

AWS Cloud Practitioner Essentials – Accenture

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Course Overview

Agenda

Introduction: Course Overview

Module 1: Introduction to Amazon Web Services

Module 2: Compute in the Cloud

Module 3: Global Infrastructure and Reliability

Module 4: Networking

Module 5: Storage and Databases

Module 6: Security

Module 7: Monitoring and Analytics

Module 8: Pricing and Support

Module 9: Migration and Innovation

Module 10: AWS Certified Cloud Practitioner Basics

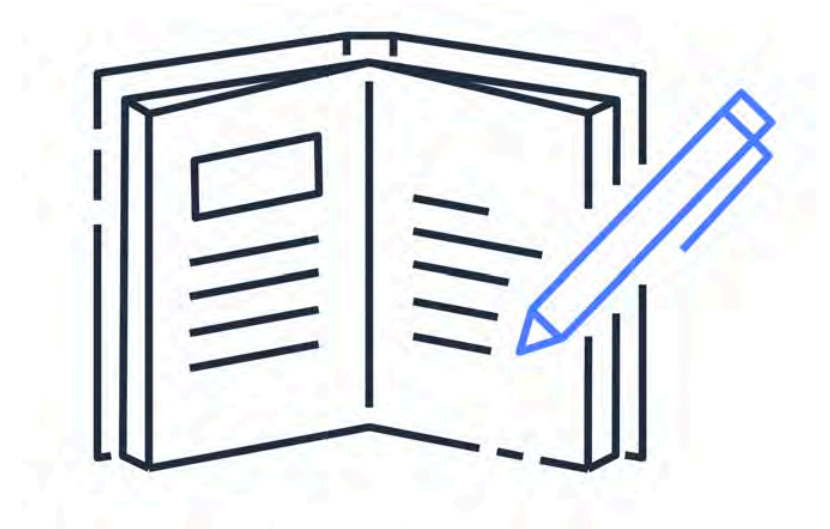
Module 1

Introduction to Amazon Web Services

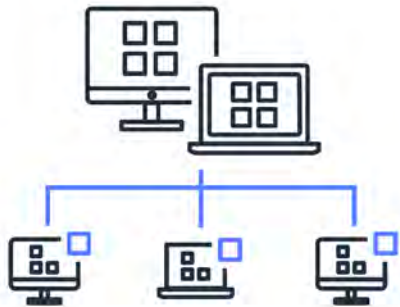
Module 1 objectives

In this module, you will learn how to:

- Describe three cloud computing deployment models
- Describe six benefits of cloud computing



What is cloud computing?



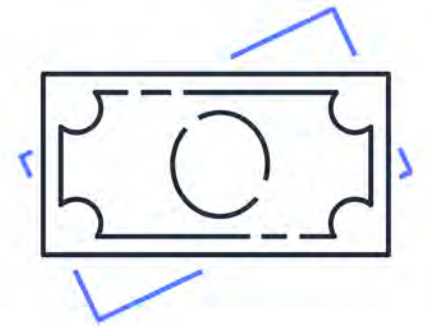
Access services
on demand



Avoid large upfront
investments



Provision computing
resources as needed



Pay only for what
you use

*The on-demand delivery of IT resources and applications
through the internet.*

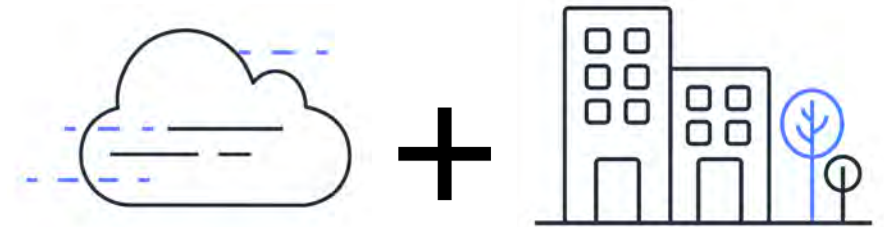
Cloud computing deployment models



Cloud



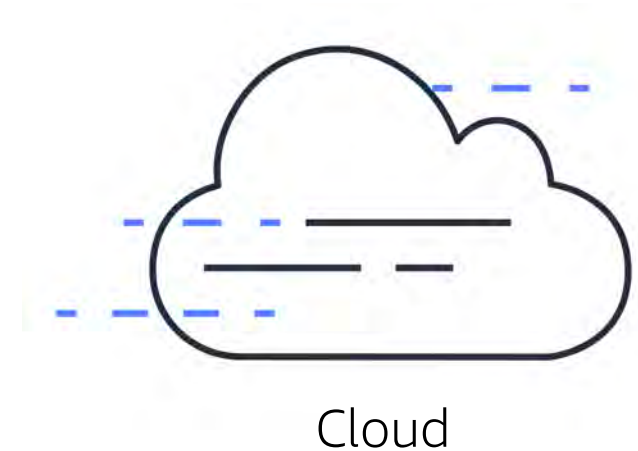
On premises



Hybrid

Cloud-based deployment

- Run all parts of the application in the cloud
- Migrate existing applications to the cloud
- Design and build new applications in the cloud



On-premises deployment

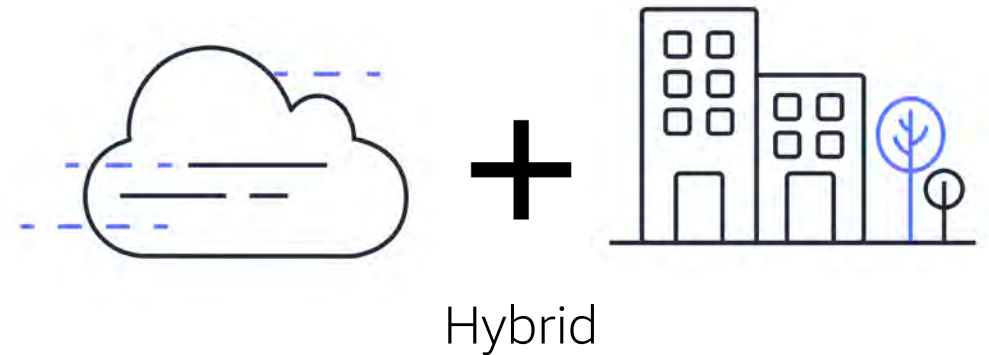
- Use virtualization and resource management tools to deploy resources
- Use application management and virtualization technologies to increase resource usage

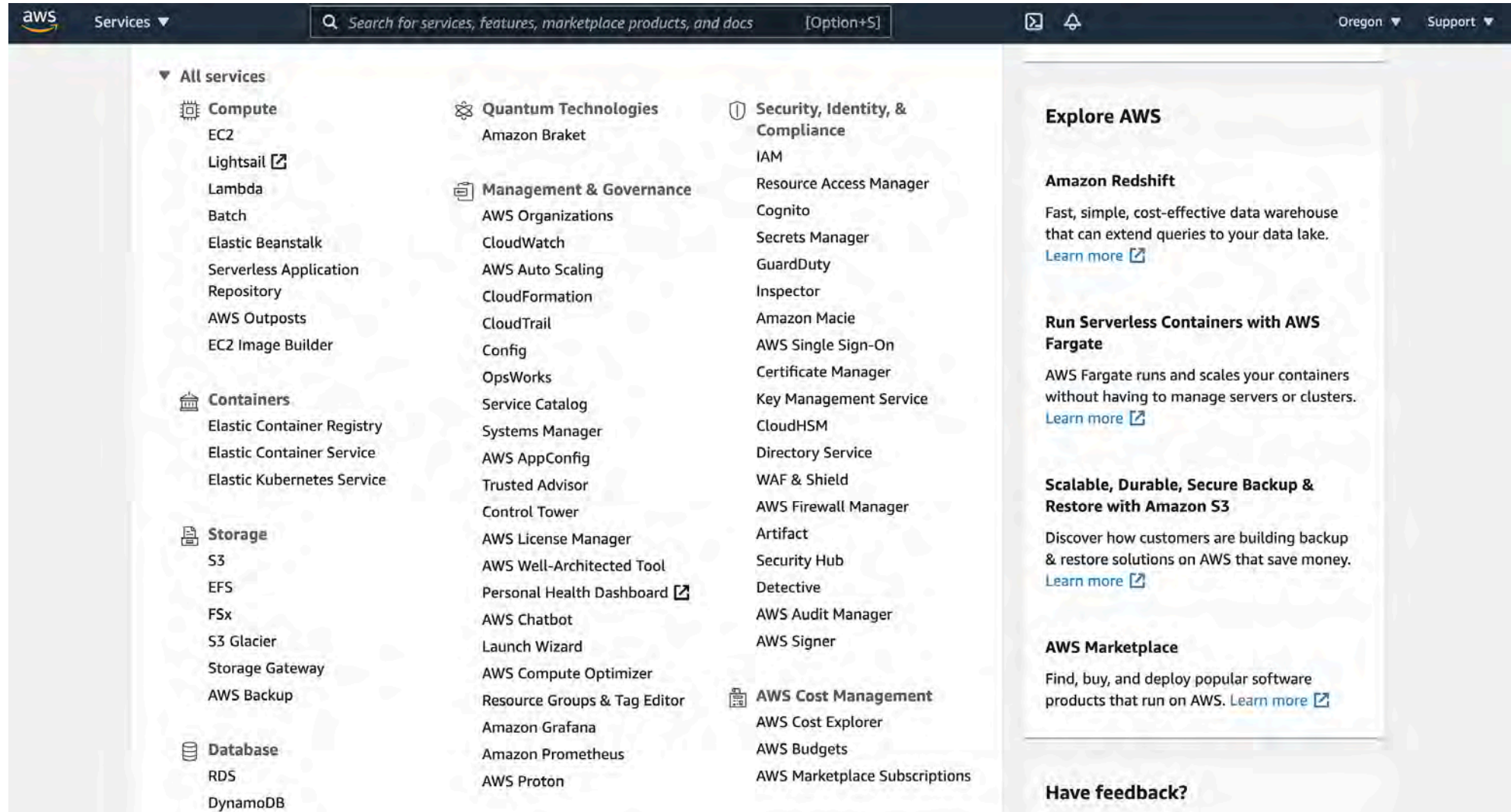


On premises

Hybrid deployment

- Connect cloud-based resources to on-premises infrastructure
- Integrate cloud-based resources with legacy IT applications





The screenshot shows the AWS Management Console's 'Services' page. At the top, there's a navigation bar with the AWS logo, a 'Services' dropdown, a search bar with the placeholder text 'Search for services, features, marketplace products, and docs', and a '[Option+S]' shortcut. On the right of the navigation bar are links for 'Oregon' and 'Support'. The main content area is divided into a left sidebar and a main panel. The sidebar, under 'All services', lists categories: Compute (EC2, Lightsail, Lambda, Batch, Elastic Beanstalk, Serverless Application Repository, AWS Outposts, EC2 Image Builder), Containers (Elastic Container Registry, Elastic Container Service, Elastic Kubernetes Service), Storage (S3, EFS, FSx, S3 Glacier, Storage Gateway, AWS Backup), and Database (RDS, DynamoDB). The main panel displays three columns of services: Quantum Technologies (Amazon Braket), Management & Governance (AWS Organizations, CloudWatch, AWS Auto Scaling, CloudFormation, CloudTrail, Config, OpsWorks, Service Catalog, Systems Manager, AWS AppConfig, Trusted Advisor, Control Tower, AWS License Manager, AWS Well-Architected Tool, Personal Health Dashboard, AWS Chatbot, Launch Wizard, AWS Compute Optimizer, Resource Groups & Tag Editor, Amazon Grafana, Amazon Prometheus, AWS Proton), Security, Identity, & Compliance (IAM, Resource Access Manager, Cognito, Secrets Manager, GuardDuty, Inspector, Amazon Macie, AWS Single Sign-On, Certificate Manager, Key Management Service, CloudHSM, Directory Service, WAF & Shield, AWS Firewall Manager, Artifact, Security Hub, Detective, AWS Audit Manager, AWS Signer), and AWS Cost Management (AWS Cost Explorer, AWS Budgets, AWS Marketplace Subscriptions). On the right side of the console, there's an 'Explore AWS' section with four featured services: Amazon Redshift, Run Serverless Containers with AWS Fargate, Scalable, Durable, Secure Backup & Restore with Amazon S3, and AWS Marketplace. Each entry includes a brief description and a 'Learn more' link. At the bottom of this section is a 'Have feedback?' link.

Services ▼

Search for services, features, marketplace products, and docs [Option+S]

Oregon ▼ Support ▼

▼ All services

- Compute**
 - EC2
 - Lightsail
 - Lambda
 - Batch
 - Elastic Beanstalk
 - Serverless Application Repository
 - AWS Outposts
 - EC2 Image Builder
- Containers**
 - Elastic Container Registry
 - Elastic Container Service
 - Elastic Kubernetes Service
- Storage**
 - S3
 - EFS
 - FSx
 - S3 Glacier
 - Storage Gateway
 - AWS Backup
- Database**
 - RDS
 - DynamoDB

Quantum Technologies

- Amazon Braket

Management & Governance

- AWS Organizations
- CloudWatch
- AWS Auto Scaling
- CloudFormation
- CloudTrail
- Config
- OpsWorks
- Service Catalog
- Systems Manager
- AWS AppConfig
- Trusted Advisor
- Control Tower
- AWS License Manager
- AWS Well-Architected Tool
- Personal Health Dashboard
- AWS Chatbot
- Launch Wizard
- AWS Compute Optimizer
- Resource Groups & Tag Editor
- Amazon Grafana
- Amazon Prometheus
- AWS Proton

Security, Identity, & Compliance

- IAM
- Resource Access Manager
- Cognito
- Secrets Manager
- GuardDuty
- Inspector
- Amazon Macie
- AWS Single Sign-On
- Certificate Manager
- Key Management Service
- CloudHSM
- Directory Service
- WAF & Shield
- AWS Firewall Manager
- Artifact
- Security Hub
- Detective
- AWS Audit Manager
- AWS Signer

AWS Cost Management

- AWS Cost Explorer
- AWS Budgets
- AWS Marketplace Subscriptions

Explore AWS

Amazon Redshift

Fast, simple, cost-effective data warehouse that can extend queries to your data lake. [Learn more](#)

Run Serverless Containers with AWS Fargate

AWS Fargate runs and scales your containers without having to manage servers or clusters. [Learn more](#)

Scalable, Durable, Secure Backup & Restore with Amazon S3

Discover how customers are building backup & restore solutions on AWS that save money. [Learn more](#)

AWS Marketplace

Find, buy, and deploy popular software products that run on AWS. [Learn more](#)

Have feedback?

