Software Engineering

Plan

◇ Deployment
◇ Motivation
◇ Platform Spectrum
◇ Heroku

Mo.Agamia

1

Deployment

Agile Development Cycle

"Software deployment is all of the activities that make a software system available for use."

Software Deployment Activities

◇ Release

◇ Installation and activation

◇ Deactivation

◇ Uninstallation

◇ Update

◇ Built-in update

◇ Version tracking

◇ Adaptation

Mo.Agamia

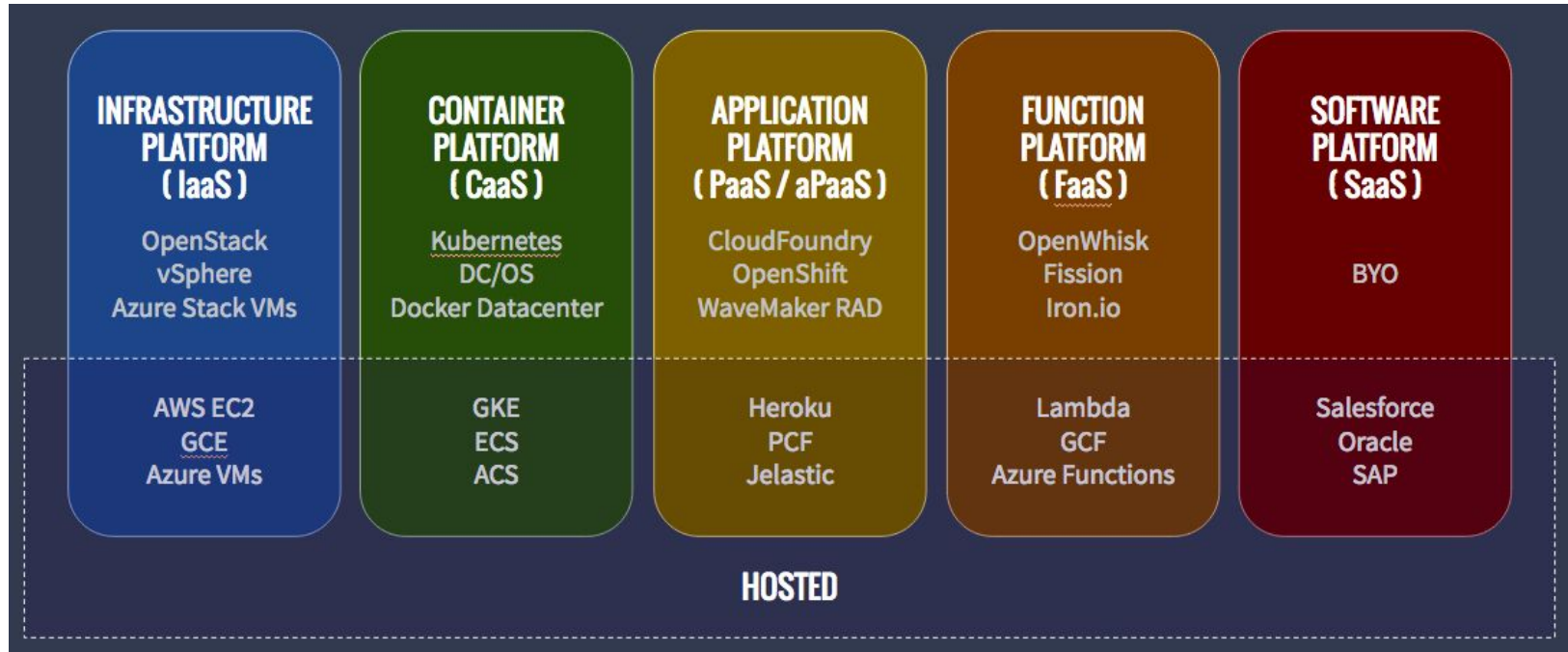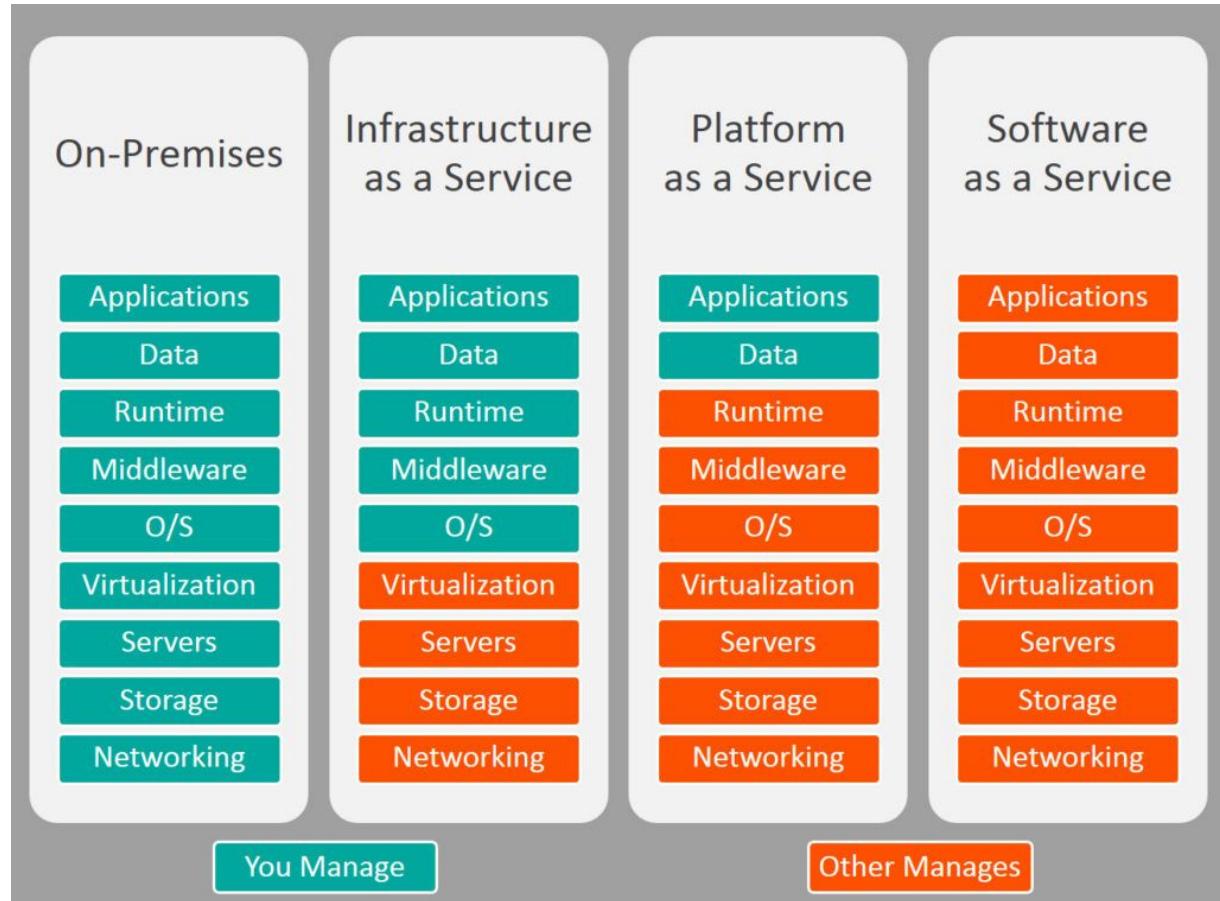# 2 Motivation

