

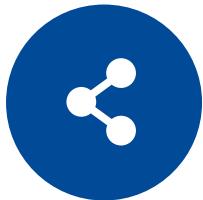
Certified Solutions Architect Associate

https://d1.awsstatic.com/training-and-certification/docs-sa-assoc/AWS-Certified-Solutions-Architect-Associate_Exam-Guide.pdf





Exam 4 domains



- + Design Resilient Architectures 30%
- + Design High-Performing Architectures 28%
- + Design Secure Applications and Architectures 24%
- + Design Cost-Optimized Architectures 18%

24 Regions, 77 Availability Zones



- Regions
- Coming Soon

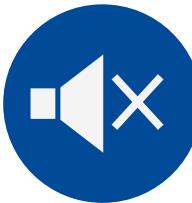
Created by AWS

What is a data center?

A data center is just a
building filled with servers



Availability Zone

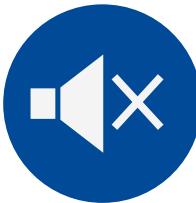


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An availability zone may be several data centers, but because they are close together, they are counted as 1 availability zone

What's a Region?

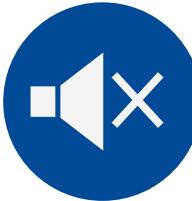


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A Region is a geographical area. Each region consist of 2 (or more) Availability zones

Edge Location

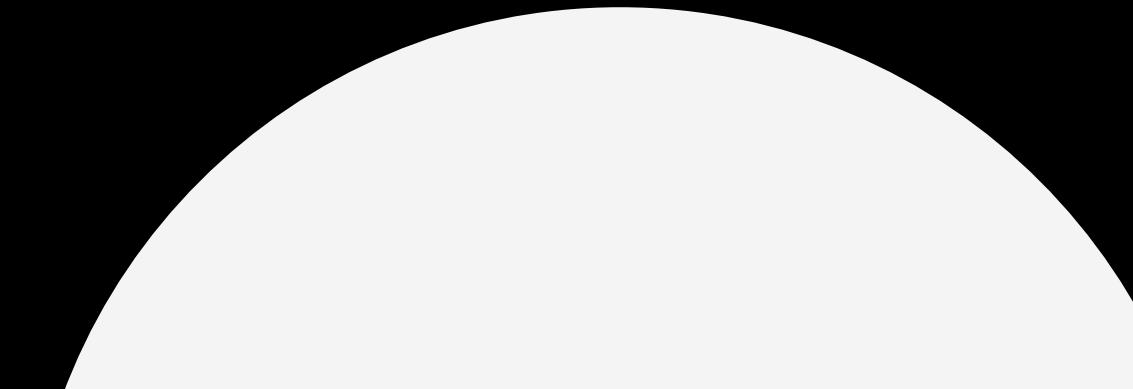
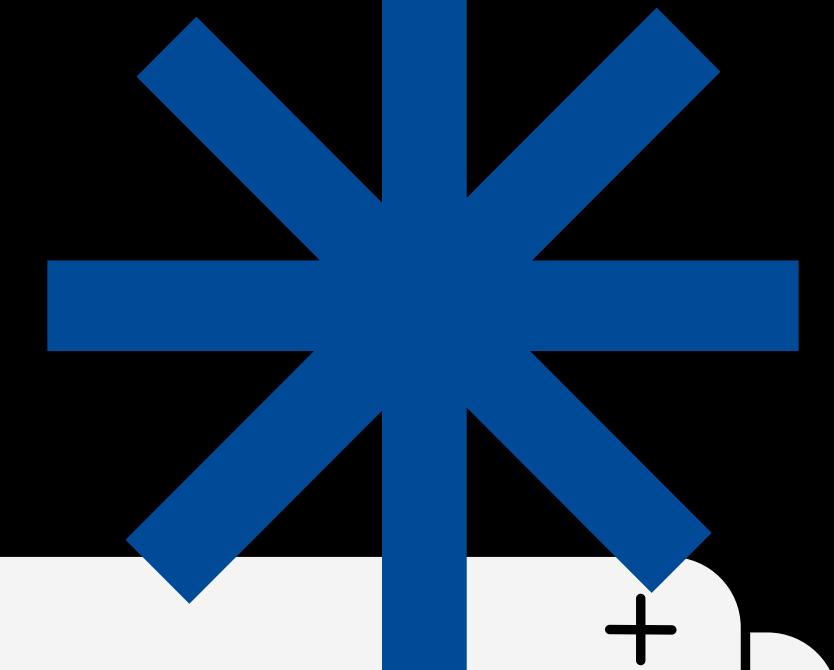


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Edge locations are endpoints for AWS
that are used for caching content.

