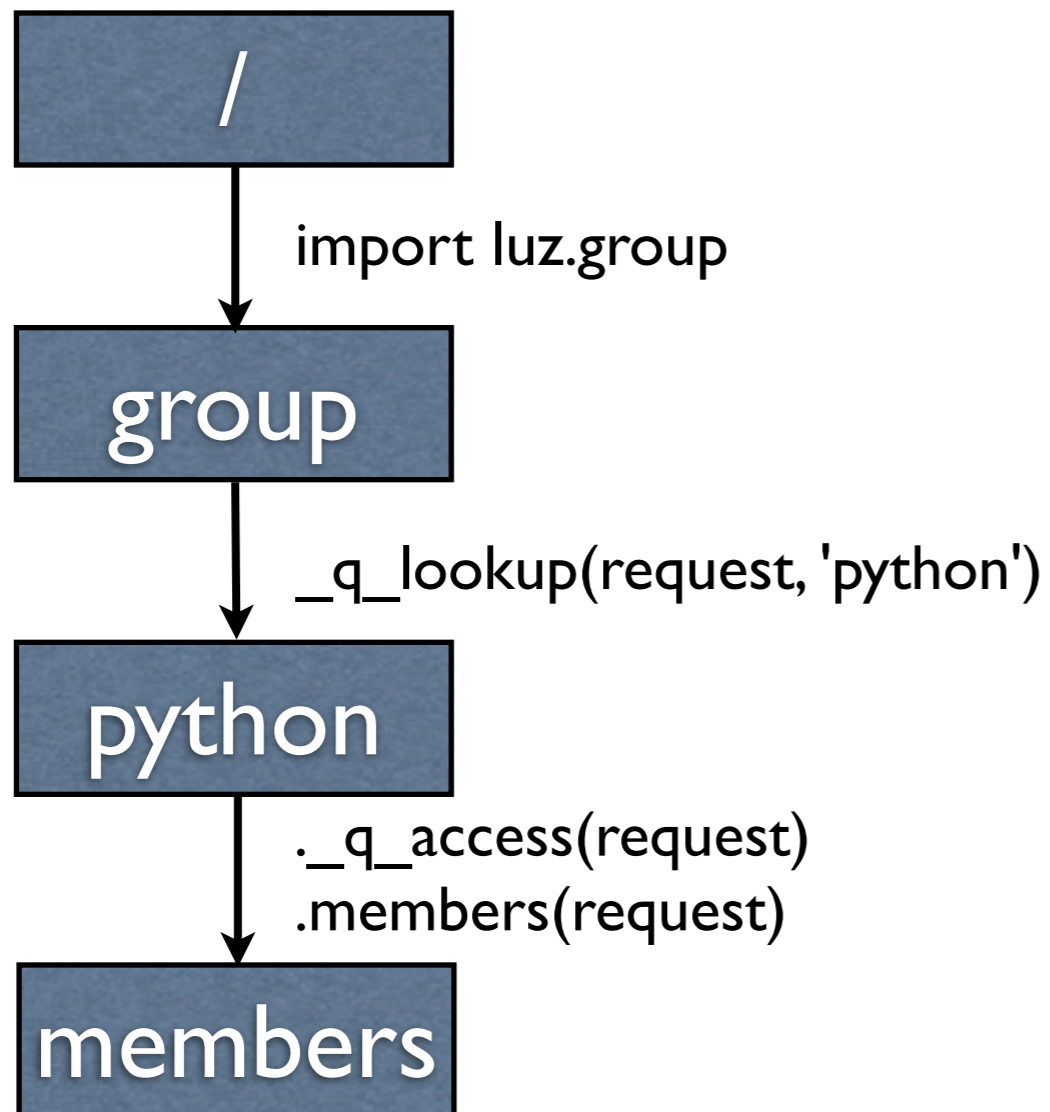
Traversal

<http://www.douban.com/group/python/members>



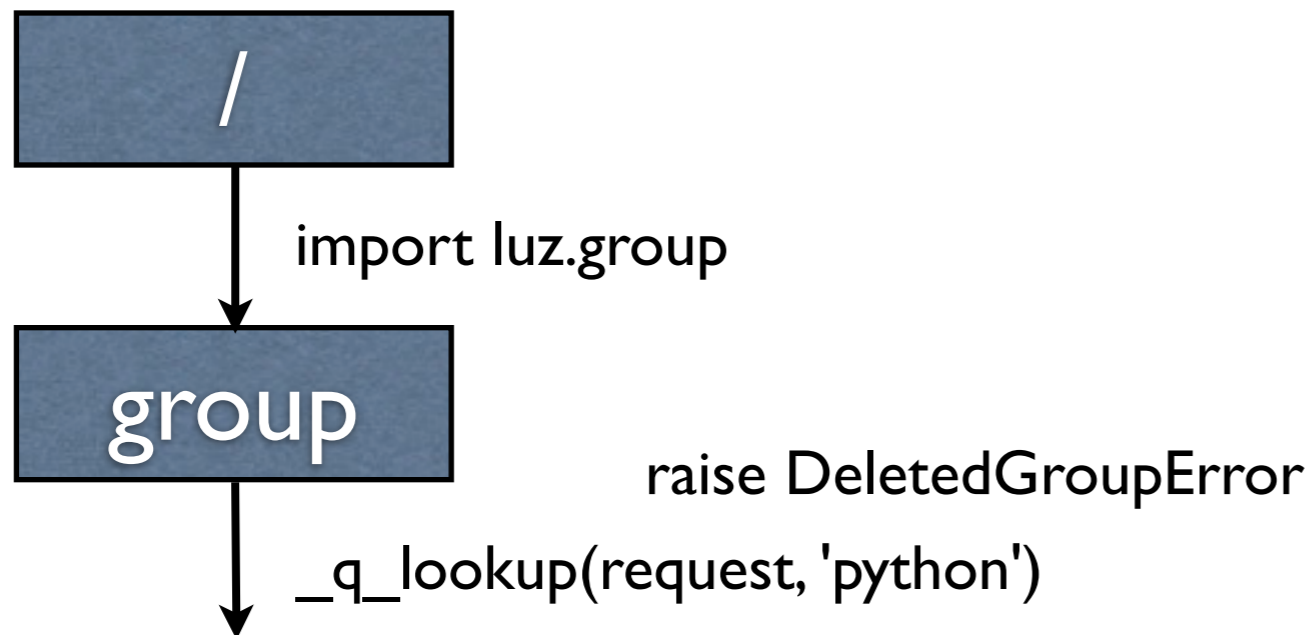
Traversal

<http://www.douban.com/group/python/members>



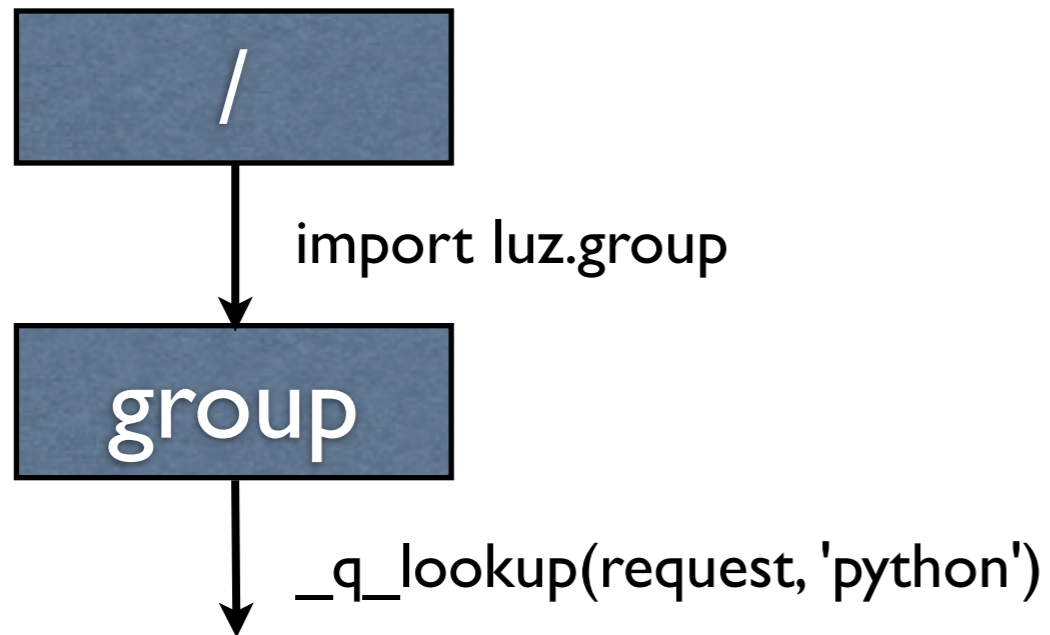
