



利用Mesos和Docker 快速构建 DEV/BETA环境

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- 一 . **背景**
- 二 . **如何落地**
- 三 . **技术架构**
 - ◆ **系统架构**
 - ◆ **功能展示**
- 四 . **存在问题及未来计划**
- 五 . **经验总结**

➤ 业务线的期望

- 一键部署整套环境（包含基础服务）
- 快速
- 环境隔离
- 学习和维护成本低

环境!!!

虚拟机
资源有限

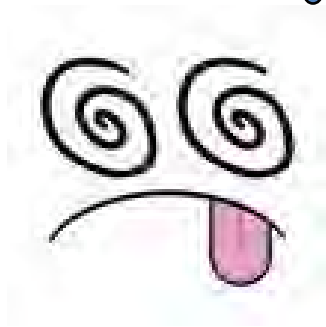
环境复杂
涉及几十个模块

代码、配置和
数据库经常
不匹配

沟通成本

公共服务
排队使用

多套环境维护
成本极高



➤ 为什么选 Docker+Mesos

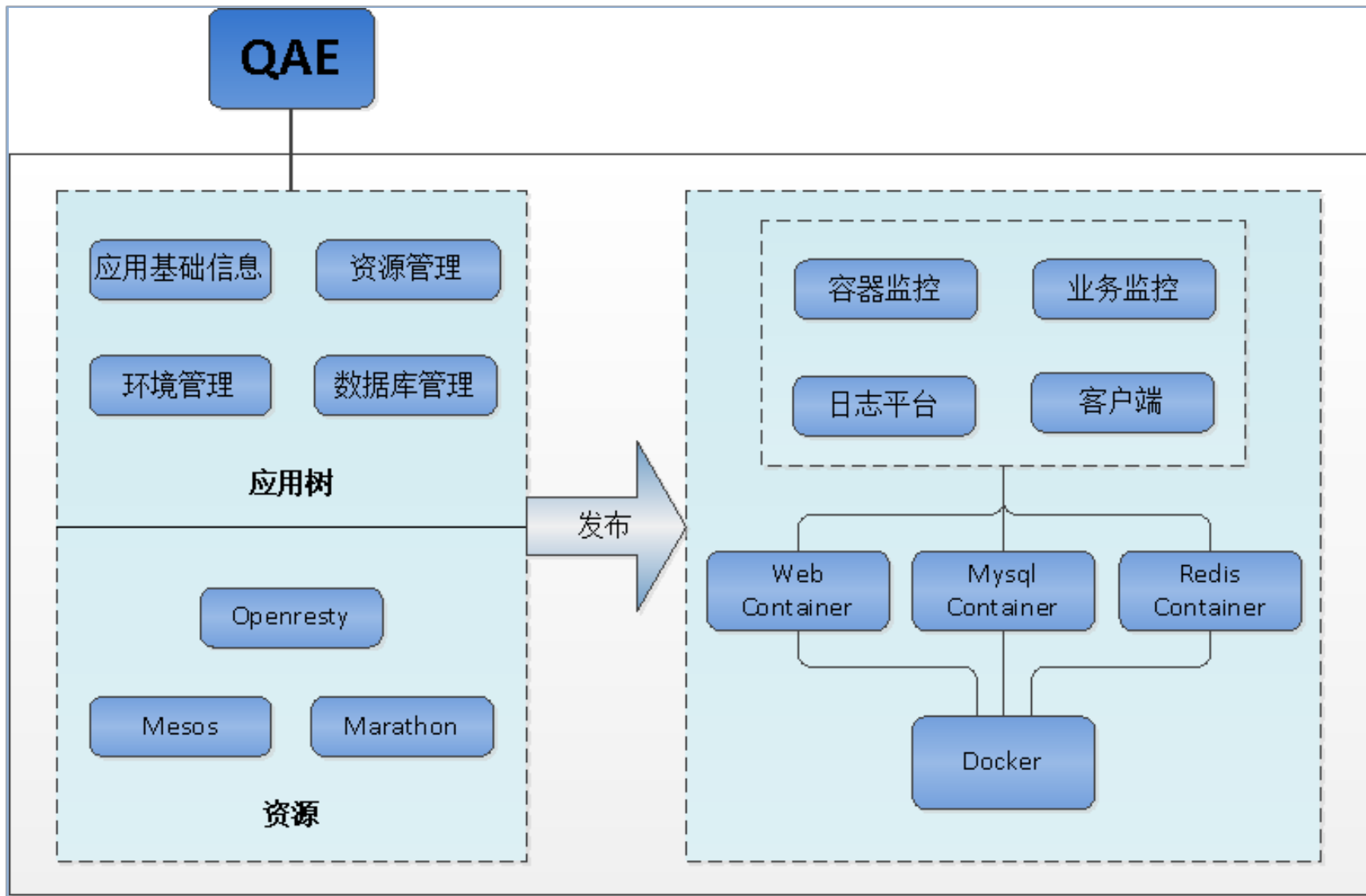
- 轻量级、快
- Mesos+Marathon符合功能需求
- 公司日志系统已经上线使用

