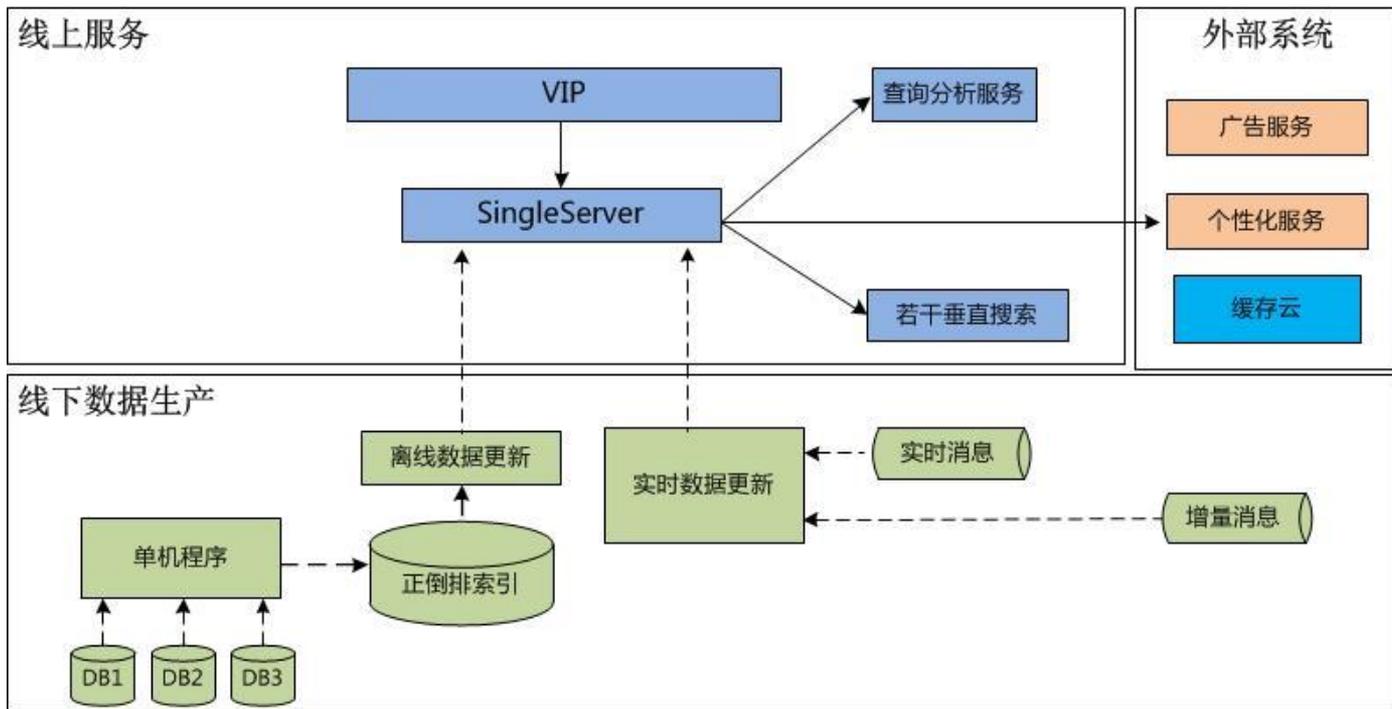


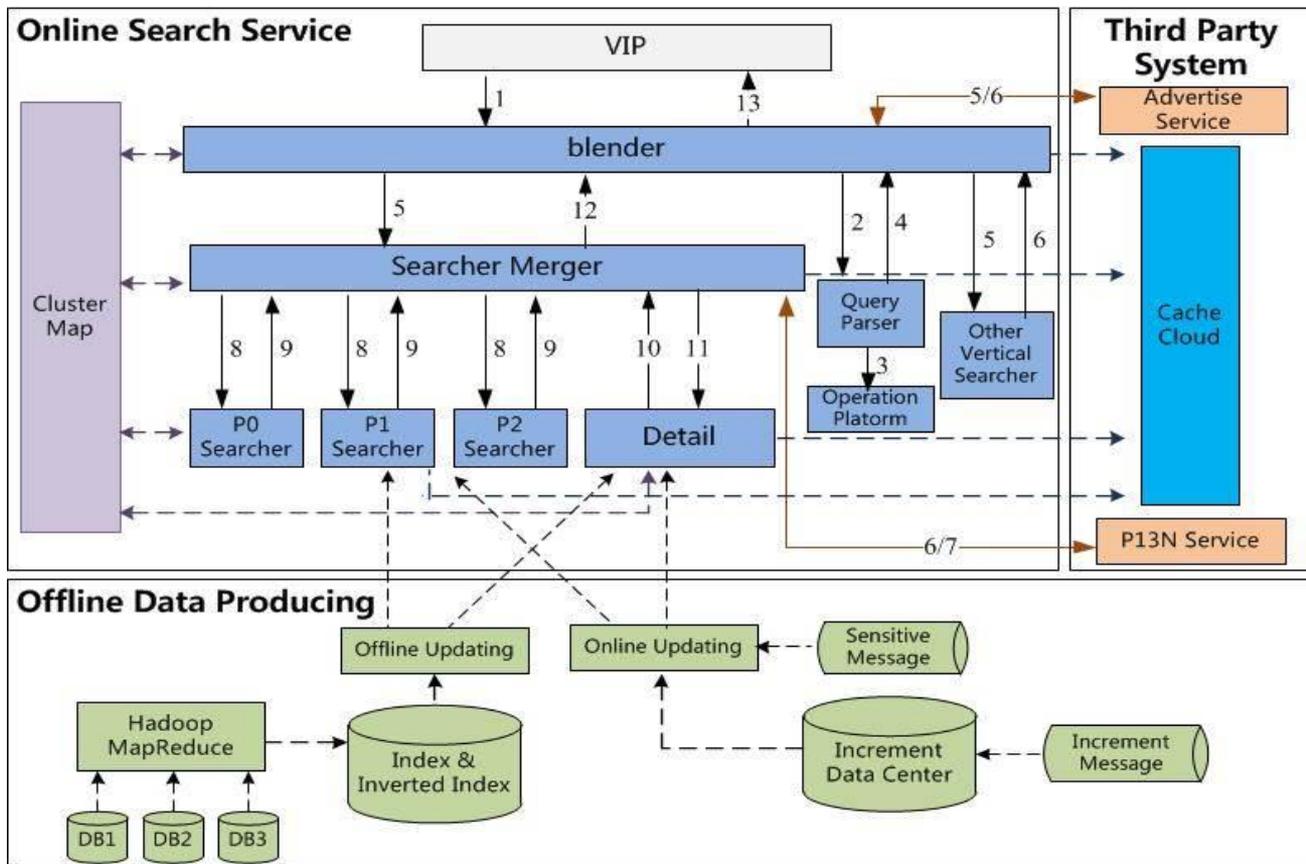
大型分布式系统DevOps实战