Typically used on AWS Cloud Front
(CDN)



Shared Responsibility Model

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.**

CUSTOMER

RESPONSIBILITY FOR
SECURITY 'IN' THE CLOUD

AWS

RESPONSIBILITY FOR
SECURITY 'OF' THE CLOUD

CUSTOMER DATA

PLATFORM, APPLICATIONS, IDENTITY & ACCESS MANAGEMENT

OPERATING SYSTEM, NETWORK & FIREWALL CONFIGURATION

CLIENT-SIDE DATA
ENCRYPTION & DATA INTEGRITY
AUTHENTICATION

SERVER-SIDE ENCRYPTION
(FILE SYSTEM AND/OR DATA)

NETWORKING TRAFFIC
PROTECTION (ENCRYPTION,
INTEGRITY, IDENTITY)

SOFTWARE

COMPUTE

STORAGE

DATABASE

NETWORKING

HARDWARE/AWS GLOBAL INFRASTRUCTURE

REGIONS

AVAILABILITY ZONES

EDGE LOCATIONS

Compute

You wouldn't be able to build an application without compute power — you need something crunching the data.

-  **EC2**
-  **Lambda**
-  **Elastic Beanstalk**





Storage

Think of storage like a giant disk in the cloud — it's a safe place to save your information.

✓ **S3**

✓ **FSx**

✓ **EBS**

✓ **Storage Gateway**

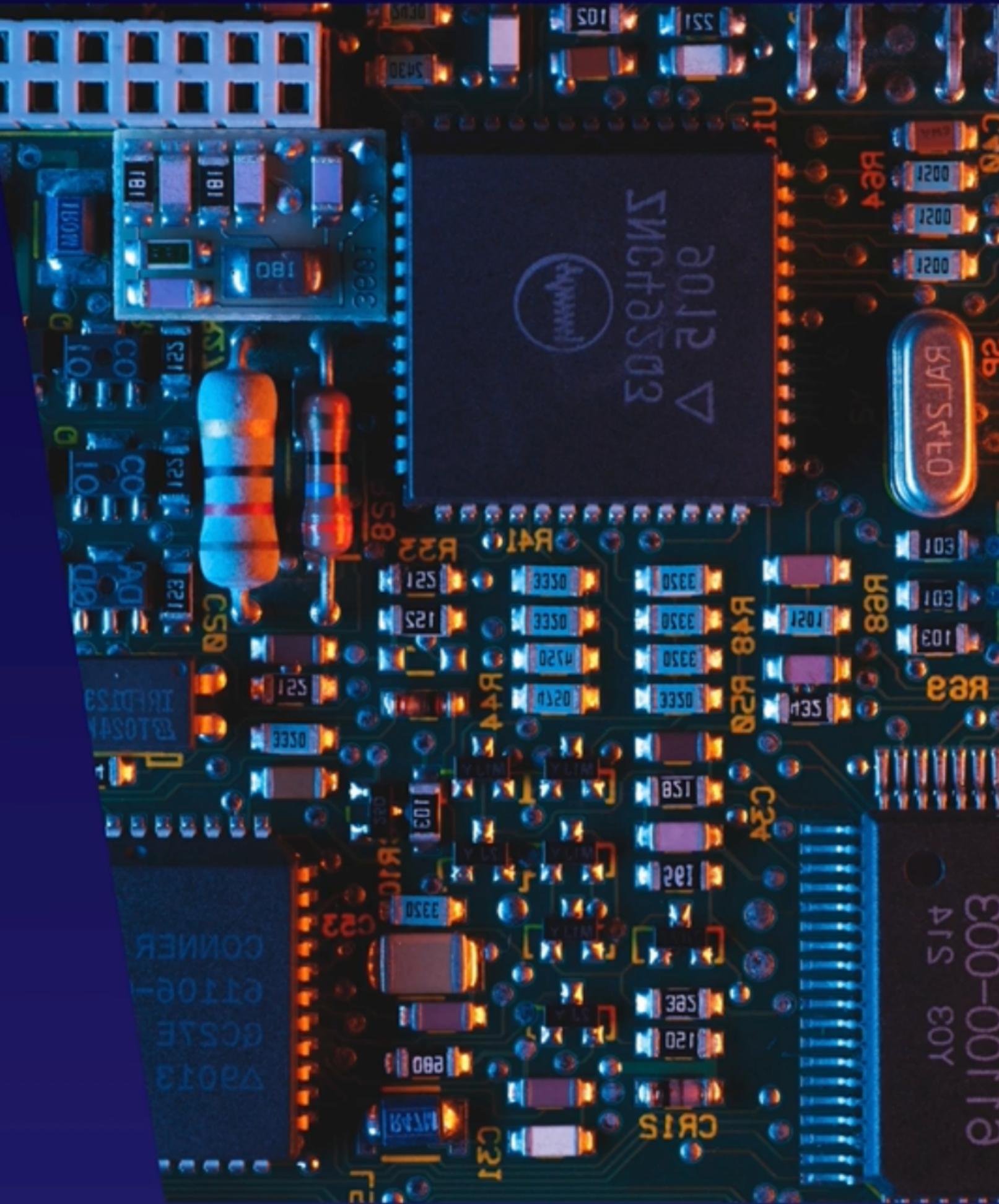
✓ **EFS**

Databases

Databases

The easiest way to think of a database is a spreadsheet.
It's a reliable way to store and retrieve information.

-  RDS
-  DynamoDB
-  Redshift



Networking



We need a way for our compute, storage, and databases to communicate and even a place for them to live. This is where networking comes in.

- ✓ VPCs

- ✓ Direct Connect

- ✓ Route 53

- ✓ API Gateway

- ✓ AWS Global Accelerator

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.