



# INNOVATE2018

## ONLINE CONFERENCE



# Migrate Microsoft Applications to AWS like an Expert (Level 200)

Sriwantha Attanayake, Partner Solution Architect

# We will discuss a few migration options out of many....

1. AWS VM Import/Export
2. AWS Server Migration Service
3. Migrate Using Containers - Demo

# Lift & Shift

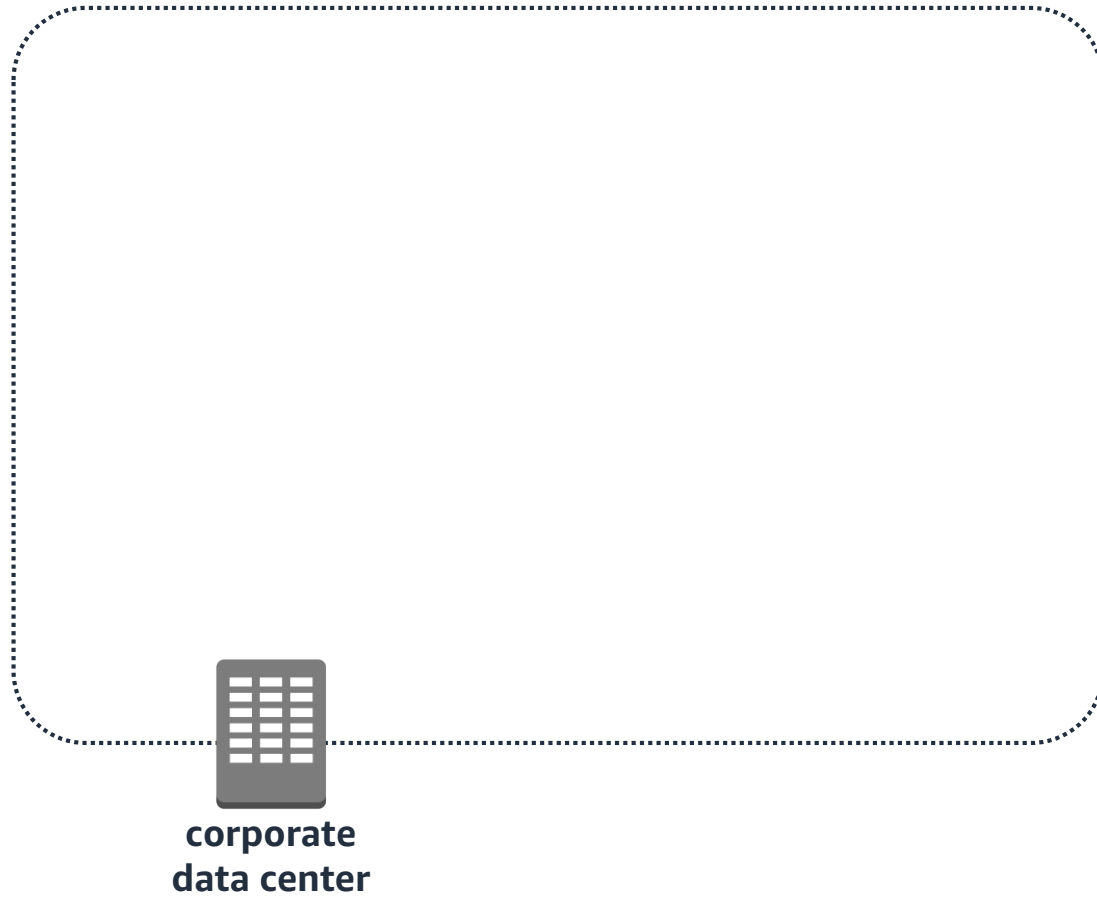
You can run Windows 2003 on AWS

AWS supports 32bit operating systems

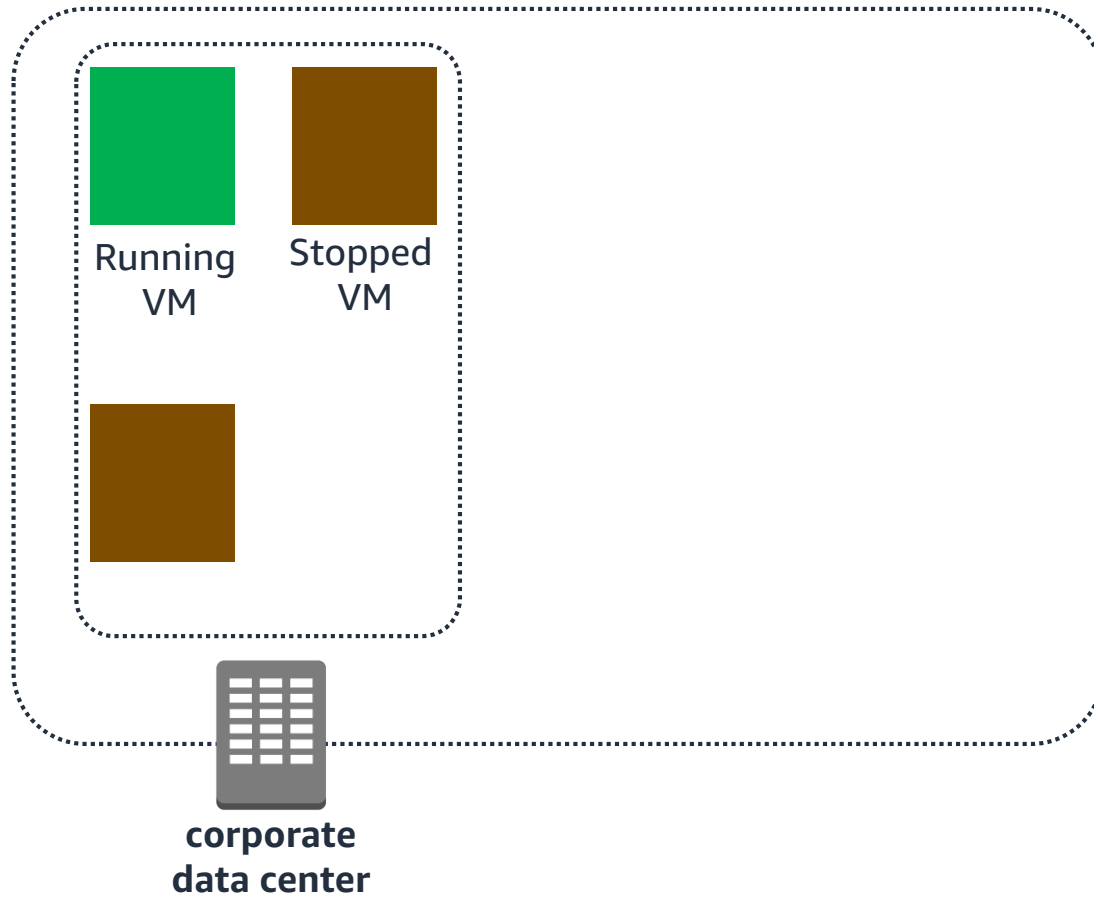
First lift and shift then think about OS modernization

# VM import & Export

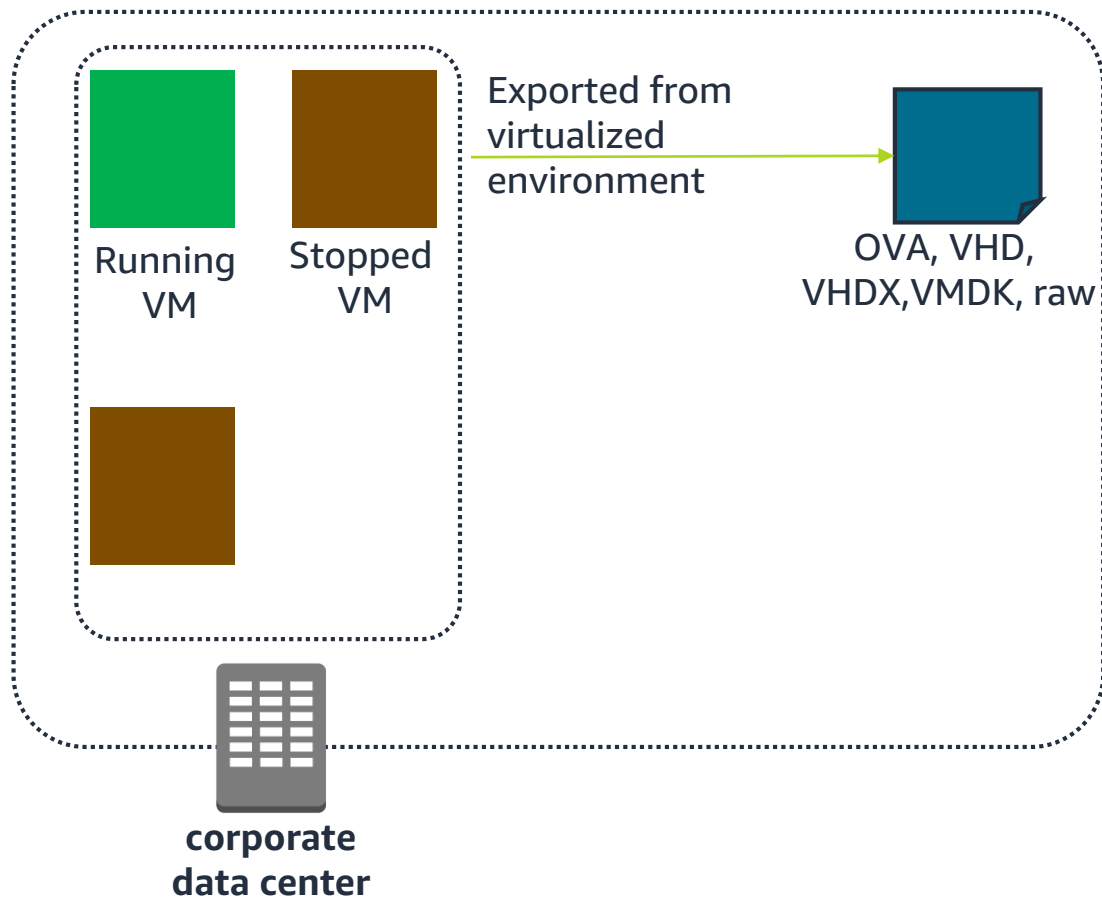
# VM import & Export



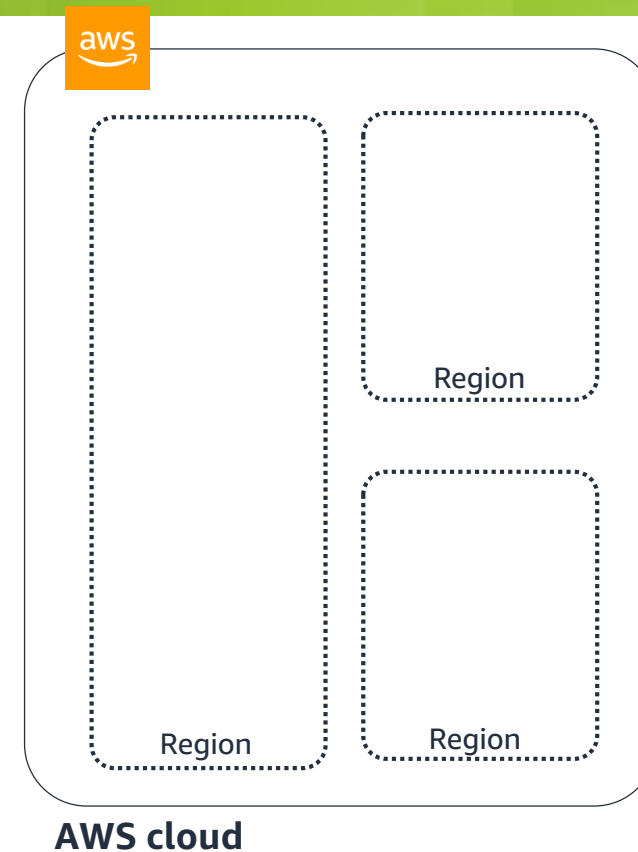
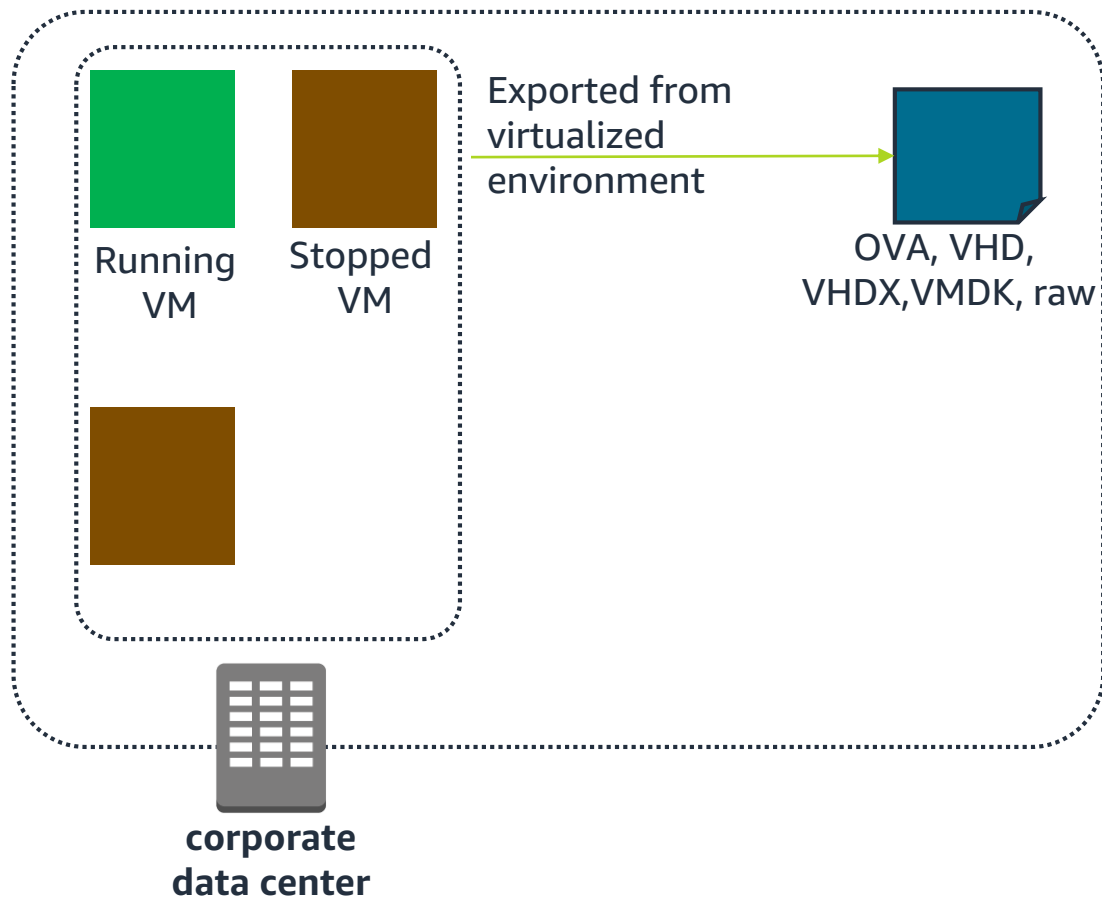
# VM import & Export



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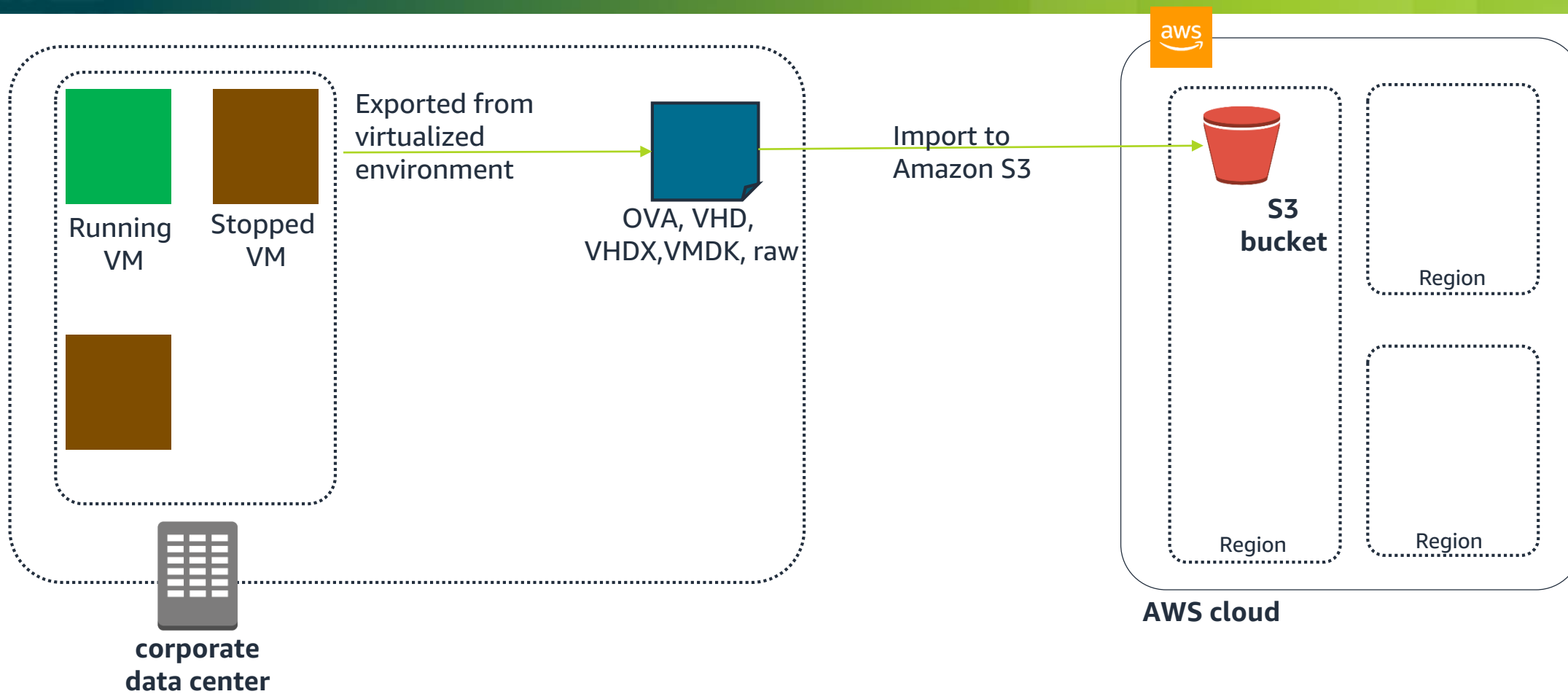