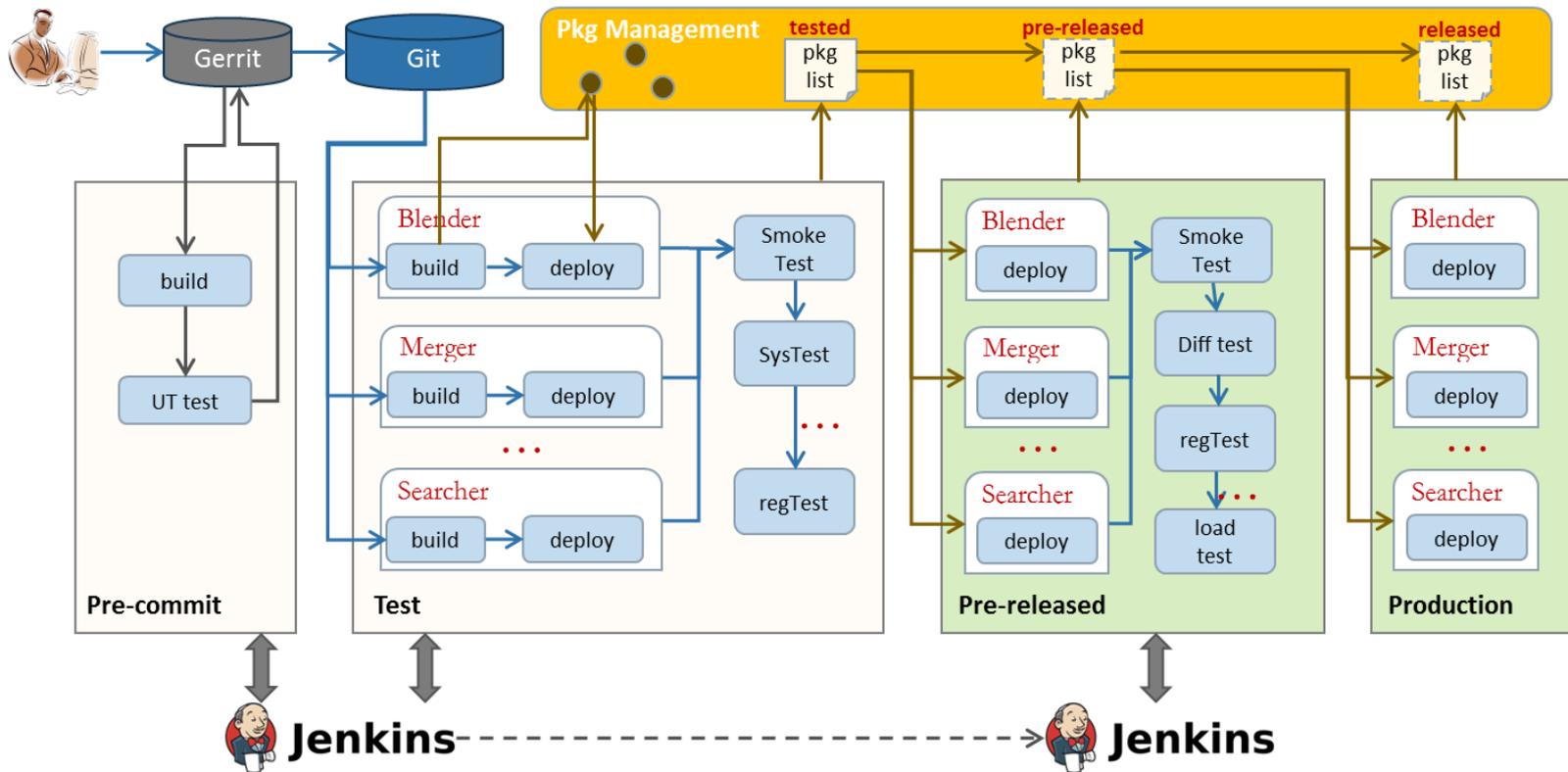
He Xueqi



- ◆ 系统架构
- ◆ 持续集成
- ◆ 监控系统
- ◆ 告警系统







1. 系统目标

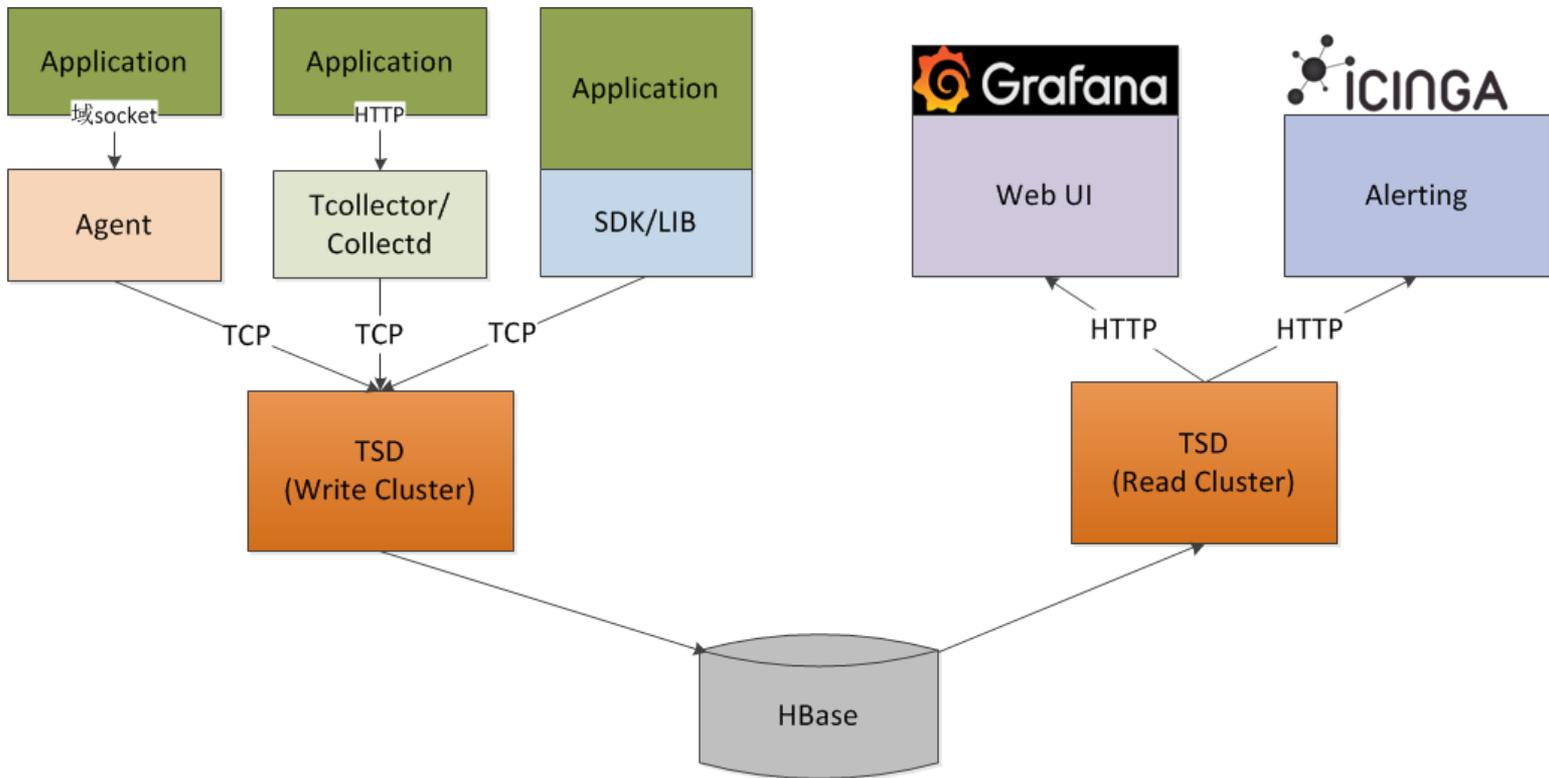
