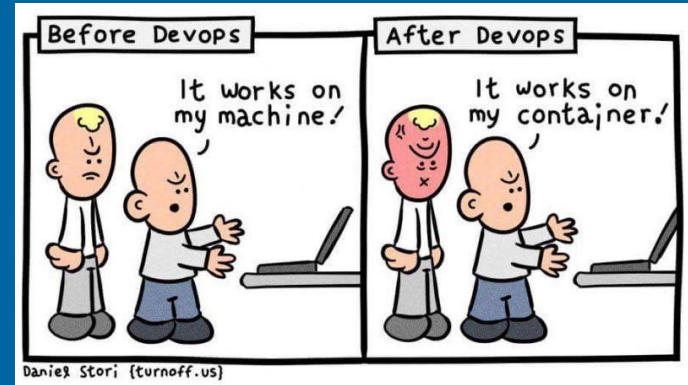
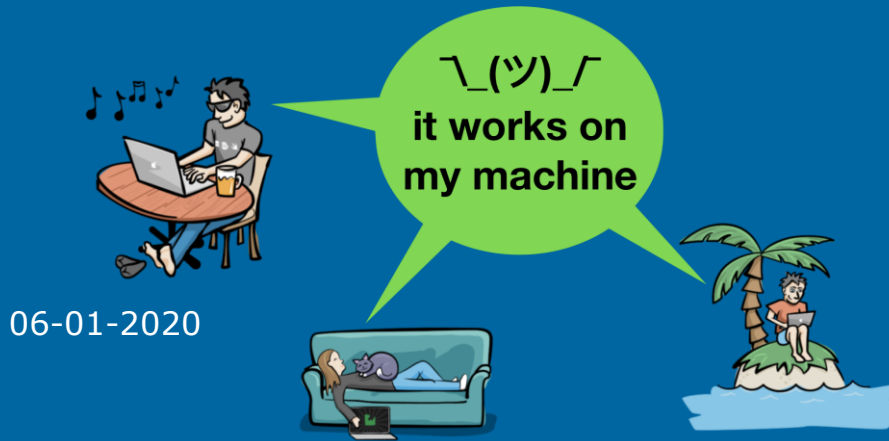


# Let's Talk about Container



# SUMMARY

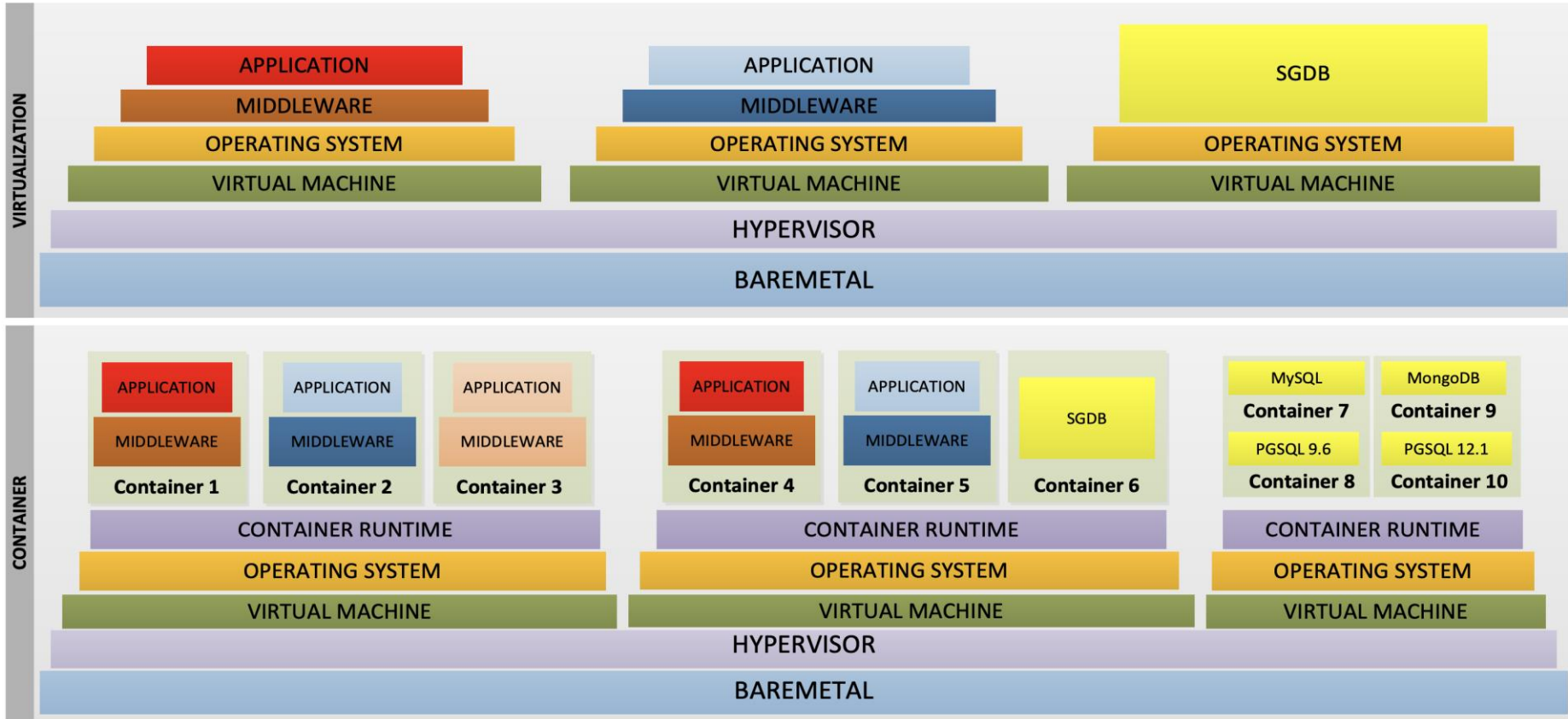
---

- 1 - GLOBAL OVERVIEW
- 2 - VIRTUALIZATION OVERVIEW
- 3 - CONTAINER OVERVIEW
- 4 - WHAT ARE WE TALKING ABOUT
- 5 - WHAT ABOUT COMPATIBILITY
- 6 - WHO IN CHARGE OF WHAT
- 7 - #IMAGE #CONTAINER #INSTANCE
- 8 - HOW DOES IT WORK
- 9 - WHAT ABOUT PRICE LIST
- 10 - STATS
- 11 - ROADMAP
- 12 - NEWS
- 13 - FUN

