Microservices and the Real World

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Author & Trainer

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Overview/ Summary

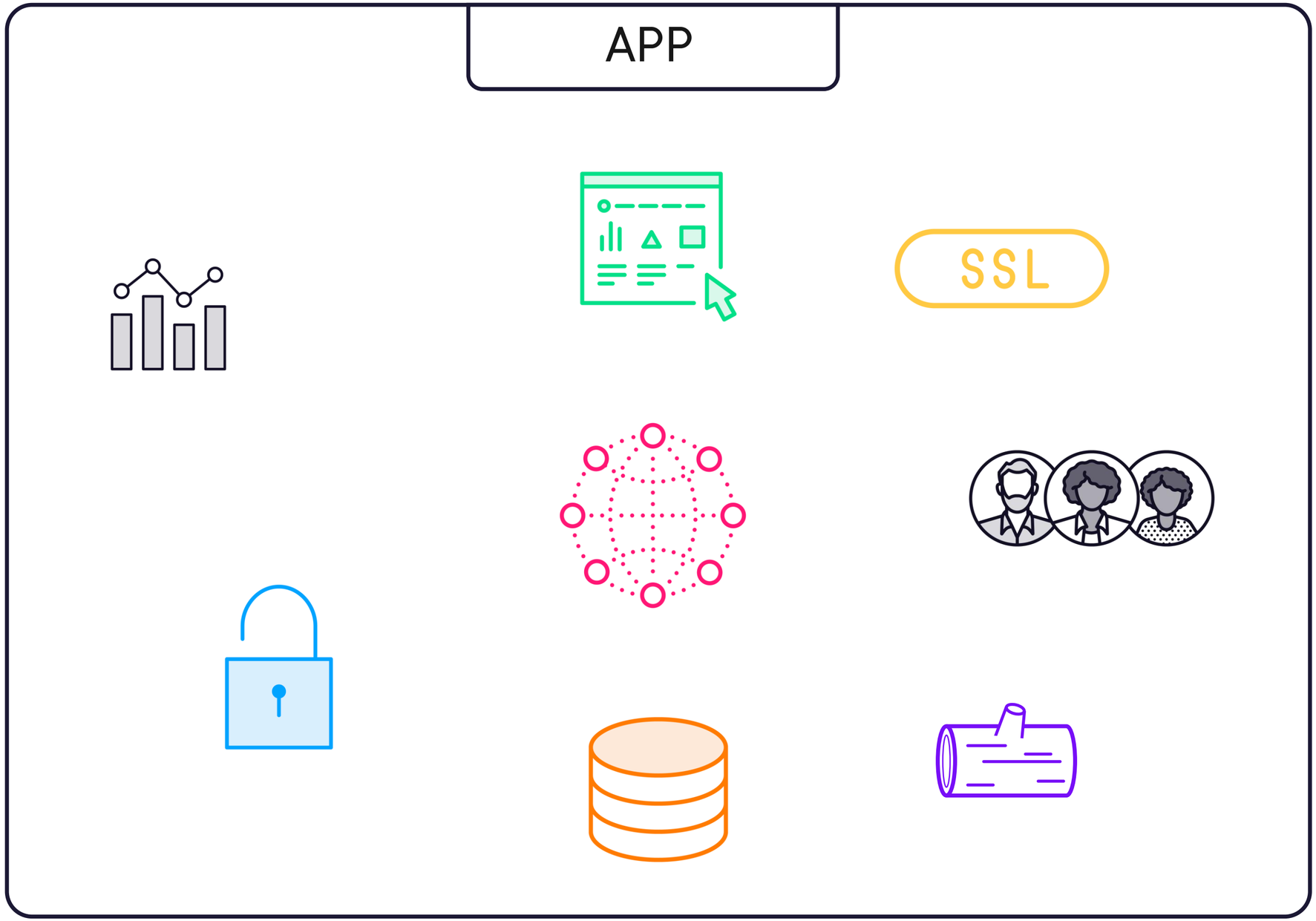
Cloud-native Microservices

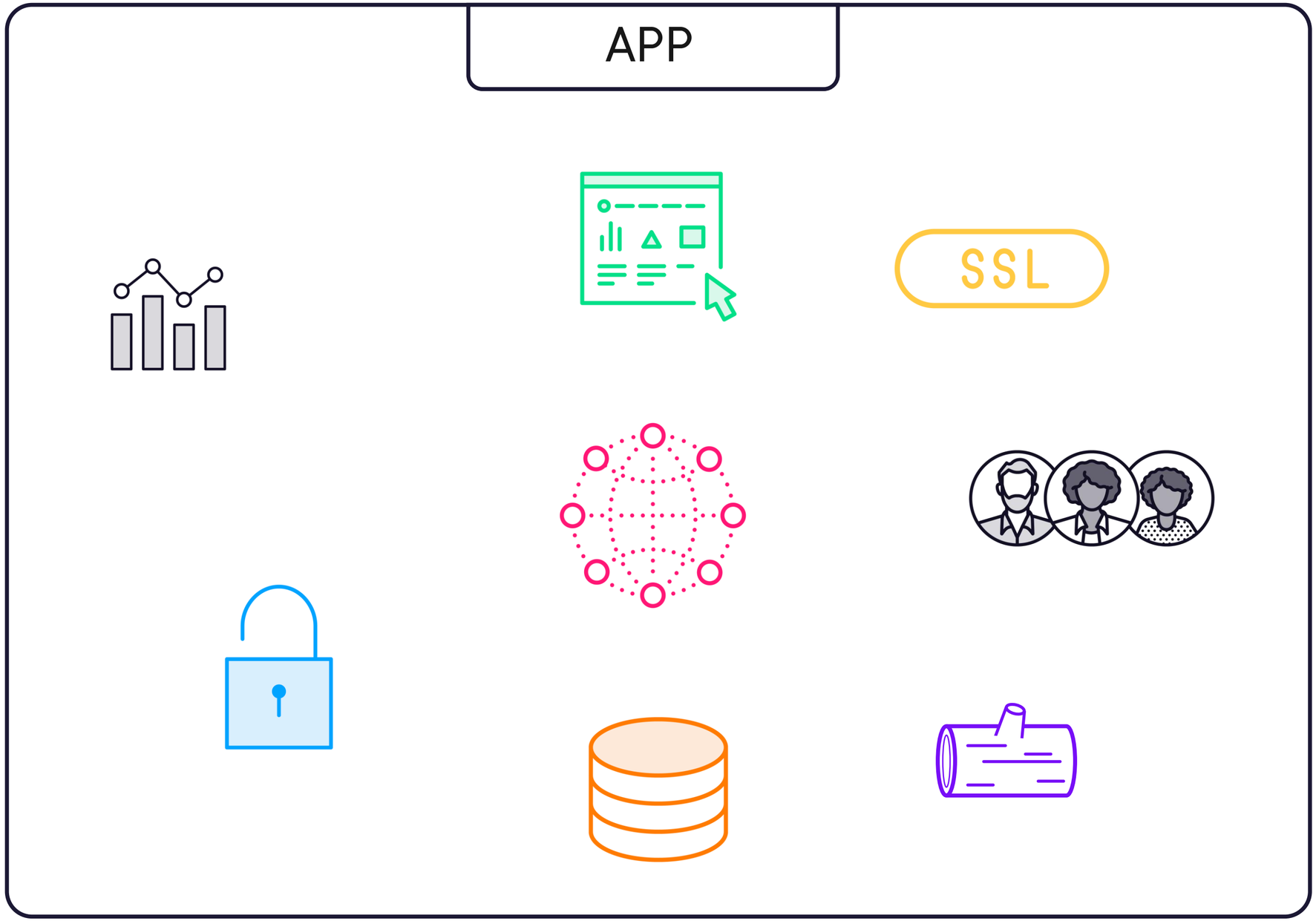
Hands-on

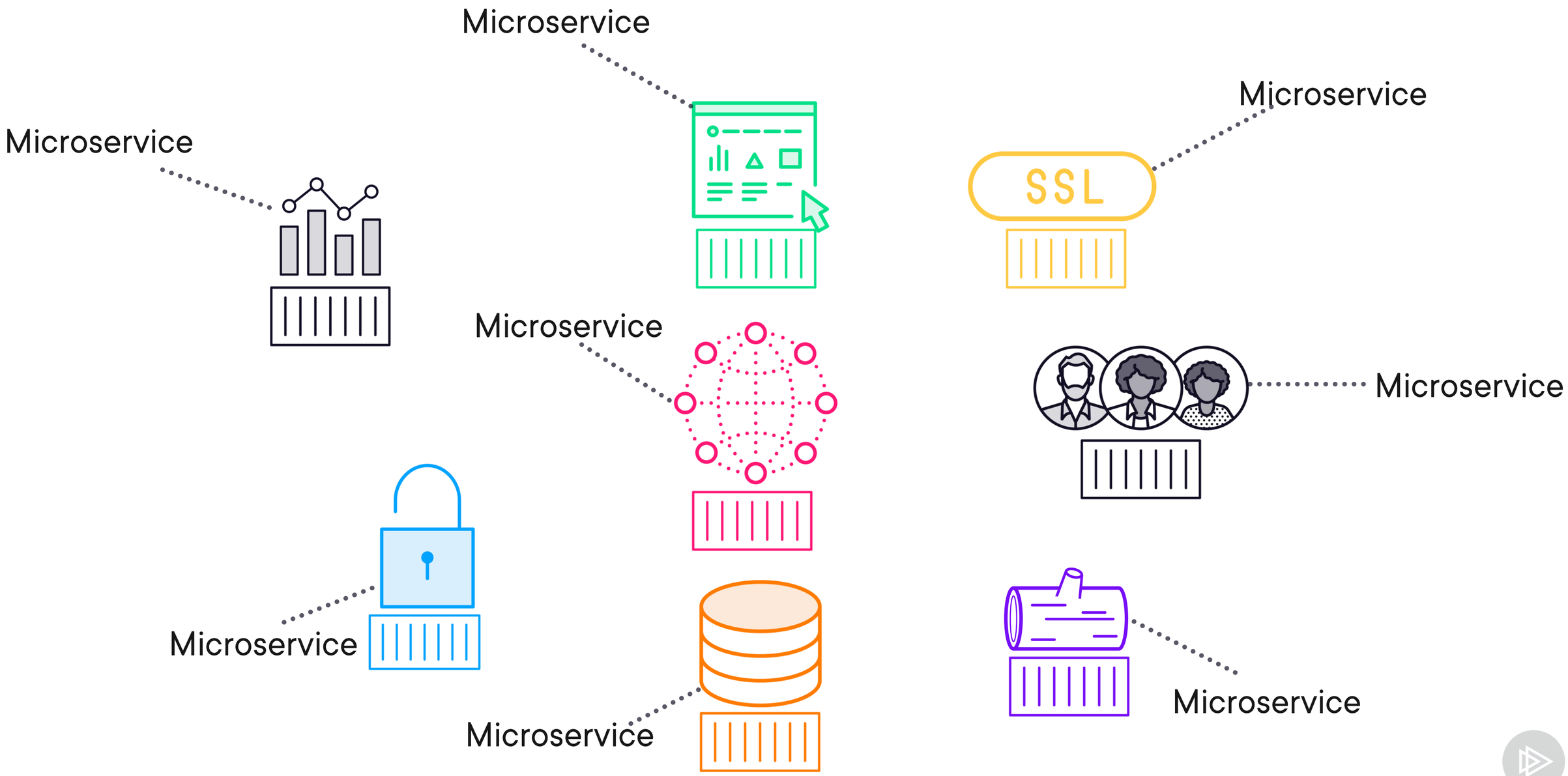
- Multi-container Apps with Docker Compose
- Docker Swarm Fundamentals
- Building Docker Swarm
- Working with Docker Swarm
- Multi-container Apps with Docker Swarm

Cloud-native Microservices

