

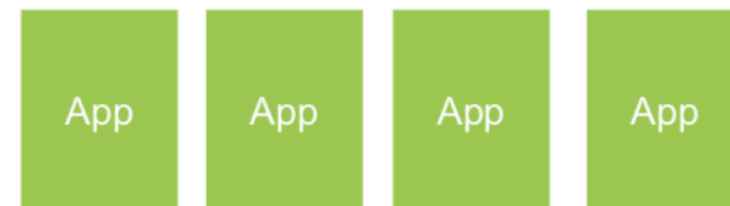
CONTAINERS & DEVOPS

REMEMBER OLD TIMES....

Applications run businesses

Applications run on servers

- Procurement
- Big / massive server
- Time
- Cost (Capex / Opex)

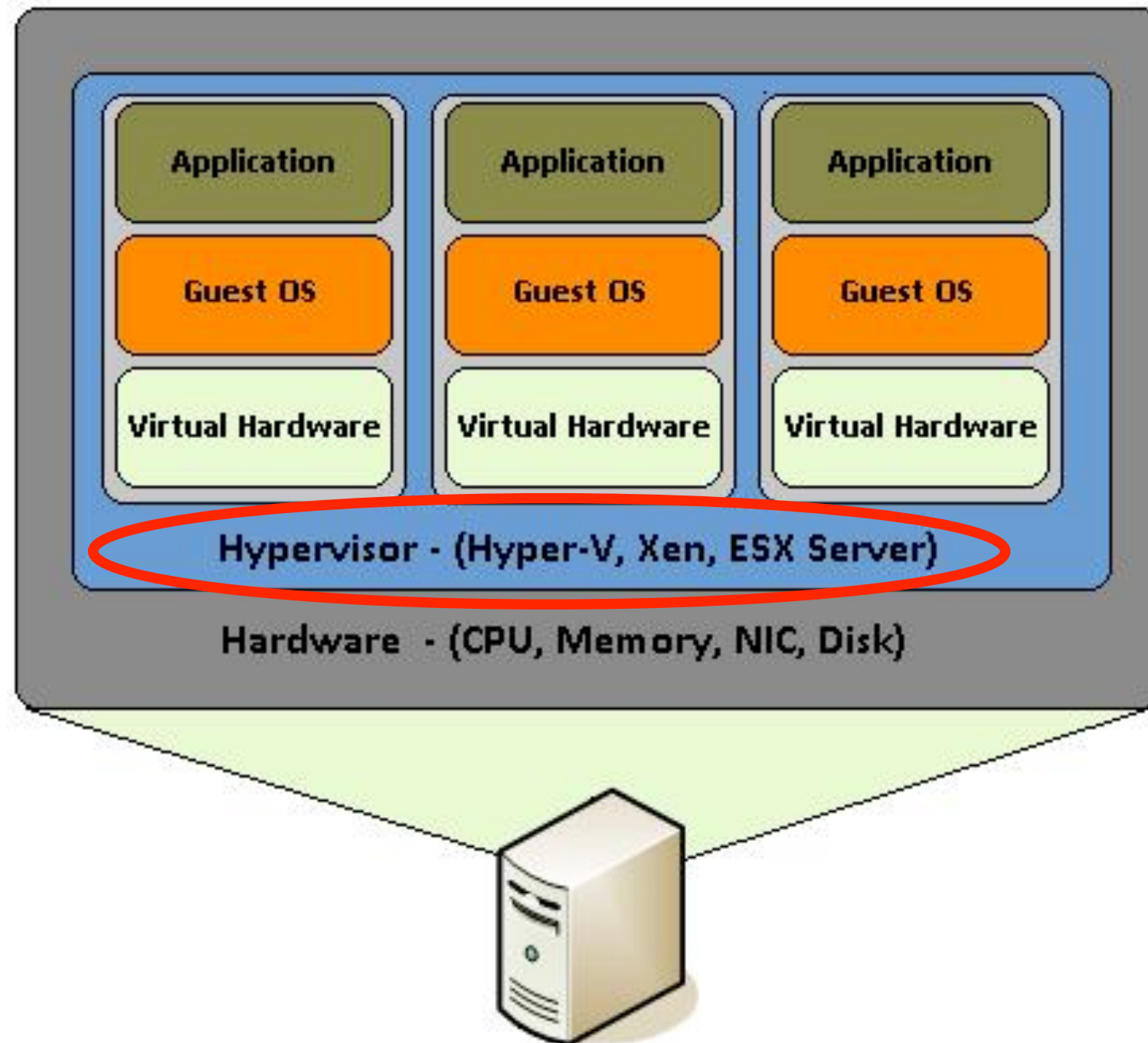


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VIRTUALIZATION

.....

