



DTCC

# 2016中国数据库技术大会

DATABASE TECHNOLOGY CONFERENCE CHINA 2016

## 数据定义未来

SequeMedia  
威拓传媒

# 利用Docker构建自动化运维平台

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**DTCC** 2016年中国数据库技术大会  
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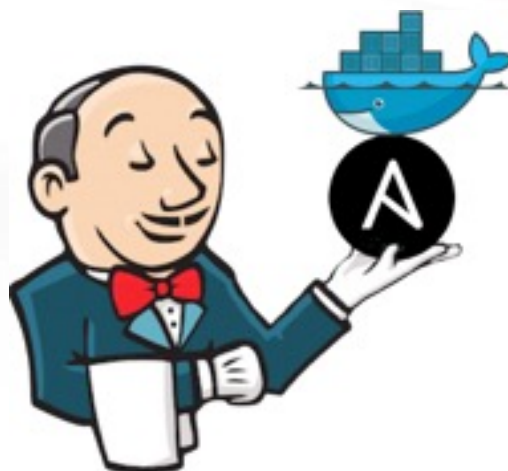
SequeMedia  
MEDIA

IT 788

ChinaUnix

IT PUB

# 平台生态圈

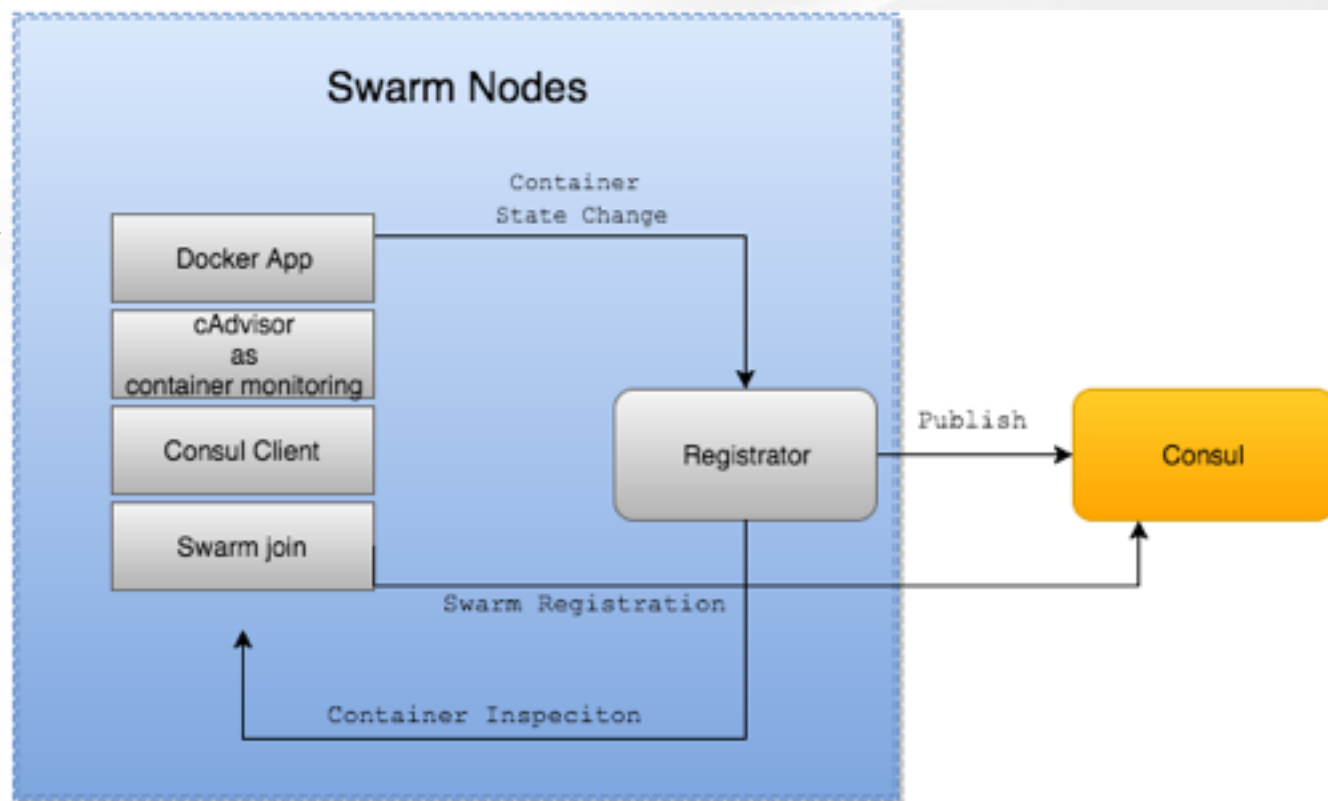


ZABBIX



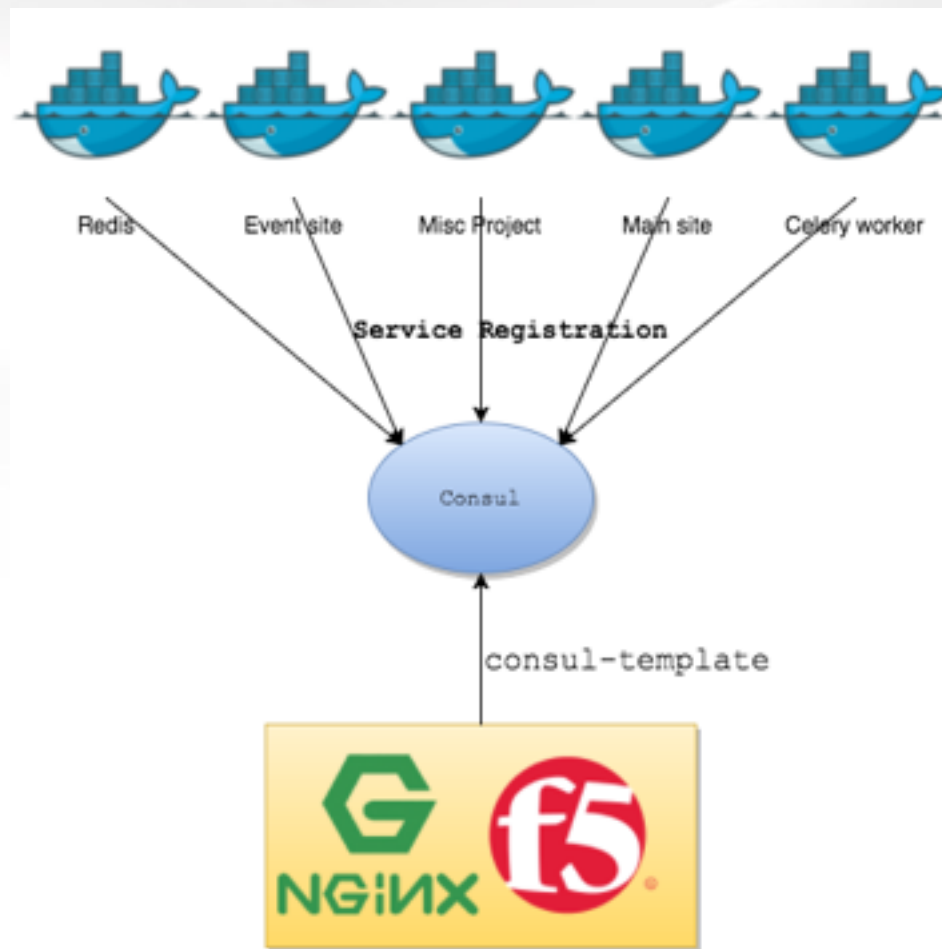
# 基础容器

- cAdvisor
- Consul Client
- Registrator
- Swarm join



# 容器的编排和调度

- Swarm Manager
- Docker Compose
- affinity:container!=
- Random exposed ports
- Consul template



# Ansible - 自动化利器

- 建立镜像
- 初始化Swarm nodes
- 代码同步
- 添加监控及Dashboard
- .....

