

Docker在B站的实战

Bilibili 运维开发工程师 吴佳兴

哔哩哔哩 - (°- °)つロ 乾杯~ - bilibili

About Me



- 吴佳兴
- <http://devopstarter.info>
- Bilibili运维开发工程师
- dockone.io 社区翻译
- 玩过Salt，搞过基础运维，也写点py，目前重点是Docker和Mesos及周边设施的建设。

弹幕视频网站

1亿的活跃用户
100万活跃UP主
扎根2次元文化

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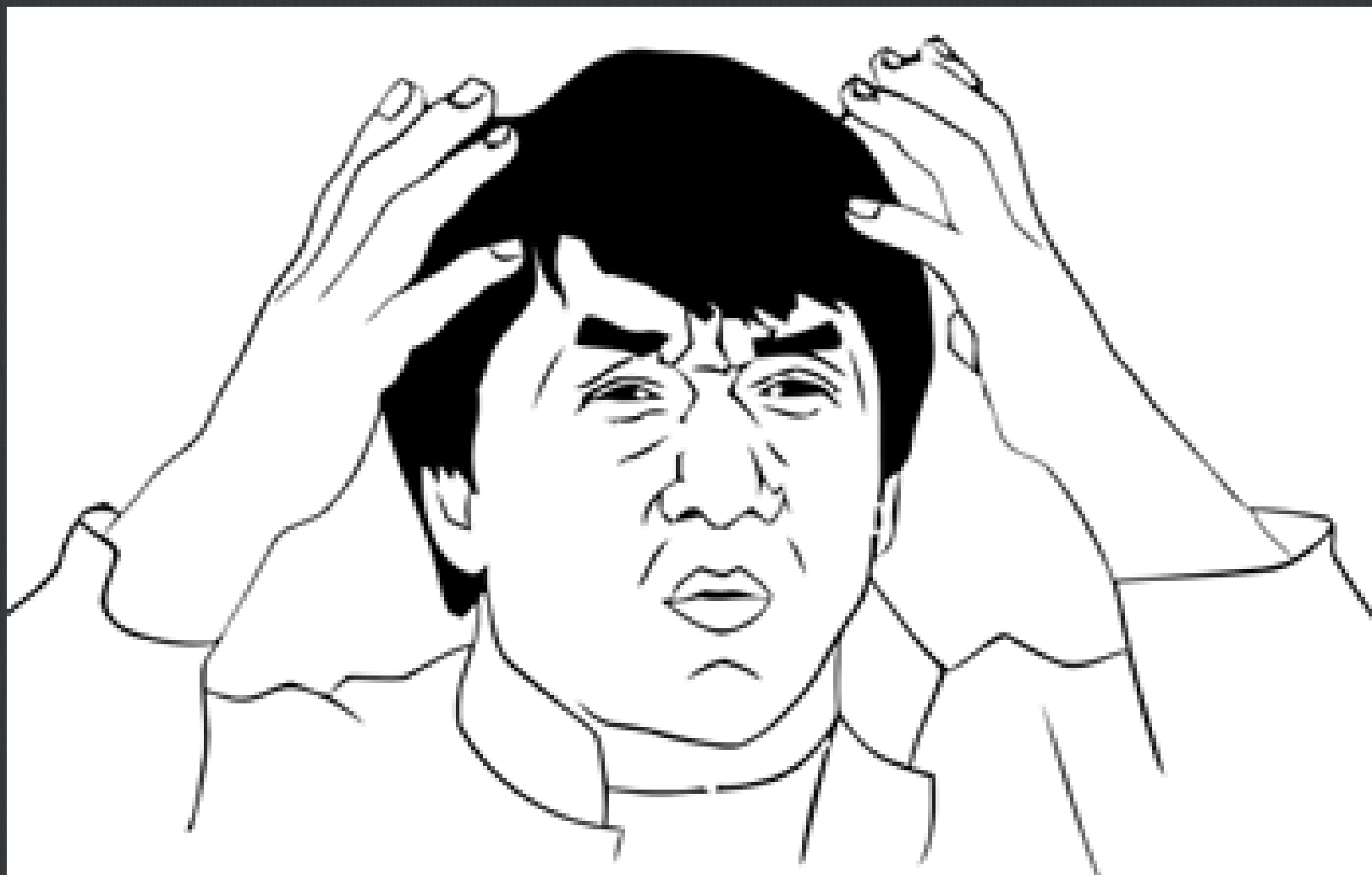


Contents

- Problems
- Jenkins married Mesos
- Containerized infrastructure
- Challenges
- TODOs

Problems

- 应用部署不够标准化
- 资源利用率低
- SLB配置复杂
- 物理机复用严重
- 没有稳定的集成环境
- ...



测试环境又**炸了？？？

Solution ?