1

## GLOBAL OVERVIEW

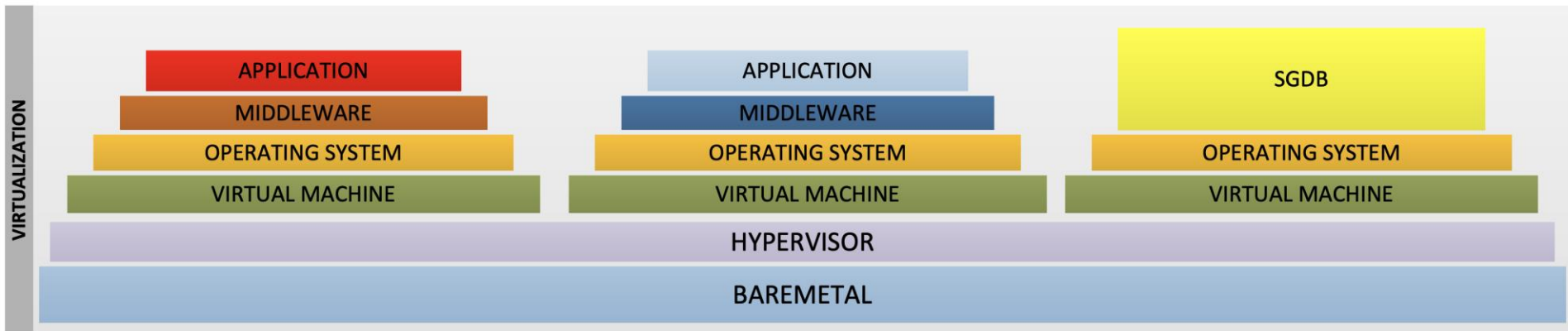
## CONTAINER & VIRTUALIZATION QUICK VIEW



2

## VIRTUALIZATION OVERVIEW

# How to host application by using Virtual Machine

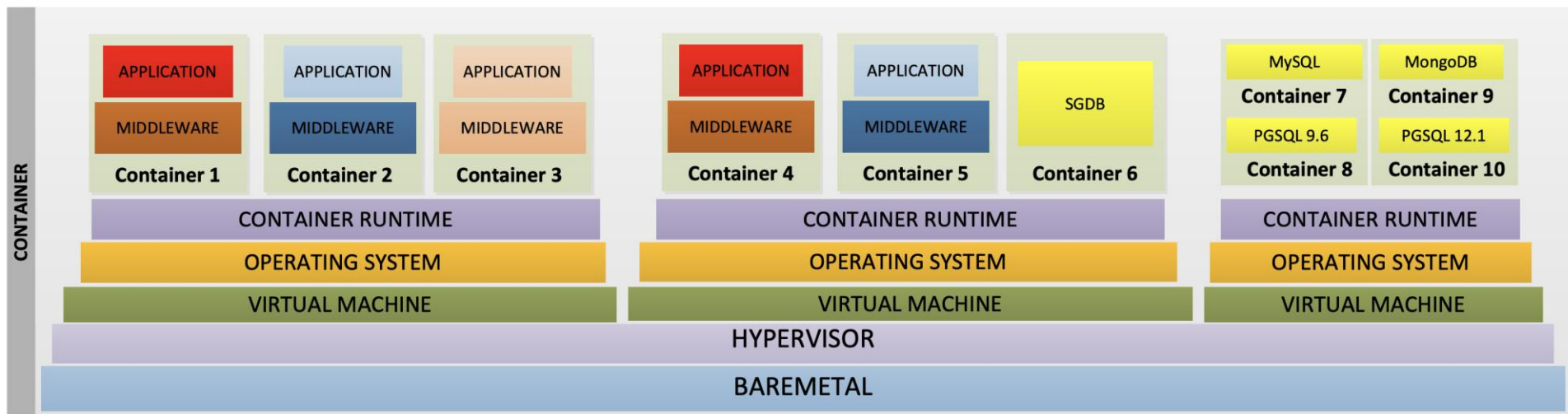


3

## CONTAINER OVERVIEW

---

# How to host application by using Container





4

What are we talking about ?

