

Lesson5 Redis运维

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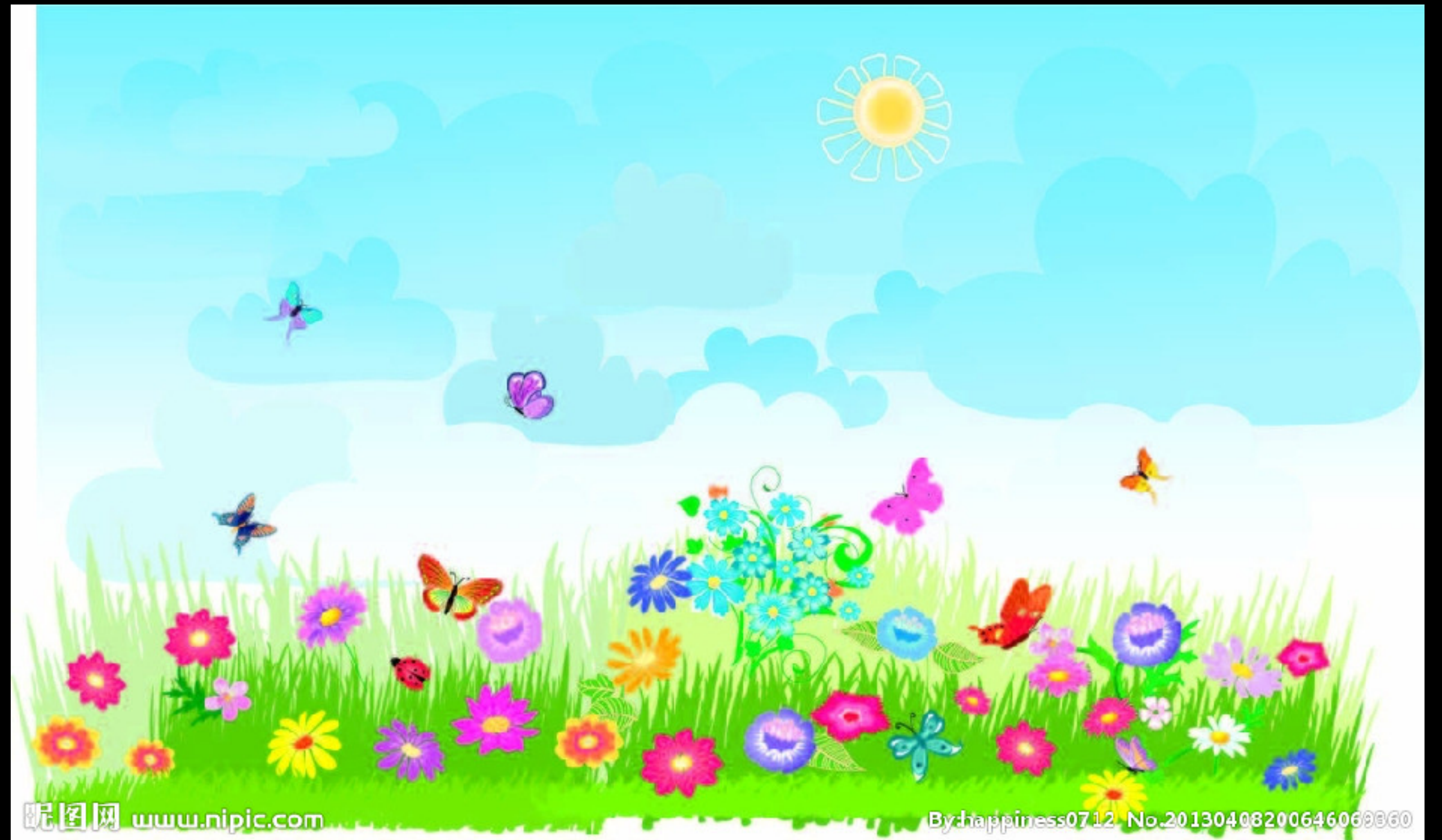
Agenda