如何落地

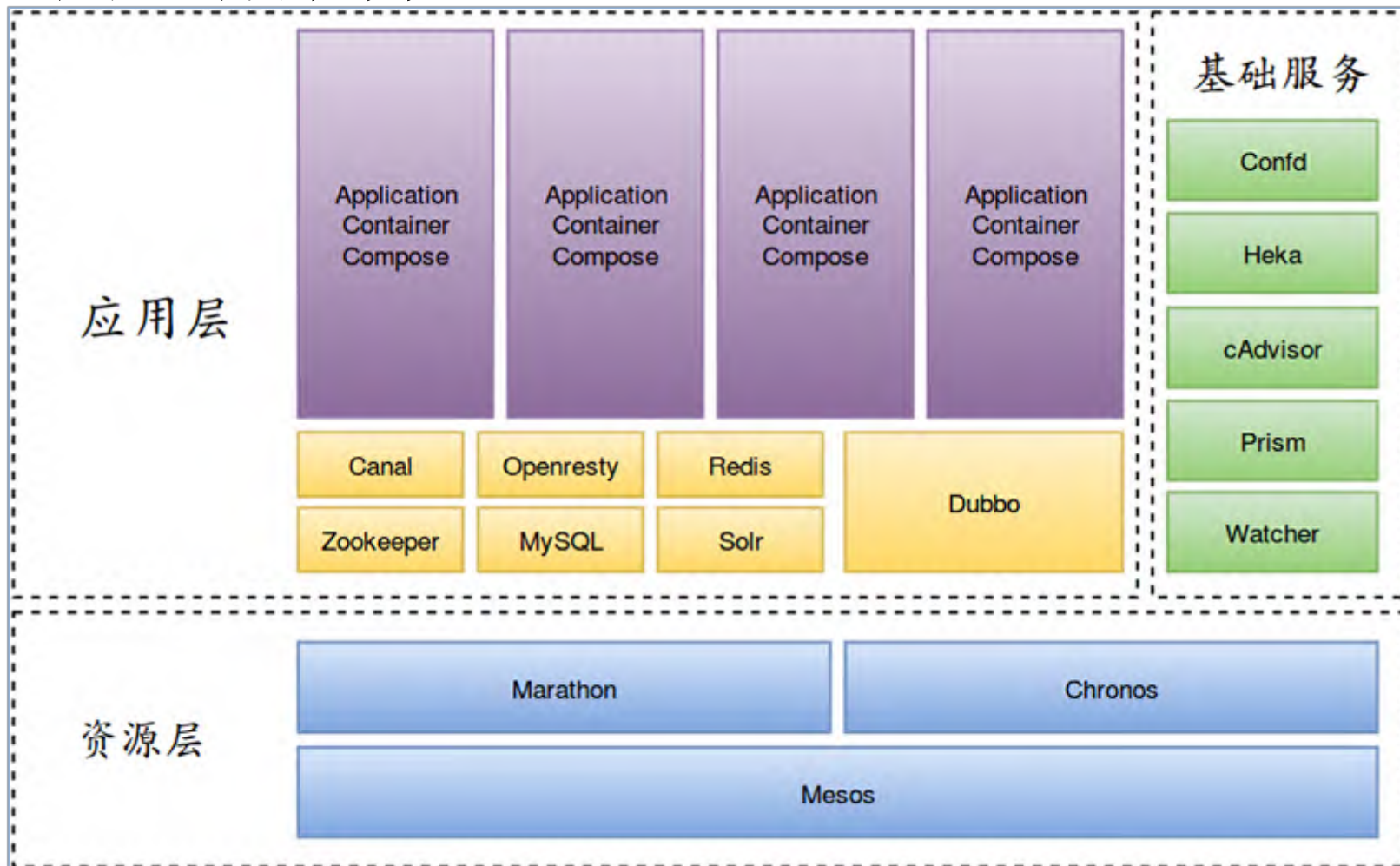
- 是否每次build镜像
- 是否使用Jenkins-Mesos
- 加速DEV/BETA环境构建
- 使用方式如何平滑过渡
- 如何建立容器发布的流程标准
- 运维能否支撑
- 资源利用率是否真的提高了