Dockerize it !

Jenkins married Mesos



Apache
MESOS™



Jenkins

<https://github.com/jenkinsci/mesos-plugin>



jks pipeline
build

jks
framewo
rk

Mesos-Master

mesos plugin



jenkins-master

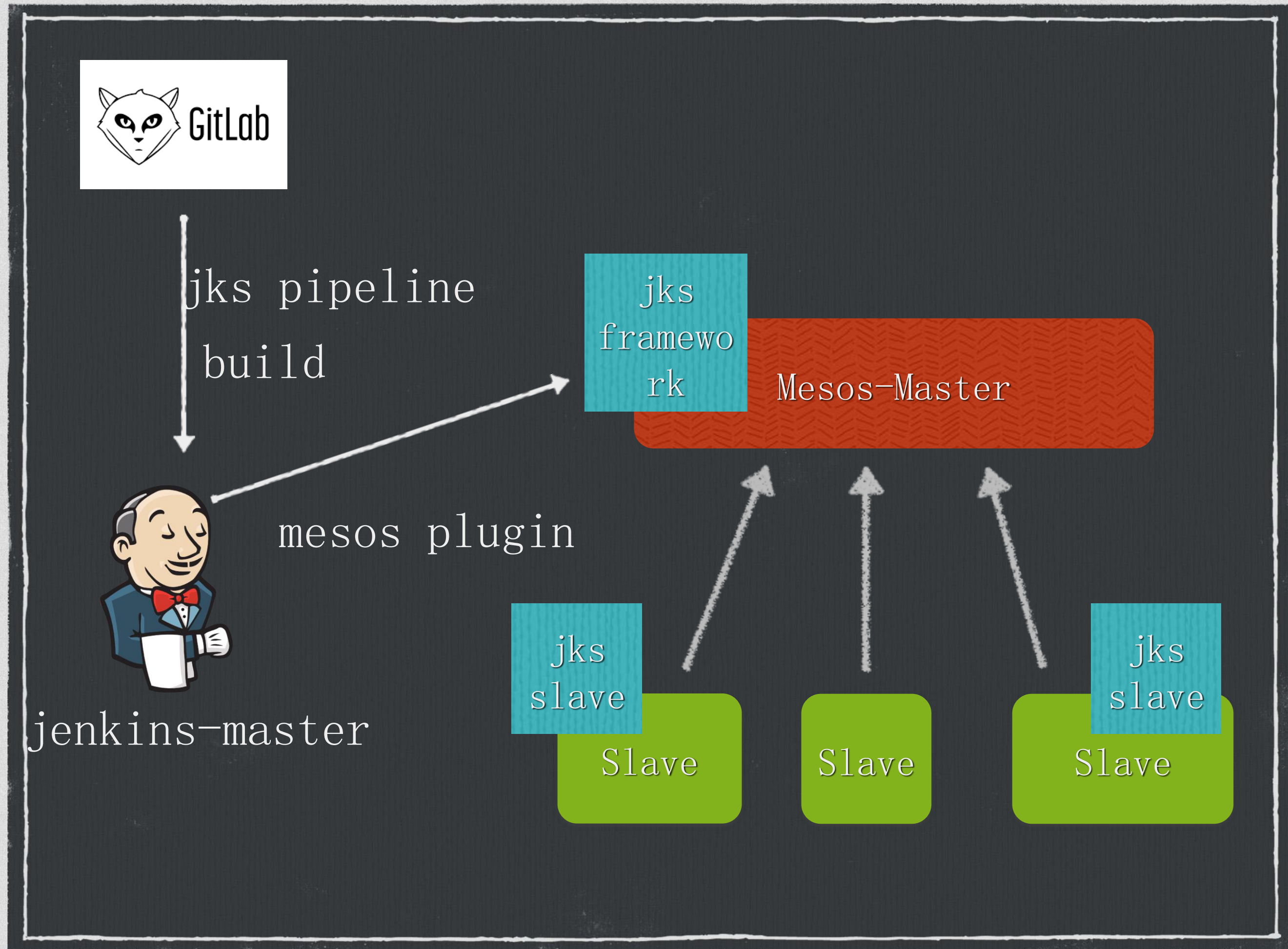
jks
slave

Slave

Slave

jks
slave

Slave



Jenkins married Mesos

[Jenkins CD](#)

Parallel
tests
Docker
workflow

Pipeline

Definition


Pipeline script

Script

```
1 node('mesos') {  
2  
3     def job_name = "${env.JOB_NAME}"  
4     def relativeTargetDir = "/var/docker-f  
5     def scriptTargetDir = "/var/docker-f  
6     def clearpath = "/var/dockerfiles/php  
7     def workdir="/var/dockerfiles/php${ve  
8     def Git_Path = "${git_path}"  
9     def Git_Branch = "${git_branch}"  
10    def App_name="${app_name}"  
11    def App_tag="${docker_tag}"  
12    def php_tag="php${version}"  
13    def go_build="${build_image}"  
14    def php_build_image="${build_image}"  
15    def Port="${port}"  
16
```

