AWS Certified Cloud Practitioner Training Bootcamp

Introduction to AWS Cloud Computing

What is Cloud Computing ?

- Cloud computing is the on-demand delivery of compute power, database storage, applications, and other IT resources through a cloud services platform via the internet with pay-as-you-go pricing

- Amazon AWS cloud services platform provides rapid access to flexible and low cost IT resources

- Pay-as-you-go pricing ? Pay only for what you use, when you use it !

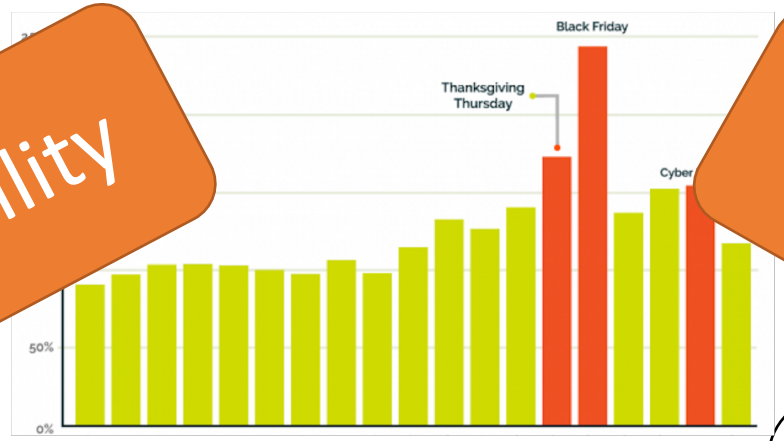
Applications and Data Centers

- Applications and services are typically run on servers, which are comprised of CPU - processor, RAM – memory and storage – HDD, SSD.
  - Email, Web server, DBs, FTP, etc
- How can you run these services ?
- Either in your company DC – Data Center … or
- You can RENT the compute power and move into the cloud

Running Services in the AWS Cloud

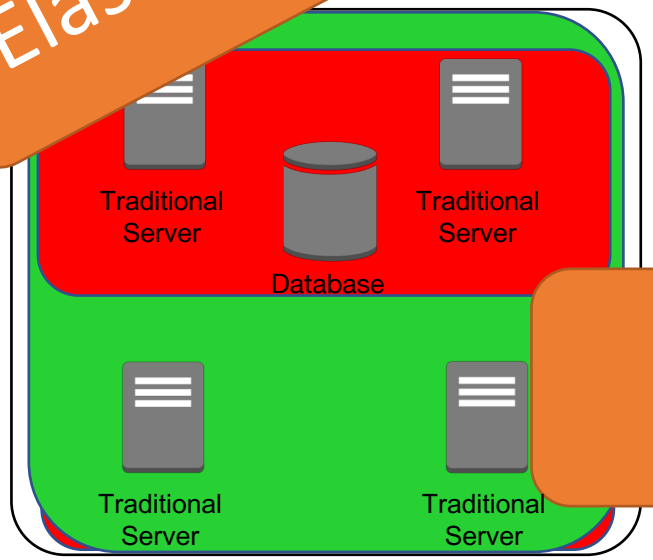
- With cloud computing, you don't need to make large upfront investments in hardware and spend a lot of time provisioning the hardware
- You provision exactly the right type and size of computing resources you need to power and run your services
- You can run one server or 10s of thousands of servers in minutes, as you need, almost instantly, and only pay for what you use