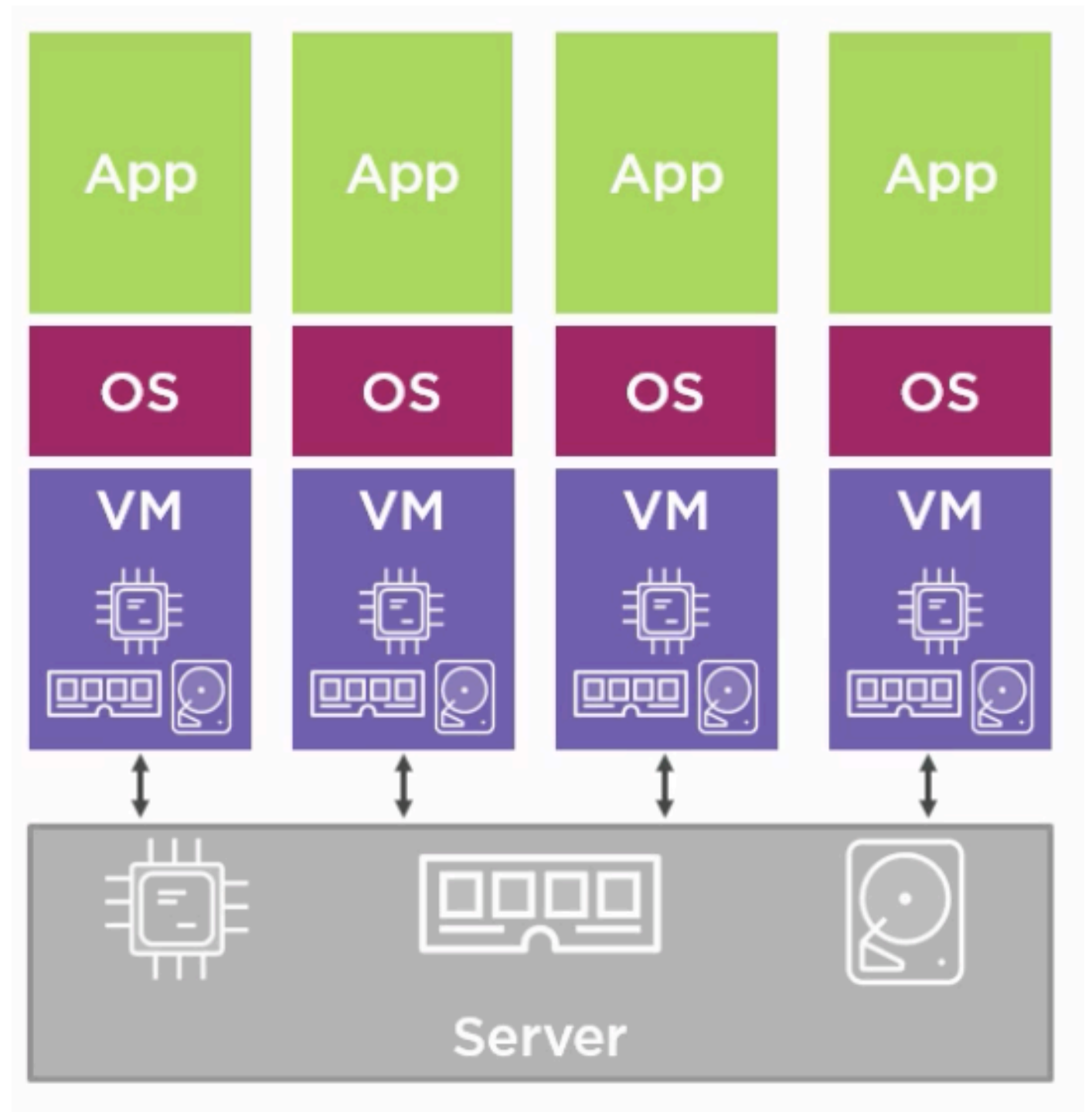


VIRTUALIZATION 101

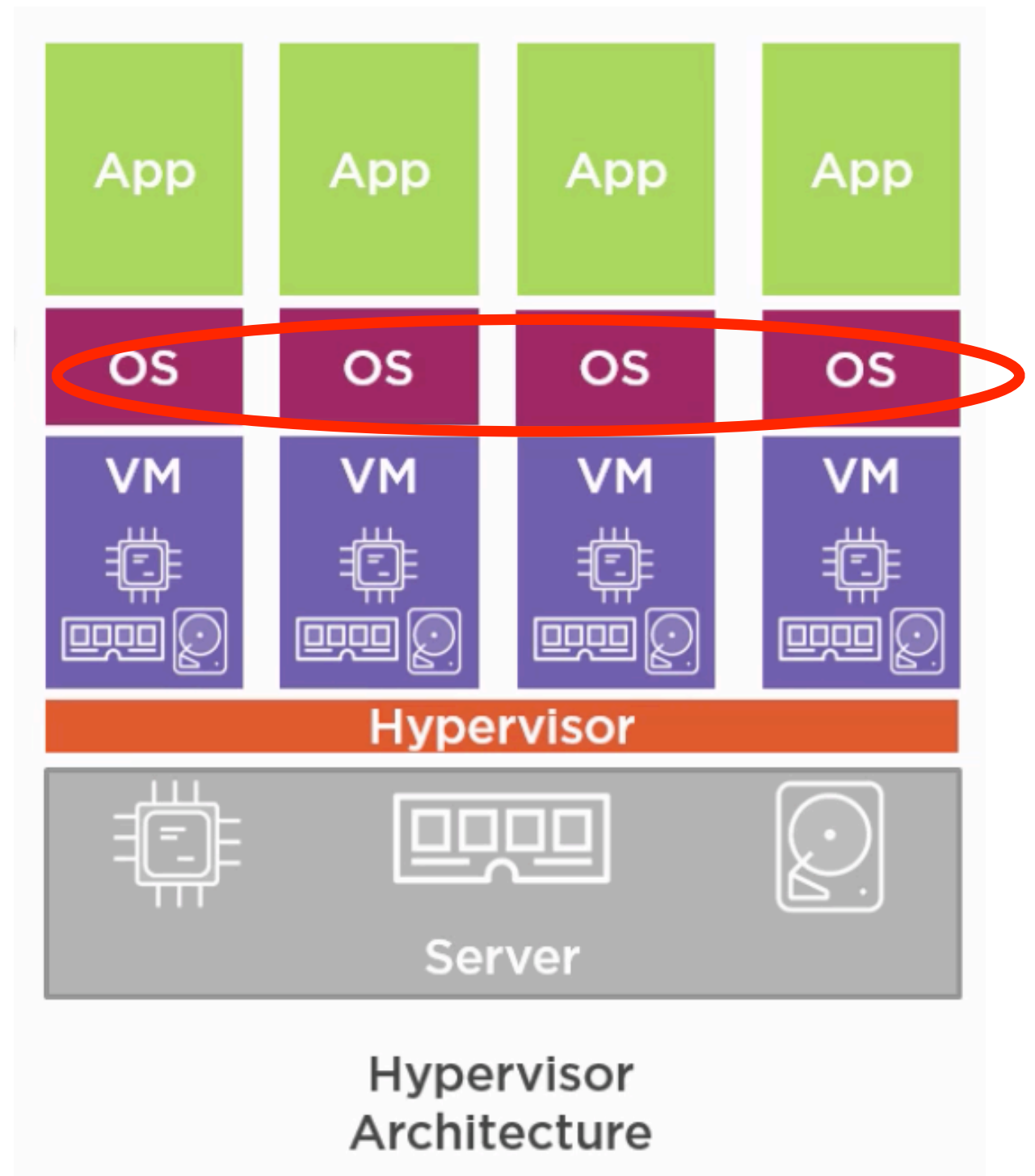
