

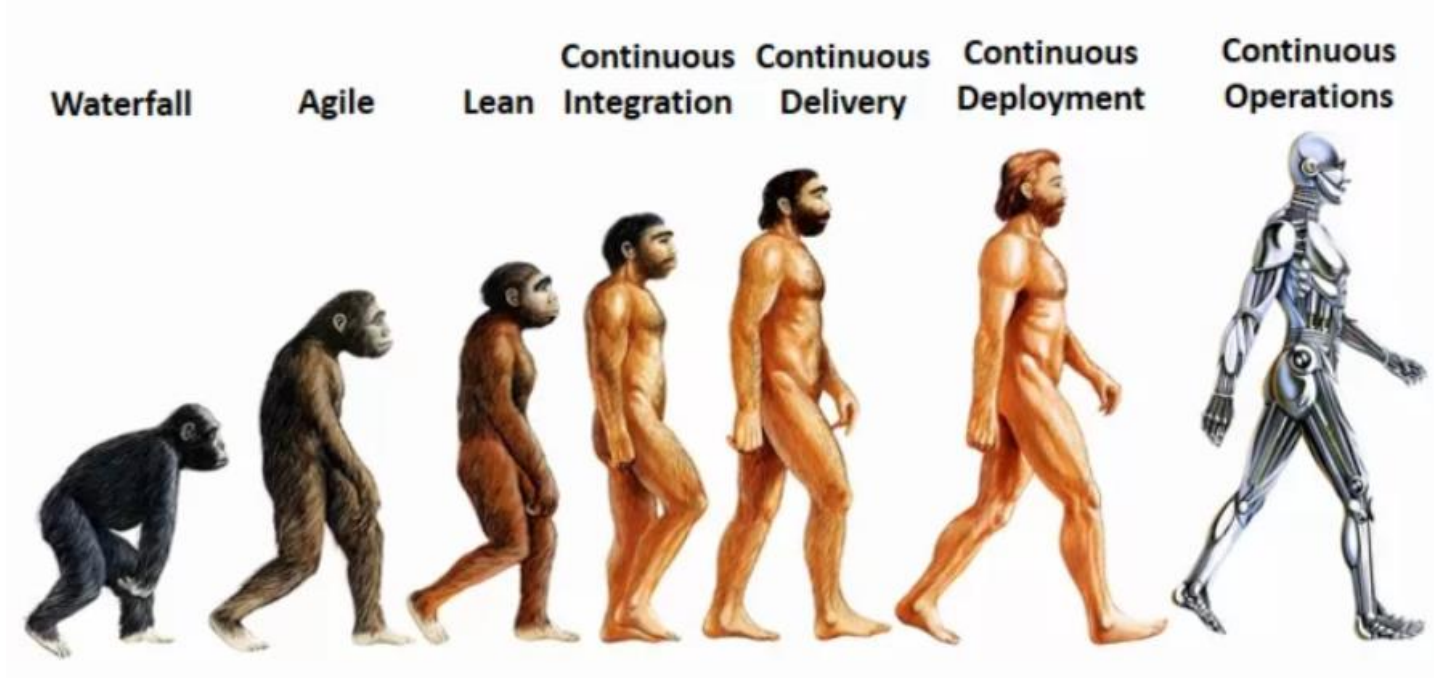
docker

Docker CE and EE summary

The open platform to build, ship and run any application anywhere

About me

- 14+ Engineering experience
- Continuous Operations freak and AWS enthusiast



Session Logistics

- 3 hours (exercising time included)
- No docker experience required
- Familiar with microservices architecture is a plus

Agenda

- What is Docker
- Benefits
- Evolution of Docker
- Docker CE and EE
- Docker EE
 - Cluster Components
 - Load Balancing
 - Service Discovery
 - HRM
- Lifecycle
- Subscription Tiers

What is Docker

Docker is a platform for developing, shipping and running applications using container virtualization technology

65%

use Docker to deliver development agility.

48%

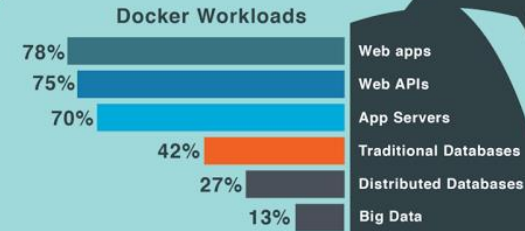
use Docker to control app environments.