# What are we talking about (1/5)?

## BAREMETAL

Sequana

Dell

HP

SuperMicro

Quanta

## HYPERVERSOR

Vmware 

Hyper-V

KVM

XEN

Acropolis CS  
(Nutanix)

## CONTAINER RUNTIME

Dockerd (Docker.io) 

CRI-O

Containerd (k8s) 

Rkt (Rocket)

Podman (Redhat)

Ixc

# What are we talking about (2/5)?

## ORCHESTRATION CLUSTER

Kubernetes



Tanzu (vmware Pacific)

OpenShift (Redhat)

Mesos

Nomad

Tanka (by Grafana)

Swarm

Depreciate

Need server cnx

API Based

## SUPER MANAGER

Rancher

Karbon (ACS/Nutanix)

## CONF MANAGEMENT

Ansible



Chef

Puppet

Saltstack

## HYBRID MANAGER

Outposts (AWS)

Anthos (GCP)

Azure Arc (Microsoft)

## APP DEPLOYMENT

Helm



GitKube

Draft

Kustomize

## SERVICE MANAGEMENT

Docker Compose

# What are we talking about (3/5)?

## CONTAINER MONITORING

DaemonSet

Prometheus 

Datadog<sup>(1)</sup>

## INFRA AS CODE

Terraform 

ARM (Azure)

## CONTAINER REGISTRY

Docker<sup>(1)</sup>

Docker Trusted Registry

Docker Hub

GitLab

GitLab Container Registry 

Quay.io

Sonatype Nexus 

Harbor

## CONTAINER ANALYSIS

Clair

Trivy (Aqua)

Anchore

Snyk <sup>(1)</sup>

GoHarbor 

(1) paid mode

# What are we talking about (4/5)?

(1) paid mode (2) multi-tenant

## SERVICE MESH<sup>(2)</sup>

Istio

SmartStack

Nginx



HAProxy



Flannel

## STORAGE MANAGEMENT

OpenEBS

Longhorn



## DATA COLLECTOR

Fluentd



File Beat /Beat\*



StreamSets

## LOG MANAGEMENT

ElasticSearch



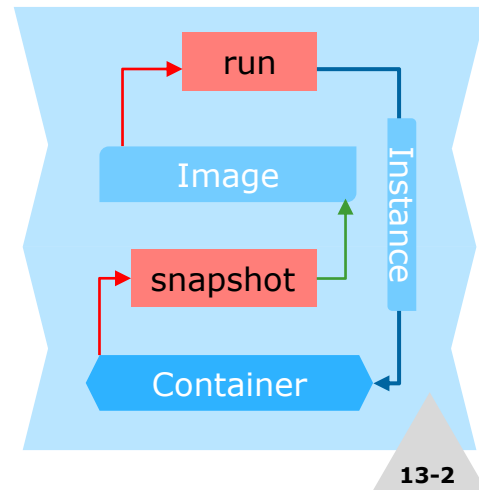
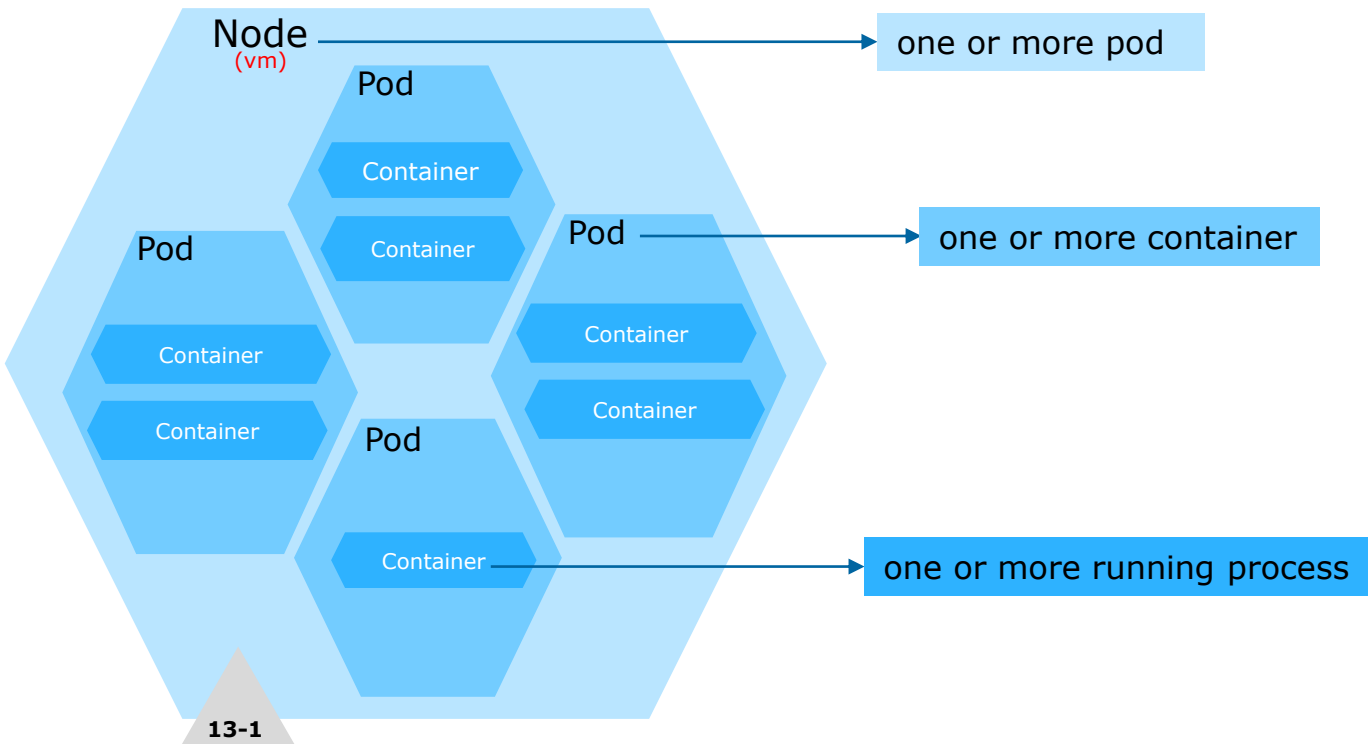
Loki

Syslog

Datadog<sup>(1)</sup>

# What are we talking about (5/5)?

Just for good wording !!



