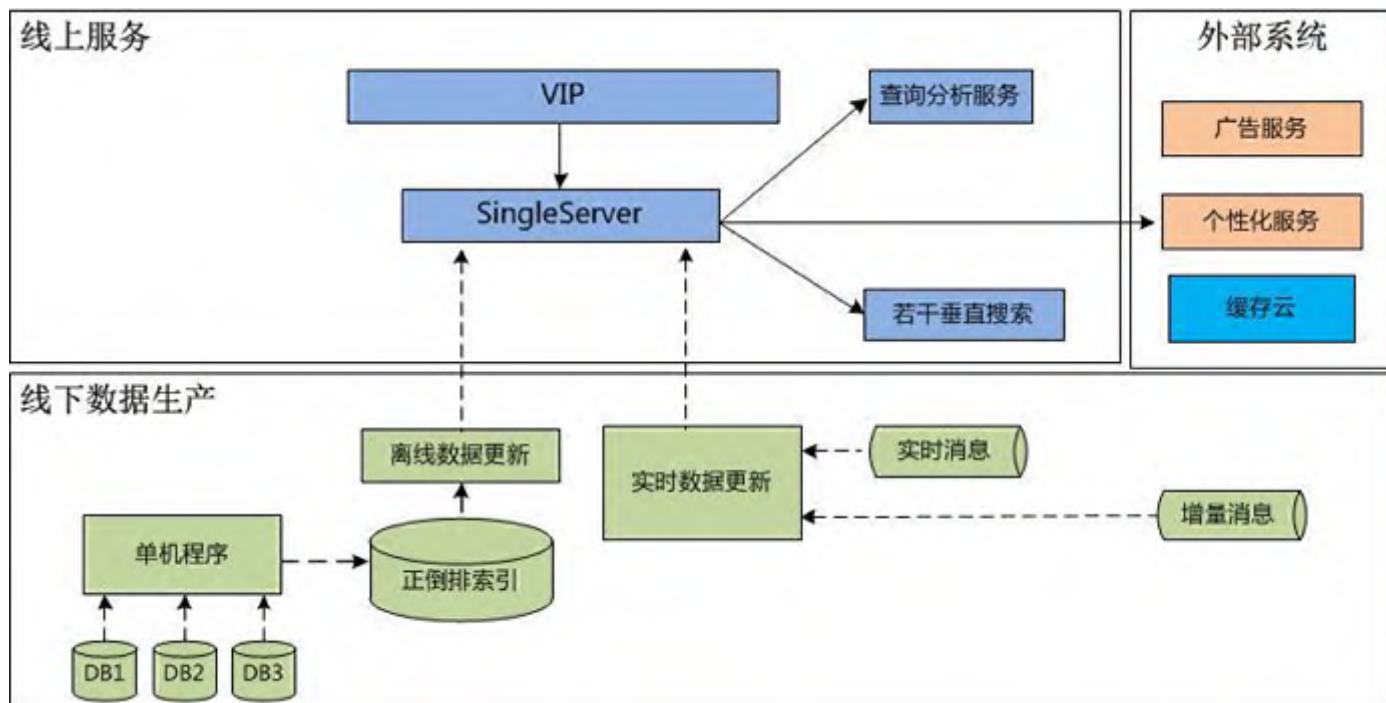


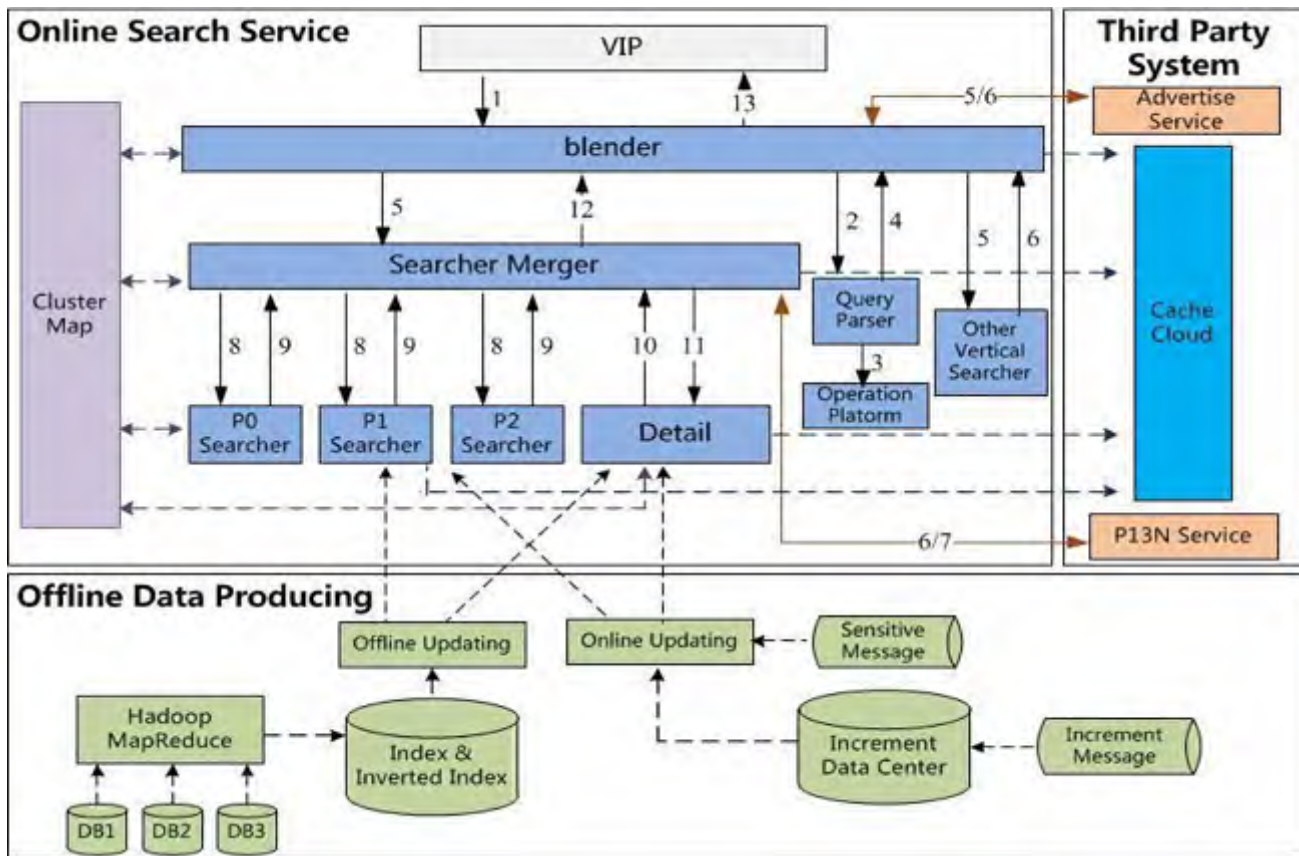
# 大型分布式系统DevOps实战

