



IT大咖说  
不止于技术

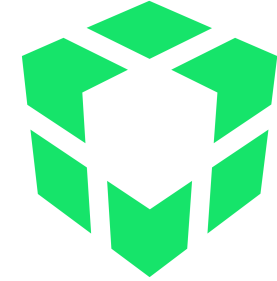
# Running Docker Labs

孙宏亮

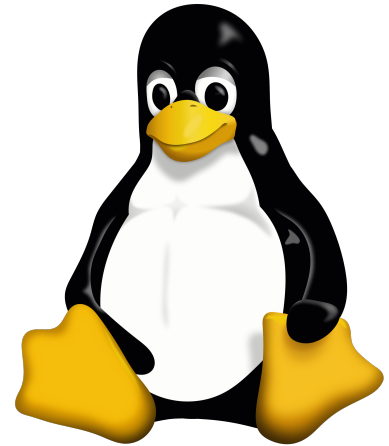
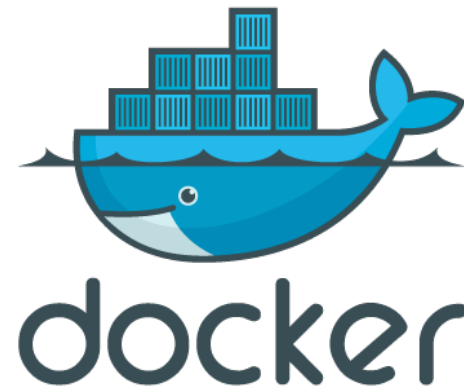
[allen.sun@daocloud.io](mailto:allen.sun@daocloud.io)

# About me

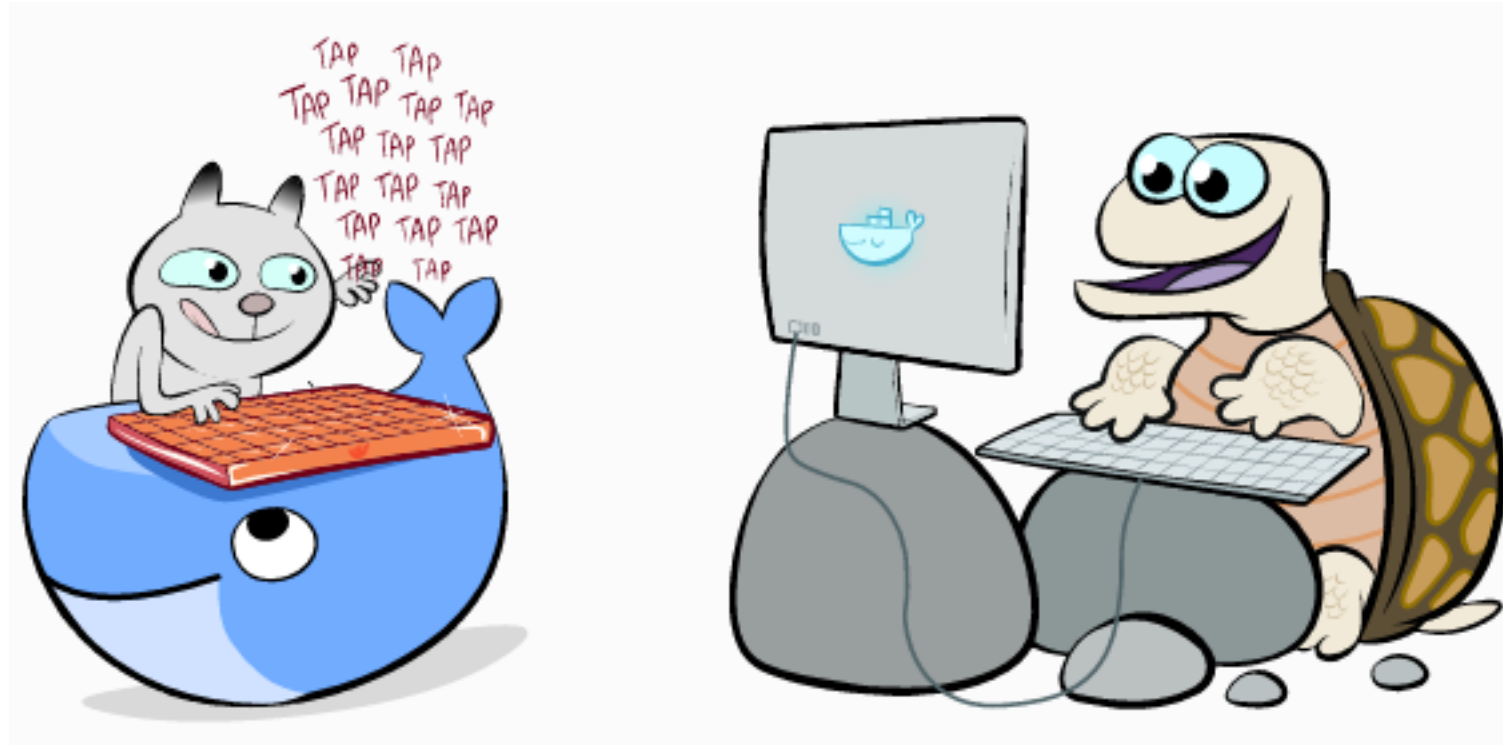
- DaoCloud
- Docker
- Linux
- GitHub: allencloud