1. 百万级metrics
2. 秒级监控粒度
3. 多维度汇总

2. 架构要求

1. 水平扩展性
2. 高可用性&高可靠性

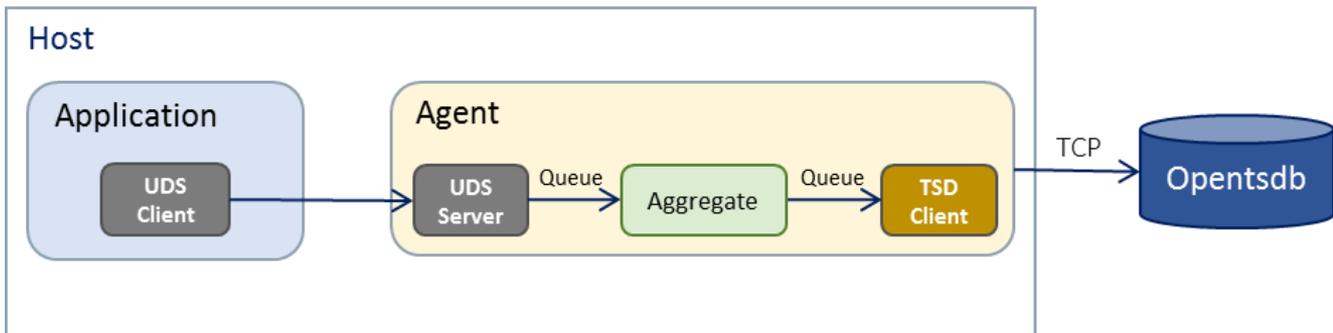
3. 技术选型