# VM import & Export

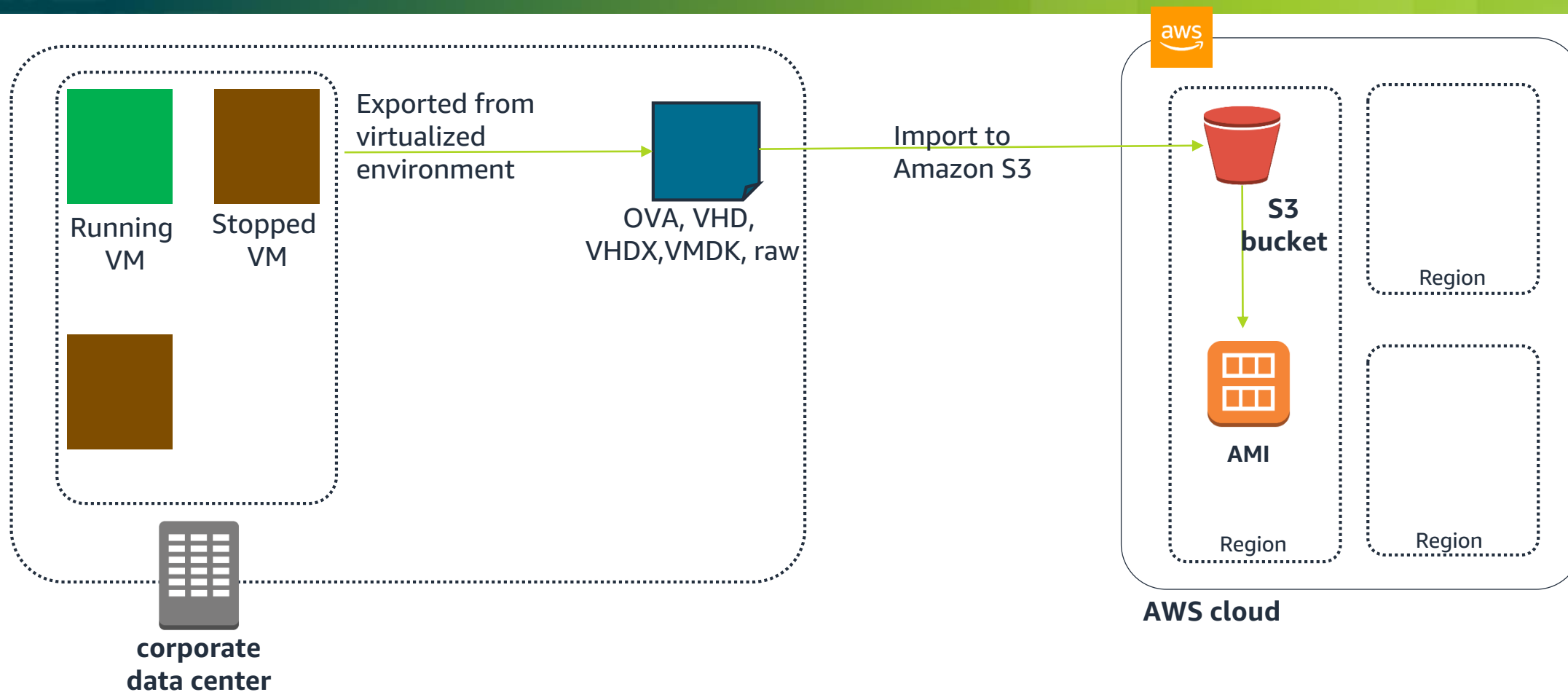




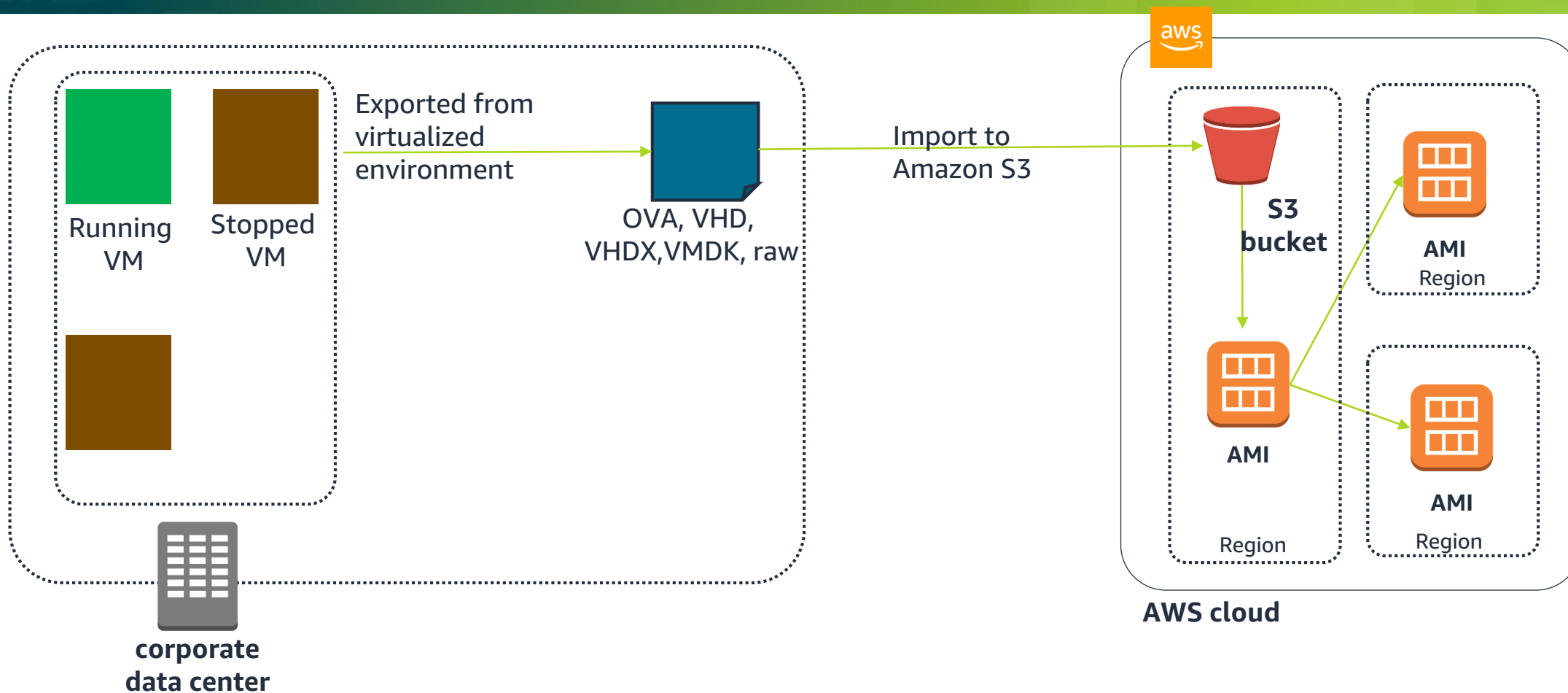
# VM import & Export



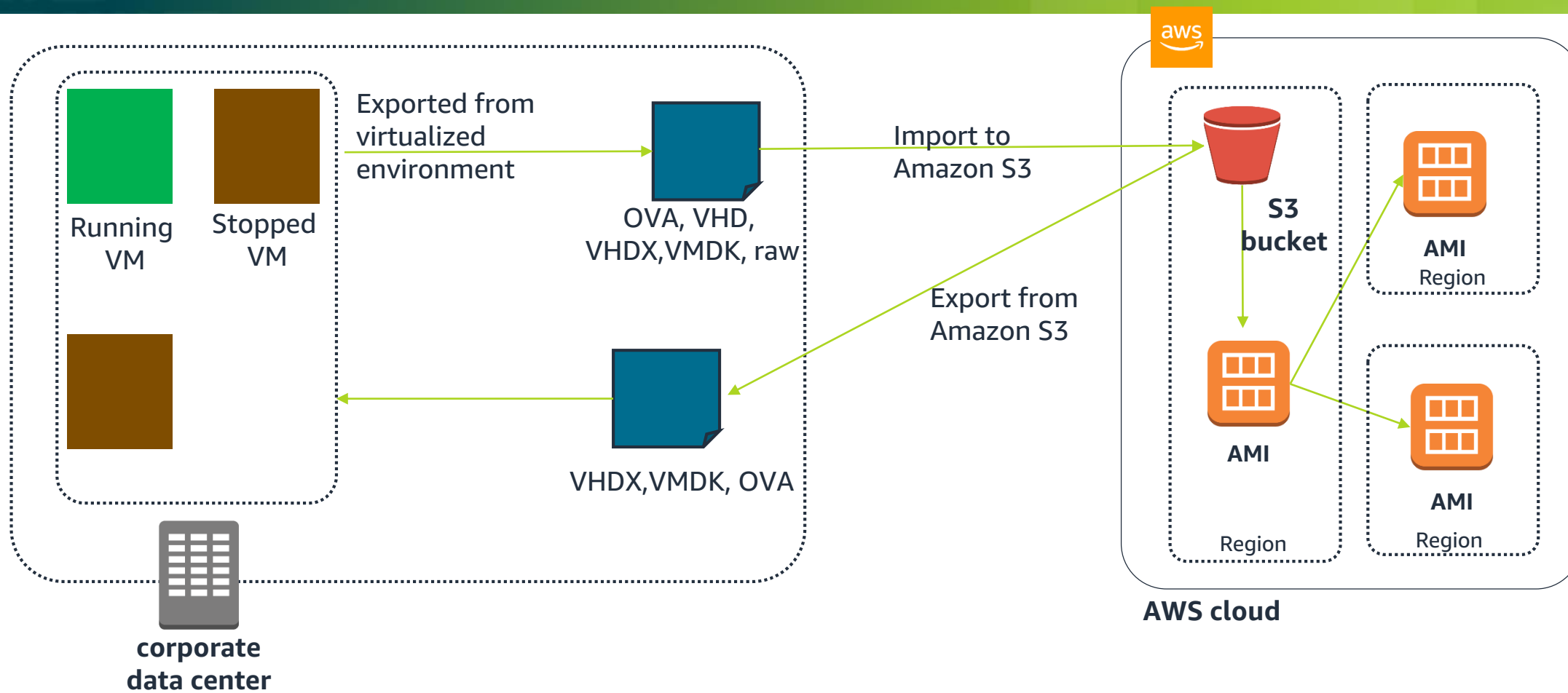
# VM import & Export



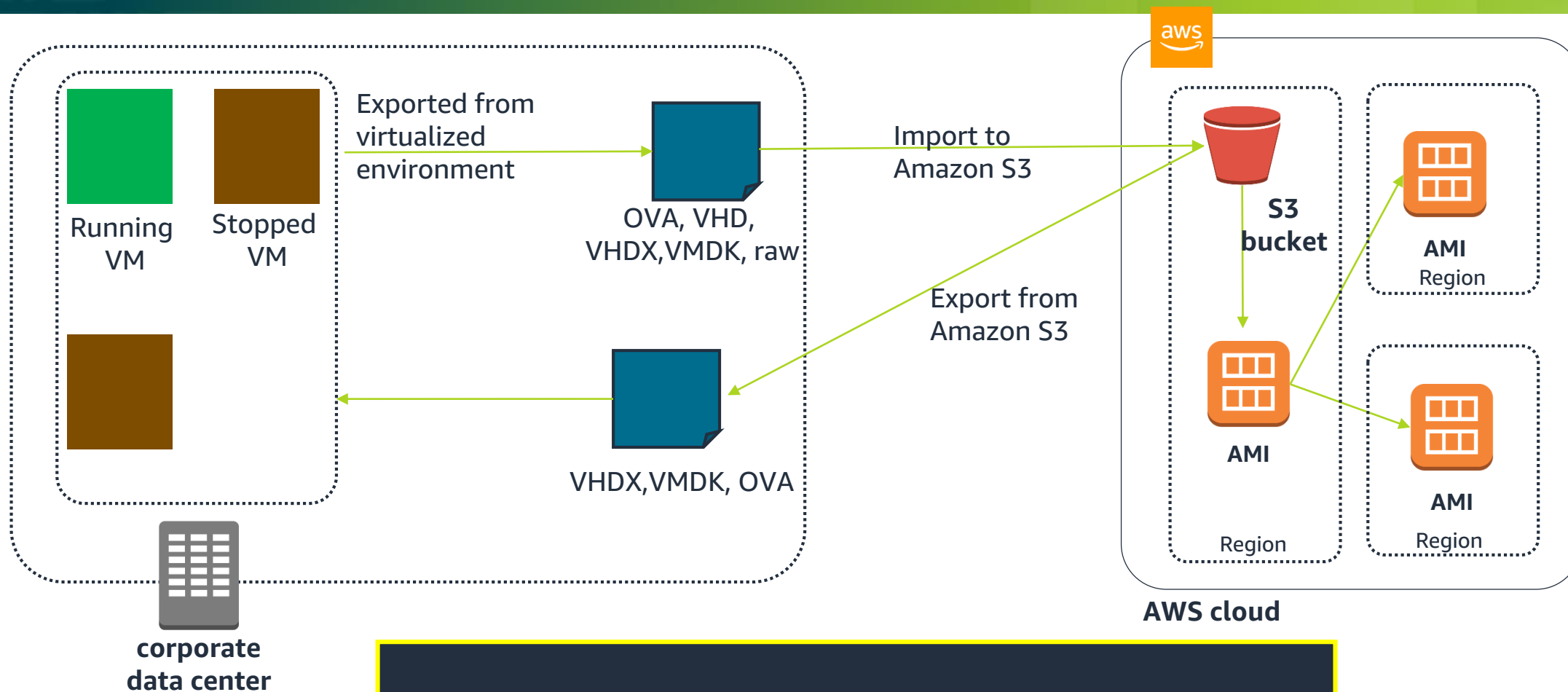
# VM import & Export



# VM import & Export



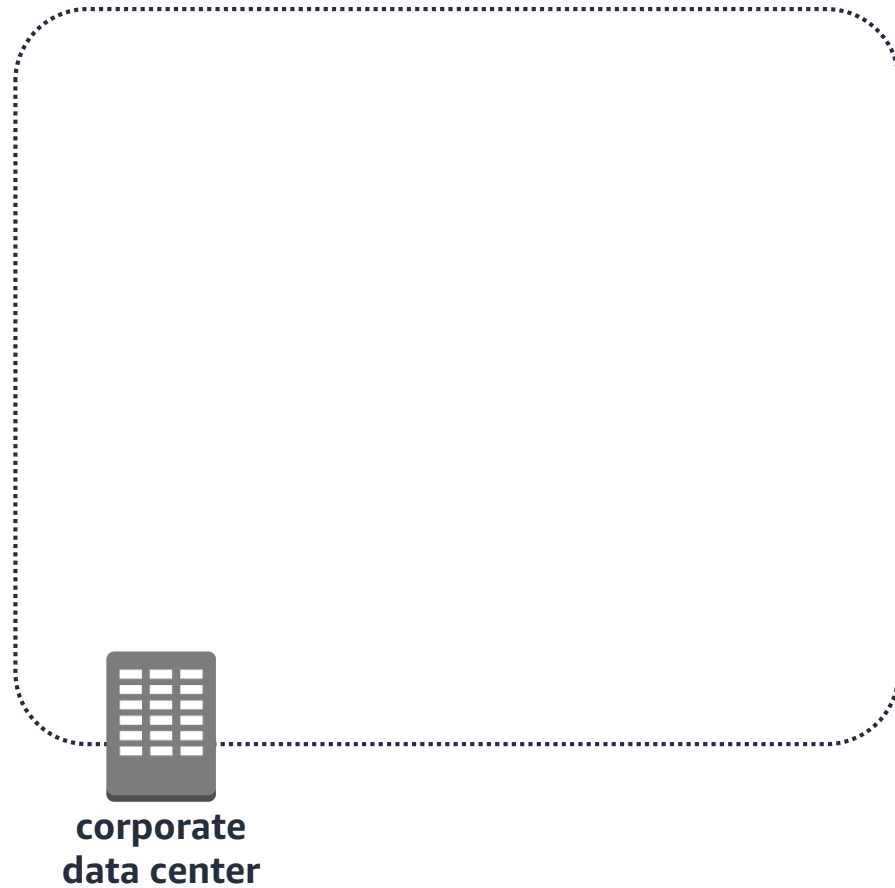
# VM import & Export



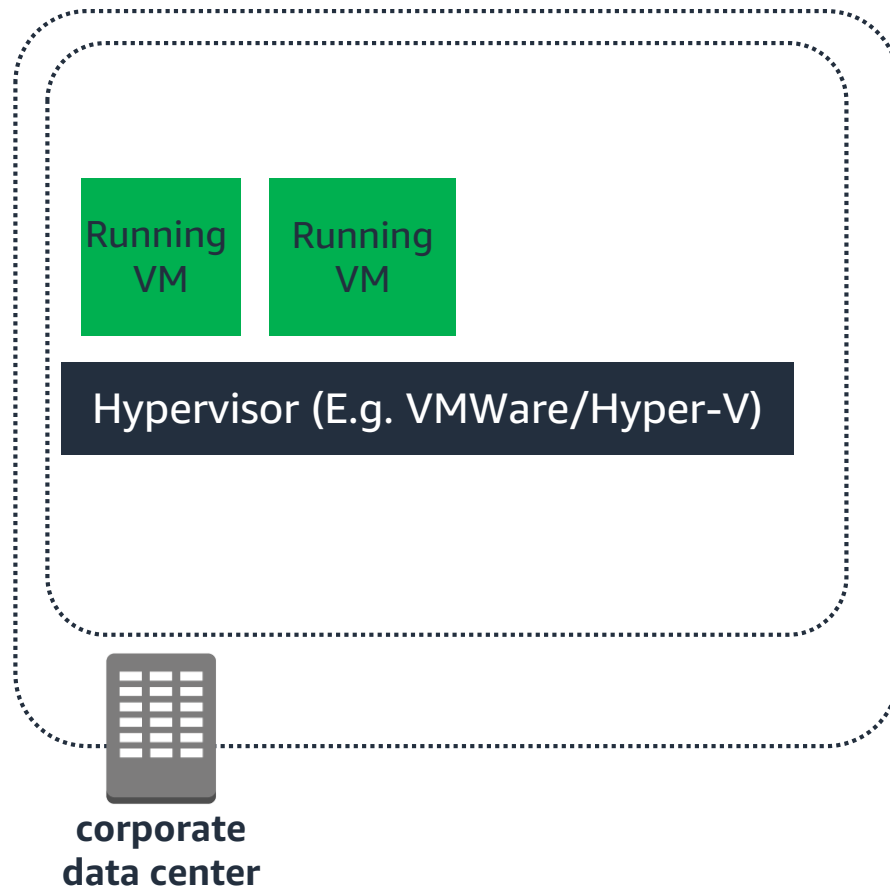
```
aws ec2 import-image <other parameters>
aws ec2 create-instance-export-task <other parameters>
```