Cloud computing benefits

Upfront expenses



Invest in technology
resources before using
them

Variable expenses



Pay only for what you use

Cost optimization



Run data centers



Focus on applications and
customers

Investment



Stop guessing on your
infrastructure capacity
needs



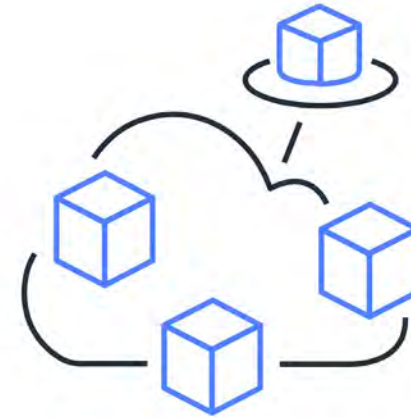
Scale in and scale out as
needed

Smaller scale



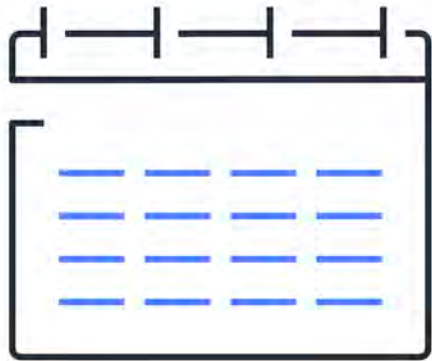
Pay higher prices based on
only your own usage

Economies of scale



Benefit from customers'
aggregated usage

Data centers



Weeks between wanting
resources and having
resources

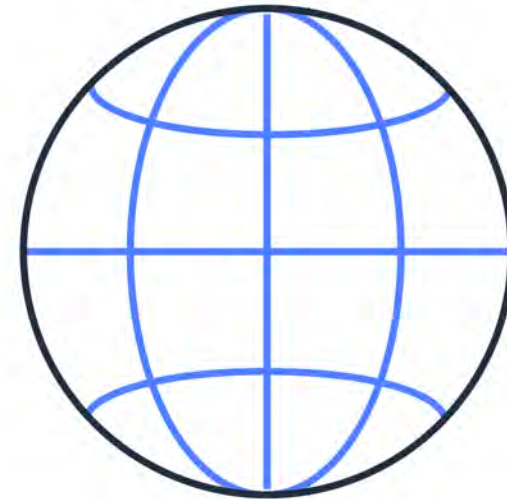
Cloud computing



Minutes between wanting
resources and having
resources

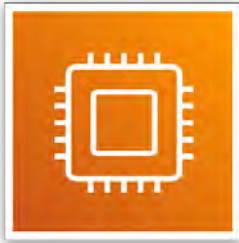


Quickly deploy applications
worldwide



Use the AWS global
infrastructure.

AWS core service categories



Compute



Networking and
Content Delivery



Storage



Database



Security, Identity,
and Compliance



Management
and Governance

Module 1

Knowledge check

Knowledge check question 1



What is cloud computing?

- A. Backing up files that are stored on desktop and mobile devices to prevent data loss
- B. Deploying applications that are connected to an on-premises infrastructure
- C. Using on-demand delivery of IT resources and applications through the internet
- D. Running code without needing to manage or provision servers

Knowledge check answer 1



What is cloud computing?

- A. Backing up files that are stored on desktop and mobile devices to prevent data loss
- B. Deploying applications that are connected to an on-premises infrastructure
- C. Using on-demand delivery of IT resources and applications through the internet (correct)
- D. Running code without needing to manage or provision servers

Knowledge check question 2



What is another name for on-premises deployment?

- A. Cloud-based application
- B. Hybrid deployment
- C. Private cloud deployment
- D. AWS Cloud

Knowledge check answer 2



What is another name for on-premises deployment?

- A. Cloud-based application
- B. Hybrid deployment
- C. Private cloud deployment (correct)
- D. AWS Cloud

Knowledge check question 3



How does the scale of cloud computing help you save costs?

- A. You do not have to invest in technology resources before using them.
- B. The aggregated cloud usage from a large number of customers results in lower pay-as-you-go prices.
- C. Accessing services on-demand helps prevent excess or limited capacity.
- D. You can quickly deploy applications to customers and provide low latency.

Knowledge check answer 3



How does the scale of cloud computing help you save costs?

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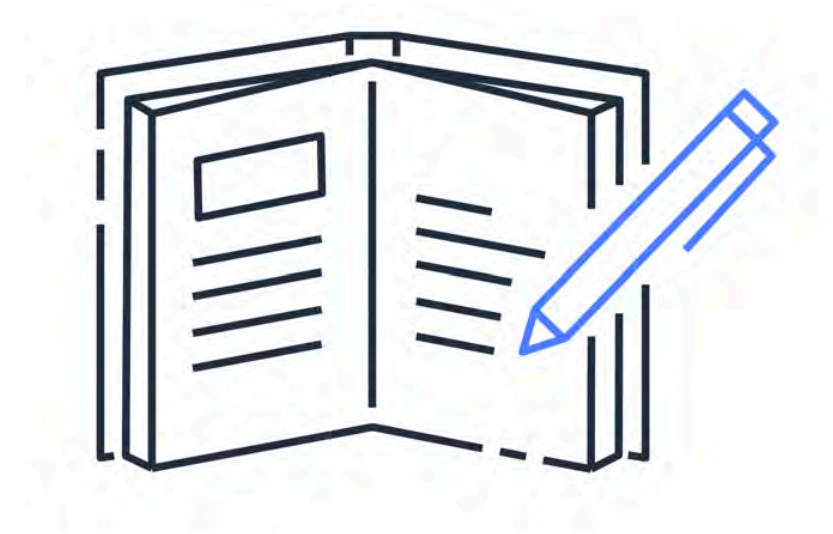
Module 2

Compute in the Cloud

Module 2 objectives

In this module, you will learn how to:

- Describe Amazon EC2 benefits
- Identify the Amazon EC2 instance types
- Differentiate among Amazon EC2 billing options
- Summarize Amazon EC2 Auto Scaling benefits
- Summarize Elastic Load Balancing benefits
- Provide examples of Elastic Load Balancing uses
- Describe differences between Amazon SNS and Amazon SQS
- Summarize additional AWS compute options

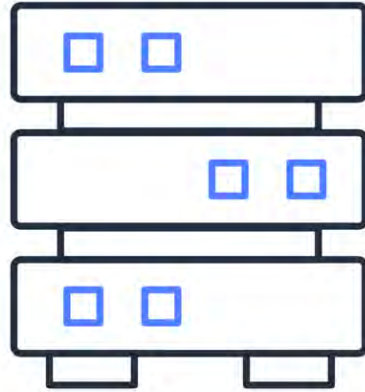


Amazon Elastic Compute Cloud (Amazon EC2)

How Amazon EC2 works



Launch an
instance



Connect to the
instance



Use the instance

Amazon EC2 instance types

Amazon EC2 instance types

General purpose

- Balances compute, memory, and networking resources
- Suitable for a broad range of workloads

Compute optimized

- Offers high-performance processors
- Ideal for compute-intensive applications and batch processing workloads

Memory optimized

- Delivers fast performance for memory-intensive workloads
- Well suited for high-performance databases

Accelerated computing

- Uses hardware accelerators to expedite data processing
- Ideal for application streaming and graphics workloads

Storage optimized

- Offers low latency and high input/output operations per second (IOPS)
- Suitable for workloads such as distributed file systems and data warehousing applications

Match: Amazon EC2 instance types

1. Ideal for high-performance databases

2. Suitable for data warehousing applications

3. Balances compute, memory, and networking resources

4. Offers high-performance processors

A. General purpose

B. Compute optimized

C. Memory optimized

D. Storage optimized

Match: Amazon EC2 instance types

1. Ideal for high-performance databases

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A. General purpose

B. Compute optimized

C. Memory optimized

D. Storage optimized

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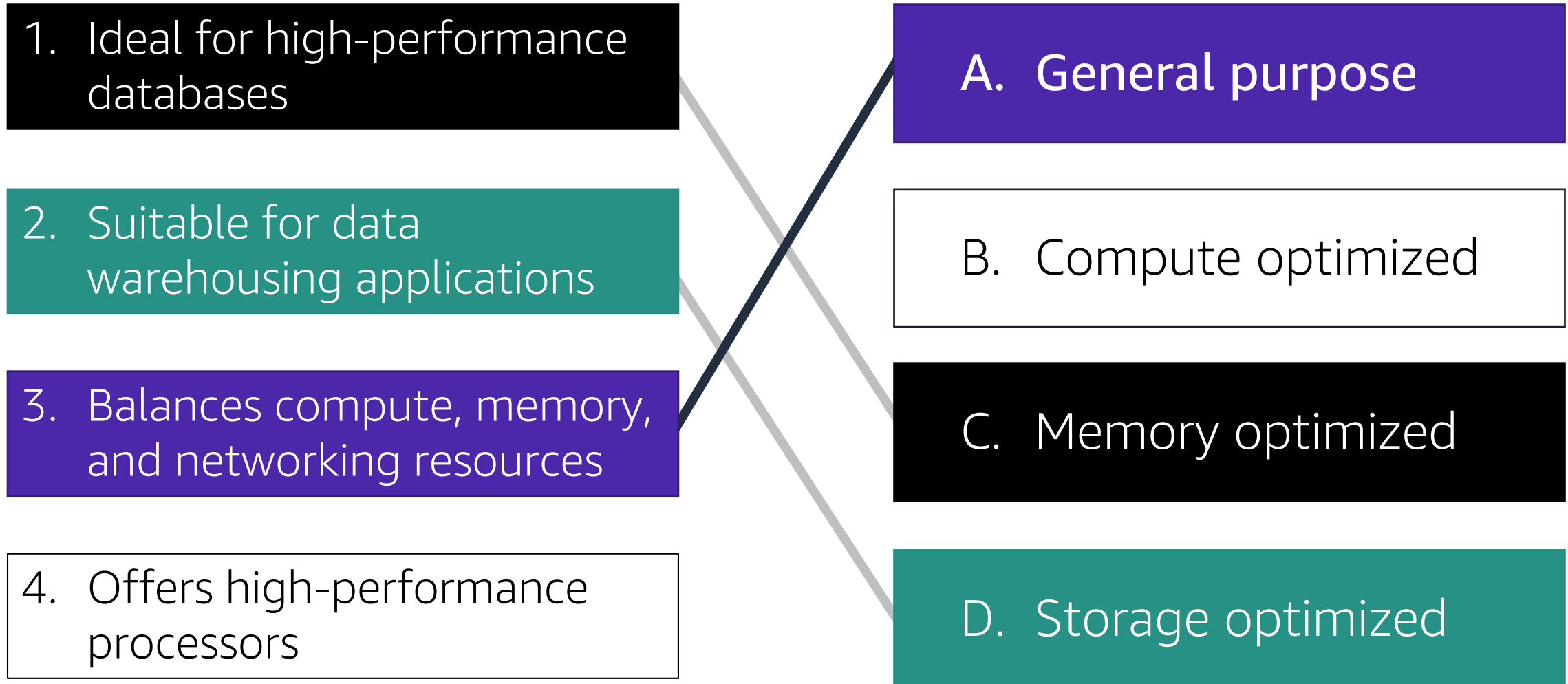
A. General purpose

