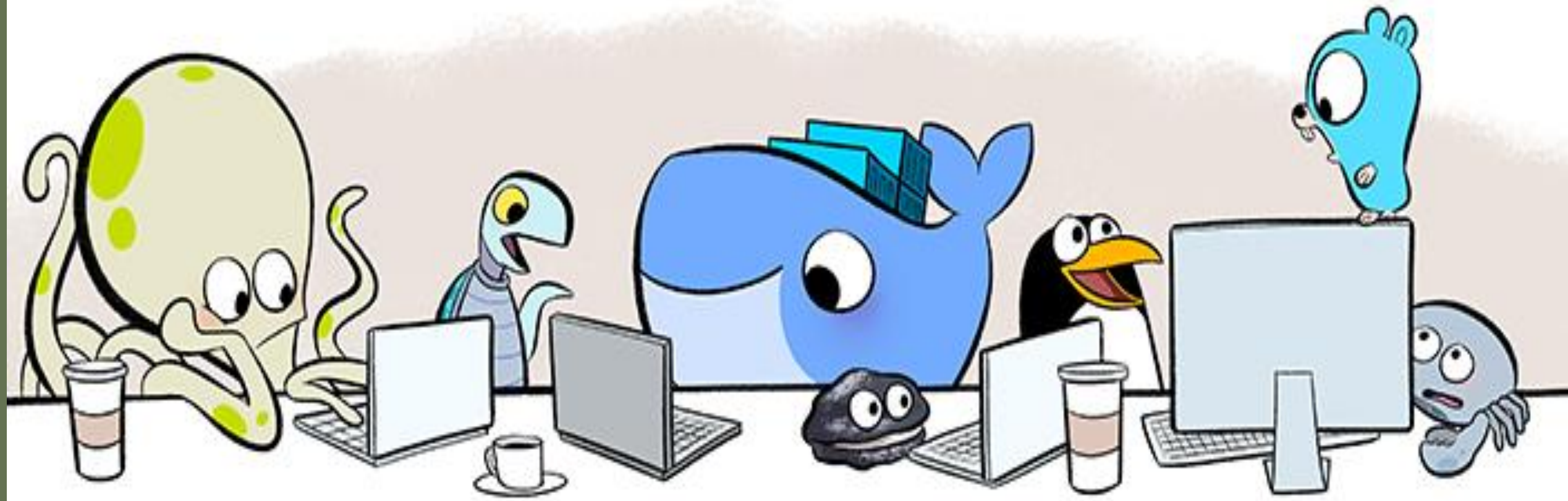
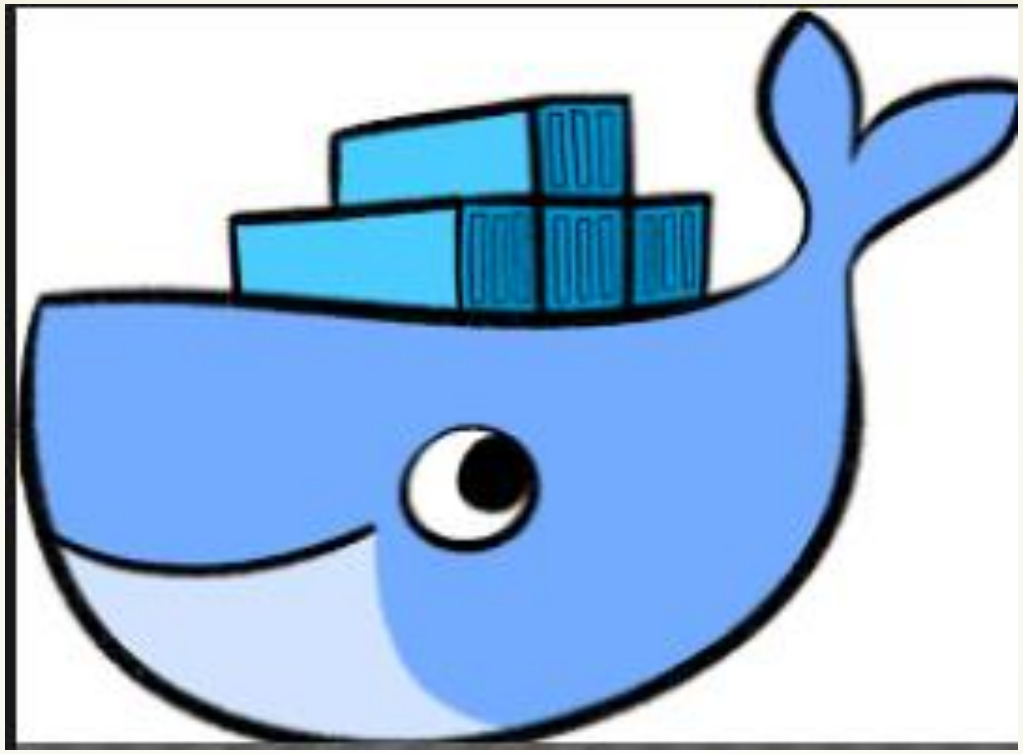