Microservices


APP
SSL


APP
SSL


Microservice
Microservice
Microservice
SSL
Microservice
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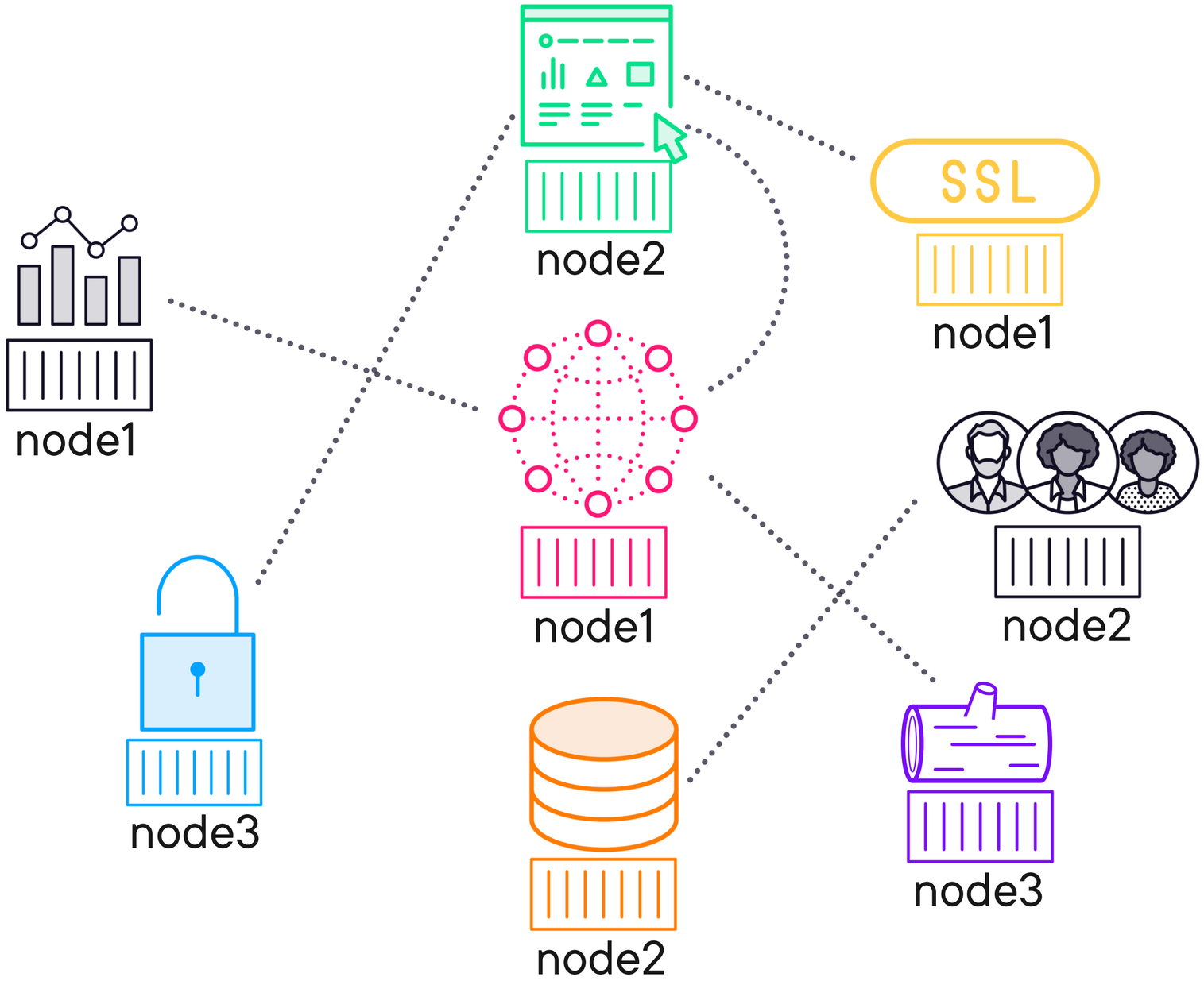
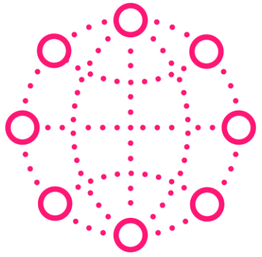
Microservice
Microservice


node2
SSL
node1
node1
node1
node2
node3
node2
node3

APP

SSL



Microservices

Building, deploying, and managing each application feature as its own small app.

Cloud Native

Capabilities such as self-healing, auto-scaling, rolling updates, and more...