# AWS Server Migration Service (SMS)

# AWS Server Migration Service (SMS)

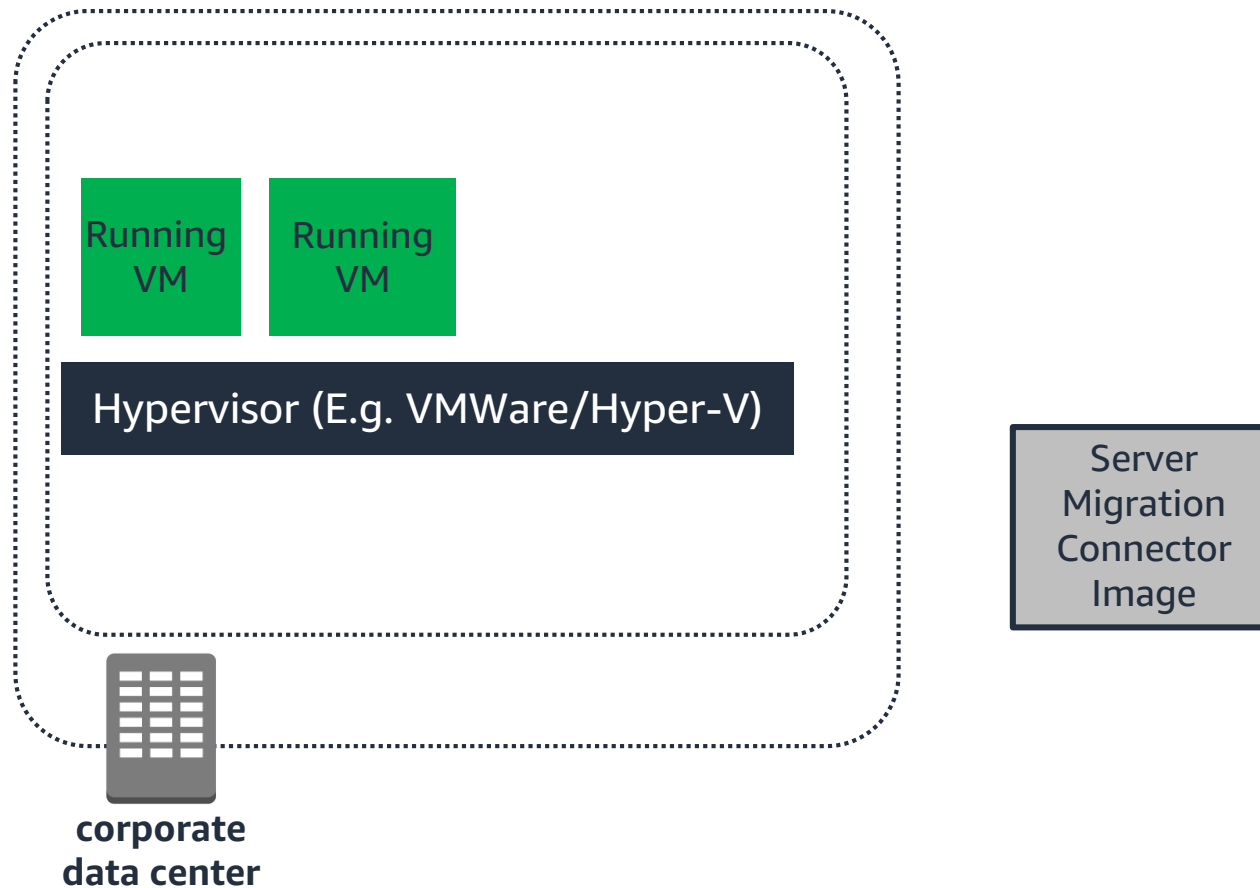


# AWS Server Migration Service (SMS)

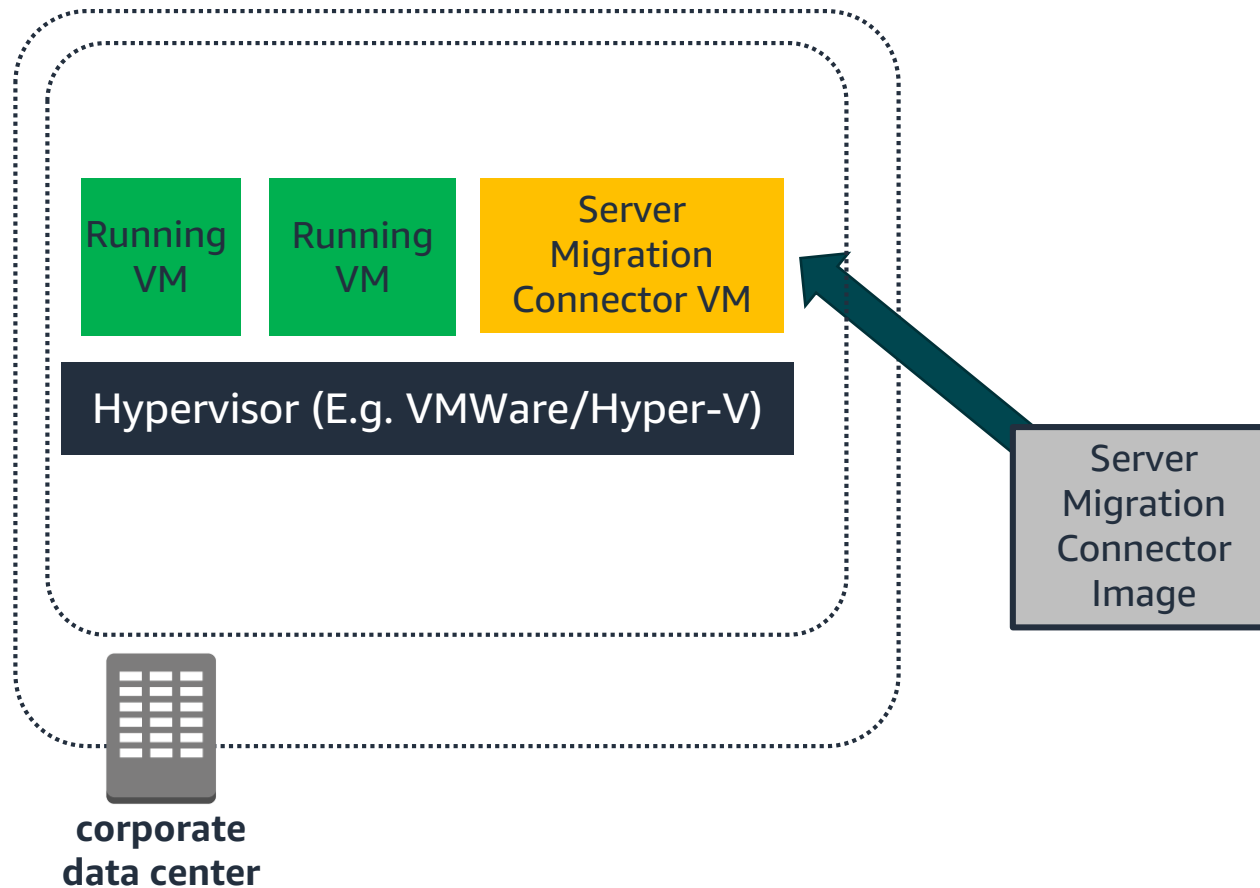




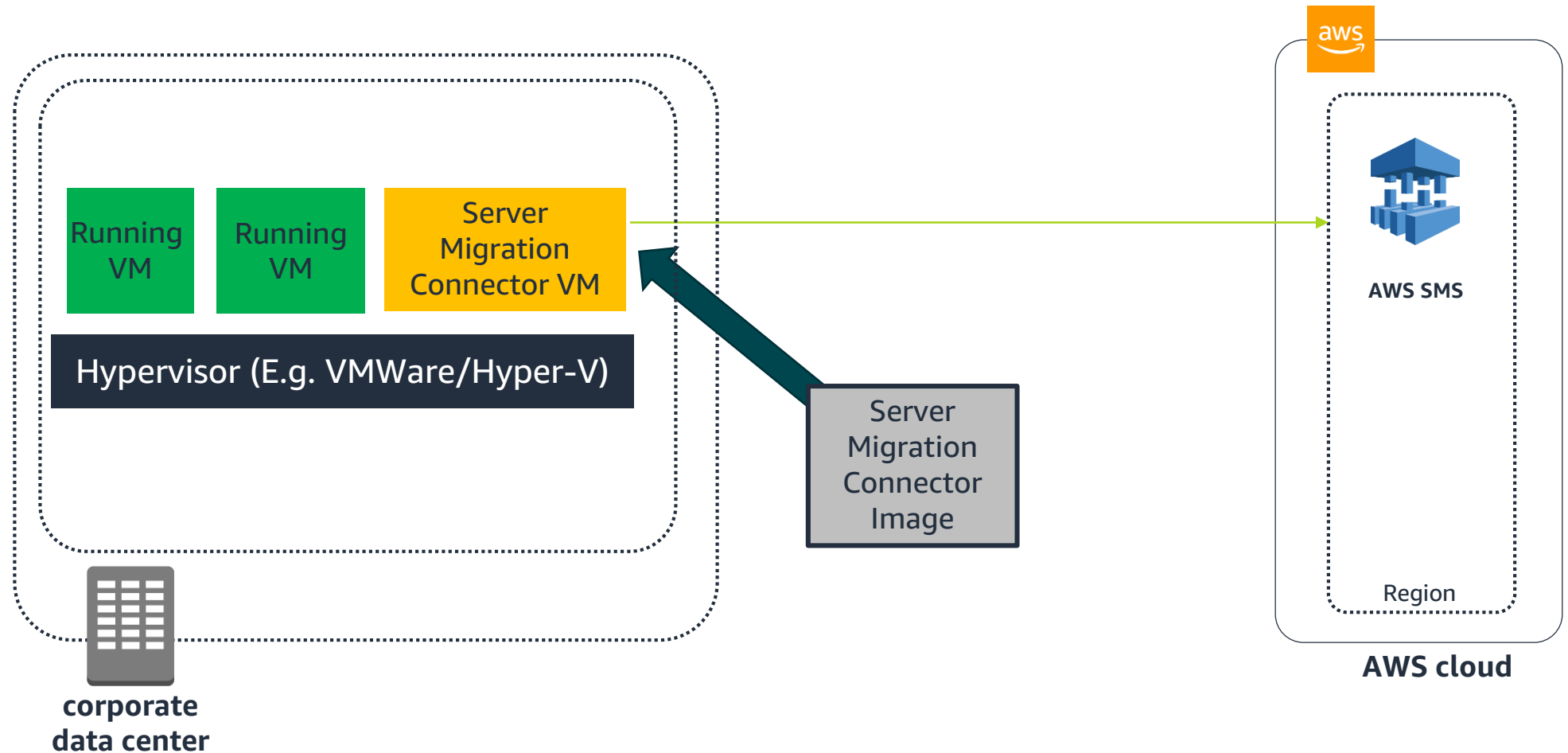
# AWS Server Migration Service (SMS)



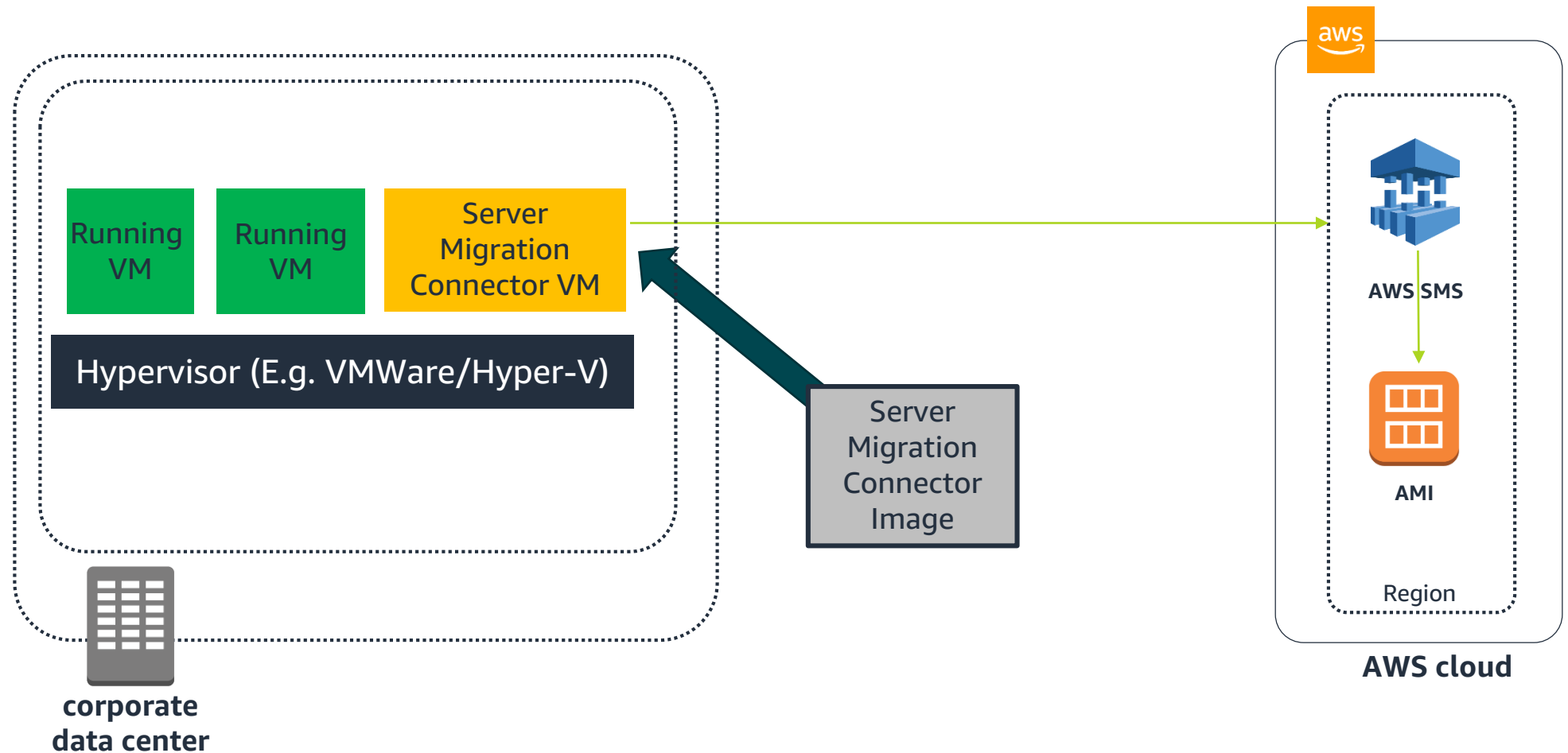
# AWS Server Migration Service (SMS)



# AWS Server Migration Service (SMS)



# AWS Server Migration Service (SMS)



# How it feels like

**AWS Server Migration Service** [Edit AWS Server Migration Service Settings](#)

AWS Region	ap-south-1
Connector ID	c-56z7nlpamjmx65xai
Number of parallel uploads allowed based on memory available on this connector	10
Service Connectivity Check	2017-11-21T11:40:05.229Z
vCenter Connectivity Check	2017-11-21T11:40:04.741Z <a href="#">View info</a>
vCenter Server Hostname/IP	192.168.102.113
vCenter Service Account	vsphere.local\vmmigration