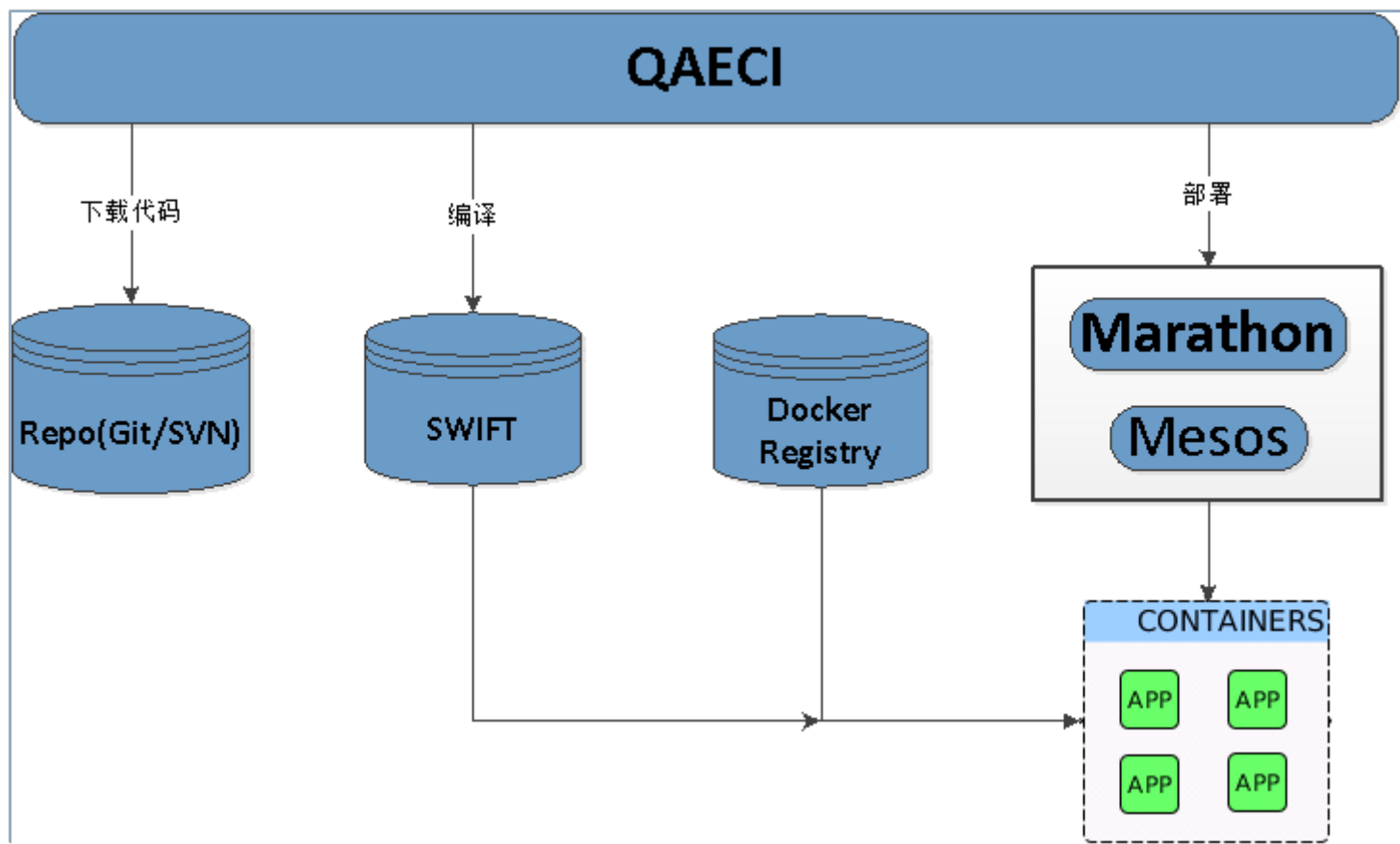
系统架构



应用运行架构:



QAECI架构:



➤ 系统关键点

- 使用app_code作为应用的唯一标识
- 基础信息统一记录
- 配置文件模板化
- 计算部署顺序
- 泛域名

功能展示

java



应用列表

新增

应用名称

f_tts_inter_java

f_tts_inter_java_nexus



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应用详情

编辑

应用名称	f_tts_inter_java
app_tree	
scm_root	git@gitlab.corp.qunar.com:flightdev-itts/tts_inter_java.git
src_dir	./target/tts/
build_Method	mvn
rsync_Dst	
webserv_Type	tomcat
check_urls	/config/init.jsp
service_name	
rsync_Exclude	tenpay_cacert.jks
deploy_dependency	f_inter_tts_policy,f_publicdata_cache,f_itts_insurance,f_tts_currency
TOMCAT_JAVA_OPTS	-Xms512m -Xmx512m -Xmn256m -XX:PermSize=128m -XX:MaxPermSize=128m -server -XX:+DisableExplicitGC -Dqunar.logs=\$CATALINA_BASE/logs -Dqunar.cache=\$CATALINA_BASE/cache -verbose:gc -XX:+PrintGCDateStamps -XX:+PrintGCDetails -Xloggc:\$CATALINA_BASE/logs/gc.log

Jenkins > ittsdev_a > Qunar Build

-  修改记录
