

# Ctrip Session Server

携程框架研发部  
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[DerbySoft-技术沙龙-高可用架构-2016.5.28](#)

- 问题&目标
- 架构&实现
- 运维&推广



Sticky Session!!

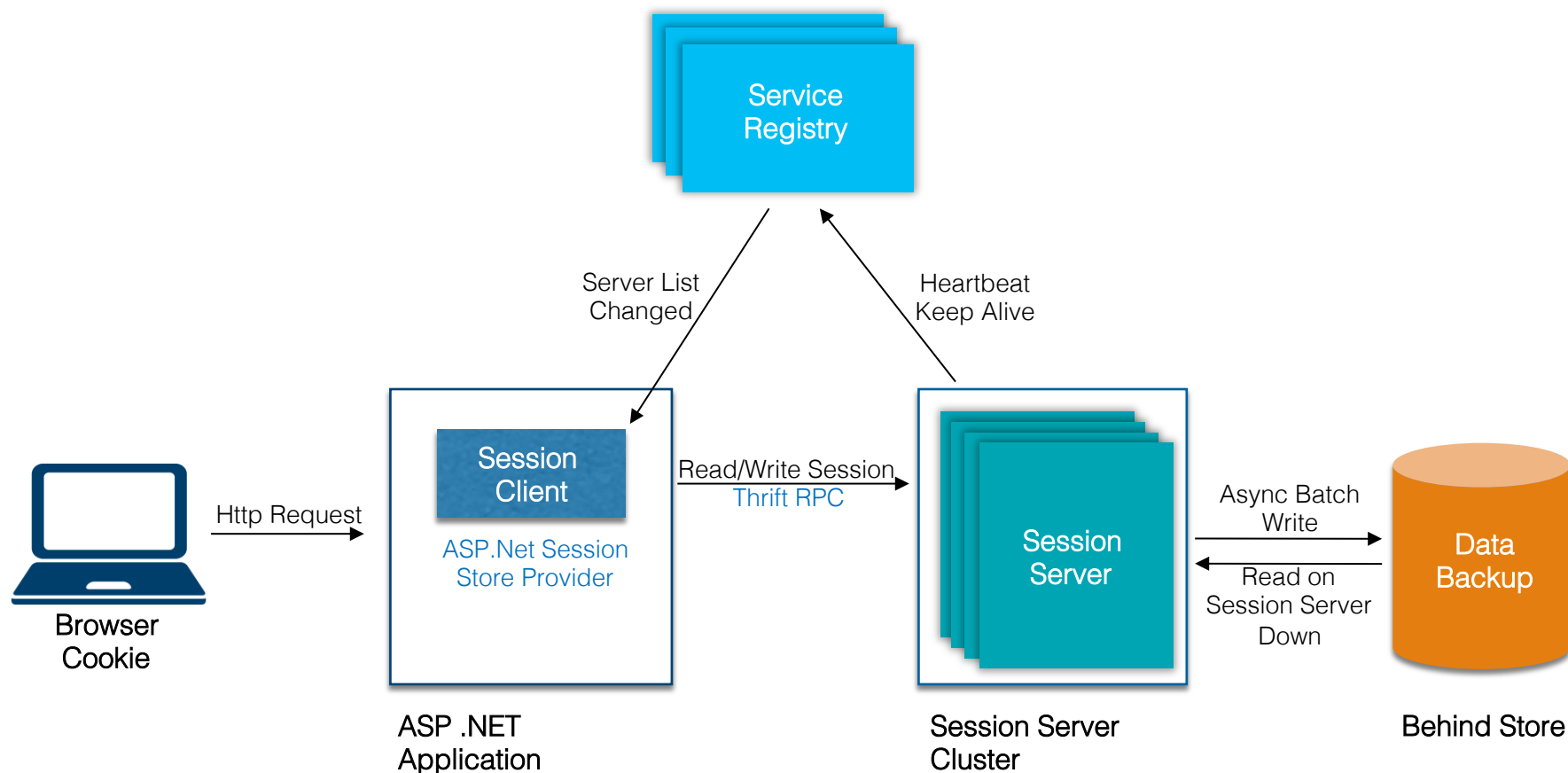


- 10000+ 服务器
- 2000+ App
- 80,000,000 pv
- Ajax = pv X 3?5?10?
- 20分钟内同时在线 : 6,000,000
- Session 大小 ? 1K 5K 50K 500K 1M ...
- 一次请求至少3次Session操作