**General Health**

AWS access key ID	AKIAINBNBTPUSURN4XA
AWS connectivity	✓
Connector registered IP address is current	✓
Connector up-to-date	✓ Version: 1.0.8.44
IAM user ARN	arn:aws:iam::090143607121:user/AWSConnector
Poller Service	✓
System time synchronization	✓ <a href="#">View info</a>

**Actions**

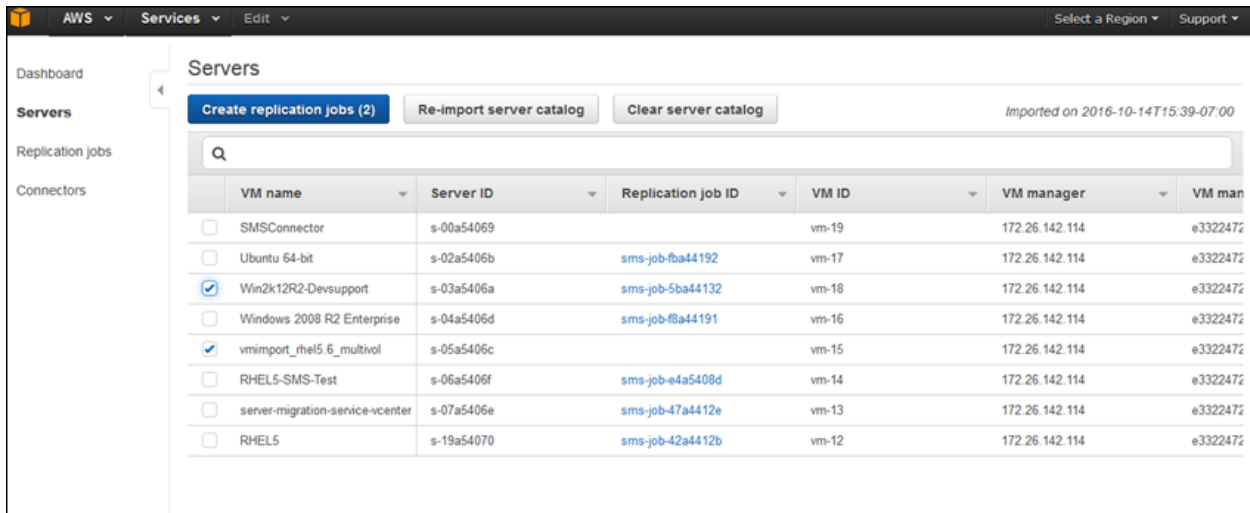
- [Unregister AWS Server Migration Service](#)
- [Rotate encryption key](#)
- [Upload connector certificate](#)
- [Change admin password](#)
- [Disable Auto-Upgrade](#)
- [Enable certificate validation](#)

**Support Links**

- [Getting Started with AWS Server Migration Service](#)
- [Documentation](#)
- [Download log bundle](#)
- [Report a problem to AWS](#)

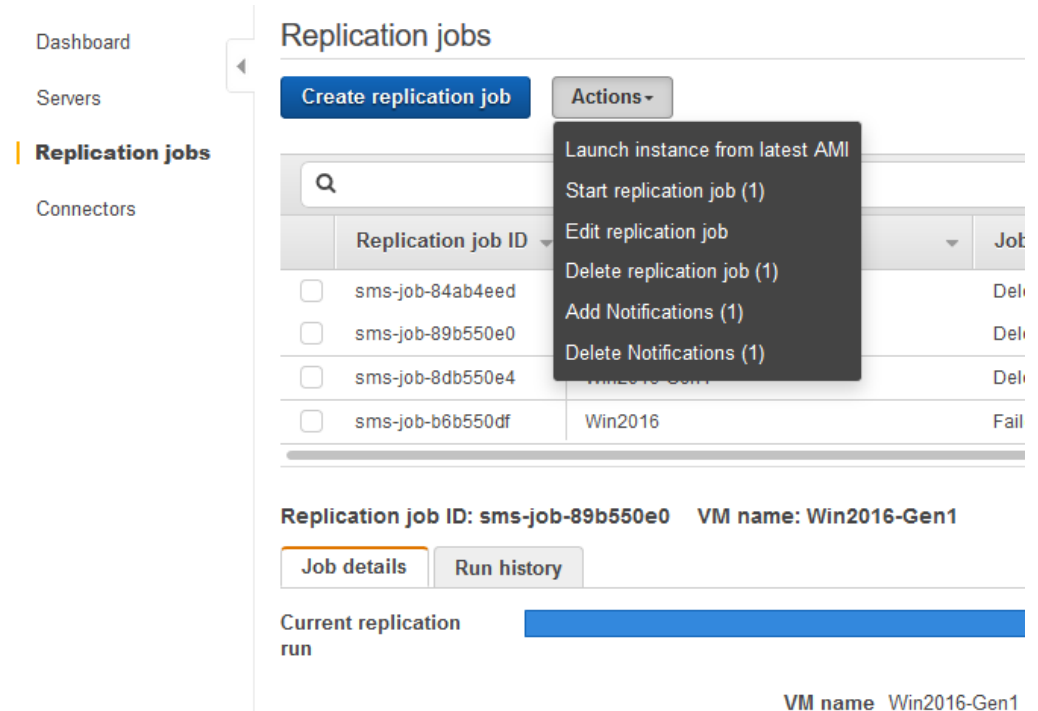
# How it feels like

Your on premises servers appear on AWS SMS console



	VM name	Server ID	Replication job ID	VM ID	VM manager	VM manager ID
<input type="checkbox"/>	SMSConnector	s-00a54069		vm-19	172.26.142.114	e3322472
<input type="checkbox"/>	Ubuntu 64-bit	s-02a5406b	sms-job-fba44192	vm-17	172.26.142.114	e3322472
<input checked="" type="checkbox"/>	Win2k12R2-DevSupport	s-03a5406a	sms-job-5ba44132	vm-18	172.26.142.114	e3322472
<input type="checkbox"/>	Windows 2008 R2 Enterprise	s-04a5406d	sms-job-f8a44191	vm-16	172.26.142.114	e3322472
<input checked="" type="checkbox"/>	vmimport_rhel5.6_multivol	s-05a5406c		vm-15	172.26.142.114	e3322472
<input type="checkbox"/>	RHEL5-SMS-Test	s-06a5406f	sms-job-e4a5408d	vm-14	172.26.142.114	e3322472
<input type="checkbox"/>	server-migration-service-vcenter	s-07a5406e	sms-job-47a4412e	vm-13	172.26.142.114	e3322472
<input type="checkbox"/>	RHEL5	s-19a54070	sms-job-42a4412b	vm-12	172.26.142.114	e3322472

Start a replication jobs. Once the replication is done, spin up an EC2 instance out of it.



Dashboard

Servers

Connectors

Replication jobs

Create replication job

Actions

- Launch instance from latest AMI
- Start replication job (1)
- Edit replication job
- Delete replication job (1)
- Add Notifications (1)
- Delete Notifications (1)

Replication job ID	VM name	Status
<input type="checkbox"/> sms-job-84ab4eed		Del
<input type="checkbox"/> sms-job-89b550e0		Del
<input type="checkbox"/> sms-job-8db550e4	Win2016-Gen1	Del
<input type="checkbox"/> sms-job-b6b550df	Win2016	Fail