41%

use Docker to achieve app portability.

90%

use Docker for apps in development.



58%

use Docker for apps in production.



90%

plan dev environments around Docker.



80%

plan DevOps around Docker.



The IT Landscape is Changing



Evolution of the Docker Platform



Beginning



- Single purpose
- Linux developer community



Mobyproject

An open framework to assemble specialized container systems without reinventing the wheel.

What is Moby?

Moby is an open framework created by Docker to assemble specialized container systems without reinventing the wheel. It provides a “lego set” of dozens of standard components and a framework for assembling them into custom platforms. At the core of Moby is a framework to assemble specialized container systems which provides:

Component Library

Orchestration

Image Management

Secret Management

Configuration Management

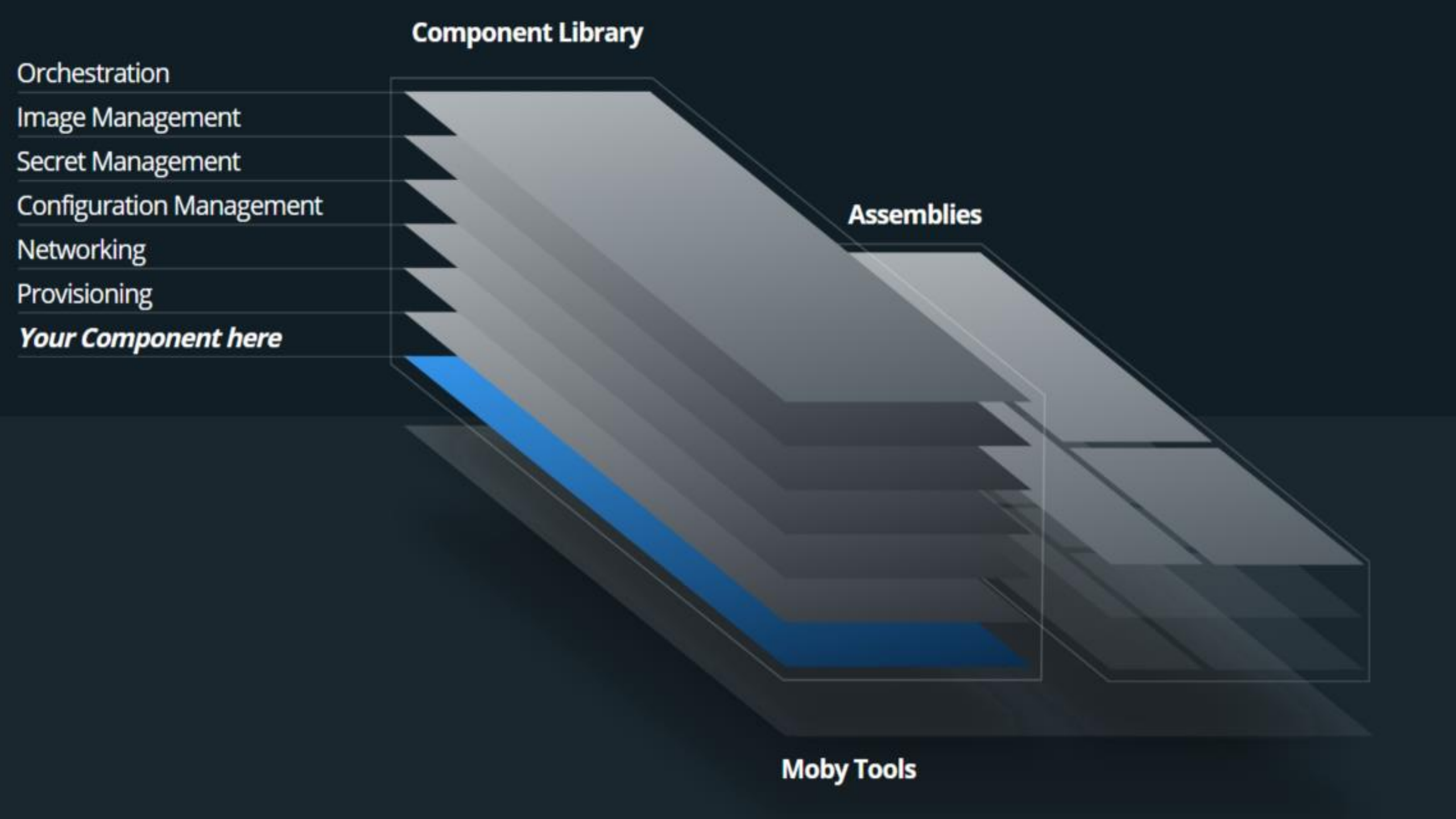
Networking

Provisioning

Your Component here

Assemblies

Moby Tools



Evolution of the Docker Platform