- 架构选型
- 容量评估
- 服务配置
- 故障处理

架构选型

架构选型

- 扩展性
- 可靠性
- 可控性
- 易用性
-



架构选型

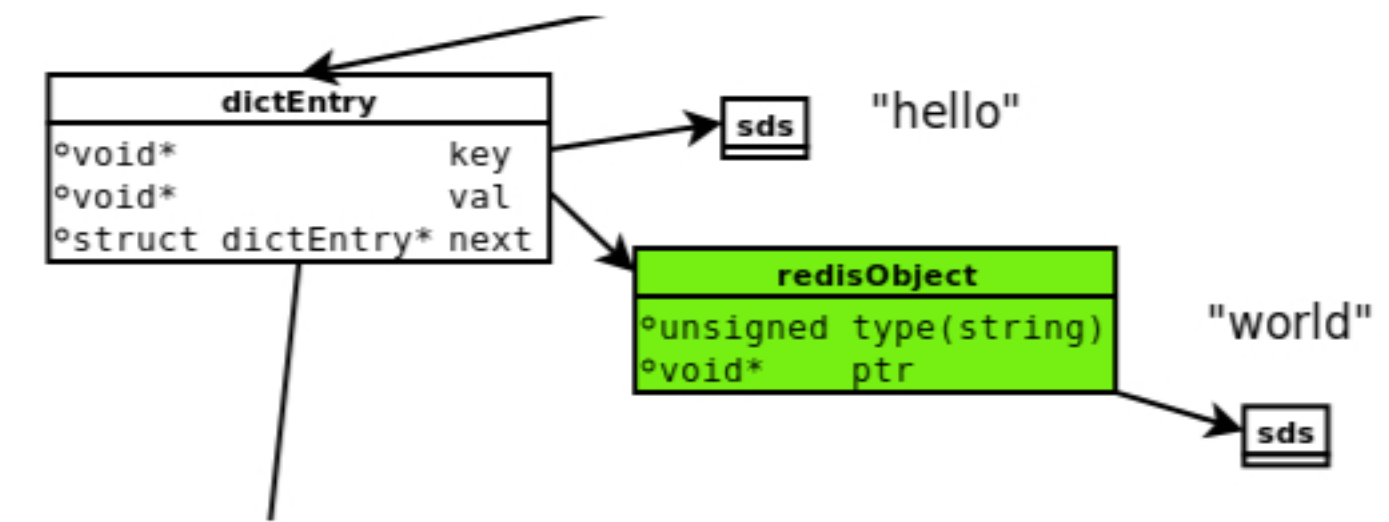


容量评估

我需要多少内存

string 类型的内存大小 = 键值个数 *
(dictEntry大小 + redisObject大小 + 包含
key的sds大小 + 包含value的sds大小) +
bucket个数 * 4

```
sds sdsnewlen(const void *init, size_t initlen) {  
    struct sdshdr *sh;  
  
    if (init) {  
        sh = zmalloc(sizeof(struct sdshdr)+initlen+1);  
    } else {  
        sh = zcalloc(sizeof(struct sdshdr)+initlen+1);  
    }  
}
```



传说中的QPS

- 时间复杂度
- CPU
- 网卡

GET key

Available since 1.0.0.

Time complexity: $O(1)$

ZREVRANGE key start stop [WITHSCORES]

Available since 1.2.0.

Time complexity: $O(\log(N)+M)$ with N being the number of elements in the sorted set and M the number of elements returned.

