

Ethical Hacking: Cloud Computing

Identify Cloud Computing Concepts

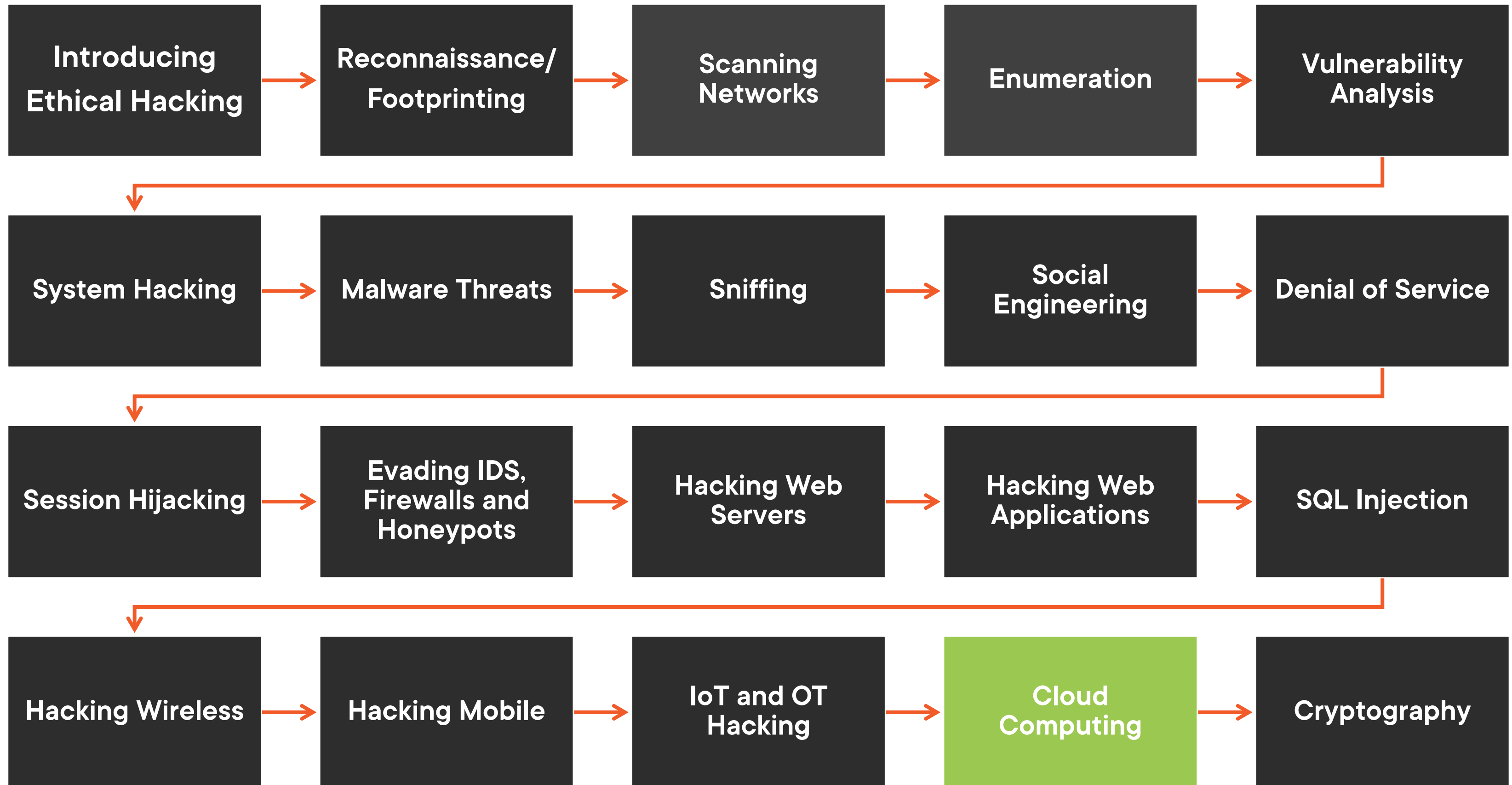


Michael J. Teske

Principal Author Evangelist-Pluralsight



Ethical Hacking Series



Identify Cloud Computing Concepts



Cloud service types

- IaaS
- SaaS
- PaaS

Cloud deployment models

- Public
- Private
- Community
- Hybrid

Container technology

- Serverless computing



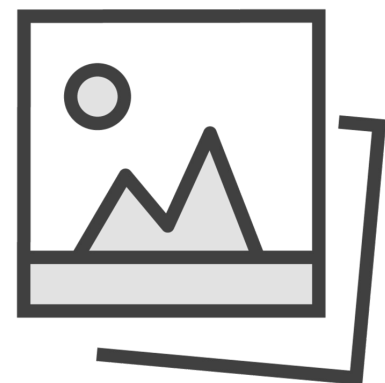
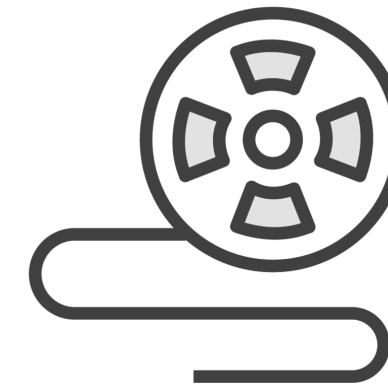
Cloud Service Types



What Is Cloud Computing?



What Is Cloud Computing?





+ Create a resource

Home

Dashboard

All services

FAVORITES

All resources

Resource groups

Virtual machines

Microsoft Sentinel

Monitor

Microsoft Defender for Cloud

Azure Active Directory

Recent

Kubernetes services

Container registries

App Services

SQL databases

Subscriptions

Help + support

Advisor

Virtual machines (classic)

Cloud services (classic)

Cost Management + Billing

My Dashboard

Private dashboard

+ New dashboard

Refresh

Full screen

Edit

Share

Export

Clone

Assign tags

Delete

Feedback

Auto refresh : Off

All resources

All subscriptions

Refresh

blank-playbook Logic app

incident-trigger1 Logic app

defender-app Logic app

sentinel-trigger1 Logic app

sentinelplaybook Logic app

sentinel-incident-trigger Logic app

sql-notify Logic app

sql-book Logic app

myworkspace2 Log Analytics works...

myWorkspace Log Analytics works...

data1 Virtual machine

Security(myworkspace) Solution

web3 Virtual machine

See more...

Service Health

Marketplace

Azure getting started made easy!