1. OpentsDB
2. Influxdb

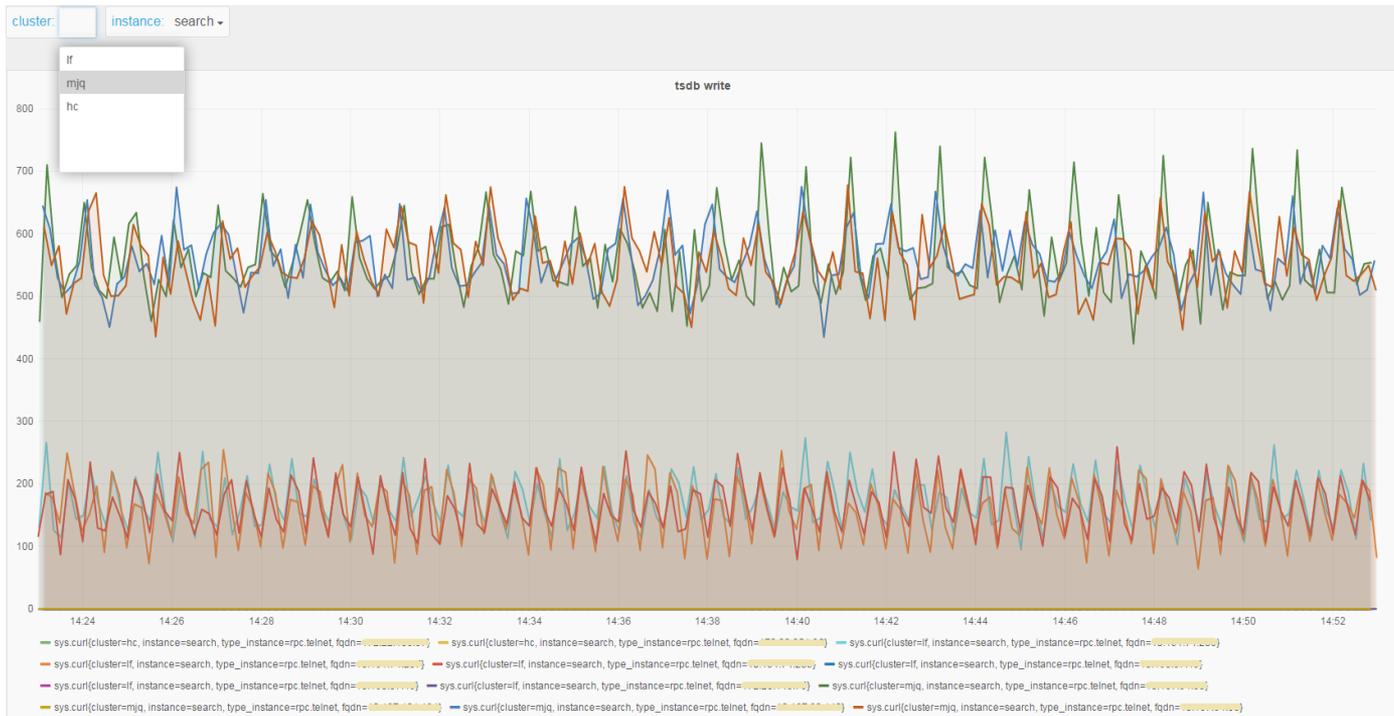


Agent的设计目标

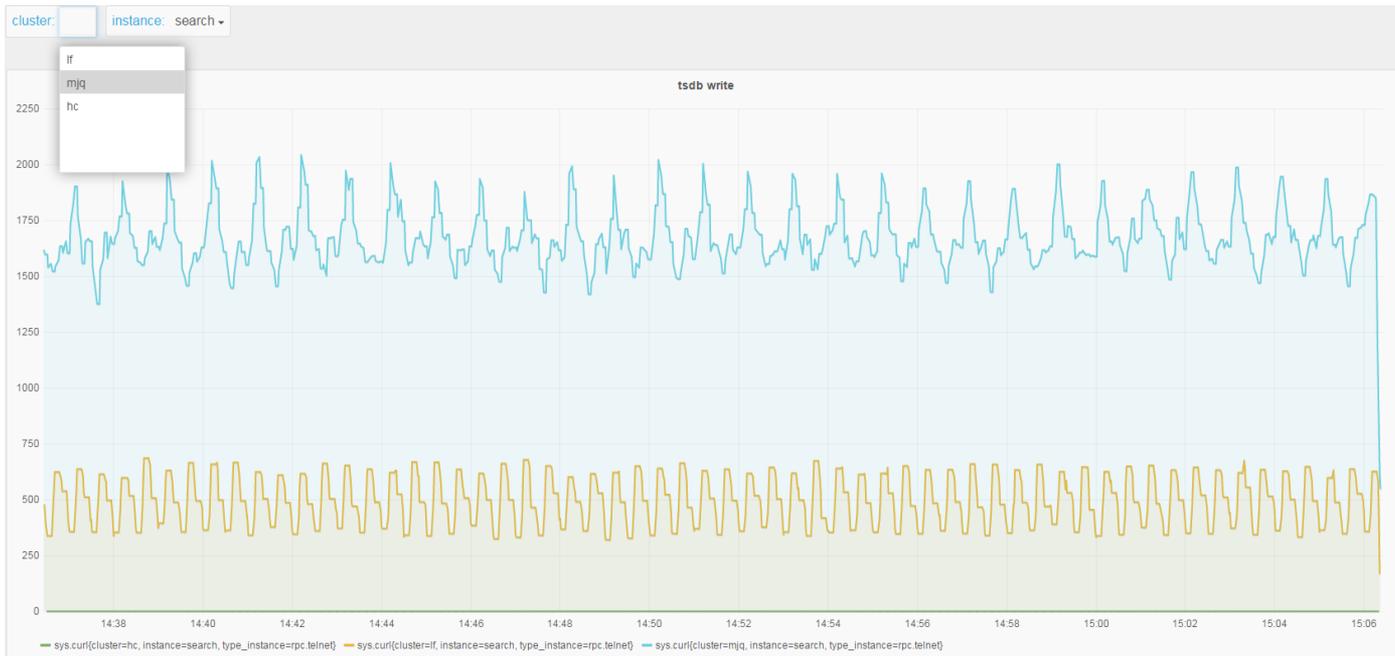
