

Kubernetes - From Beginner to Beginners

Sergej Kurakin



**I am new to
Kubernetes.**

**But I am really very
excited by it's features.**

**And this is because of
my past experience.**

Experience...

Manually installed
servers and compiled
software.

Scaled PHP projects with NGINX and PHP-FPM.

**Tried to automate
server installation with
Puppet**

**Used KVM to run
expendable VMs.**

**Tried Pacemaker &
Corosync for HA
projects**

**Used LXC for project
development and
hosting.**

**Tried Docker a few
times.**

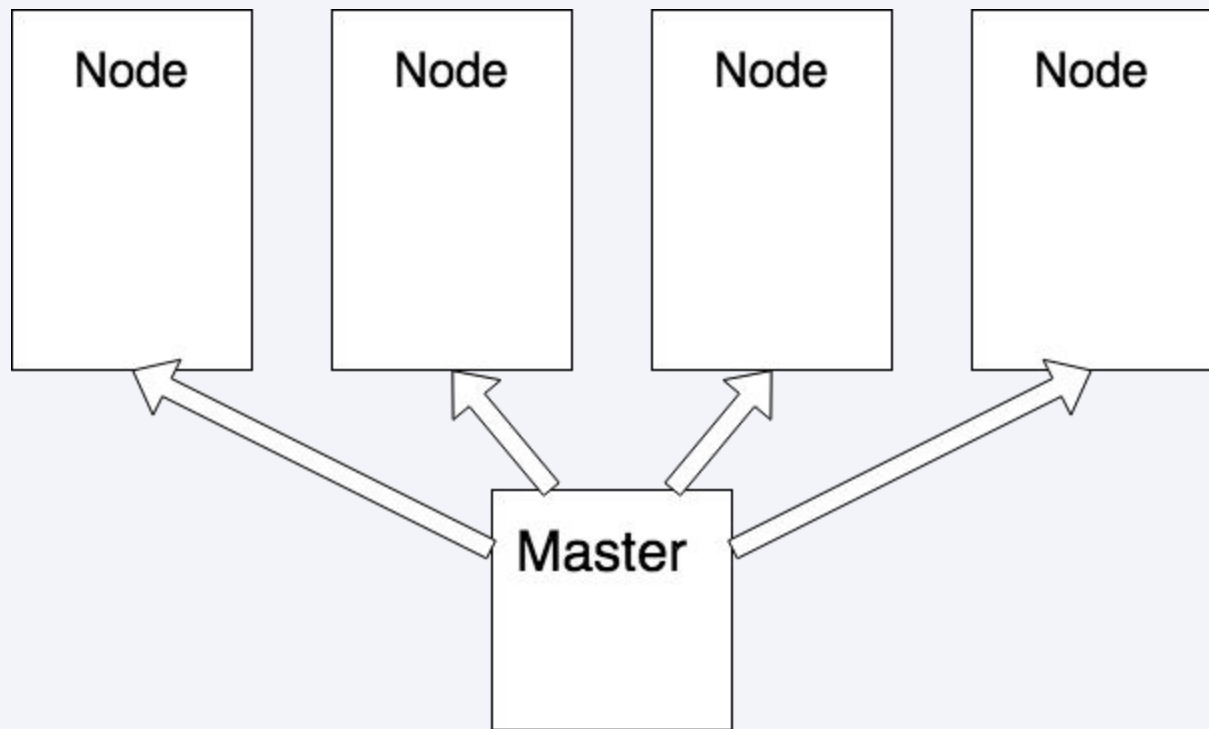
**Failed with Docker
Swarm.**

**But now I've made to
Kubernetes.**

New tool excitement!

Platform for managing
containerized
workloads and
services.