☒ Use Groovy Sandbox

Jenkins married Mesos

 持续集成

 退出

项目管理

项目管理

配置管理

工单管理

日志

发起工单

测试环境

测试

集成环境

集成回归

创建测试实例

开始创建实例

构建ID: 583

实例创建流程

Create bigdata path	GIT 拉取app-home-py	GIT 拉取script 耗时: 728ms	Docker Docker run pkg	bigdata Docker Build	Run Marathon App
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运行测试脚本

运行结果

测试脚本: [getkey 1.0.getkey](#)

执行CASE耗时:

构建执行总耗时: 2.071s

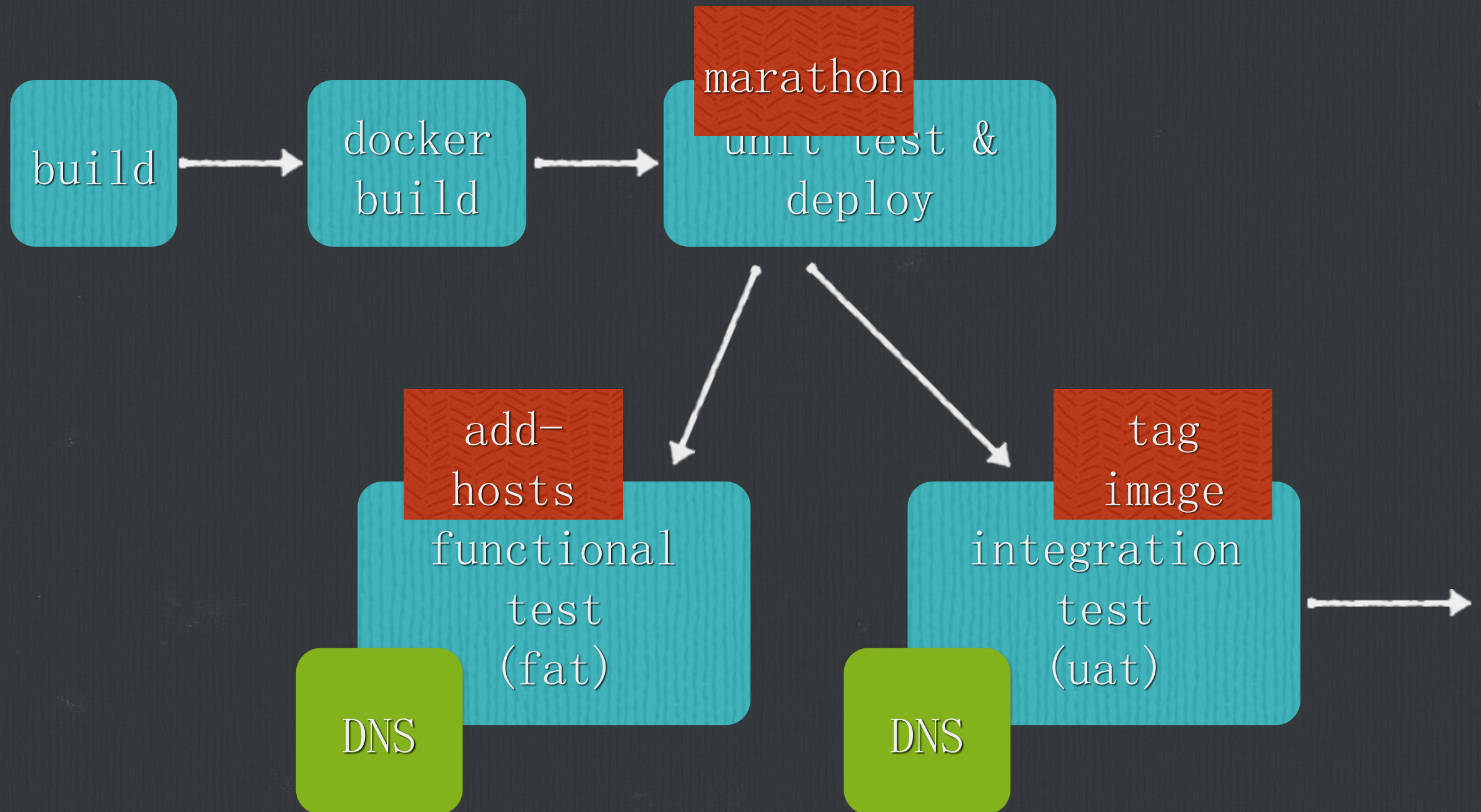
通知测试

邮件已发送

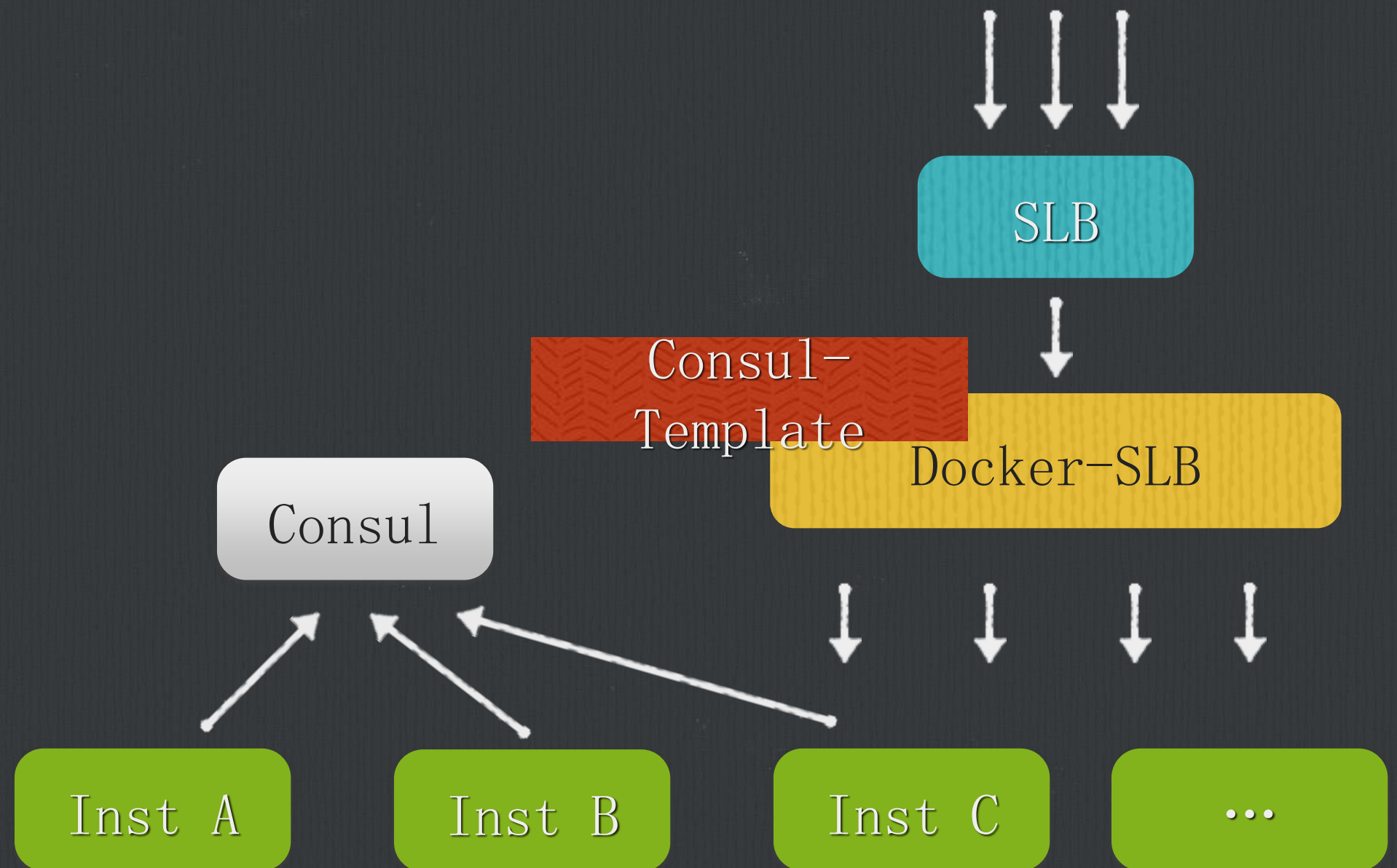
(项目: app-home-py, 创建人: 兰彬)