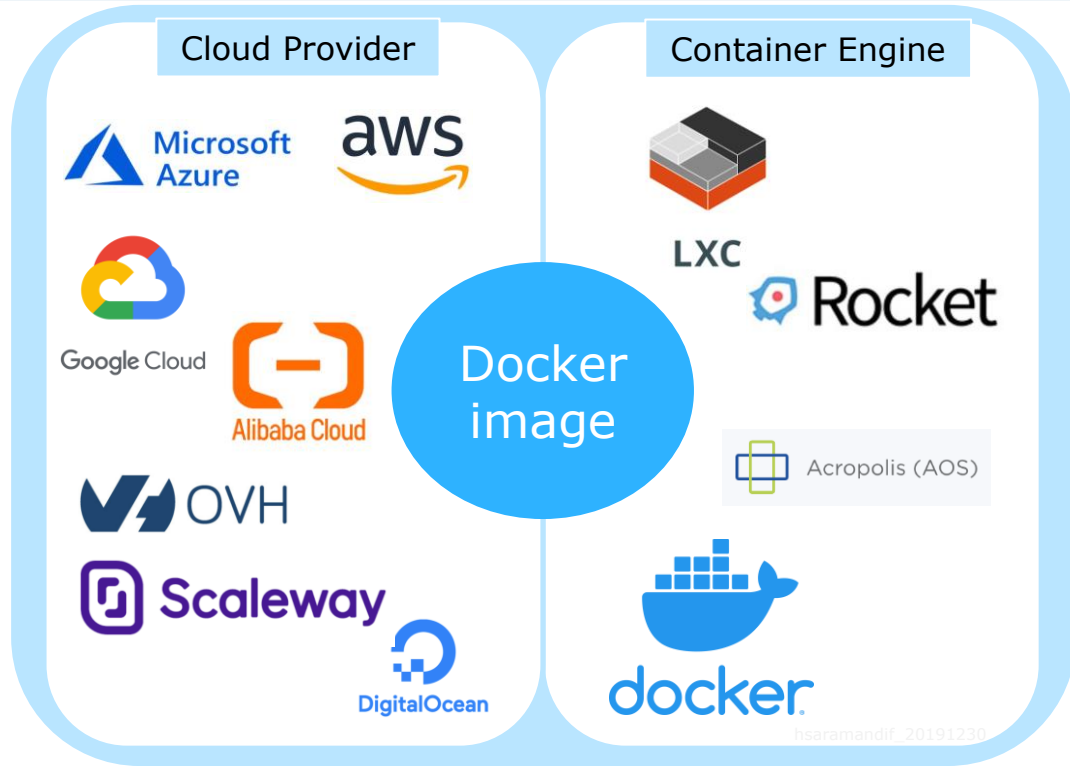
5

What About compatibility ?

---

**Now think portability !!**

# or why Docker.io rules the world ?





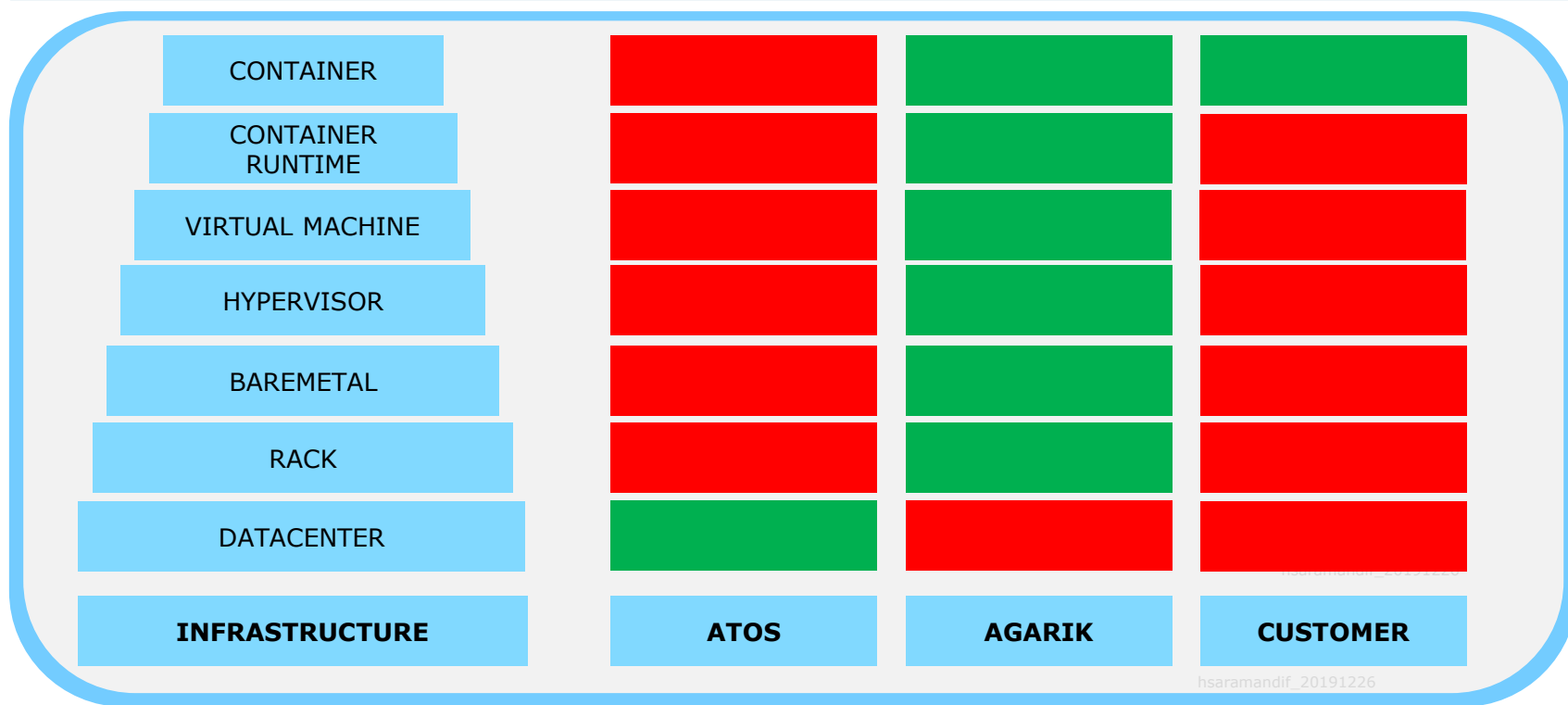
6

Who in charge of what ?

