

Solution architecture - 1 overview



Cloud history transformation

Global Infrastructure



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Global Infrastructure



16 Regions & 44 Availability Zones - December 2017

6 More Regions & 17 More AZ's for 2018

CONCEPTS AND COMPONENTS

The AWS Platform



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AR / VR

Application Integration

Analytics

Security & Identity & Compliance

Mobile Services

Management Tools

Media Services

Machine Learning

Migration

Networking & Content Delivery

Developer Tools

Compute

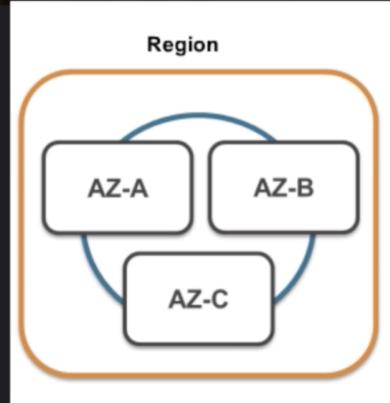
Storage

Databases

AWS Global Infrastructure

Udemy

What is a Region? What is an AZ?



A Region is a geographical area. Each Region consists of 2 (or more) Availability Zones.

An Availability Zone (AZ) is simply a Data Center.

North America



US East (Northern Virginia) Region
EC2 Availability Zones: 6
Launched 2006

US West (Oregon) Region
EC2 Availability Zones: 3
Launched 2011

AWS GovCloud (US-West) Region
EC2 Availability Zones: 2
Launched 2011

US East (Ohio) Region
EC2 Availability Zones: 3
Launched 2016

US West (Northern California) Region
EC2 Availability Zones: 3*
Launched 2009

Canada (Central)
EC2 Availability Zones: 2
Launched 2016
Learn more at [AWS Canada](#)

AWS Edge Network Locations:

North America

Edge locations - Ashburn, VA (3); Atlanta GA (3); Boston, MA; Chicago, IL (2); Dallas/Fort Worth, TX (4); Denver, CO; Hayward, CA; Jacksonville, FL; Los Angeles, CA (2); Miami, FL (2); Minneapolis, MN; Montreal, QC; New York, NY (3); Newark, NJ (2); Palo Alto, CA; Phoenix, AZ; Philadelphia, PA; San Jose, CA; Seattle, WA (3); South Bend, IN; St. Louis, MO; Toronto, ON

Regional Edge Caches - Northern Virginia; Ohio; Oregon

*New customers can access two EC2 Availability Zones in US West (Northern California).

CONCEPTS AND COMPONENTS

What Is An Edge Location?



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Edge Locations are endpoints for AWS which are used for caching content. Typically this consists of CloudFront, Amazon's Content Delivery Network (CDN)

There are many more Edge Locations than Regions.
Currently there are over 96 Edge Locations.

EXAM TIPS



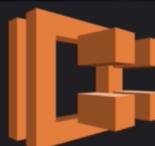
Understand the difference between a region, an Availability Zone (AZ) and an Edge Location.

- A Region is a physical location in the world which consists of two or more Availability Zones (AZ's).
- An AZ is one or more discrete data centers, each with redundant power, networking and connectivity, housed in separate facilities.
- Edge Locations are endpoints for AWS which are used for caching content. Typically this consists of CloudFront, Amazon's Content Delivery Network (CDN)

10,000 Foot Overview - COMPUTE



EC2



EC2

Container Service



Elastic
Beanstalk



Lambda



Lightsail



Batch

CONCEPTS AND COMPONENTS

10,000 Foot Overview - Storage



S3



EFS



Glacier



Snowball



Storage
Gateway

10,000 Foot Overview - Databases



RDS



Elasticache



DynamoDB



Red Shift



VPC



API Gateway



CloudFront



Route53



Direct Connect

CONCEPTS AND COMPONENTS

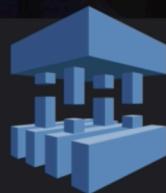
10,000 Foot Overview - Migration



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AWS Migration Hub



Server Migration Service



Application Discovery Service



Database Migration Service



Snowball

10,000 Foot Overview - Developer Tools



CodeStar



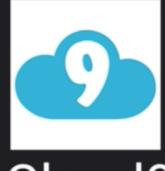
CodeDeploy



CodeCommit



CodePipeline



Cloud9



CodeBuild



X-Ray

Cloud formation makes your deployment your aws simple.