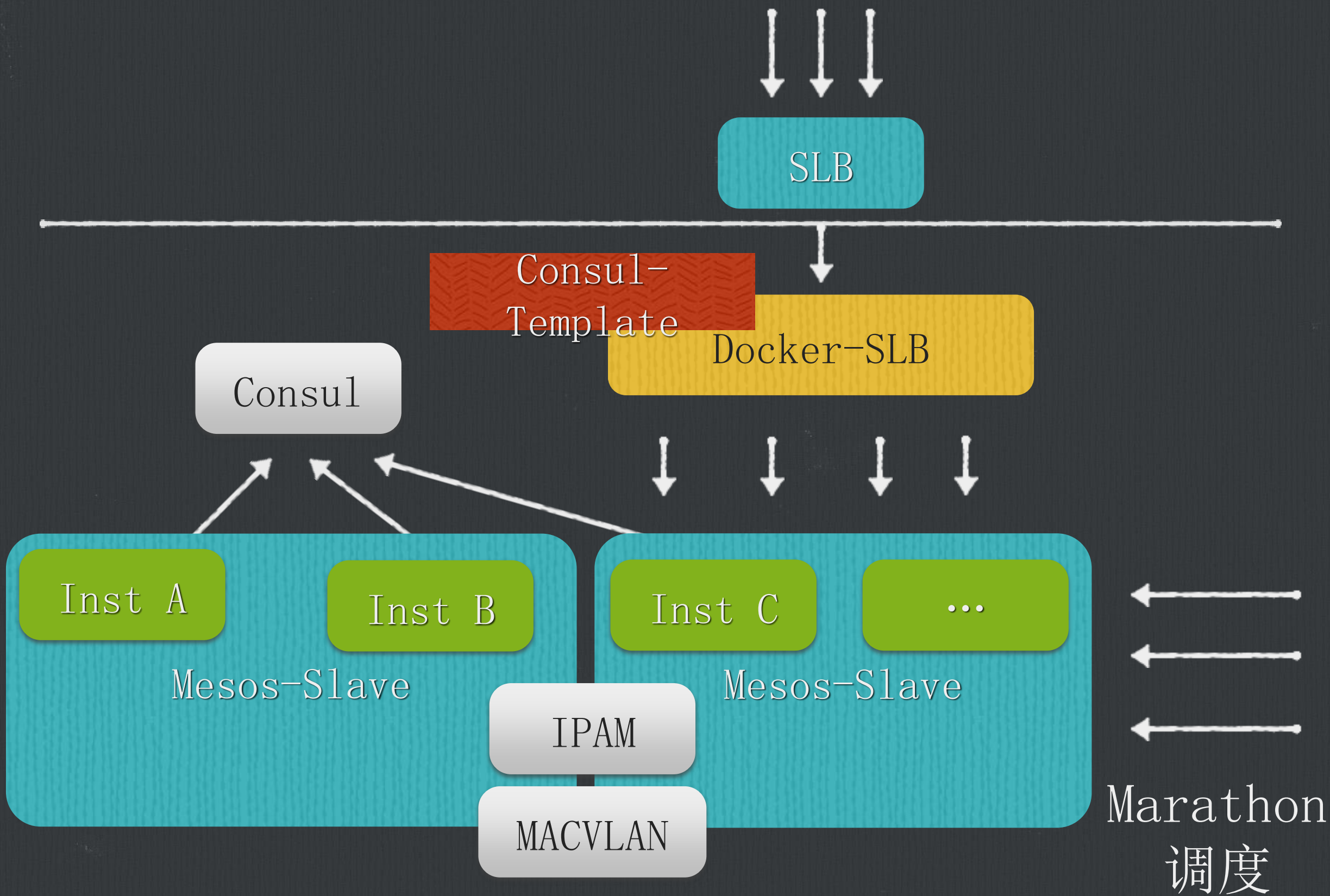
彬, HOST: (redacted)