Many purposes, users and infrastructure



Today

Developer Community

Need to experiment and innovate with leading edge tech

Ops Community

Need a predictable system to deploy and run apps

Enterprise

Run business critical apps at scale anywhere

Partner Ecosystem

Extend and add value to a platform with a shared path to monetization

Docker Enterprise Edition (EE) and Community Edition (CE)

Enterprise Edition (EE)

- CaaS enabled platform subscription (integrated container orchestration, management and security)
- Enterprise class support
- Quarterly releases, supported for one year each with backported patches and hotfixes.
- Certified Infrastructure, Plugins, Containers

Community Edition (CE)

- Free Docker platform for “do it yourself” dev and ops
- Monthly Edge release with latest features for developers
- Quarterly release with maintenance for ops

Editions and certification

NEW Certification program for Infrastructure, Plugins and Containers



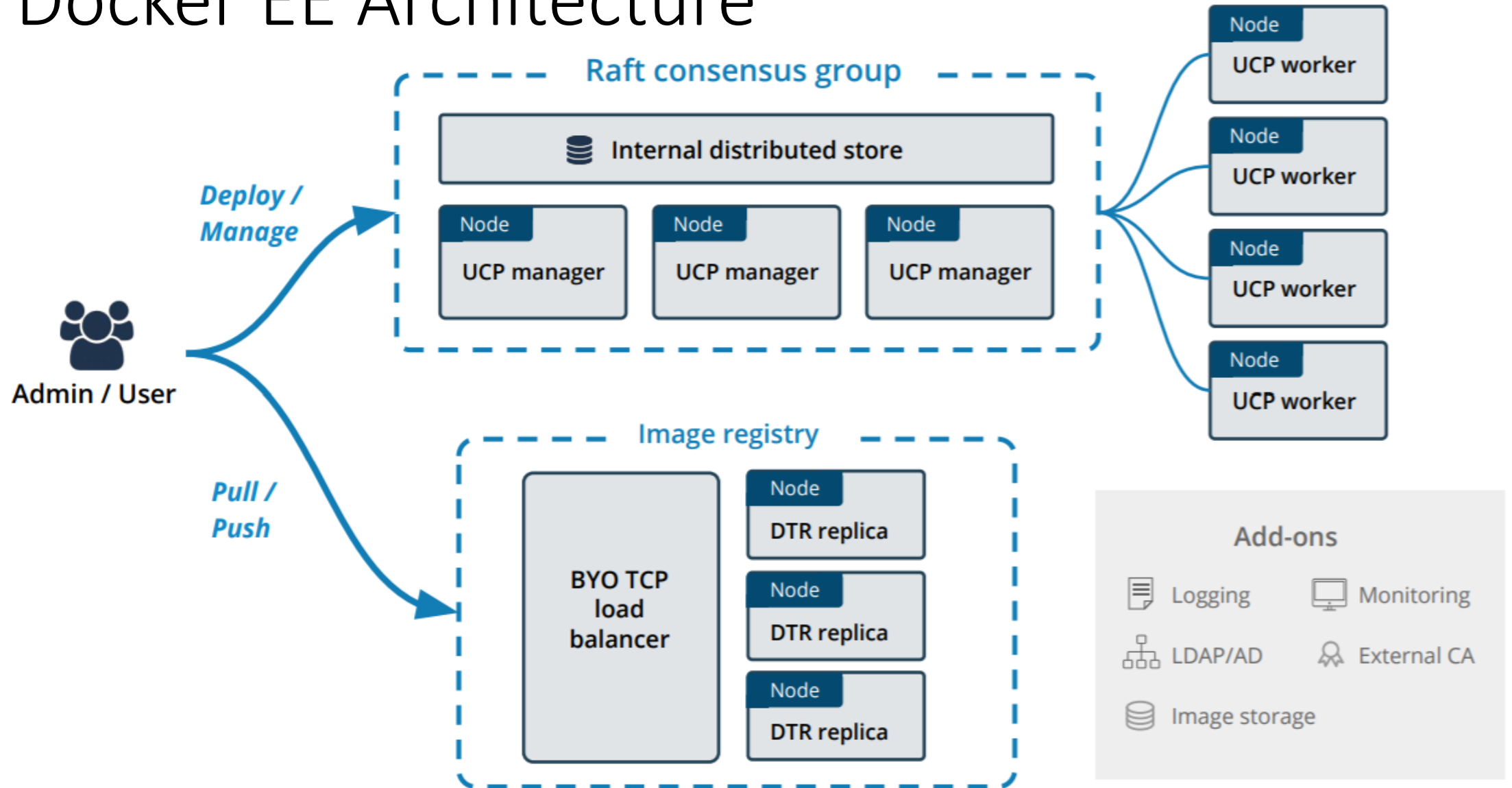
Docker Enterprise Edition (EE)