Launch an app of your choice on Azure in a few quick steps

Create DevOps Starter

Quickstarts + tutorials

Windows Virtual Machines Provision Windows Server, SQL Server, SharePoint VMs

Linux Virtual Machines Provision Ubuntu, Red Hat, CentOS, SUSE, CoreOS VMs

App Service Create Web Apps using .NET, Java, Node.js, Python, PHP

Functions Process events with a serverless code architecture

SQL Database Managed relational SQL Database as a Service



New EC2 Experience Tell us what you think

- EC2 Dashboard
- EC2 Global View
- Events
- Tags
- Limits

Instances

- Instances New
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved
- Instances New
- Dedicated Hosts
- Capacity

Instances (2) Info

Refresh
Connect
Instance state
Actions
Launch instances

Search

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS
<input type="checkbox"/>	-	i-0d498ab4ec146d5cb	Stopped	t2.micro	-	No alarms	us-east-2a	-
<input type="checkbox"/>	-	i-0ea7f6b524eb2ab64	Stopped	t2.micro	-	No alarms	us-east-2c	-

Select an instance

Cloud services (classic)
Service Health
Marketplace
SQL Managed relational SQL Database as a Service
Cost Management + Billing



```
PS D:\> get-azvm | select name, location
```

```
Name      Location
```

```
-----
```

```
data1     eastus
```

```
web1      eastus
```

```
web2      eastus
```

```
web3      eastus
```

```
PS D:\> _
```

Cloud Service Types



**Running virtualized resources with on-demand scalability.
Resources are maintained by you**



A development platform. Hardware/software maintained by Cloud Service Provider (CSP)