-  工作空间
-  Build with Parameters
-  删除 Project
-  配置
-  Rebuild Last
-  Job Config History
-  **Qunar Build**

公共模块

build_Type

deploy_Type

env_name

force_update

destroy_env

销毁所勾选的应用的指定环境，如果不需要全部销毁，请一定要反选不销毁的应用

- f_inter_search_server_mt
- f_fuwu_ttsi_ui
- f_tts_avfeedback
- f_ttsi_tgq
- f_inter_dispatch_order
- ttsi_airline_tgq
- f_inter_qtax
- f_itts_flightdetail
- f_plusmatchchange1
- f_fuwu_ttsi
- nginx
- memcached
- f_plusmatchchange2
- f_itts_ota_ticket_validate
- f_itts_newcommon_worker

Build History

构建历史 

x

- #5 2016-1-14 下午4:56
build_user:sophia.zhang
env_name:testa
- #4 2016-1-14 下午4:19
build_user:sophia.zhang
env_name:testa
- #3 2016-1-14 下午3:35
build_user:sophia.zhang
env_name:testa
- #2 2016-1-14 下午3:13

环境管理列表

新增环境

tts_beta_template

×

环境应用详情

编辑

job	tts_beta_template
manager	hongwei.lu × sophia.zhang × 新增管理员
env_name	betatemplate
deploy_Type	beta
build_Type	docker-beta-config
destroy_env	销毁环境