- 去除Sticky Session
- 高性能(High Performance)
- 高可用(HA)
- 水平扩展(Scale Out)
- 透明扩容(Transparent Expansion)
- 透明升级(Transparent Upgrade)
- 跨数据中心(Cross DC)
- 运维友好(Ops Friendly)
- 接入简单(No Code Change)

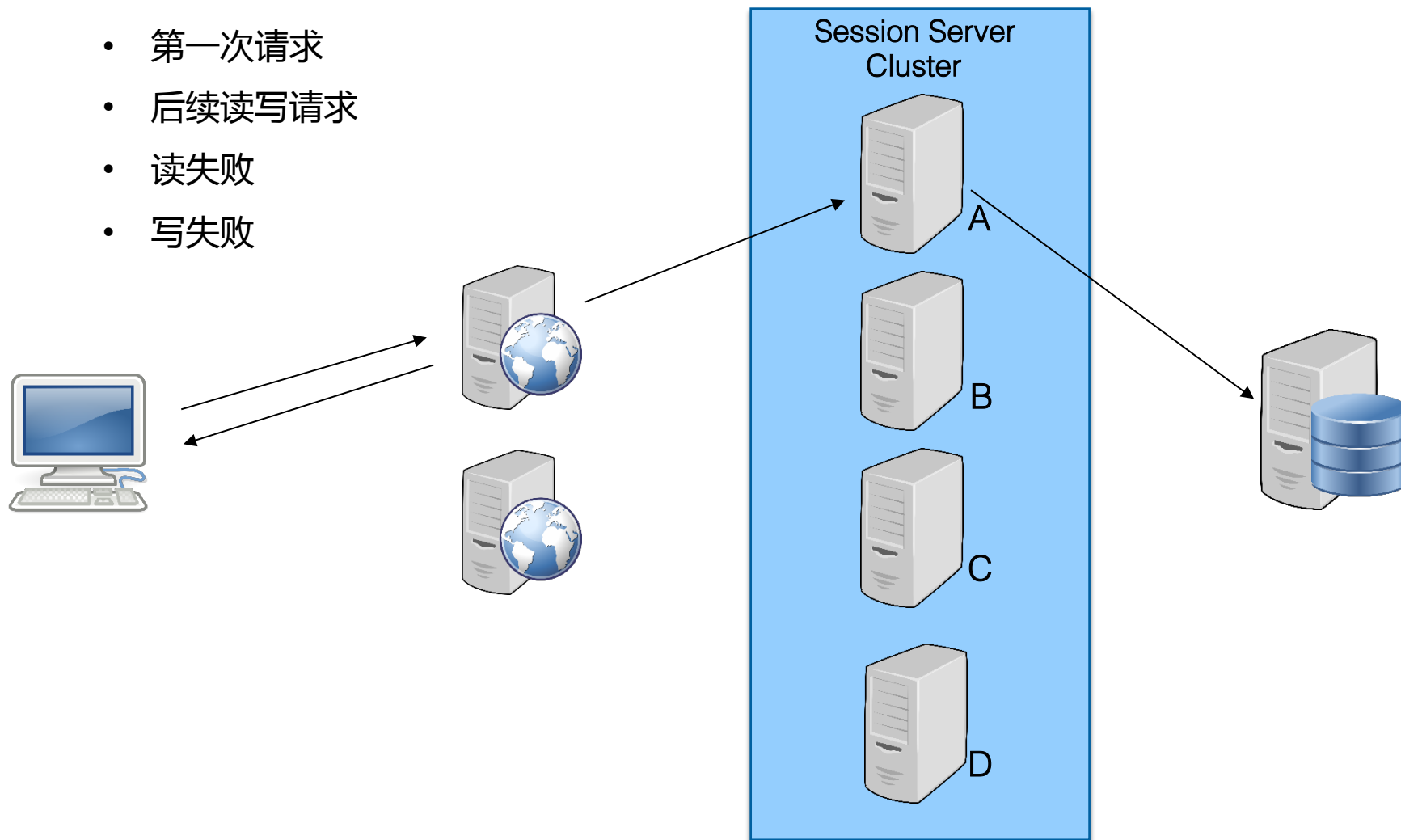
- Session Server架构设计
- 用户典型场景
- 自注册、自发现
- 3级存储