Replication job ID: sms-job-89b550e0 VM name: Win2016-Gen1

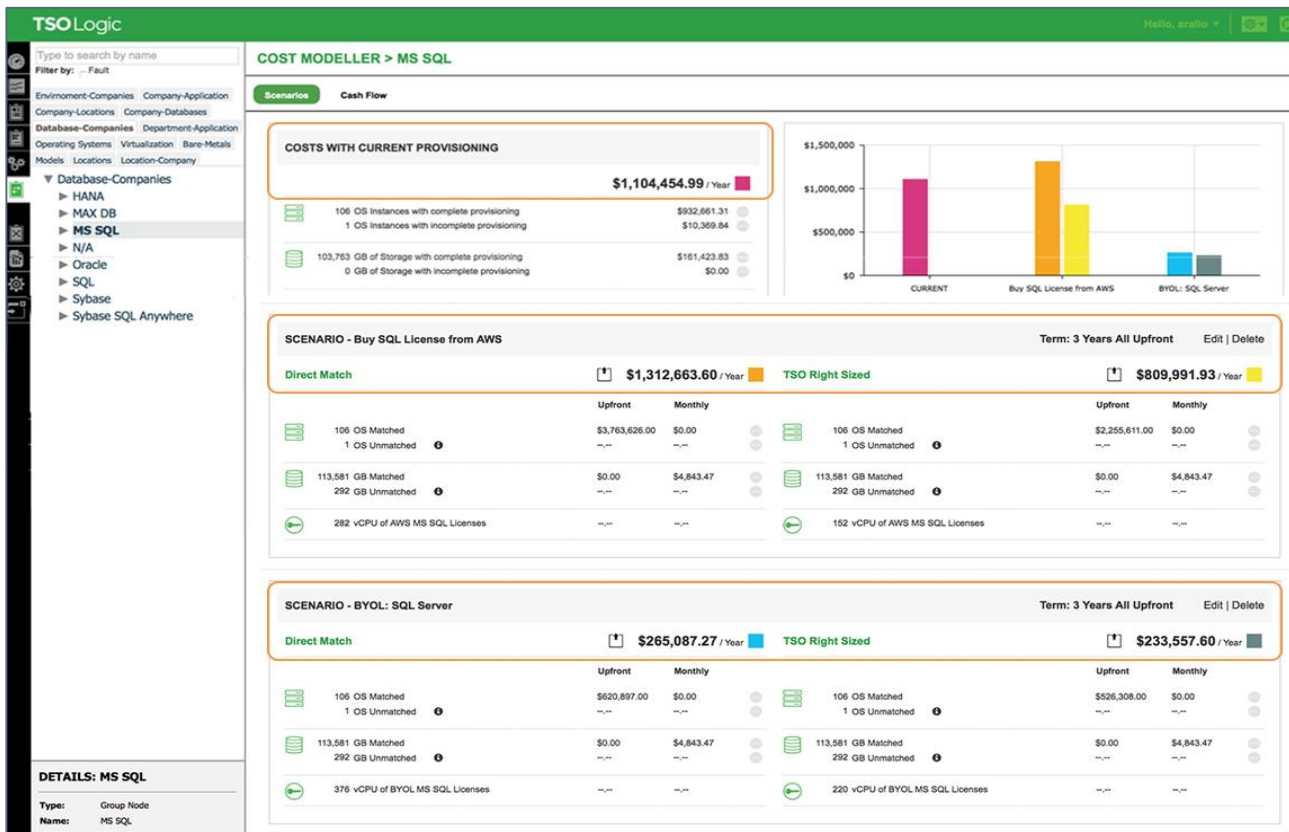
Job details Run history

Current replication run

VM name Win2016-Gen1

# Partner Solutions

## TSOLogic



# Containers

Once the applications are containerize, the migration is super easy

Containers are portable across cloud service providers

Windows 2016 has native Docker support



# Container Crash Course

**VM**

**Containers**

# Container Crash Course

**VM**

Server

**Containers**

Server

# Container Crash Course

## VM

Host OS

Server

## Containers

Host OS

Server

# Container Crash Course

## VM

Hypervisor

Host OS

Server

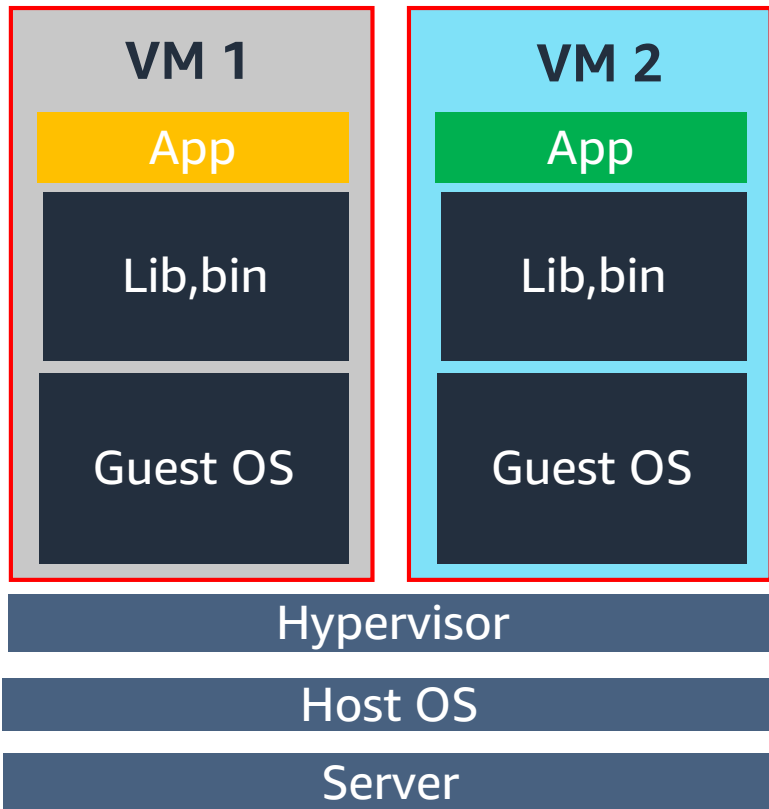
## Containers

Host OS

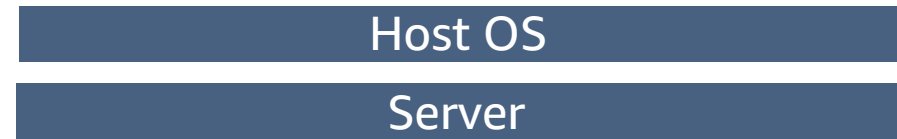
Server

# Container Crash Course

## VM

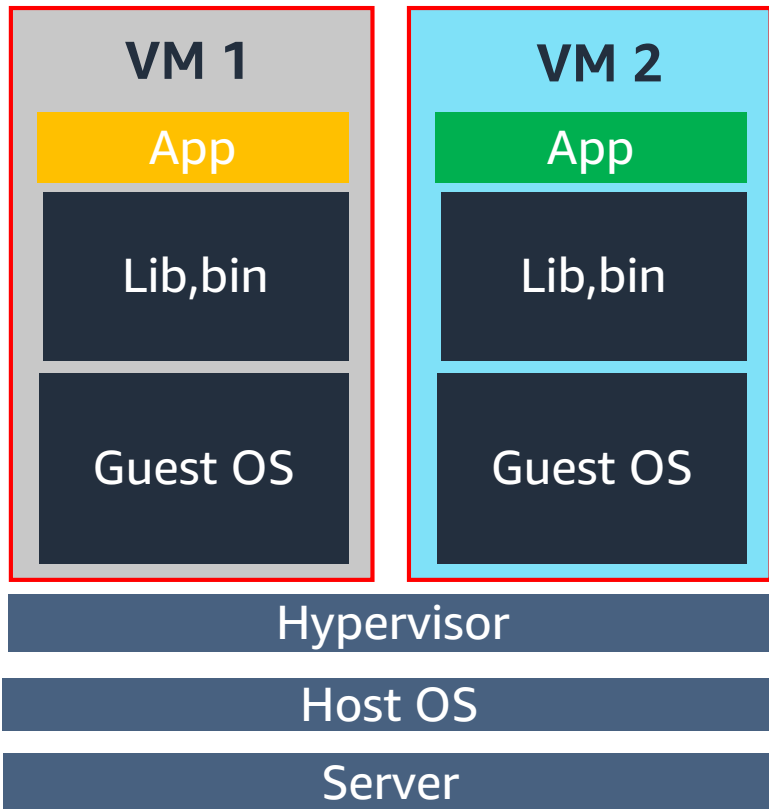


## Containers

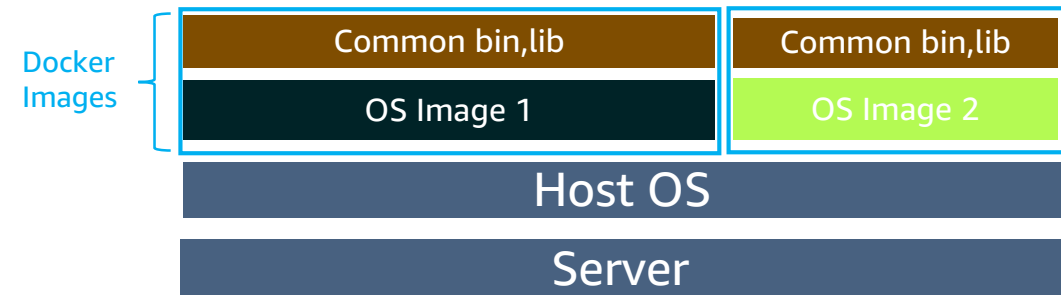