Jenkins married Mesos



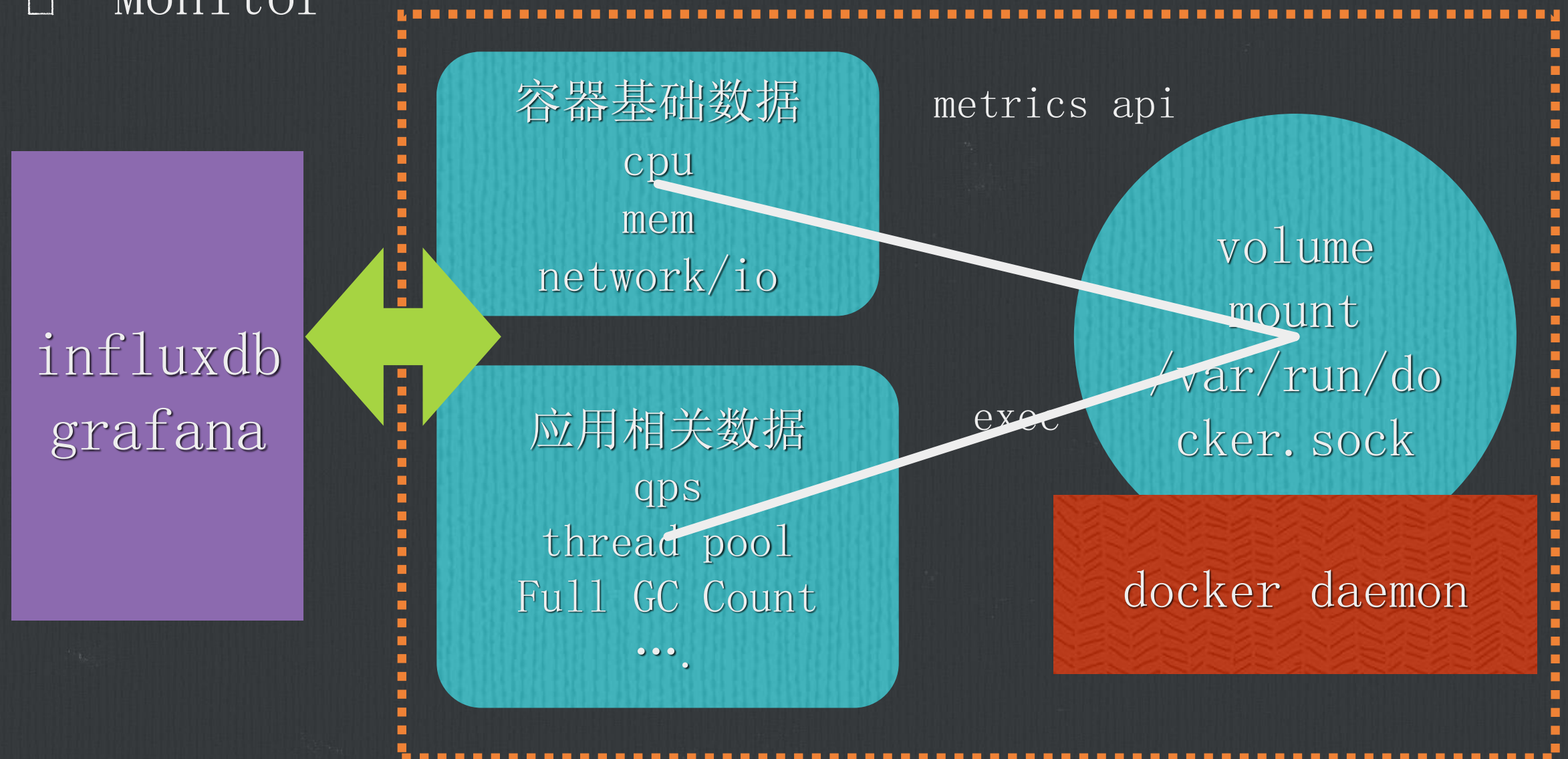
Containerized infrastructure





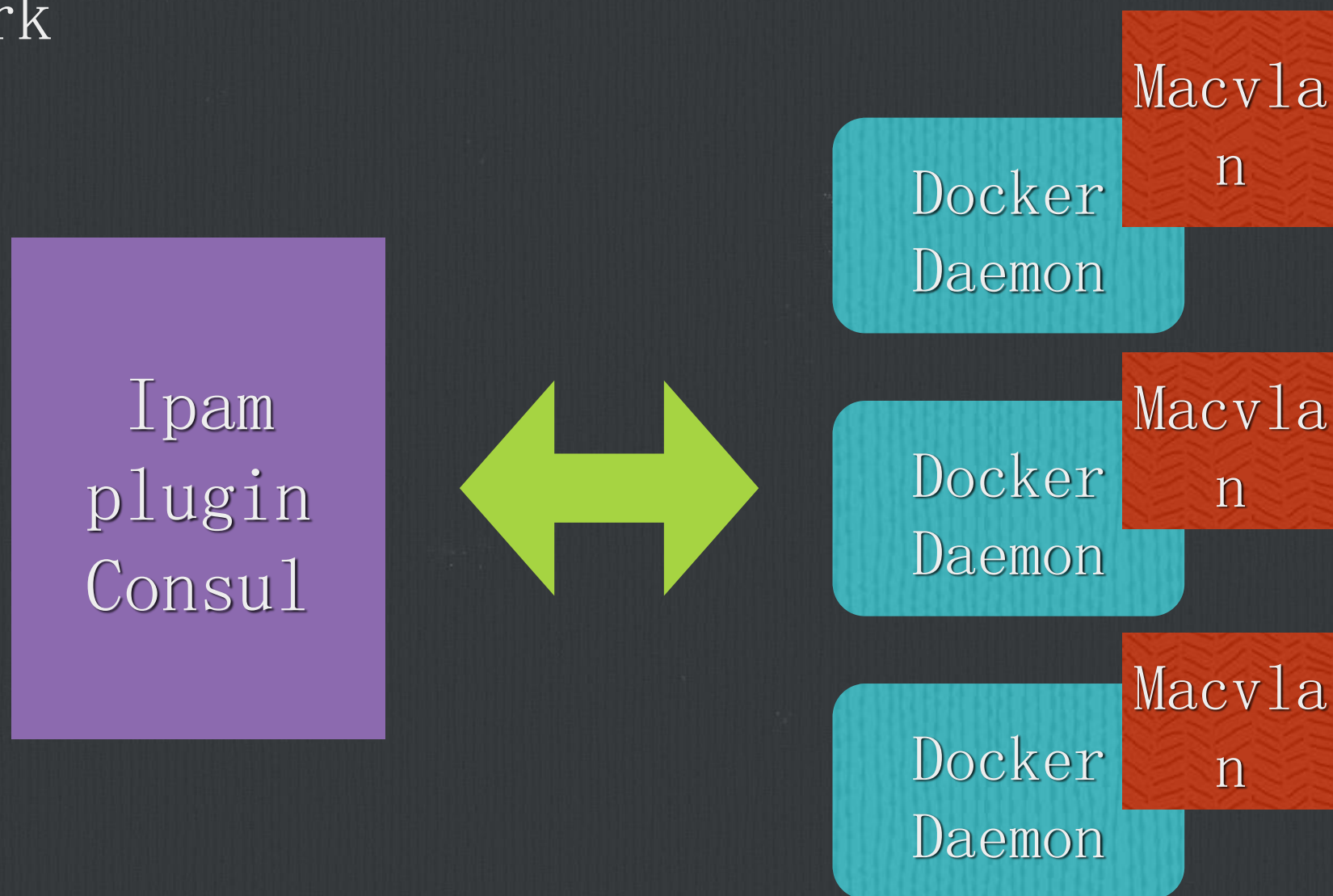
Containerized infrastructure

□ Monitor



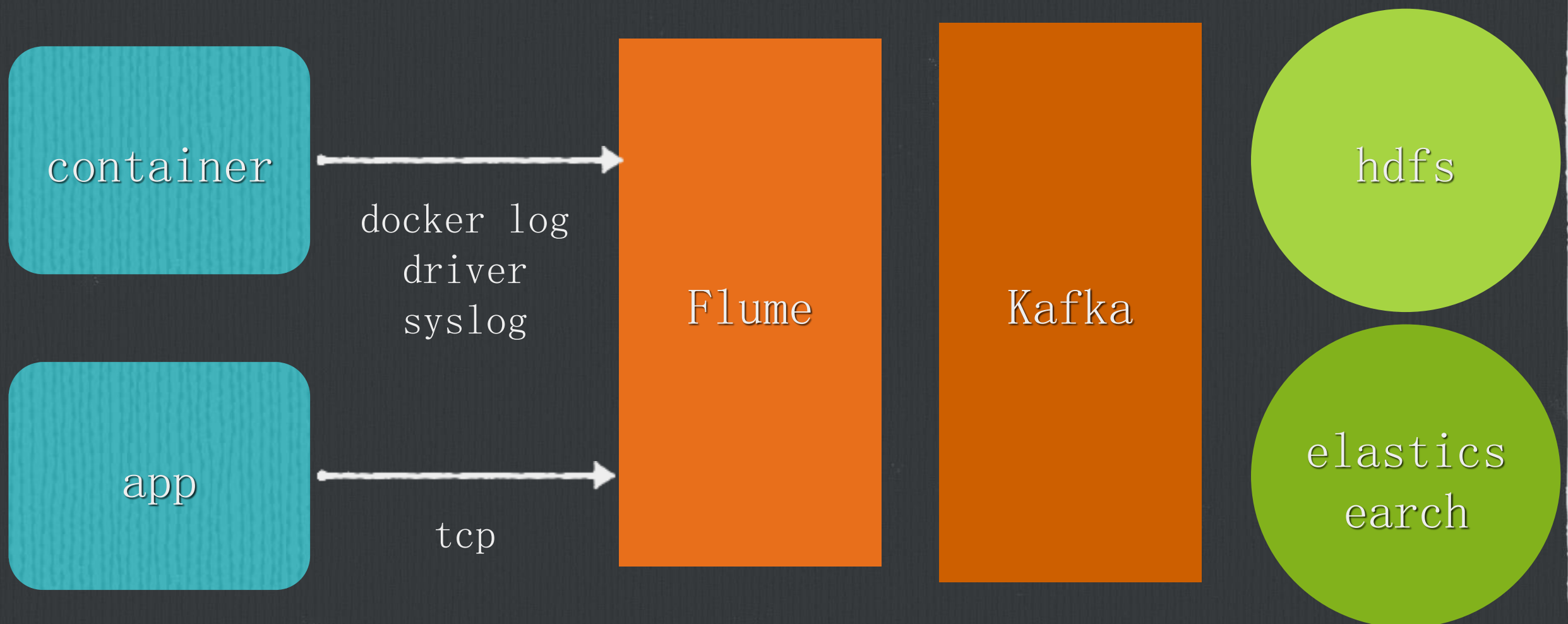
Containerized infrastructure

□ Network



Containerized infrastructure