**Kubernetes has
Master(s) and Nodes.**



Kubernetes Components

kube-apiserver

etcd

kube-scheduler

kube-controller-manager

kube-proxy

kubelet

Container Runtime

Other Addons

Kubernetes Objects

Pods

Node

Pod



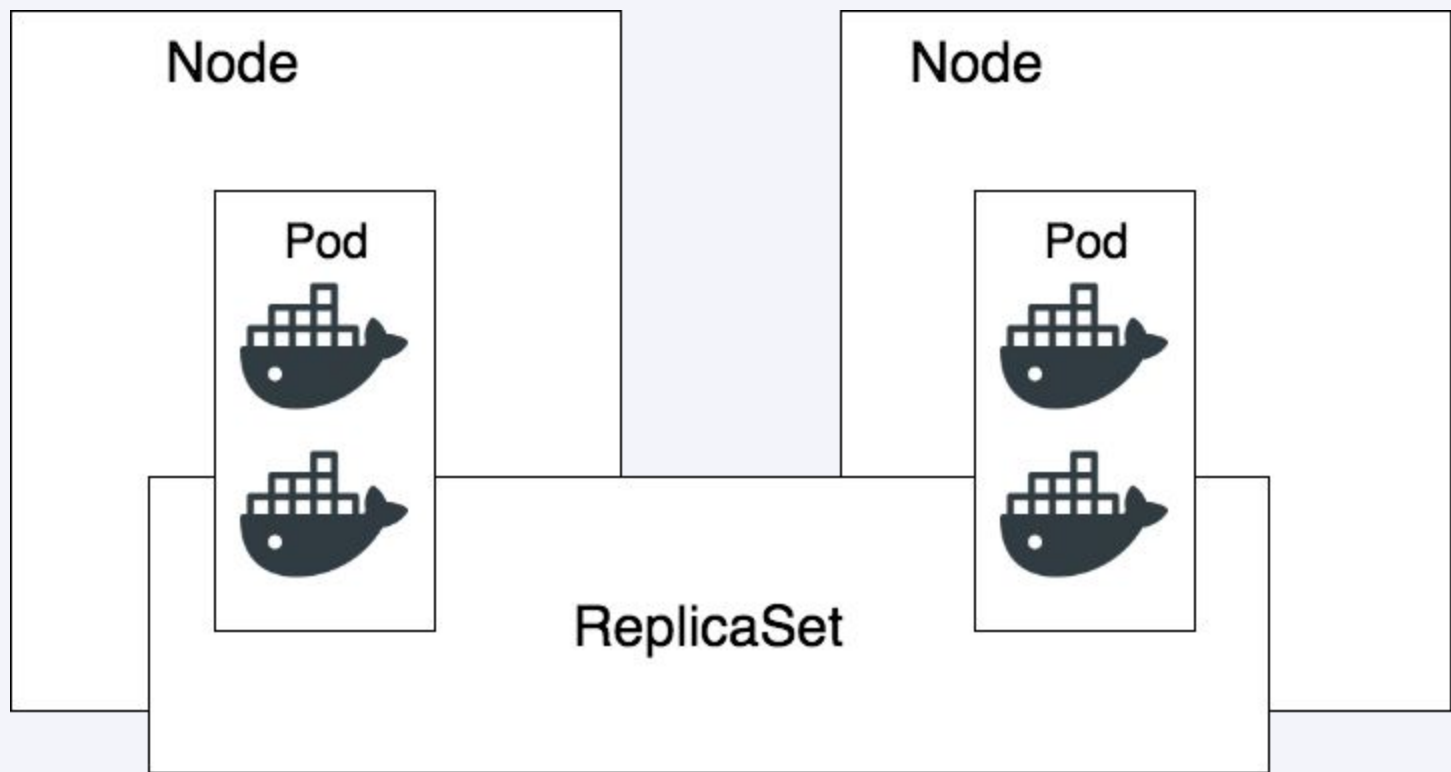
Pod



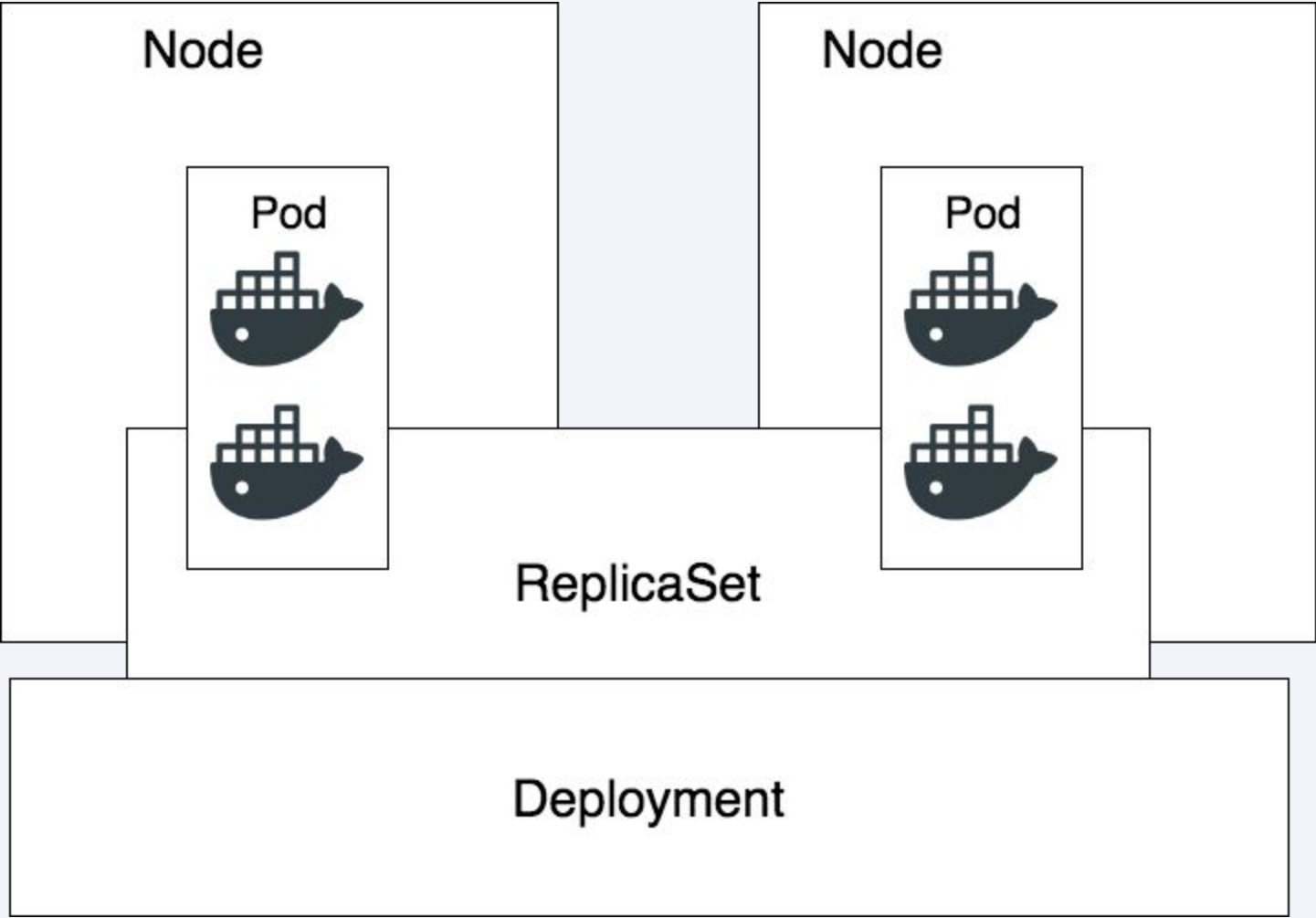
Pod



ReplicaSet



Deployment



Node

Node

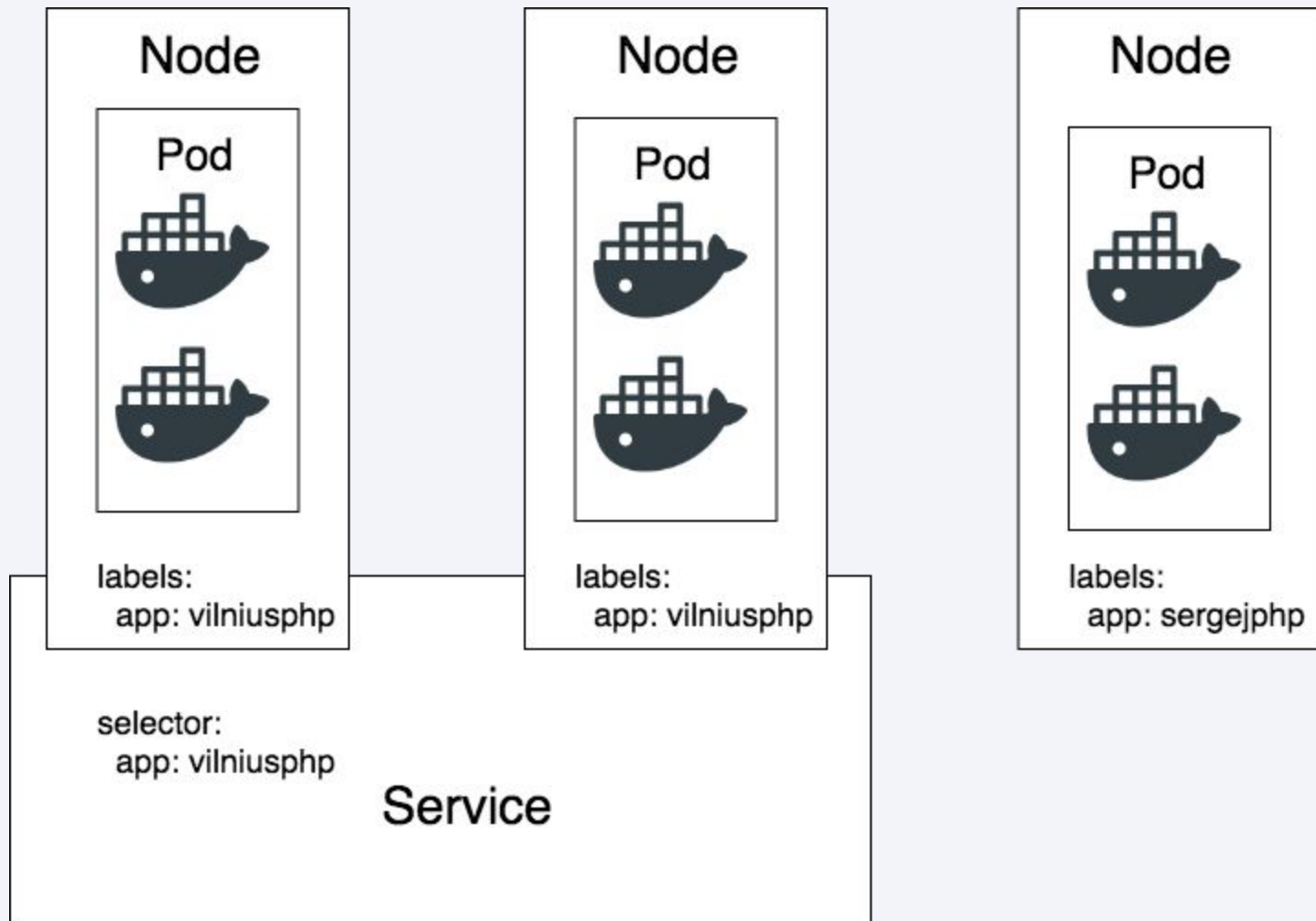
Pod

Pod

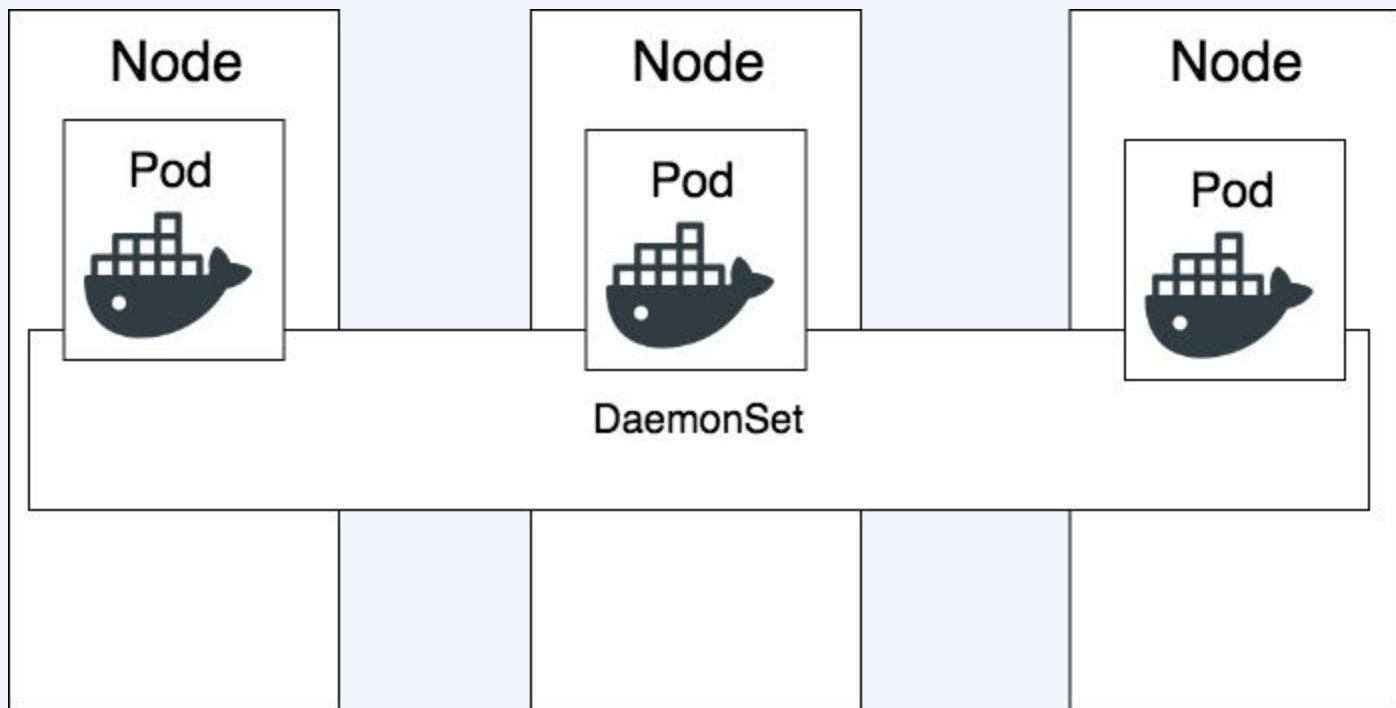
ReplicaSet

