

Chapter 1

Amazon Cloud Services Overview

Episode 1.01

Cloud Computing Defined

AWS (Amazon Web Services)

- Cloud Computing Defined
- Benefits of Cloud Computing
- Cloud Computing Models
- AWS History
- AWS Platform
- AWS Products Overview
- AWS Security and Compliance
- Regions and Availability

AWS Benefits

- Reduced:
 - Hardware cost
 - Operational cost
 - Deployment cost
- Increased:
 - Resiliency
 - Performance
 - Capacity

The Cloud

- Internet-based solution
- Operates on servers
- Limited knowledge of location or server hardware capabilities

Origins of the Cloud

- Engineers used a cloud icon to represent networks they didn't manage
- The cloud indicated, "We're connected to it, but we don't manage it or care about the details of how it works."

Cloud Examples

- Dropbox
- Google
- Microsoft Azure
- Amazon Web Services

Episode 1.02

Benefits of Cloud Computing

AWS Benefits

- Reduced:
 - Hardware cost
 - Operational cost
 - Deployment cost
- Increased:
 - Resiliency
 - Performance
 - Capacity

Episode 1.03

Cloud Computing Models

Full Cloud Deployment

- All components in the cloud
 - Database
 - Processing
 - Storage
 - Application logic
- Nothing on premises

Hybrid Deployment

- Some resources are internal, others are in the cloud
 - Processing
 - Databases
 - Storage
 - Application logic

IaaS

- Infrastructure as a Service (IaaS)
 - Entire infrastructure in the cloud
 - Platforms and software run on others' infrastructure
 - You must manage it all

PaaS

- Platform as a Service (PaaS)
 - You don't manage the infrastructure
 - Applications are deployed on platforms

SaaS

- Software as a Service (SaaS)
 - Someone else develops the software
 - You use it from the cloud

Episode 1.04 AWS History

AWS History

- Launched in 2006 as we know it today
 - Included three services: S3, SQS and EC2
- SQS launched as a single service in 2004
- Simple DB launched in 2007
- More than 10 new services in 2008 (including Elastic IP)
- 2009 introduced the AWS management console
- 2010 gave us Route 53
- 2011 ElastiCache was introduced
- Dynamo DB was introduced in 2012
- AWS certifications launched in 2013
- 2014 added Redshift (SSD-based storage)
- Amazon QuickSight launched in 2015

AWS History

2004 - 2005	2006	2007	2008
AWS public launch	AWS Re-Launch	SimpleB	Elastic IP
• SQS (Simple Queue Services)	•S3 Services		
• Single zone	•SQS Services		
	•EC2 Services		
2009	2010	2011	2012
Management Console	Route 53	ElastiCache	SWF
VPC	IAM	CloudFormation	DynamoDB
	SNS		+160 new features
2013	2014	2015	2017
OpsWorks	Redshift (SSD-based storage)	CloudTrail	Direct Connect
Kineses	516 New Features	Data Pipeline	AWS Organizations
CloudHSM		WAF	EC2 Spot Advisor
AWS Cert. Program		QuickSight	Chime
+280 New Features		722 New Features	

Episode 1.05 AWS Platform

Episode 1.06 Services, Part 1

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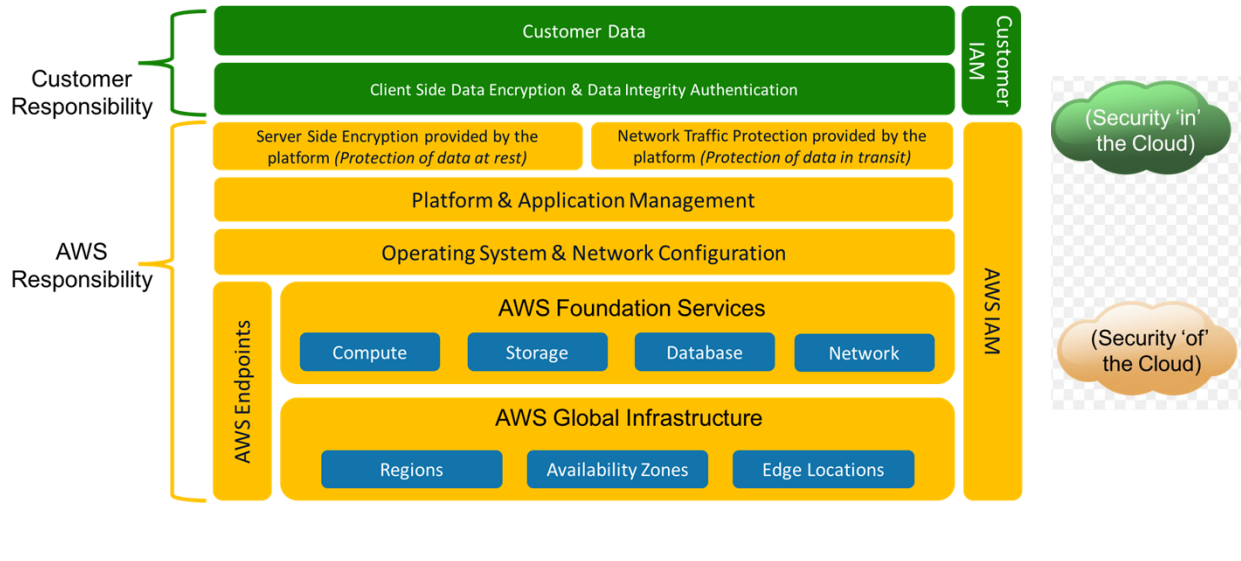
- Explain services by browsing through them in AWS

Episode 1.07 Services, Part 2

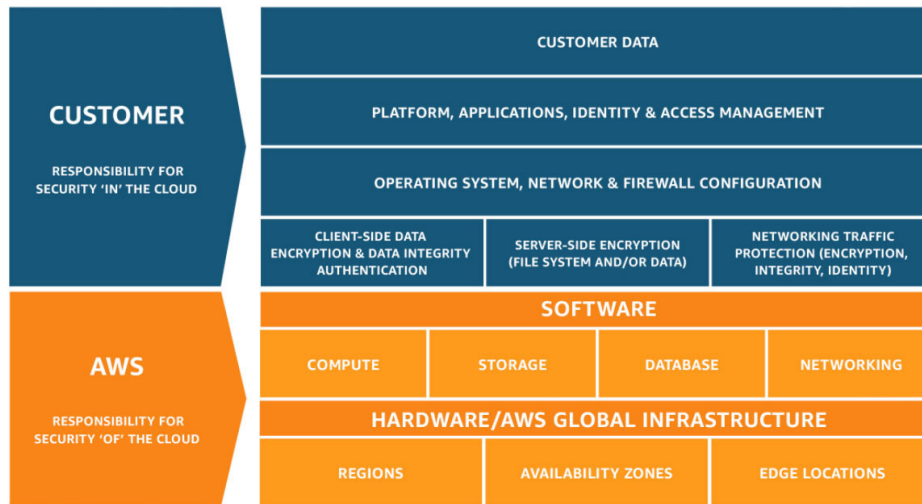
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AWS Security and Compliance

Security and Compliance



Shared Responsibility Model



Episode 1.09

Regions and Availability

Regions and Availability Zones

- Region
 - Physical location or boundary with AWS data centers
- Availability Zone
 - 1-6 data centers
 - Redundant power and networking
 - Multiple availability zones are within regions

DEMO

aws.amazon.com/about-aws/global-infrastructure/