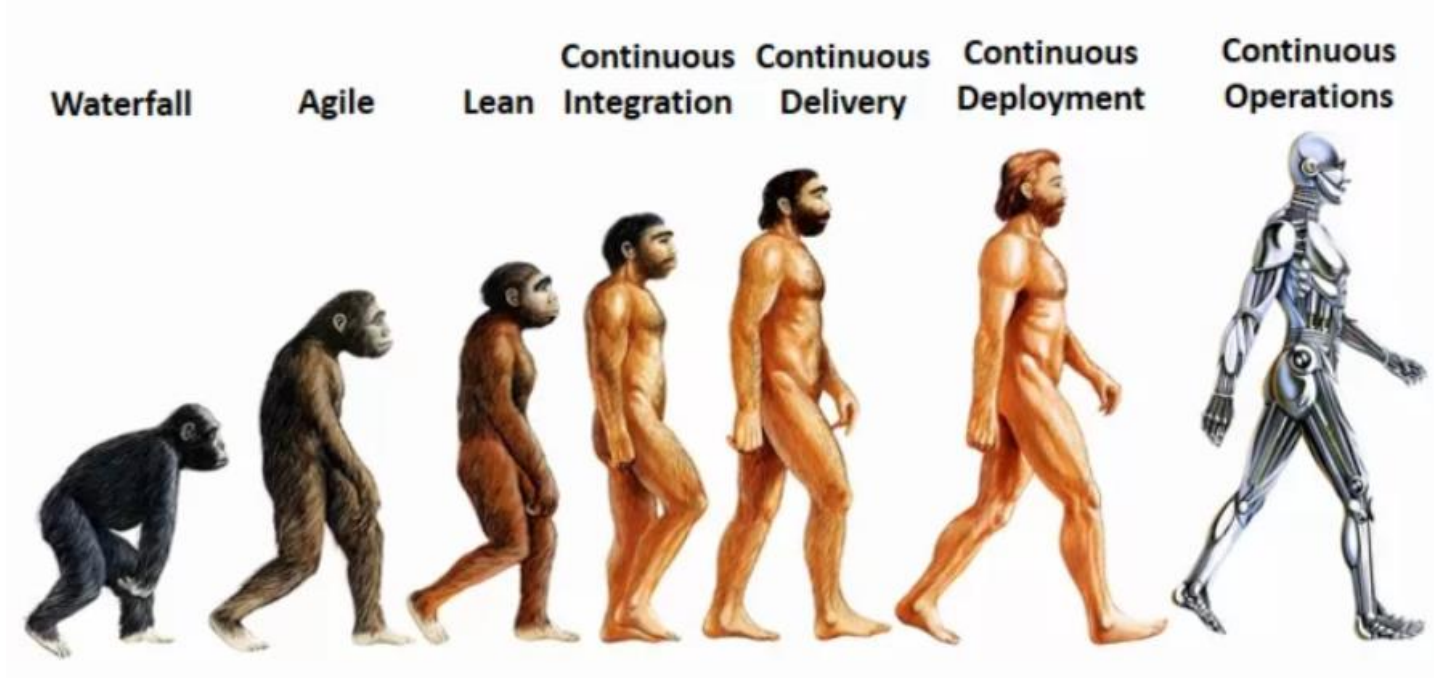# Docker CE and EE summary

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

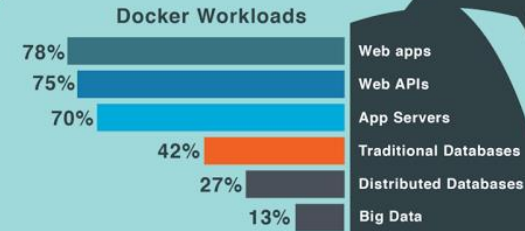**65%** use Docker to deliver development agility.

48% use Docker to control app environments.

41% use Docker to achieve app portability.

90% use Docker for apps in development.

Docker Workloads
- 78% Web apps
- 75% Web APIs
- 70% App Servers
- 42% Traditional Databases
- 27% Distributed Databases
- 13% Big Data

58% use Docker for apps in production.

90% plan dev environments around Docker.