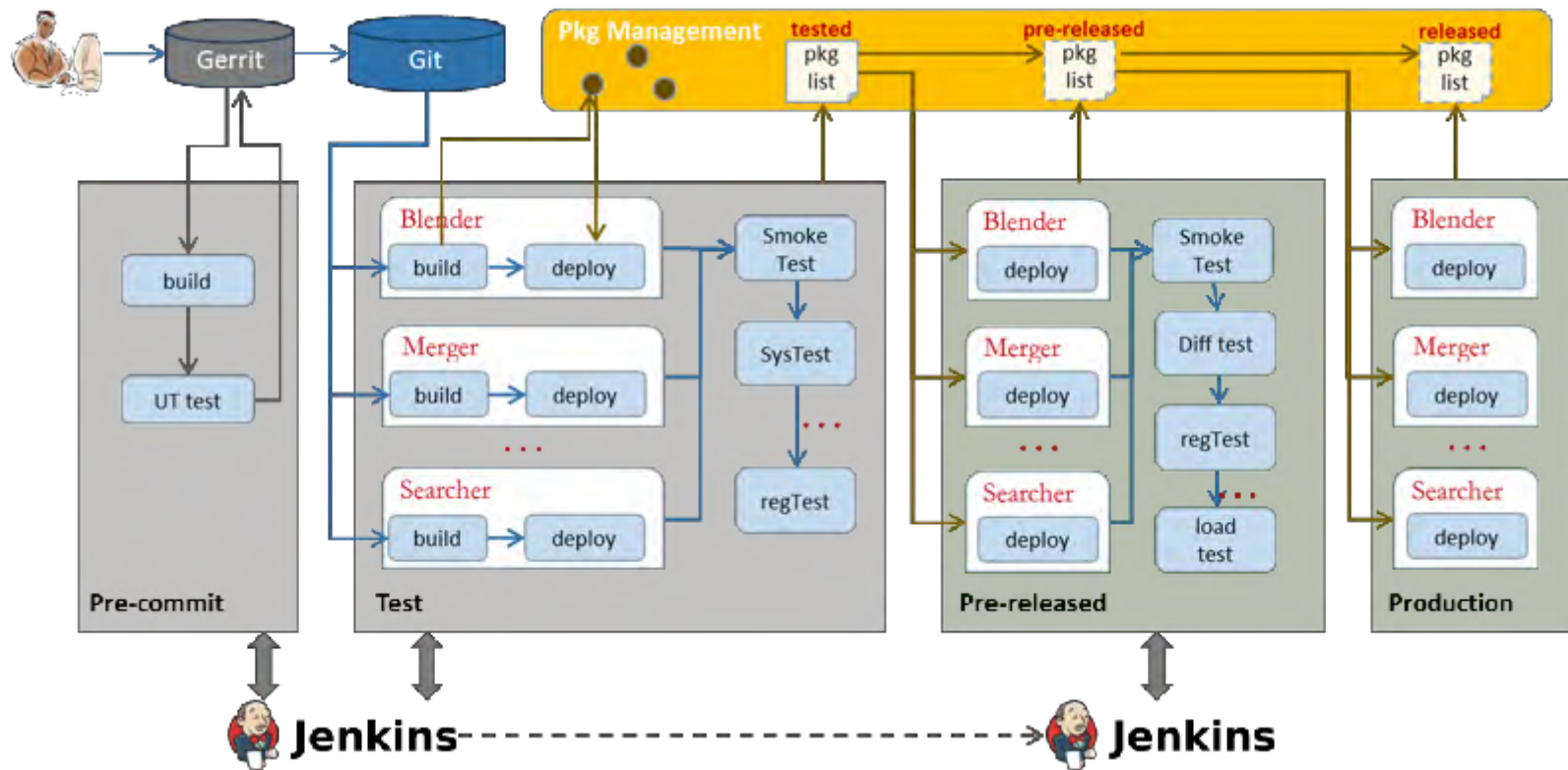
He Xueqi



- ◆ 系统架构
- ◆ 持续集成
- ◆ 监控系统
- ◆ 告警系统







## 1. 系统目标

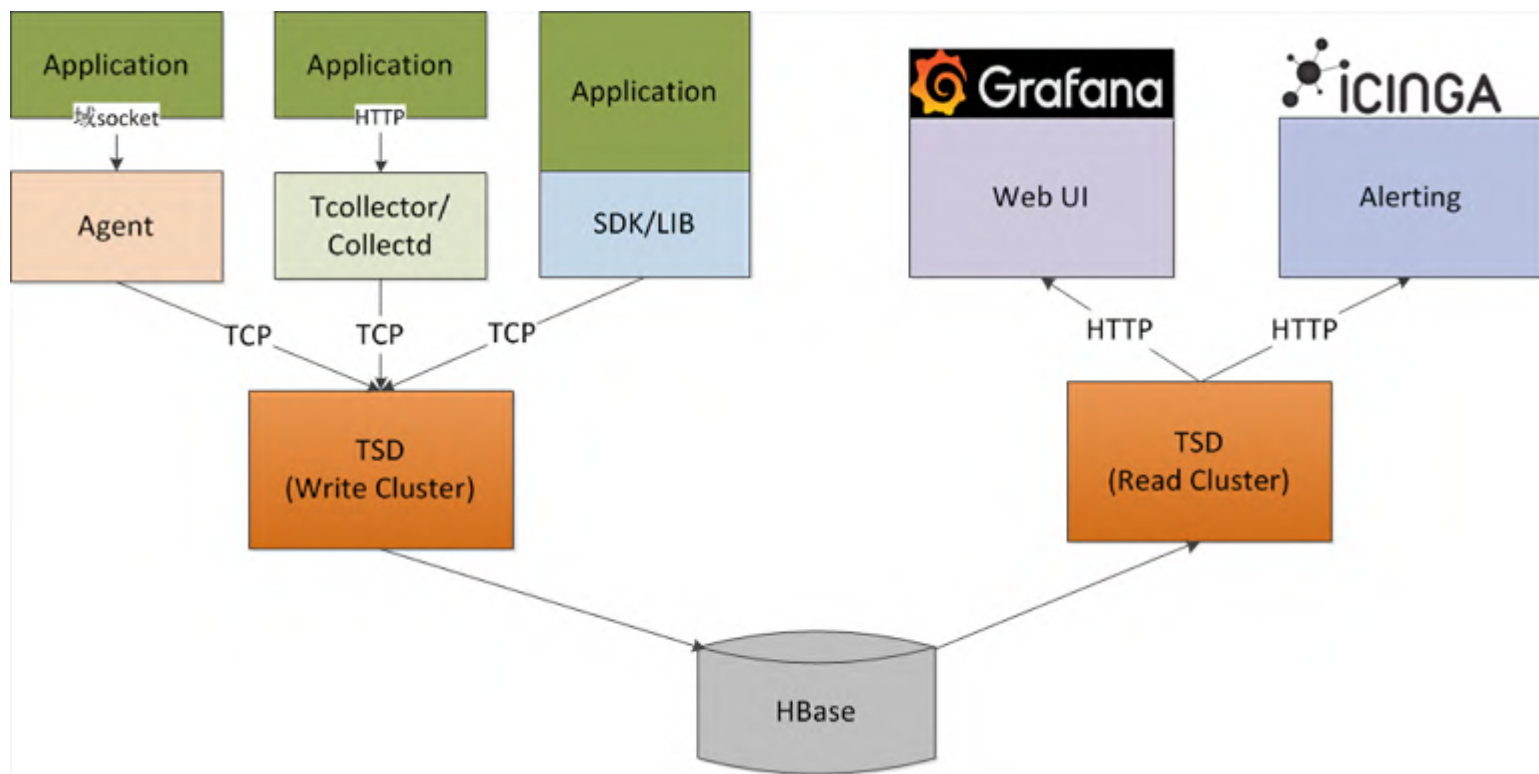