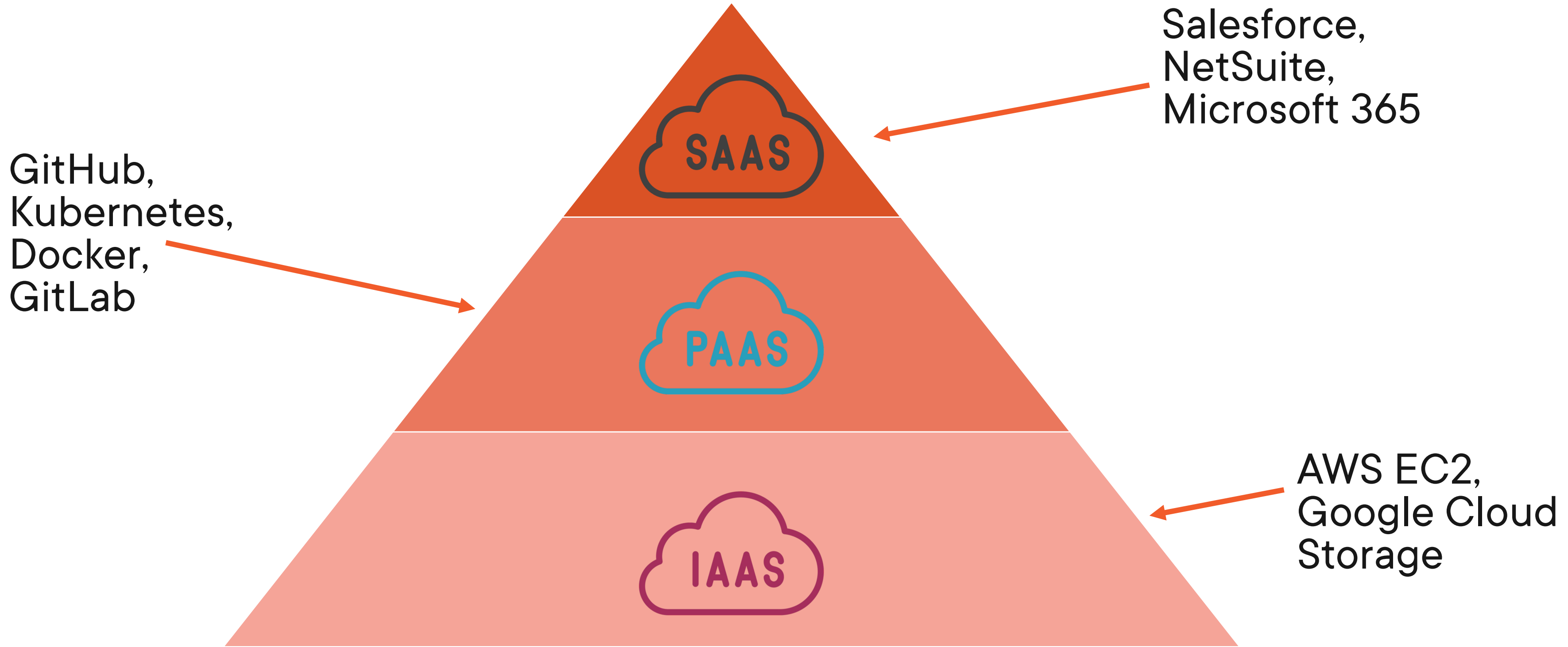


On-demand applications. CSP manages everything