80% plan DevOps around Docker.

docker

Benefits of Docker

- Separation of concerns
  - Developers focus on building apps
  - QA focus on testing
  - System admins focus on deployment
- Fast development cycle
- Application portability and
  - Build in one environment, test and ship to another
- Scalability spin-up new container if needed
  - Easily spin-up new container on demand
- Cost efficiency

Evolution of the Docker Platform

Beginning

- Single purpose
- Linux developer community

Evolution of the Docker Platform

Many purposes, users and infrastructure

Today

Developer Community	Ops Community	Enterprise	Partner Ecosystem
Need to experiment and innovate with leading edge tech	Need a predictable system to deploy and run apps	Run business critical apps at scale anywhere	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
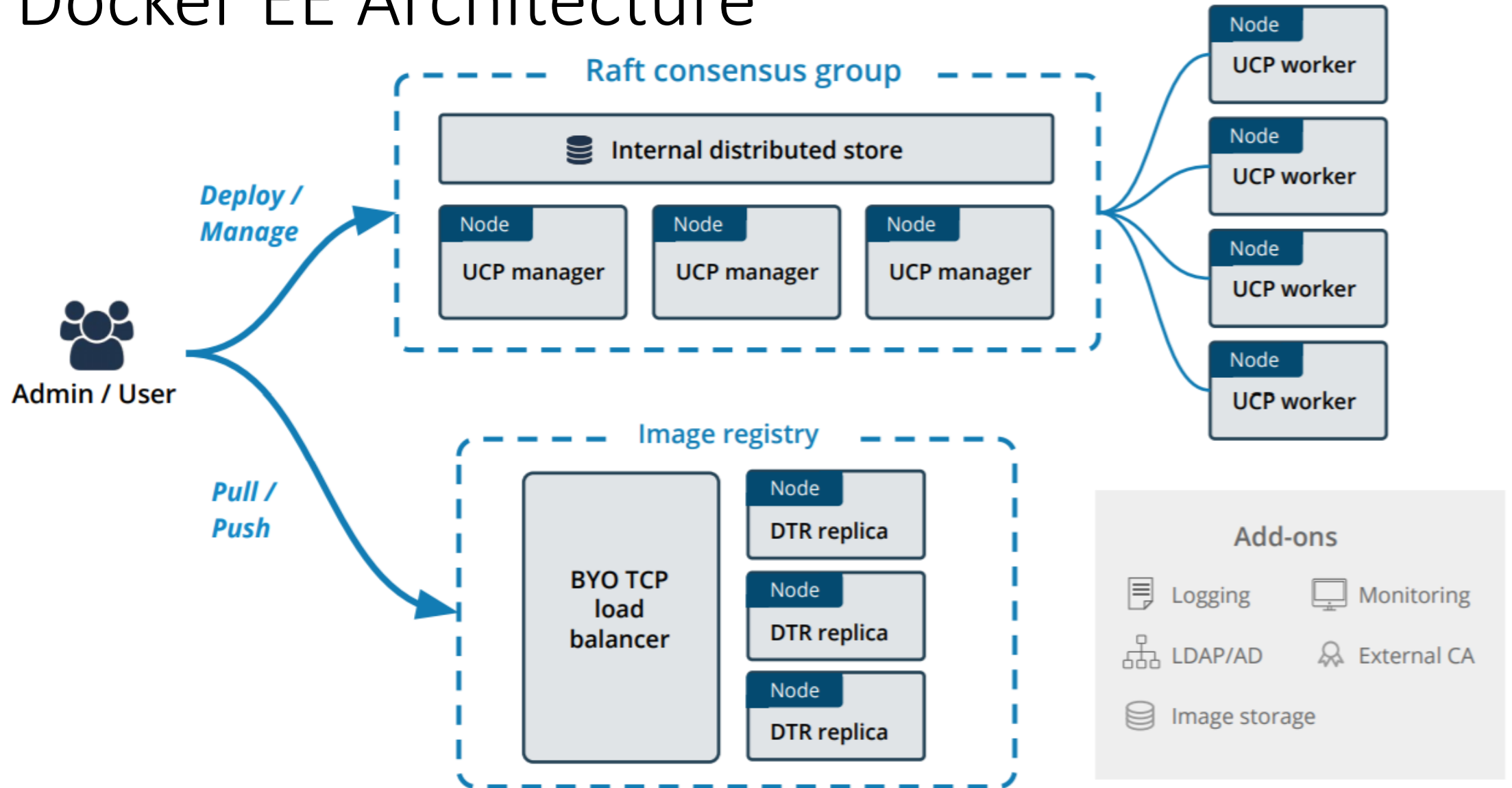
Service Discovery (DNS style)
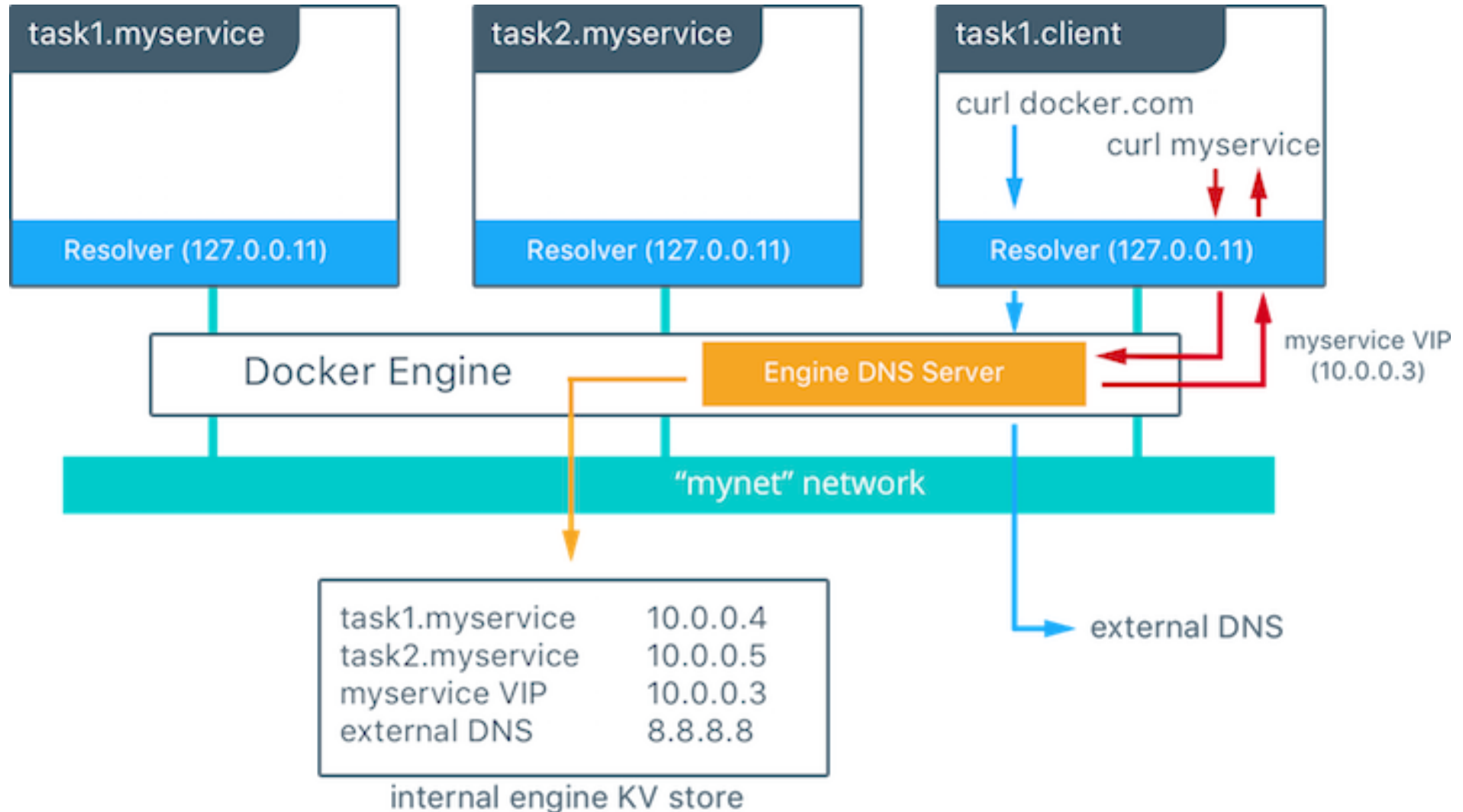
Internal Load Balancing