Multi-container Apps with Docker Compose

```
$ docker image build...
```

◀ **Containerize an app**

```
$ docker image push...
```

◀ **Push to a registry**

```
$ docker container run...
```

◀ **Run as a container**

Declarative

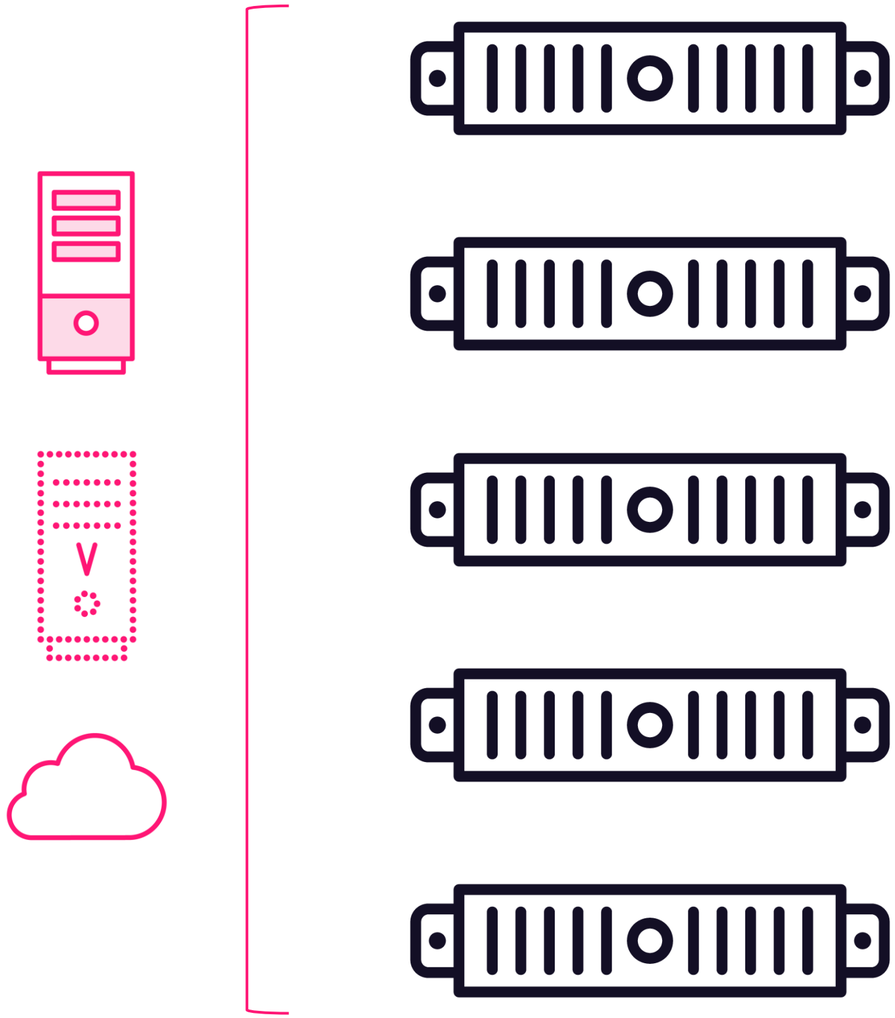
Describe an application in a configuration file. Use that file to deploy the application.

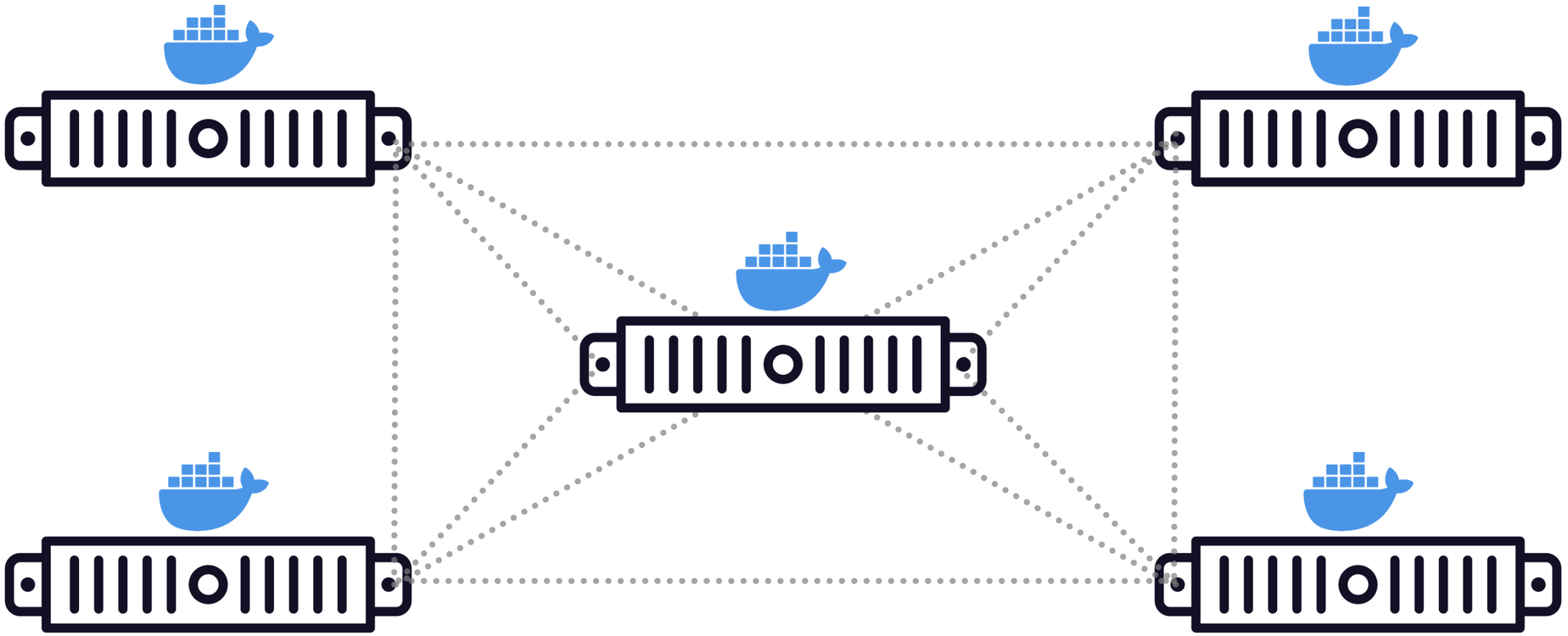
```
$ git clone https://github.com/nigelpoulton/gsd.git
$ cd gsd/compose
```

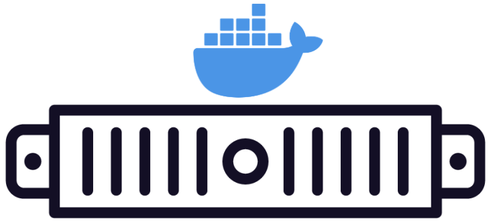
Up Next:

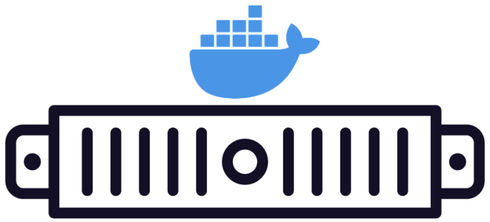
Docker Swarm Fundamentals

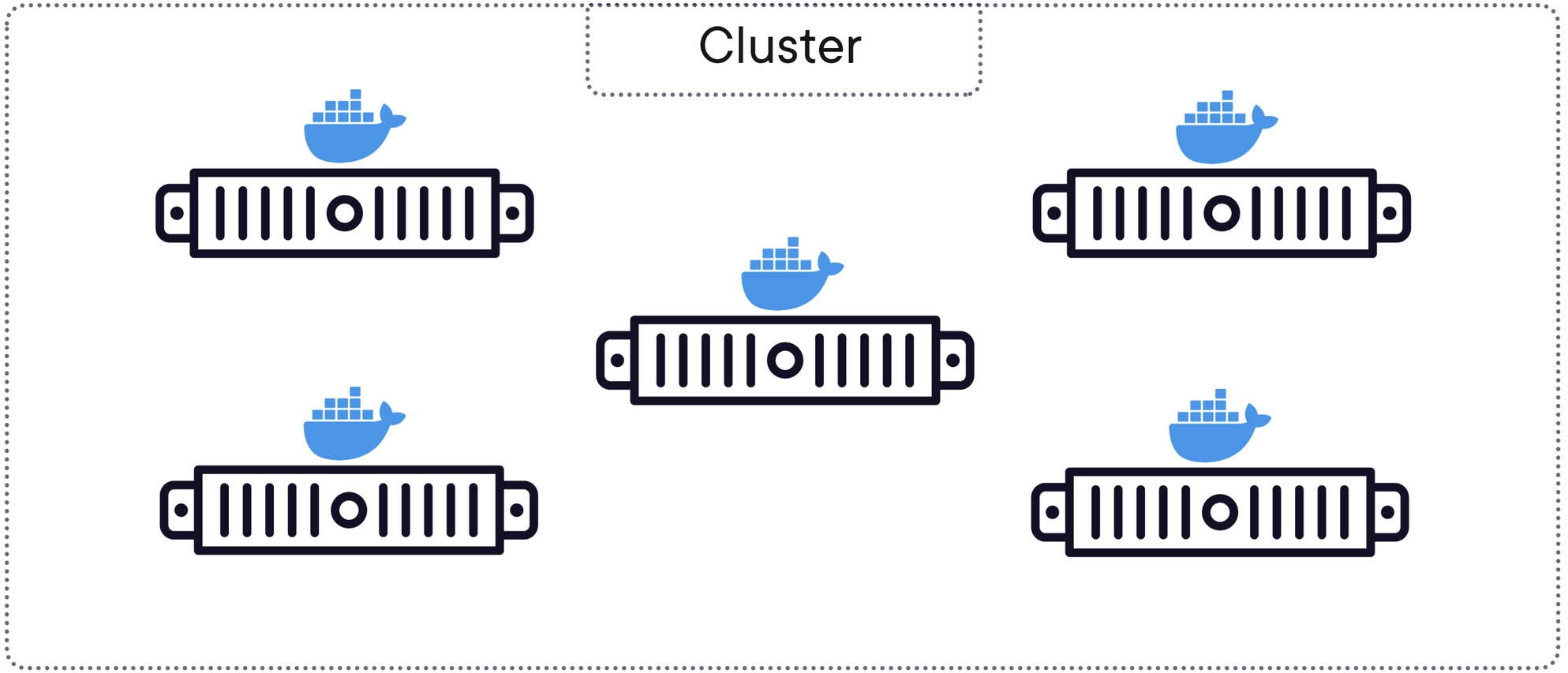
Docker Swarm Fundamentals

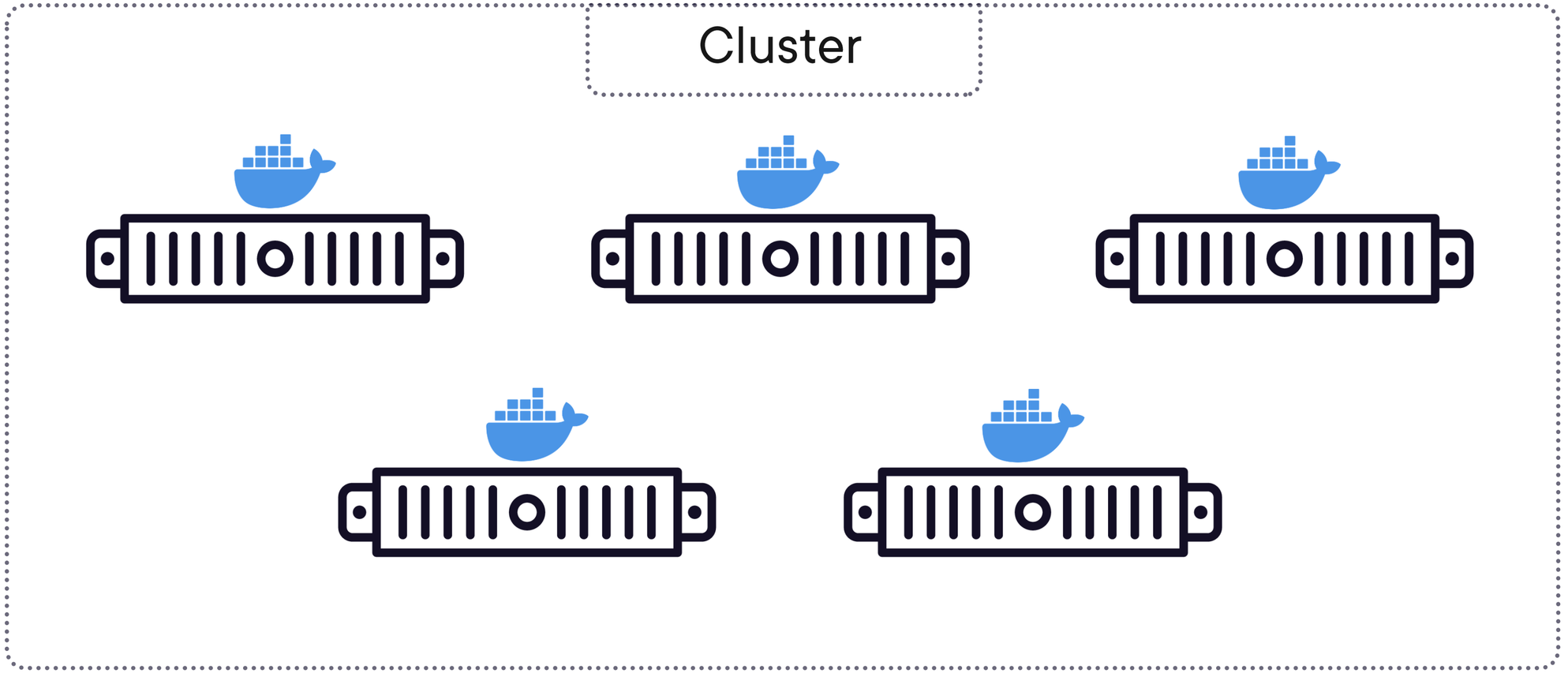


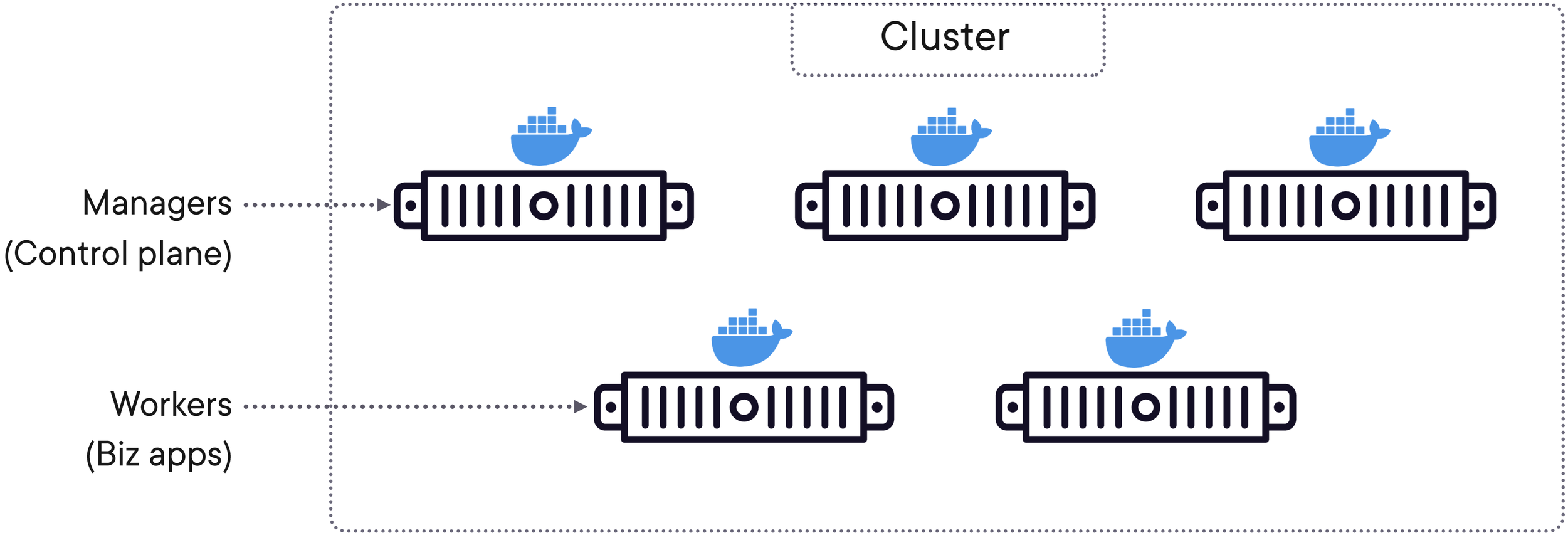