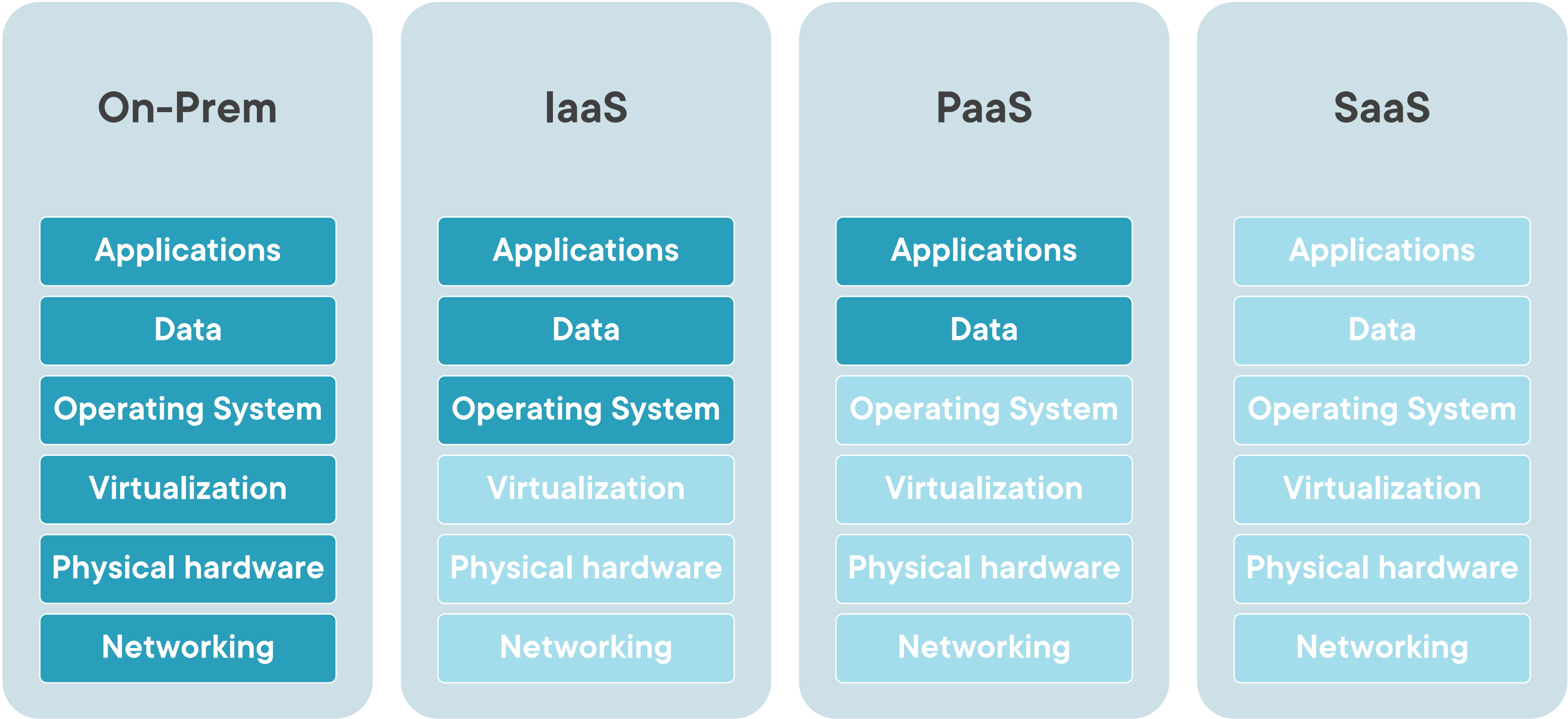


Cloud Service Types

Tabs FTW!