# SessionServer Architecture



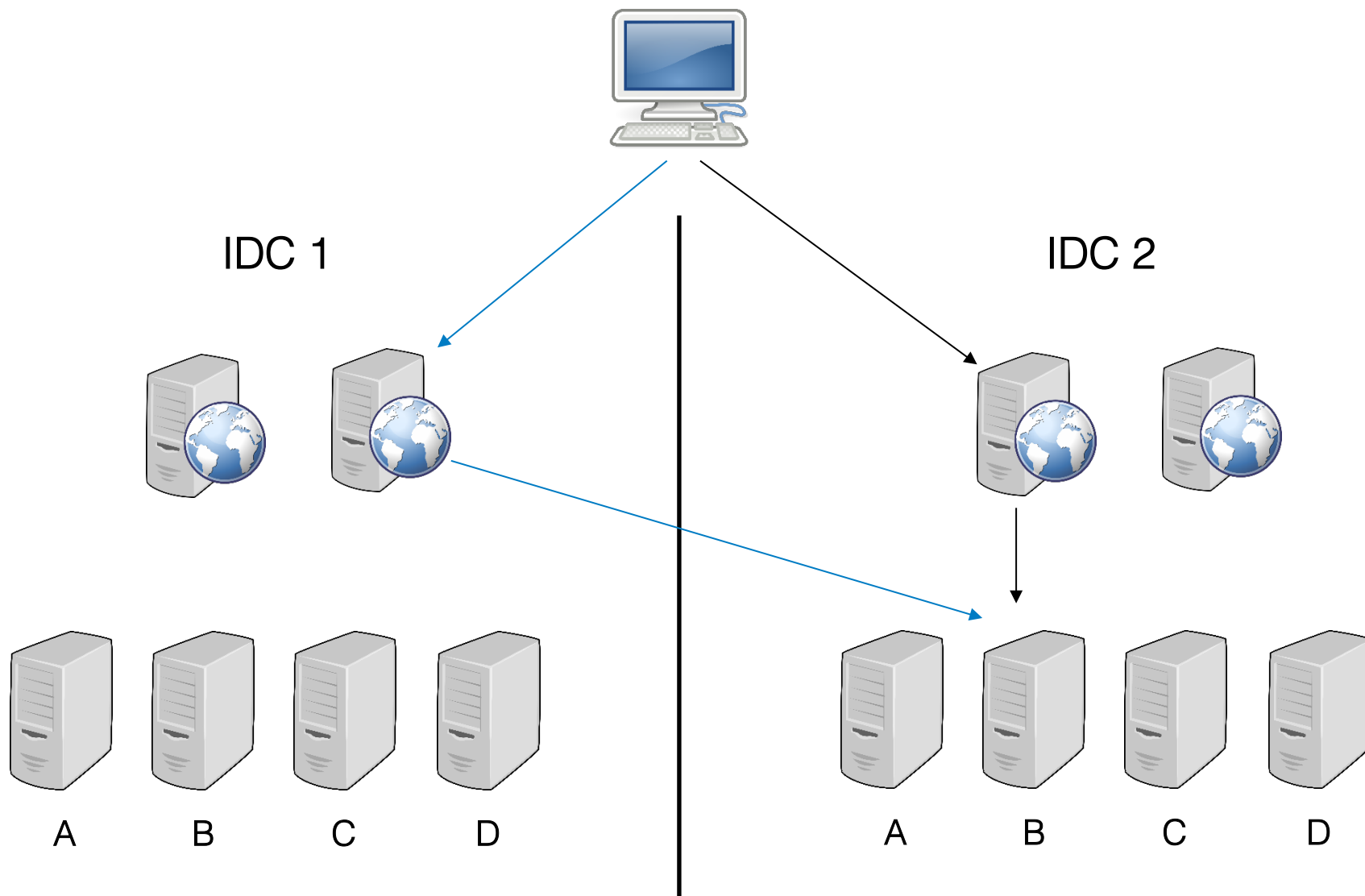
# 用户典型场景

- 第一次请求
- 后续读写请求
- 读失败
- 写失败

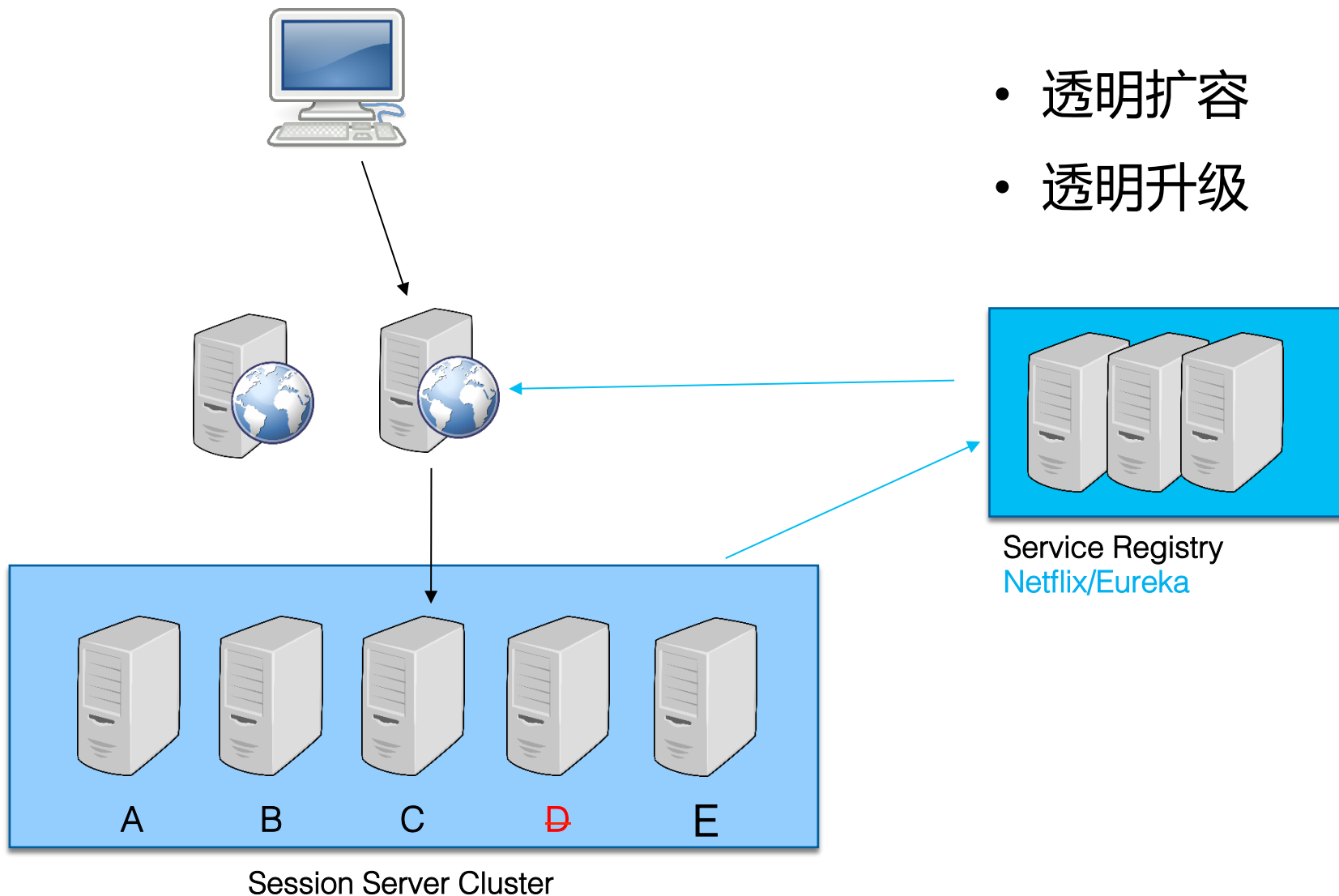




# 跨IDC摇摆策略



# 自注册、自发现



# 3级存储



$$M + E = B$$