App列表

增加App

全选

反选

构建

构建所有失败应用

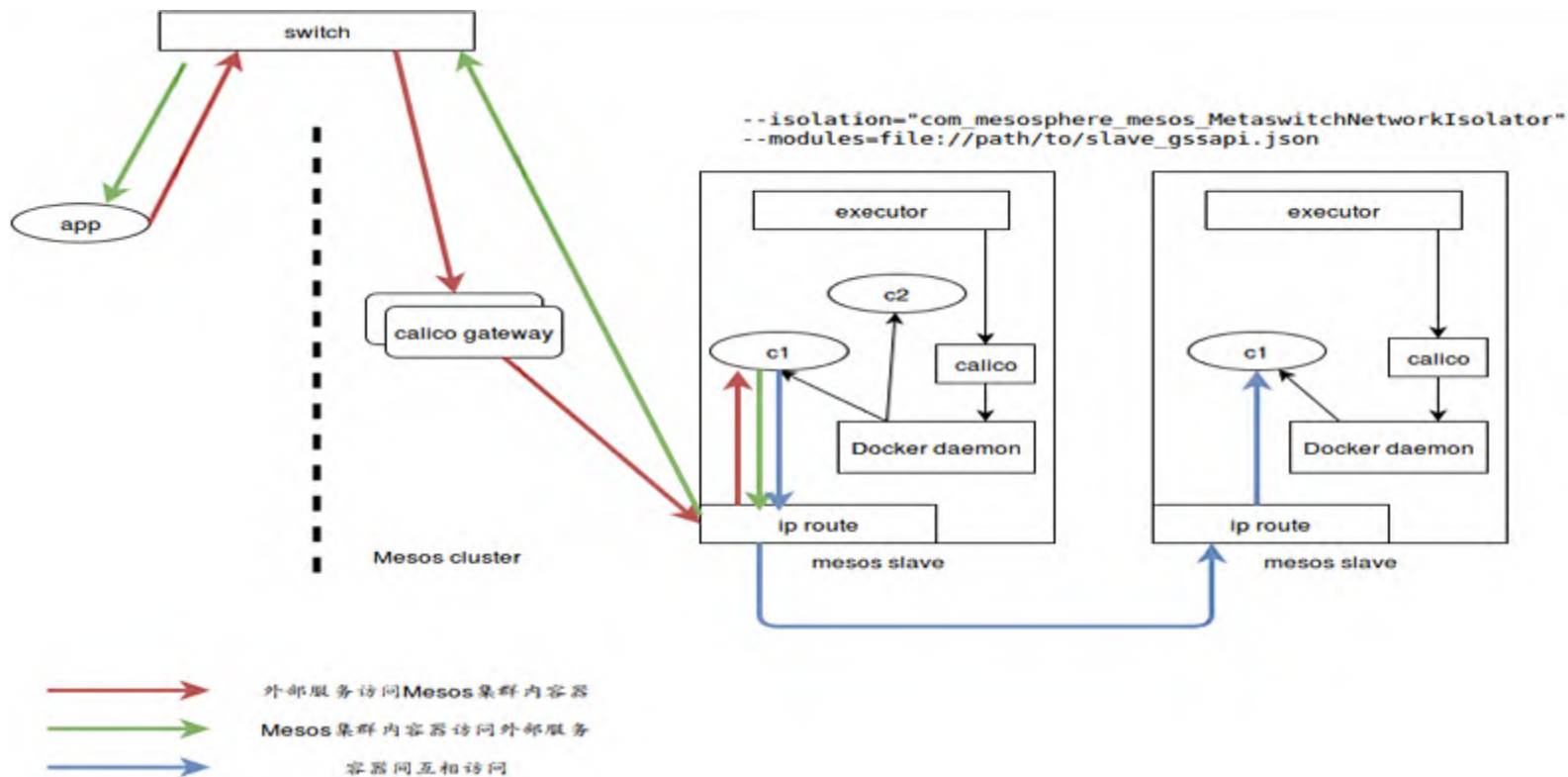
增加参数

编辑参数

<input type="checkbox"/> f_inter_search_server_mt  ×	tag_Name: docker2	×
<input type="checkbox"/> f_tts_avfeedback  ×	tag_Name: last rtag build_Type: beta	×
<input type="checkbox"/> f_tts_tgq  ×	tag_Name: last rtag	×
<input type="checkbox"/> f_inter_dispatch_order  ×	tag_Name: last rtag	×
<input type="checkbox"/> f_plusmatchchange1  ×	tag_Name: last rtag	×