Shared Responsibility Model

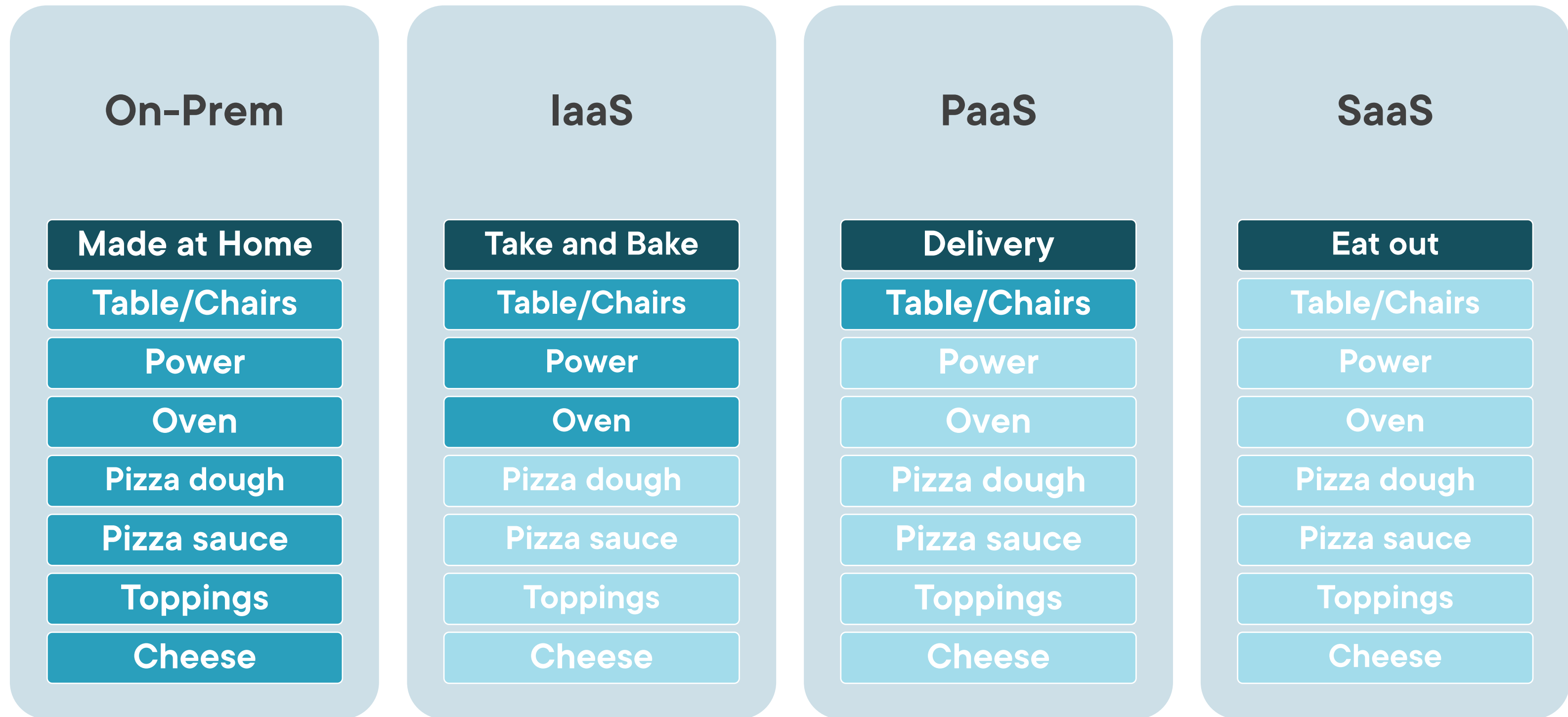


You Manage

CSP Manages



Pizza as a Service



You Manage

Teske's Pizza Palace Manages



Other Cloud Service Types



Identity as a Service: Identity and access management



Function as a Service: developing and running app functions



Security as a Service: suite of services like IDS, incident reporting, etc.