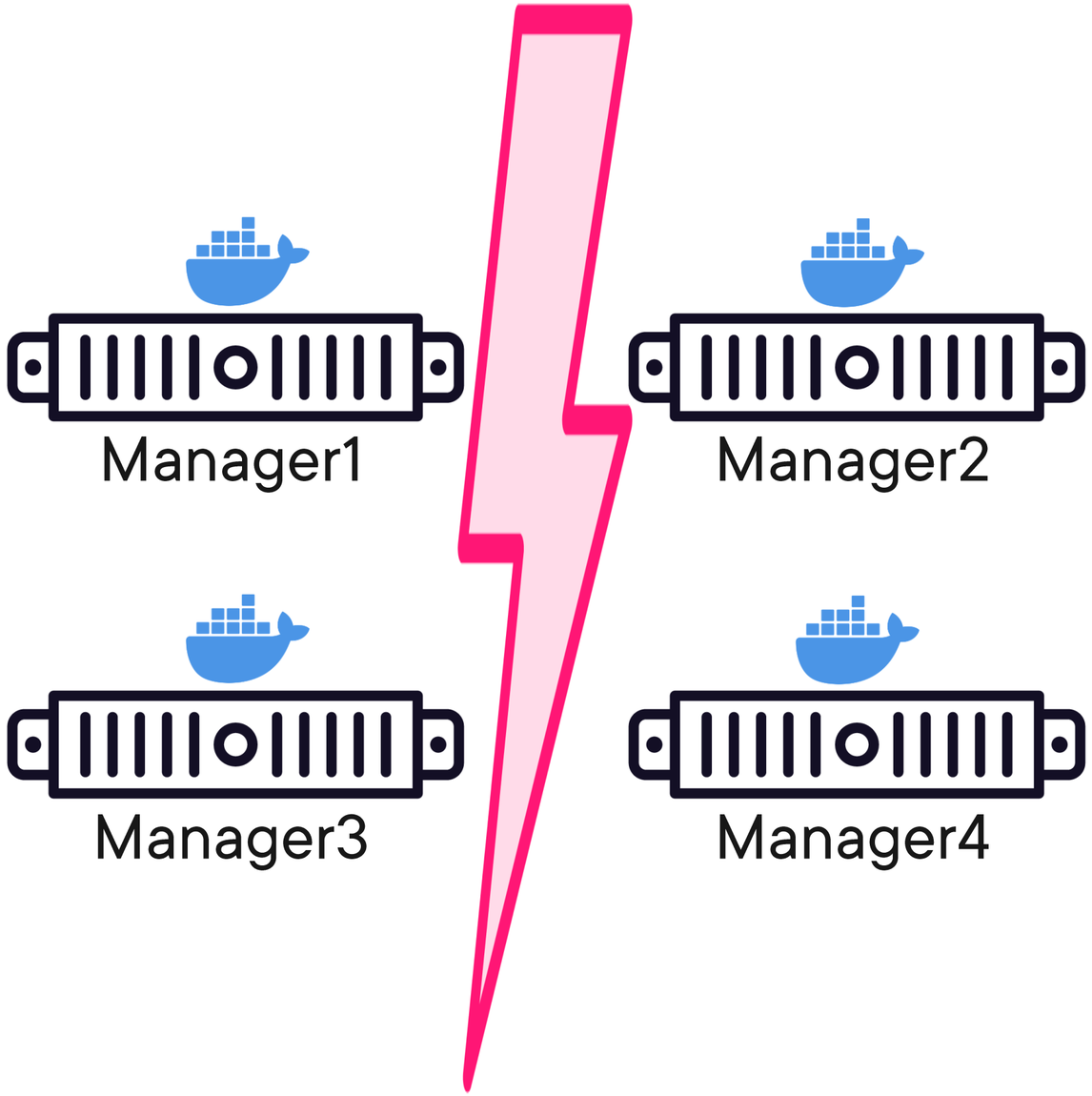


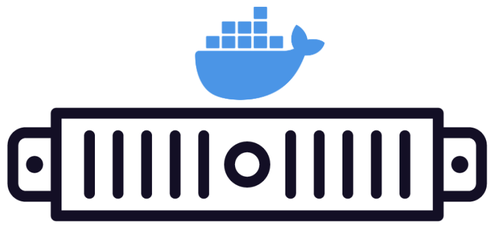



Cluster

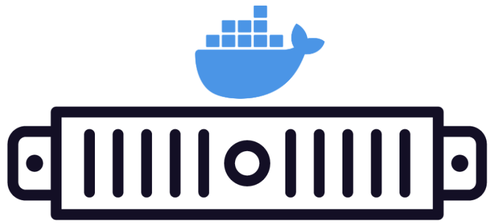

Cluster


Cluster
Managers
(Control plane)
Workers
(Biz apps)