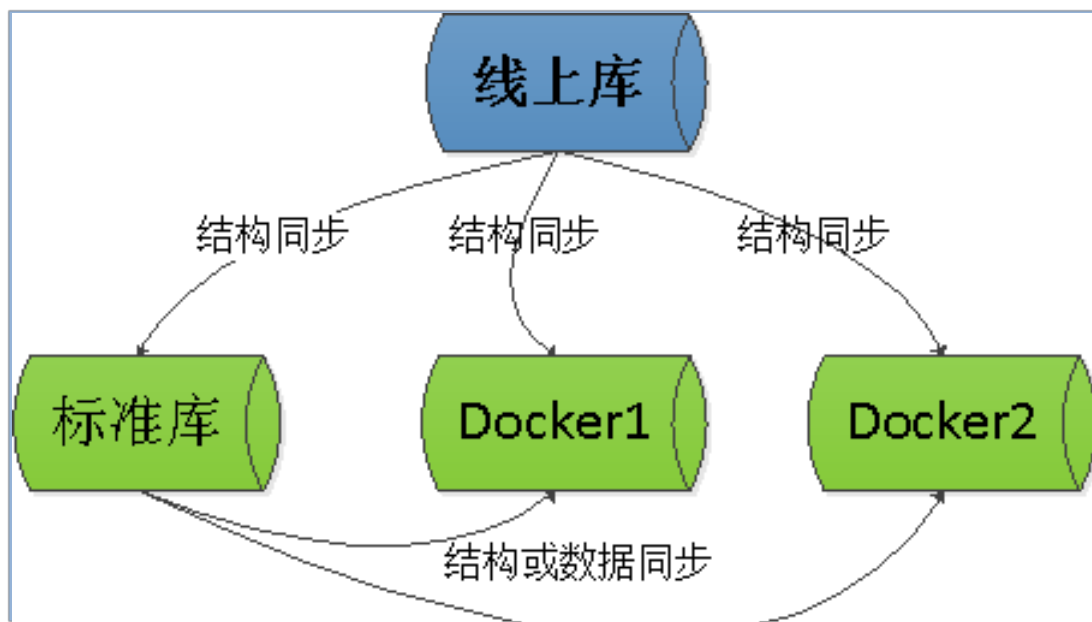
存在问题及未来计划

➤ 没有固定ip和端口（在尝试Calico）



存在问题及未来计划

- 集群里边有宿主出现问题，应用自动飘可能会启动失败
- DBCI



➤ 日志

- heka收集
- ELK查询

➤ 监控/报警

- cAdvisor
- wacher

➤ Kabana上查看日志

The screenshot shows the Kibana search interface. The search bar contains 'error'. Below the search bar, there are two panels: 'app_code list' and 'env list'. The 'app_code list' panel shows a table with columns 'Top 1000 APP_CODE' and 'Count'. The 'env list' panel shows a table with columns 'Top 1000 ENV_NAME' and 'Count'. Below these panels is the 'all log' section, which displays a list of log entries with columns 'Time' and 'content'.

Top 1000 APP_CODE	Count
f_ttsi_router	2,464
h_qta_baseinfo_qtaman	2,052
f_fuwu_ttsi	788
f fuwu ticketi	544