B. Compute optimized

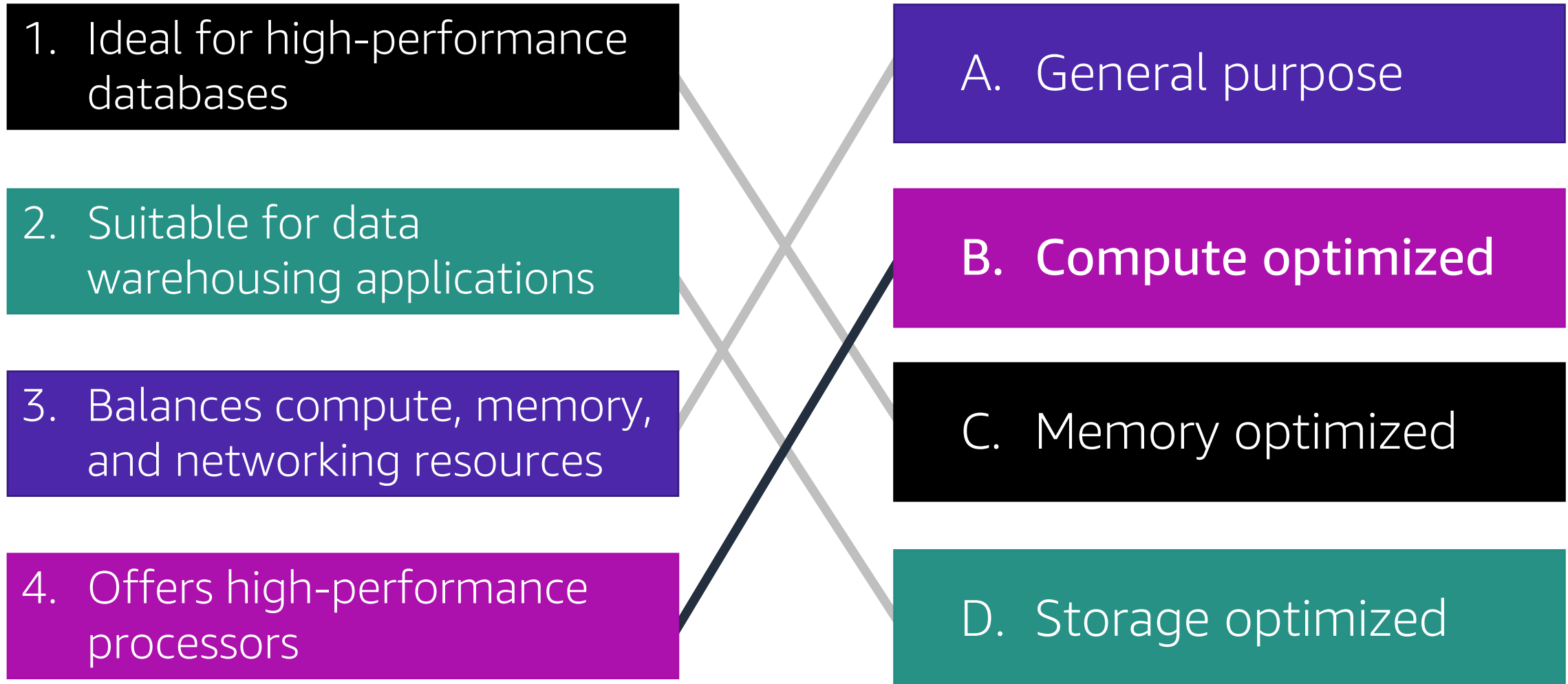
C. Memory optimized

D. Storage optimized

Match: Amazon EC2 instance types



Match: Amazon EC2 instance types



Amazon EC2 pricing

Amazon EC2 instance pricing options

On-Demand

- No upfront costs or minimum contracts
- Ideal for short-term, irregular workloads

Spot

- Ideal for workloads with flexible start and end times
- Offers savings over On-Demand prices

Amazon EC2 instance pricing options

Reserved

- Provides a billing discount over On-Demand pricing
- Requires a 1-year or 3-year term commitment

Compute Savings Plan

- Offers up to 72% savings over On-Demand costs for a consistent amount of compute usage
- Requires a 1-year or 3-year term commitment

Dedicated Instance

- An EC2 *instance* that runs in a VPC on hardware for a single customer
- Higher cost compared to standard Amazon EC2 instances

Dedicated Host

- A *physical server* with EC2 instance capacity for a single customer
- Most expensive Amazon EC2 option

Knowledge check question



What is the difference between
Compute Savings Plans and Spot
Instances?

Knowledge check answer

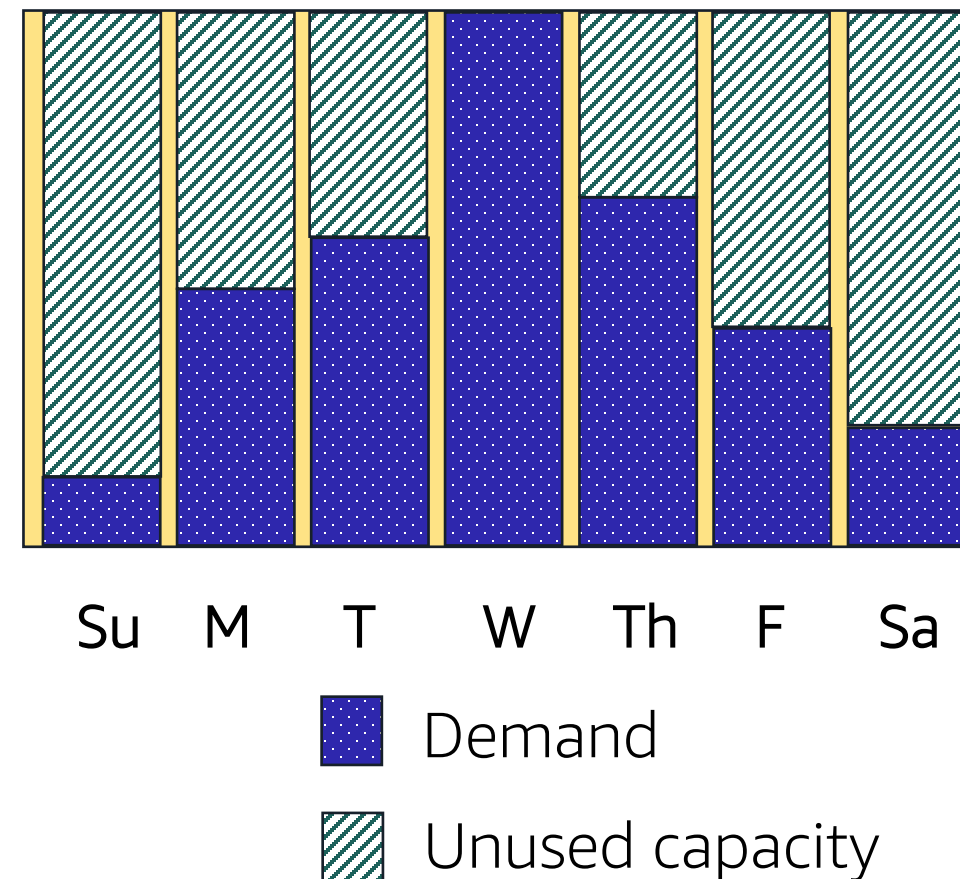


- Compute Savings Plans are ideal for workloads that involve a consistent amount of compute usage over a 1-year or 3-year term.
- Spot Instances are ideal for workloads with flexible start and end times, or that can withstand interruptions.

Amazon EC2 Auto Scaling

Amazon EC2 Auto Scaling

- Scale capacity as computing requirements change
- Use dynamic scaling and predictive scaling



Elastic Load Balancing

Elastic Load Balancing

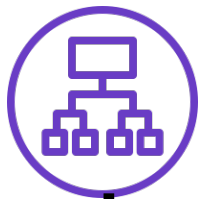
- Automatically distributes traffic across multiple resources
- Provides a single point of contact for your Auto Scaling group



Elastic Load Balancing

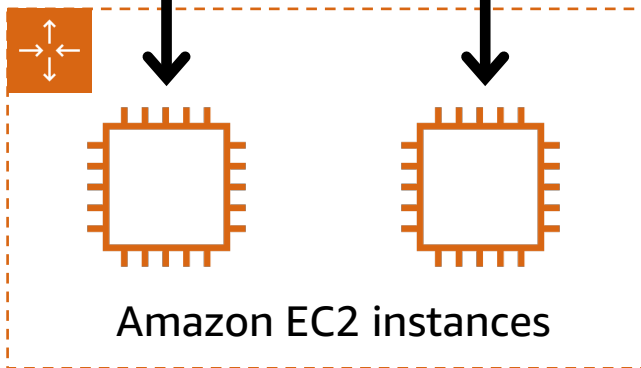
Scalability and load balancing

Low-demand period



Elastic Load Balancing

Auto Scaling group



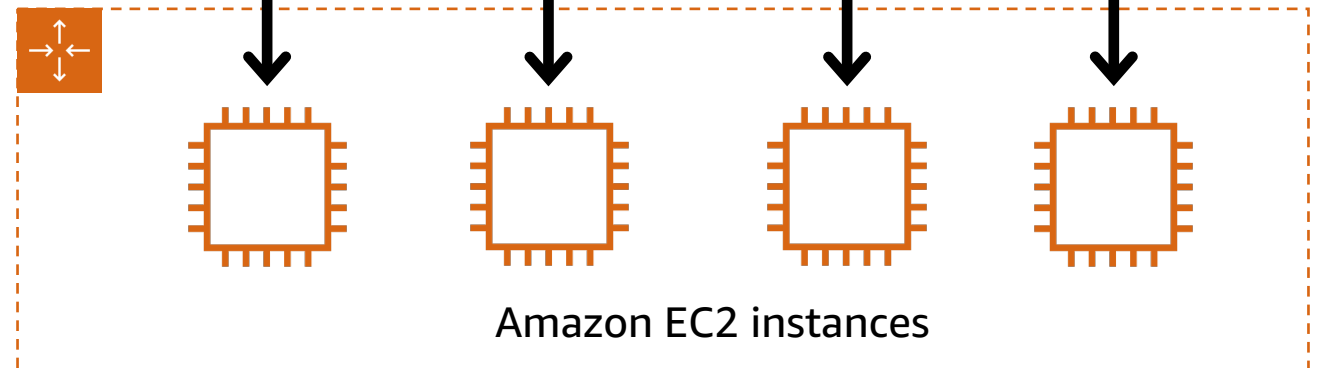
Amazon EC2 instances

High-demand period



Elastic Load Balancing

Auto Scaling group



Amazon EC2 instances

Auto Scaling and Elastic Load Balancing

Are these examples of **Auto Scaling** or **Elastic Load Balancing**?

Auto Scaling

1. Removes unneeded Amazon EC2 instances when demand is low

2. Adds a second Amazon EC2 instance during an online store's popular sale

Auto Scaling

Elastic Load Balancing

3. Distributes a workload across several Amazon EC2 instances

4. Ensures that no single EC2 instance has to carry the full workload on its own

Elastic Load Balancing

Auto Scaling

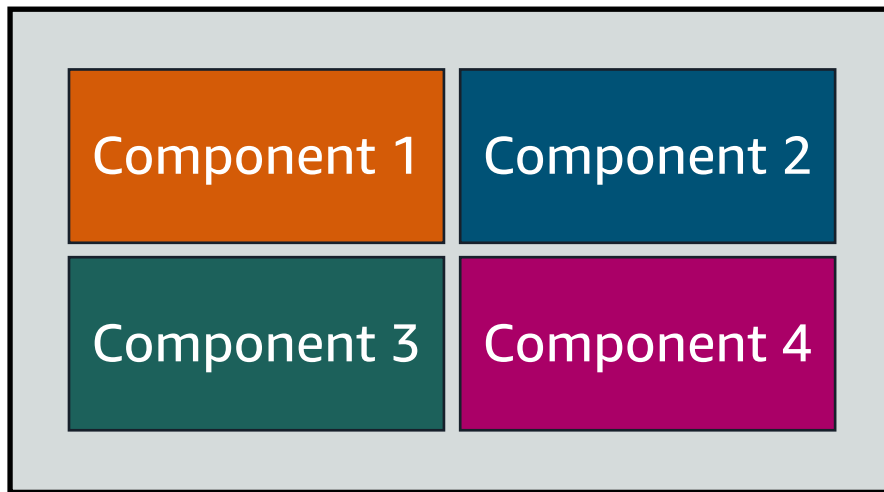
5. Automatically adjusts the number of Amazon EC2 instances to match demand