**DaoCloud**



# Docker Labs



<https://github.com/docker/labs>

# Docker Tutorials and Labs



docker



DaoCloud



This repo contains [Docker](#) labs and tutorials authored both by Docker, and by members of the community. We welcome contributions and want to grow the repo.

## Docker tutorials:

- [Docker for beginners](#)
- [Docker Swarm Mode](#)
- [Configuring developer tools and programming languages](#)
  - [Java](#)
    - [Live Debugging Java with Docker](#)
    - [Docker for Java Developers](#)
  - [Node.js](#)
    - [Live Debugging a Node.js application in Docker](#)
    - [Dockerizing a Node.js application](#)
- [Docker for ASP.NET and Windows containers](#)
- [Building a 12 Factor app with Docker](#)
- [Docker Security](#)
- [Docker Networking](#)

## Community tutorials

- [Docker Tutorials from the Community](#) - links to a different repository



# Agenda

- 从 0 到 1 构建一个应用镜像
- 使用 HEALTHCHECK 功能让容器完成健康检查;
- 使用 Swarm Mode 秒级构建一个分布式集群
- 创建服务的形式部署分布式应用
- 实现应用的滚动更新



# HEALTHCHECK

HEALTHCHECK 健康检查

Dockerfile

开发者定义

运维者统一接口查询

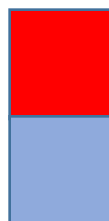
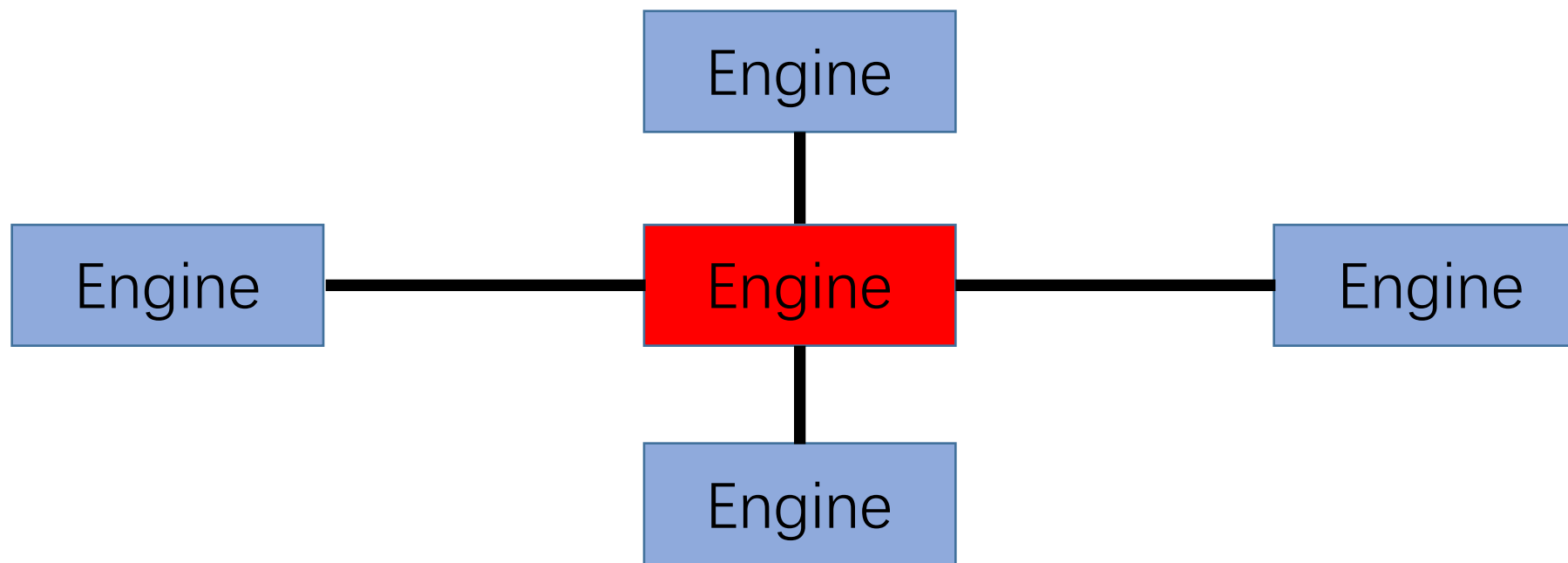
```
HEALTHCHECK curl --fail http://localhost:3000/ || exit 1
```

```
STATUS          PORTS
Up 2 minutes    0.0.0.0:5000->5000/tcp
Up 2 minutes (healthy) 0.0.0.0:3000->3000/tcp
Up 2 minutes    0.0.0.0:5001->5001/tcp
```

```
STATUS          PORTS          NAMES
Up 24 seconds (unhealthy) 0.0.0.0:3000->3000/tcp frontend
Up 3 minutes    0.0.0.0:6379->6379/tcp redis
```