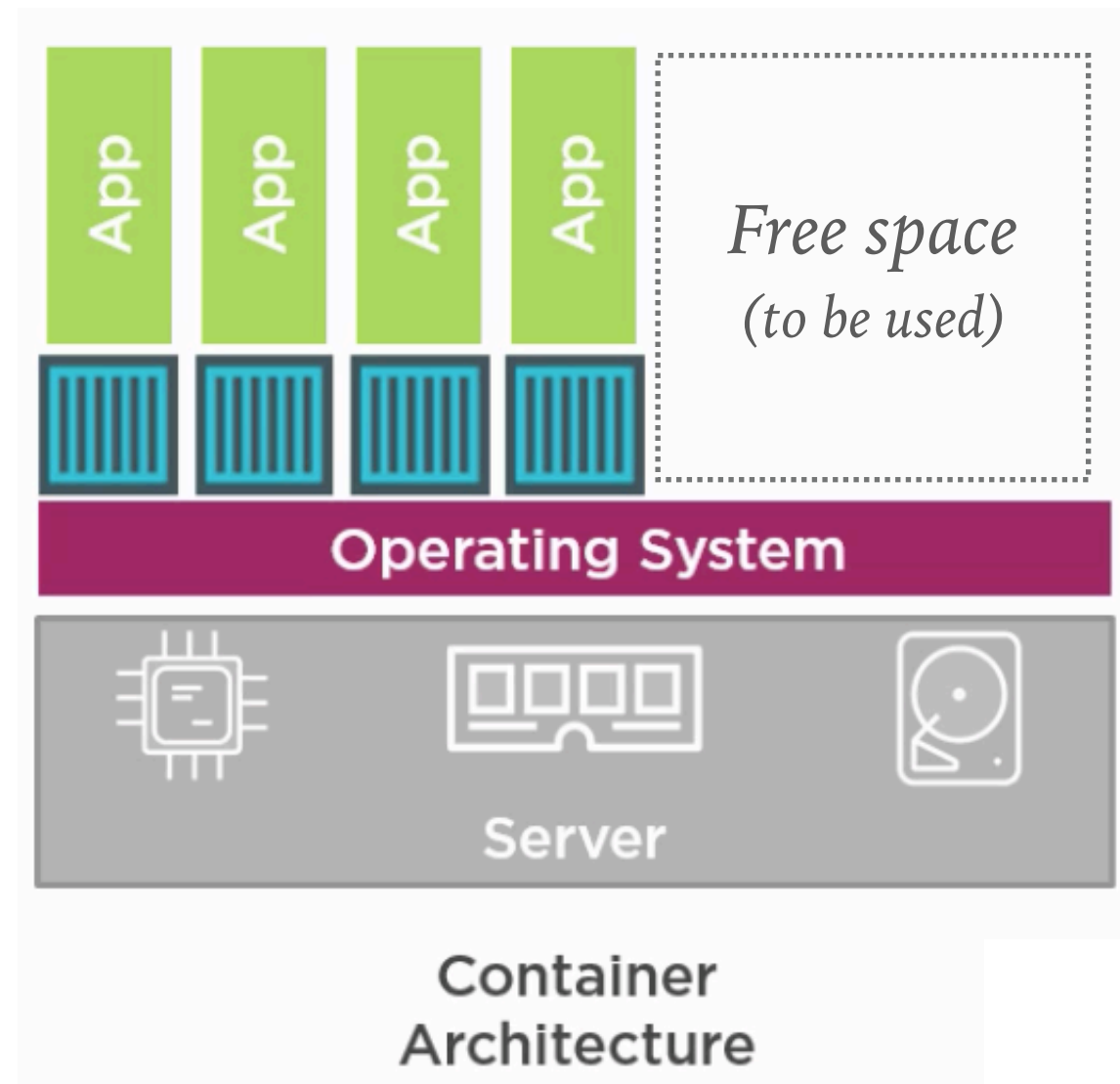
Hypervisor allows
multiple apps on single
server