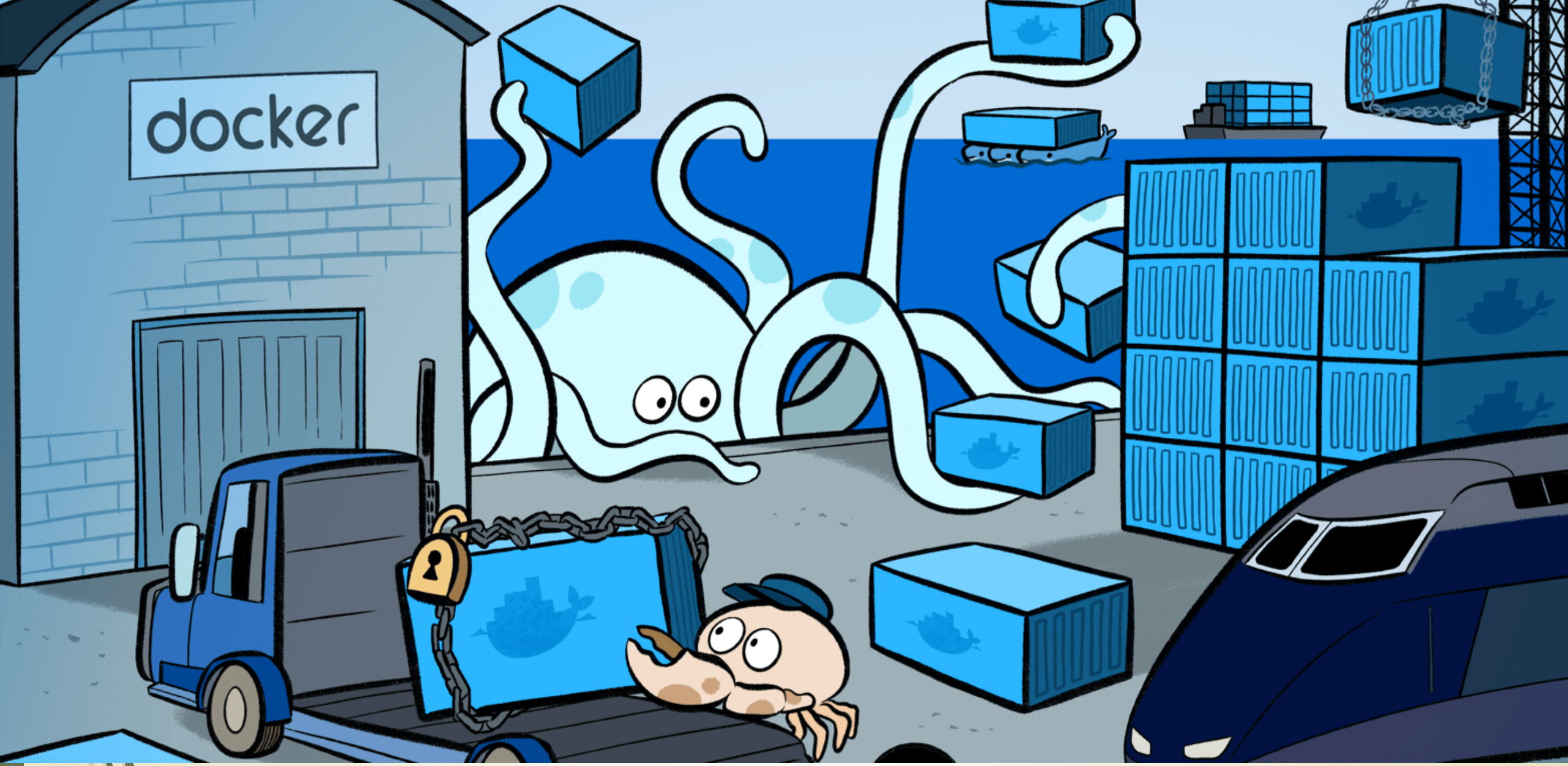