1. 百万级metrics
2. 秒级监控粒度
3. 多维度汇总

## 2. 架构要求

1. 水平扩展性
2. 高可用性&高可靠性

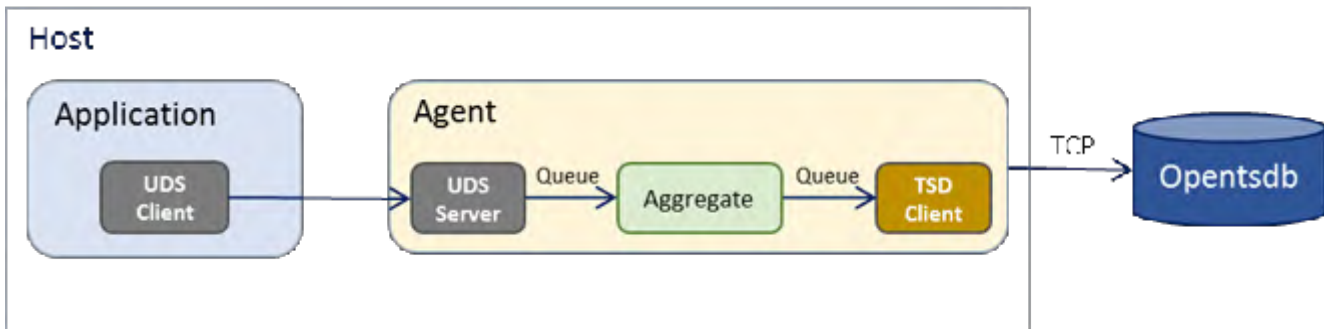
## 3. 技术选型

1. OpentsDB
2. Influxdb



## Agent的设计目标

1. 与应用分离，不同进程
2. 避免磁盘读写
3. 支持基本统计 ( avg, min, max, sum, rate, tp99 )