CaaS enabled platform for the modern software supply chain

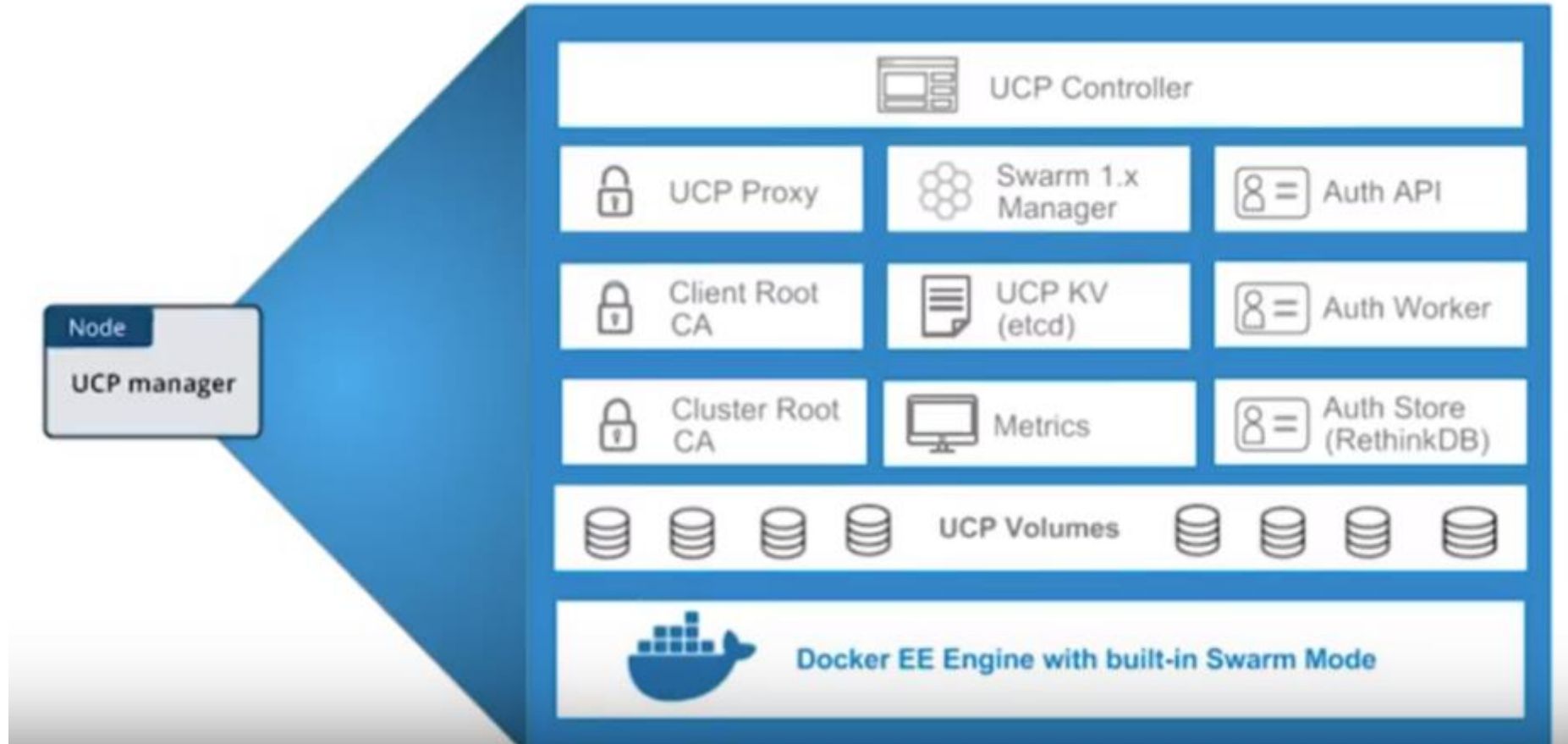


- Integrated orchestration, security and management
- Stable releases with 1 year of support and maintenance
- Security patches and hotfixes backported to all supported versions
- Enterprise class support (9am-6pm or 24x7x365)
- Certified Infrastructure, Containers and Plugins