Docker

- Docker
- Swarm
- Stack



docker

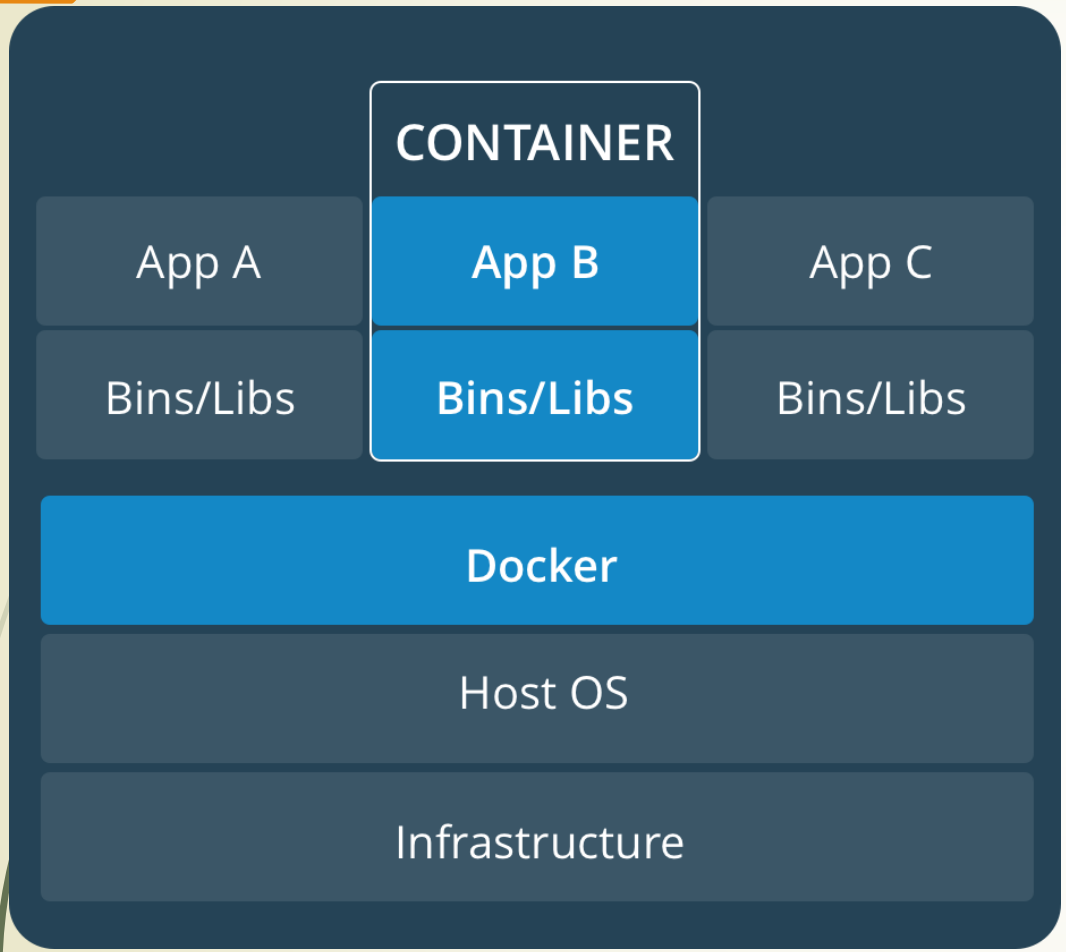


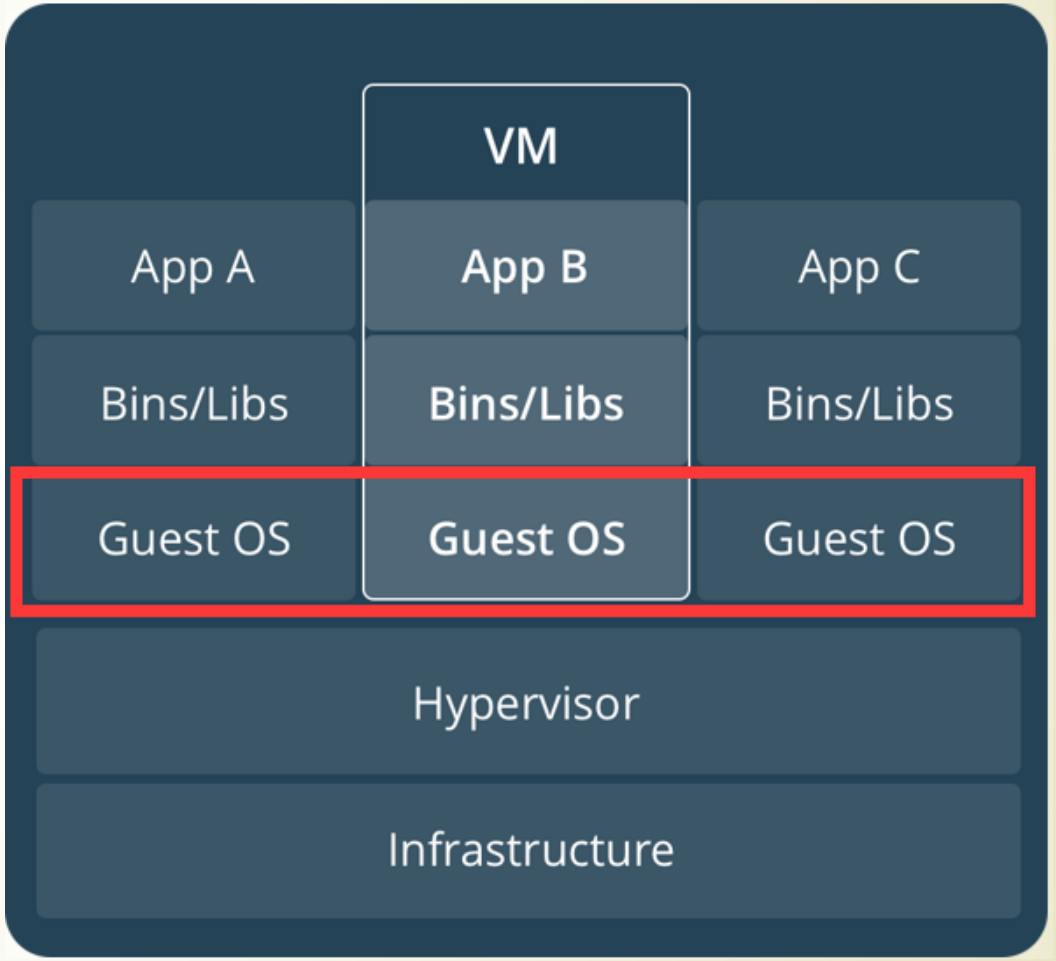
DOCKER ←===→ 集装箱