# Store实现

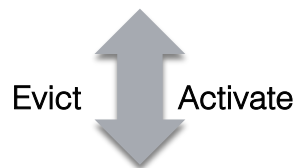


MemoryStore

- 基于ConcurrentHashMap



Entry:  
time  
next  
previous



EvictedStore

- 堆外内存 + Disk

Off Heap + Disk

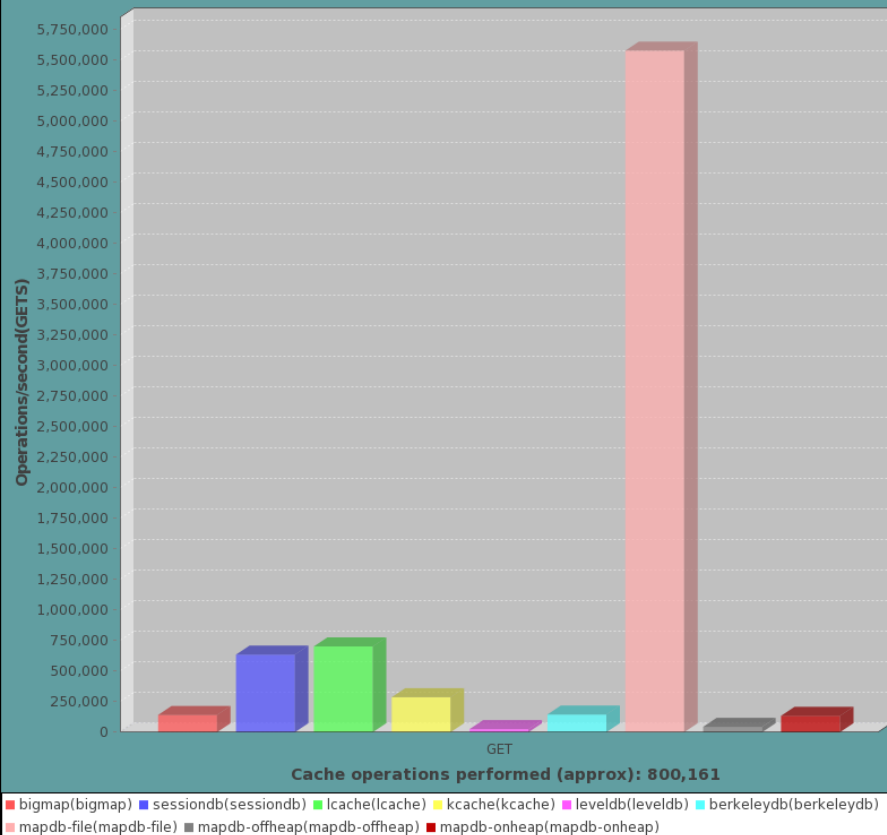
# Store性能测试



## Report: Comparing