Traversal

<http://www.douban.com/group/python/members>



Traversal

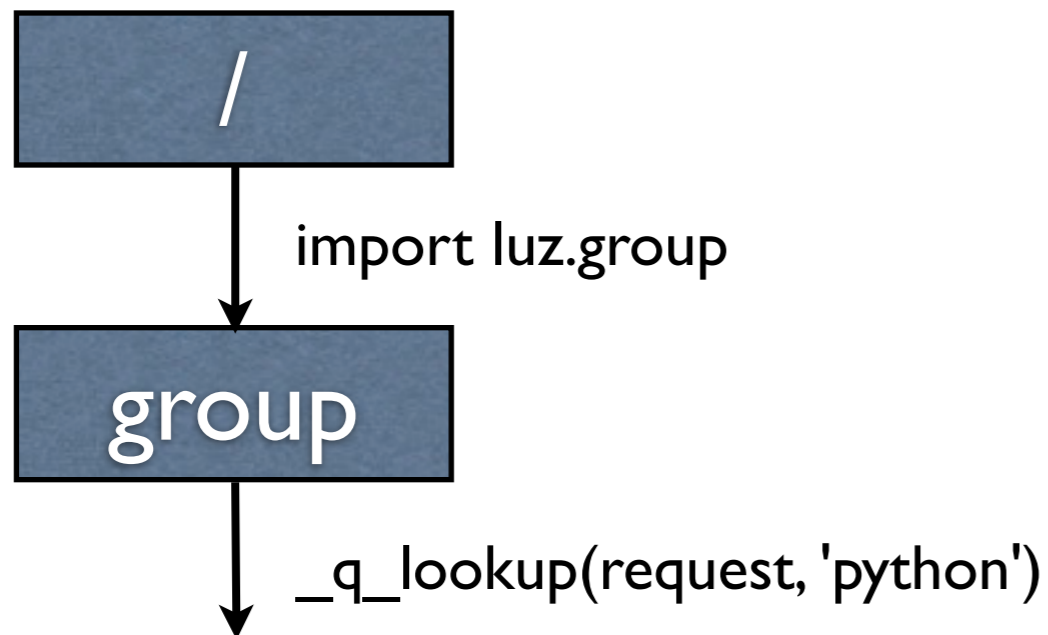
<http://www.douban.com/group/python/members>



```
raise DeletedGroupError  
_q_exception_handler(request, e)
```