1. 与应用分离，不同进程
2. 避免磁盘读写
3. 支持基本统计 (avg, min, max, sum, rate, tp99)



Tag : cluster = * , host=*



Tag : cluster = *



核心指标：

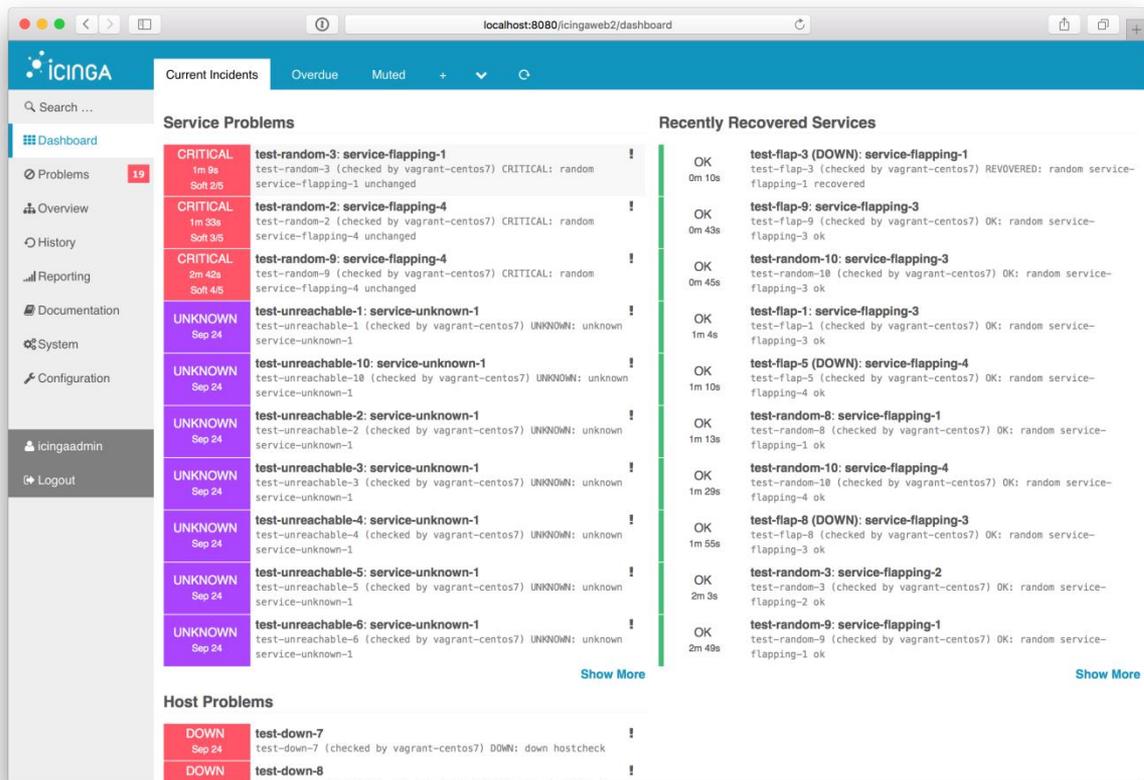
1. Metric: >1w
2. Write: 2w ops
3. Read: >100 qps (双十一)
4. Latency: 30s