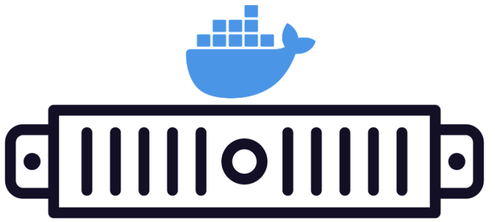

Manager1
Manager2
Manager3
Manager4



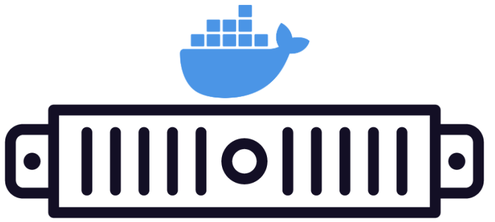
Manager1



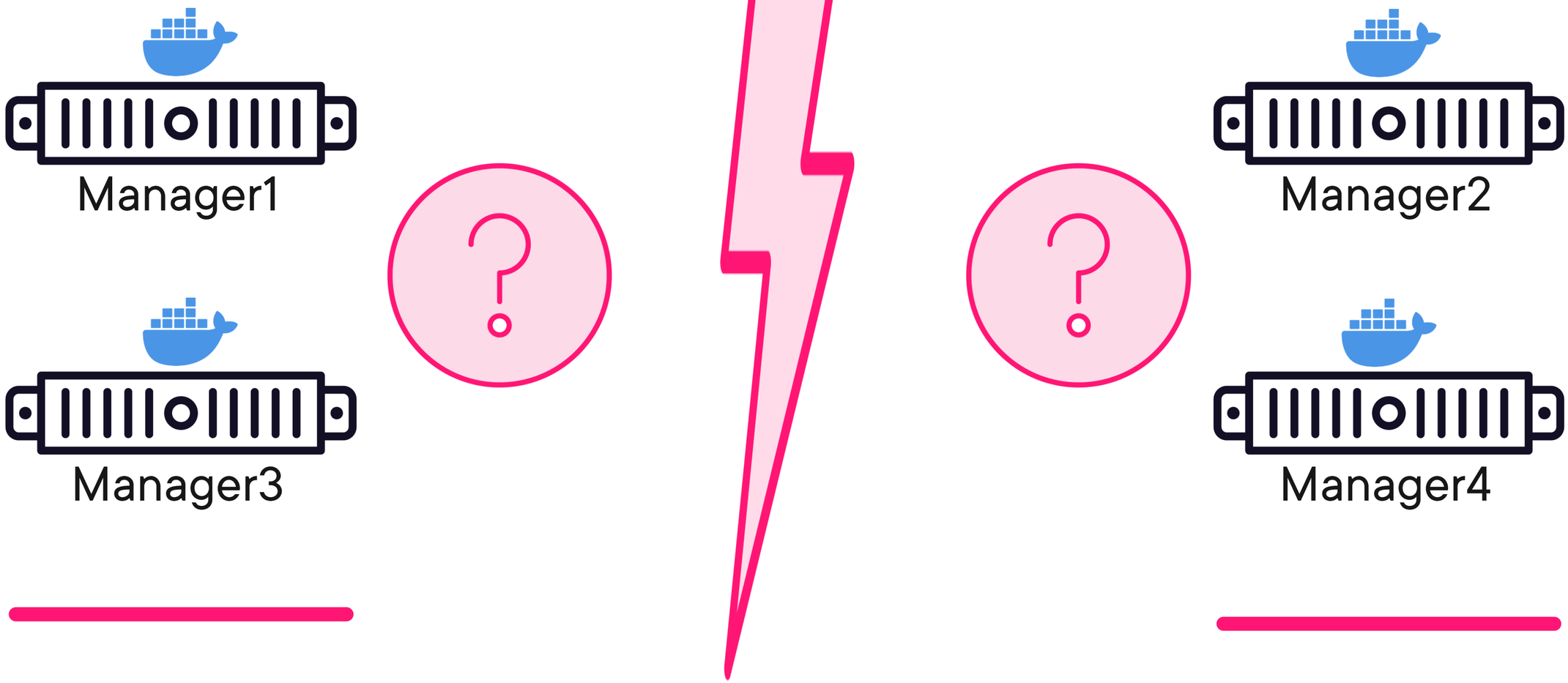
Manager3



Manager2



Manager4


Manager1
Manager3
Manager2
Manager4

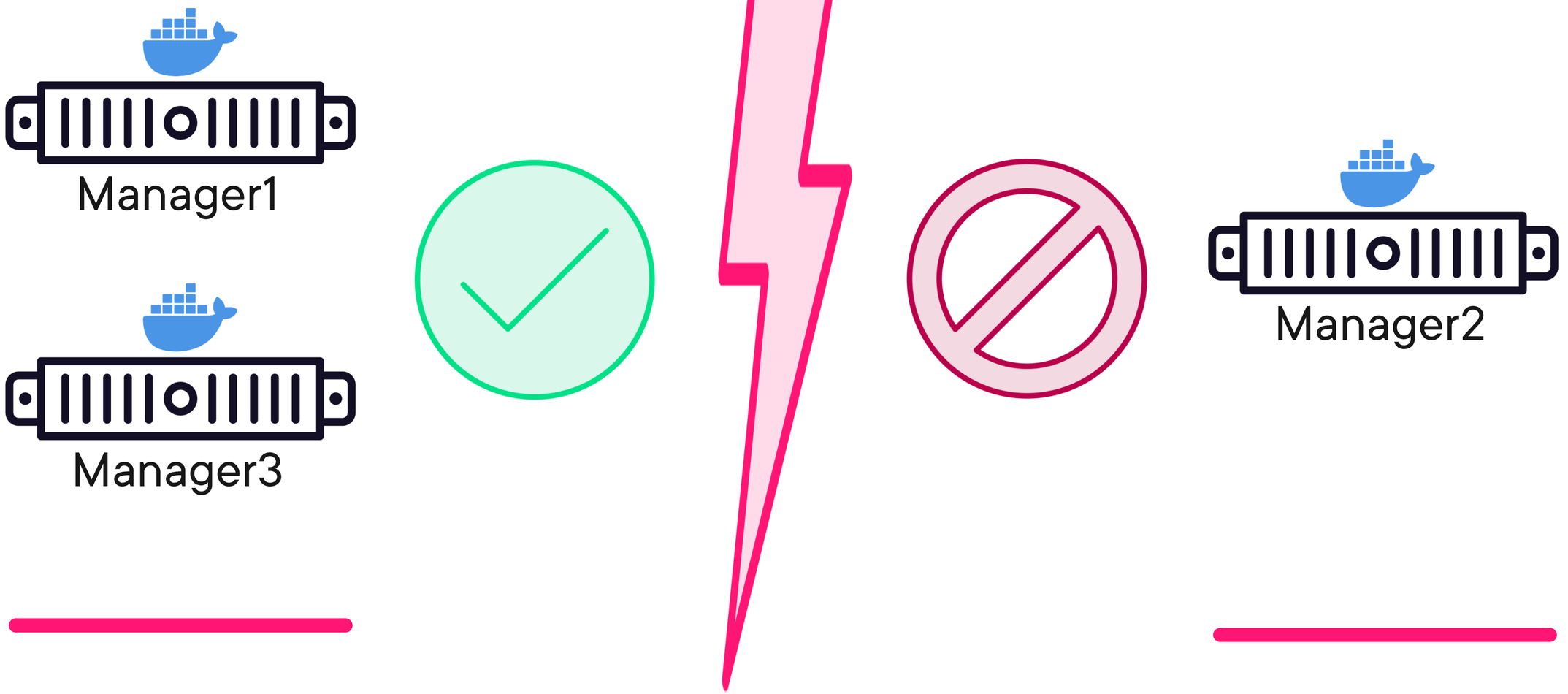
Manager1

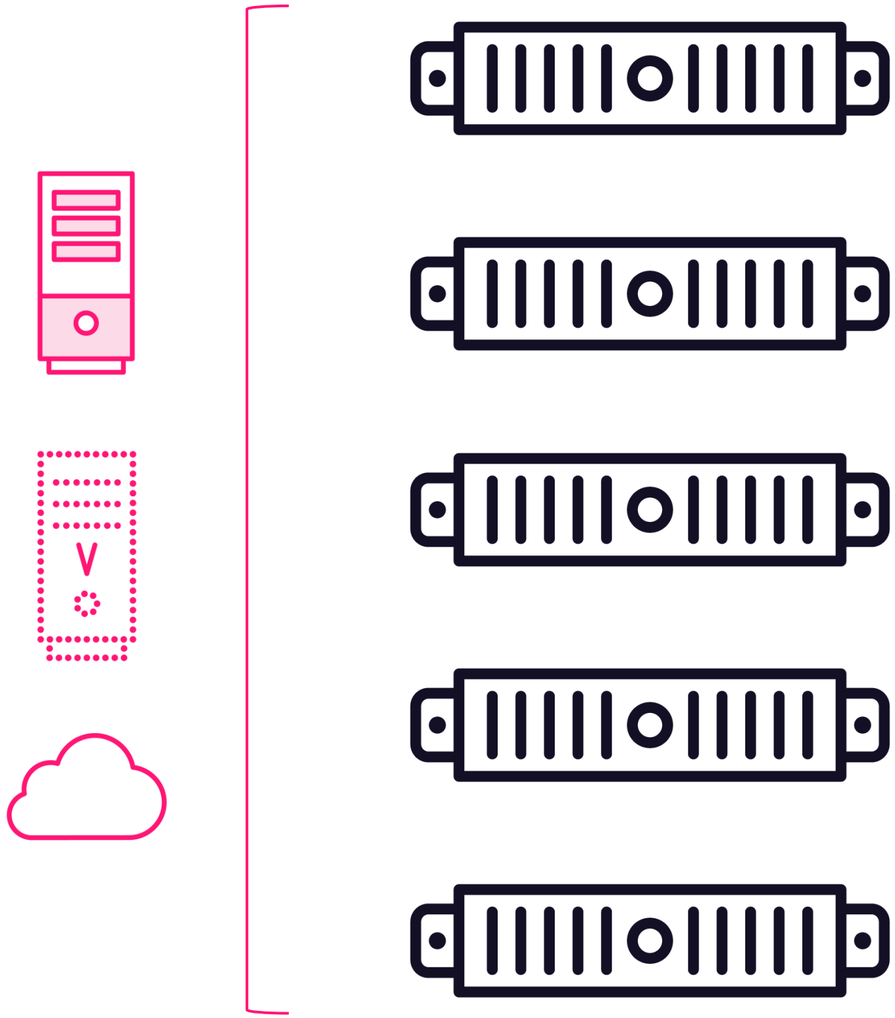