Traversal

<http://www.douban.com/group/python/members>



```
raise DeletedGroupError  
_q_exception_handler(request, e)
```

比route based url dispatch
更容易在目录级别进行
控制

Decorators

```
@need_post
@require_login
@check_switch('annotation')
@check_permission('admin')
@jsonize
def preview(self, request):
```

Generators

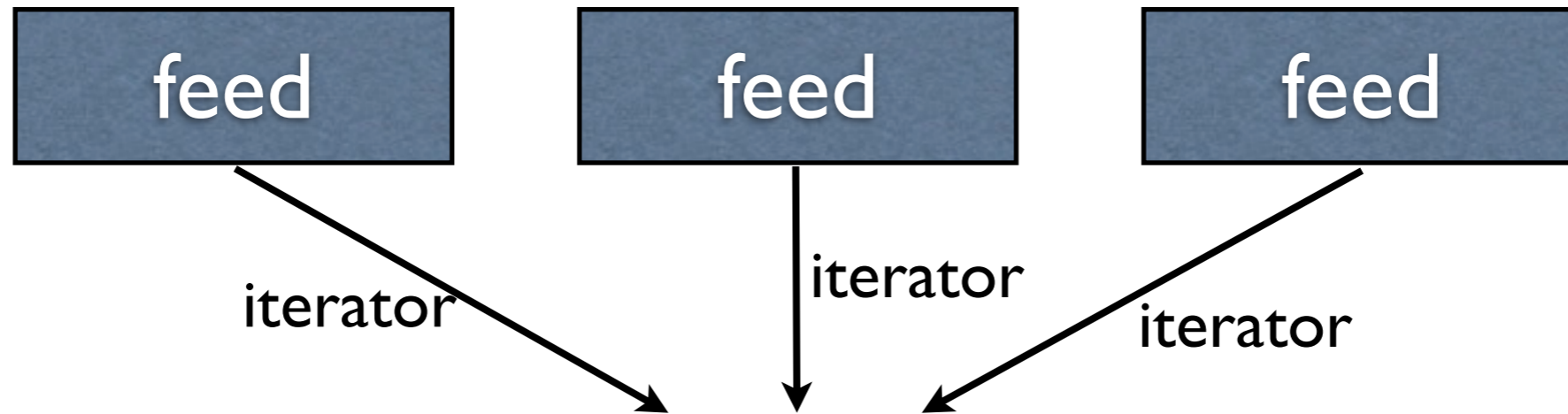
Generators

feed

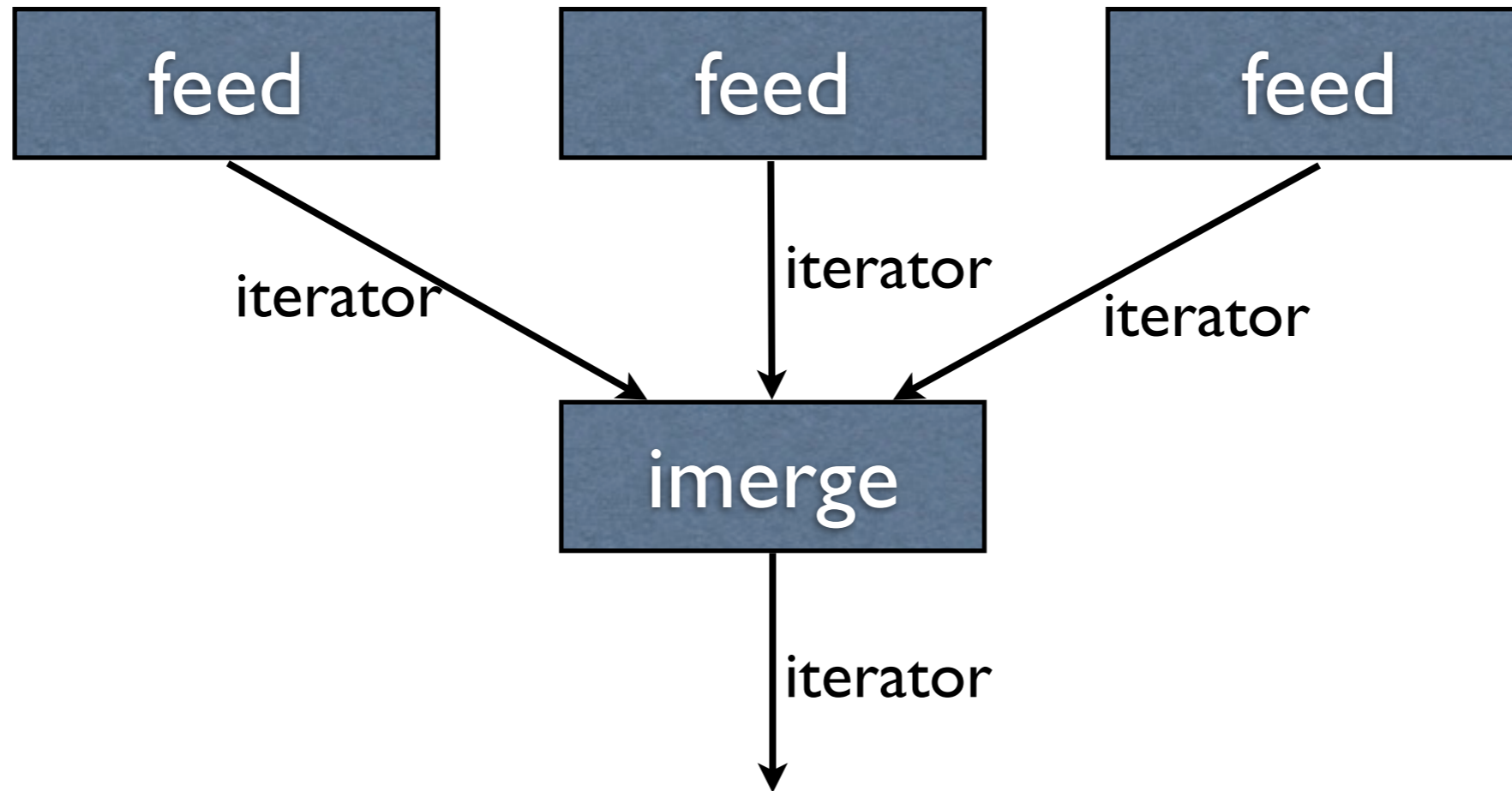
feed

feed

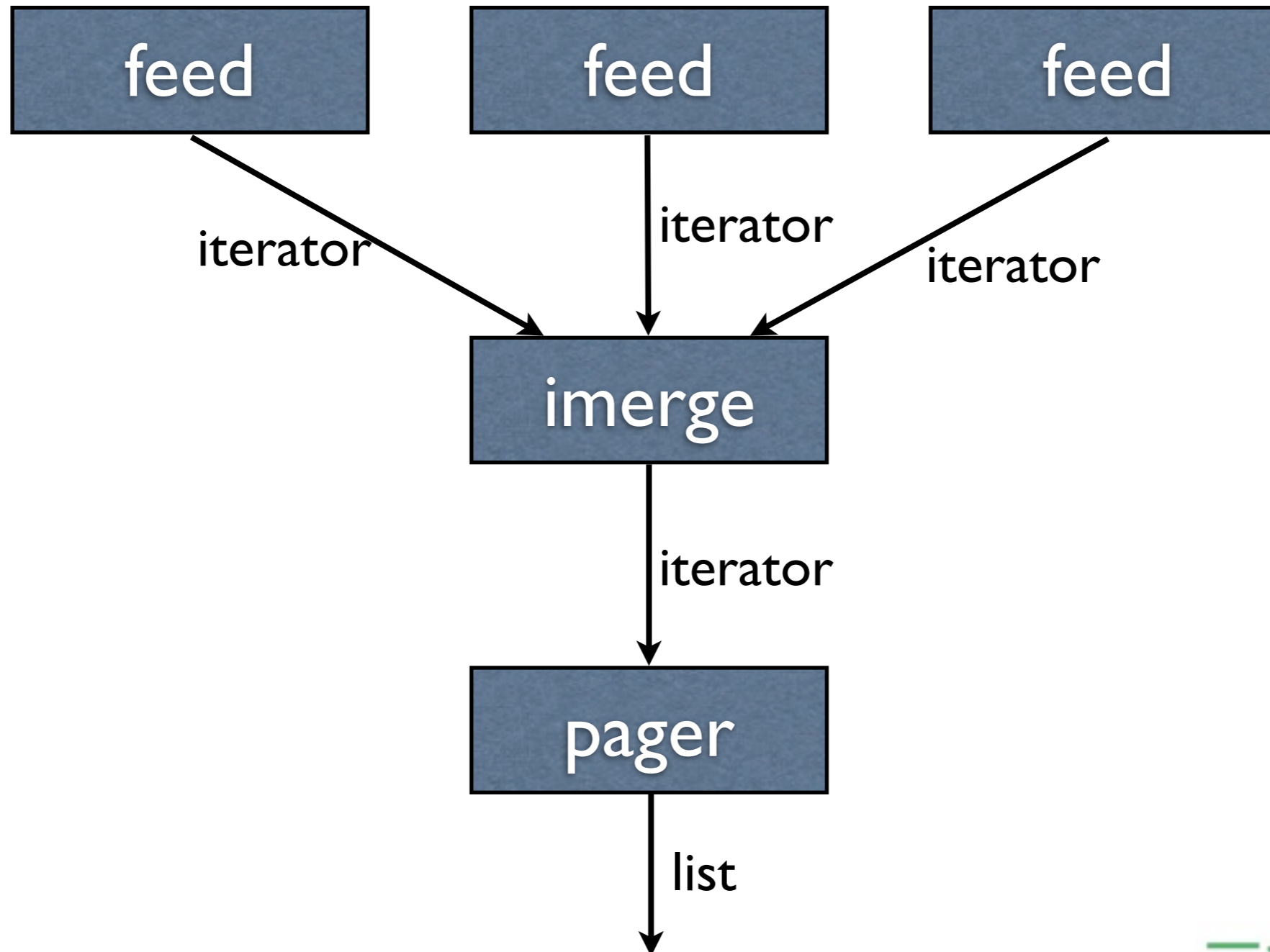
Generators



Generators

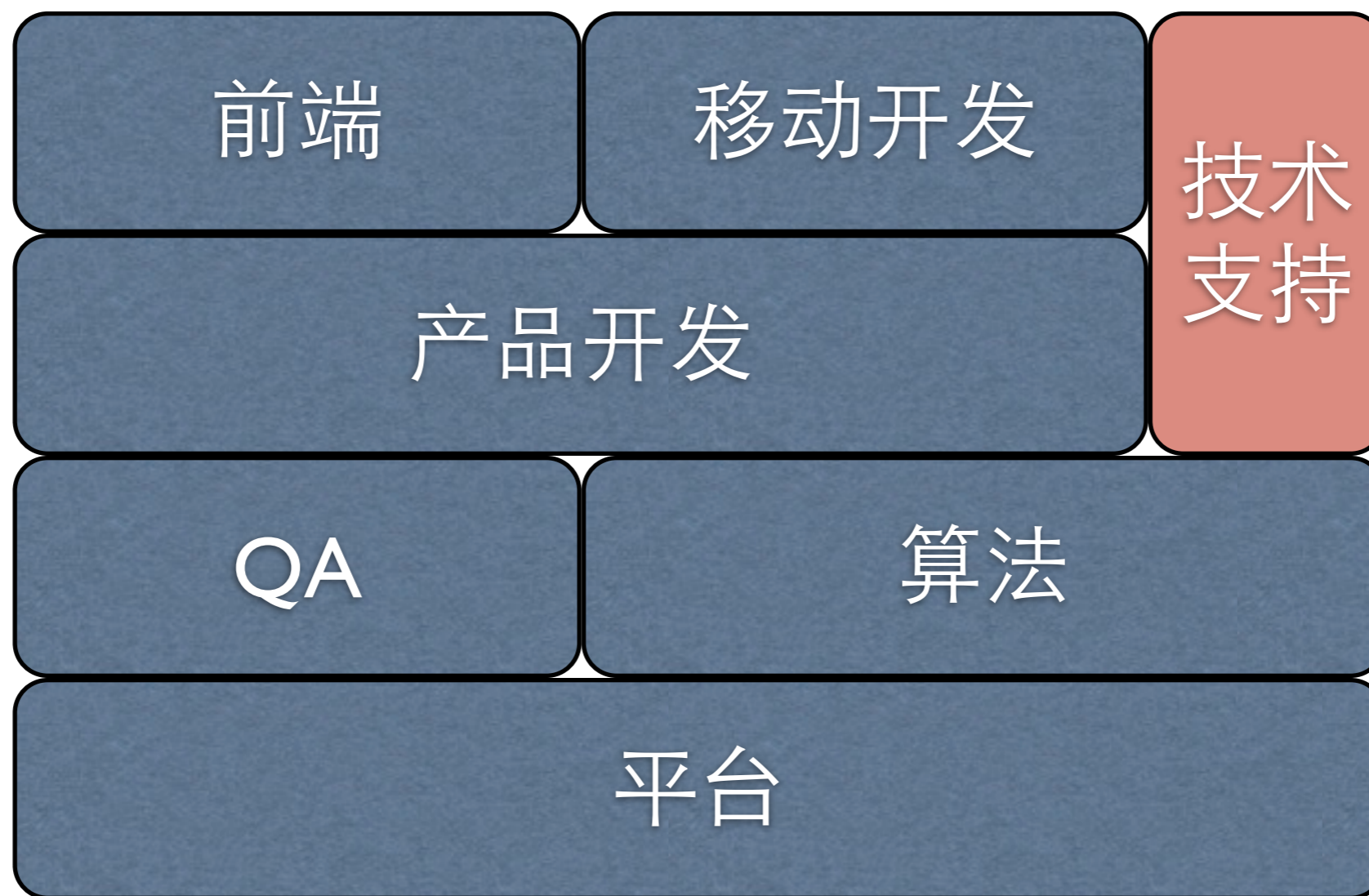


Generators