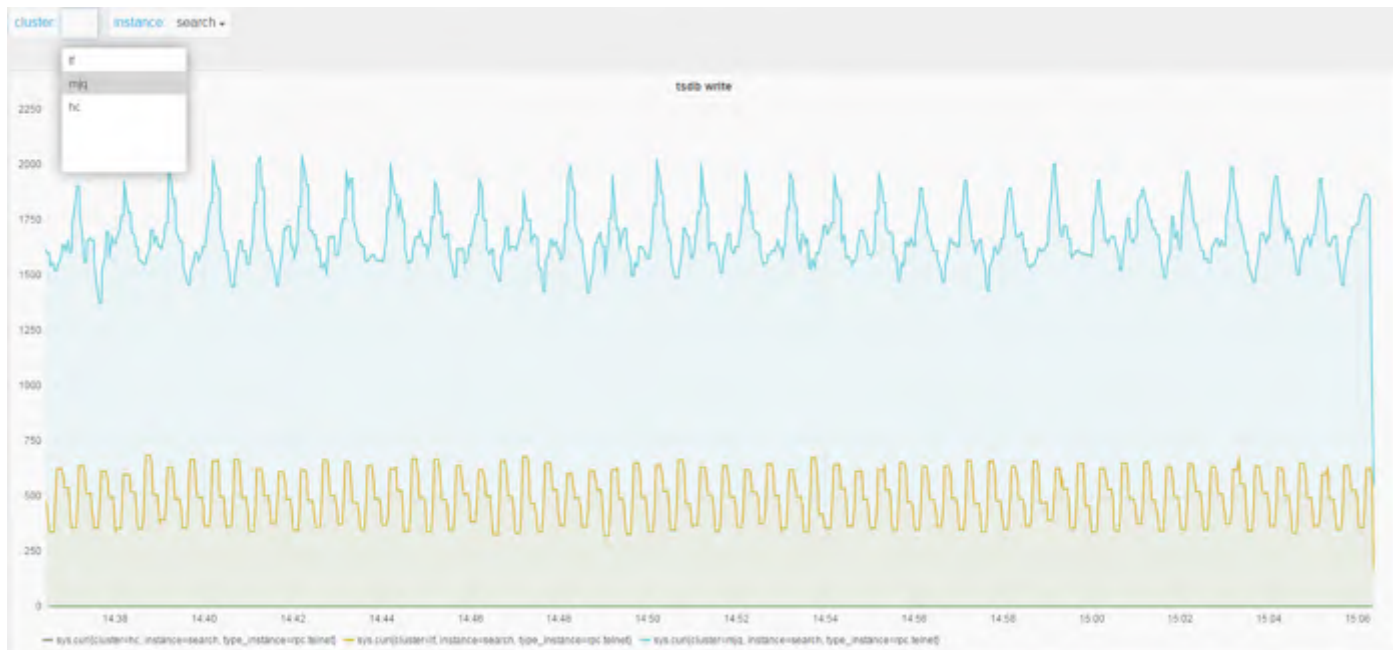




Tag : cluster = \* , host=\*



Tag : cluster = \*



核心指标：