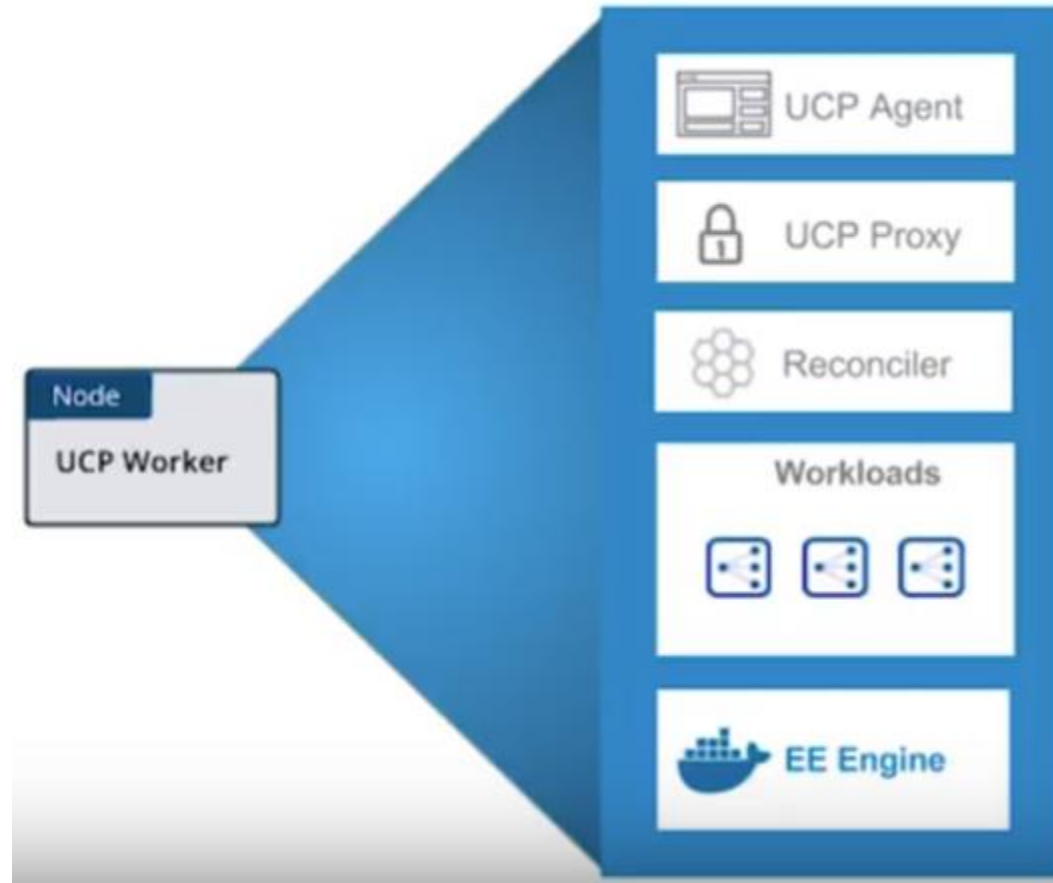
Docker EE Architecture



UCP Manager