---

# New infrastructure design : what about perimeter ?

## GLOBAL VIEW



# New infrastructure design : what about perimeter ?

## CONTAINER & SERVICES VIEW

INFRASTRUCTURE	OPERATION			
	HOST	BUILD	MANAGE	MAINTENANCE
CONTAINER	AGA	AGA CUS	AGA	AGA CUS
CONTAINER RUNTIME	AGA	AGA	AGA	AGA
CONTAINER MONITORING	AGA	AGA	AGA	AGA
CONTAINER ANALYSIS	AGA	AGA	AGA	AGA
CONTAINER REGISTRY	AGA	AGA	AGA	AGA
CONFIGURATION MANAGEMENT	AGA	AGA CUS	AGA	AGA CUS
LOG MANAGEMENT	AGA	AGA	AGA	AGA
SERVICE MESH	AGA	AGA	AGA	AGA
ORCHESTRATION CLUSTER	AGA	AGA	AGA	AGA

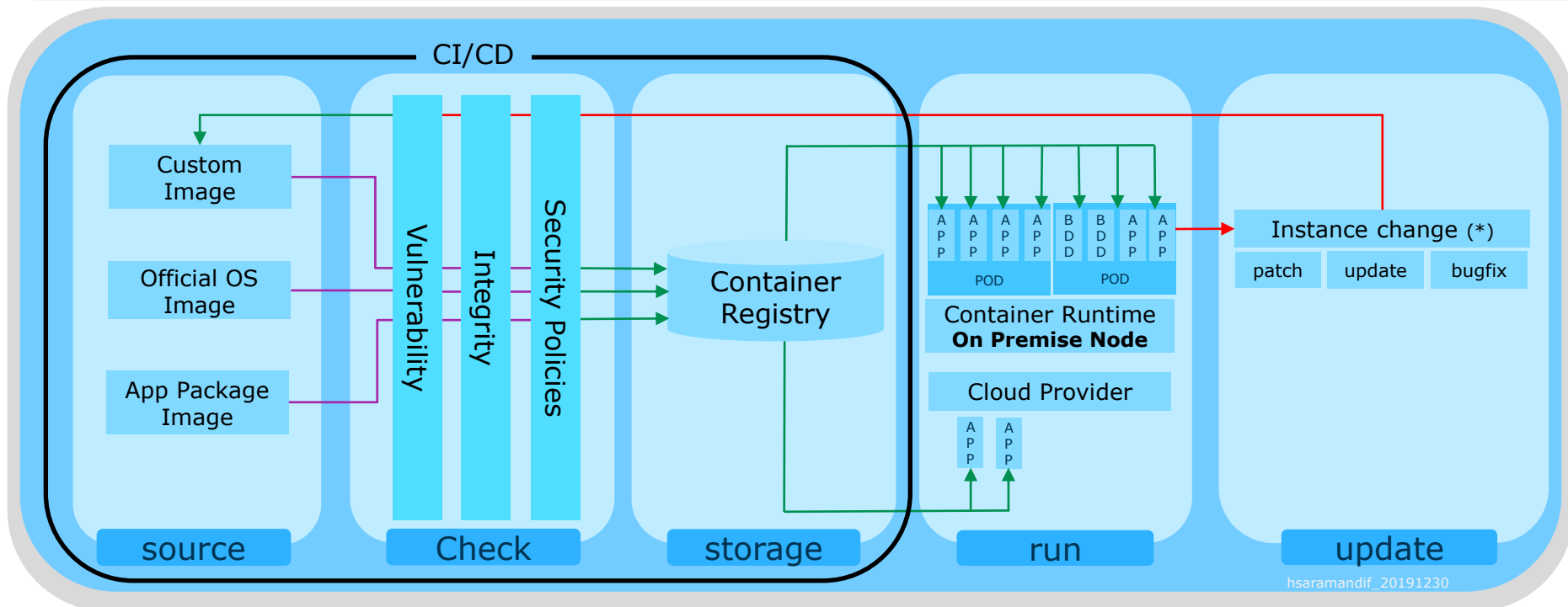
**AGA** : Agarik    **CUS** : Customer

hsaramandif\_2019126-20191231

7

#Image #container #Instance

# Container <-> image life cycle

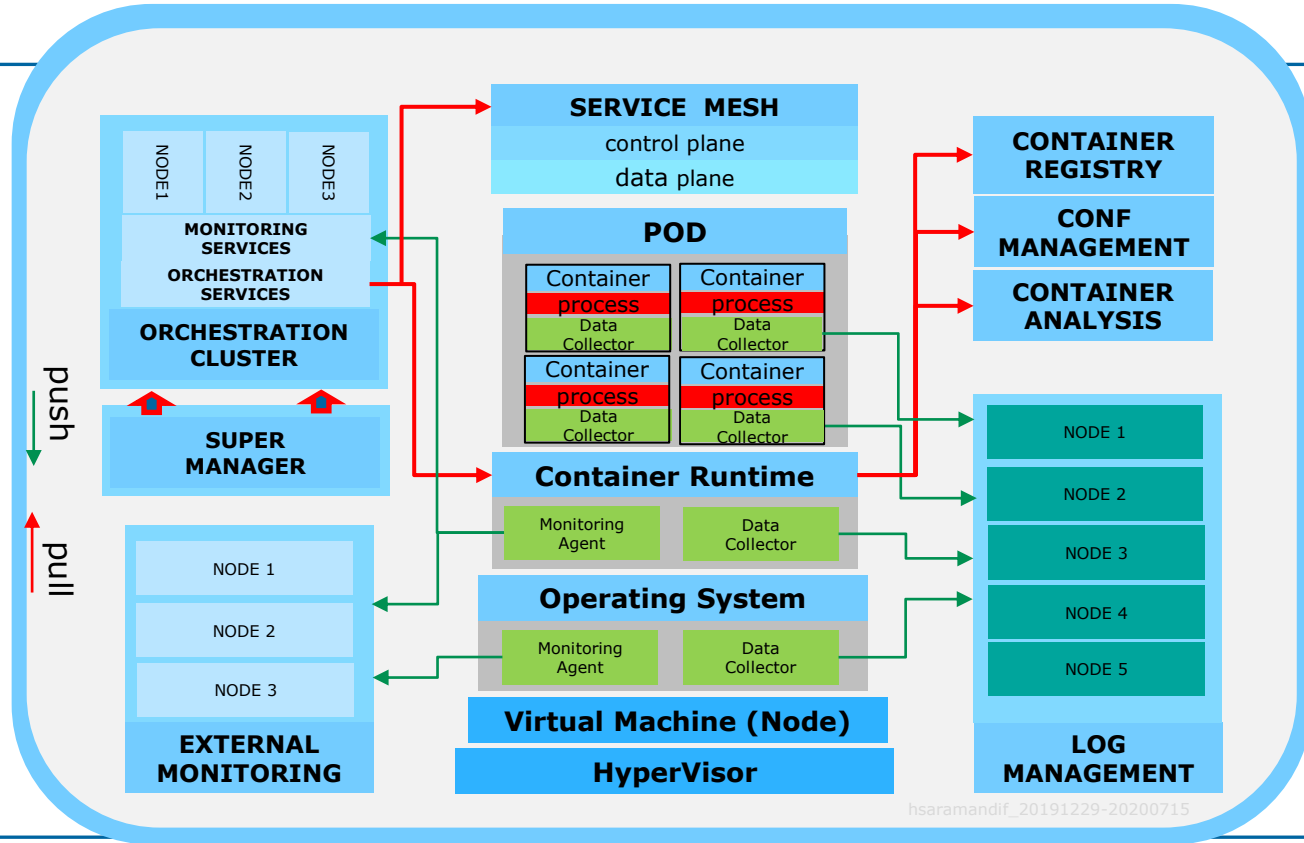


8

How does it work ?

---

# Basic Container Infrastructure Setup



9

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## What About Price List ?

Please contact Agarik Team for Price List.



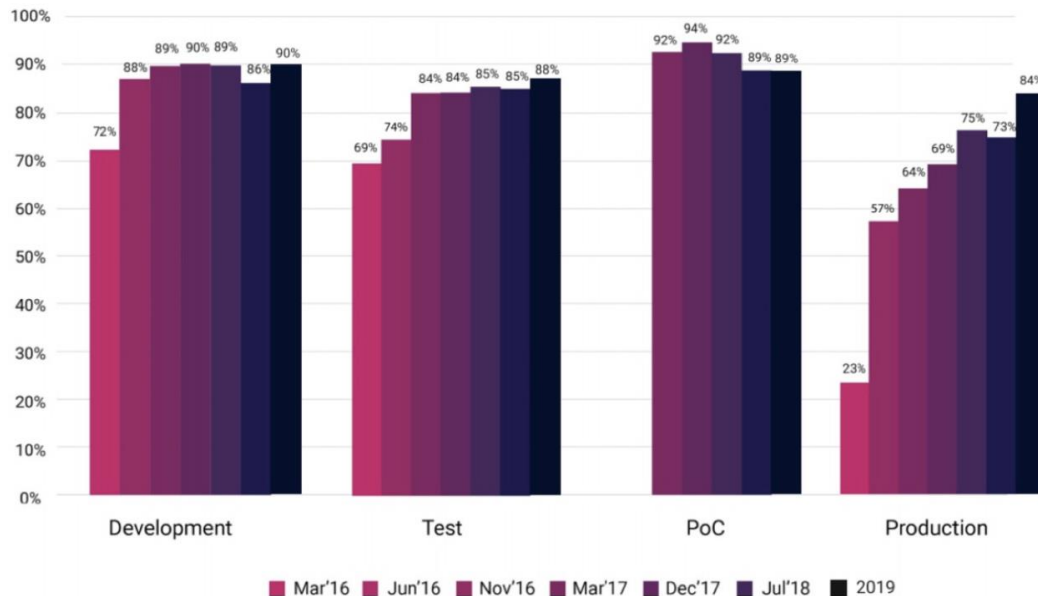
10 STATS!!