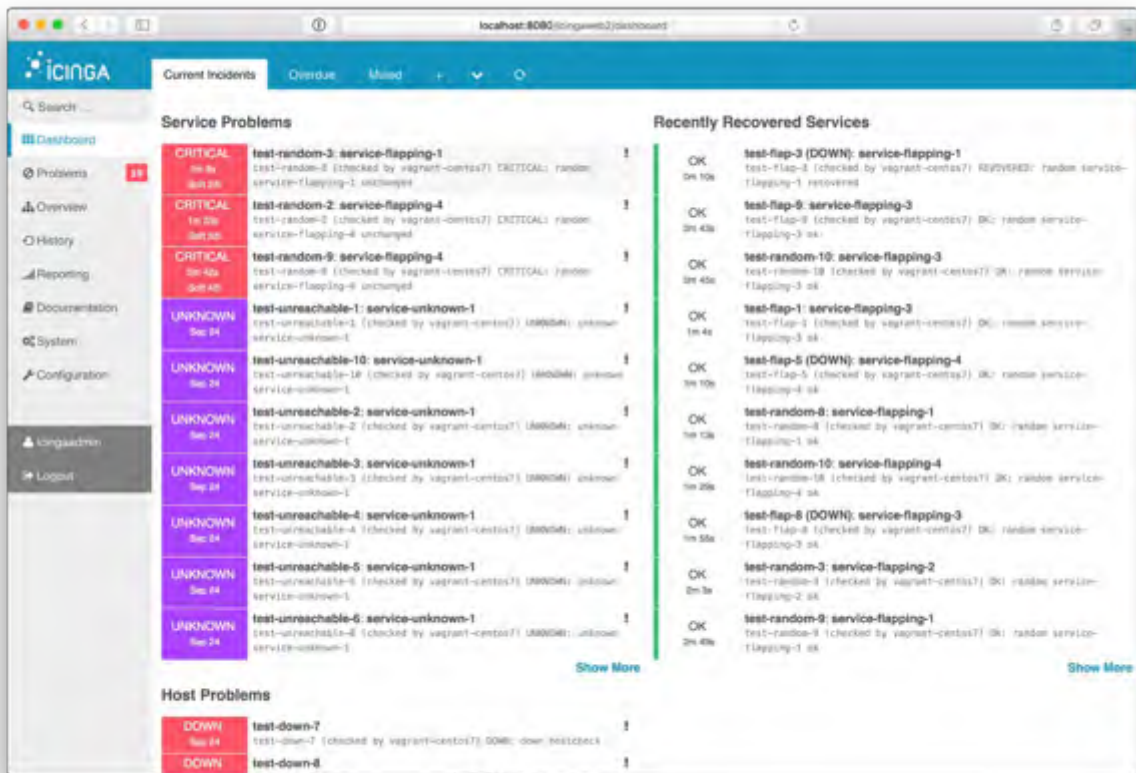
1. Metric: >1w
2. Write: 2w ops
3. Read: >100 qps (双十一)
4. Latency: 30s

