

Deploying in Production with Stacks and Services



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Module Outline



Big Picture

Stack Files

Deploy and Manage a Stack

Recap





Domain 1: Orchestration

- Extend the instructions to run individual containers into running services under swarm
- Convert an application deployment into a stack file using a YAML compose file with
docker stack deploy
- Manipulate a running stack of services
- Increase number of replicas
- Mount volumes



Big Picture

Stacks Primer

Docker CLI



Docker UCP



Docker Cloud

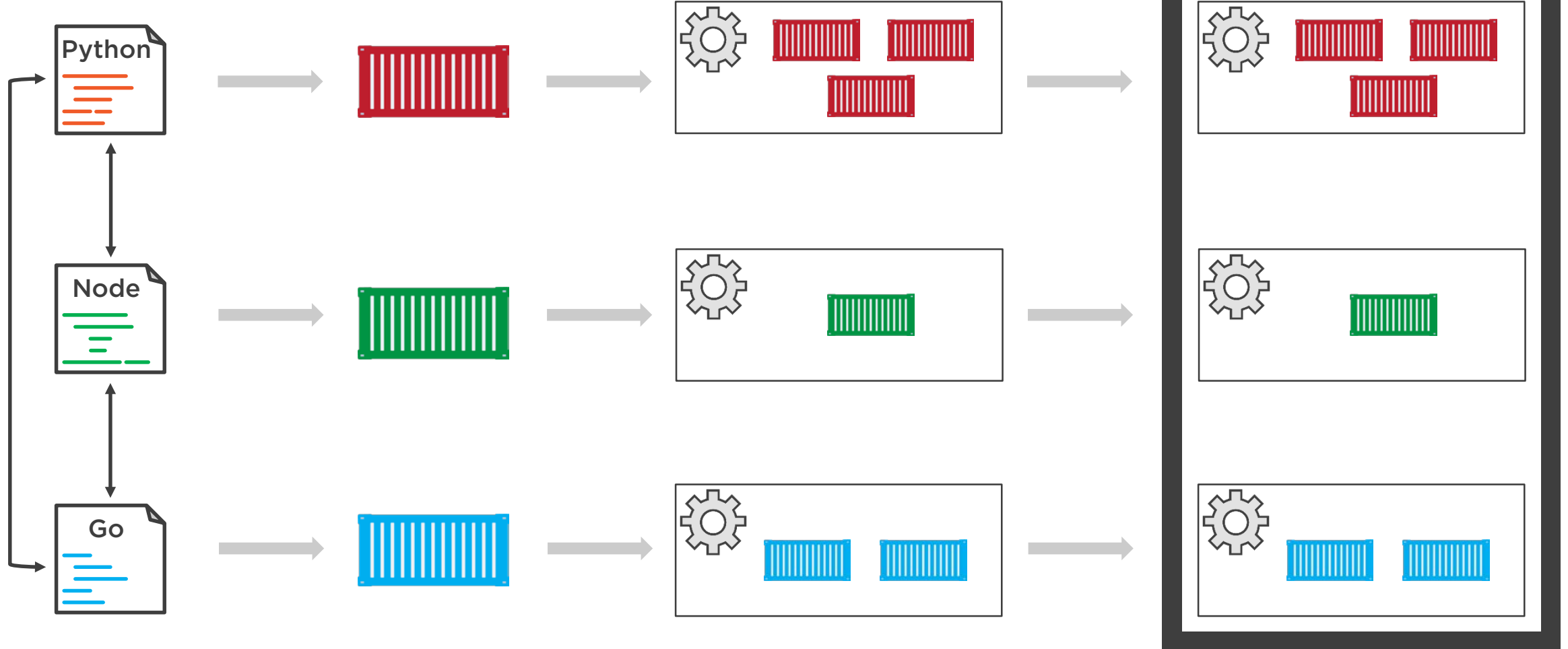


Code

Containers

Services

Stack

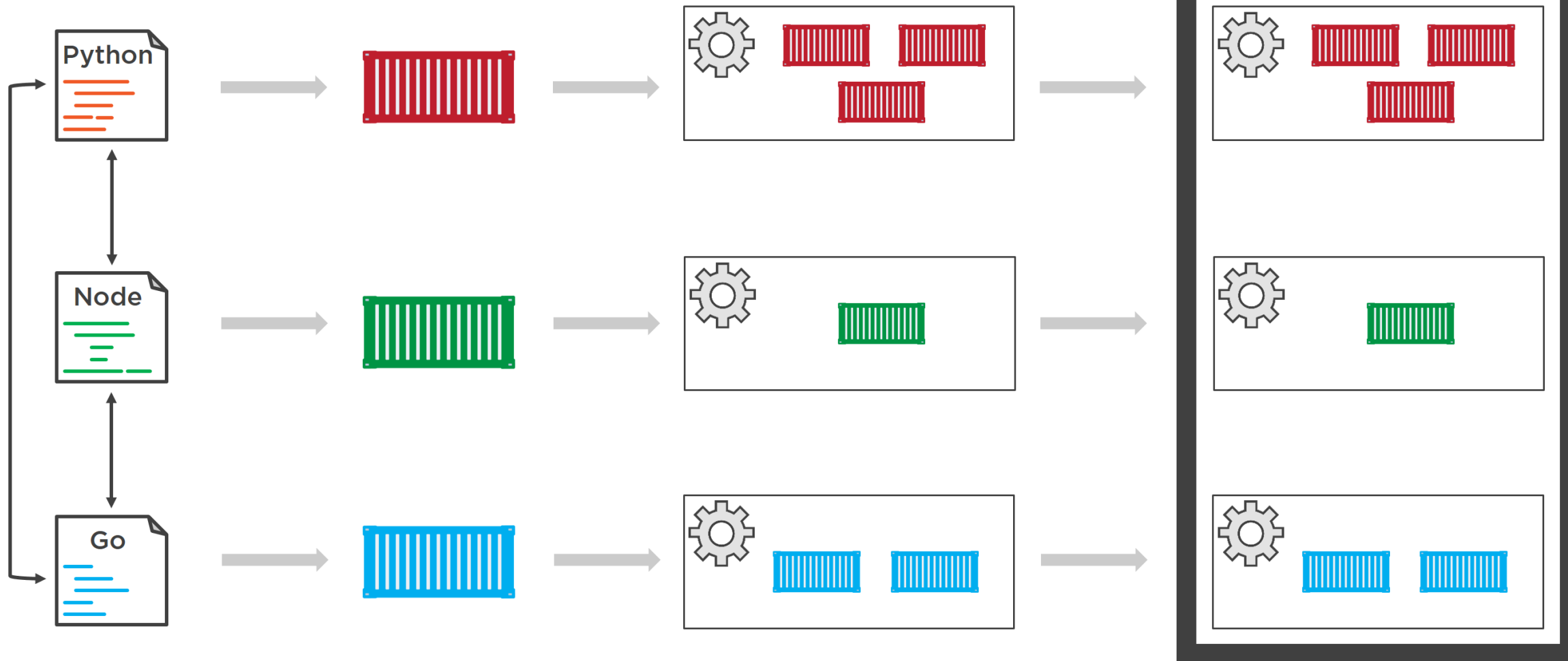


Code

Containers

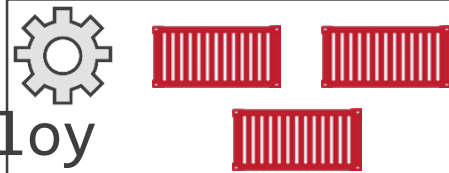