---

# In the Real Life !!!

## Container environment View

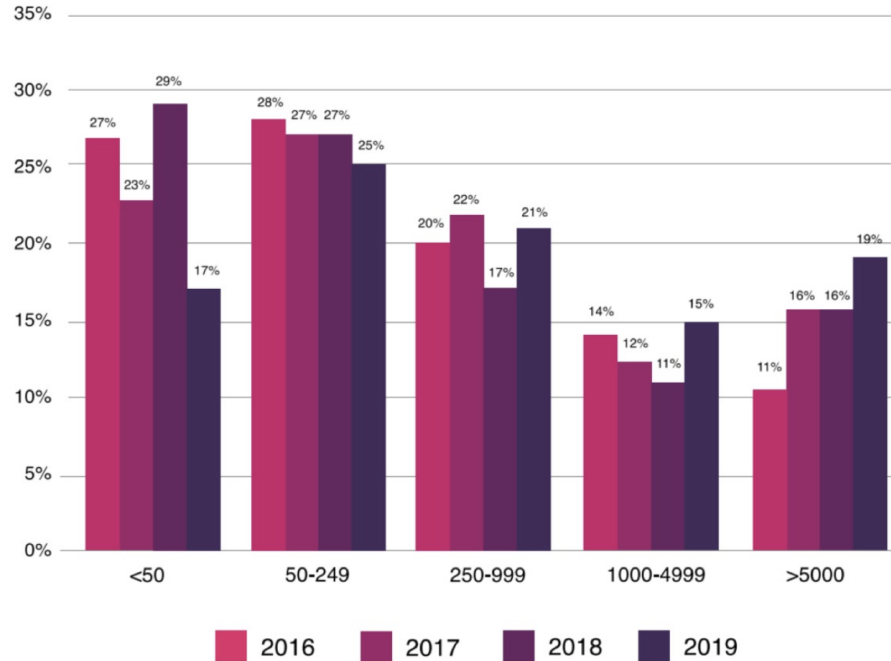
Use of Containers since 2016



Adoption des conteneurs depuis 2016 (Crédit : CNCF)

# In the Real Life !!!

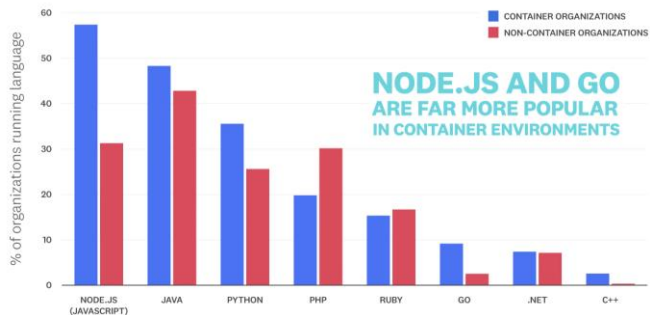
Number of Containers in Production



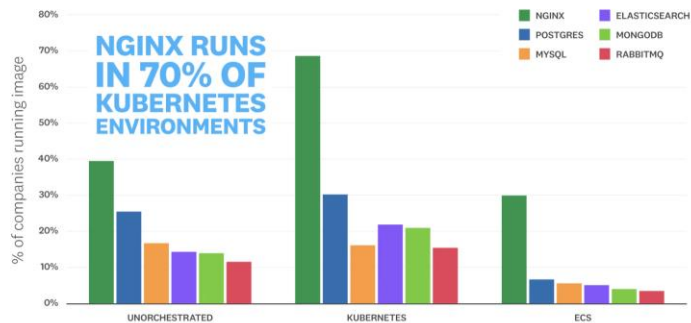
# In the Real Life !!!

## Just Stats

Language Popularity by Environment



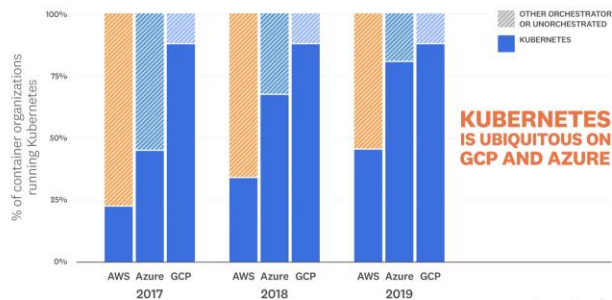
Common Container Images by Orchestrator



Kubernetes Share among Container Organizations



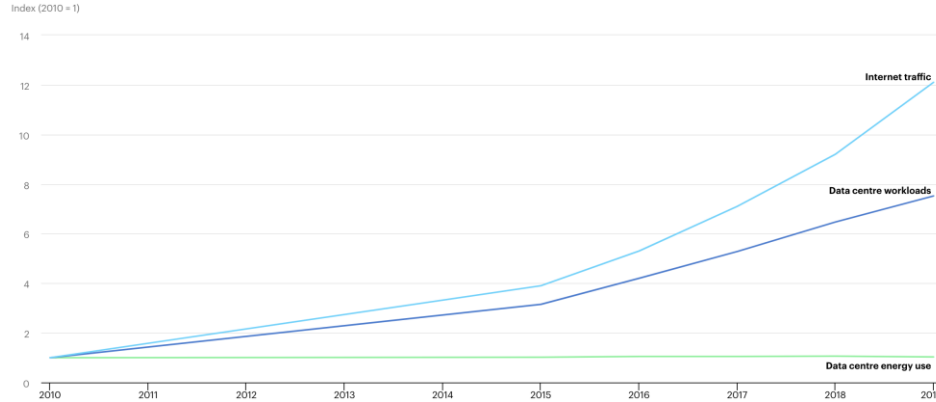
Kubernetes Usage by Container Organizations



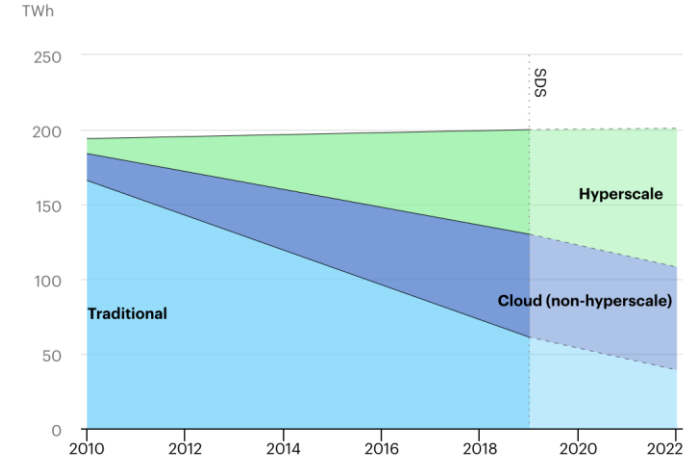
# In the Real Life !!!