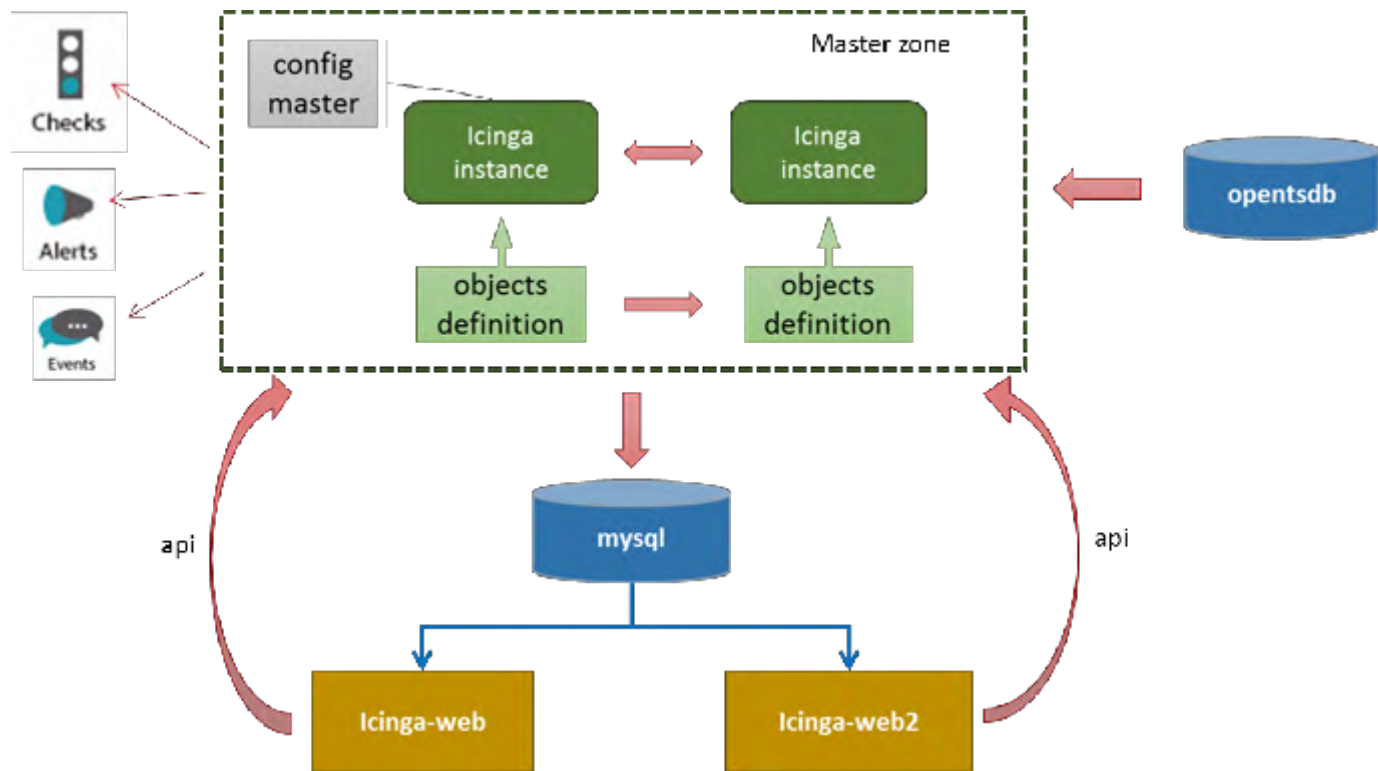
容量上限：

1. Write: >20w ops
2. 100qps/instance tp99: 35ms

- 限制查询的时间范围  
*时间太长会由于数据量太大内存耗尽, 导致jvm重启*
- 读集群和写集群分离  
*防止不可预期的读操作影响正常监控数据写入*
- Opentsdb 2.2.0 rc3 memory leak
- 写入时建议加入host tag, 导致hbase性能急剧下降
- Meta sync 耗时变长, 随着数据量的增大