Software Deployment Advantages

3 Platform Spectrum

Platform Spectrum

INFRASTRUCTURE PLATFORM (IaaS)	CONTAINER PLATFORM (CaaS)	APPLICATION PLATFORM (PaaS / aPaaS)	FUNCTION PLATFORM (FaaS)	SOFTWARE PLATFORM (SaaS)
OpenStack vSphere Azure Stack VMs	Kubernetes DC/OS Docker Datacenter	CloudFoundry OpenShift WaveMaker RAD	OpenWhisk Fission Iron.io	BYO
AWS EC2 GCE Azure VMs	GKE ECS ACS	Heroku PCF Jelastic	Lambda GCF Azure Functions	Salesforce Oracle SAP

HOSTED

Mo.Agamia

On-Premises	Infrastructure as a Service	Platform as a Service	Software as a Service
Applications	Applications	Applications	Applications
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
O/S	O/S	O/S	O/S
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking

You Manage Other Manages

Mo.Agamia

4 Heroku

"Heroku is a container-based cloud Platform as a Service (PaaS).

Heroku is used to deploy, manage, and scale modern apps"

Fast app delivery, short cycles

The Heroku Platform enables you to build and deploy apps fast. Whether you're working on a personal project or a company product, Heroku helps you quickly prototype new ideas, build new features, or deliver new apps to production and beyond.

Polyglot platform

Heroku is flexible and adapts to your development style. The platform officially supports eight popular development languages and frameworks. Heroku Buildpacks extend the build system to support additional languages or customizations.

Simplified DevOps

With a fully-managed platform, Heroku's staff monitors uptime, performance, and infrastructure concerns, freeing you from the distraction of setting up and managing your own servers and hardware operations.

Run apps for free

A range of free services on Heroku can help you experiment, play, or test out new ideas with your users. Signing up with Heroku gives you a pool of free dyno hours to use for your apps. Many of our add-on providers also offer free services.

Integrated data services

Heroku's managed data services are optimized for developers, making it even easier to build data-driven apps. Choose Heroku Postgres, Heroku Redis, and Apache Kafka on Heroku, or third-party add-on services.

Ecosystem of add-on services

Build apps faster by extending the Heroku platform with fully-managed cloud services that can be installed in one click. Over 150+ Heroku Add-ons support every stage of app development and operation.

Seamless scalability

Once your app gains traction with users, you can easily scale app resources with a single click or command using the Heroku Dashboard or CLI. The platform's autoscaling feature allows your apps to instantly scale up or down as needed.

Documentation and support

The Heroku Dev Center offers a wealth of information, including technical reference docs, getting started guides by language, learning resources, changelogs, and more. In addition, Heroku offers a variety of support options for customized assistance. We're also proud of authoring the twelve-factor app manifesto.

Team collaboration

Heroku Teams offers shared app workspaces and centralized tools to manage your app project's team, processes, and billing. Heroku Flow provides collaboration tools and workflows to support your continuous delivery and continuous integration practices.

Mo.Agamia

Getting Started on Heroku

Step-by-step guides for deploying your first app and mastering the basics of Heroku

Node.js

Ruby

Java

PHP

Python

Go

Scala

Clojure

Mo.Agamia

Thanks!

Any questions?

You can find me at:

◇ Github:
https://github.com/MoAgamia/SE-Boot-Camp

References

- https://en.wikipedia.org/wiki/Software_deployment
- https://pdf.wondershare.com/business/what-is-software-deployment.html
- https://mesosphere.com/wp-content/uploads/2017/07/platform-spectrum-small.png
- https://www.heroku.com