6. Provides a single point of contact for traffic into an Auto Scaling group

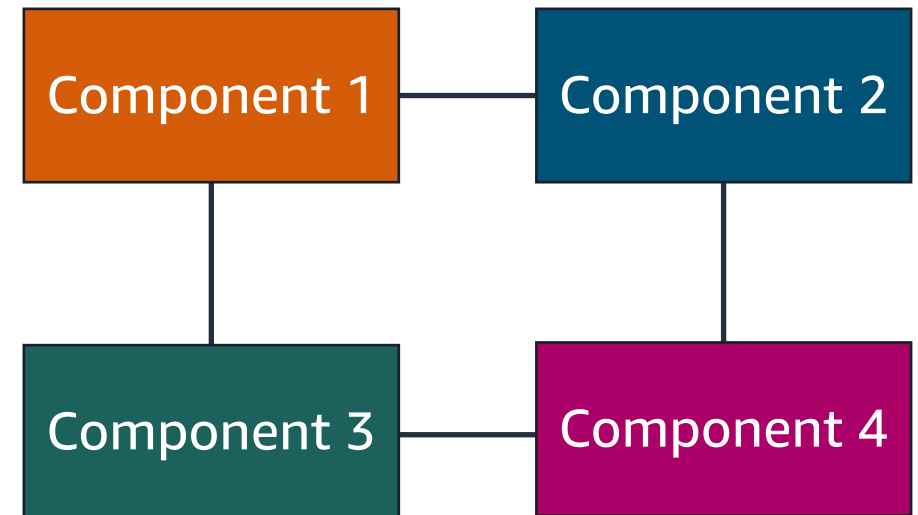
Elastic Load Balancing

AWS messaging services

Monolithic application

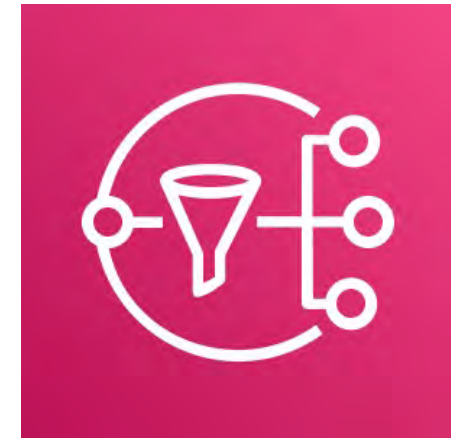


Microservices



Amazon Simple Notification Service

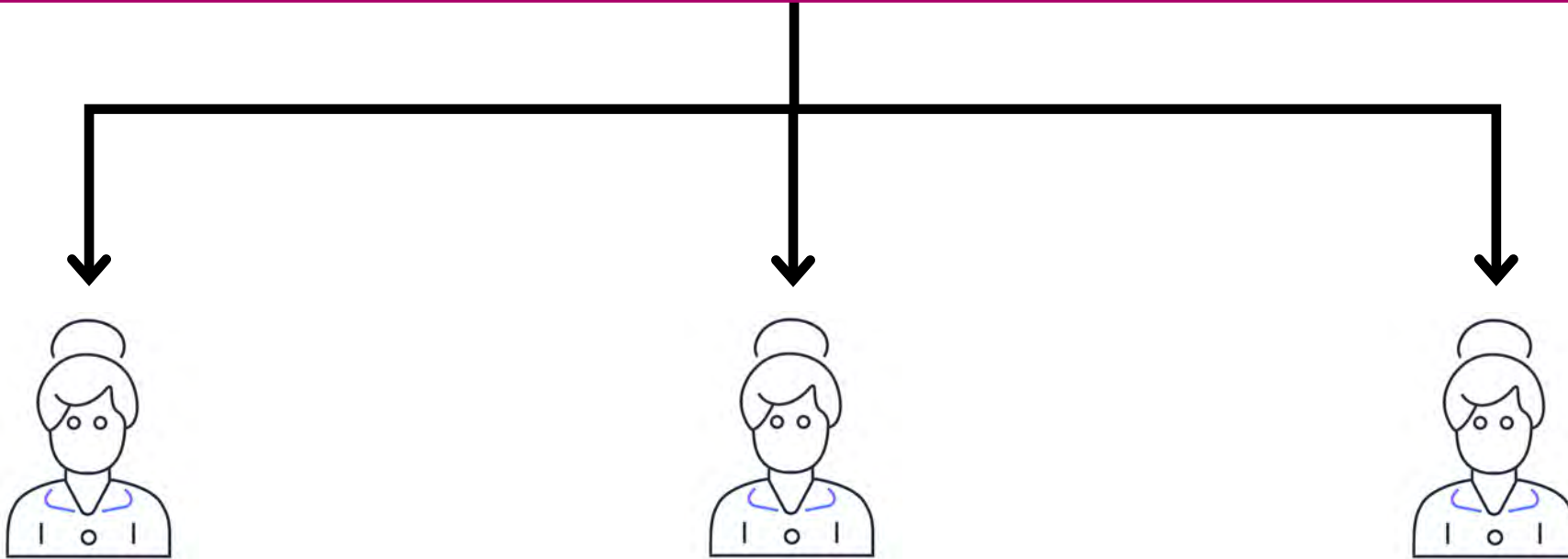
- Messages are published to topics.
- Subscribers immediately receive messages for their topics.



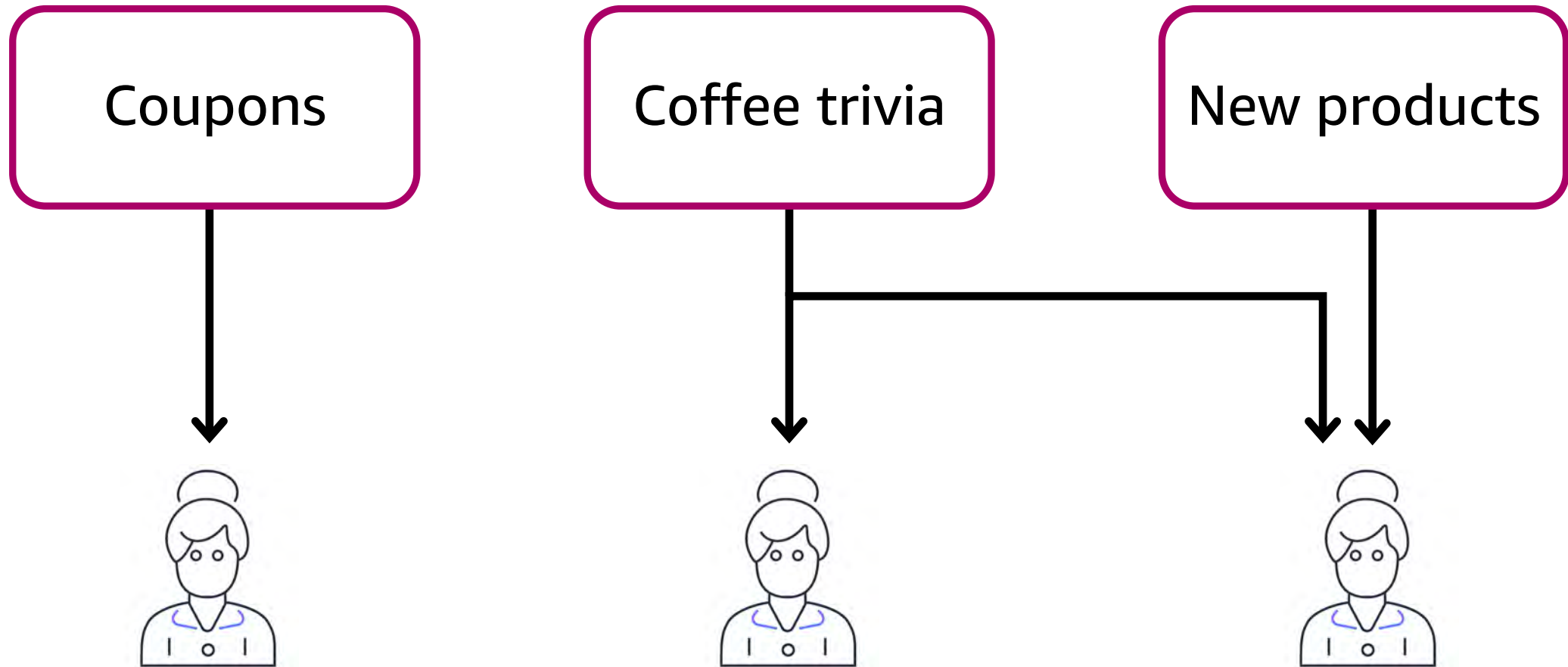
Amazon Simple
Notification Service
(Amazon SNS)

Publish updates from a single topic

Coupons, coffee trivia, and new products



Publish updates from multiple topics



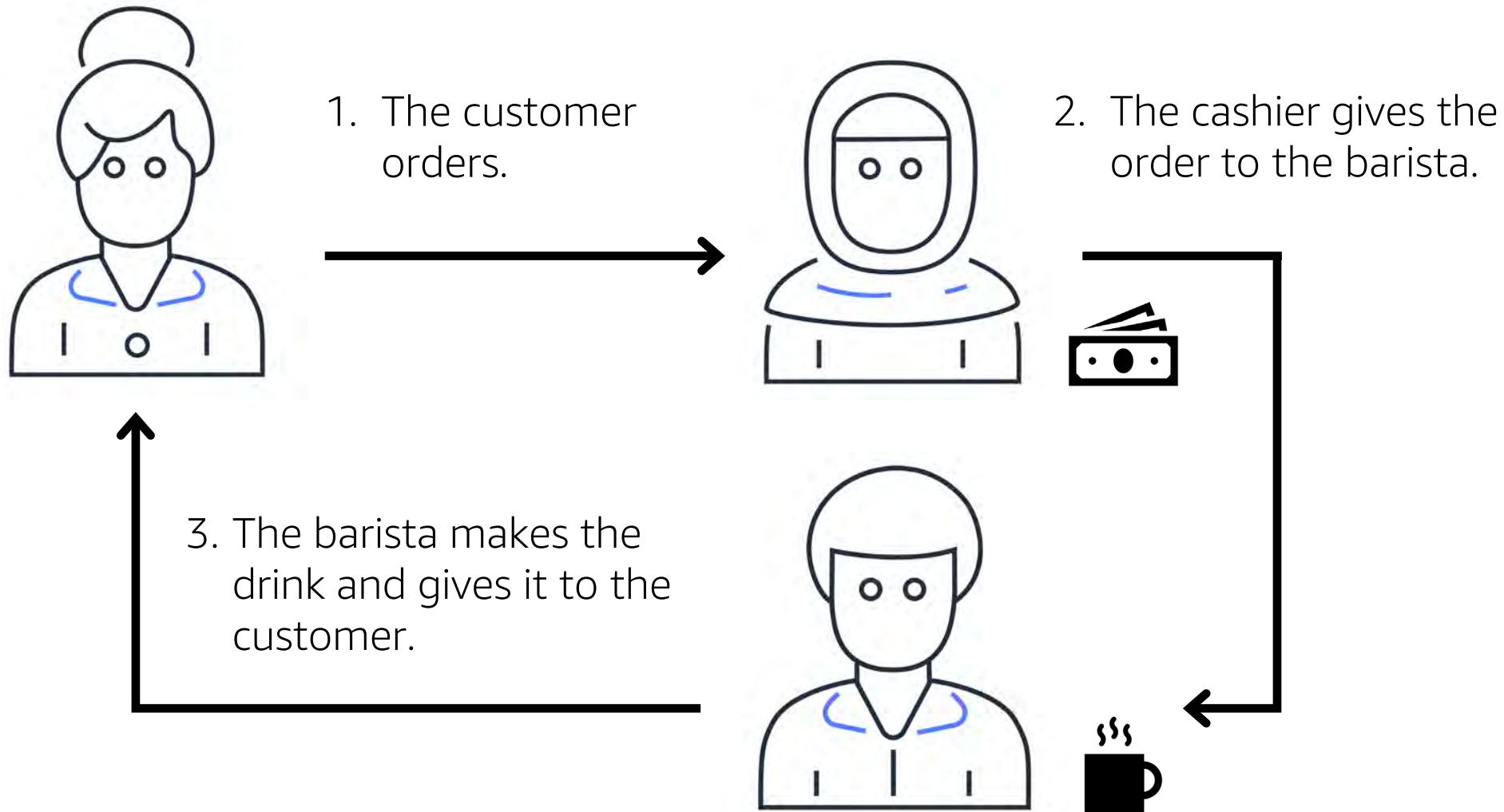
Amazon Simple Queue Service

- Send, store, and receive messages between software components
- Queue messages without requiring other services to be available

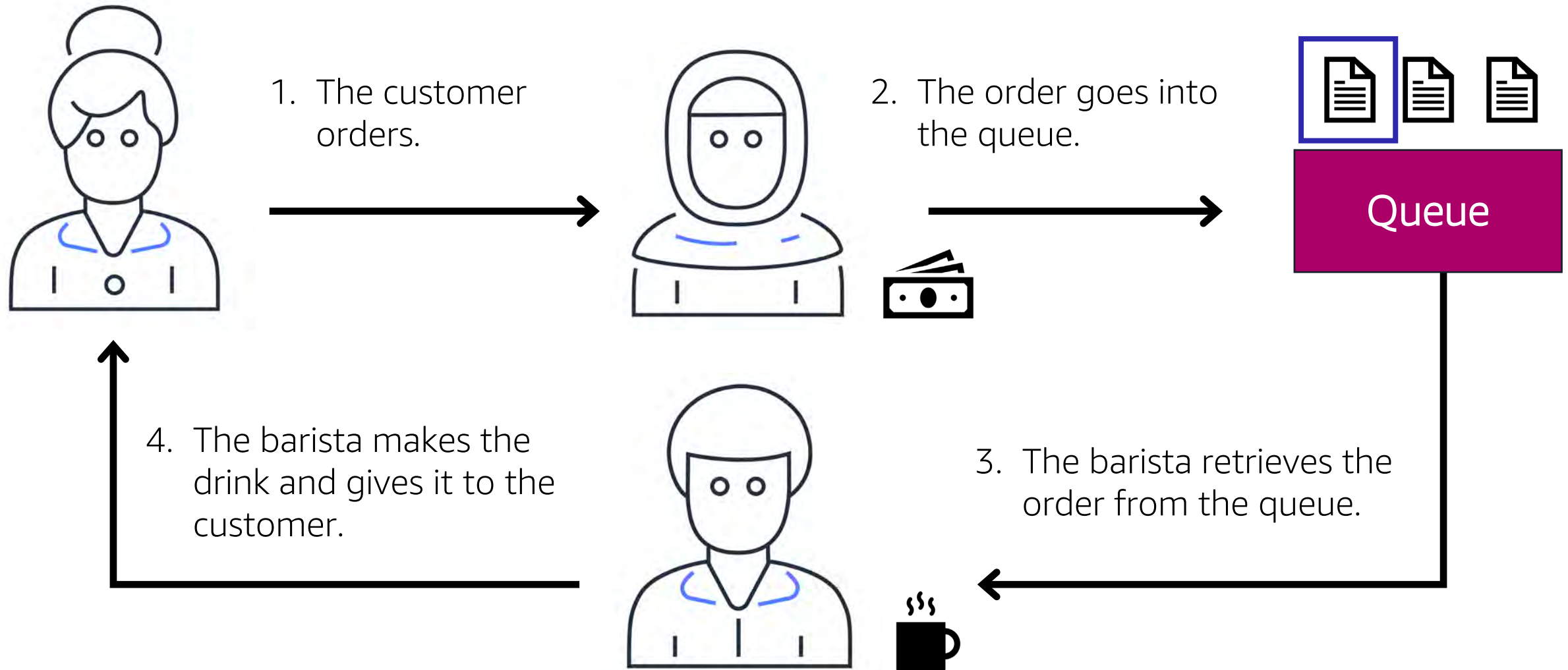


Amazon Simple
Queue Service
(Amazon SQS)

Example: Fulfill an order



Example: Orders in a queue



Serverless compute services

- Run code without provisioning or managing servers
- Pay only for compute time while code is running
- Use other AWS services to automatically trigger code

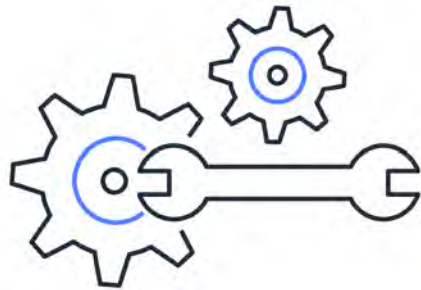


AWS Lambda

How AWS Lambda works



Upload code to
Lambda.



Set code to trigger
from an event
source.