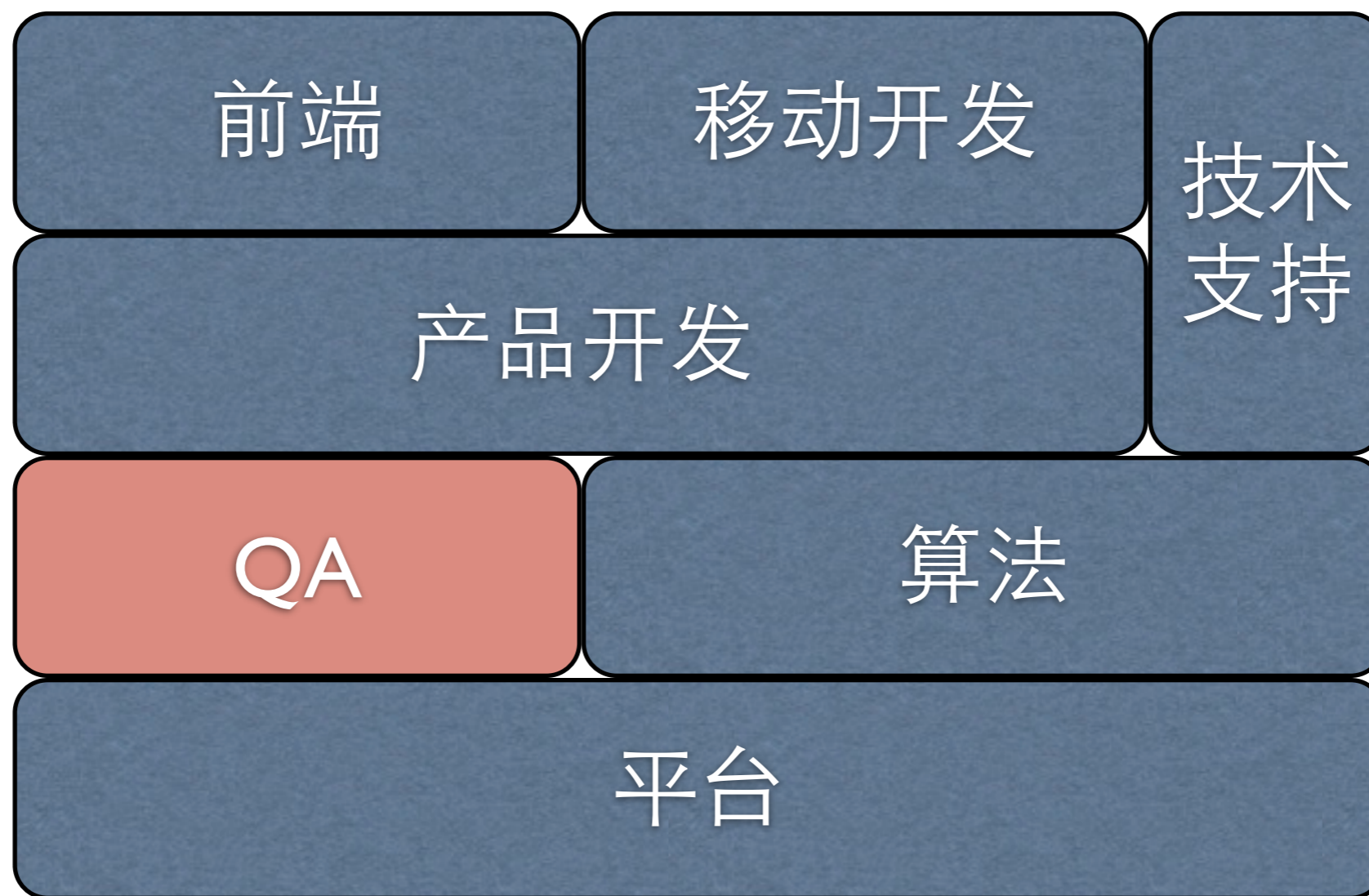
Meta Programming

```
class MetaPage(object):  
    __metaclass__ = MetaObserver  
  
class Vote(Commentable, MetaPage):  
    kind = K_VOTE  
    kind_name = 'vote'  
  
assert MetaObserver.get_class_by_name('vote') is Vote
```


