完全免费  
优化的WebUI  
社区活跃

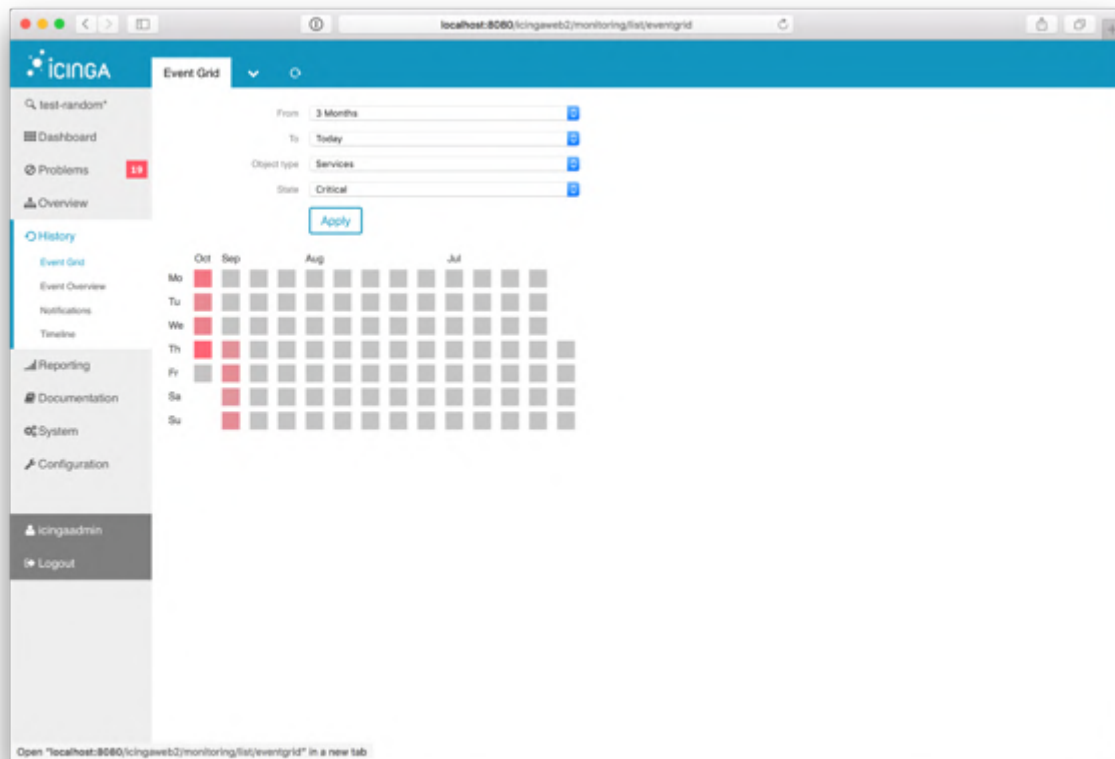




## 告警多样性

- ✓ 组合告警 ( if  $A > \text{Threshold}$  &  $B > \text{Threshold}$  )
- ✓ 趋势告警 (if A drop X% )
- ✓ 统计告警 (if percentage > X%)
- ✓ 聚合告警

## 告警报告



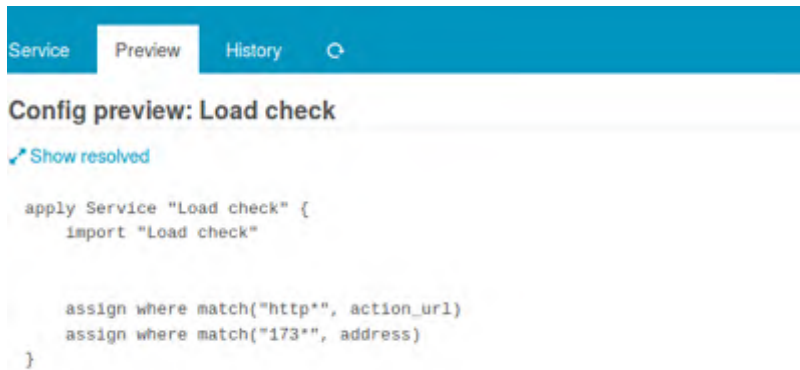


## 1. 规则配置集中管理，门槛高

- 由于icinga配置相对复杂，添加或修改告警指标需要对系统有一定的了解，目前配置权限仅开放给icinga系统管理员

## 2. 告警配置可视化

- Icinga官方提供的可视化配置工具，没有对可配置项进行抽象，仅是配置文件的web展示，对开发人员不够友好



The screenshot shows a web interface for Icinga configuration. At the top, there is a navigation bar with tabs for 'Service', 'Preview', and 'History', along with a search icon. Below the navigation bar, the title 'Config preview: Load check' is displayed. A checkbox labeled 'Show resolved' is checked. The main content area shows a code editor with the following configuration snippet:

```
apply Service "Load check" {
    import "Load check"

    assign where match("http*", action_url)
    assign where match("173*", address)
}
```

Q&A