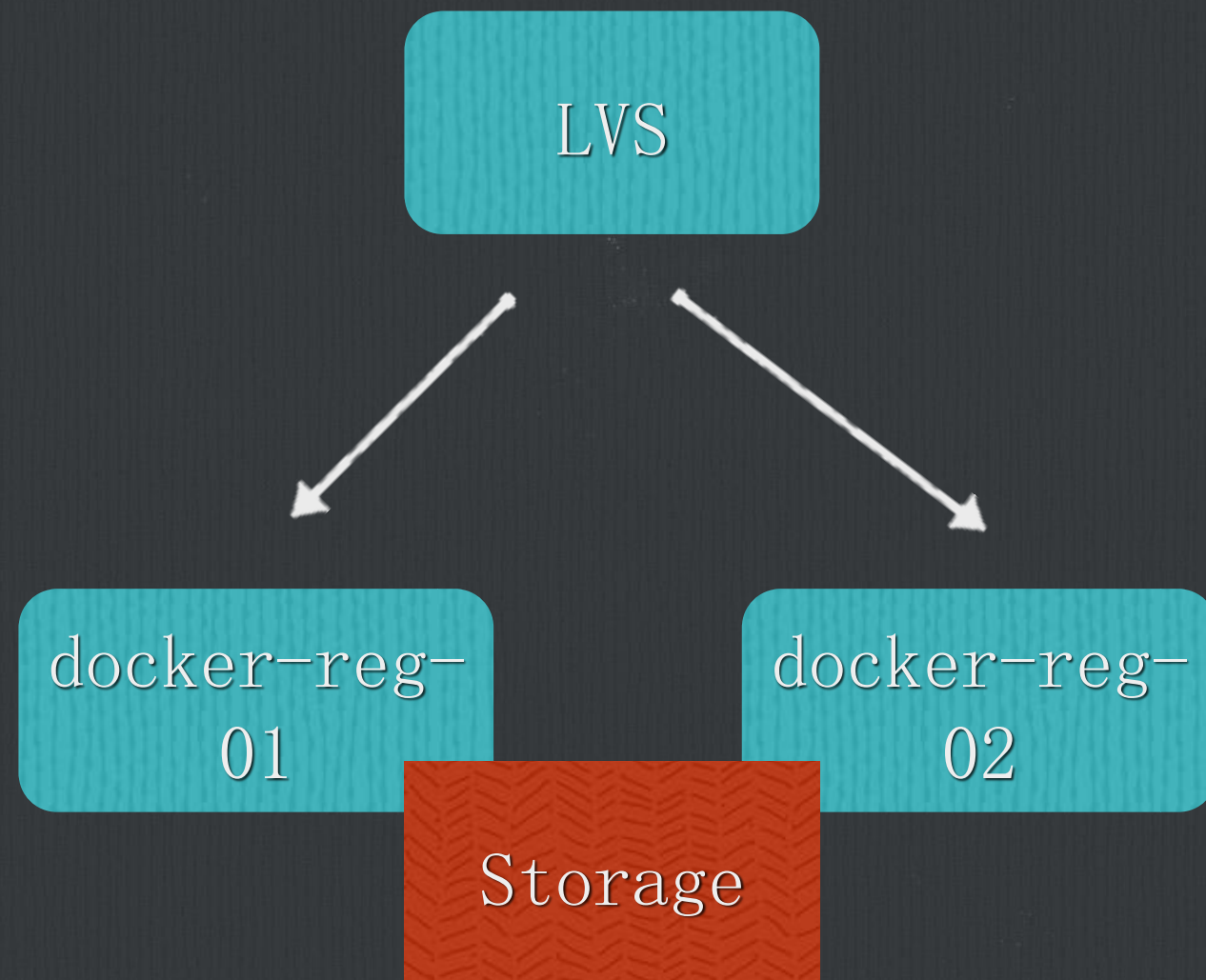
□ Logging



Containerized infrastructure

□ Registry

Habor?



Containerized infrastructure

□ PaaS

- 镜像管理
- 应用发布
- Web Console管理
- 配置、监控、告警

Containerized infrastructure

□ PaaS

灰度更新

镜像

docker-reg.bilibili.co/account-service

灰度版本选择

v5.1.3

配置中心版本

v5

创建容器数量

1

返回

确认

Challenges

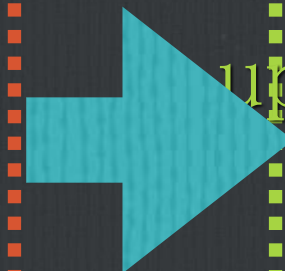
docker daemon hung

3.16 kernel crash

文件系统缺陷

docker registry delete image

...



docker 1.12.3 fix

update kernel 4.4.27

overlayfs2

do GC run

...

Thank you!

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