Restful MongoDB Service

- 提供给商业合作方的数据存储接口
- django-piston
- sleepy



pylint

pylint 117 violations (17 not shown)		
73		Line too long (106/80)
73		Method 'update' is abstract in class 'IData' but is not overridden
73		Interface not implemented
73		Too many ancestors (9/7)
73		Too many public methods (64/20)
91		Redefining built-in 'id'
91		__init__ method from base class 'IData' is not called
91		__init__ method from base class 'PropsMixin' is not called
91		__init__ method from base class 'StatusCommentMixin' is not called
91		__init__ method from base class 'StatusLikeMixin' is not called
91		__init__ method from base class 'StatusReshareMixin' is not called
91		__init__ method from base class 'StatusTypeMixin' is not called
95		Line too long (89/80)
99		Line too long (120/80)
99		Operator not followed by a space

- 代码静态检查
- SQL inject 漏洞检查
- XSS 漏洞检查

onimaru

54625 File "cmemcached_imp.pyx", line 280, in cmemcached_imp._prepare 8 分钟 ago

error root ValueError: 'unmarshallable object'

Details

Messages

ValueError: 'unmarshallable object'

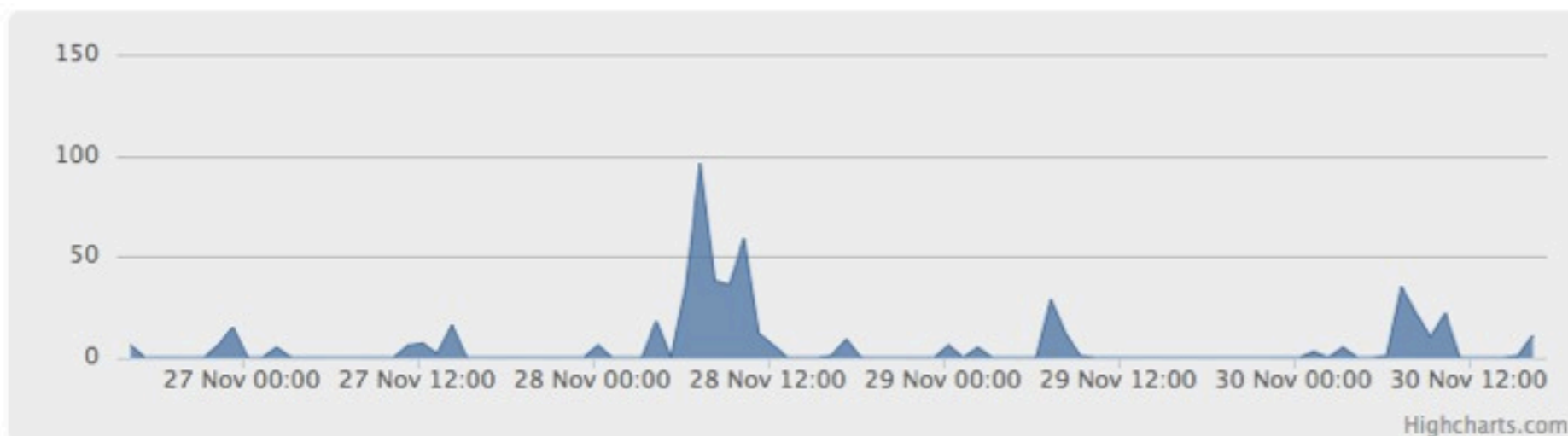
Request Method: POST

Request URL: <http://shuo.douban.com/api/in/attachment>

Exception Value: 'unmarshallable object'

Traceback [Switch to copy-and-paste view](#)

