Amazon Web Services

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Introduction:

What is AWS?- AWS is a cloud service from Amazon, which provides services in the form of building blocks, these building blocks can be used to create and deploy any type of application in the cloud.

Few domains which are widely used are:

- Compute
- Storage
- Database
- Migration
- Network and Content Delivery
- Management Tools
- Security & Identity Compliance
- Messaging

The Compute Domain includes services related to compute workloads, it includes the following services:

- EC2 (Elastic Compute Cloud)
- Lambda
- Elastic Beanstalk
- Amazon LightSail

The Storage domain includes services related data storage, it includes the following services:

- S3 (Simple Storage Service)
- Elastic Block Store
- Amazon Glacier
- AWS Snowball

The Migration domain is used for transferring data to or from the AWS Infrastructure, it includes the following services:

- AWS database Migration Service
- AWS SnowBall

The Networking and Content Delivery domain is used for isolating your network infrastructure, and content delivery is used for faster delivery of content. It includes the following services:

- Amazon Route 53
- AWS CloudFront

The Management Tools domain consists of services which are used to manage other services in AWS, it includes the following services:

- AWS CloudWatch
- AWS CloudFomation
- AWS CloudTrail

The Security & Identity, Compliance domain consist of services which are used to manage to authenticate and provide security to your AWS resources. It consists of the following services:

- AWS IAM
- AWS KMS
- AWS Shield

The Messaging domain consists of services which are used for queuing, notifying or emailing messages. It consists of the following domains:

- Amazon SQS
- Amazon SNS
- Amazon SES

What is Amazon Web Services?

AWS provides on-demand delivery of IT resources via the Internet on a secure cloud services platform, offering compute power, storage, databases, content delivery, and other functionality to help businesses scale and grow.

Using AWS resources instead of your own is like purchasing electricity from a power company instead of running your own generator, and it provides the key advantages of cloud computing: Capacity exactly matches your need, you pay only for what you use, economies of scale result in lower costs, and the service is provided by a vendor experienced in running large-scale networks.

Global infrastructure:

AWS serves over one million active customers in more than 190 countries, and it continues to expand its global infrastructure steadily to help organizations achieve lower latency and higher throughput for their business needs.

AWS provides a highly available technology infrastructure platform with multiple locations worldwide. These locations are composed of **Regions, Availability Zones & Edge Locations**.

Region:

Each region is a separate geographic area. Each region has multiple, isolated locations known as Availability Zones.

Each region is completely independent and is designed to be completely isolated from the other regions.

This achieves the greatest possible fault tolerance and stability. Each Availability Zone is also isolated, but the Availability Zones in a region are connected through low-latency links.

Availability Zone:

These are the physical data centers of AWS, this is the place where actual compute, storage, network, and database resources are hosted. A single availability zone is equal to a single data center.

Availability Zones are physically separated within a typical metropolitan region and are located in lower-risk flood plains

In addition to using a discrete uninterruptable power supply (UPS) and on-site backup generators, they are each fed via different grids from independent utilities (when available) to reduce single points of failure further.

By placing resources in separate Availability Zones, you can protect your website or application from a service disruption impacting a single location.

You can achieve high availability by deploying your application across multiple Availability Zones.