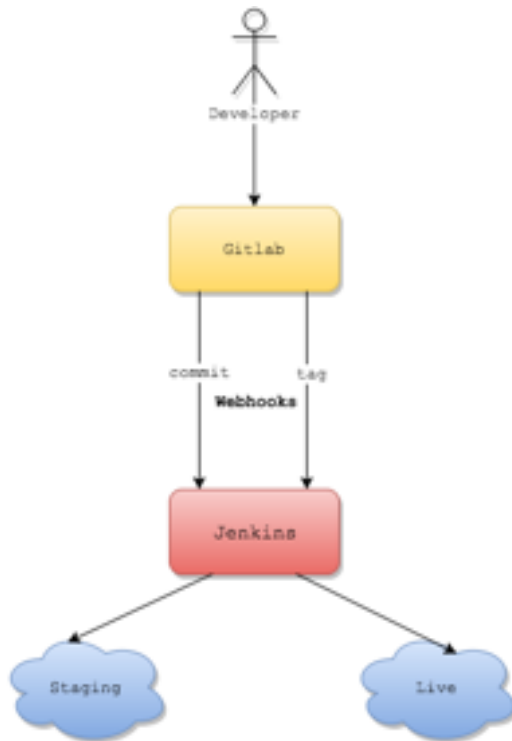


# 测试环境与线上环境

- 不同的Consul集群
- 单独的测试环境域名 (test.xx.xx.xx)
- 集群自动部署自动化



# Web网站的 代码同步



- 从FTP过渡到Gitlab
- Webhooks
- Docker Volume
- Rolling Update



# 监控体系

- cAdvisor + InfluxDB + Grafana: 容器监控
- Consul: 容器健康检查
- Zabbix + Grafana: 宿主机监控



Usage

Overview

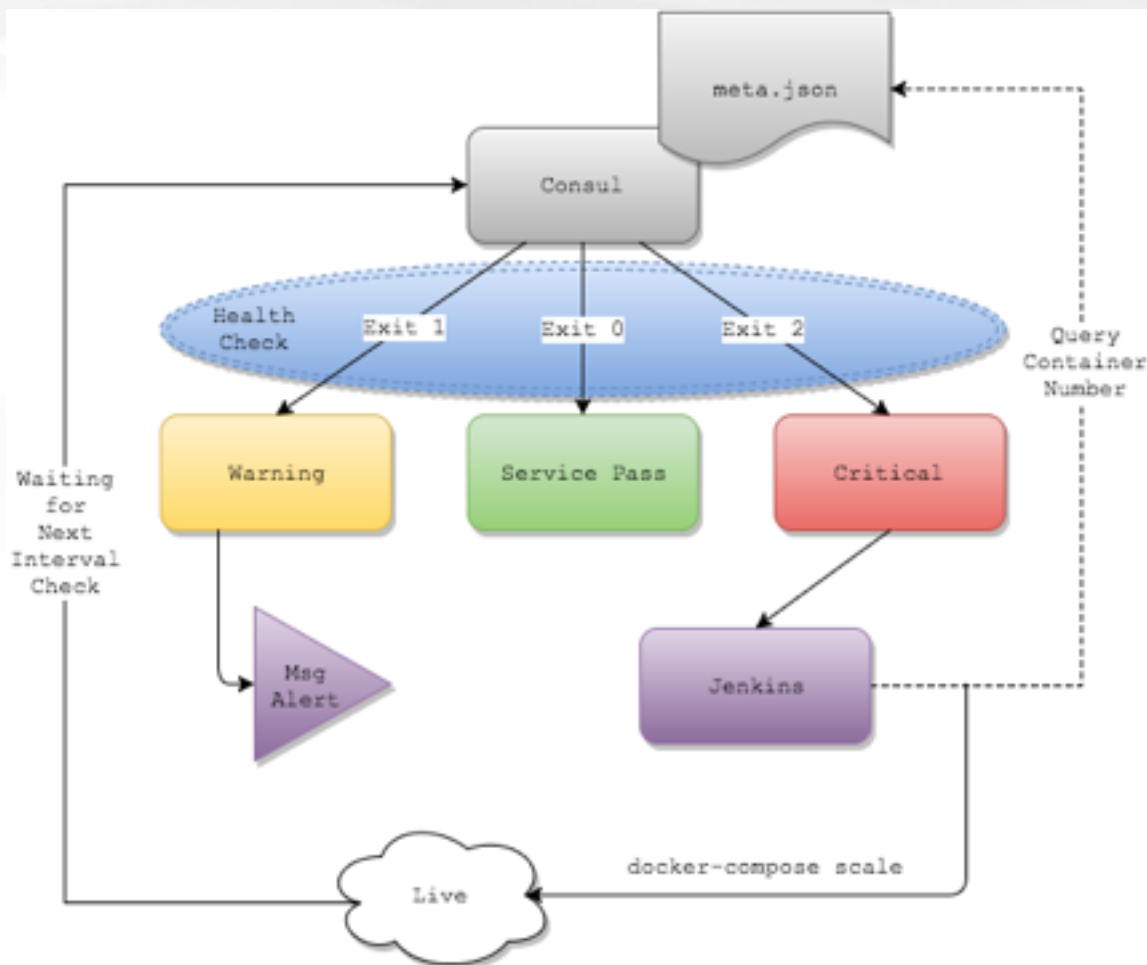
Resources

ID	IP	OS	Host Name	CPU (%)	MEM (%)	DISK (%)	Net In	Net Out	Status	Running Time	Comment	Container
1	192.168.1.1	Ubuntu	Host	0.0	0.0	0.0	0.0	0.0	Up	0.0		
2	192.168.1.2	Ubuntu	Container	10.0	10.0	10.0	10.0	10.0	Up	10.0		
3	192.168.1.3	Ubuntu	Container	20.0	20.0	20.0	20.0	20.0	Up	20.0		
4	192.168.1.4	Ubuntu	Container	30.0	30.0	30.0	30.0	30.0	Up	30.0		
5	192.168.1.5	Ubuntu	Container	40.0	40.0	40.0	40.0	40.0	Up	40.0		
6	192.168.1.6	Ubuntu	Container	50.0	50.0	50.0	50.0	50.0	Up	50.0		
7	192.168.1.7	Ubuntu	Container	60.0	60.0	60.0	60.0	60.0	Up	60.0		
8	192.168.1.8	Ubuntu	Container	70.0	70.0	70.0	70.0	70.0	Up	70.0		
9	192.168.1.9	Ubuntu	Container	80.0	80.0	80.0	80.0	80.0	Up	80.0		
10	192.168.1.10	Ubuntu	Container	90.0	90.0	90.0	90.0	90.0	Up	90.0		



# 服务自愈

- 预定义容器个数
- Consul watches
- 自动部署



# Consul EnableTagOverride

- Consul 0.6 新特性
- 使用Tag区分Redis Master/Slave
- 改写Registrar支持动态更改Tag



# Hacking F5

- consul-template
- F5 service partition
- 注册KV信息到Consul中
- 刷新及上线配置脚本化

```
ltm pool /SERVICE_NAME/redis_pool_SERVICE_NAME {  
  members { {{range service "SERVICE_NAME"}}  
    /Common/{{.Address}}:{{.Port}} {  
      address {{.Address}}{{ if .Tags | contains "master" }}  
      priority-group 10{{end}}{{ if .Tags | contains "slave" }}  
      priority-group 9{{end}}  
    }{{end}}  
  }  
  min-active-members 1  
  monitor /Common/tcp_persistence  
}
```



# 遇到的问题



- Consul reload
- Zabbix active log monitor
- Docker compose动态镜像
- F5 SNAT



THANKS

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威视传媒

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