What's an

Availability Zone?

Think of an Availability Zone as a data center.



What's a Data Center?

A data center is just a building filled with **servers**.



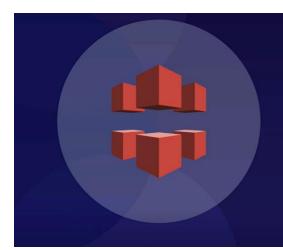
Multiple Data Centers

An Availability Zone may be several data centers, but because they are close together, they are counted as **1 Availability Zone**.

What's a Region?

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





Edge Locations

Edge locations are endpoints for AWS that 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 215 edge locations.

A CLOUD GURU **AWS Service Types End User Computing Quantum Technologies Containers Game Development** IOT **Customer Enablement Customer Engagement Business Applications Desktop & App Streaming** AR & VR **AWS Cost Management Application Integration Analytics** Security, Identity & Compliance Mobile **Management & Governance Media Services Machine Learning Robotics Blockchain** Satellite Migration & Transfer **Network & Content Delivery Developer Tools** Storage Compute **Databases AWS Global Infrastructure**





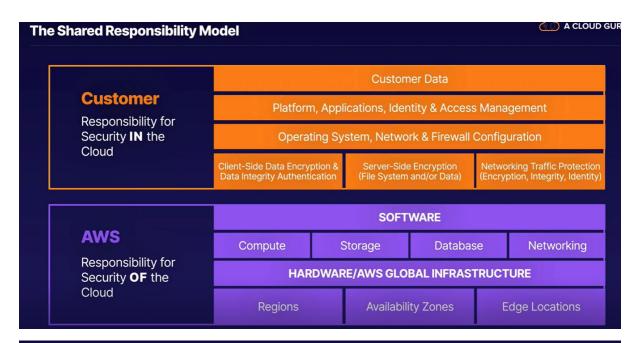
A Region is a physical location in the world that consists of two or more Availability Zones (AZs).



An AZ is one or more discrete data centers — each with redundant power, networking, and connectivity — housed in separate facilities.



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Can you do this yourself in the AWS Management Console?

- If yes, you are likely responsible.
 Security groups, IAM users, patching EC2 operating systems, patching databases running on EC2, etc.
- . If not, AWS is likely responsible. Management of data centers, security cameras, cabling, patching RDS operating systems, etc.
- Encryption is a shared responsibility.

5 Pillars of the **Well-Architected Framework**



Operational Excellence

Focuses on running and monitoring systems to deliver business value, and continually improving processes and procedures.



Security

Focuses on protecting information and systems.



Reliability

Focuses on ensuring a workload performs its intended function correctly and consistently when it's expected to.



Performance Efficiency

Focuses on using IT and computing resources efficiently.



Cost Optimization

Focuses on avoiding unnecessary costs.

Key Services to Know for the Exam

- Compute: EC2, Lambda, Elastic Beanstalk
- Storage: S3, EBS, EFS, FSx, Storage Gateway
- ✓ **Databases:** RDS, DynamoDB, Redshift
- Networking: VPCs, Direct Connect, Route 53, API Gateway, AWS Global Accelerator