# Docker Swarm Cluster



\$ docker swarm init
\$ docker swarm join <manager ip>:2377

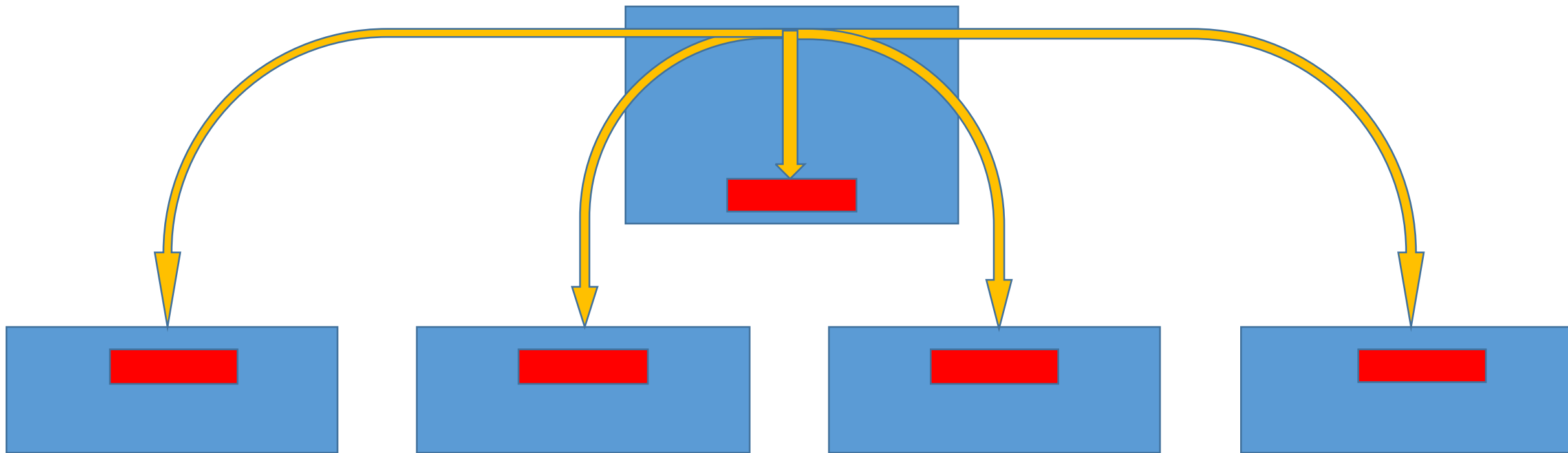
```
docker service create --name allen --replicas=5 -p 30001:80 alpine :
```



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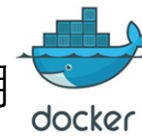
1. 创建指定数量的服务实例，这里是5