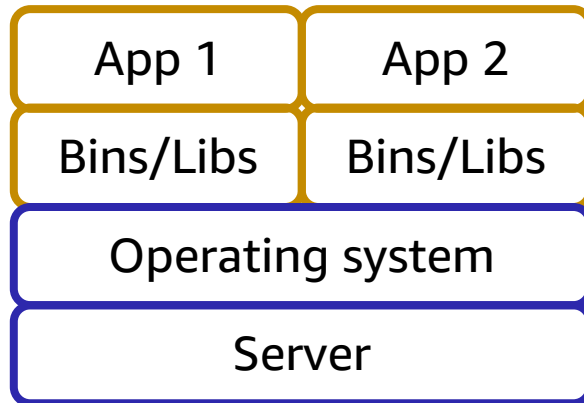
Code runs only
when triggered.



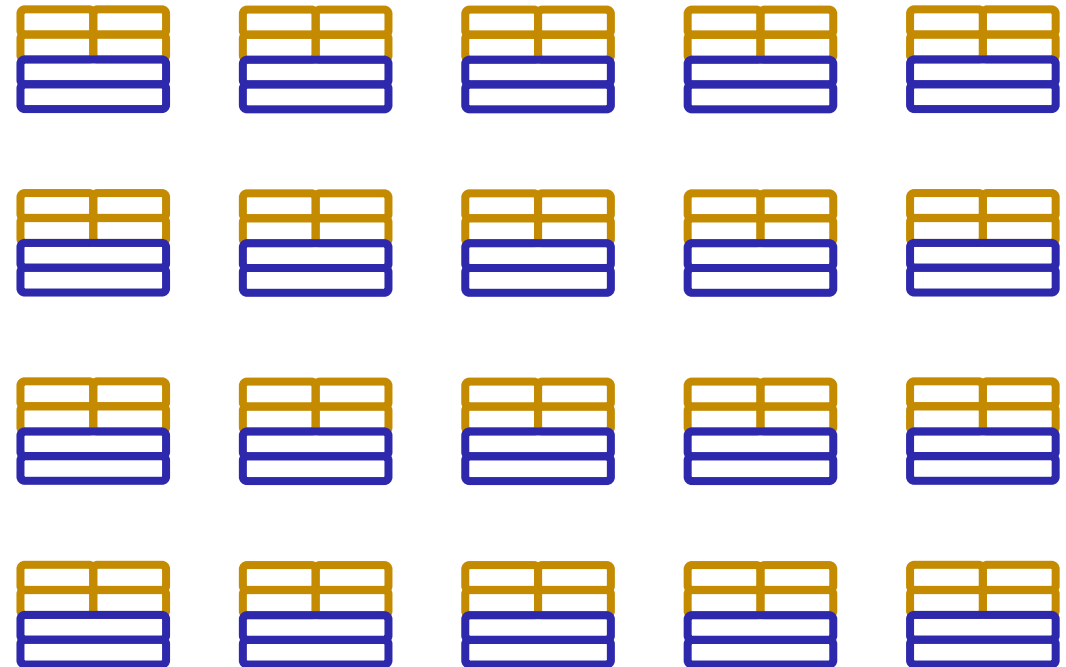
Pay only for the
compute time
you use.

AWS container services

One host with multiple
containers



Tens of hosts with hundreds of
containers





Amazon Elastic Container Service (Amazon ECS)

- Run and scale containerized applications
- Use simple API calls to control Docker-enabled applications



Amazon Elastic Kubernetes Service (Amazon EKS)

- Run and scale Kubernetes applications
- Readily update applications with new features

- Run serverless containers with Amazon ECS or Amazon EKS
- Pay only for the resources you use

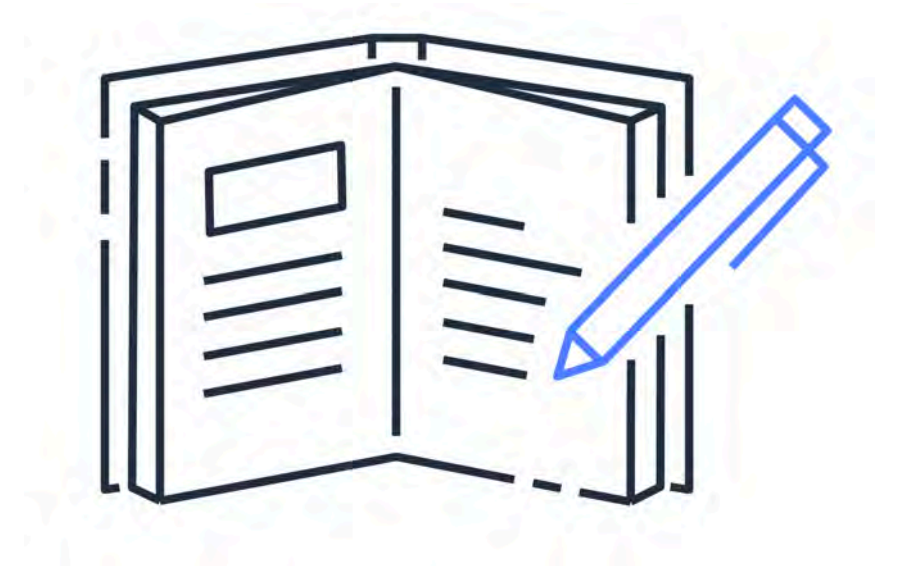


AWS Fargate

Module 2 summary

In this module, you learned how to:

- Describe Amazon EC2 benefits
- Identify the Amazon EC2 instance types
- Differentiate among Amazon EC2 billing options
- Summarize Amazon EC2 Auto Scaling benefits
- Summarize Elastic Load Balancing benefits
- Provide examples of Elastic Load Balancing uses
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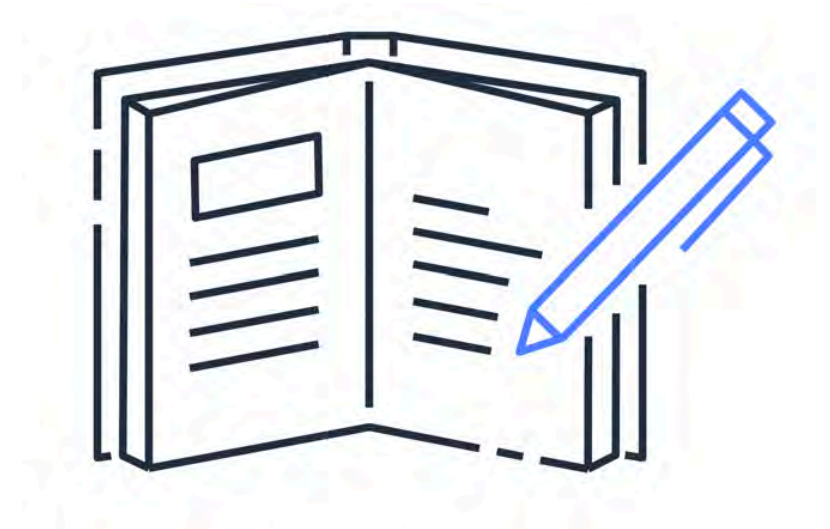
Module 3

Global Infrastructure and Reliability

Module 3 objectives

In this module, you will learn how to:

- Summarize the AWS Global Infrastructure benefits
- Describe Availability Zones
- Describe the benefits of Amazon CloudFront and edge locations.
- Compare methods for provisioning AWS services.

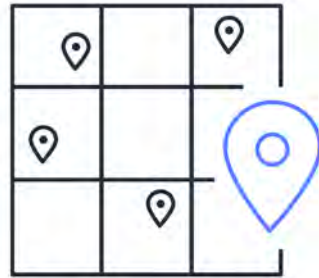


Select a Region

Determine the right Region for your services, data, and applications based on:



Compliance with data
governance and legal
requirements



Proximity to your
customers

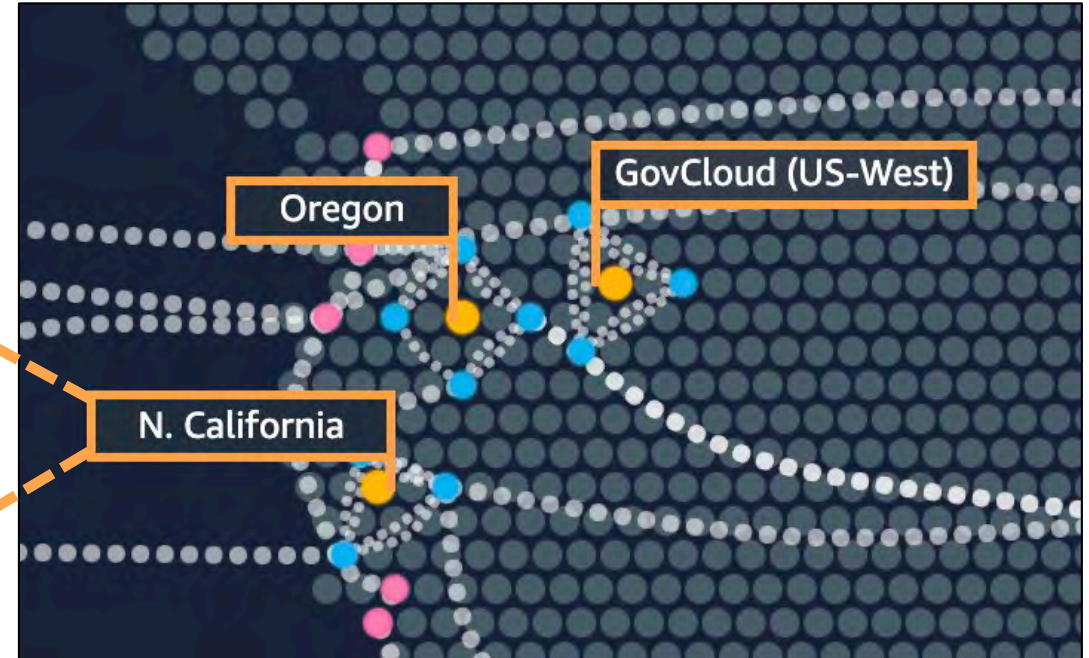
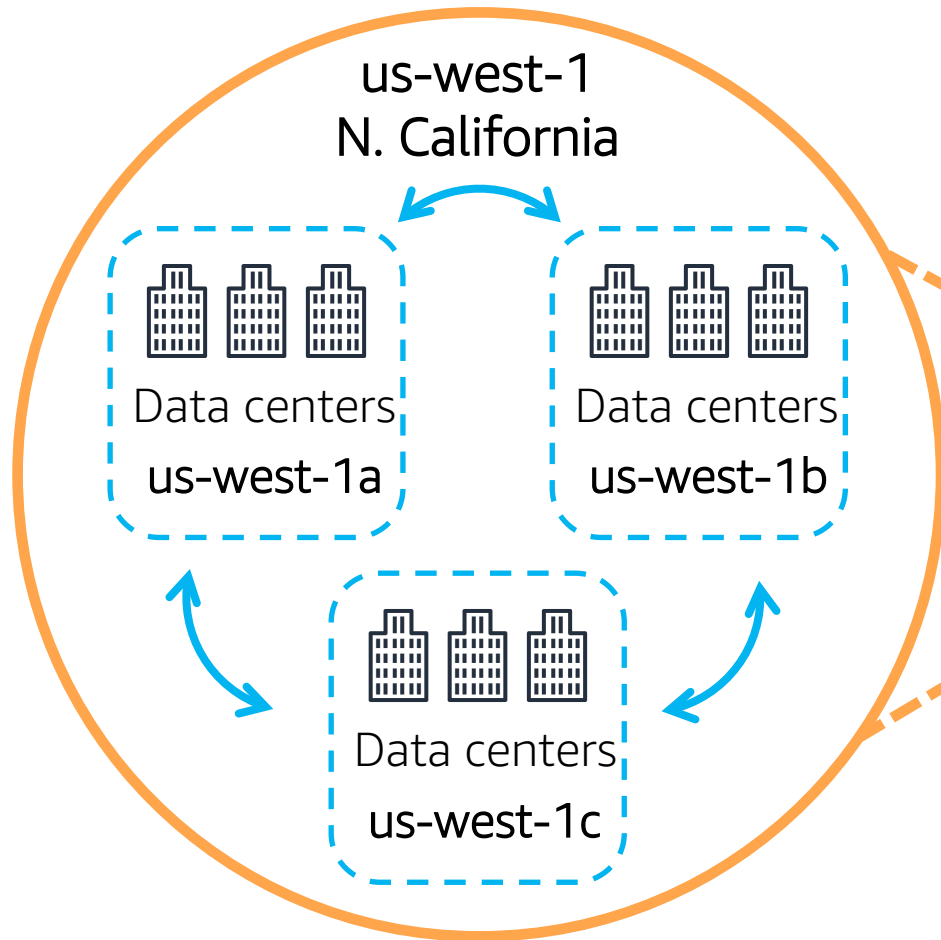