Each OS:

- Uses CPU
- Uses RAM
- Uses disk
- May have license cost
- Requires admin time

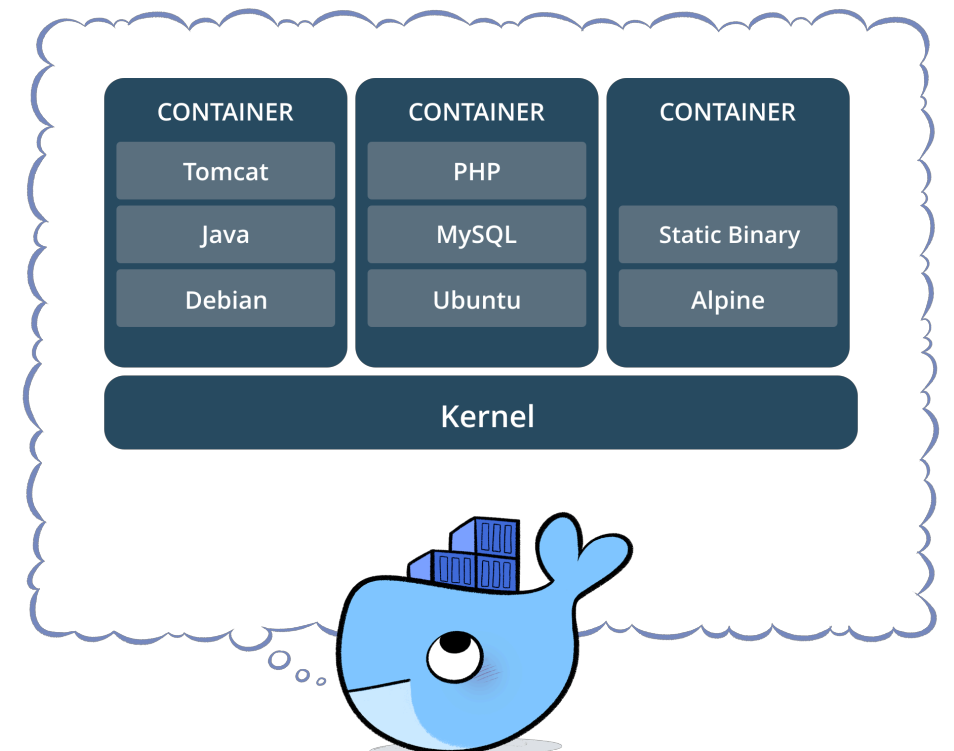
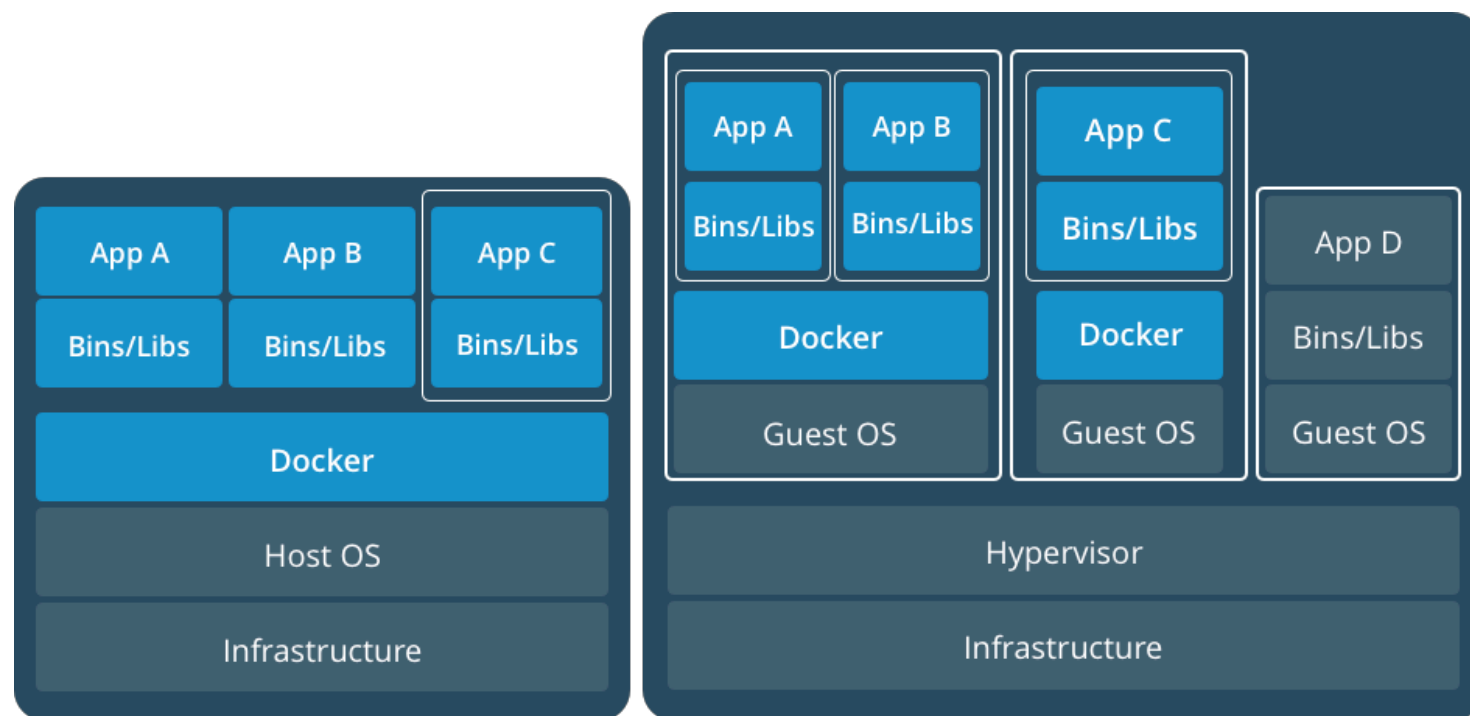