2. 支撑网络功能，每个服务实例完成服务注册，确保可以实现依据LVS完成的负载均衡

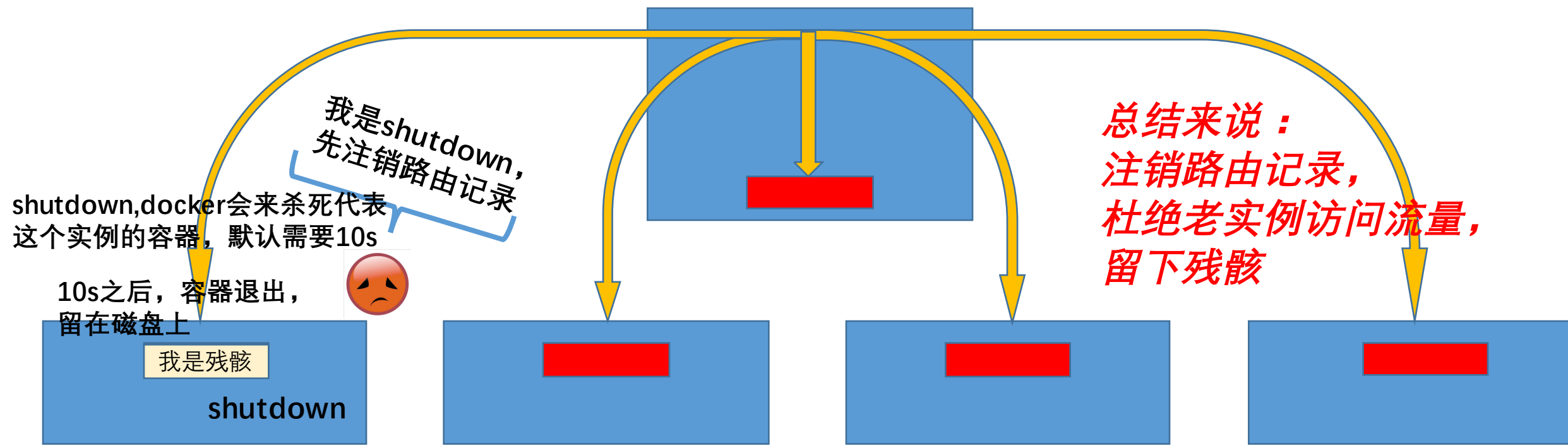




用户需要在现有系统中，使用新发布的alpine:v2.0版本来滚动升级线上的应用



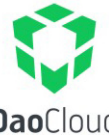
```
docker service update --update-delay=20s --update-parallelism=1 --image alpine:v2.0 allen
```



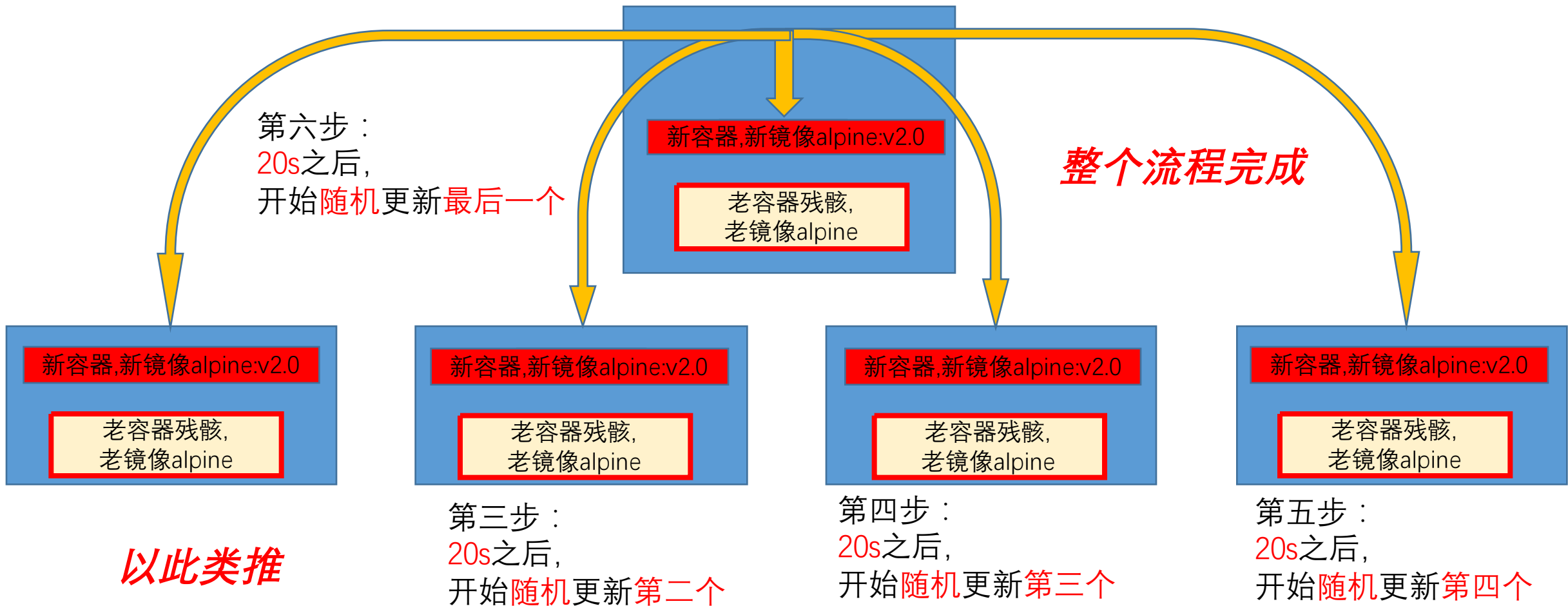
第一步：  
随机找到一个运行中的实例（原因是更新并发数update-parallelism为1，所以只找一个），  
对其的状态设置为shutdown



用户需要在现有系统中，使用新发布的alpine:v2.0版本来滚动升级线上的应用



```
docker service update --update-delay=20s --update-parallelism=1 --image alpine:v2.0 allen
```





# Q&A