Available services
within a Region



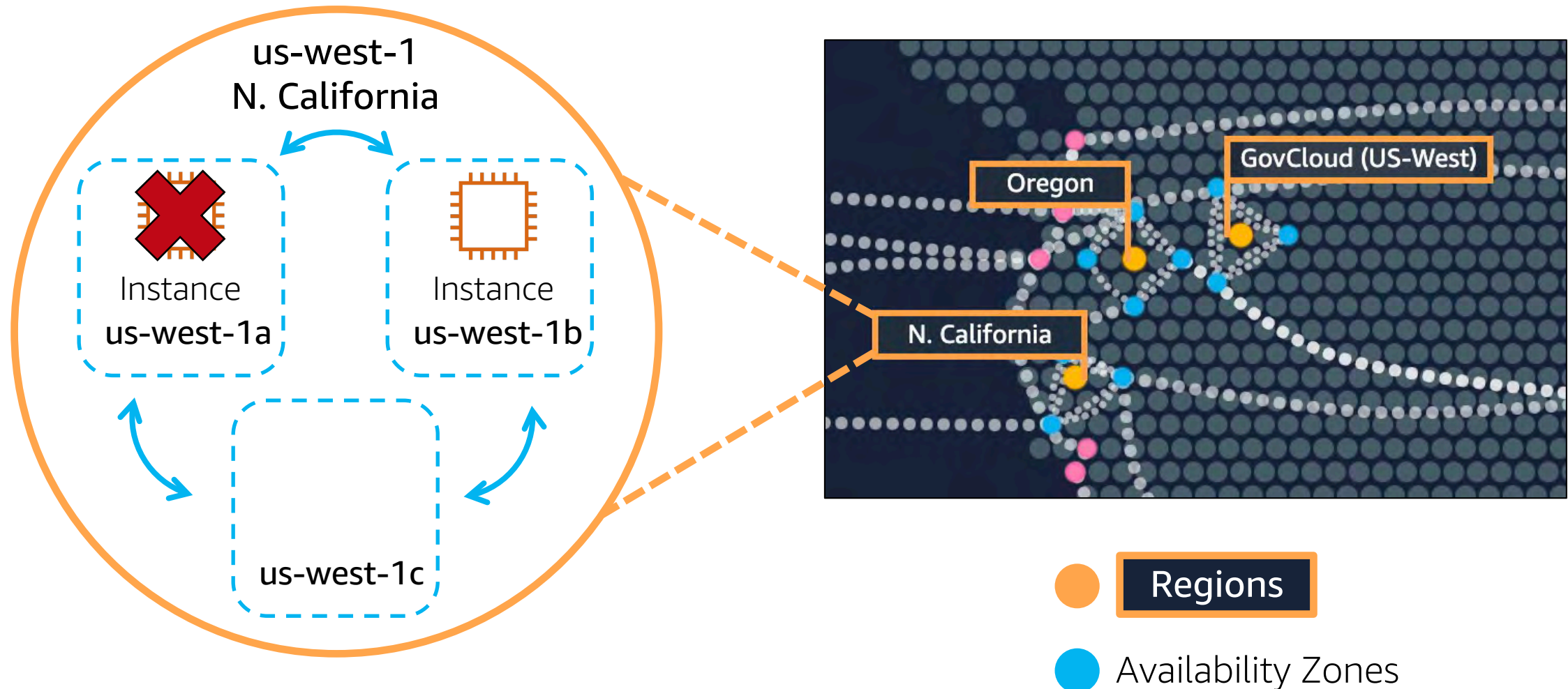
Pricing

Availability Zones



- **Regions**
- Availability Zones

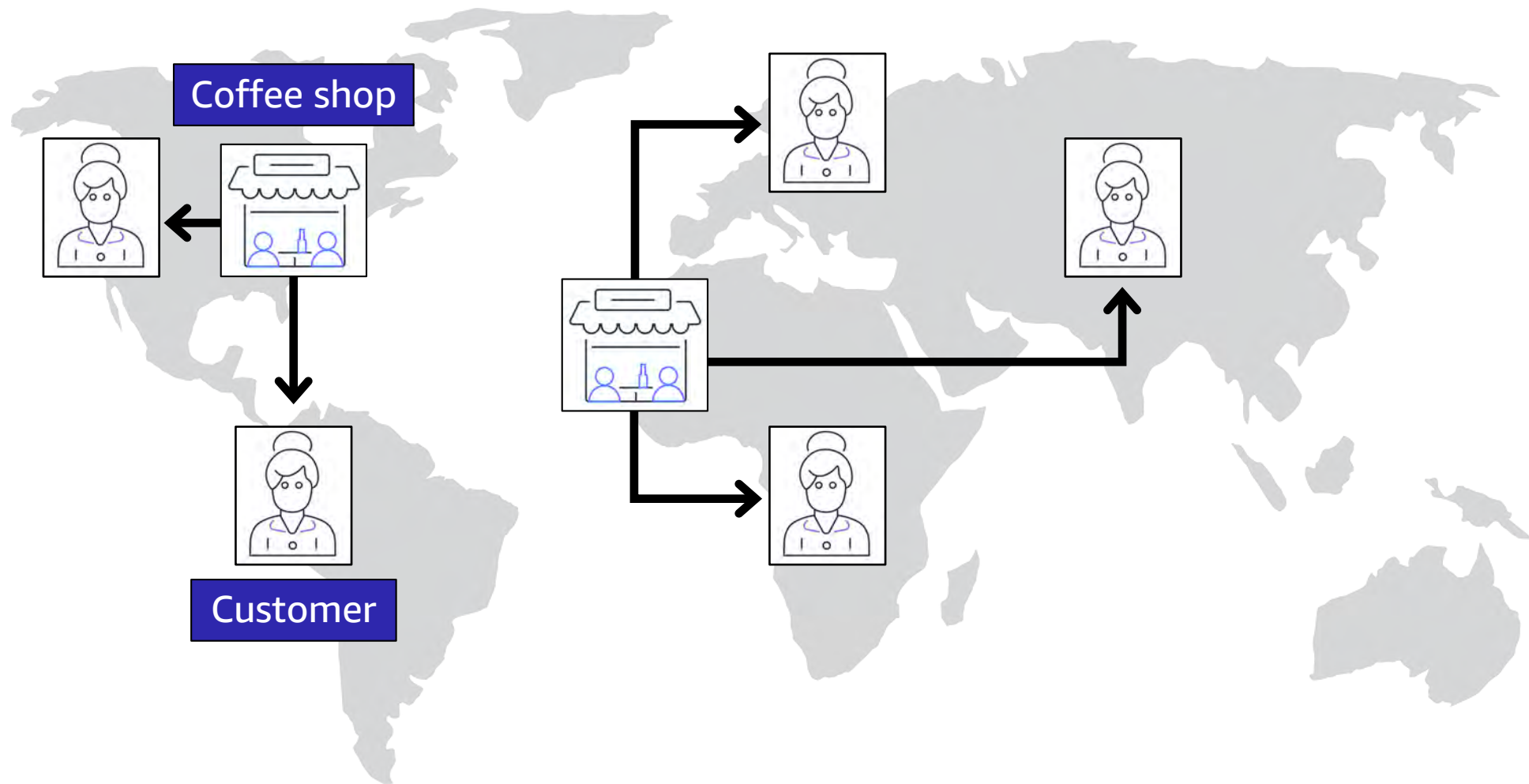
Amazon EC2 instances in multiple AZs



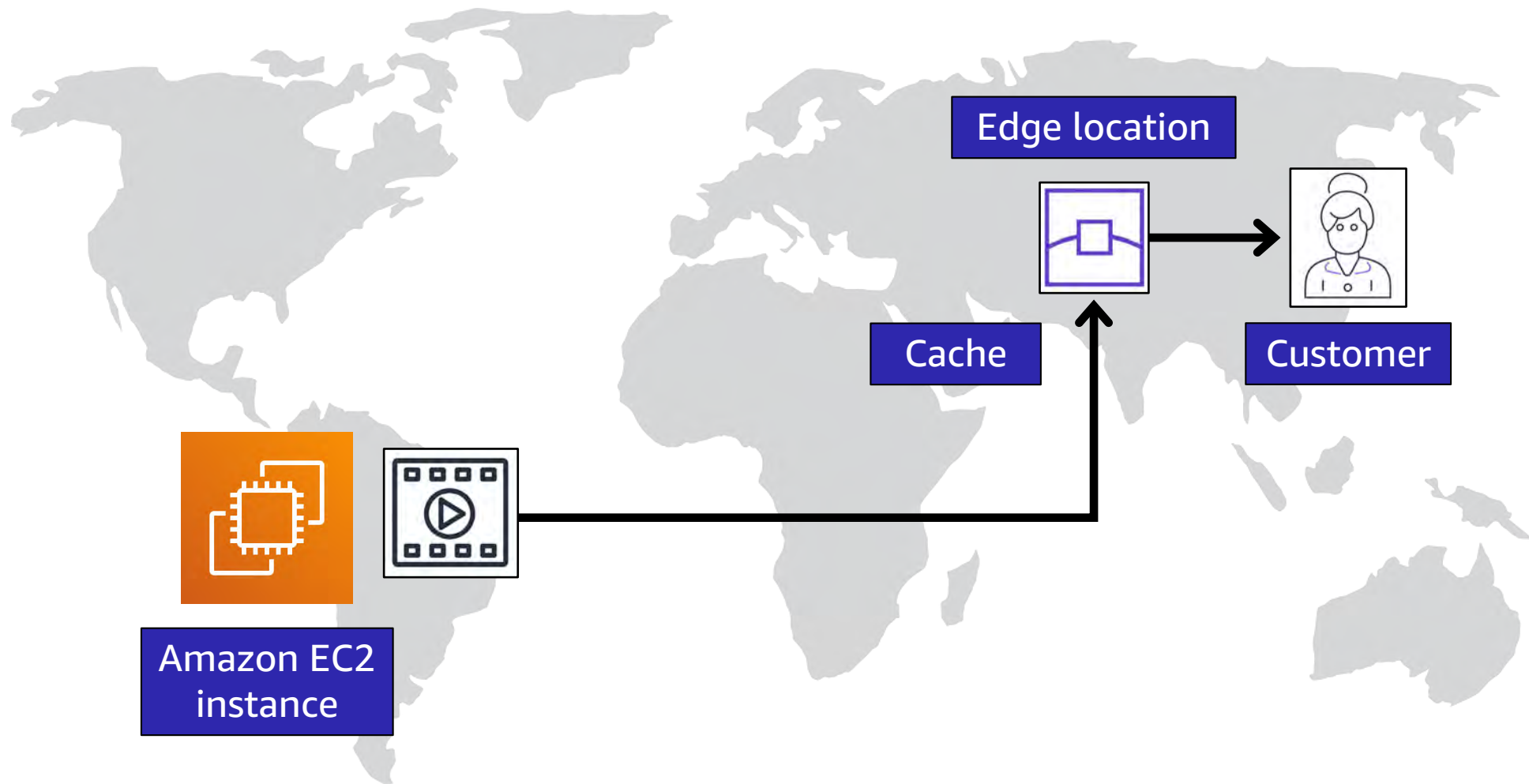
Discussion

What is the relationship between Regions and Availability Zones?

Global content delivery

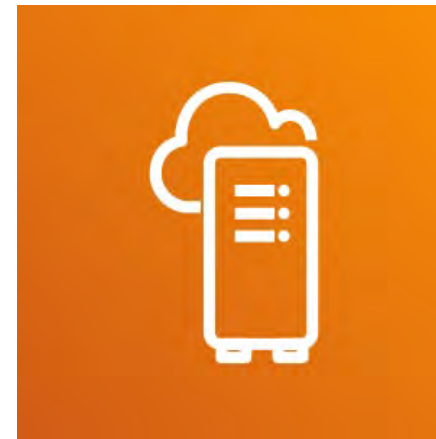


Amazon CloudFront delivers content



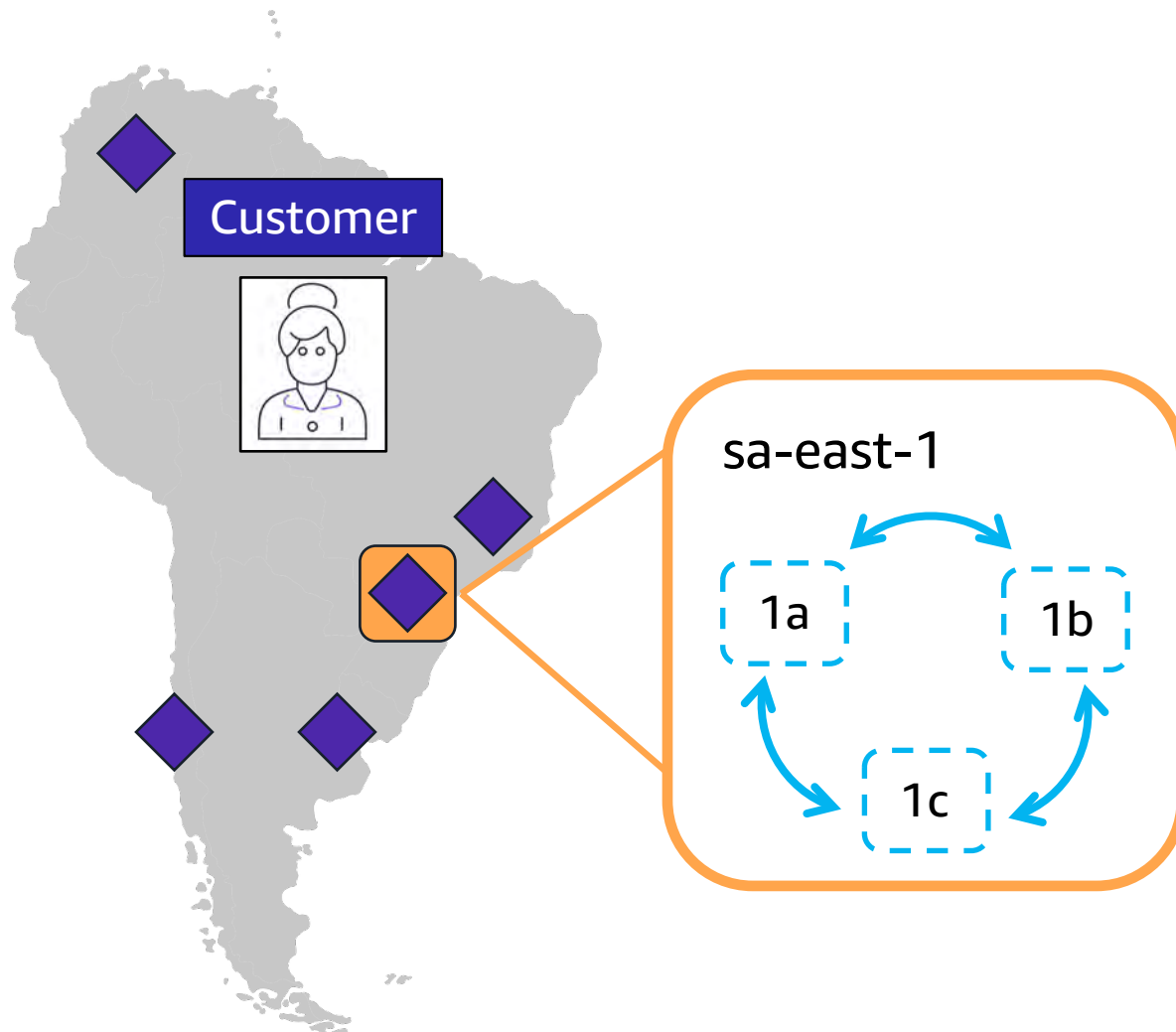
AWS Outposts

AWS Outposts



Extend AWS infrastructure and services to your on-premises data center

Review: AWS Global Infrastructure



Region:

- São Paulo



Availability Zones:

- sa-east-1a
- sa-east-1b
- sa-east-1c

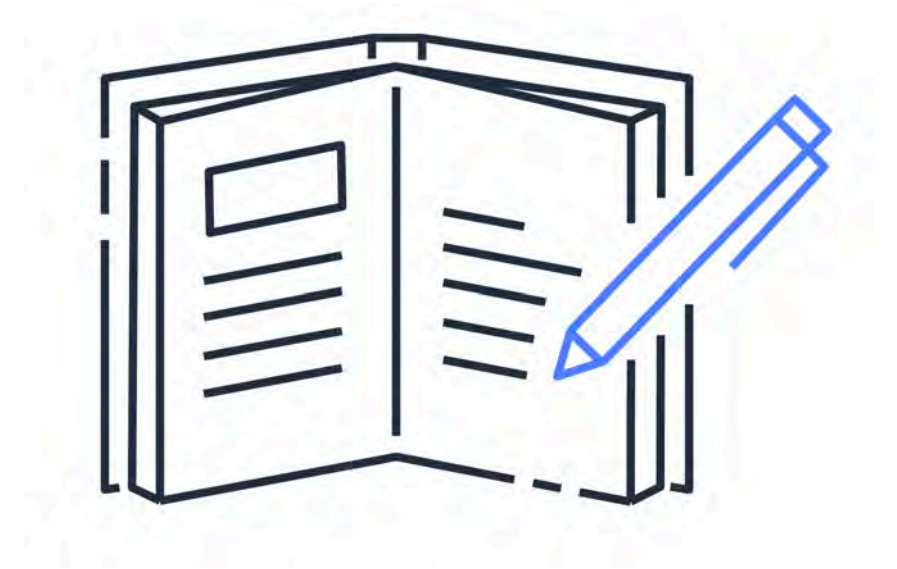


Edge locations

Module 3 summary

In this module, you learned about:

- Three aspects of the AWS Global Infrastructure
- Four factors to consider when selecting an AWS Region
- Three ways to interact with AWS services



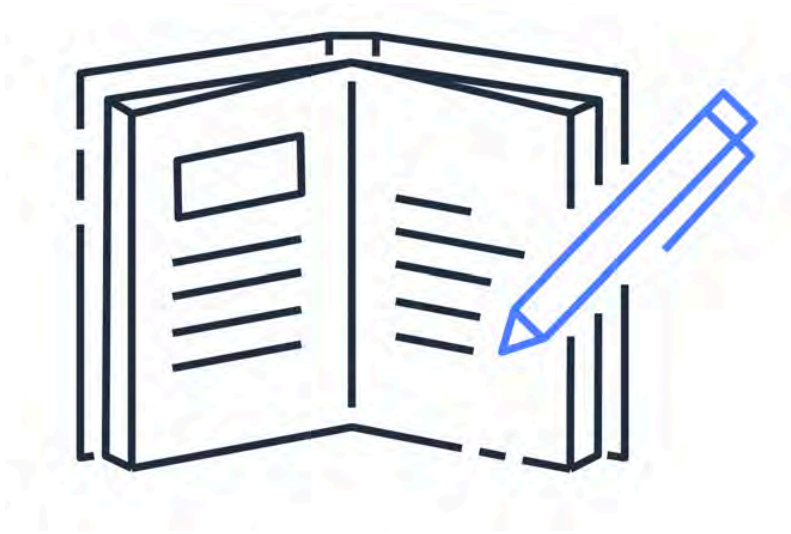
Module 4

Networking

Module 4 objectives

In this module, you will learn how to:

- Describe basic networking concepts
- Describe the differences between public and private networking resources
- Explain a virtual private gateway using a real-life scenario
- Explain a VPN using a real-life scenario
- Describe AWS Direct Connect benefits
- Describe hybrid deployment benefits
- Describe the layers of security in an IT strategy
- Describe the services customers use to interact with the AWS global network



Amazon Virtual Private Cloud (Amazon VPC)

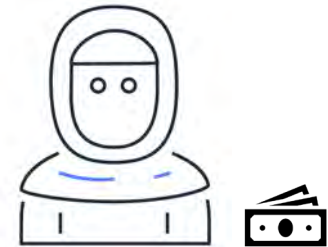


Amazon Virtual Private Cloud (Amazon VPC) enables you to launch resources in a virtual network that you define.