服务配置

maxmemory

- **maxmemory-policy**
- **maxmemory-samples**

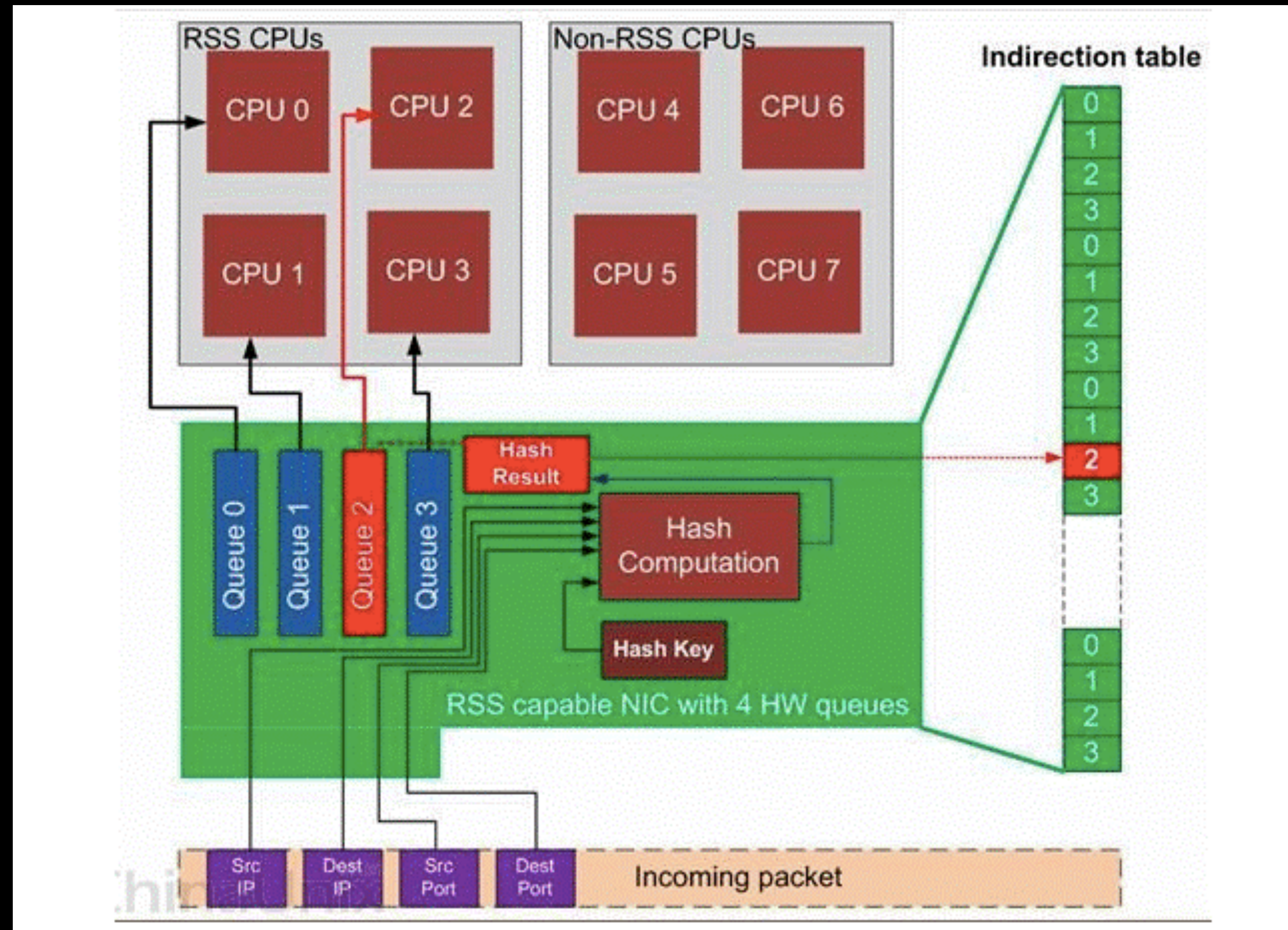
SWAP?

forget it



网卡

别只关注吞吐量



磁盘

别忘了持久化

哦 是吗?
关我什么事呢?



其他运维

bigkey

- **bigkeys, Sample Redis keys looking for big keys**
- **redis-rdb-tools**

keys or scan?

scan 被设计出来用来代替keys

宕机?

谨慎重启

碎片率

Restart

A photograph of a classroom scene from behind a group of students. In the foreground, a girl with dark hair in pigtails, wearing a red shirt, has her right arm raised. To her left, a boy in a light blue shirt also has his arm raised. Further back, another student in an orange shirt has their arm raised. On the far right, a student in a green shirt is partially visible. The background is a large blackboard filled with faint, handwritten mathematical equations and diagrams. The text 'Q/A' is overlaid in the center of the image.

Q/A