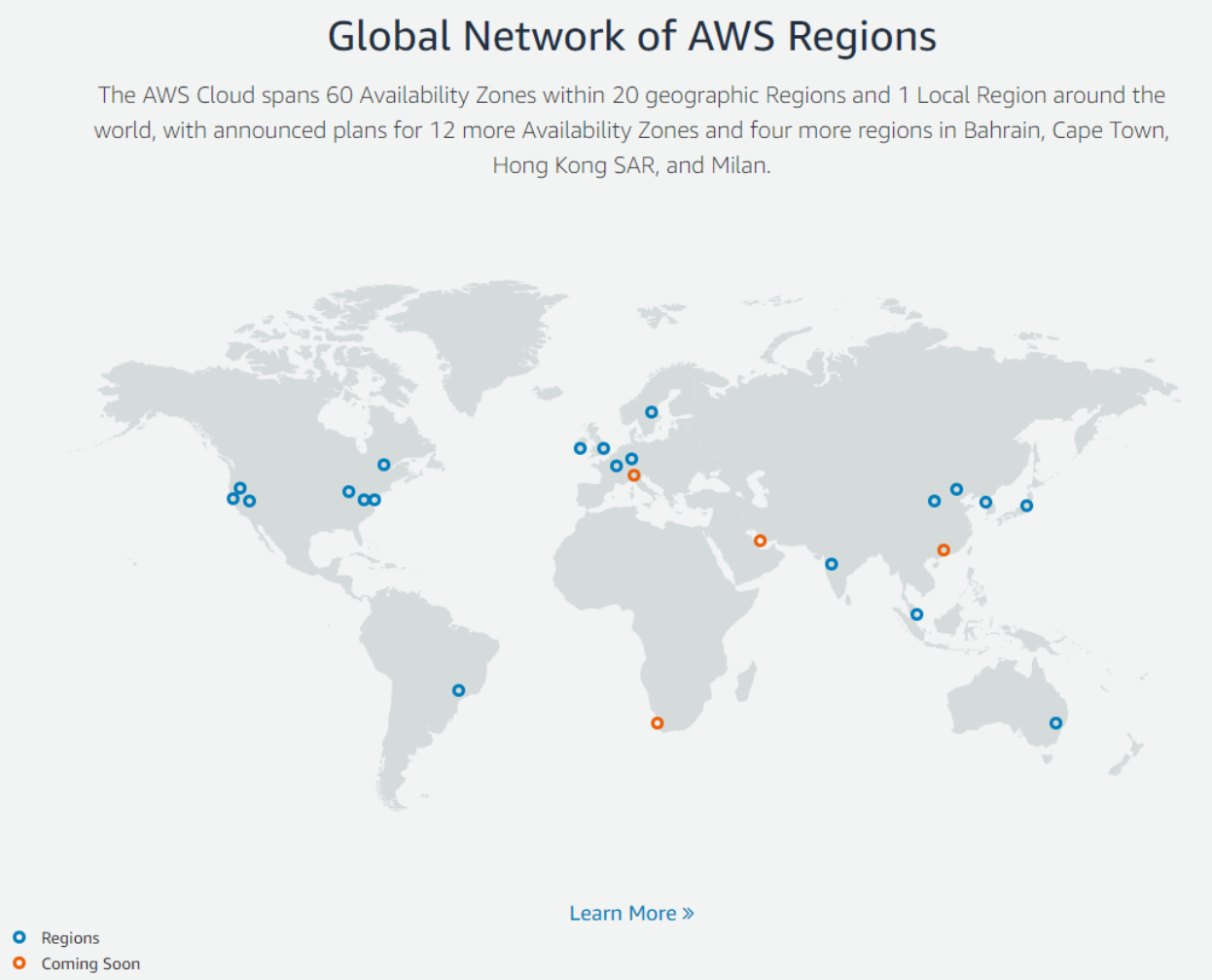
Redundant instances for each tier (for example, web, application, and database) of an application should be placed in distinct Availability Zones, thereby creating a multisite solution.

At a minimum, the goal is to have an independent copy of each application stack in three or more Availability Zones.

Edge Locations:

Edge locations are CDN endpoints. Edge locations are located in most of the major cities around the world and are specifically used by CloudFront (CDN) to distribute content to end user to reduce latency

Regions & Codes (As of 2020)



AWS Platform:

IOT		Game Development
Customer Engagement	Business Applications	Desktop & App Streaming
AR & VR	Application Integration	AWS Cost Management
Analytics	Security, Identity & Compliance	Mobile
Management & Governance	Media Services	Machine Learning
Robotics	BlockChain	Satellite
Migration & Transfer	Network & Content Delivery	Developer Tools
Compute	Storage	Databases
AWS Global Infrastructure		

What I need to know for AWS Solutions Architect Exam:

- Security, Identity & Compliance
- Compute
- Storage
- Network & Content Delivery
- Databases

Databases	
Security, Identity & Compliance	Network & Content Delivery
Compute	Storage
AWS Global Infrastructure	