# Container Crash Course

## VM

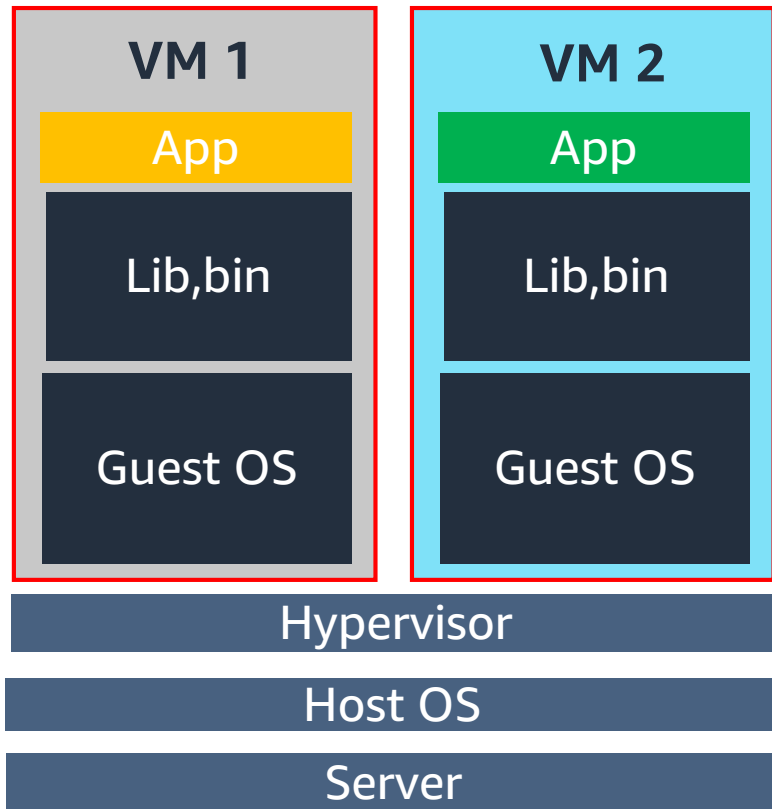


## Containers

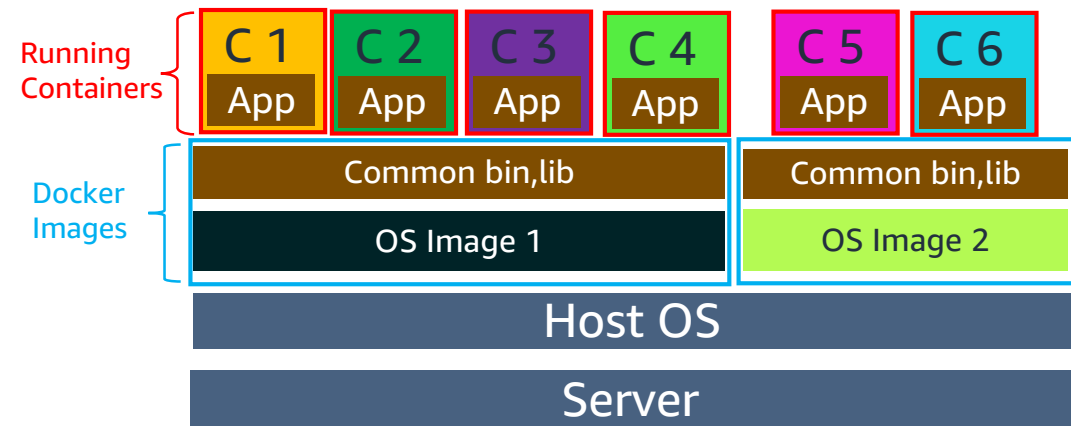


# Container Crash Course

## VM

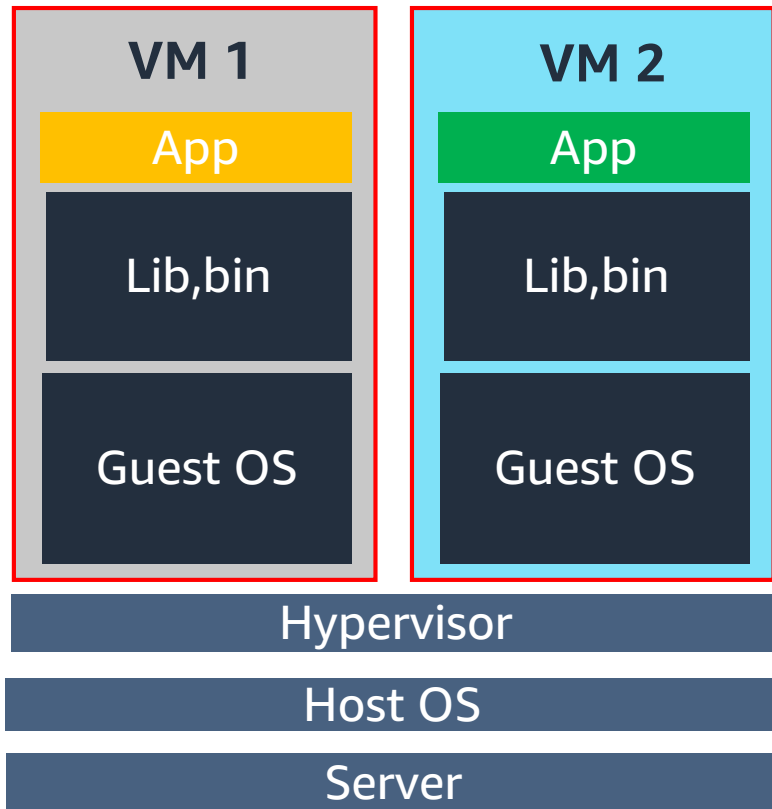


## Containers

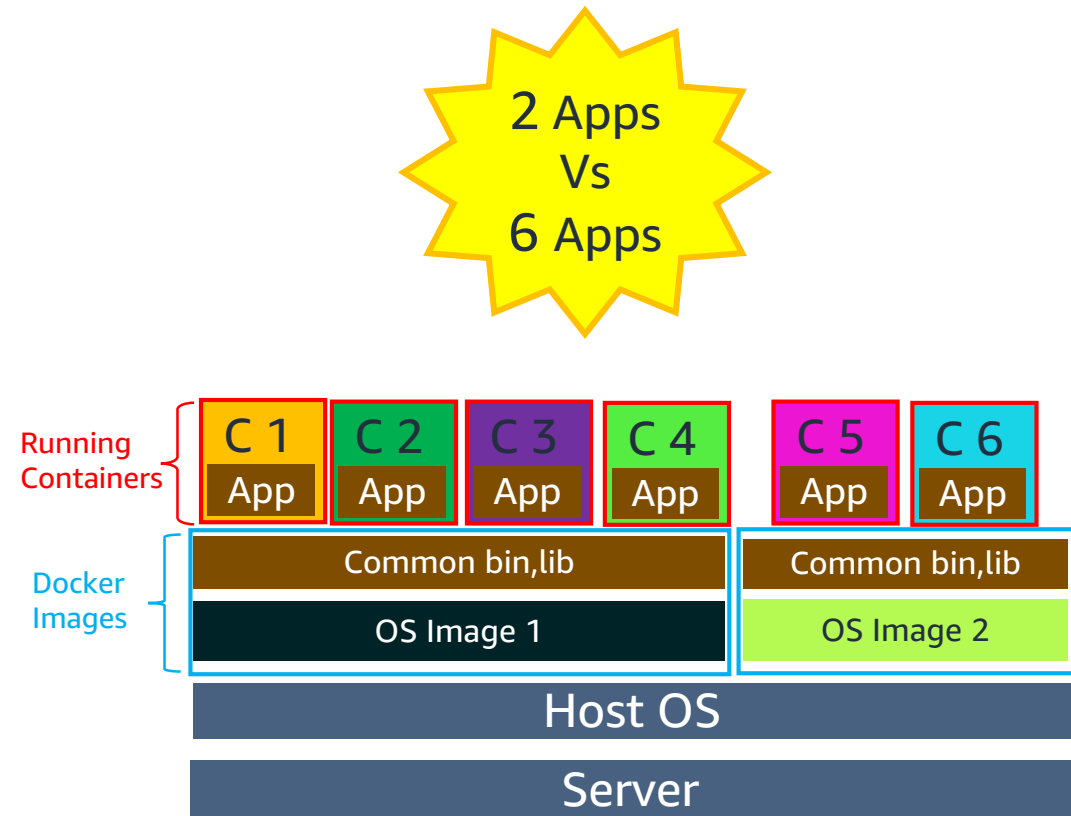


# Container Crash Course

## VM



## Containers





# Layers

Application 1

Application 2

# Layers

Application 1

Application 2

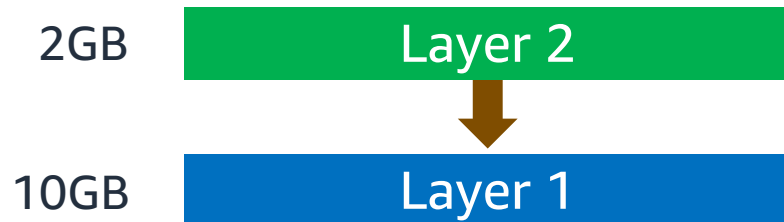
10GB

Layer 1

# Layers

Application 1

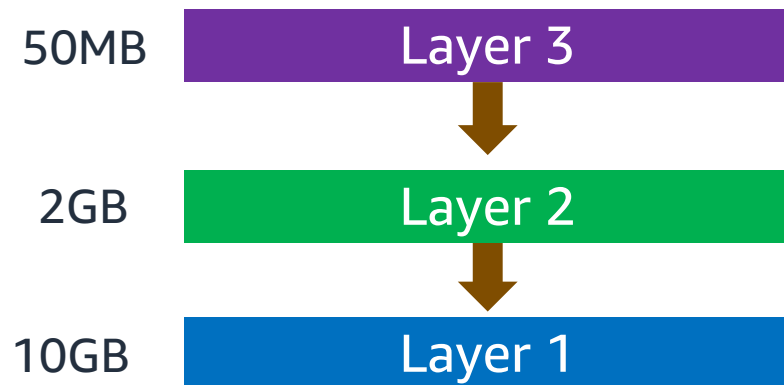
Application 2



# Layers

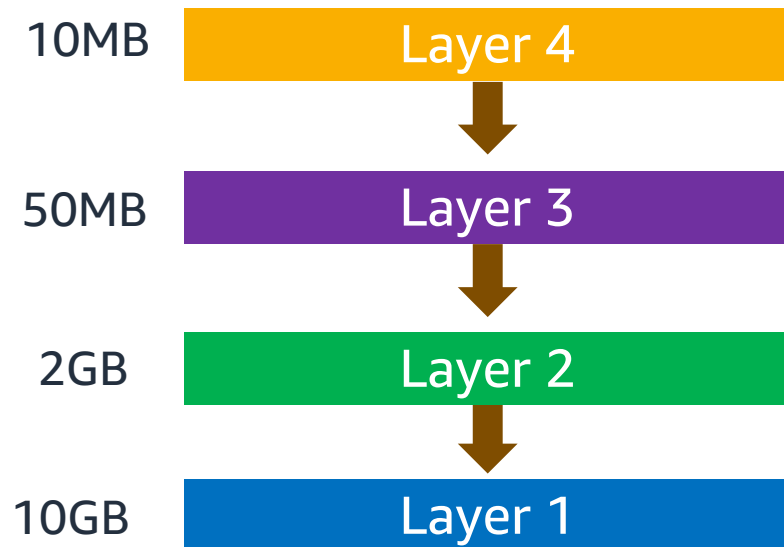
Application 1

Application 2



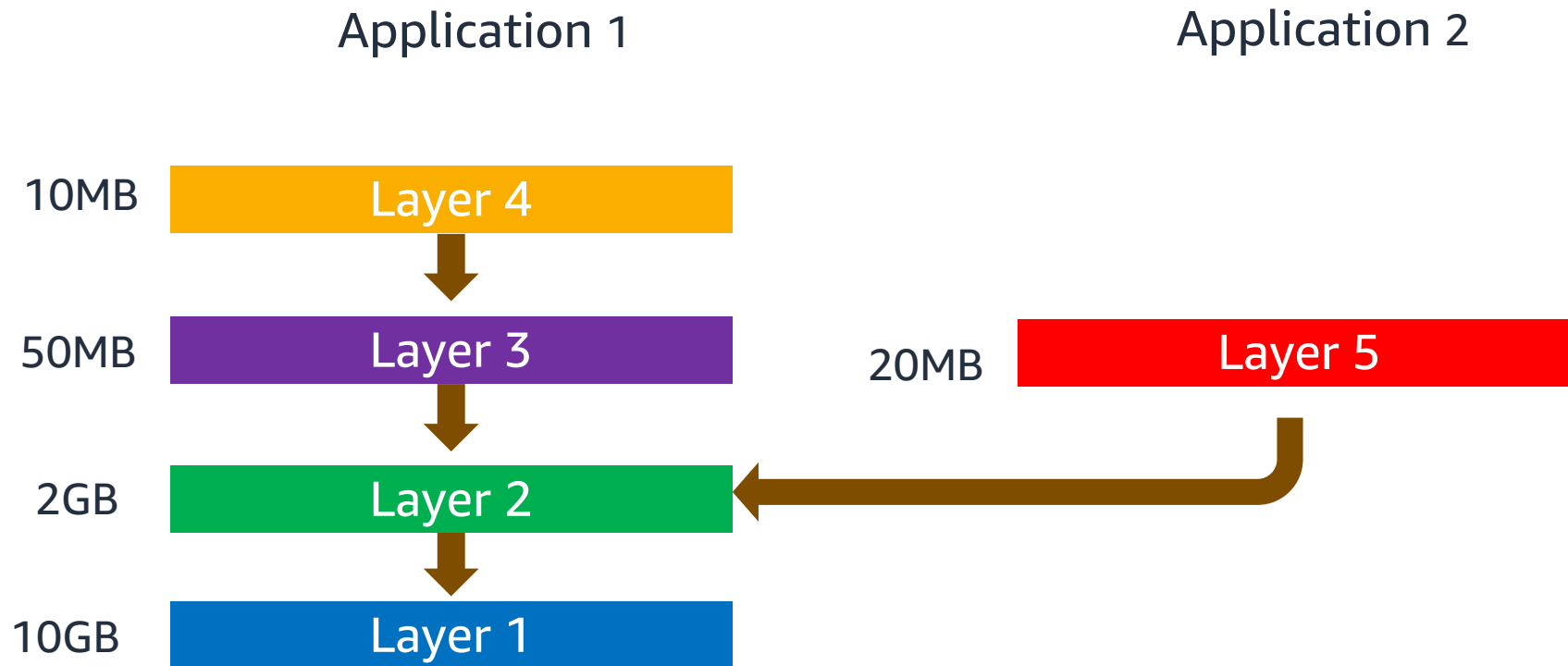
# Layers

## Application 1

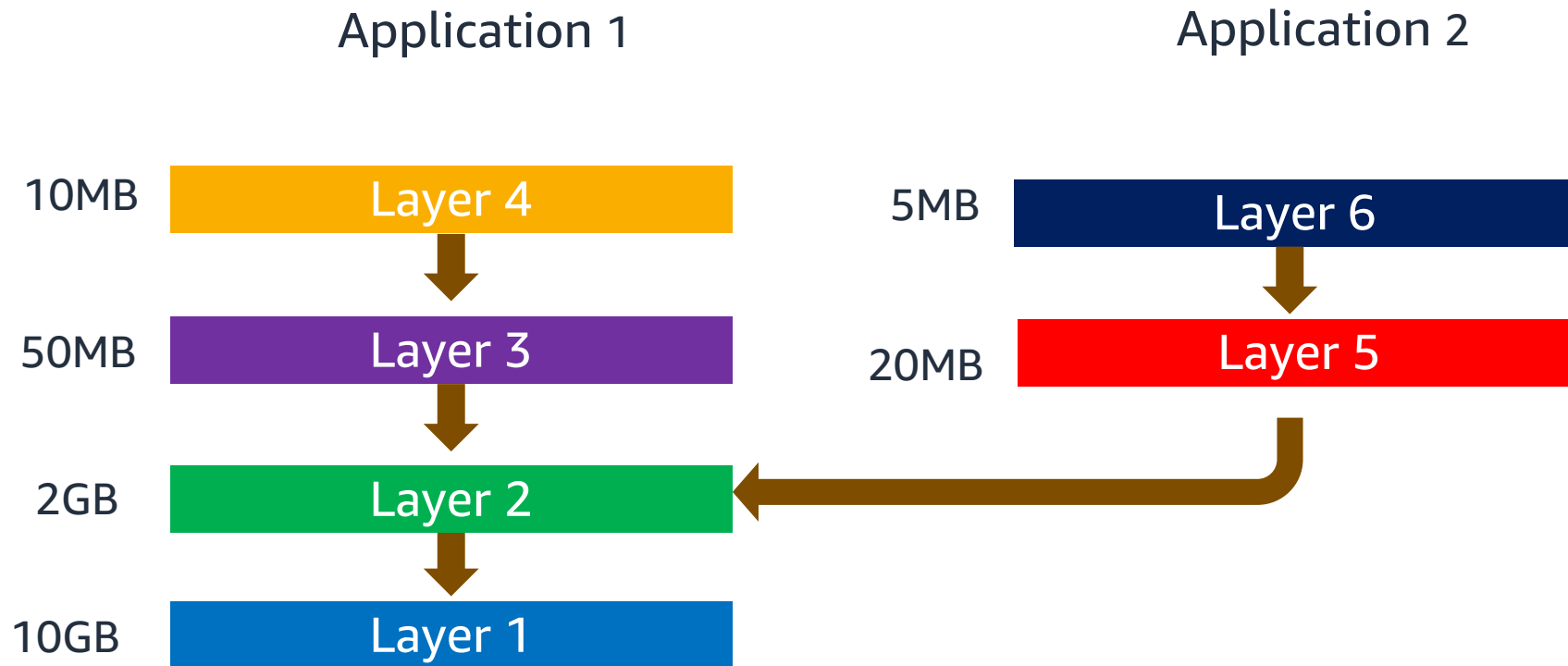


## Application 2

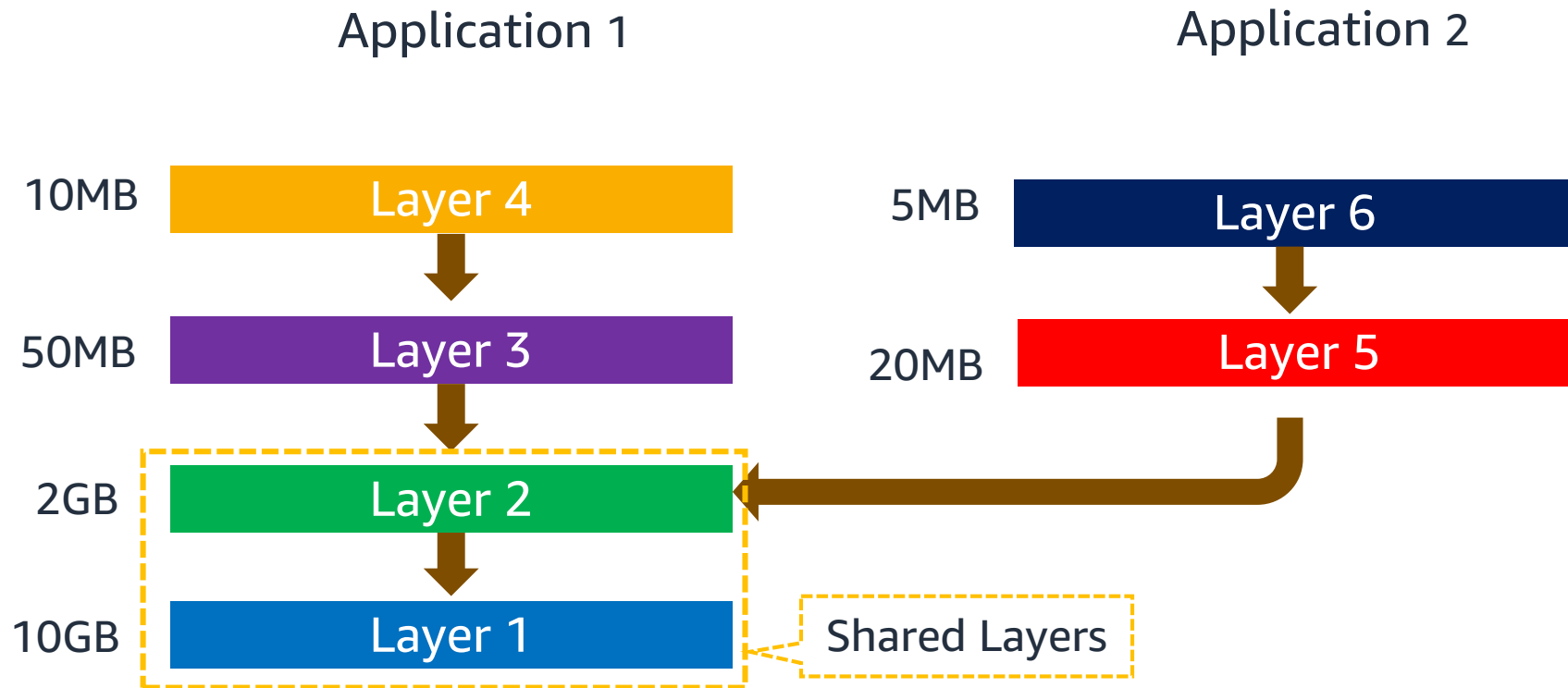
# Layers



# Layers



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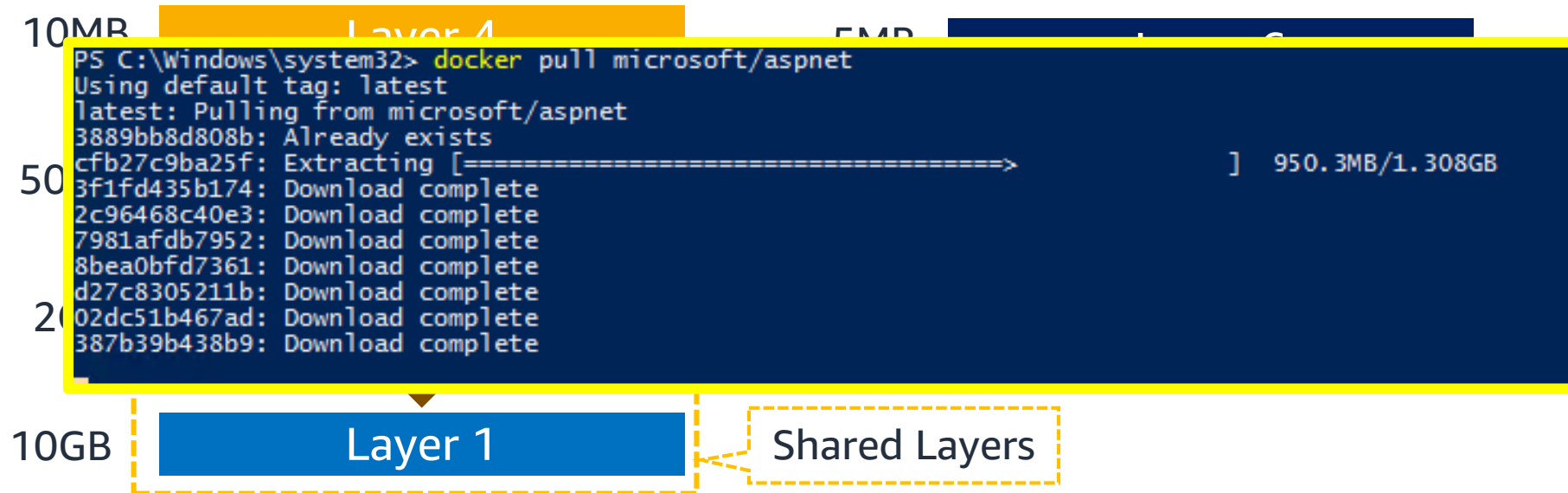