Container as a service: running containerized service and orchestration



All the aaS's

XaaS

FWaaS

mBaaS

DaaS



Cloud Deployment Models



Cloud Deployment Models

Public Cloud

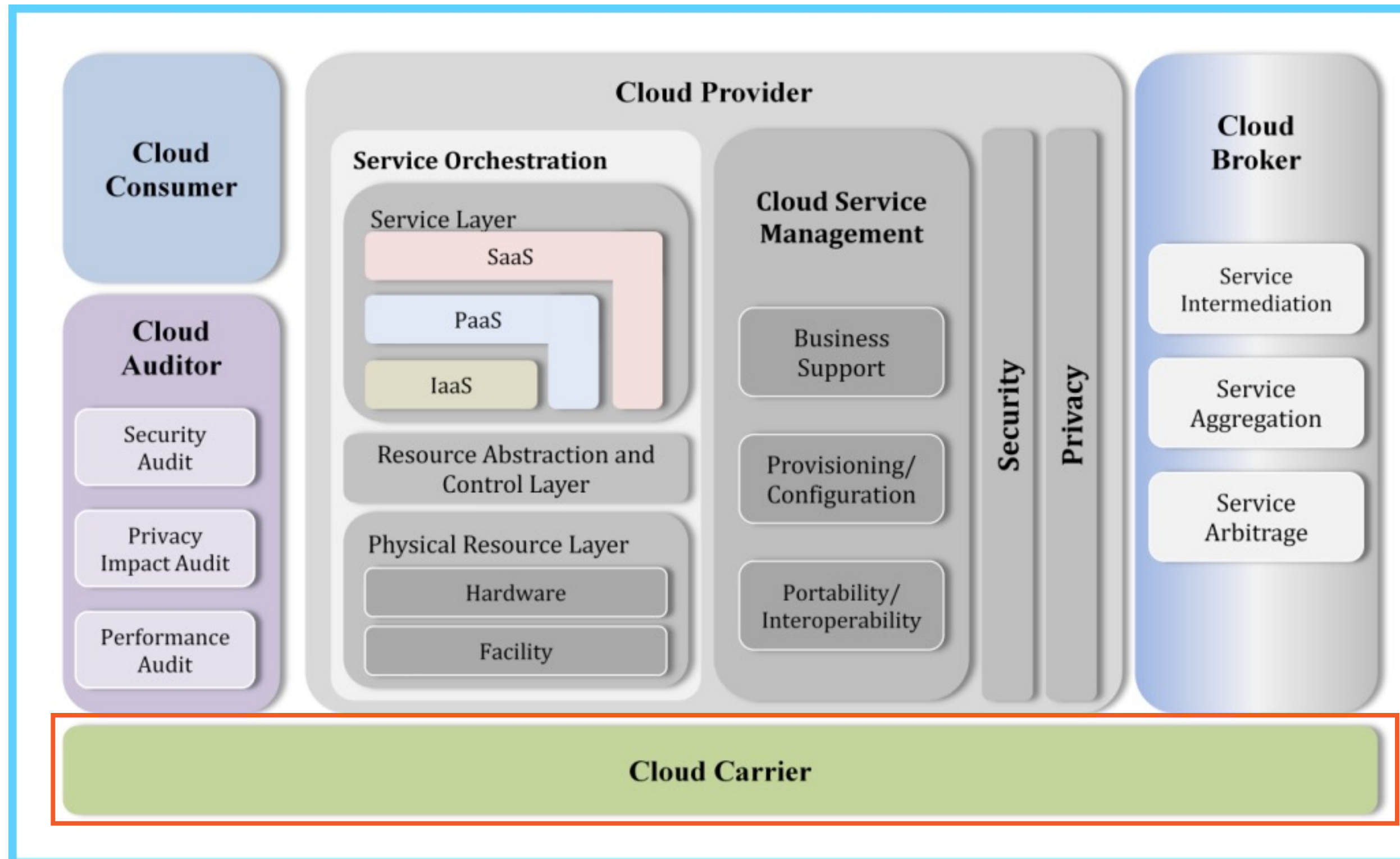
Private Cloud

Community Cloud

Hybrid Cloud



Cloud Deployment Model

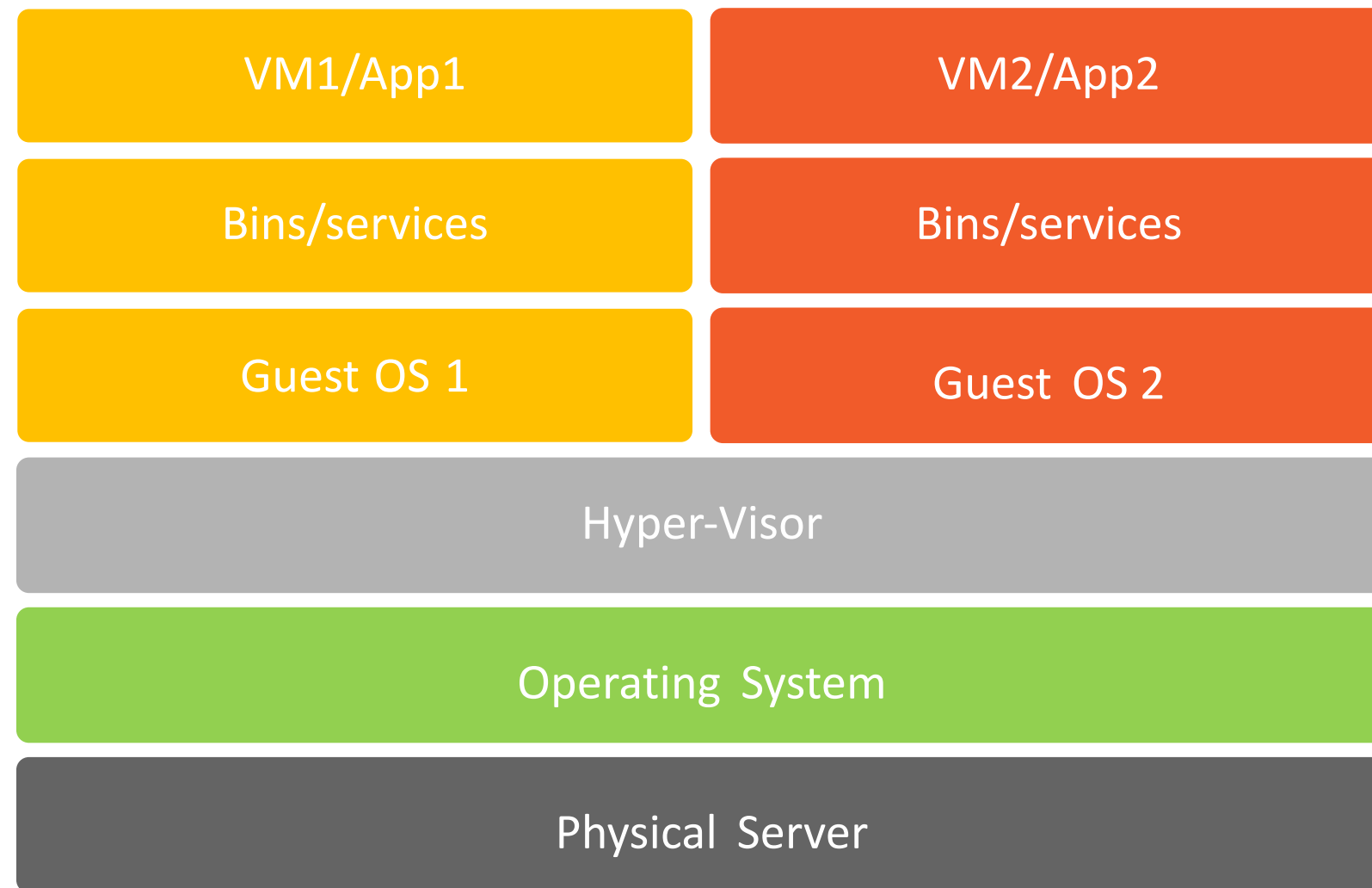


Container Technology

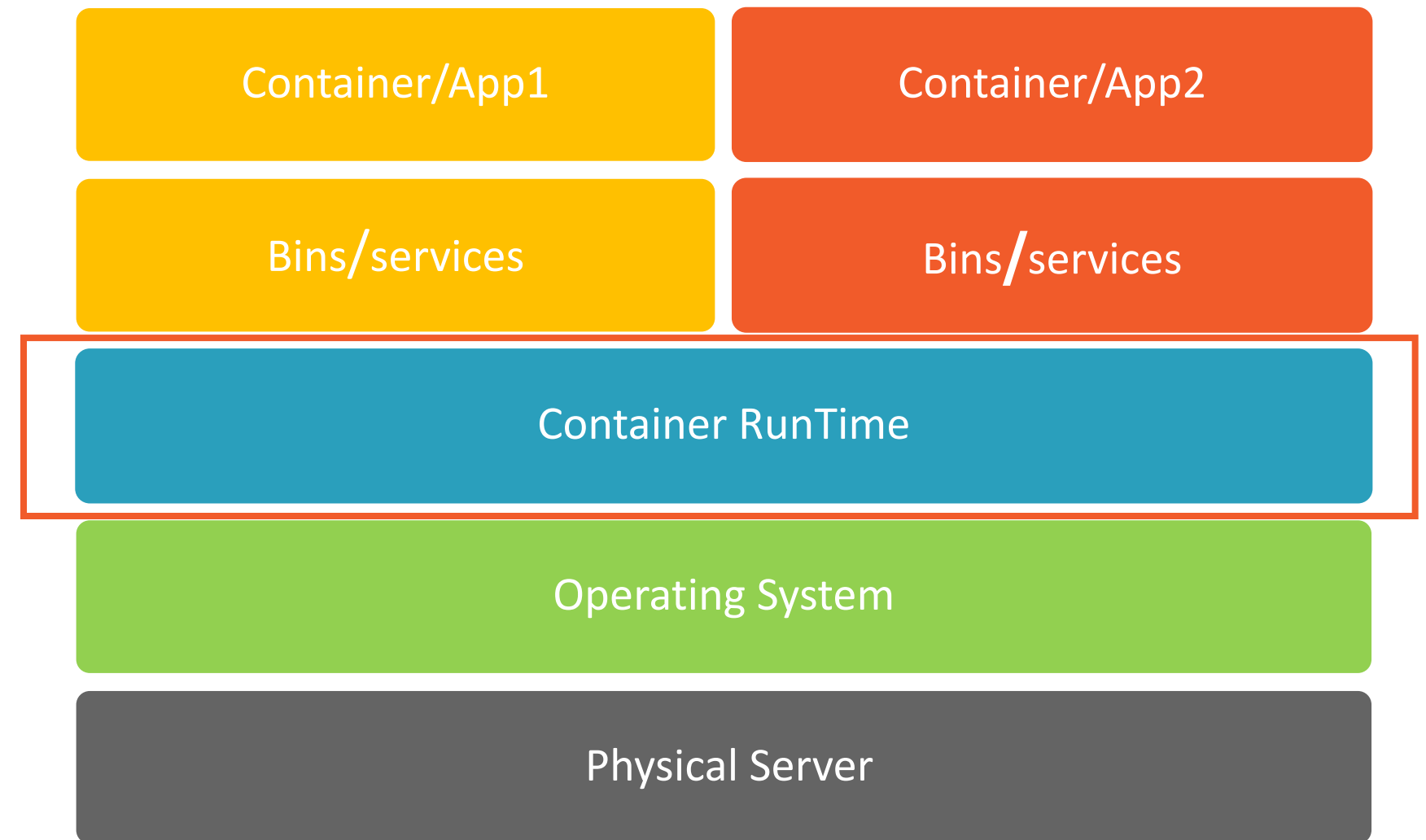


What Is a Container?

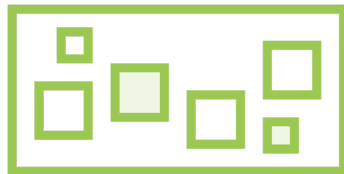
Virtual Machines