CONTAINER



CONTAINER ON TOP OF HYPERVISOR

- A container image is a lightweight, stand-alone, executable package of a piece of software that includes everything needed to run it: code, runtime, system tools, system libraries, settings.



CONTAINER TECHNOLOGIES

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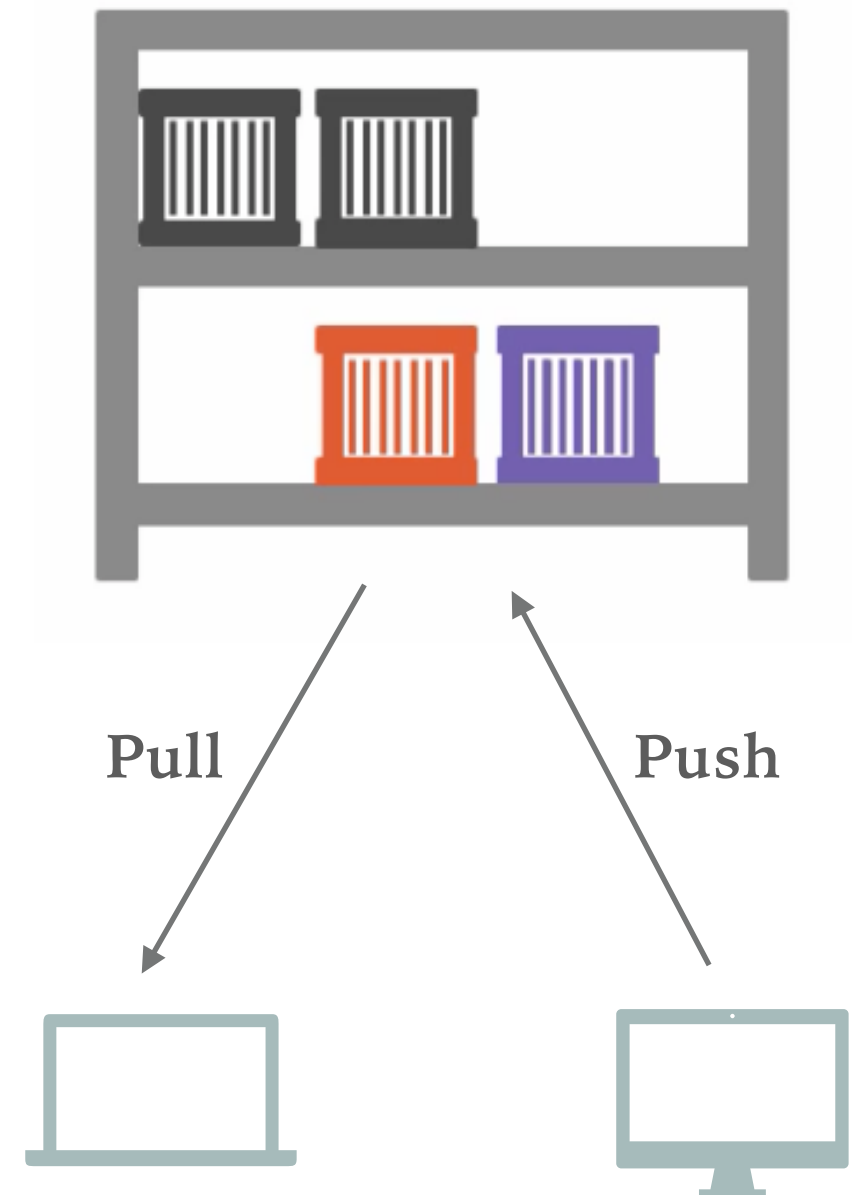