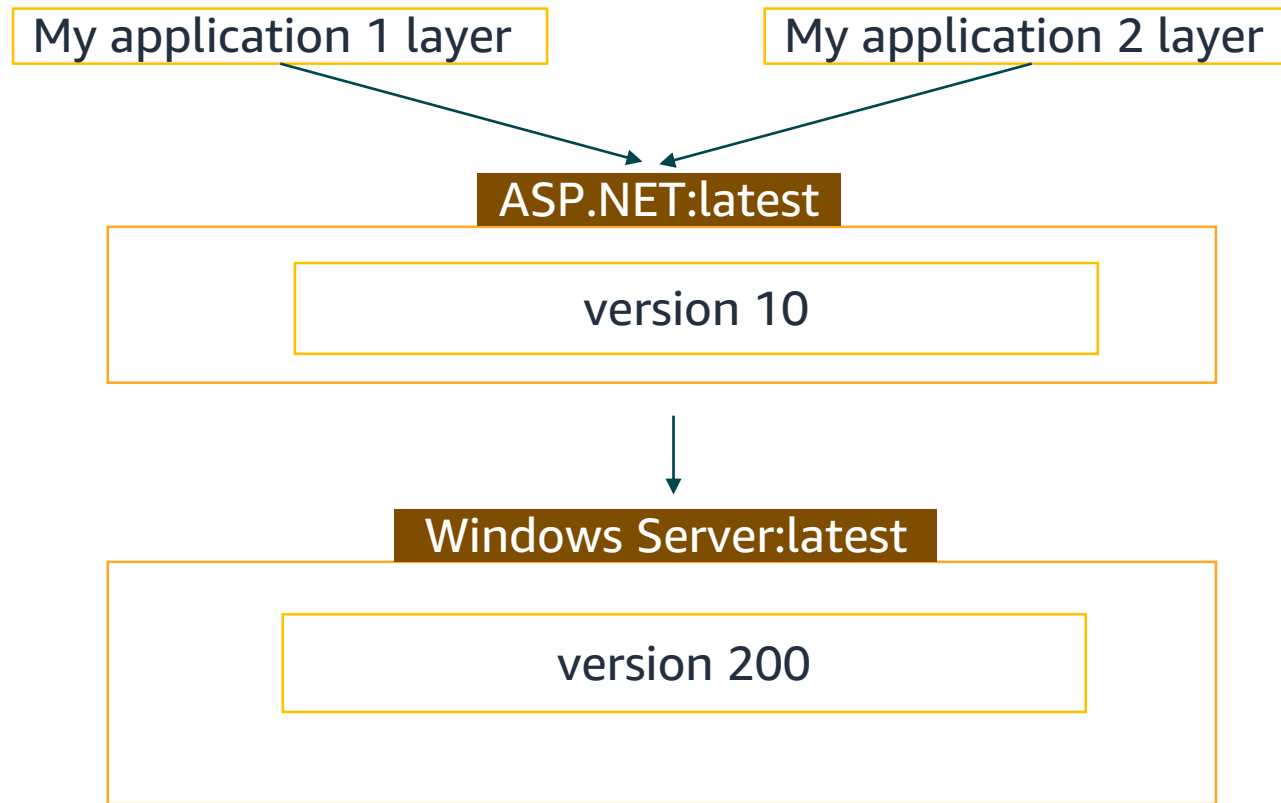
# Layers

Application 1

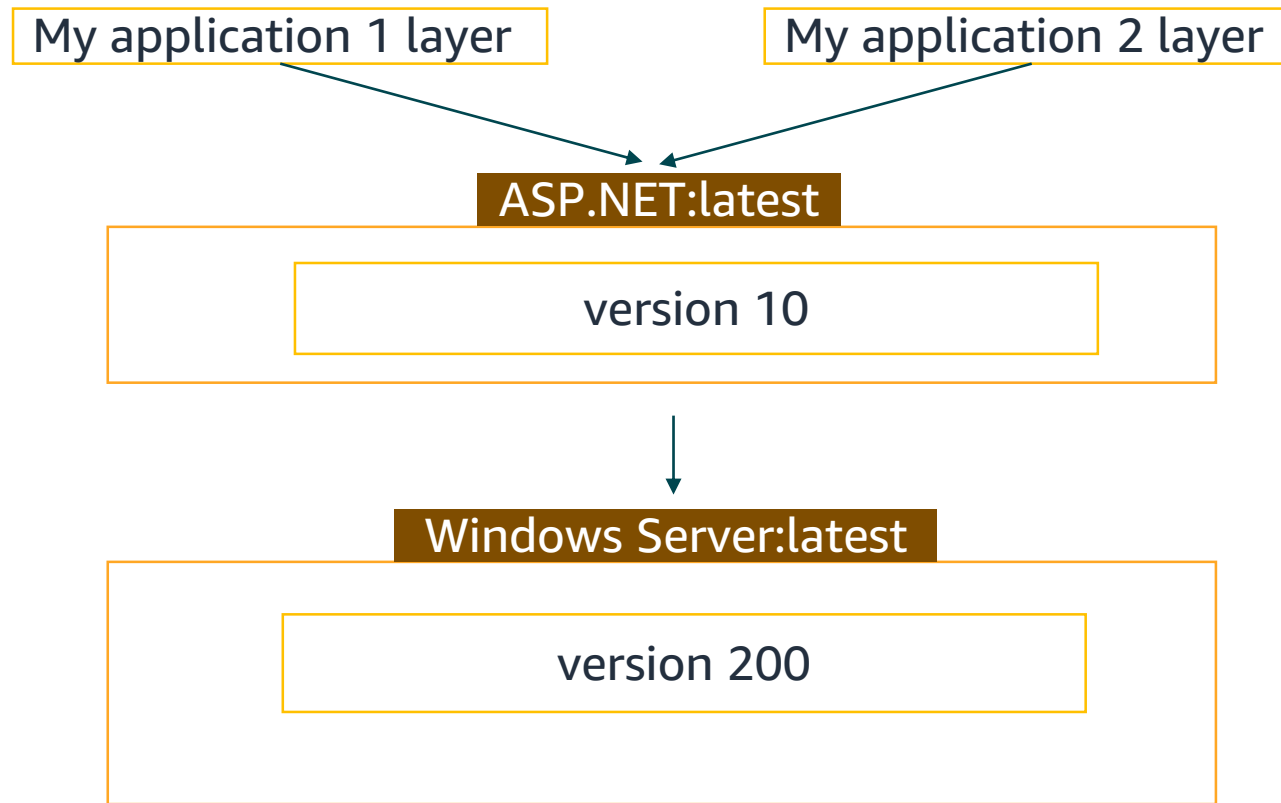
Application 2



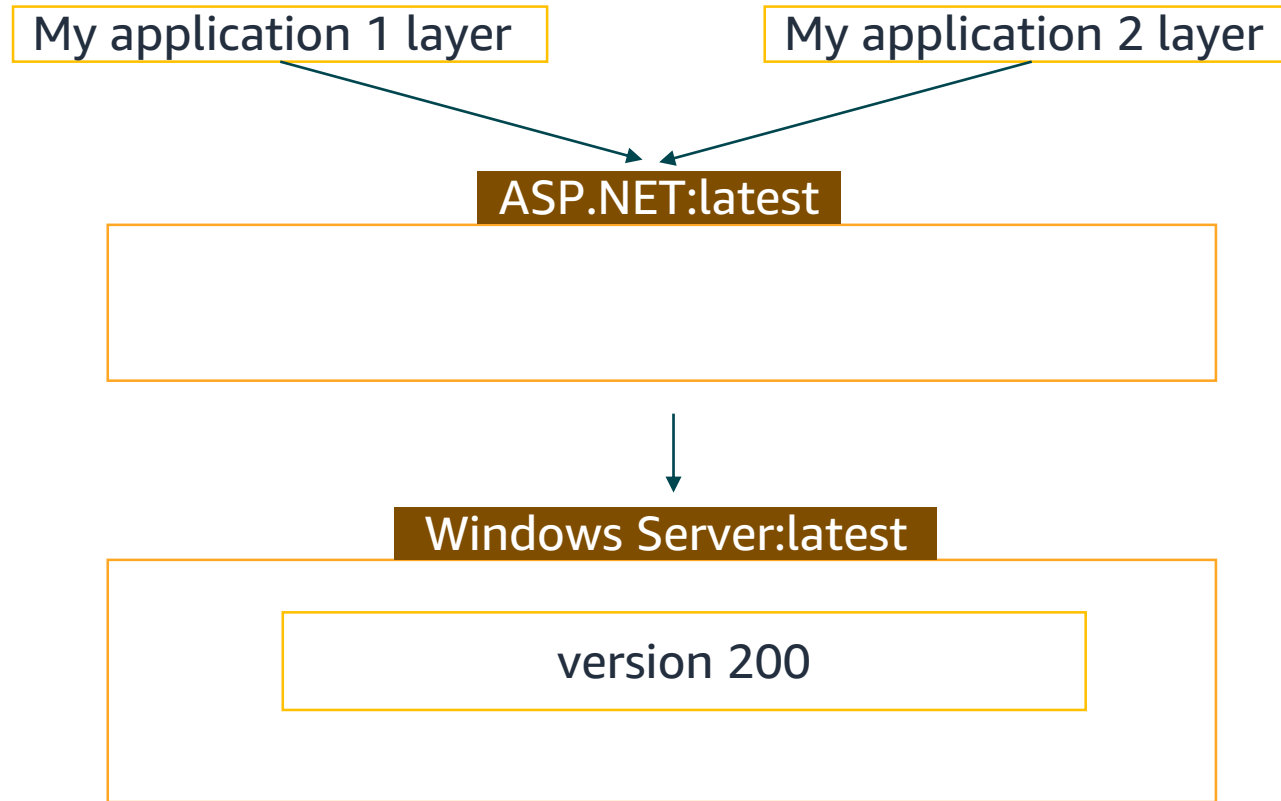
# Patching & Maintenance



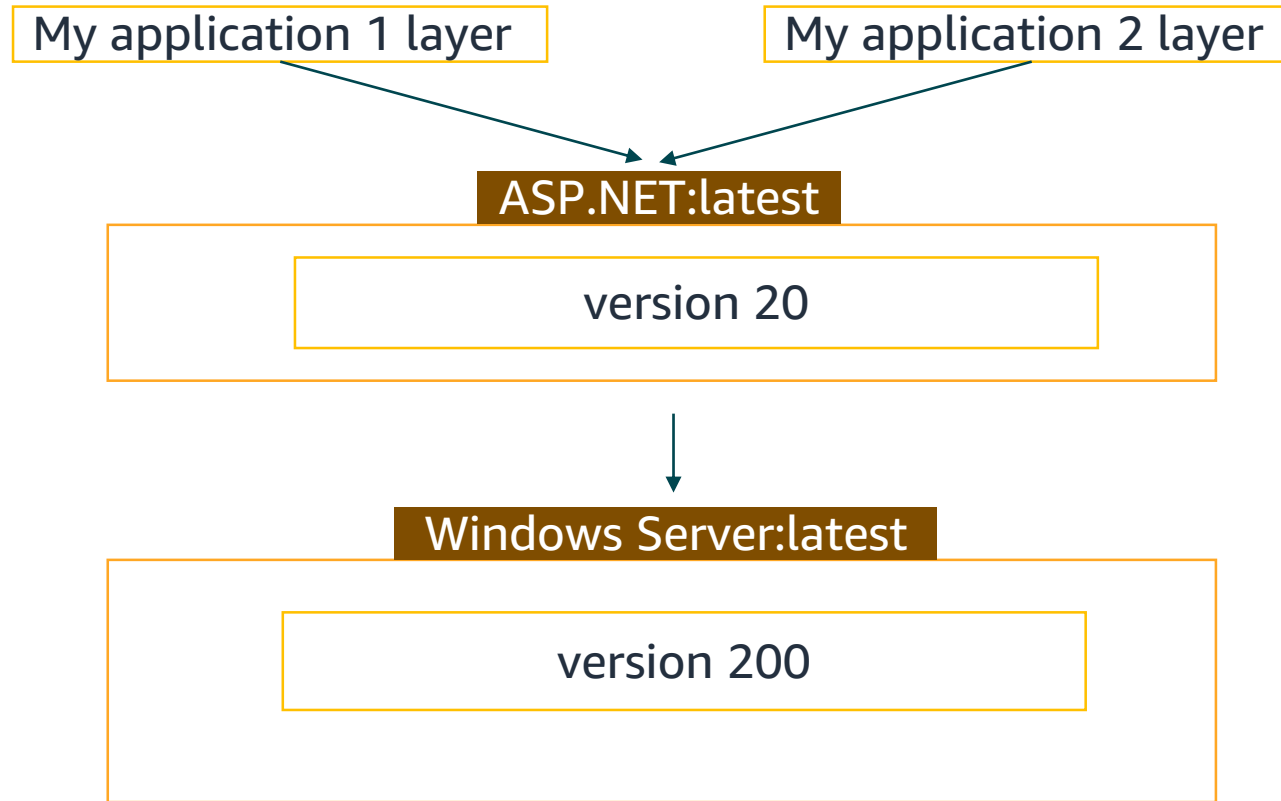
# Patching & Maintenance



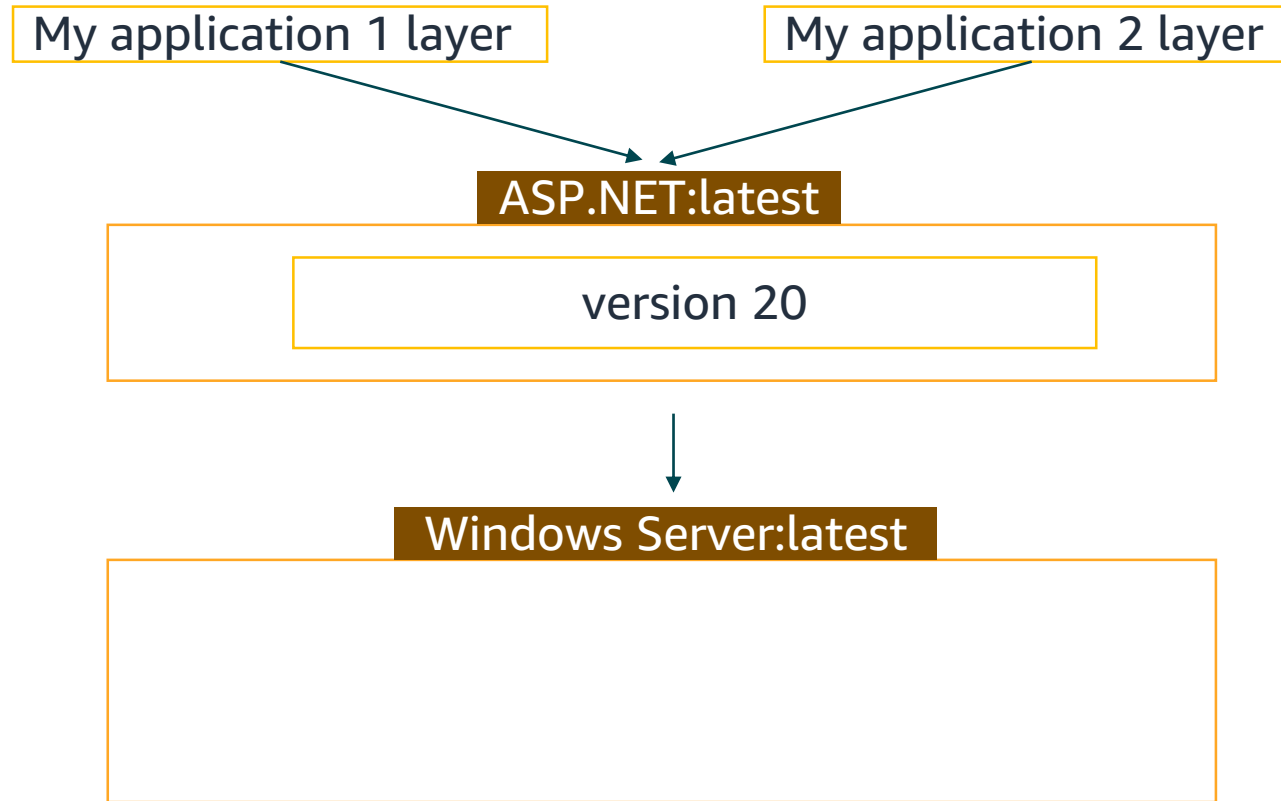
# Patching & Maintenance



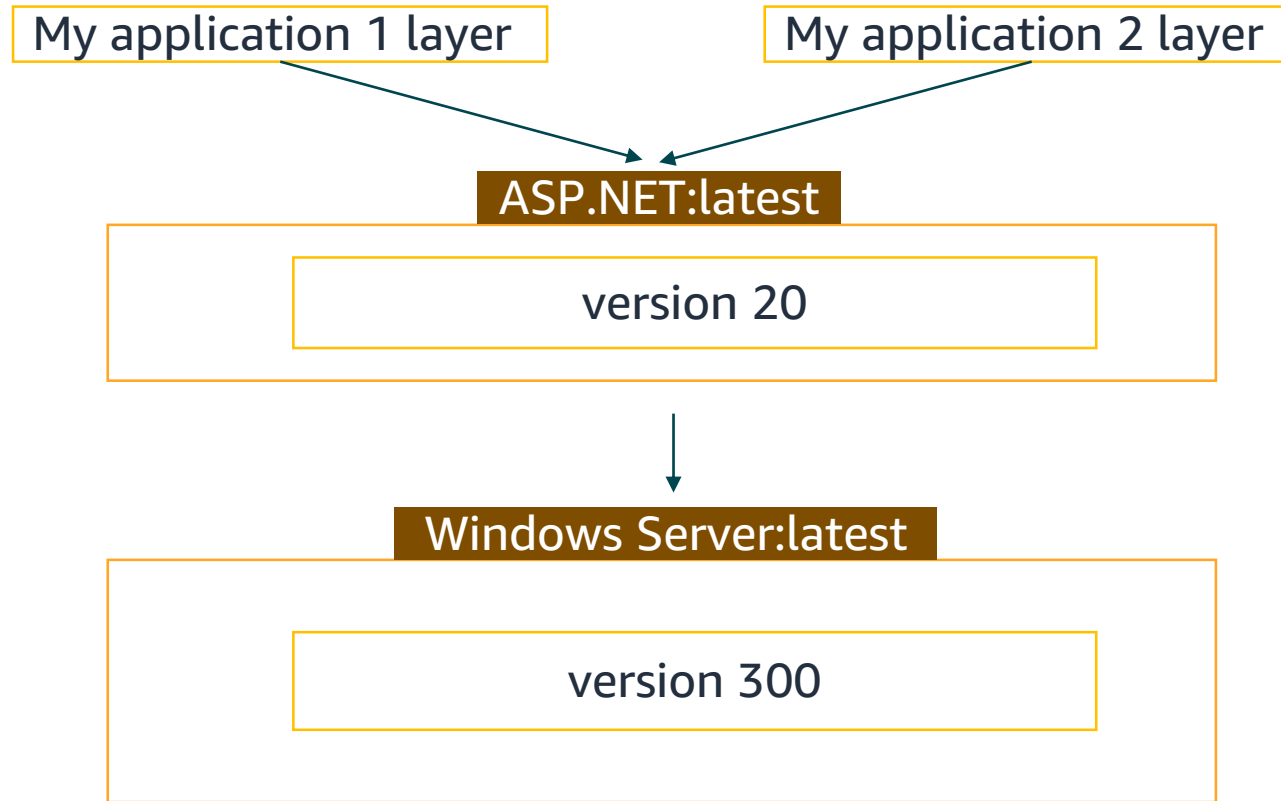
# Patching & Maintenance



# Patching & Maintenance



# Patching & Maintenance



# Let's containerize a simple exe application...

## Demo





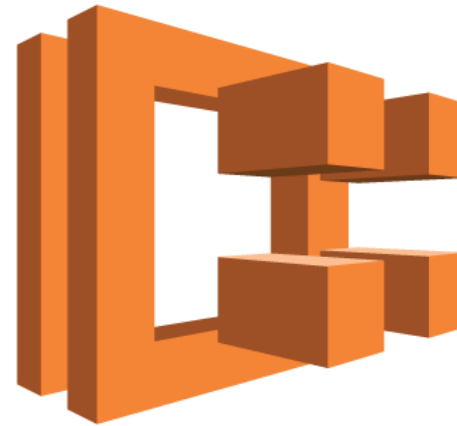






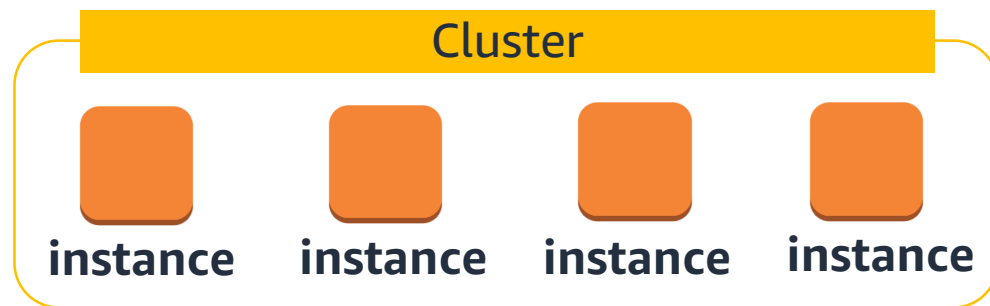


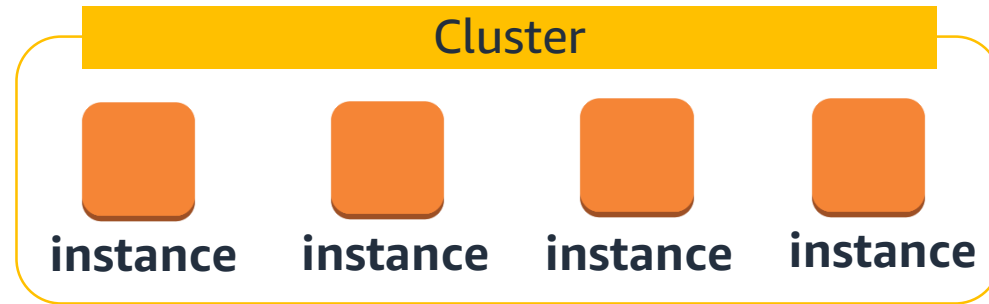
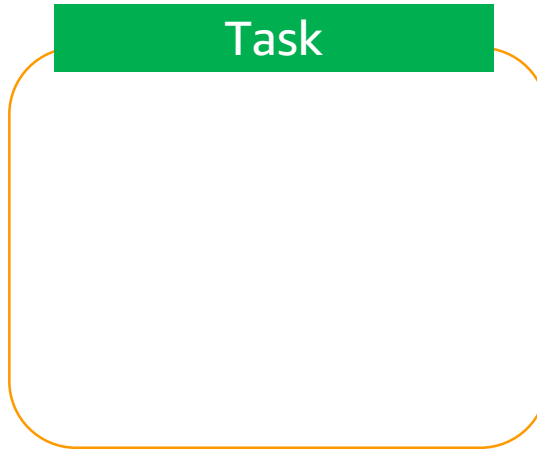
**Amazon ECR**

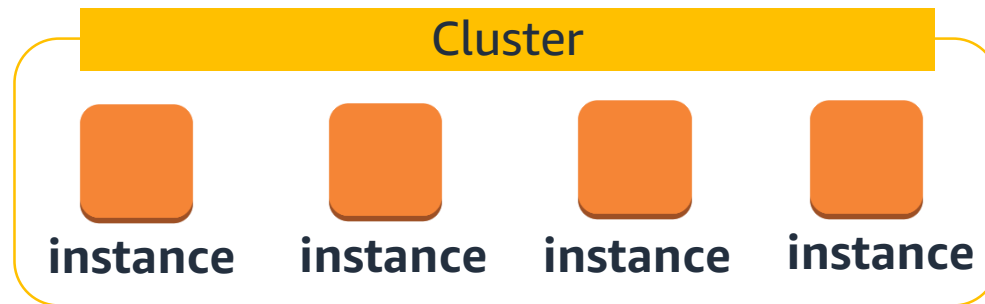
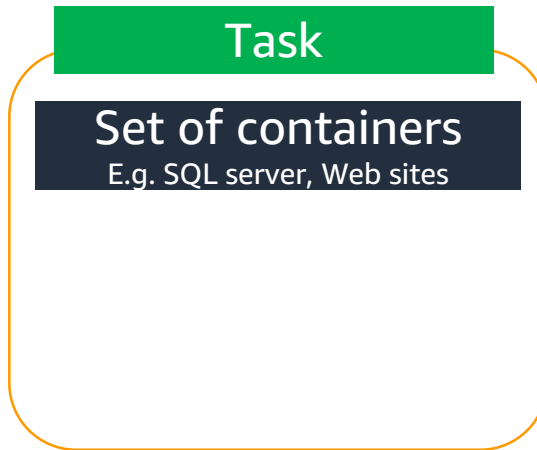


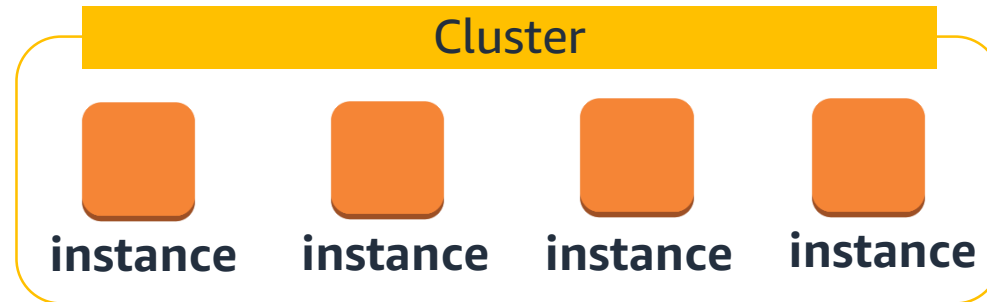
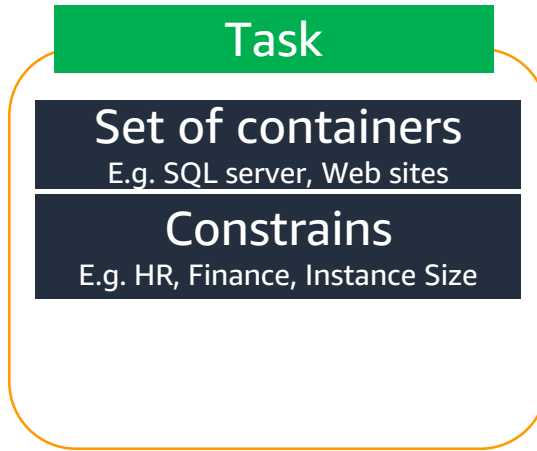
**Amazon ECS**



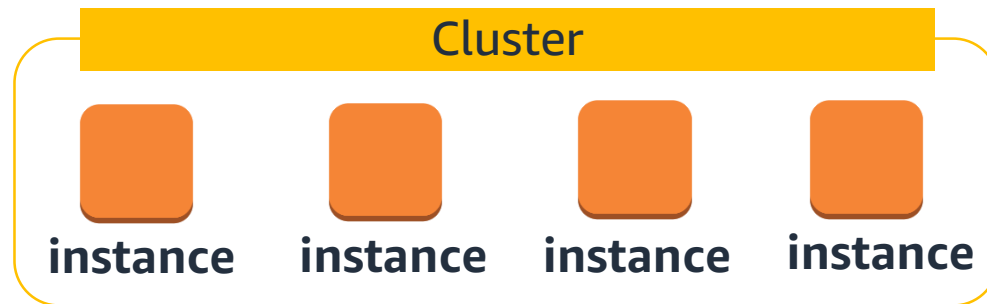
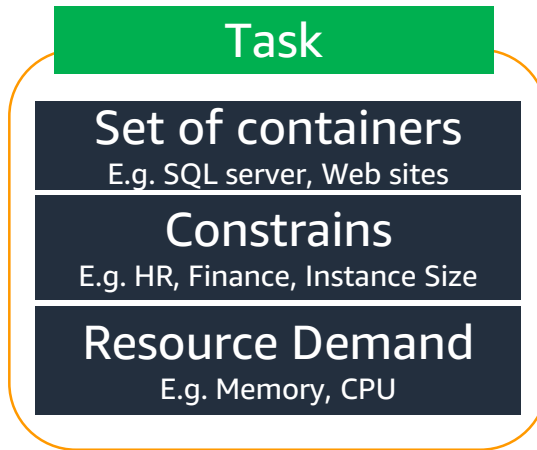