10,000 Foot Overview - Management Tools



CloudWatch



OpsWorks



CloudFormation



Service Catalog



CloudTrail



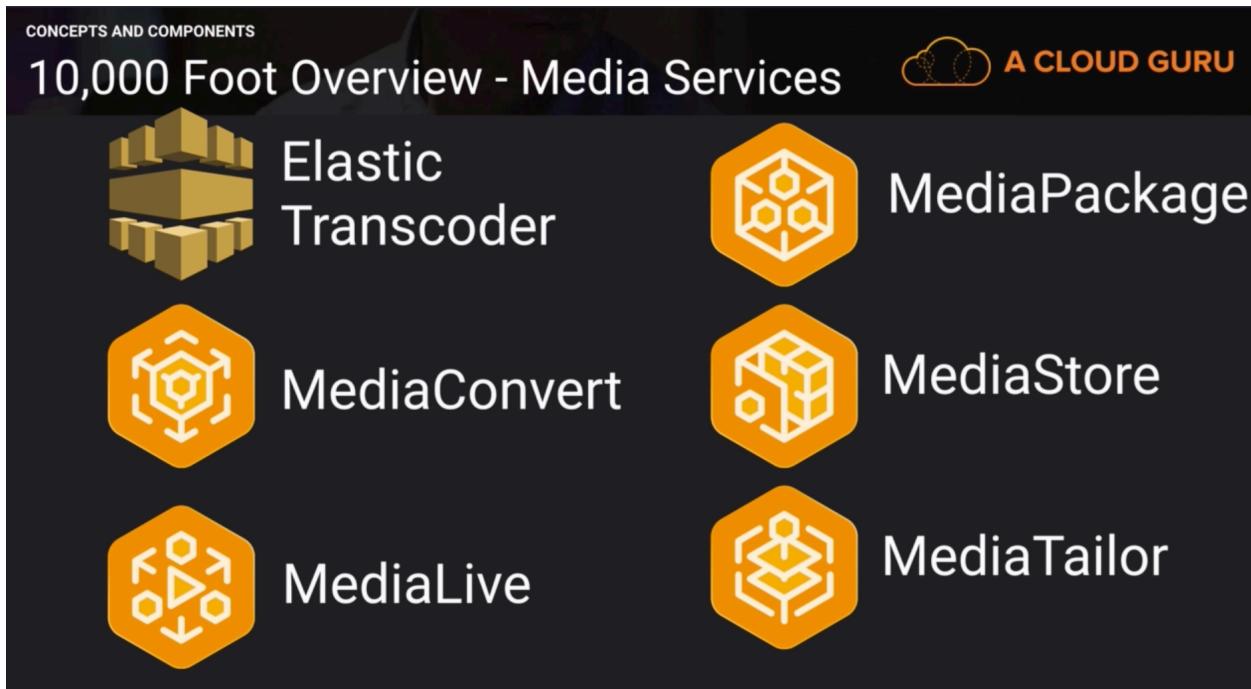
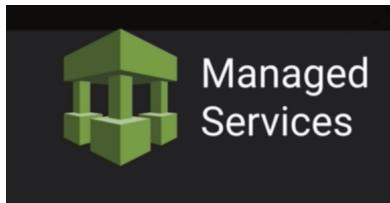
Systems Manager



Config



Trusted Advisor



Comprehend: for sentiment analysis

Deeplens: the camera can know what it see

A physical piece

Lex: a way of communication with customers

Polly : input text and output talk, the voice sounds like human

Recognition: video read

10,000 Foot Overview - Machine Learning



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SageMaker



Machine Learning



Comprehend



Polly



DeepLens



Rekognition



Lex



Transcribe: auto translate it, upload the mp3, and it will auto turn it into text

Quick sight : aws BI tools

10,000 Foot Overview - Analytics



A CLOUD



Athena



Kinesis



EMR



Kinesis Video Streams



CloudSearch



QuickSight



ElasticSearch Service



Data Pipeline



Glue

Glue is for ETL