Deployment

Service



DaemonSet



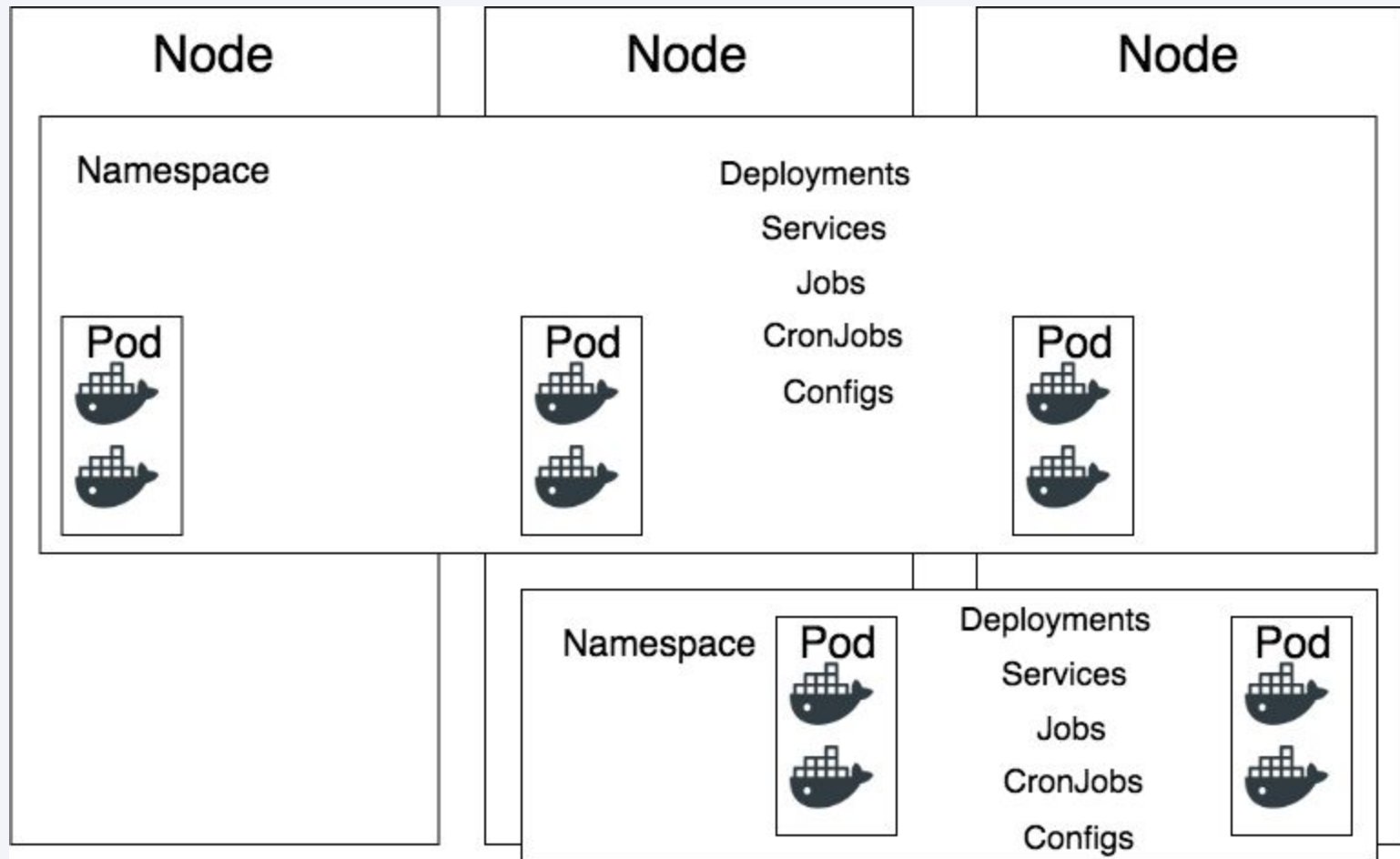
Job

CronJob

ConfigMap

Secret

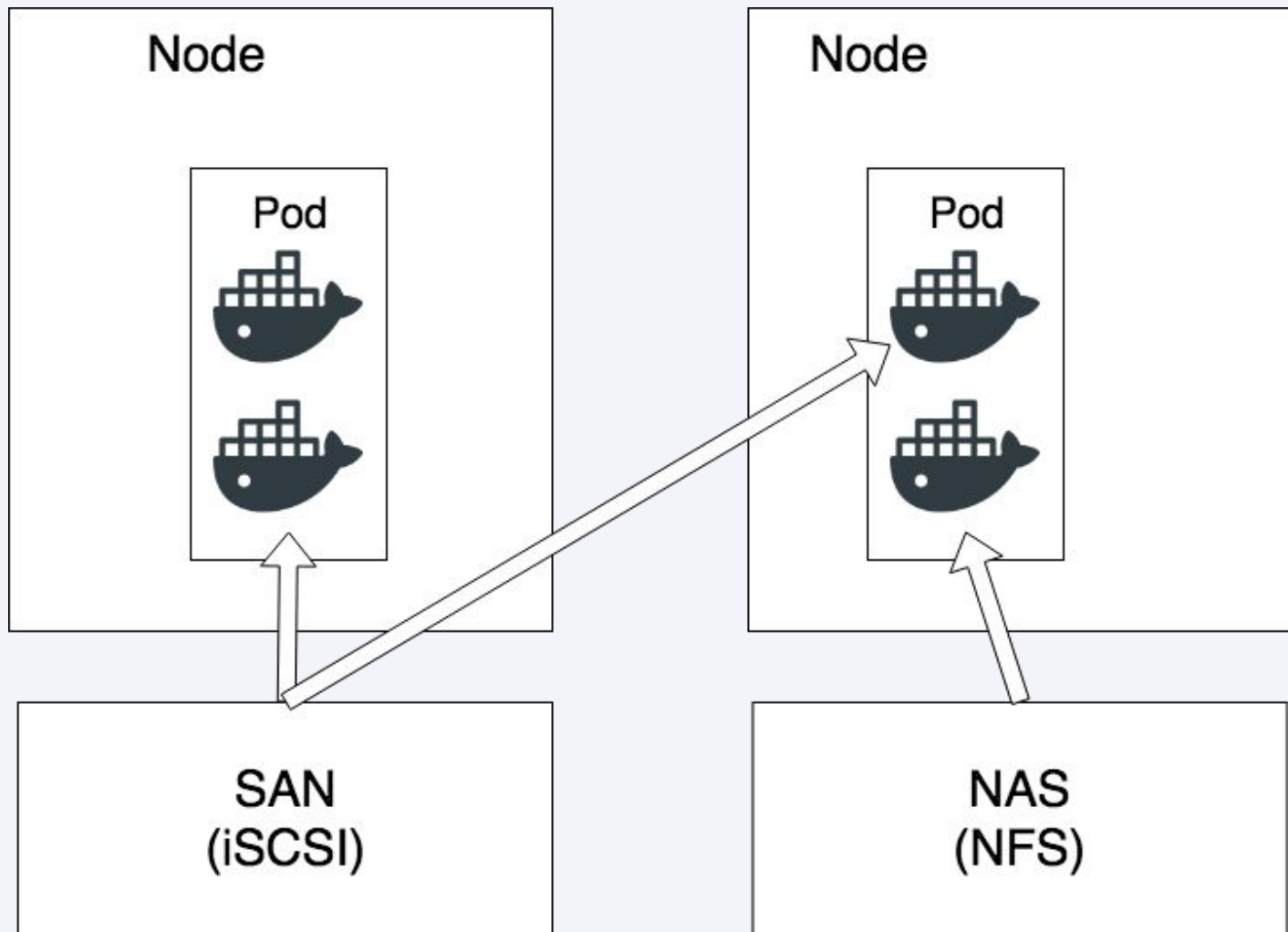
Namespaces



Labels

Annotations

Storage



PersistentVolume

PersistentVolumeClaim

Management

- Imperative commands
- Imperative object configuration
- Declarative object configuration

REST API

Excitement?

**Much easier to
manage.**

Much easier to scale.

Much easier to deploy.

**Immutable
infrastructure.**

Easy Service Discovery.

Solves storage issues.

Lots of information.

Tools ecosystem.

Exciting!

Demo?

Share your thoughts!

Links

<https://kubernetes.io/>

<http://shop.oreilly.com/product/0636920043874.do>

https://www.youtube.com/watch?v=CW3ZuQy_YZw

<https://www.youtube.com/watch?v=o85VR90RGNQ>

<https://www.youtube.com/watch?v=90kZRyPcRZw>

<https://www.youtube.com/watch?v=WwQ62OyCNz4>

<https://www.youtube.com/watch?v=6BYq6hNhcel>

Thanks!