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
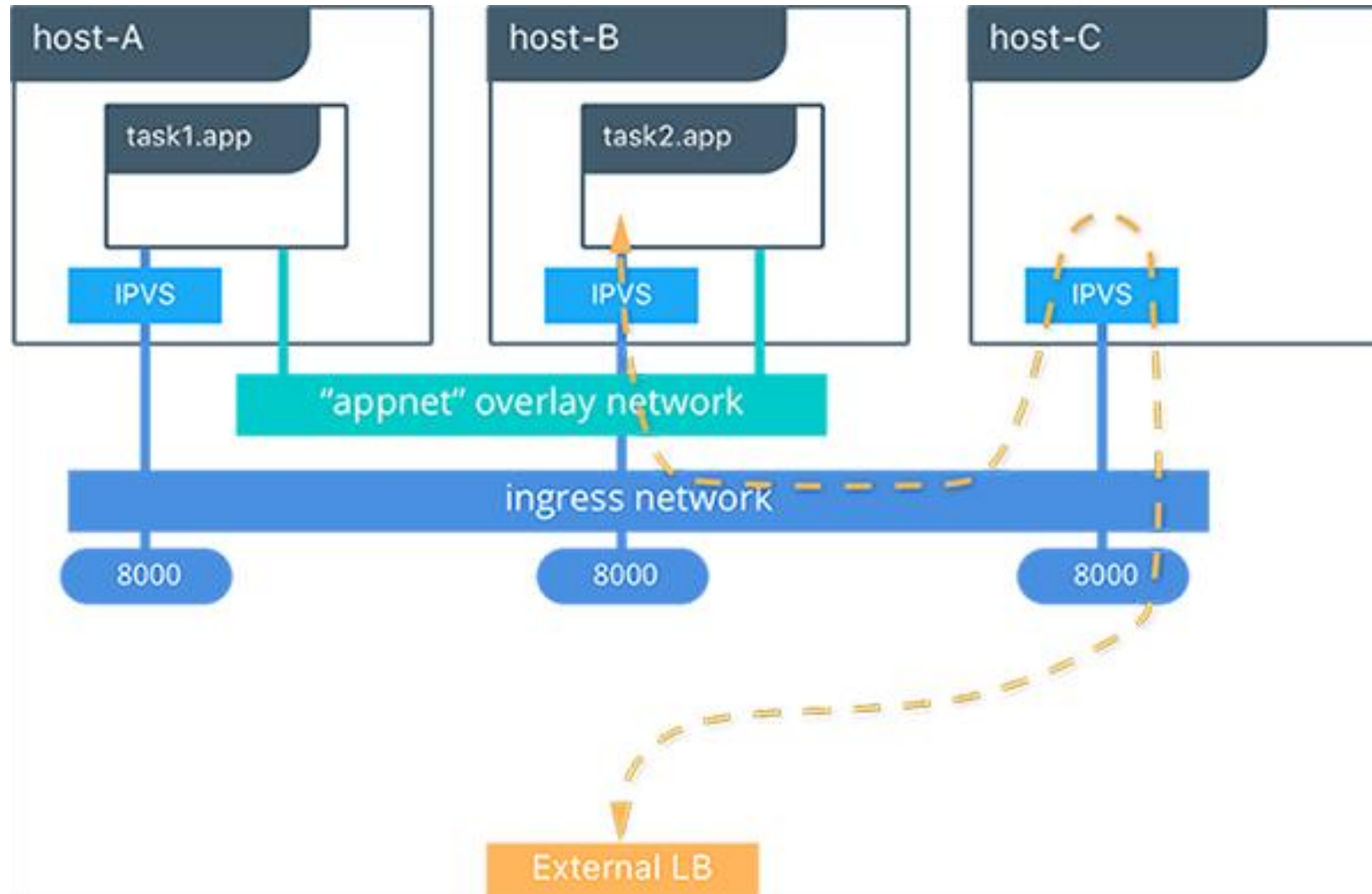
HRM
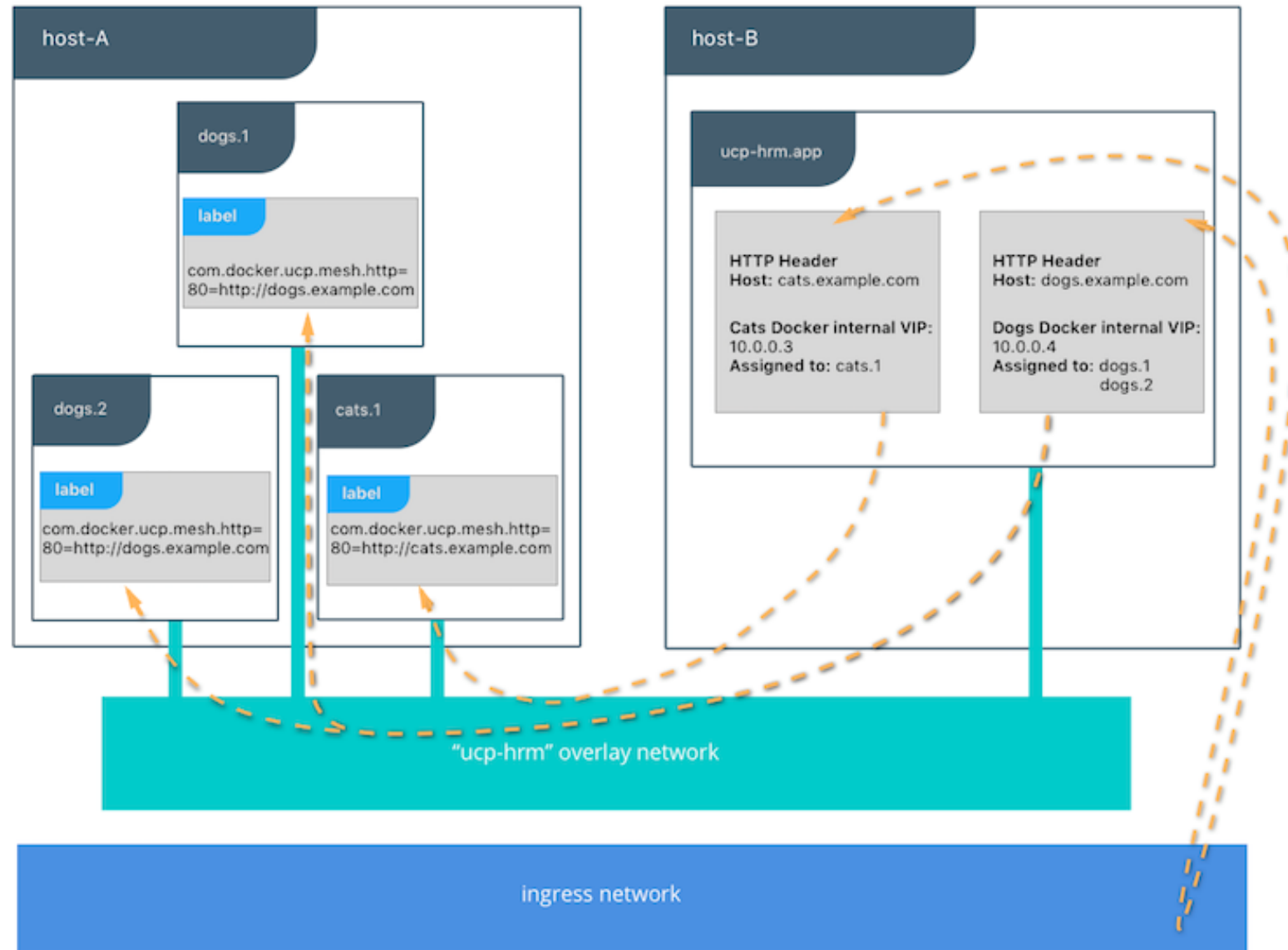
Lifecycle

• Squaring the circle: Faster releases and better stability

Docker EE Subscription Tiers

	EE Basic	EE Standard (Docker Datacenter)	EE Advanced
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

Docker Datacenter

Node: dev-1

Demo

DETAILS   STATS   ENGINE   TASKS   AGENT LOG

Save Changes   Cancel

Status ❓   **Ready**

Address ❓   10.119.14.44

Availability ❓ | Active | Pause | Drain |

Message ❓   `Healthy UCP Node`

Role

Role ❓ | Manager | **Worker** |

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 ☺