## Is this Green !!

Global trends in internet traffic, data centre workloads and data centre energy use, 2010-2019

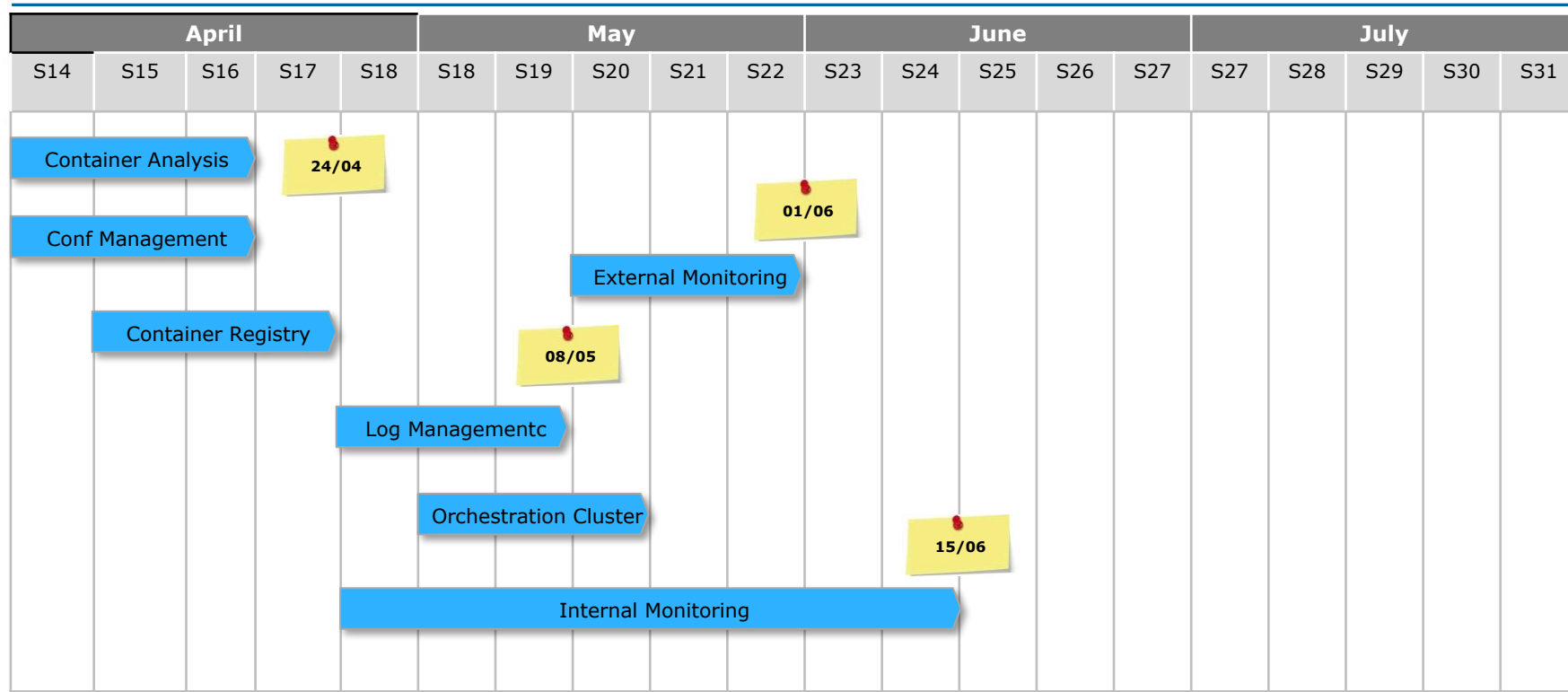


Global data centre energy demand by data centre type, 2010-2022



# 11 RoadMap

# On the Road !!!



12

News



# NEWS

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DATE	ARTICLE
08/07/2020	<a href="#">Suse to acquire Rancher</a>
01/07/2020	<a href="#">Kubernetes Stats</a>
11/03/2020	<a href="#">AWS BottleRocket</a>
25/02/2020	<a href="#">Mirantis to keep Docker Swarm buzzing around, pledges new features</a>
29/08/2019	<a href="#">VMware révolutionne le développement</a>

13

FUN

## #kubernetes #devops

### Required Technical and Professional Expertise

- Minimum 12+ years' experience in Kubernetes administration and management
- Hands-on experience on setting up Kubernetes platform, deploying microservices and other web applications, and managing secure secrets along with container orchestration using Kubernetes

## Kubernetes



Computer application

Kubernetes is an open-source container-orchestration system for automating computer application deployment, scaling, and management. It was originally designed by Google and is now maintained by the Cloud Native Computing Foundation. [Wikipedia](#)

Written in: Go

Developed by: Cloud Native Computing Foundation

Initial release: 7 June 2014; 6 years ago

Source : Reddit

# Thanks

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[henley.saramandif@atos.net](mailto:henley.saramandif@atos.net)

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The Atos logo, featuring the word "Atos" in a white, stylized, sans-serif font. The letter 'o' is unique, composed of two interlocking loops.