Frequency



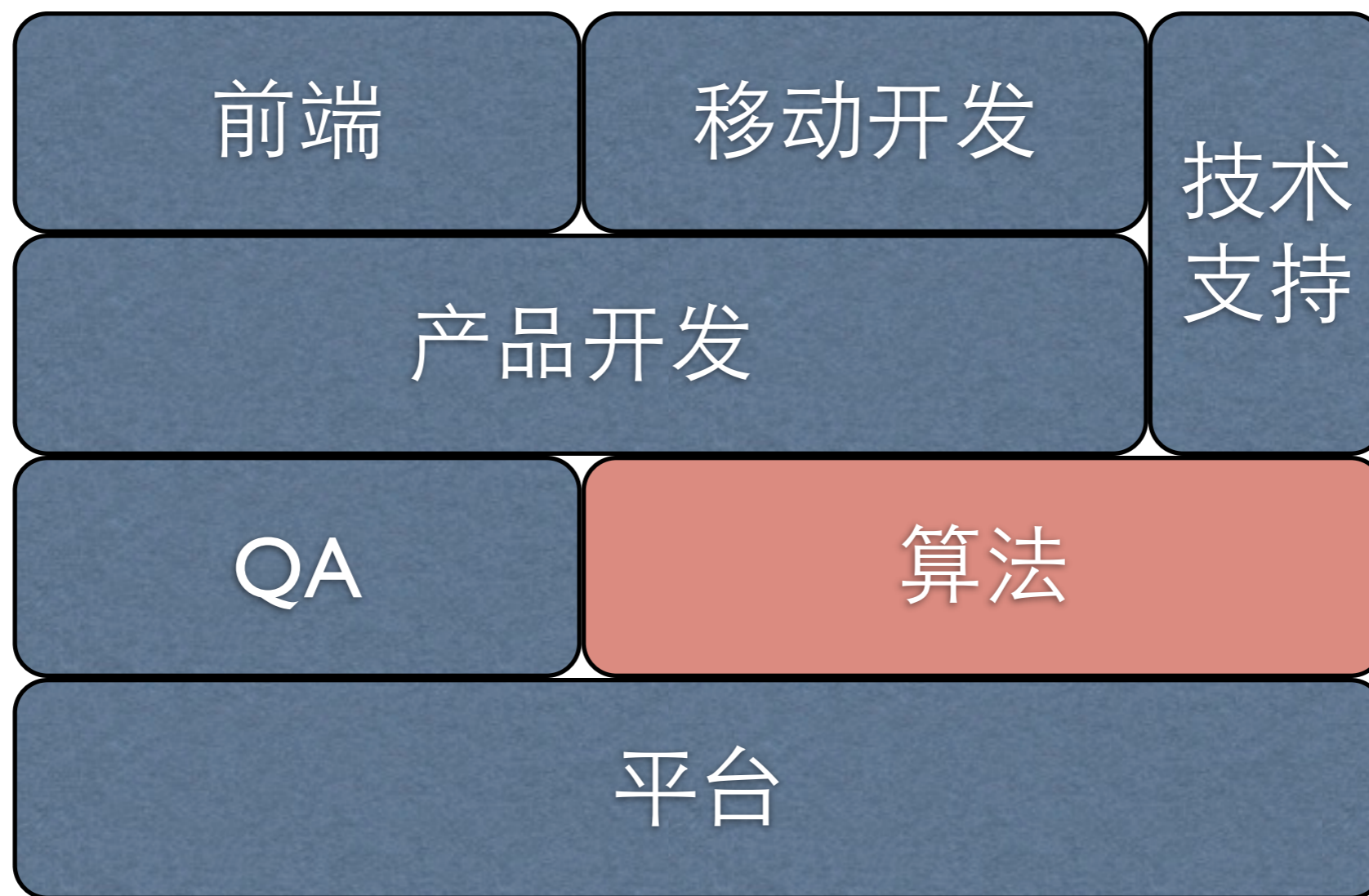
Highcharts.com

- 错误信息收集系统
- Based on django-sentry

release manager



- 自动打tag
- 确认测试结果
- 发送上线报告
- django powered



cmy - MySQL Client

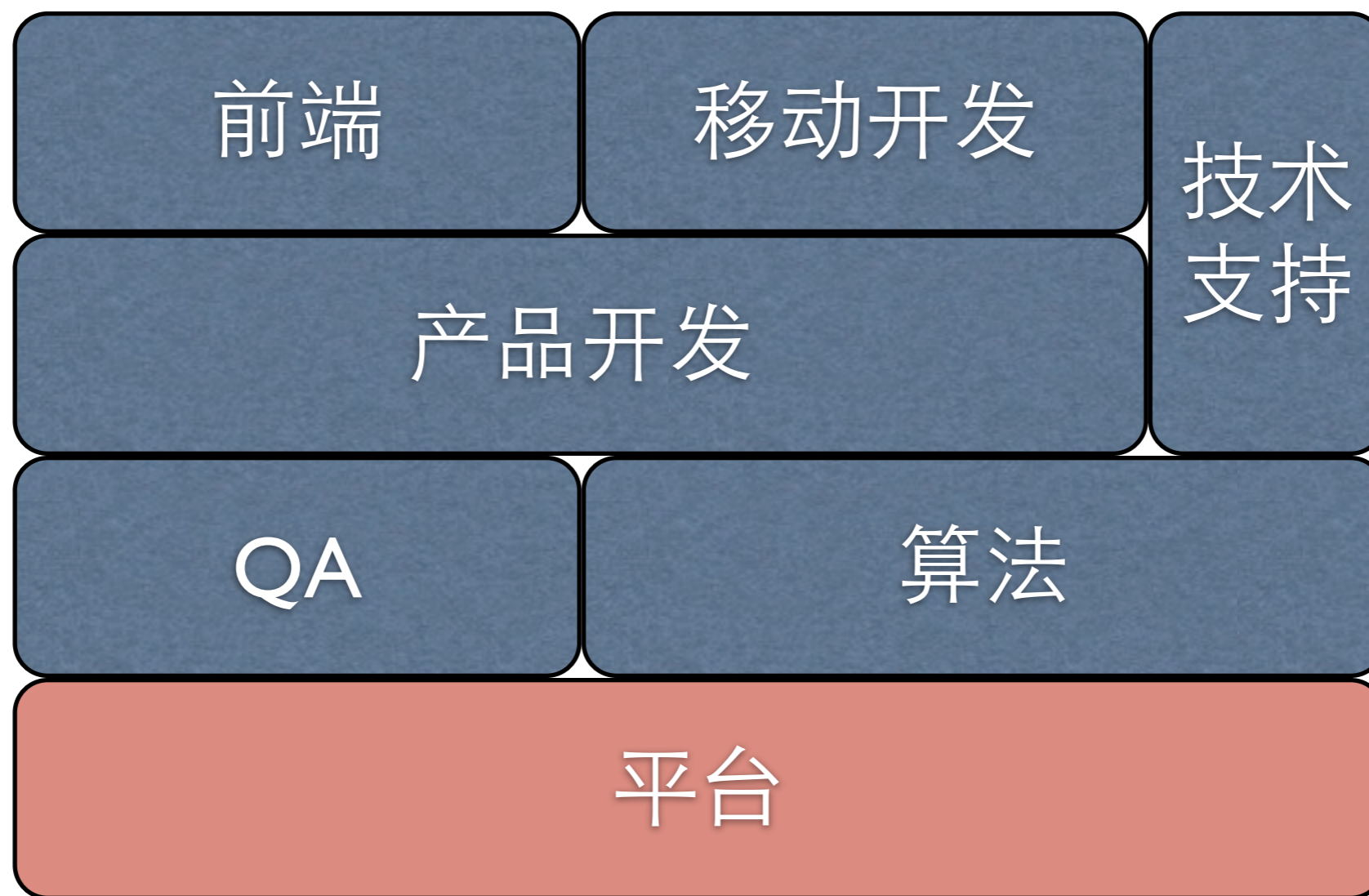
- MySQL客户端，用Python/C API编写
- 只支持 select 语句
- 返回迭代器
- 只在被访问时生成python对象
- 大数据量时比MySQLdb效率高

C++ Intergration

- `cos_sim load_data.py`

```
def load():  
    for user, subject, rating in CmyResult(  
        "select user_id, subject_id, rating from user_interest"):  
        cos_sim_io.add_edge(user, subject, rating)
```

用Python加载和初始化数据（灵活）
用C++计算（高效）



Online Profiler

12164 function calls (12109 primitive calls) in 0.250 CPU seconds

Ordered by: internal time, call count

List reduced from 274 to 60 due to restriction <60>

ncalls	tottime	percall	cumtime	percall	filename:lineno(function)
1000	0.098	0.000	0.098	0.000	cmemcached.py:22(restore)
61	0.064	0.001	0.070	0.001	cmemcached.py:64(get)
14	0.026	0.002	0.121	0.009	cmemcached.py:68(get_multi)
908	0.010	0.000	0.017	0.000	decorator.py:22(gen_key)
908	0.005	0.000	0.033	0.000	decorator.py:39(_)
67	0.004	0.000	0.199	0.003	debug.py:26(_)
898	0.004	0.000	0.004	0.000	format.py:57(_)
953	0.003	0.000	0.095	0.000	cmemcached.py:70(<genexpr>)
1	0.003	0.003	0.149	0.149	__init__.py:1866(get_loc_period_events)
908	0.002	0.000	0.007	0.000	format.py:10(format)
2	0.002	0.001	0.143	0.071	__init__.py:346(gets)
963	0.002	0.000	0.075	0.000	wrapper.py:138(get)
67	0.001	0.000	0.001	0.000	debug.py:36(format_call)
878	0.001	0.000	0.001	0.000	__init__.py:1240(is_published)
8	0.001	0.000	0.128	0.016	wrapper.py:146(get_multi)