CONTAINER REGISTRY

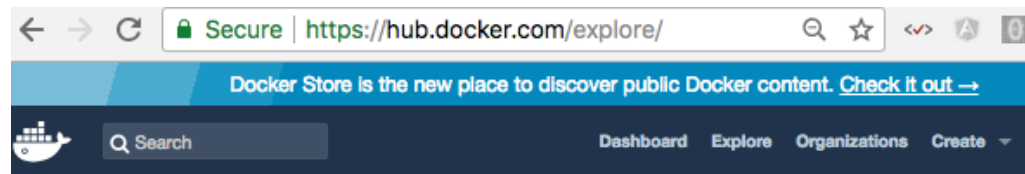
Place to store and download
container images

Docker Hub / Store is the official
Docker registry










Azure Container registry is the
Azure service for **privately** storing
images



DOCKER HUB / AZURE CONTAINER REGISTRY



Explore Official Repositories

 alpine official	3.7K STARS	10M+ PULLS
 nginx official	8.7K STARS	10M+ PULLS
 httpd official	1.7K STARS	10M+ PULLS
 busybox official	1.3K STARS	10M+ PULLS
 redis official	5.2K STARS	10M+ PULLS
 ubuntu official	7.8K STARS	10M+ PULLS
 mongo official	4.5K STARS	10M+ PULLS
 memcached official	1.0K STARS	10M+ PULLS
 mysql official	6.3K STARS	10M+ PULLS

Home > Container registries > rodock

Container registry

→ Move Delete Update

Essentials ^

Resource group	Login server
Location	Creation date
Subscription name	9/19/2017, 4:46 PM GMT+
Subscription ID	SKU
e4d416e4-62f9-430e-9262-527187763061	Basic
	Provisioning state
	Succeeded