Services

Stack





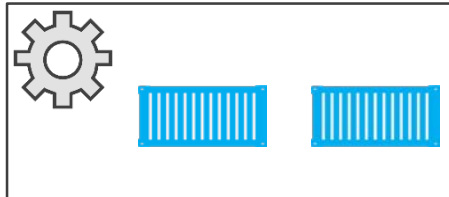
\$ docker stack deploy

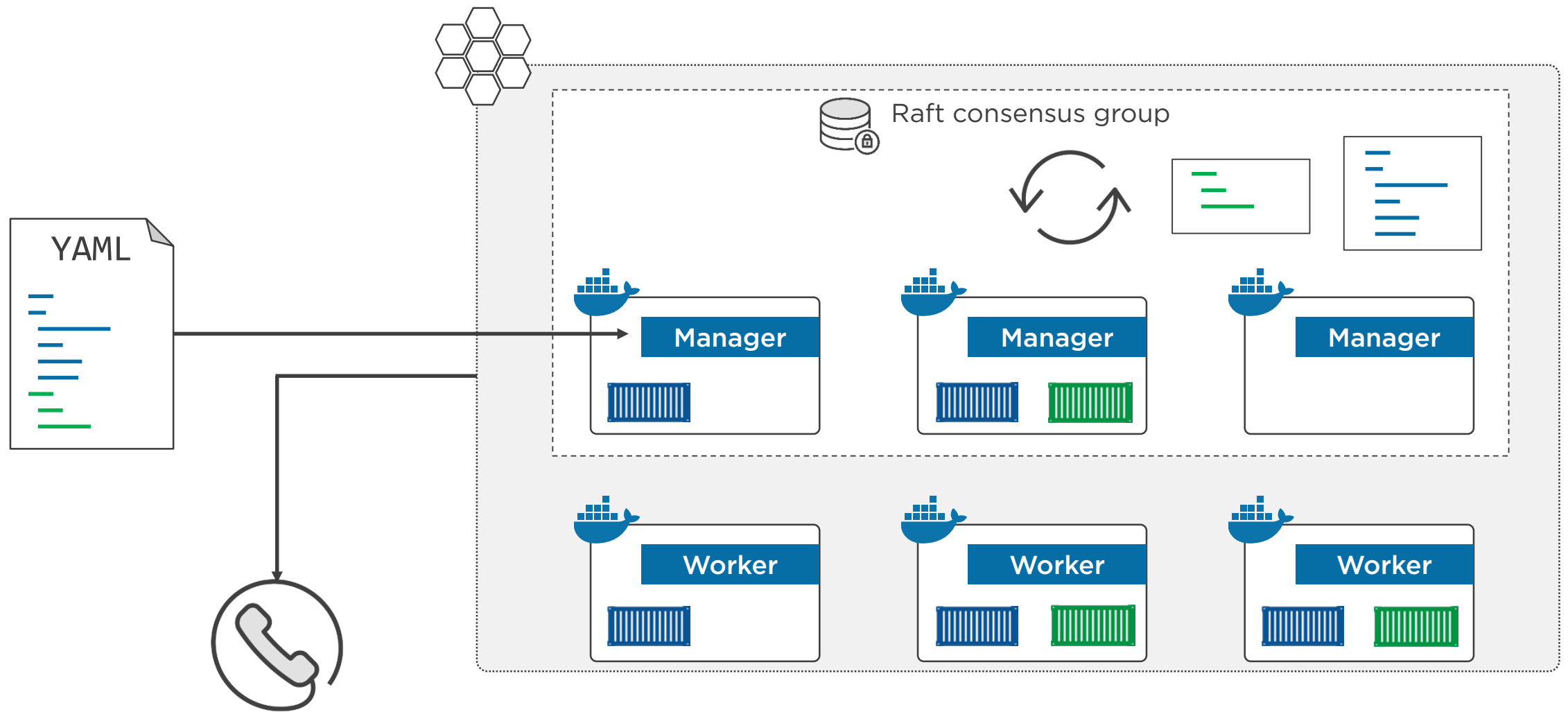


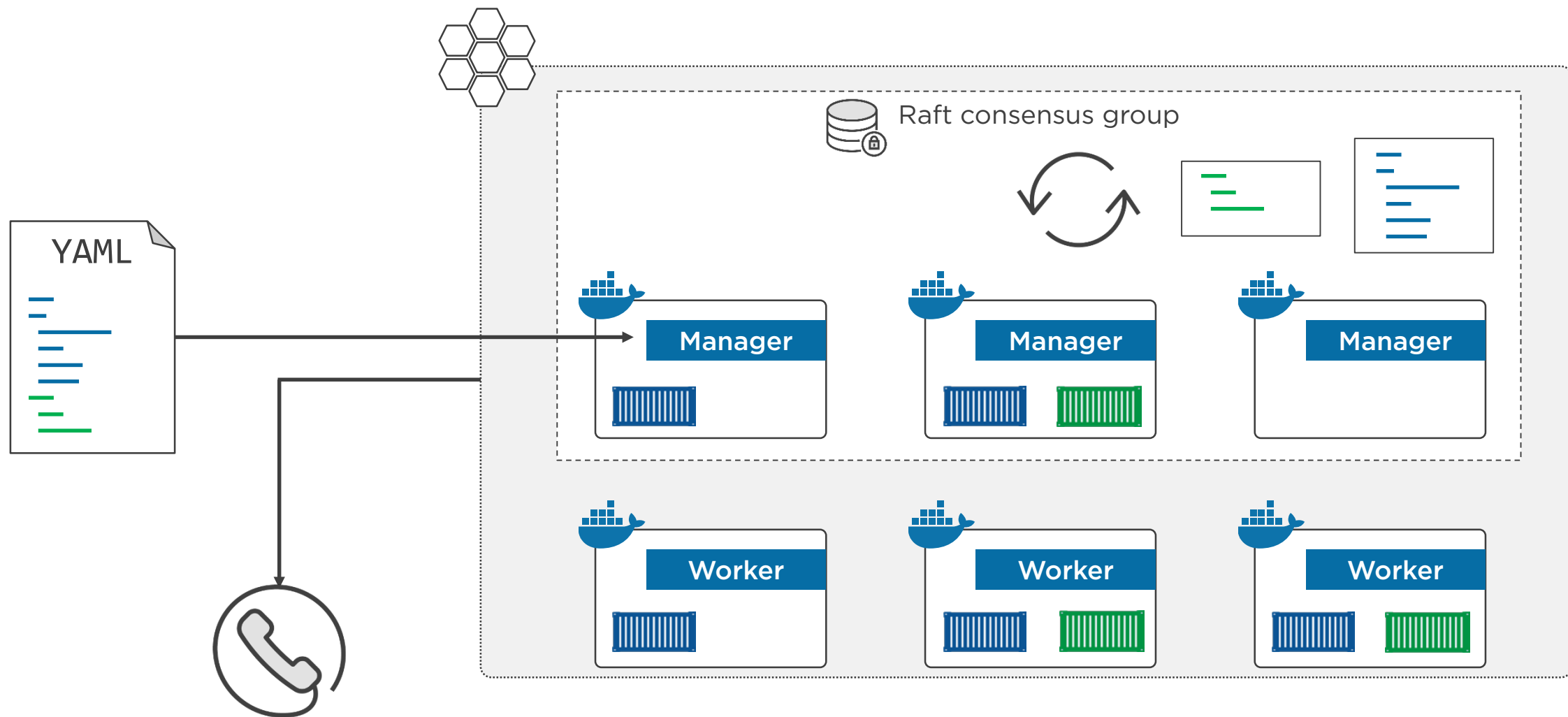
Docker UCP



Docker Cloud







YAML

```
---  
-  
  -  
    -  
      -  
      -  
      -  
      -  
      -  
-  
  -  
    -  
    -
```



The diagram illustrates a YAML file structure for a Kubernetes deployment. At the top, the word "YAML" is written in large, dark gray letters. Below it, the word "Service" is written in blue. Under "Service", there are five horizontal blue bars of varying lengths, representing different configuration sections. Below these, the words "Networks" and "Volumes" are written in green, indicating the next sections of the configuration.