Manager3

Manager2

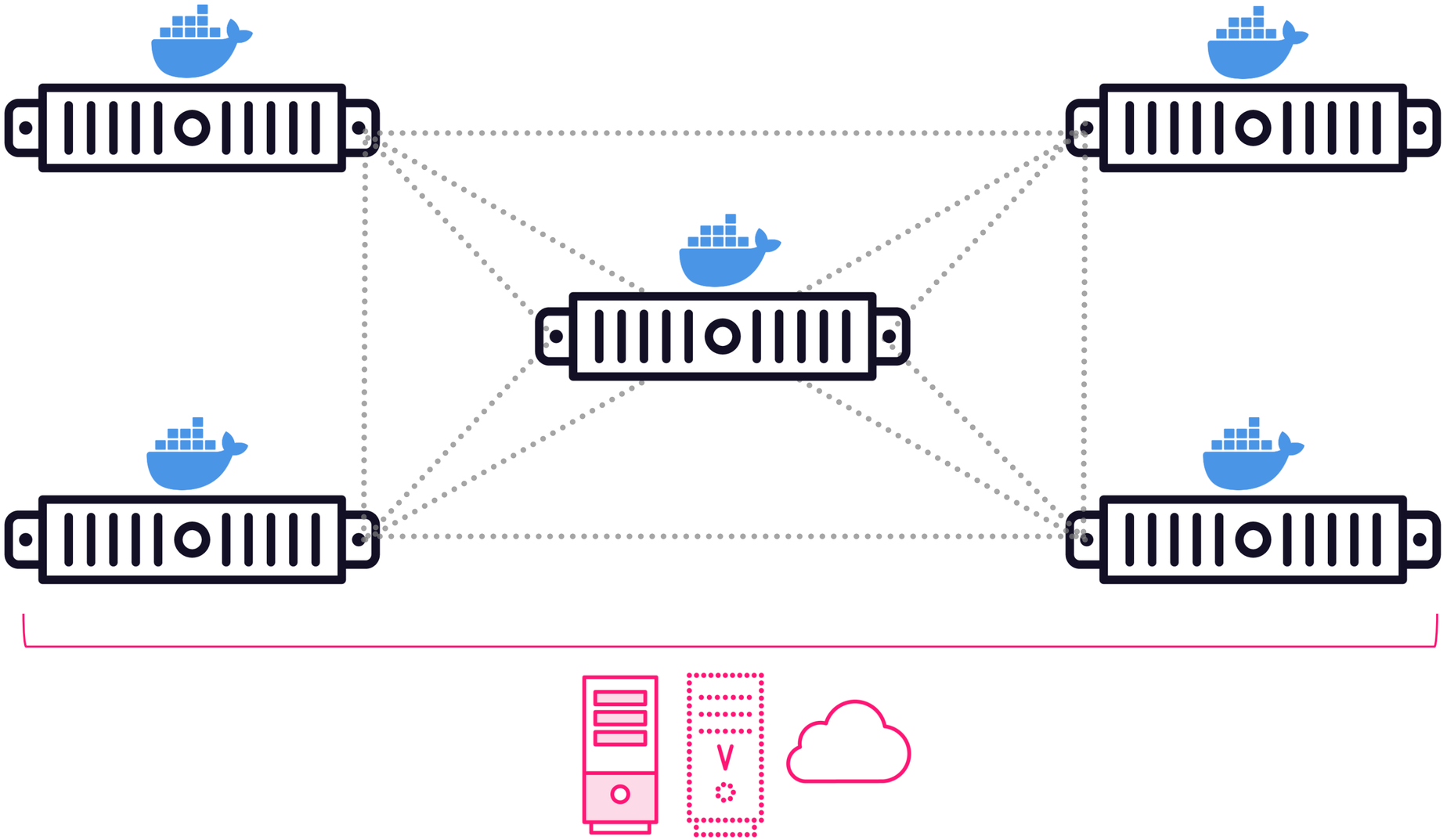
Manager4

Manager1
Manager2
Manager3


Manager1
Manager3
Manager2



3 or 5 managers for HA

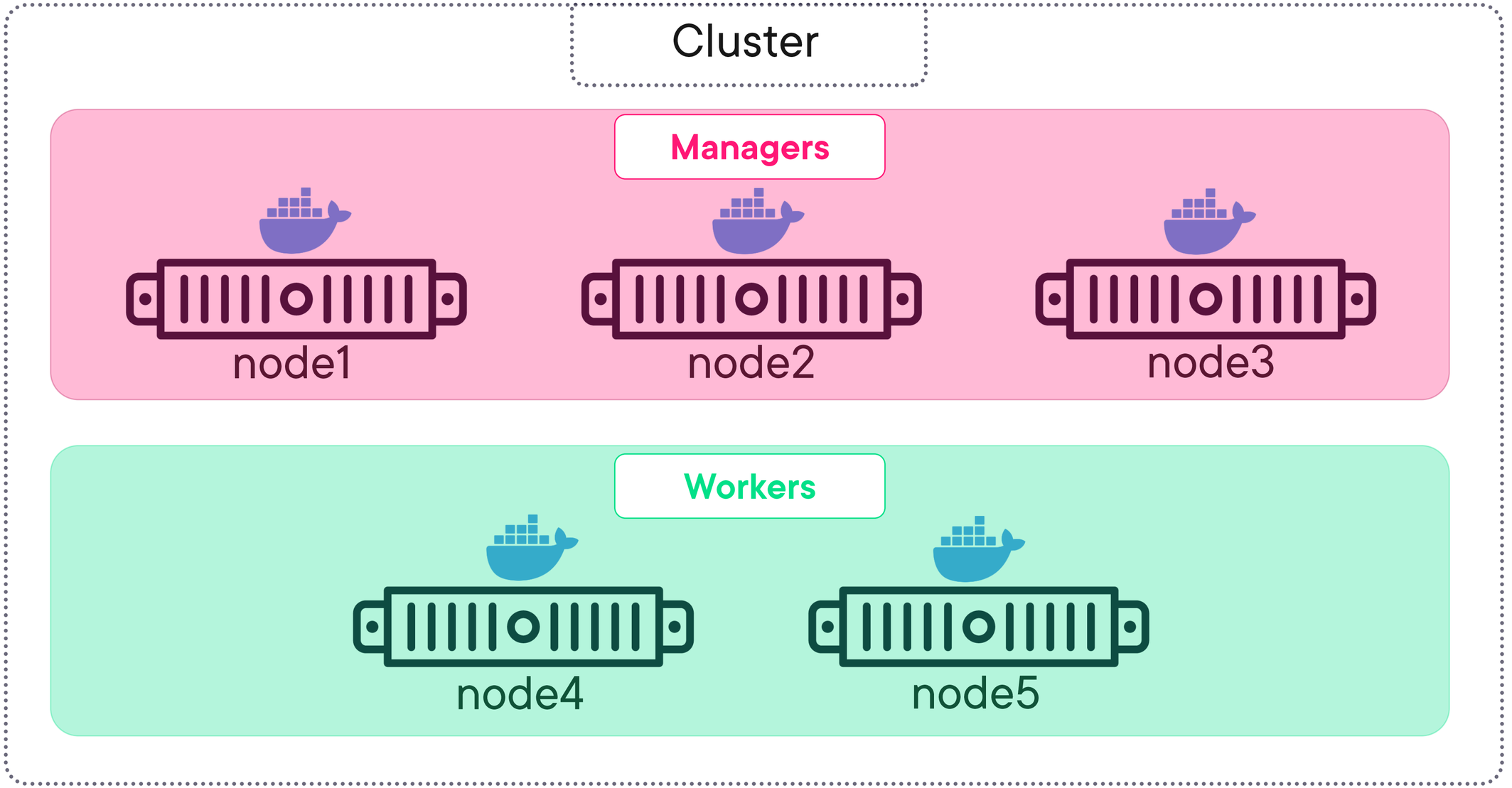


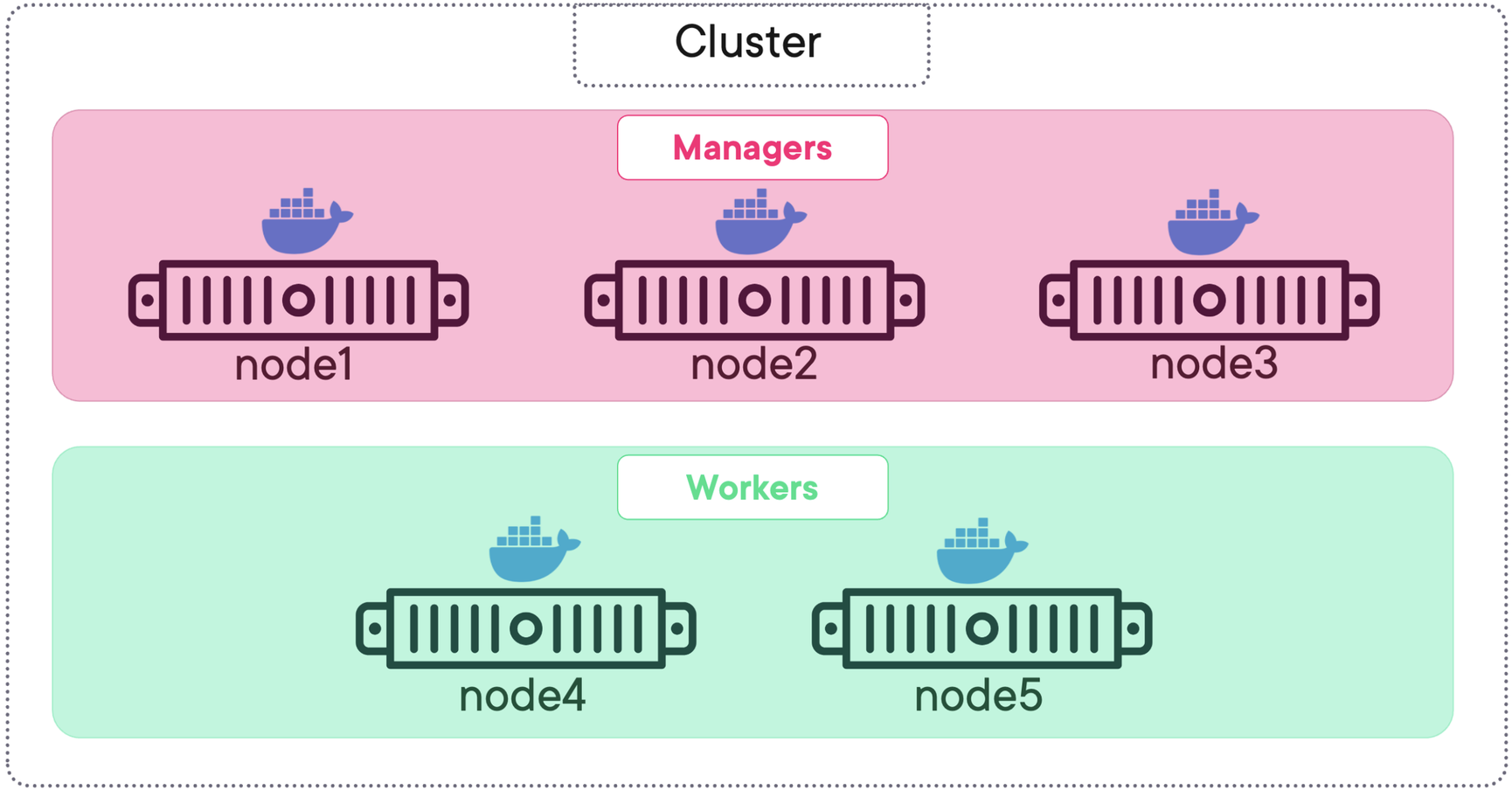
Up Next:

Building a Swarm

Docker Desktop users are ready to go with the built-in single-node cluster.