Cache GET (READ) performance

Generated on Mon Jun 09 13:49:11 CST 2014 by BlackSmith

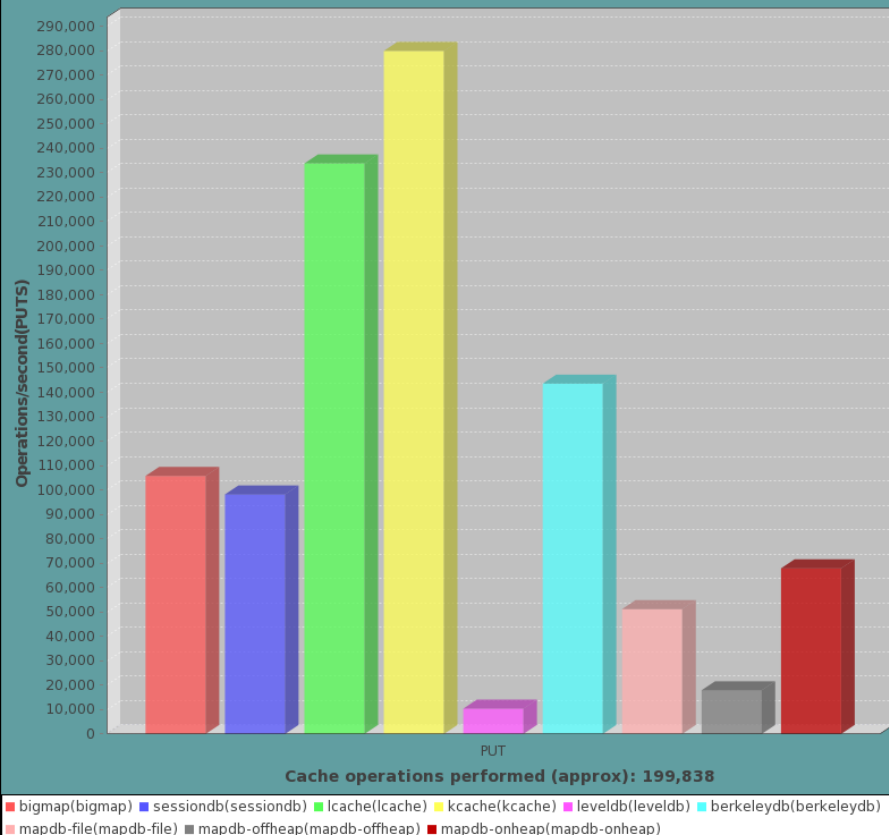
JDK: OpenJDK 64-Bit Server VM (23.25-b01, Sun Microsystems Inc.) OS: Linux (2.6.32-358.el6.x86\_64, amd64)



## Report: Comparing Cache PUT (WRITE) performance

Generated on Mon Jun 09 13:49:13 CST 2014 by BlackSmith

JDK: OpenJDK 64-Bit Server VM (23.25-b01, Sun Microsystems Inc.) OS: Linux (2.6.32-358.el6.x86\_64, amd64)