Government	Percentage
Current government	100%
Previous government	0%

YAML

Service

—
—
—
—
—
—

Networks
Volumes

Dev

YAML

Service

—
—
—
—
—
—

Networks
Volumes

Test

YAML

Service

—
—
—
—
—
—

Networks
Volumes

Prod



Topology-aware scheduling

- Schedule based on node labels etc

Health-aware scheduling

- Only schedule to healthy nodes

H/A scheduling

- Spread replicas across multiple nodes



Recap

In case you've forgotten

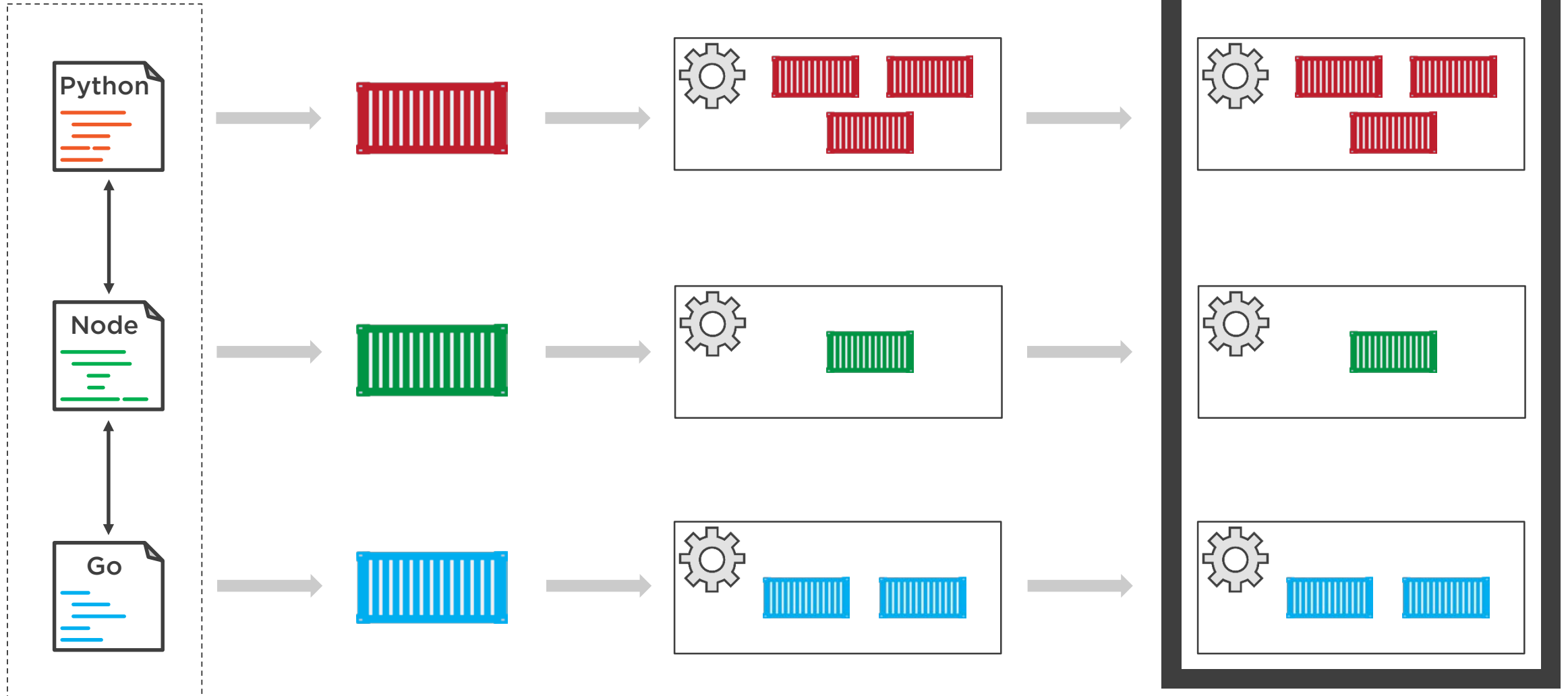


App

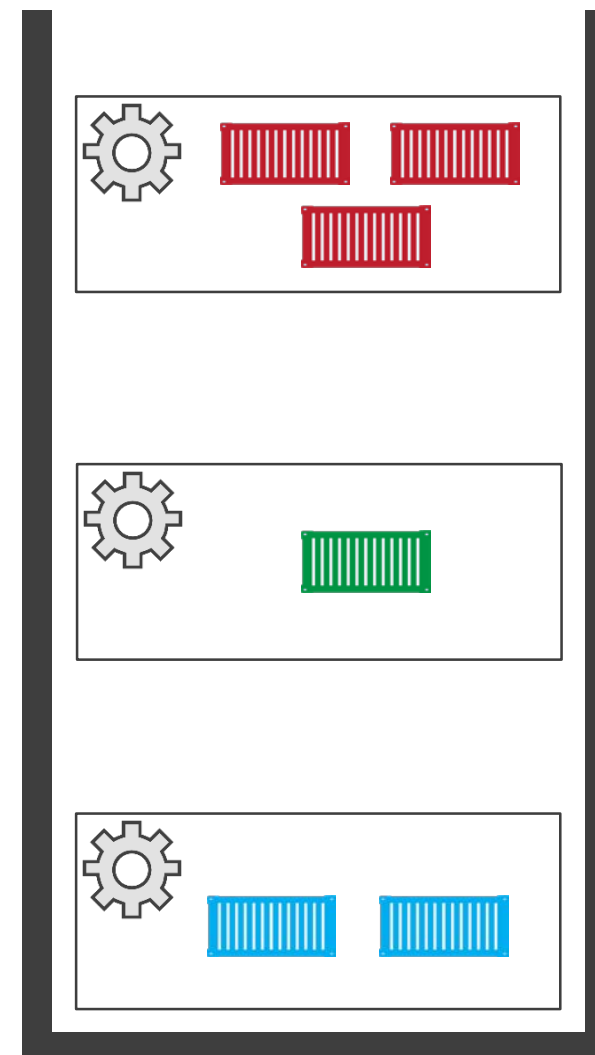
Containers

Services

Stack



Stack



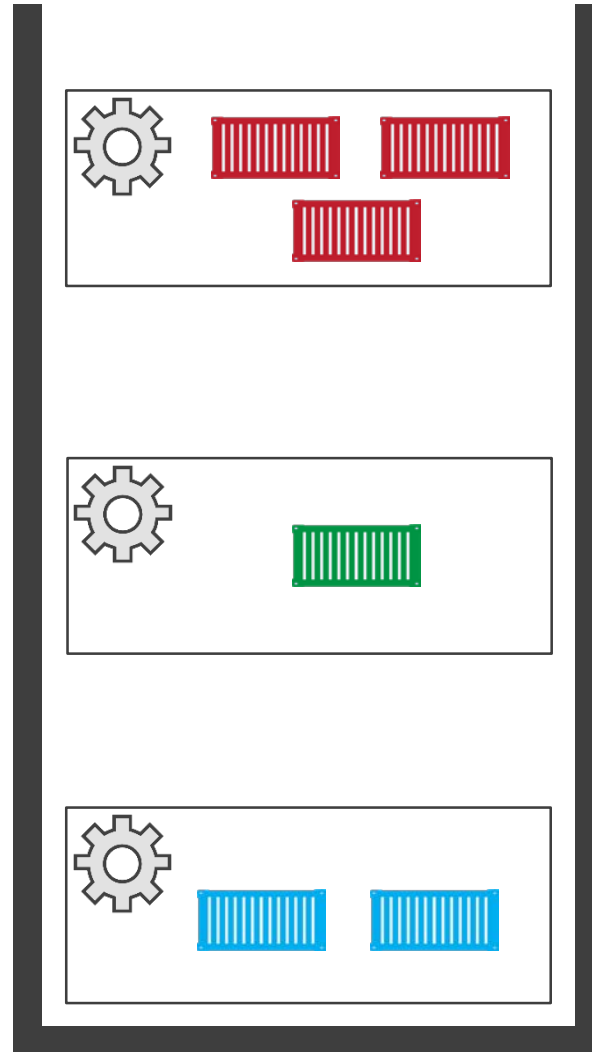