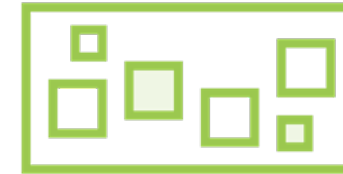
Containers



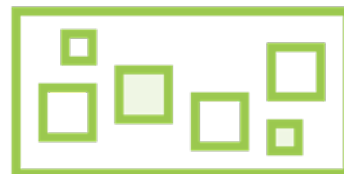
Benefits of Container Instances



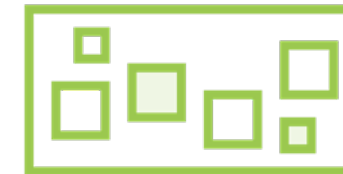
Faster startup



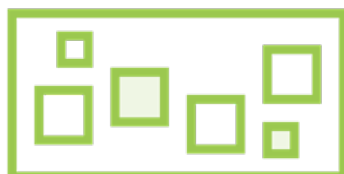
Custom sizes



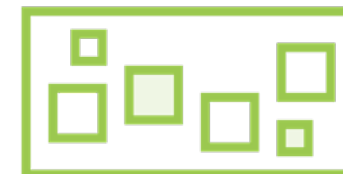
Per second billing



Persistent storage



Security through isolation



Linux and Windows



Container Orchestration



Kubernetes is an open-source system for automating deployment, scaling and management of containerized apps or microservices



Uses declarative configuration to orchestrate containers in different compute environments



A deployment is configured as a cluster consisting of at least one master machine and one or more worker machines



Learning Check



Software as as Service (SaaS)



Cloud provider



Root



Kubernetes



Module Review

Key Learnings



Cloud service types



Shared responsibility model



Serverless computing



Up Next:
Cloud Security