233	0.001	0.000	0.001	0.000	cgi.py:1031(escape)

DoubanService

- 基于thrift的RPC服务框架
- 用PasteScript实现代码生成和提供服务
- 将 https://github.com/twitter/thrift_client 移植到Python，负载均衡和failover
- 与nagios和munin集成监控

Dpark

- 一个分布式计算框架
- Modeled after Spark, but using Python
- 基于mesos实现资源调度

```
dpark = DparkContext()
rdd = dpark.textFile(filepath)

def filter(line):
    return pattern in line

for line in rdd.filter(filter).collect():
    sys.stdout.write(line)
```

pyrcap + dpkt

```
pc = pcap.pcap(interface)
pc.setfilter('tcp dst port %s' % port)
for ptime, pdata in pc:
    ether_pkt = dpkt.ethernet.Ethernet(pdata)
    ip_pkt = ether_pkt.data
    tcp_pkt = ip_pkt.data
    tcp_data = tcp_pkt.data

    pkt_header = tcp_data[:3] + '\x00' + tcp_data[3]
    pkt_len, pkt_no = struct.unpack('<IB', pkt_header)
    if pkt_len < 2:
        continue
    pkt_data = tcp_data[4:]
    command_type, = struct.unpack('B', pkt_data[0])
    if command_type != COM_QUERY:
        continue
    query = pkt_data[1:]
```

- Warm up MySQL slaves
- Analyze MySQL issue with real-time queries

DAE

- Modeled after Google AppEngine, but for internal use only
- virtualenv to manage dependencies
- gunicorn + gevent
- Best practice built-in
- Developing...

编程语言 in 豆瓣



编程语言 in 豆瓣

C
Language



编程语言 in 豆瓣

C
Language

C++



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Language

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Objective-C

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Language

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Language

C++



Objective-C



C#

Q & A

Thanks