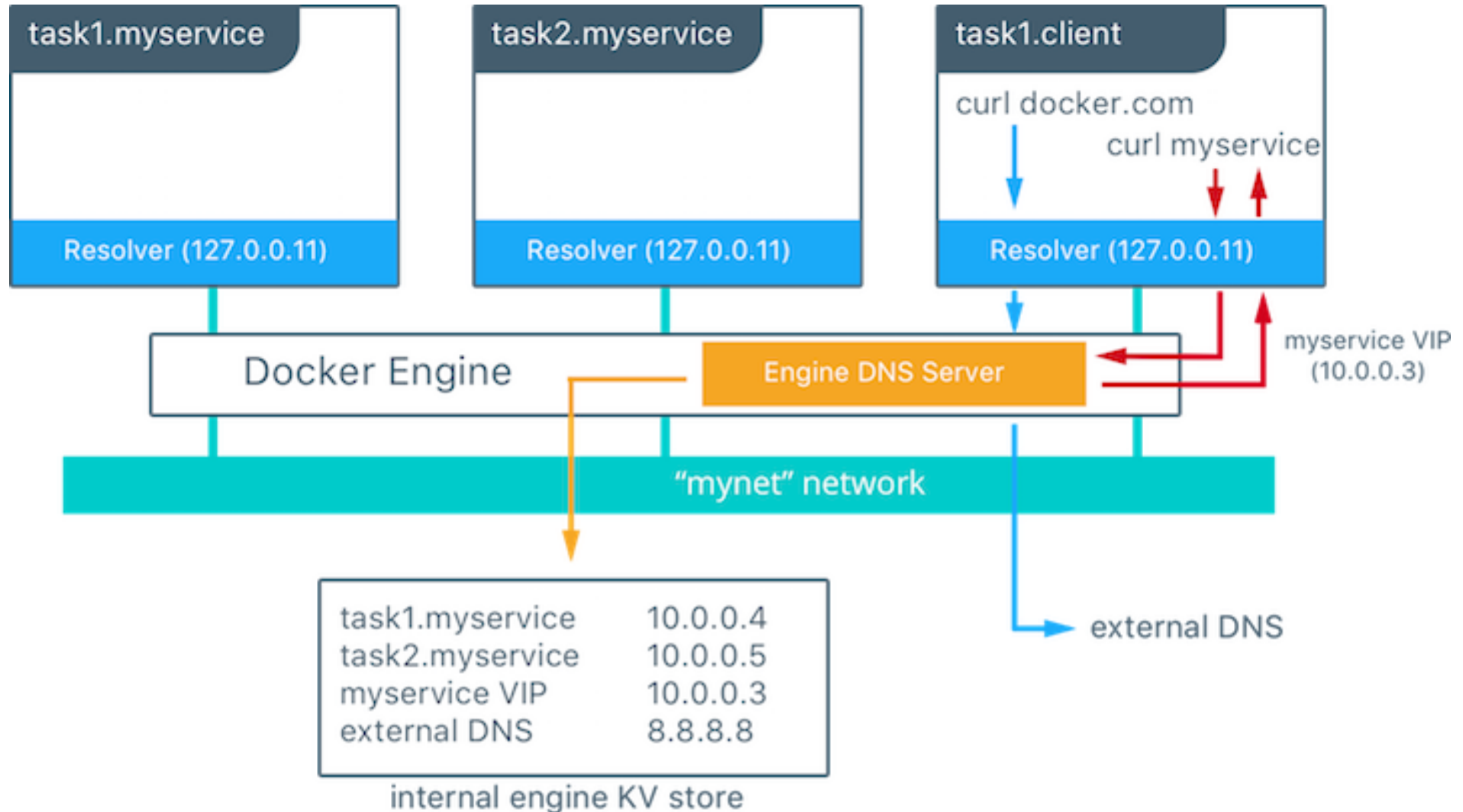
UCP Worker Node



Docker Trusted Registry



Service Discovery (DNS style)