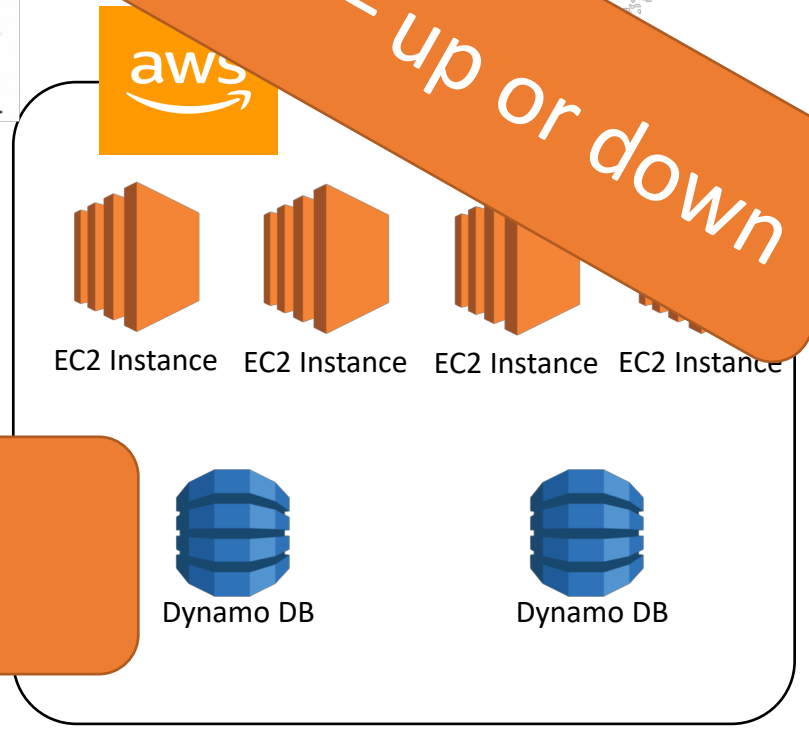
Stop Guessing - Black Friday Campaign



Elasticity, Adaptability

Scalable – up or down





Pay-as-you-go

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Cloud Computing Models

Cloud Computing Models

- There are three major types of cloud services available:
  - IaaS – Infrastructure as a Service
  - PaaS – Platform as a Service
  - SaaS – Software as a Service

- The differences between them consist of:
  - Functionality
  - Tasks' ownership and flexibility

- Let's have an example …

IaaS | PaaS | SaaS Example

YOU OWN THE CAR = ON-PREM DC

YOU GET A TAXI = PaaS

YOU LEASE THE CAR = IaaS

YOU GET THE BUS = SaaS

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Infrastructure as a Service (IaaS)

- Infrastructure as a Service (IaaS) contains the basic building blocks for cloud IT and typically provides access to networking features, computers and data storage space.

- IaaS provides the highest level of flexibility and management control over the infrastructure

Amazon EC2

Platform as a Service (PaaS)

- Platform as a Service (PaaS) removes the need for your organization to manage the underlying infrastructure (hw and OSs) and allows you to focus on the deployment and mgmt. of your applications.

- This helps you to be more efficient as you don't need to worry about resource procurement, capacity planning, software maintenance or patching,

AWS Lambda

Software as a Service (SaaS)

- Software as a Service (SaaS) provides you a complete product that is run and managed by the service provider

- With SaaS you do not have to think about how the service is maintained or how the underlying infrastructure is managed; you only need to think about how you will use the App

- A common example of a SaaS application is web-based email

Gmail

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Cloud Computing Deployment Models

What are the possibilities ?

- Three Cloud Deployment Models are currently available:
- On-premises – you run everything in your own DC
- Hybrid – you run some of your Apps in your DC and some in the AWS Public Cloud
- Cloud – you run all your Apps in AWS Public Cloud

On-Premises

- Also known as *"private cloud"*, resources are deployed in your on-premises DC, using virtualization and resource management tools – VMware, Hyper-V, OpenStack

- Private cloud option offers the ability to provide dedicated resources, not split between users or end customers (only your Apps sit on the actual hardware)

- You have full control over your infrastructure and are responsible for management and OS patching

Hybrid

- The Hybrid deployment can be an intermediate step, while you are on your way to fully migrating to the AWS cloud

- A hybrid deployment is a way to connect infrastructure and applications between cloud-based resources and existing resources that are not located in the cloud

- The most common method of hybrid deployment is between the cloud and your existing on-premises infrastructure in order to extend or grow your organization's infrastructure

AWS Cloud

- The application is fully deployed in the cloud and all components of the application run in the cloud

- Applications in the cloud have either been created in the cloud or have been migrated from an existing infrastructure to take advantage of the cloud benefits

- Migrating an App from on-prem to cloud is typically called *"lift-and-shift"*; this refers to taking the App as is, without modifying it, and running it on cloud-native resources

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Thank you