- 监控报警
- 推广

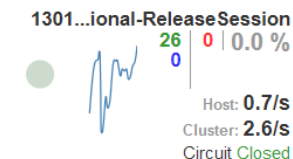
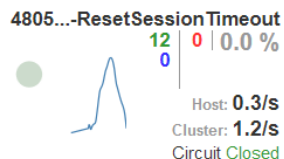
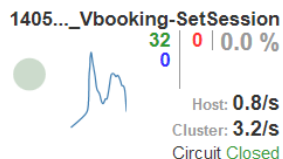
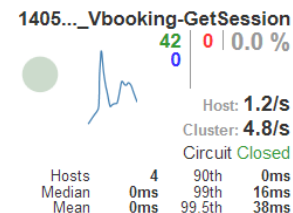
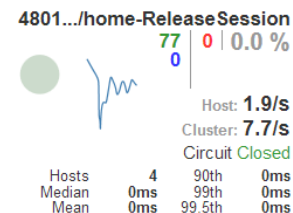
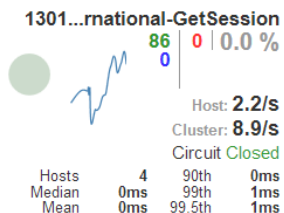
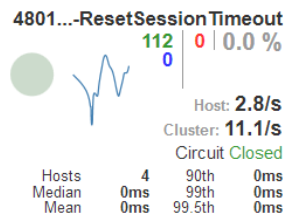
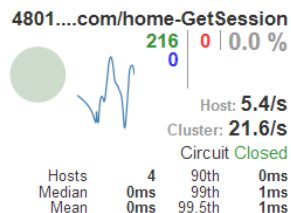
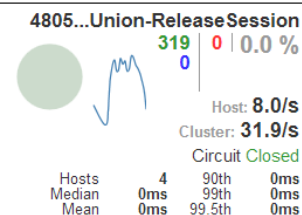
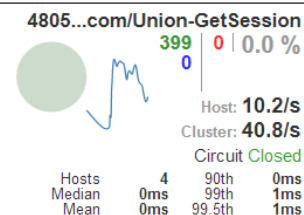
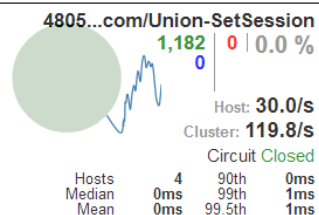
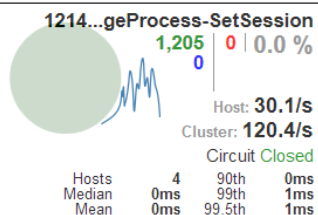
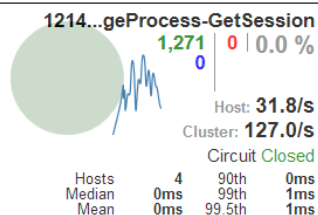
# 实时监控



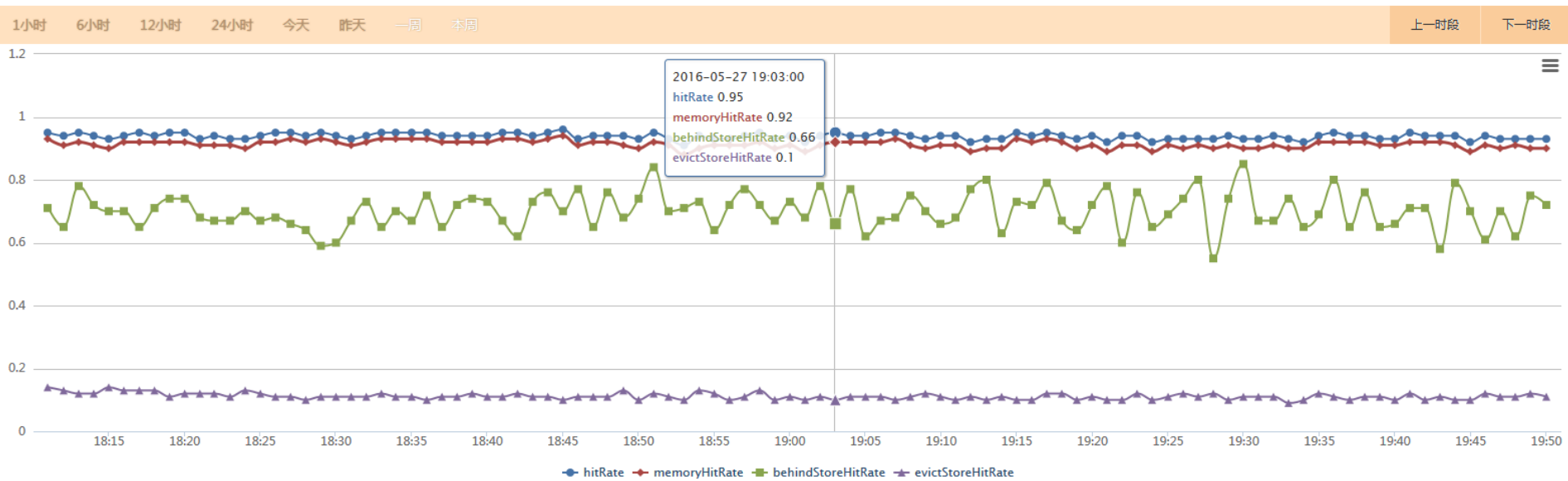
Hystrix Stream: <http://turbine.soa.ctripcorp.com/turbine/turbine.stream?cluster=session-server>