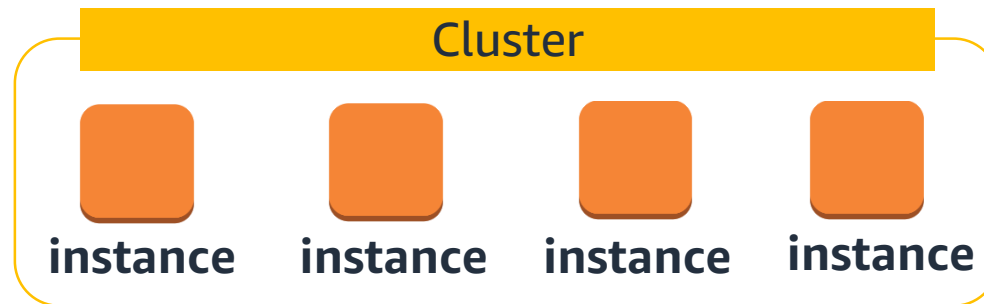
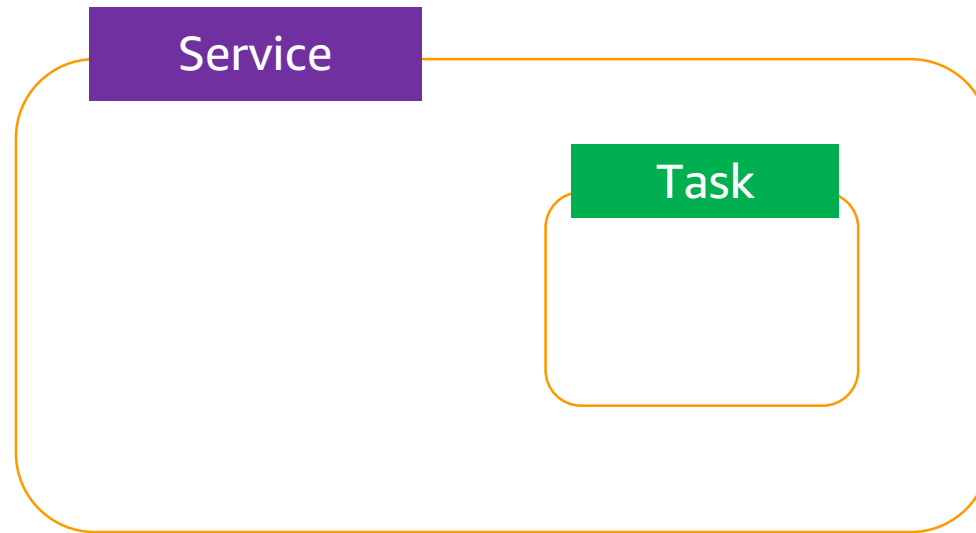


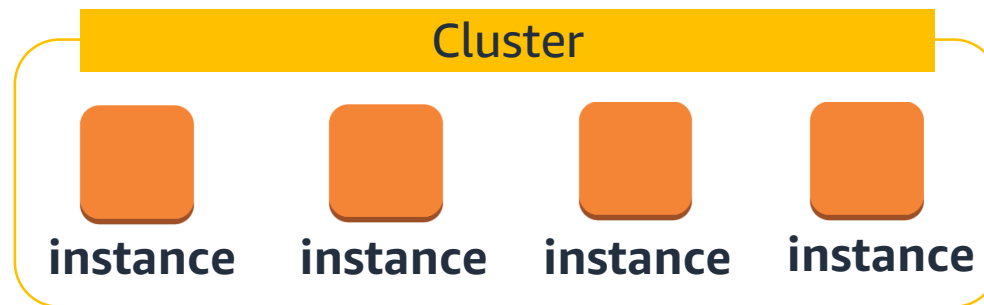
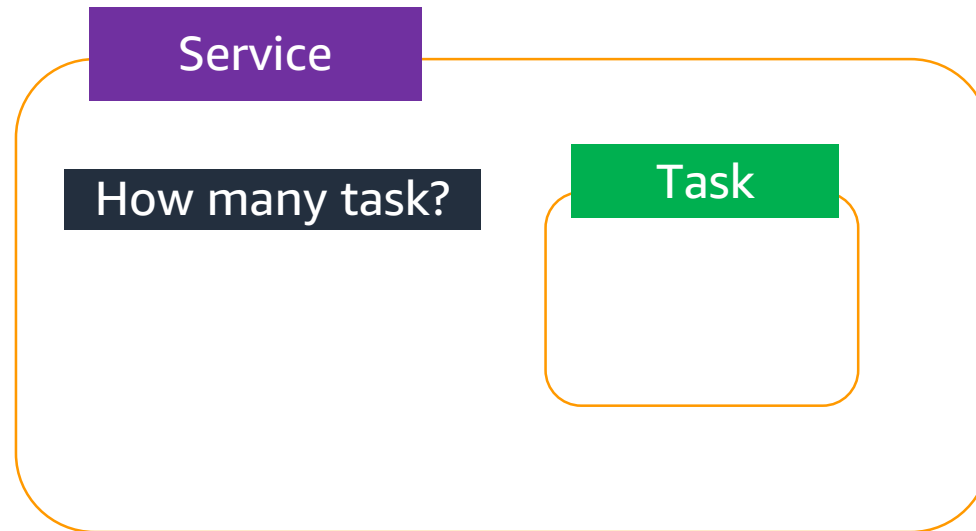


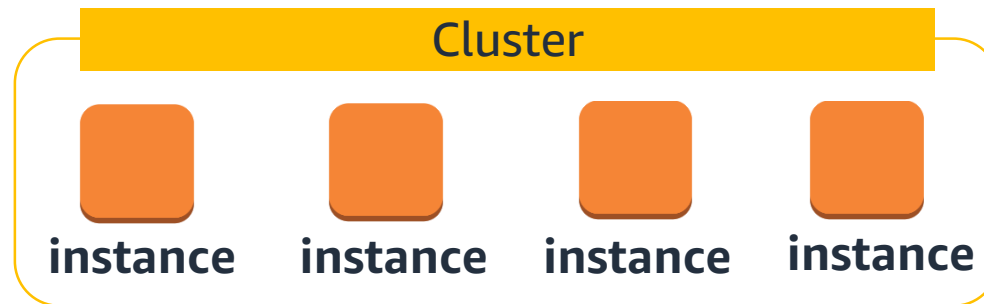
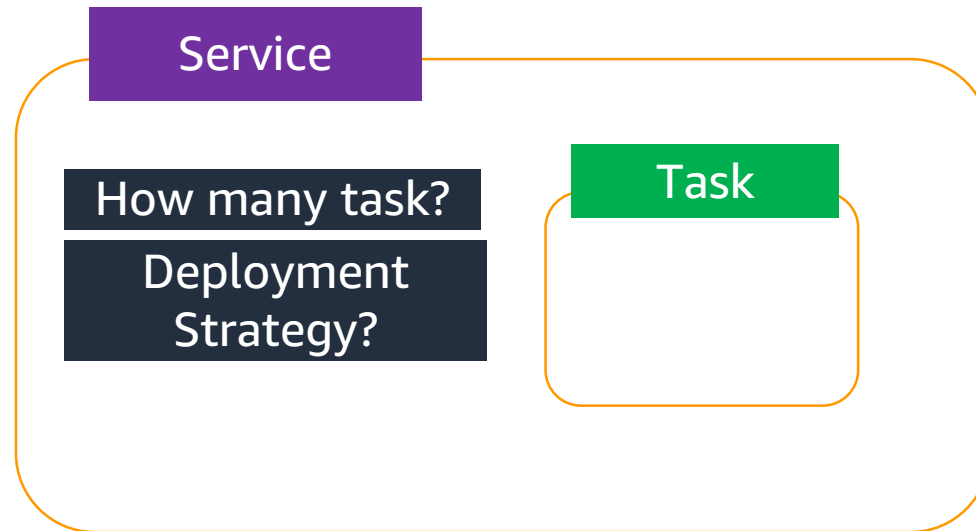


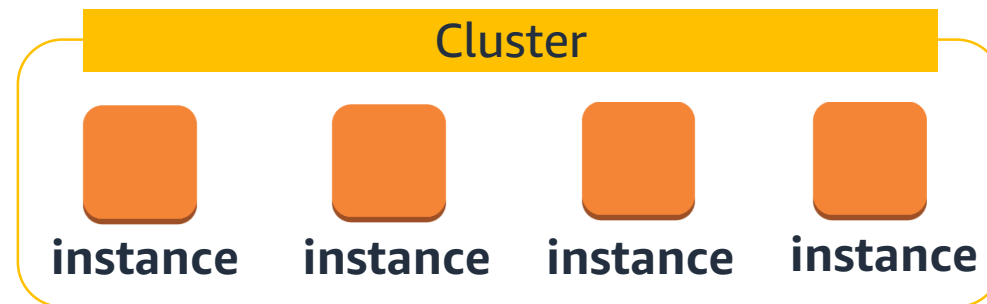
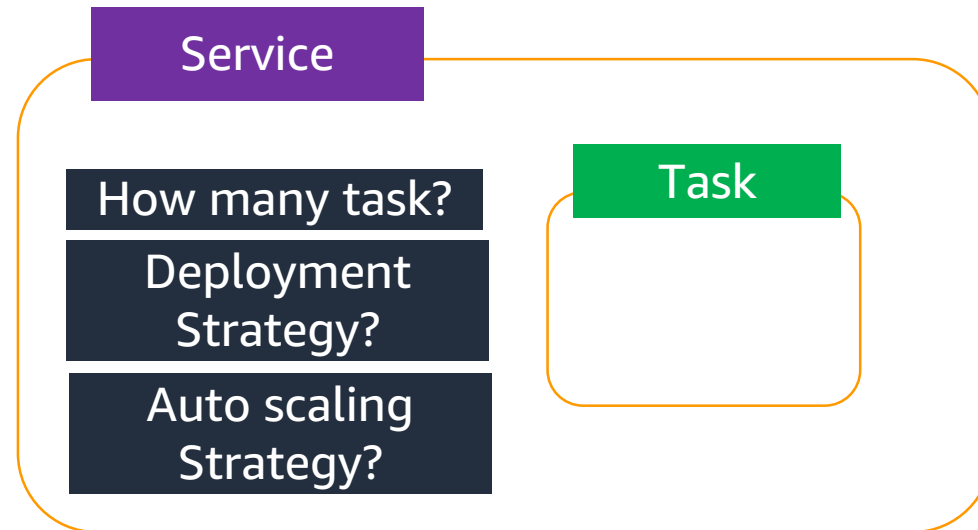












# Example Deployment

Bin Packing



Amazon ECS



Balance Spread

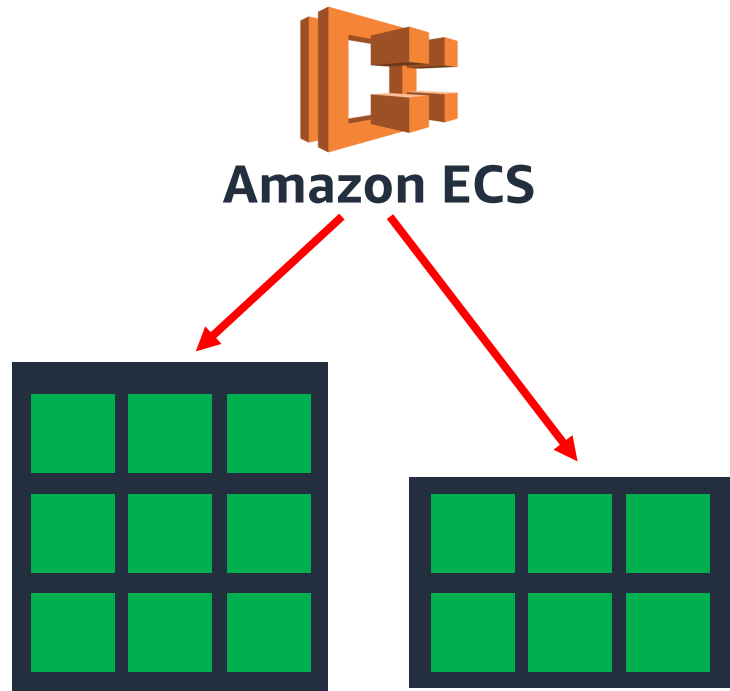


Amazon ECS



# Example Deployment

Bin Packing



Balance Spread



# Example Deployment

Bin Packing



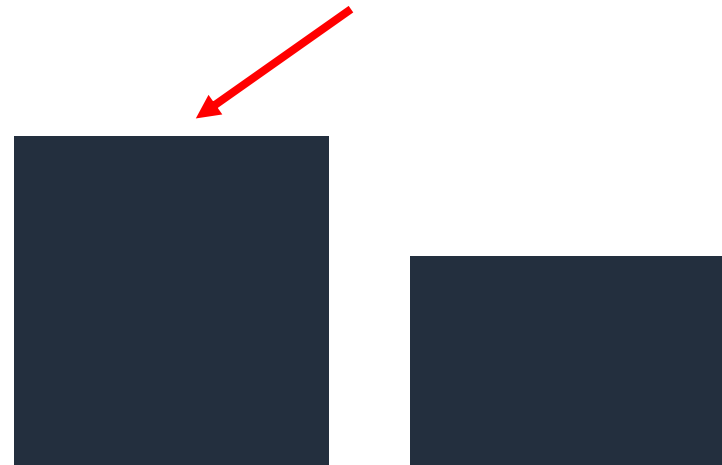
Amazon ECS



Balance Spread



Amazon ECS





# Example Deployment

Bin Packing



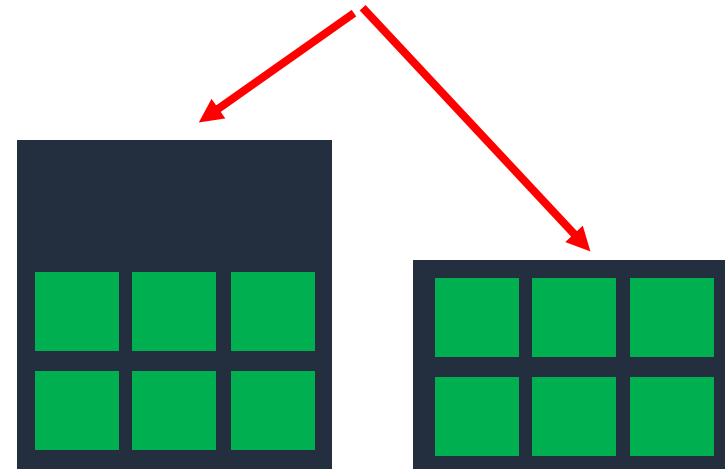
Amazon ECS

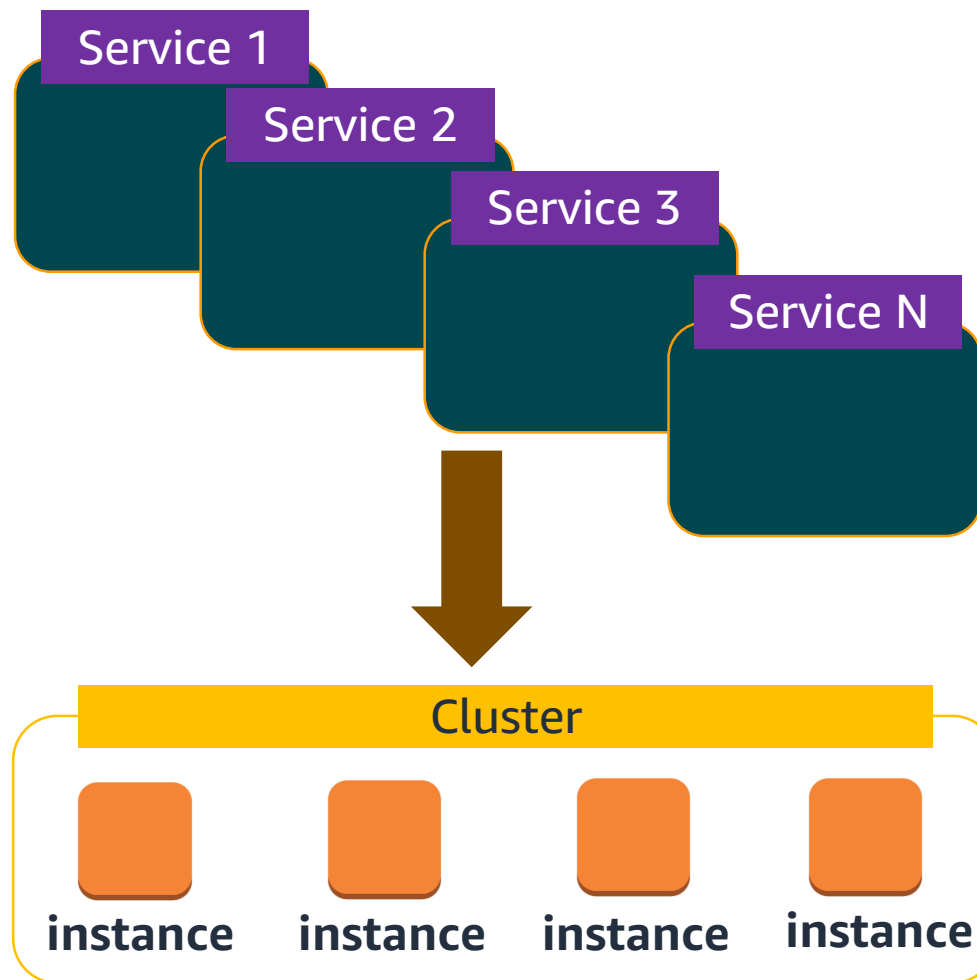


Balance Spread



Amazon ECS





# Amazon Elastic Container Service (ECS) & Amazon Elastic Container Registry (ECR)

## Demo

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[twitch.tv/aws](https://twitch.tv/aws)