YAML

version: "3"
Service



Networks
Volumes

Stack



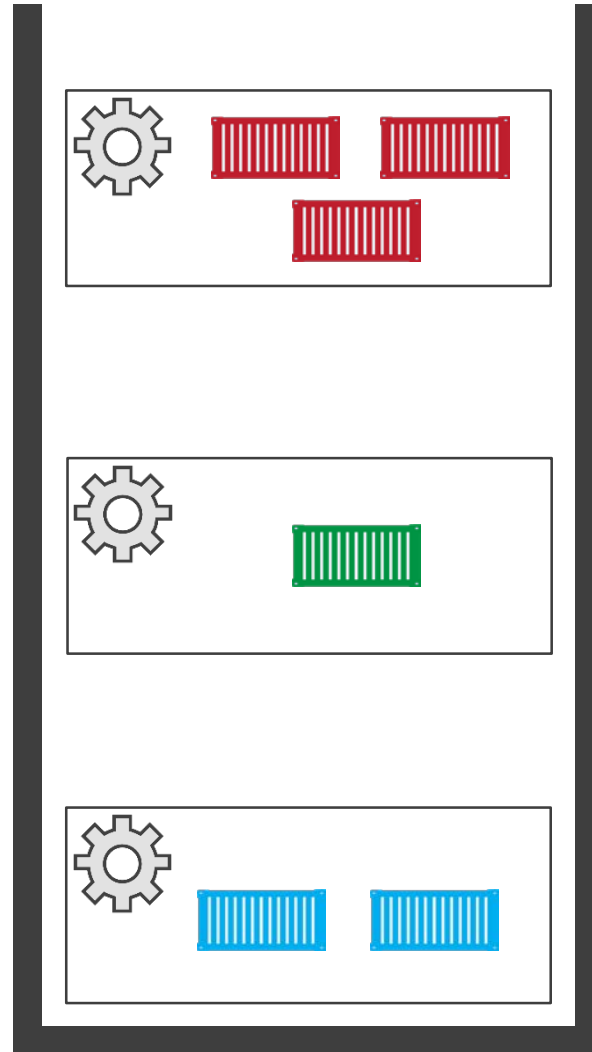
YAML

version: "3"
Service



Networks
Volumes

Stack



YAML

version: "3"

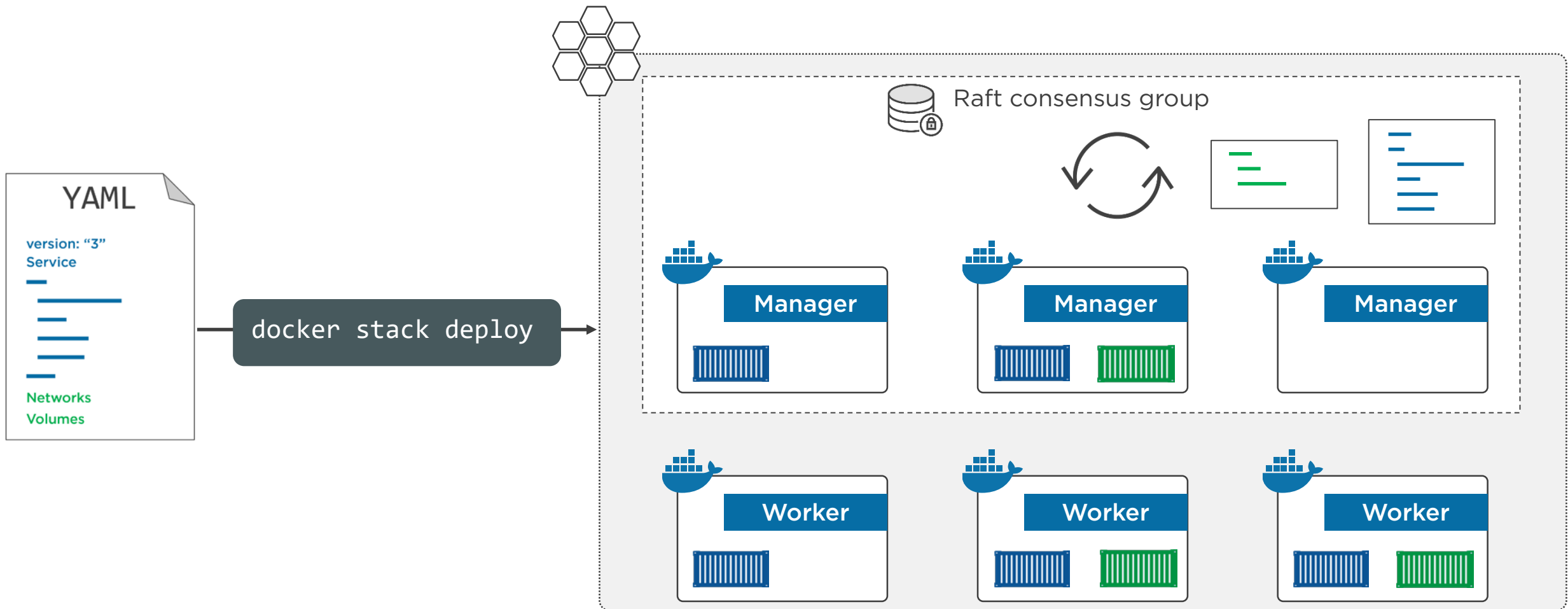
Service

—
——
—
——
——

—
Networks

Volumes





Coming up

NEXT MODULE

Enterprise Tooling