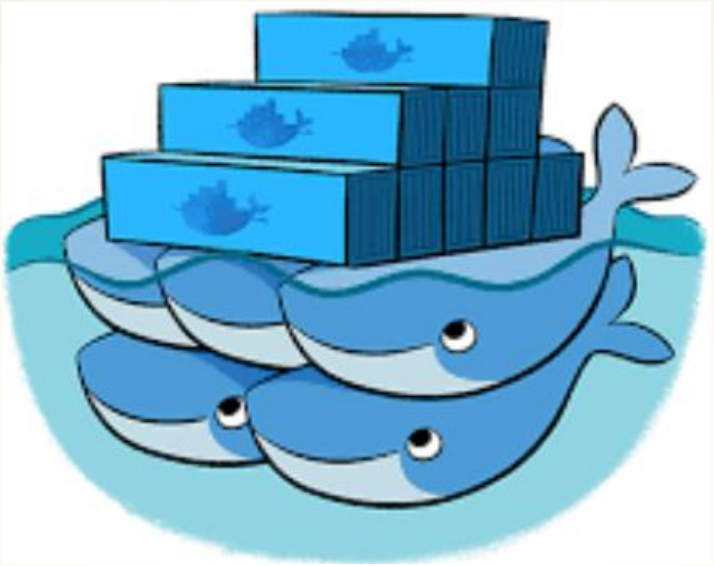
版号说明：

- 1.13.1 (2017-02-08)
  - 保持Docker 基本会保持 **3 个小版本号** 之内的兼容性
- 17.09.0-ce（2017-09-26）
  - 并且将每月发布一个**前沿(Edge)版本**，每季度发布一个**稳定(Stable)版本**