Registry usage

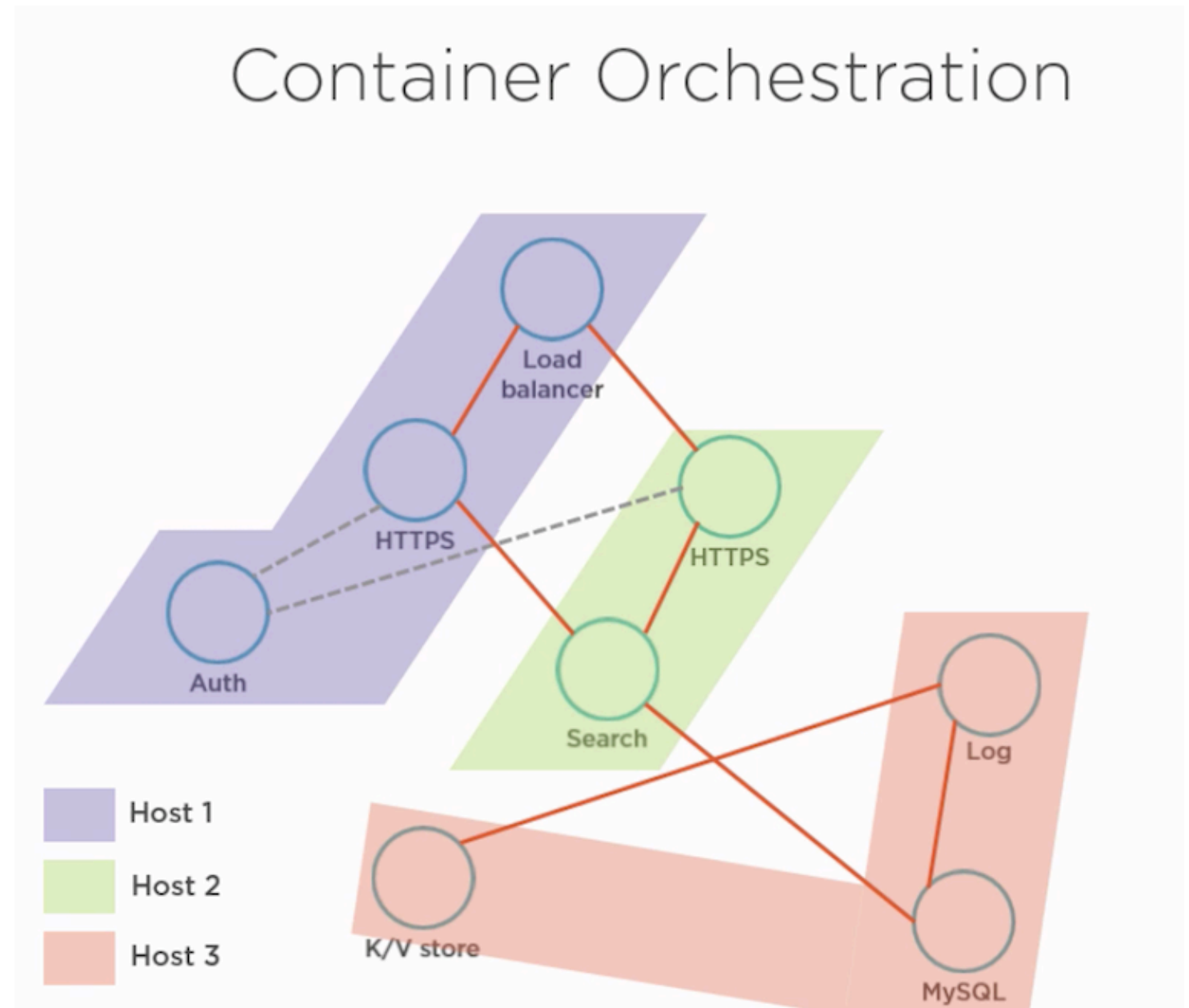
Registry quota usage

USED 1.7 GiB

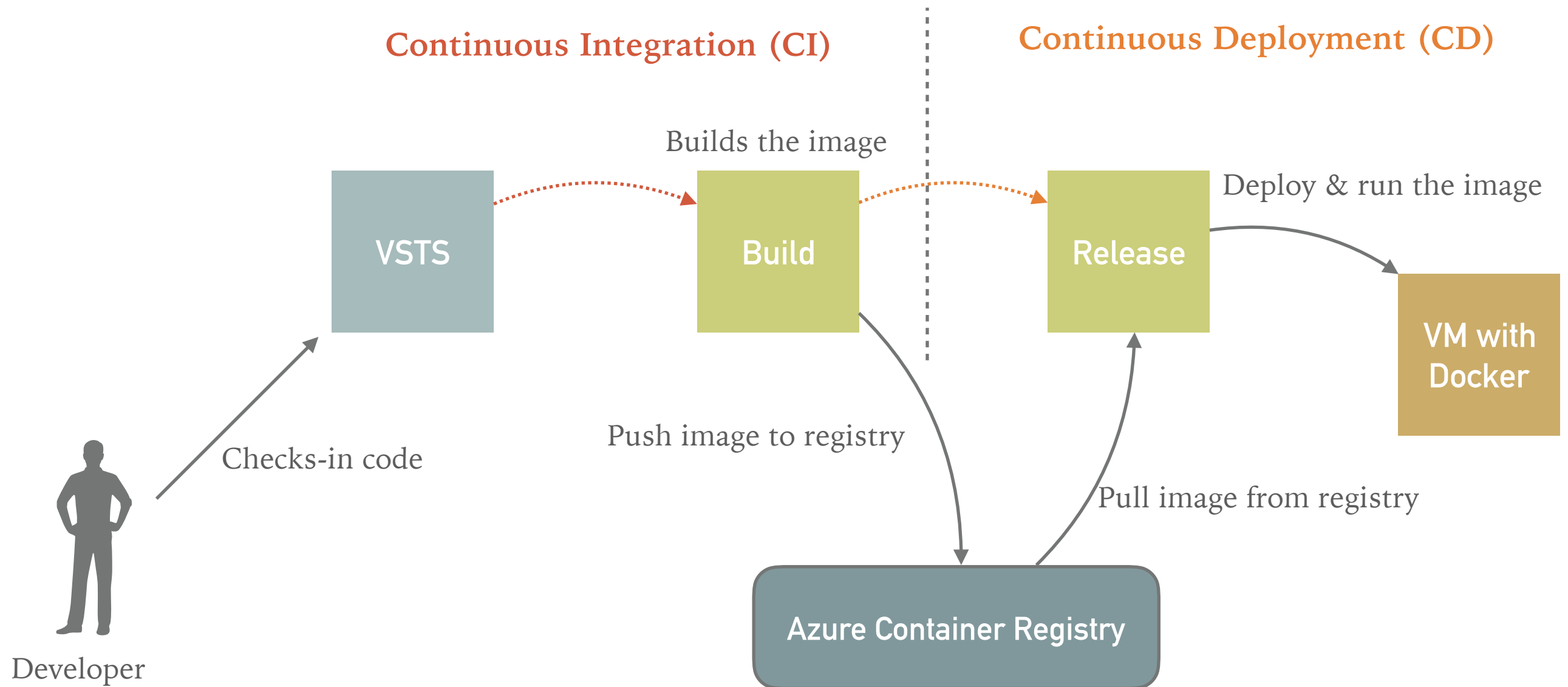
REMAINING 8.3 GiB

10 GiB SIZE QUOTA

- Apps have multiple components
 - App, Security, Databases, Cache, Key Vault, etc.
 - Thousands of containers
 - Hundreds of VMs/Hosts
- Orchestration
 - Defines app
 - Provisions infrastructure
 - Automates deployment
 - Scales app
 - Reproducible pattern
- Orchestrators Ecosystem
 - Docker Swarm
 - Kubernetes (AKS)
 - Mesosphere DCOS
 - All supported by Azure



CONTAINERS & DEVOPS



VSTS, DOCKER – CI/CD

- VSTS has Docker integration
- Build and Release Tasks
- Use Docker tasks in build or release definition inside VSTS



Docker Integration

Microsoft |  9,204 installs |  (43) | Free

Build, push, run or deploy Docker images and multi-container Docker applications.