Top 1000 ENV_NAME	Count
longmei_test	2,585
docker1	2,052
dev_e	1,387
dev b	52

Time	content
January 19th 2016, 20:52:23.000	[[[2016/01/19 20:52:23.404][WARN][ClientCnxn:1089] Session 0x352214fed5679e9 for server l-zk4.dba.cn8/192.168.237.242:2181, unexpected error, closing socket connection and attempting reconnect
January 19th 2016, 20:52:23.000	INFO: Illegal access: this web application instance has been stopped already. Could not load org.apache.zookeeper.ClientCnxnSocketNIO. The eventual following stack trace is caused by an error thrown for debugging purposes as well as to attempt to terminate the thread which caused the illegal access, and has no functional impact.
January 19th 2016, 20:52:23.000	[20:52:23 WARN org.apache.zookeeper.ClientCnxn] [localhost-startStop-1-SendThread(zk.dev.corp.qunar.com:2181)] Session 0x44d4bfc0d592a69 for server zk.dev.corp.qunar.com /10.86.45.114:2181, unexpected error, closing socket connection and attempting reconnect
January 19th 2016, 20:52:22.000	INFO: Illegal access: this web application instance has been stopped already. Could not load org.apache.zookeeper.ClientCnxnSocketNIO. The eventual following

存在问题及未来计划

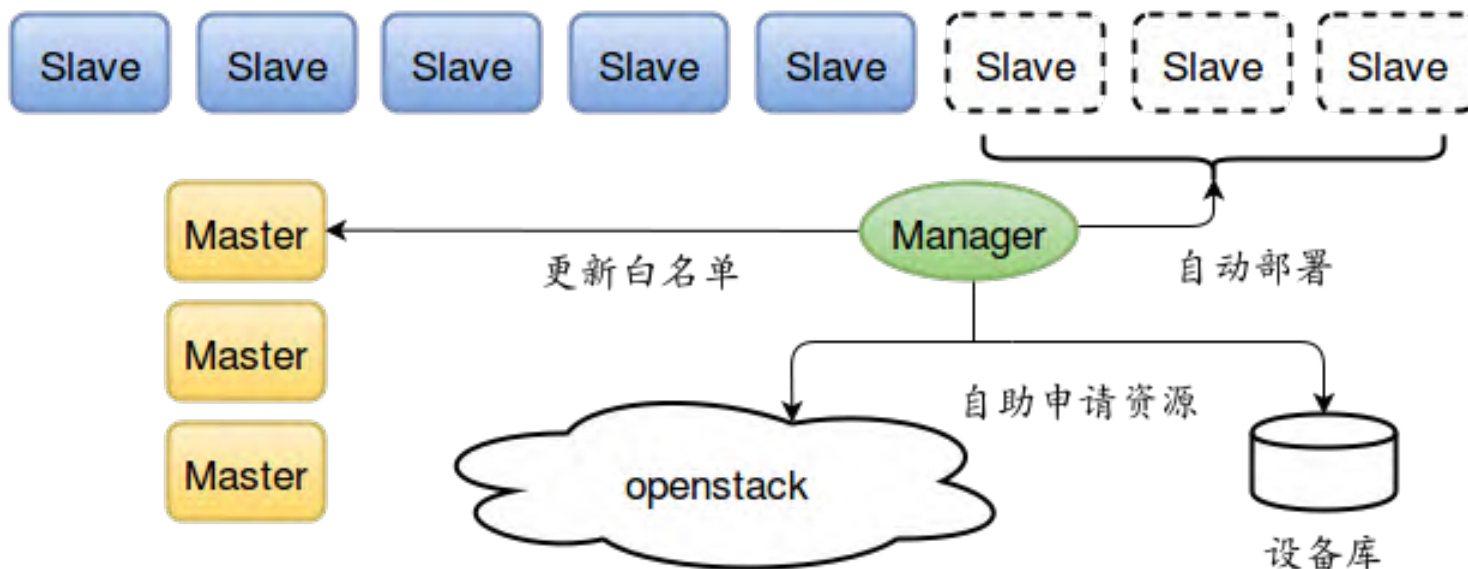
► 监控/报警



存在问题及未来计划

- 系统扩容
 - 绑定设备库，优先使用未分配的机器
 - 紧急情况申请OpenStack的虚拟机

Mesos Cluster



➤ docker devicemapper限制调大

➤ 高可用

➤ Marathon相关:

- 低版本中znode中数据没有压缩

- app_id中不能用重叠字段

`/abc/test/abc/123`

➤ 新节点预热

Thanks!