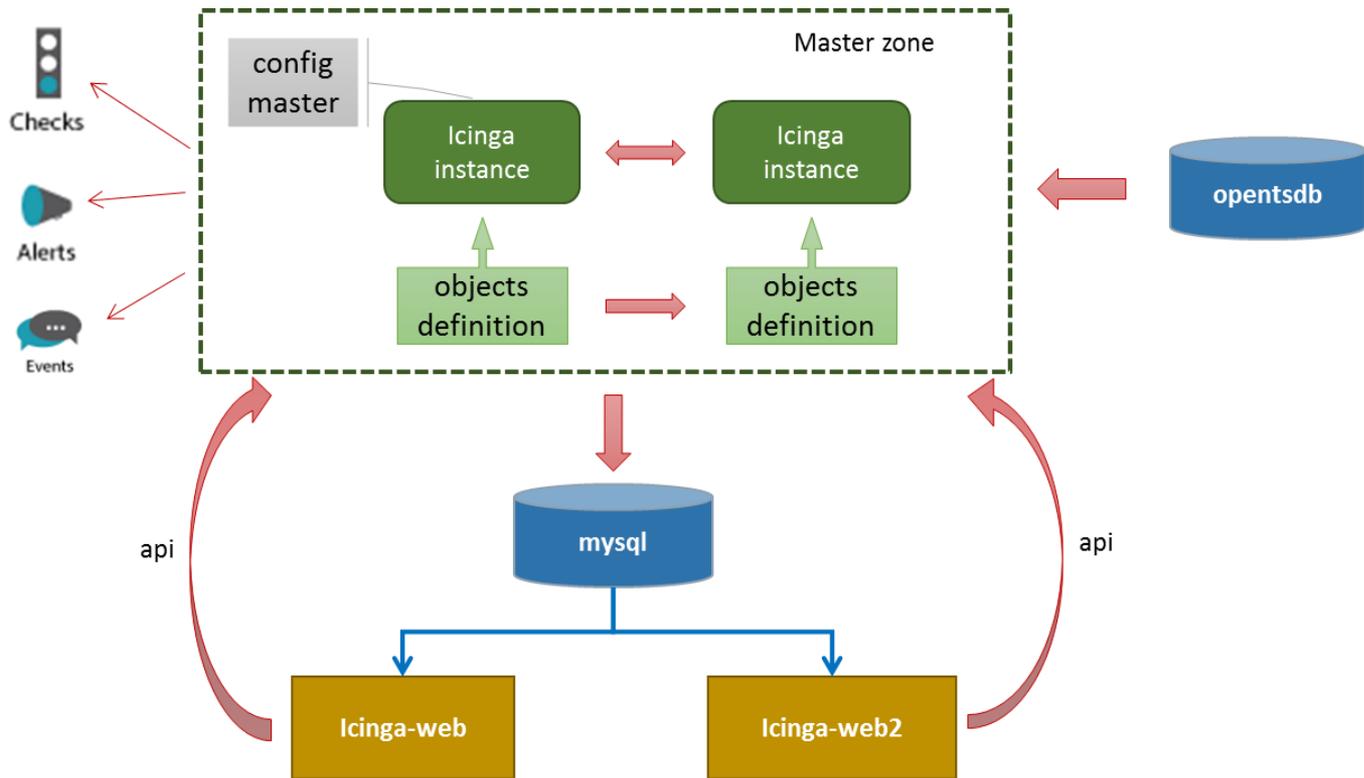
容量上限：

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

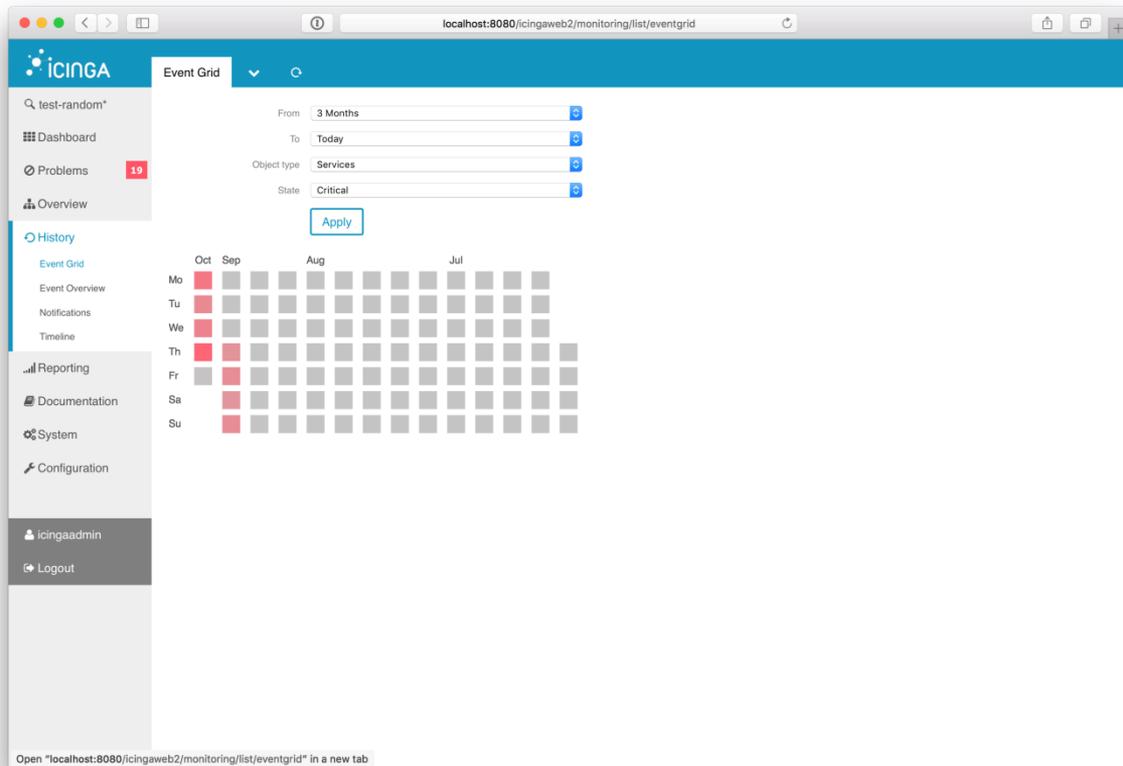




告警多样性

- ✓ 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

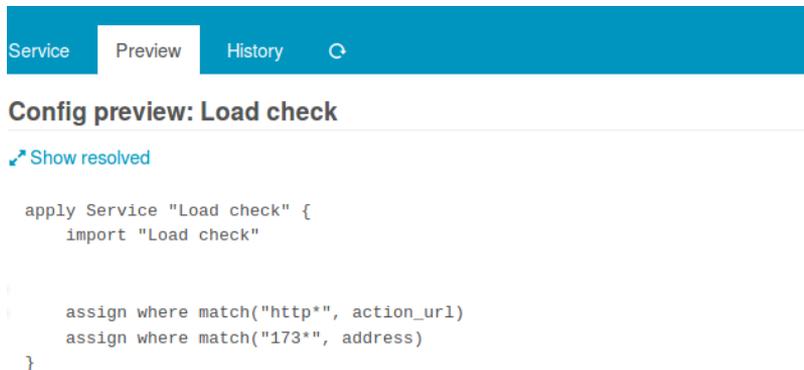


1. 规则配置集中管理，门槛高

- 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

A screenshot of a web interface for Icinga configuration. At the top, there is a navigation bar with three tabs: 'Service', 'Preview', and 'History'. The 'Preview' tab is currently selected. Below the navigation bar, the title 'Config preview: Load check' is displayed. Underneath the title, there is a link that says 'Show resolved' with a small icon. The main content area shows a snippet of Icinga configuration code in a light-colored box with a dark border. The code is as follows:

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

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

Q&A