Circuit Sort: [Error then Volume](#) | [Alphabetical](#) | [Volume](#) | [Error](#) | [Mean](#) | [Median](#) | [90](#) | [99](#) | [99.5](#)

[Success](#) | [Short-Circuited](#) | [Timeout](#) | [Rejected](#) | [Failure](#) | [Error %](#)

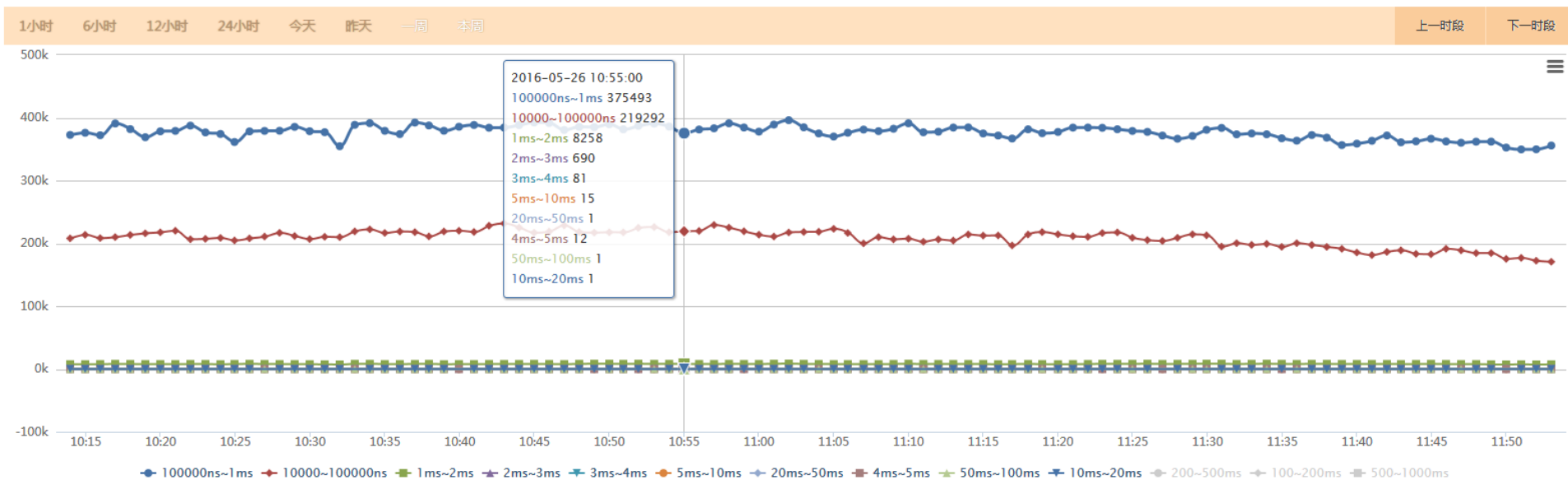


# 近实时监控





# 近实时监控



- 如何在一定期限内完成接入工作？
- 哪些应用使用了Session？
- 如何让PD愿意接入？
- Sticky Session是否解决了？

Thanks:)

Q&A

Dashboard - session-server.req.count



# 彩蛋