[Get it free](#)



Docker

Build, tag, push, or run Docker images, or run a Docker command. Task can be used with Docker or Azure Container registry.



Docker Deploy

Deploy single or multi-container Docker applications to a variety of Azure resources



Docker Compose

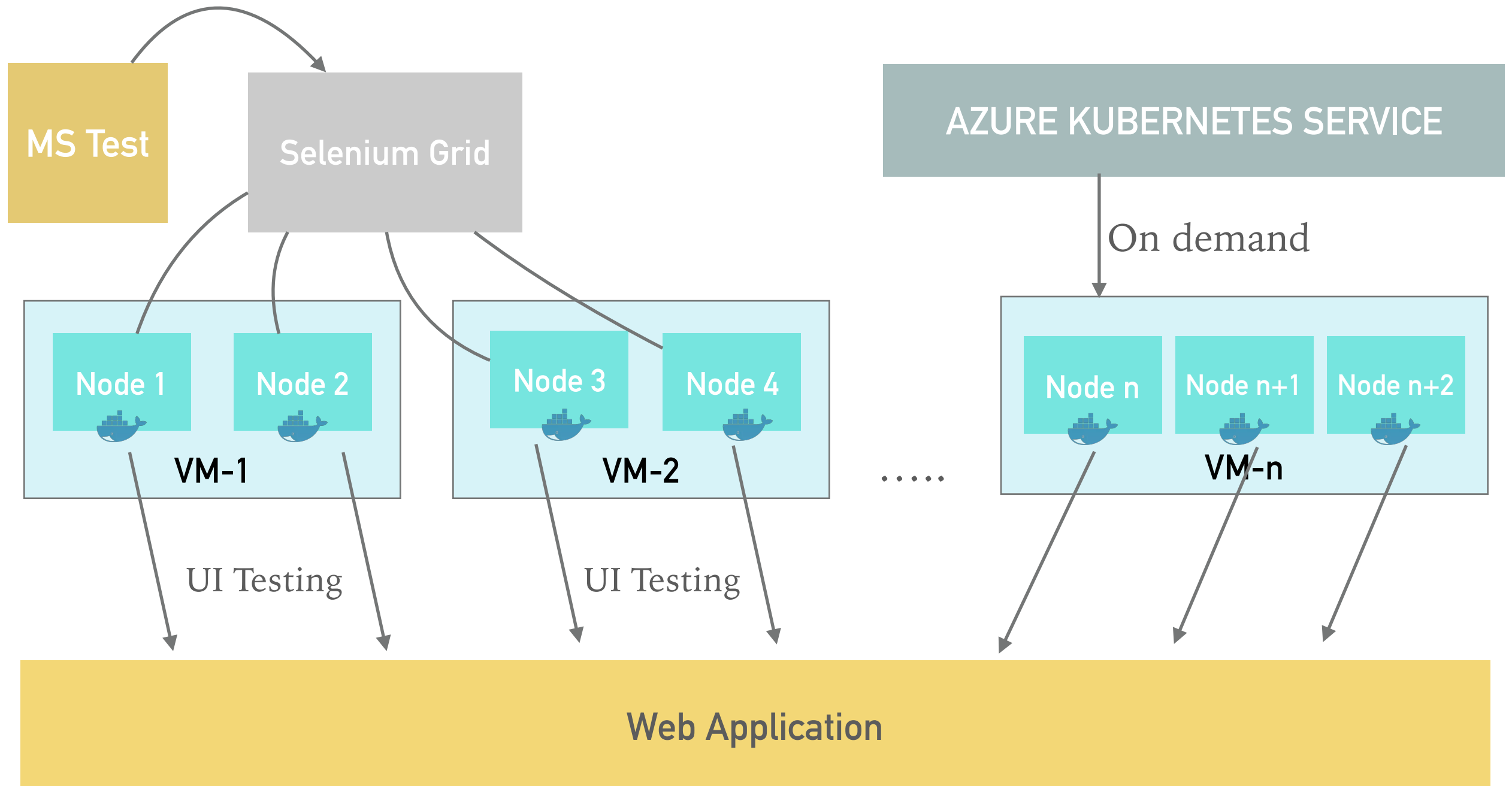
Build, push or run multi-container Docker applications. Task can be used with Docker or Azure Container registry.



Deploy to Kubernetes

Deploy, configure, update your Kubernetes cluster in Azure Container Service by running kubectl commands.

DOCKER + AKS + SELENIUM



SUMMARY

➤ Servers, Virtualization and Containers

➤ Container

A container image is a lightweight, stand-alone, executable package of a piece of software that includes everything needed to run it: code, runtime, system tools, system libraries, settings.

➤ Registry

Public or private registries are used to store images (push and pull)

Azure Container Registry

➤ Orchestration

Orchestration tools manage how multiple containers are created, upgraded, and made highly available. Orchestration also controls how containers are connected to build sophisticated applications from multiple, micro-service containers.

Azure Kubernetes Service (AKS)

➤ DevOps using Containers

Build, push, run or deploy Docker containers as part of CI / CD process

Docker integration with VSTS using Tasks