Building a Swarm


Cluster
Managers
node1
node2
node3
Workers
node4
node5



Multipass

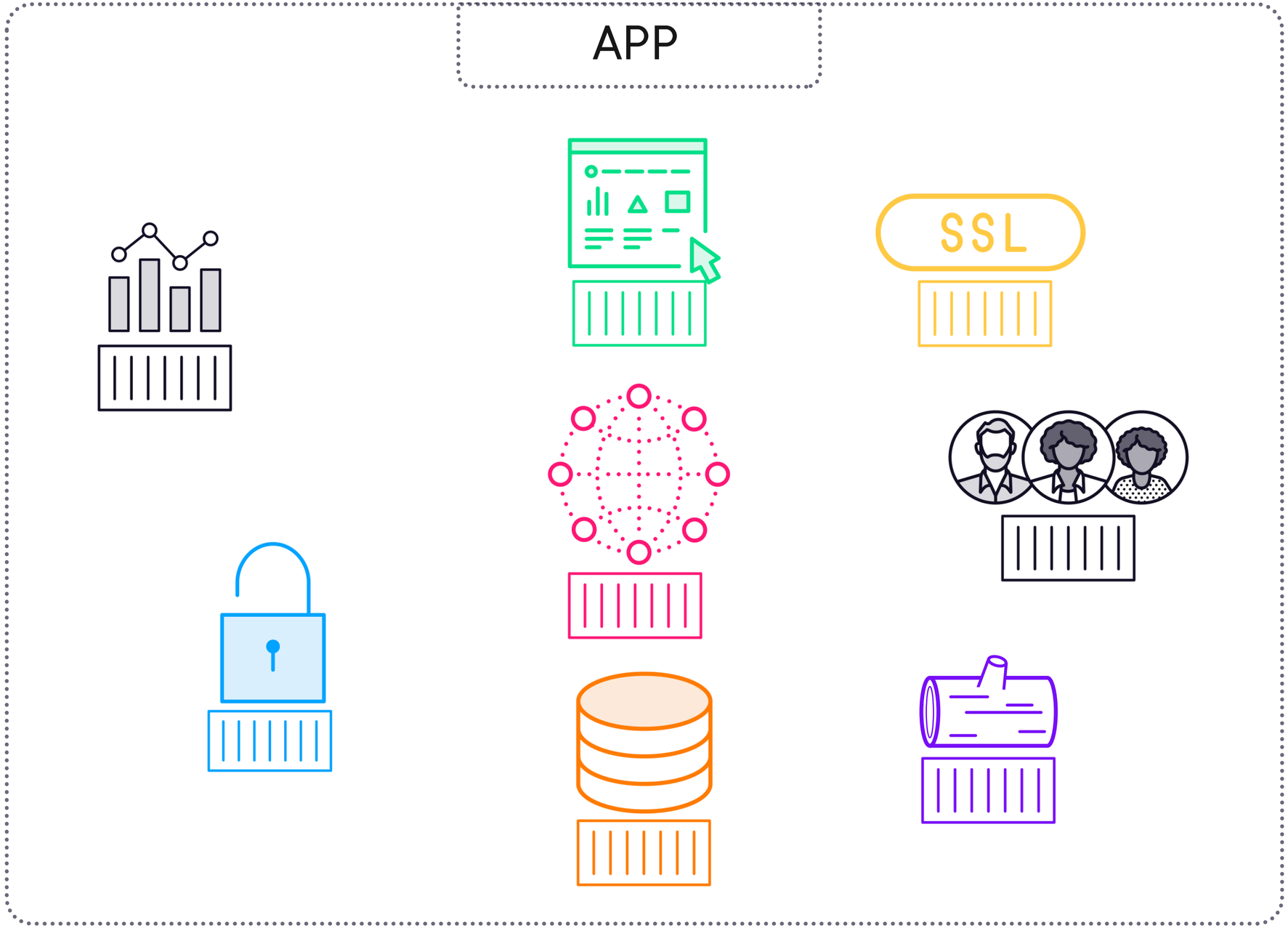
Play with Docker

Docker Desktop

Up Next:

Working with Docker Swarm

Working with Docker Swarm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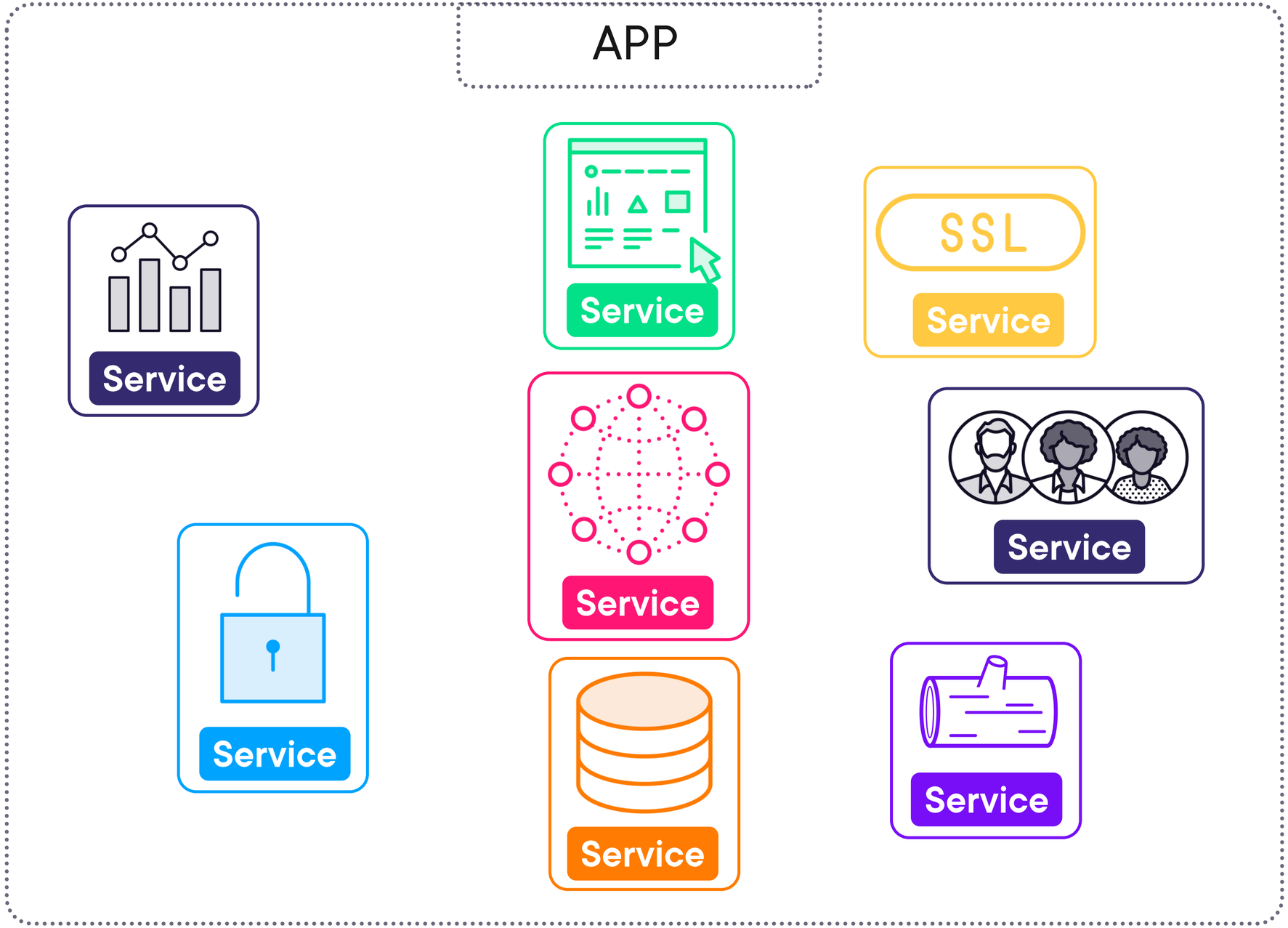
APP
Service
Service
SSL
Service
Service
Service
Service
Service
Service

Up Next:

Multi-container Apps with Docker Swarm

Multi-container Apps with Docker Swarm

Declarative Configuration

Is a form of... *living documentation*.

New Hire

+

Declarative Config File

=

Up-to-speed

Up Next:

Epic Recap