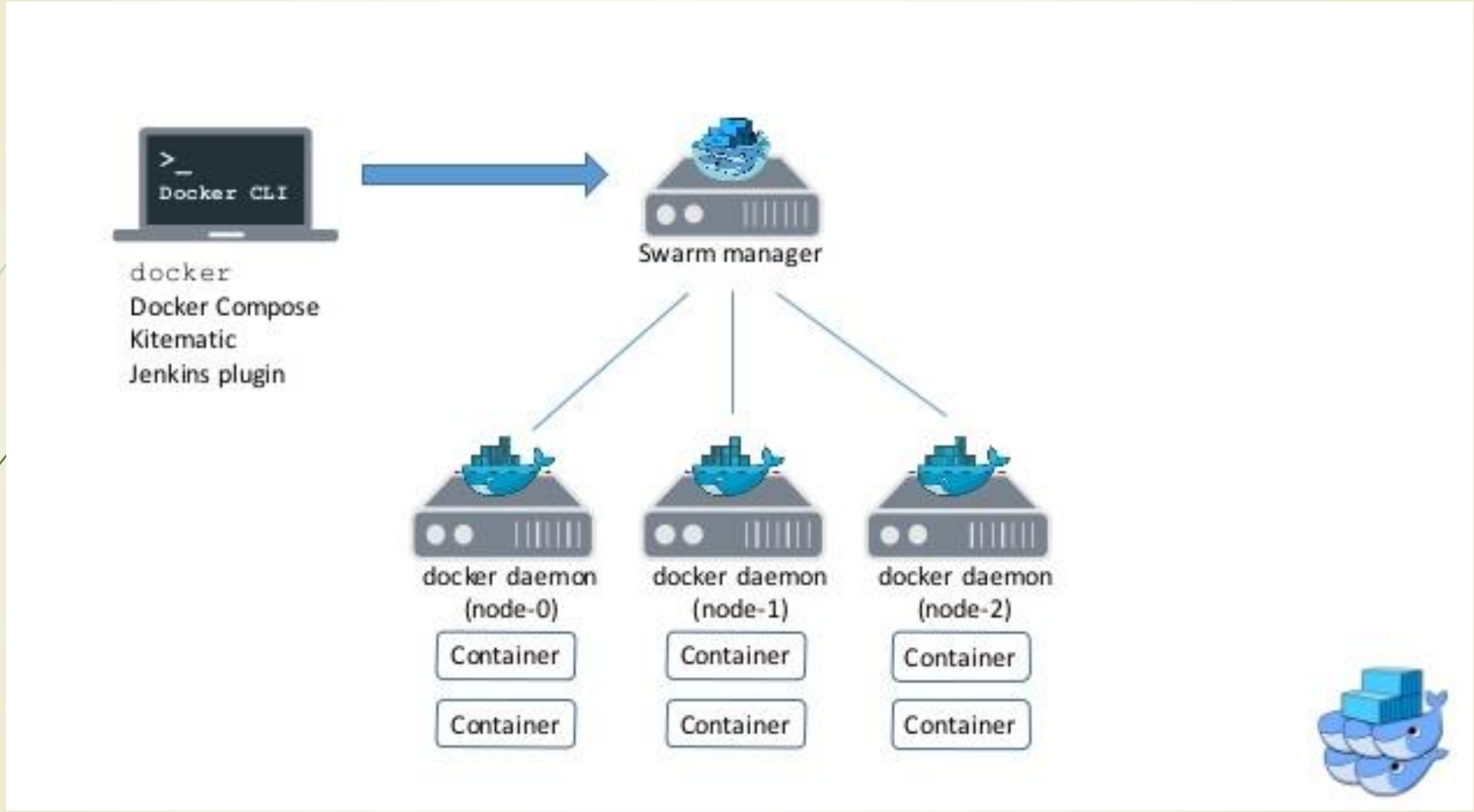
Docker vs VM


CONTAINER
App A
App B
App C
Bins/Libs
Bins/Libs
Bins/Libs
Docker
Host OS
Infrastructure


VM
App A
App B
App C
Bins/Libs
Bins/Libs
Bins/Libs
Guest OS
Guest OS
Guest OS
Hypervisor
Infrastructure