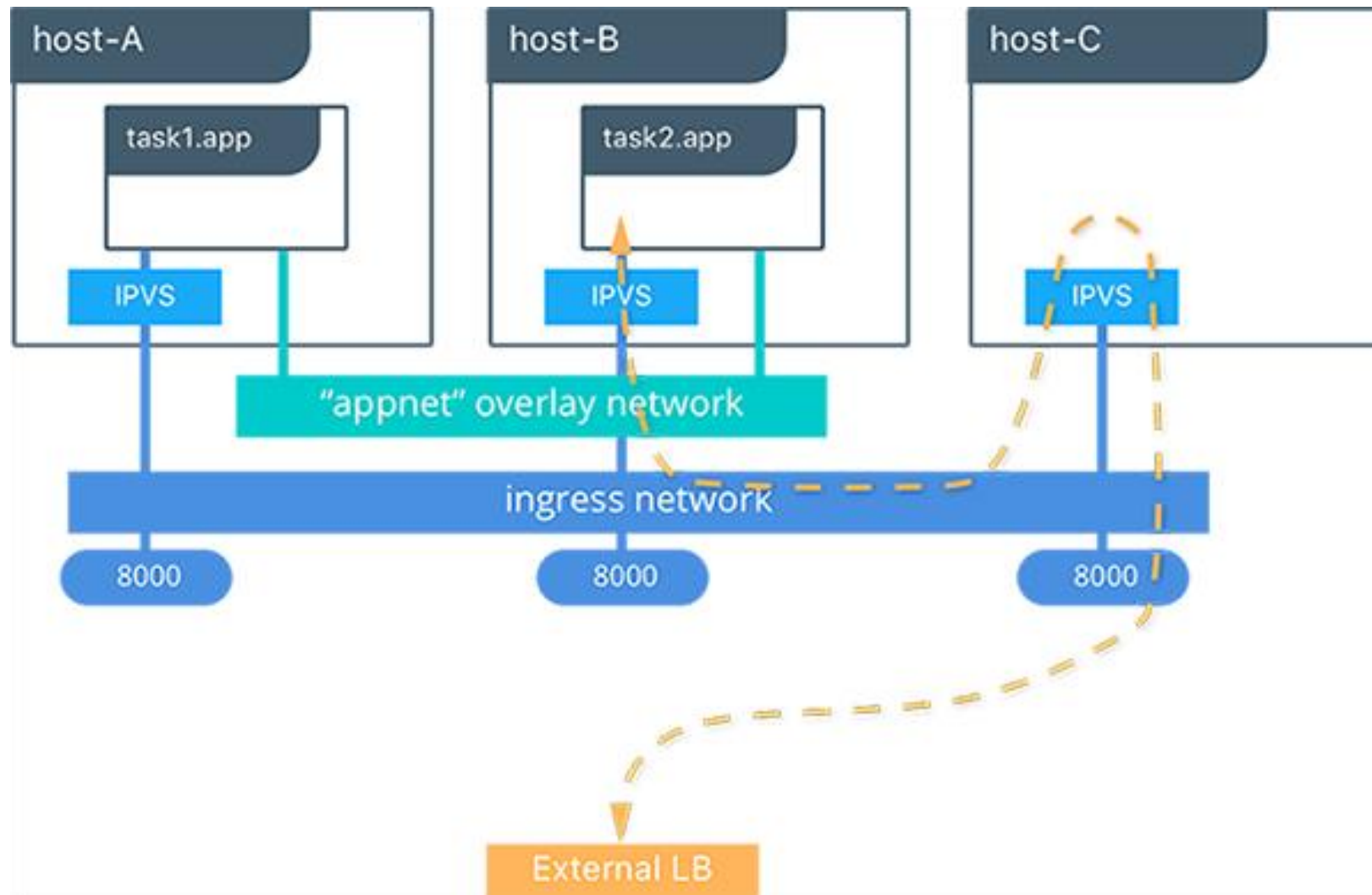
Internal Load Balancing



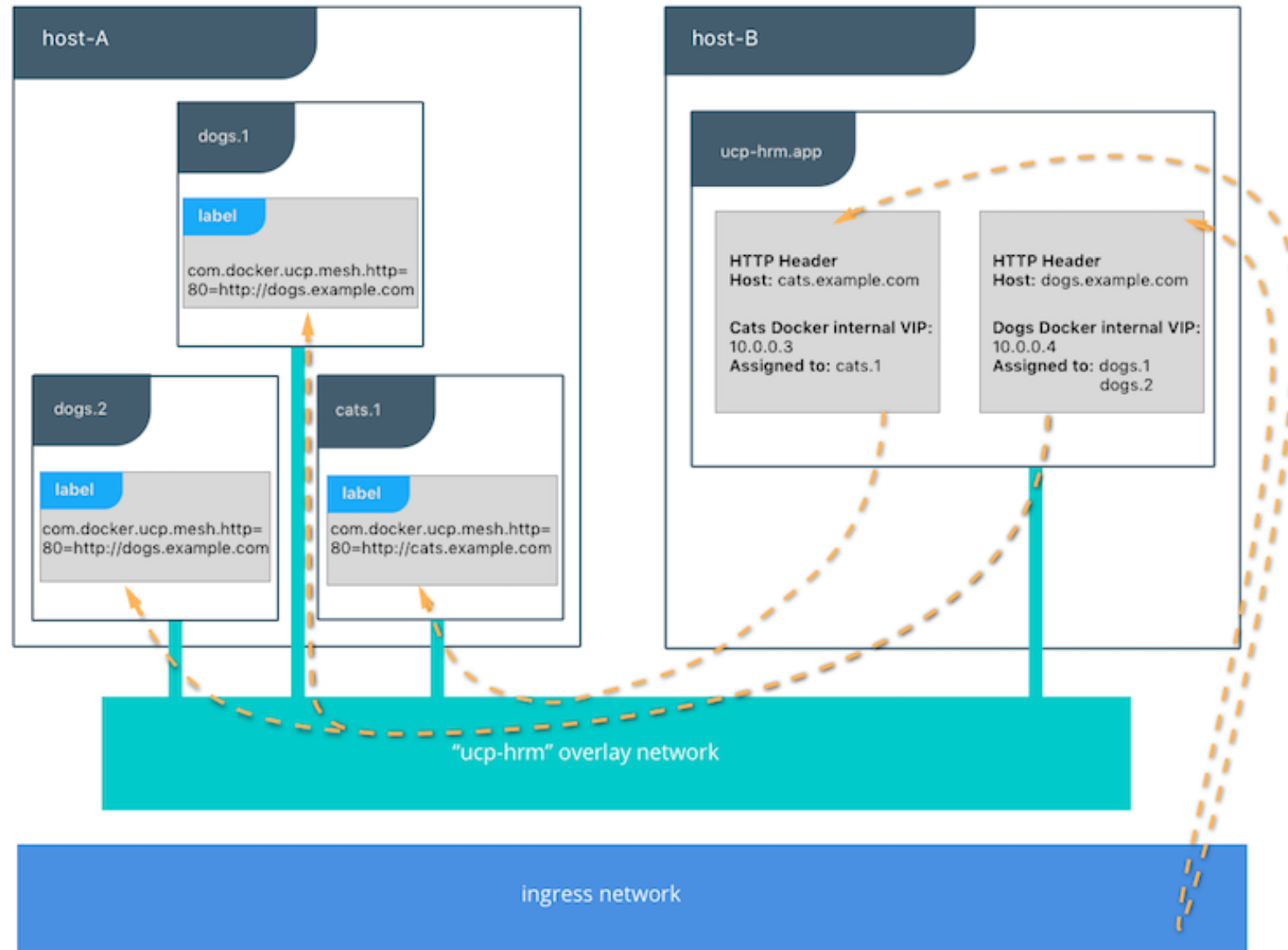
When services are created in a Docker Swarm cluster, they are automatically assigned a Virtual IP (VIP) that is part of the service's network. The VIP is returned when resolving the service's name. Traffic to the VIP is automatically sent to all healthy tasks of that service across the overlay network.

This approach avoids any client-side load balancing because only a single IP is returned to the client. Docker takes care of routing and equally distributes the traffic across the healthy service tasks.

Load Balancing (Routing Mesh) SWARM style



HRM



Lifecycle

- Squaring the circle: Faster releases and better stability



Docker EE Subscription Tiers

		EE Basic	EE Standard (Docker Datacenter)	EE Advanced
Docker Datacenter	CaaS enabled platform	x	x	x
	Container engine and built in orchestration, networking, security	x	x	x
	Docker Certified Infra, Plugins and ISV Containers	x	x	x
	Image management With private registry, caching		x	x
	Integrated container app management		x	x
	Multi-tenancy with RBAC, LDAP/AD		x	x
	Integrated secrets mgmt, image signing, policy		x	x
	Image security scanning and continuous vulnerability monitoring			x



Save Changes

Cancel

Status ⓘ

Ready

Address ⓘ

10.119.14.44

Availability ⓘ

ActivePauseDrain

Message ⓘ

Healthy UCP Node

Role

Role ⓘ

ManagerWorker

Node Labels ⓘ

+ Add label

KEY

VALUE

environment

dev



Questions



References

- Docker EE
<https://www.docker.com/enterprise-edition>
- Docker CE vs EE
<https://www.cio.com/article/3176713/open-source-tools/docker-draws-distinctions-between-enterprise-and-community-editions.html>
- Google 😊