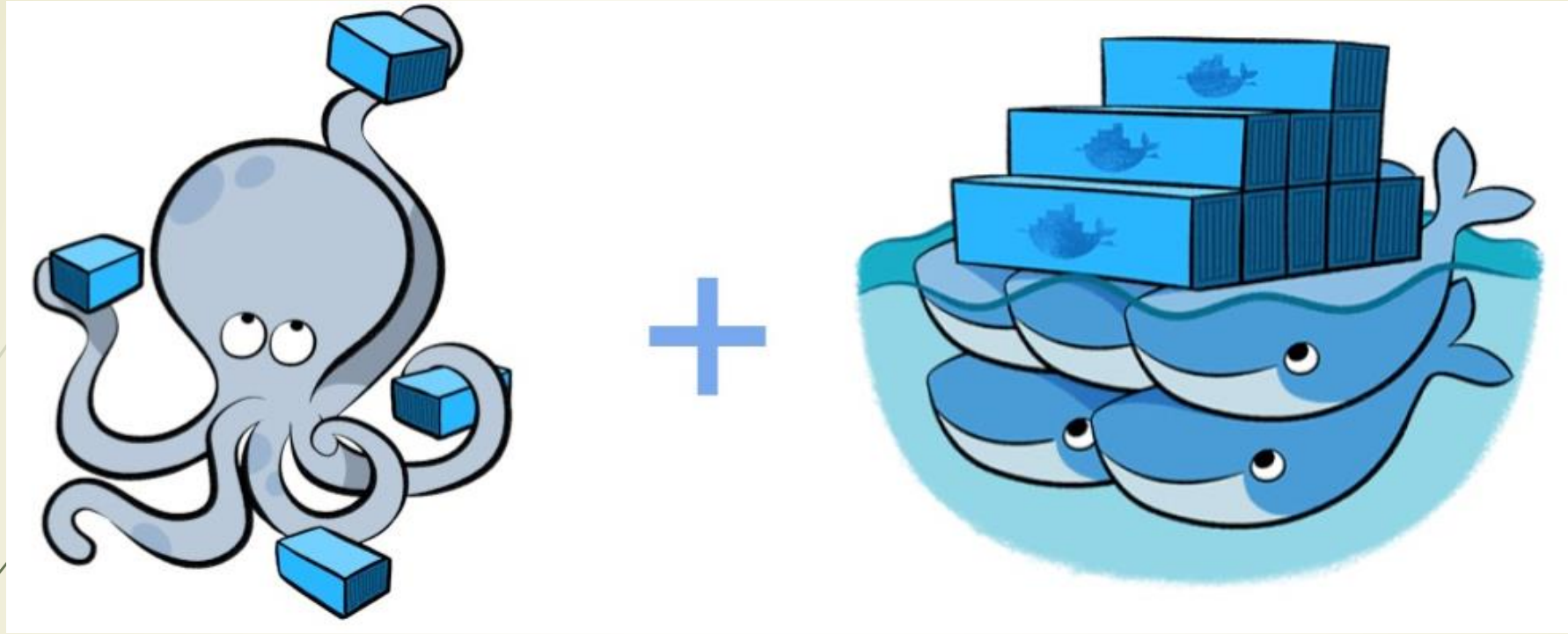
docker swarm


>_
Docker CLI
docker
Docker Compose
Kitematic
Jenkins plugin
Swarm manager
docker daemon
(node-0)
docker daemon
(node-1)
docker daemon
(node-2)
Container
Container
Container
Container
Container
Container

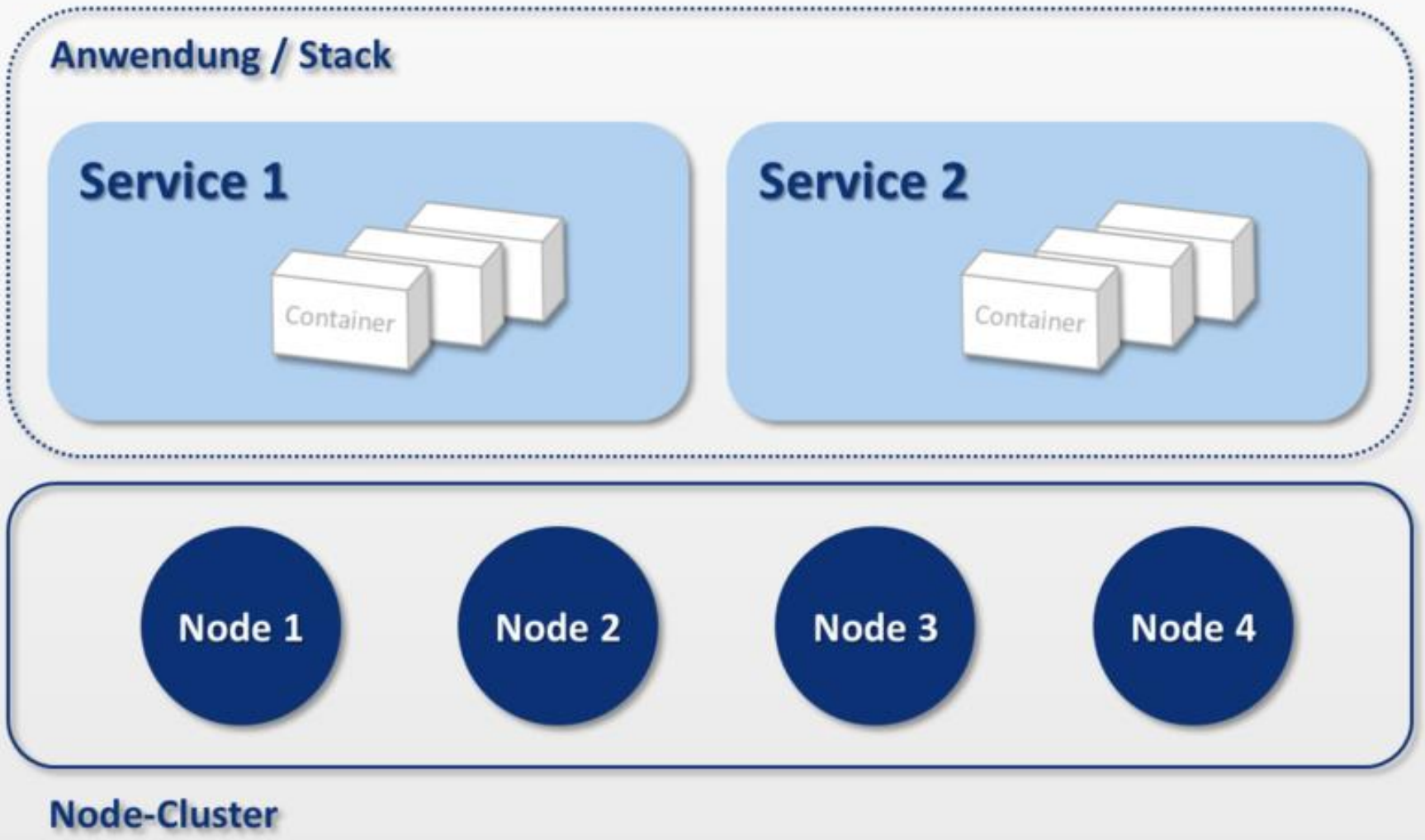
- **节点:** 节点指加入Swarm集群的Docker引擎的一个实例

- **服务与任务:** 服务指的是在工作节点上执行的任务。服务是Swarm集群系统的中心结构，也是用户与Swarm互动的主根

- **负载均衡:** Swarm管理器能自动给服务分配一个PublishedPort，或你可为服务在30000-32767范围内设置一个PublishedPort



Docker stack



Stack & service & node

```yaml
version: "3"
services:
  web:
    # replace username/repo:tag with your name and image details
    image: username/repo:tag
    deploy:
      replicas: 5
      restart_policy:
        condition: on-failure
      resources:
        limits:
          cpus: "0.1"
          memory: 50M
    ports:
      - "80:80"
    networks:
      - webnet
  visualizer:
    image: dockersamples/visualizer:stable
    ports:
      - "8080:8080"
    volumes:
      - "/var/run/docker.sock:/var/run/docker.sock"
    deploy:
      placement:
        constraints: [node.role == manager]
    networks:
      - webnet
networks:
  webnet:
```

Web

应用

Visualizer

Docker Swarm 集群图形化显示工具

运行过程(win10 Hyper-V)

- docker-machine create -d hyperv --hyperv-virtual-switch “myswitch” myvm1 --创建虚拟机
- Docker swarm init --advertise-addr <myvm1 ip> --初始化swarm(manager)
- Docker join <myvm-token> --加入swarm集群(worker)
- Docker-machine <vm> --ssh SSH 链接vm操作
- docker stack deploy -c docker-compose.yml getstartedlab --运行


Q
A