Counter area

Public workstation

Cashier

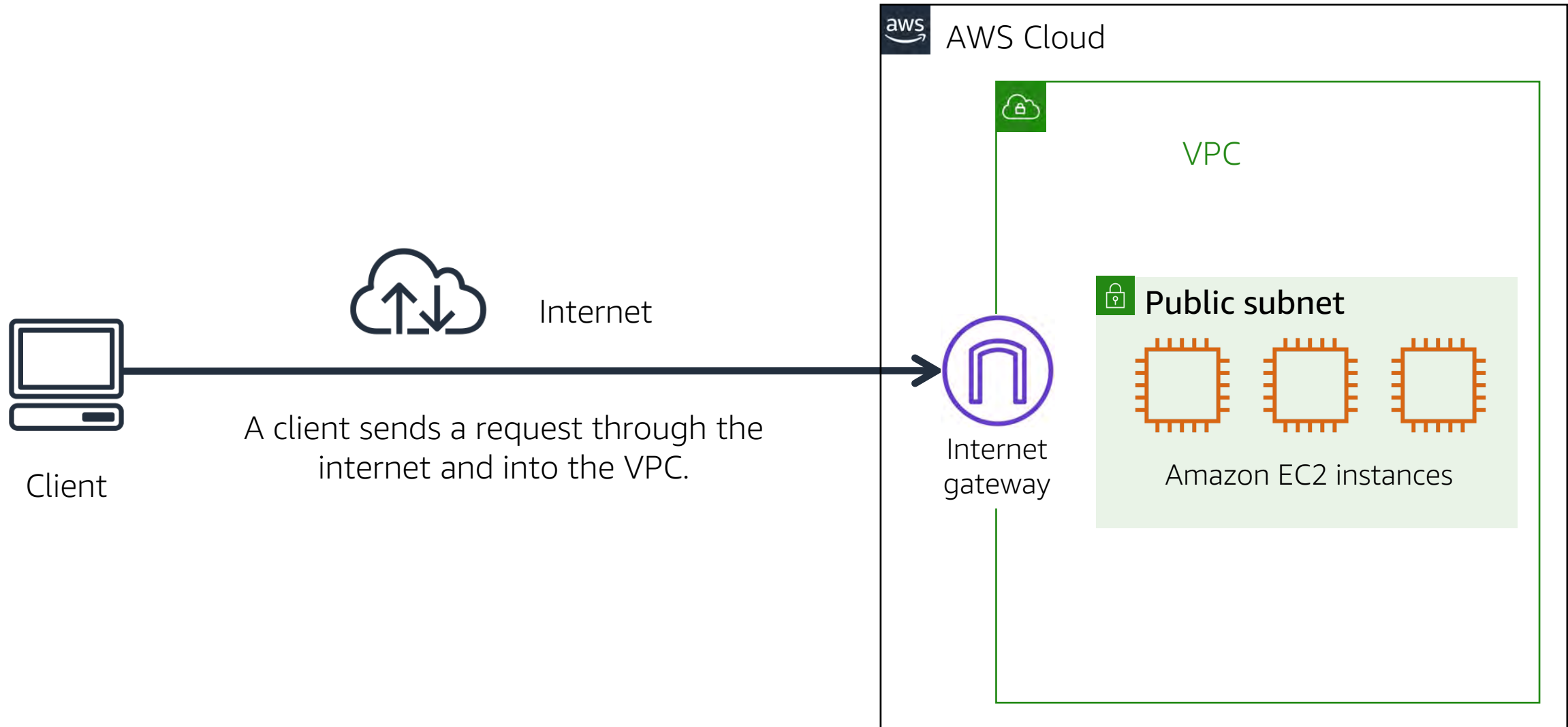


Private workstation

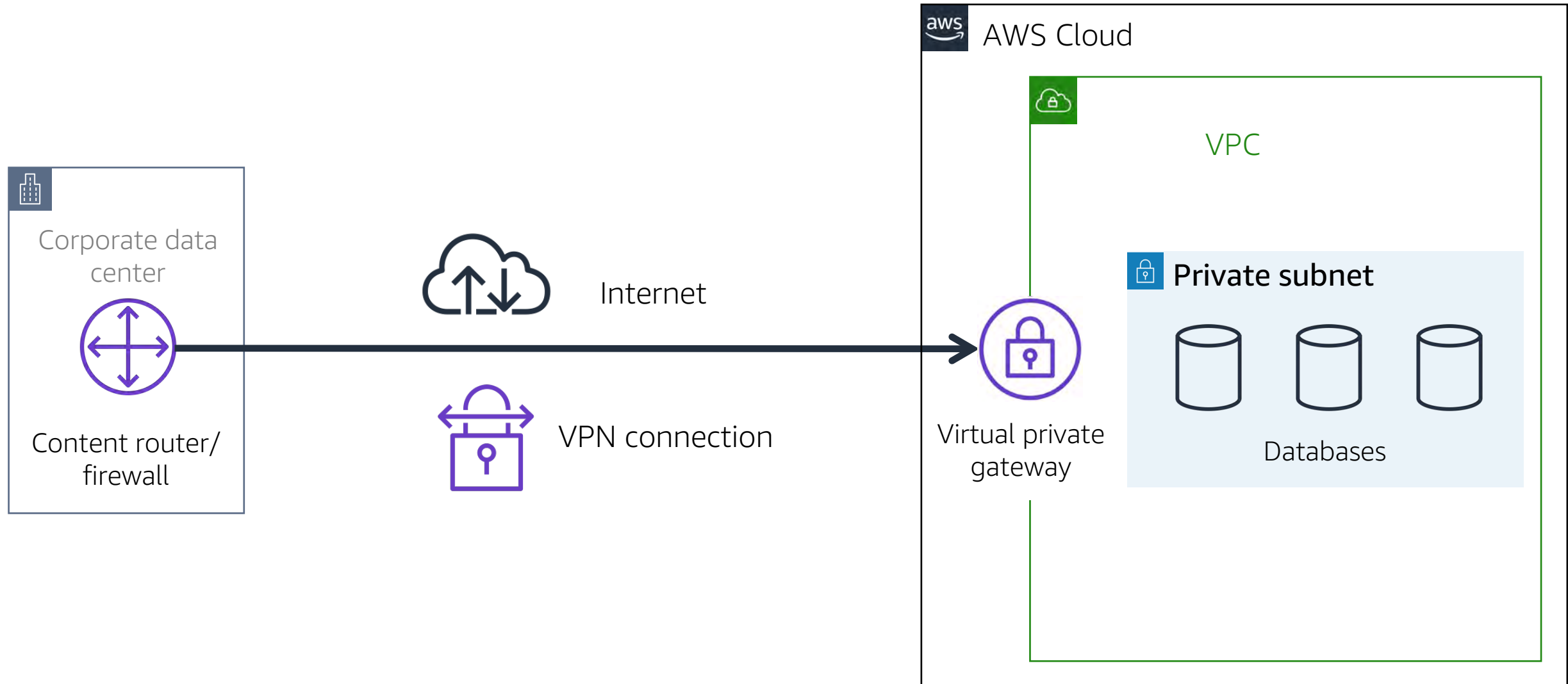
Barista



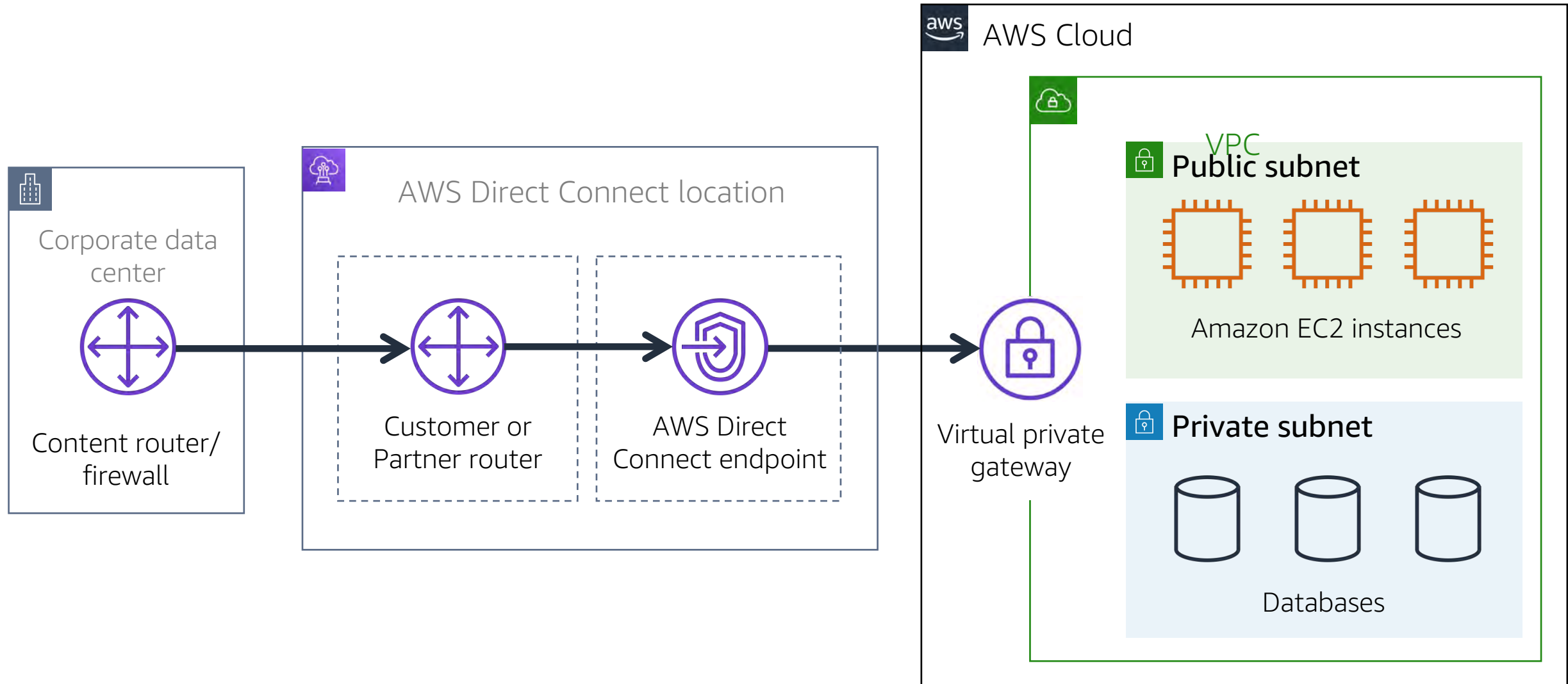
Internet gateway



Virtual private gateway



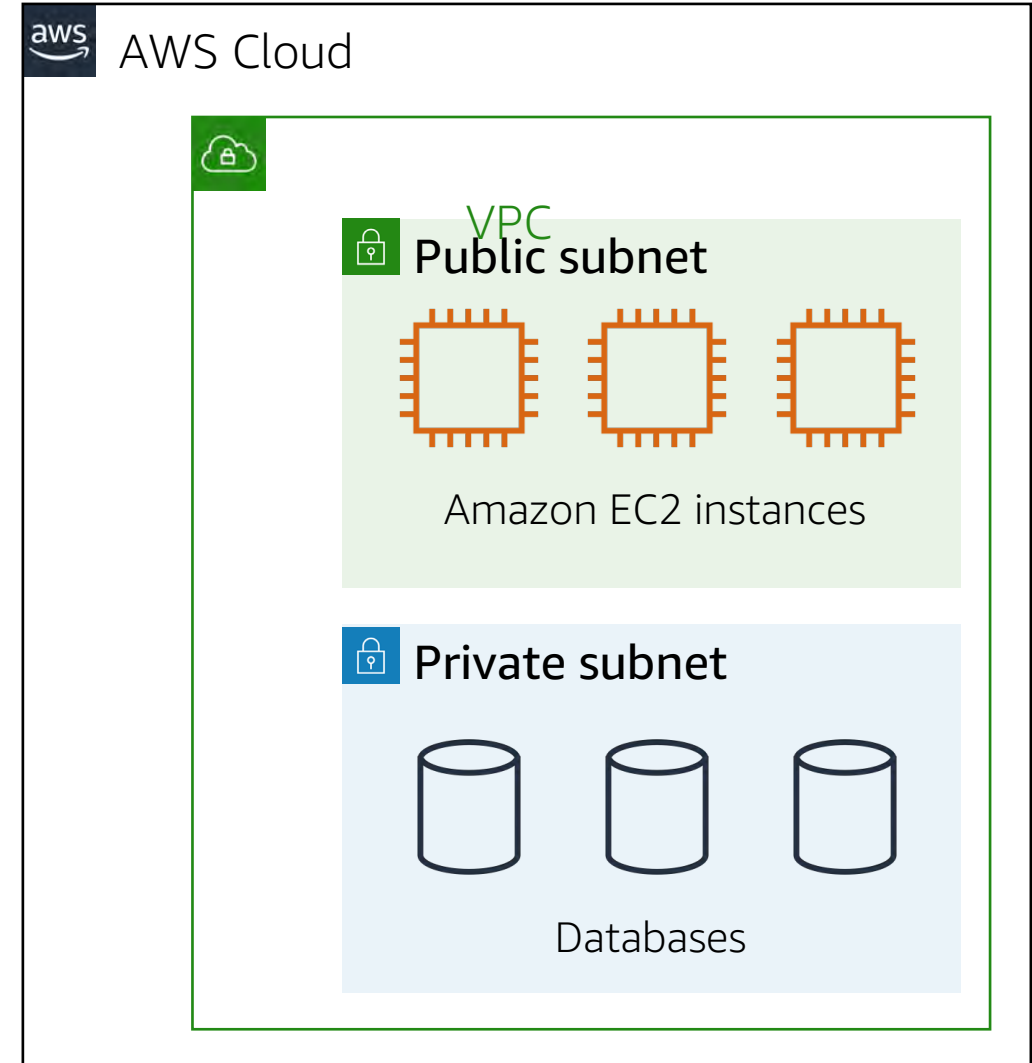
AWS Direct Connect



A subnet

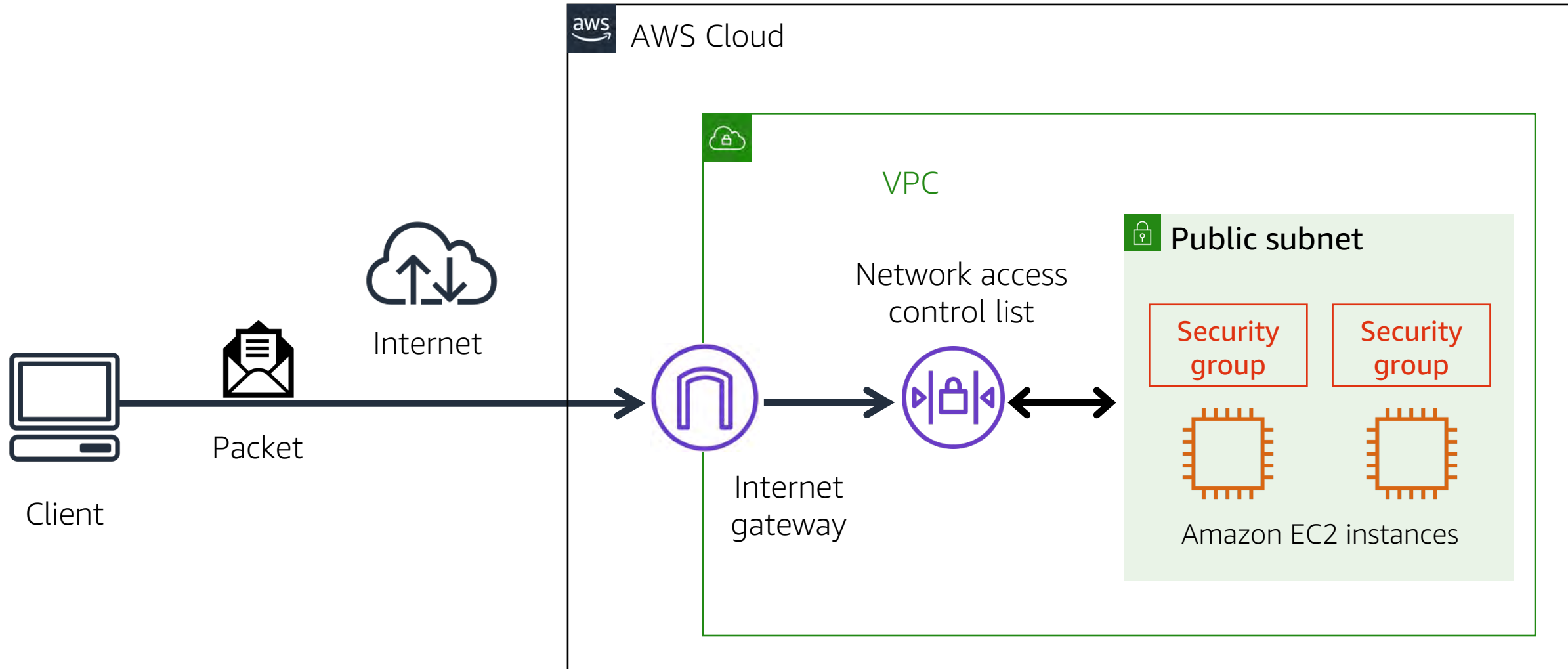
is a section in a VPC in which you can place groups of isolated resources.

A subnet can be public or private.



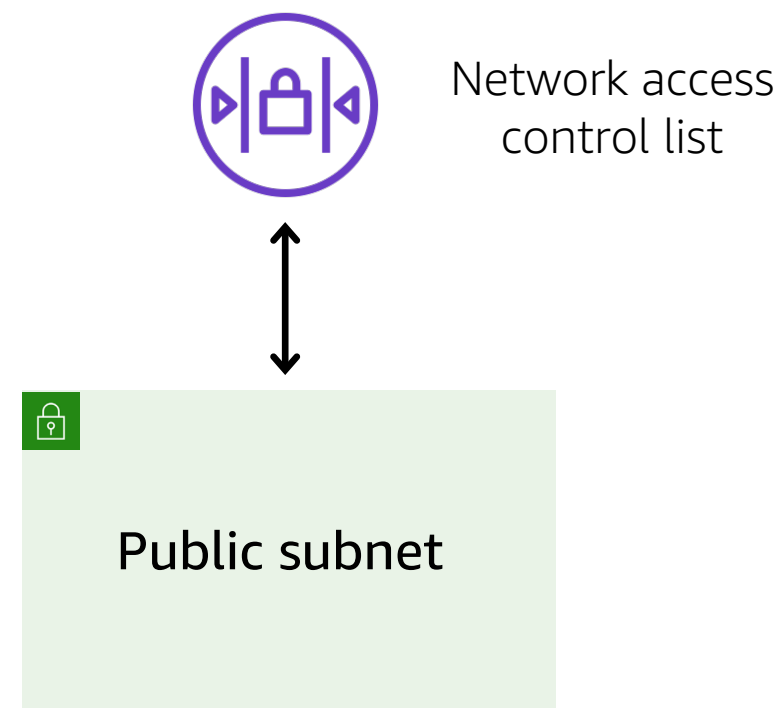
Network access control lists and security groups

Network traffic in a VPC



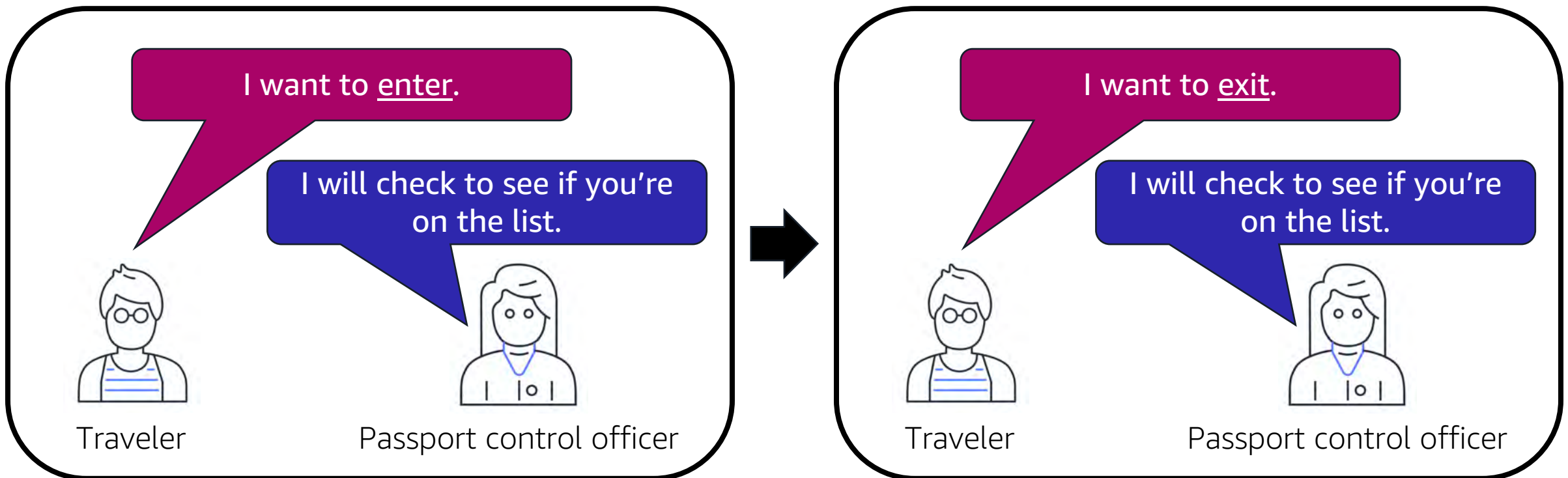
A **network access control list (network ACL)** is a virtual firewall for a subnet. By default:

- The default network ACL allows all inbound and outbound traffic.
- Custom network ACLs deny all inbound and outbound traffic.



Stateless packet filtering

- Network ACLs perform **stateless** packet filtering.
- Before a packet can exit a subnet, it must be checked against the outbound rules.

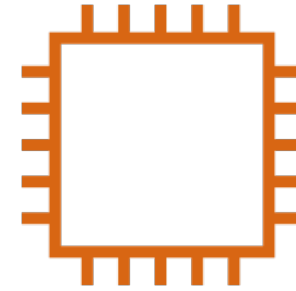


Security groups

A **security group** is a virtual firewall for an Amazon EC2 instance.

By default, a security group denies all inbound traffic and allows all outbound traffic.

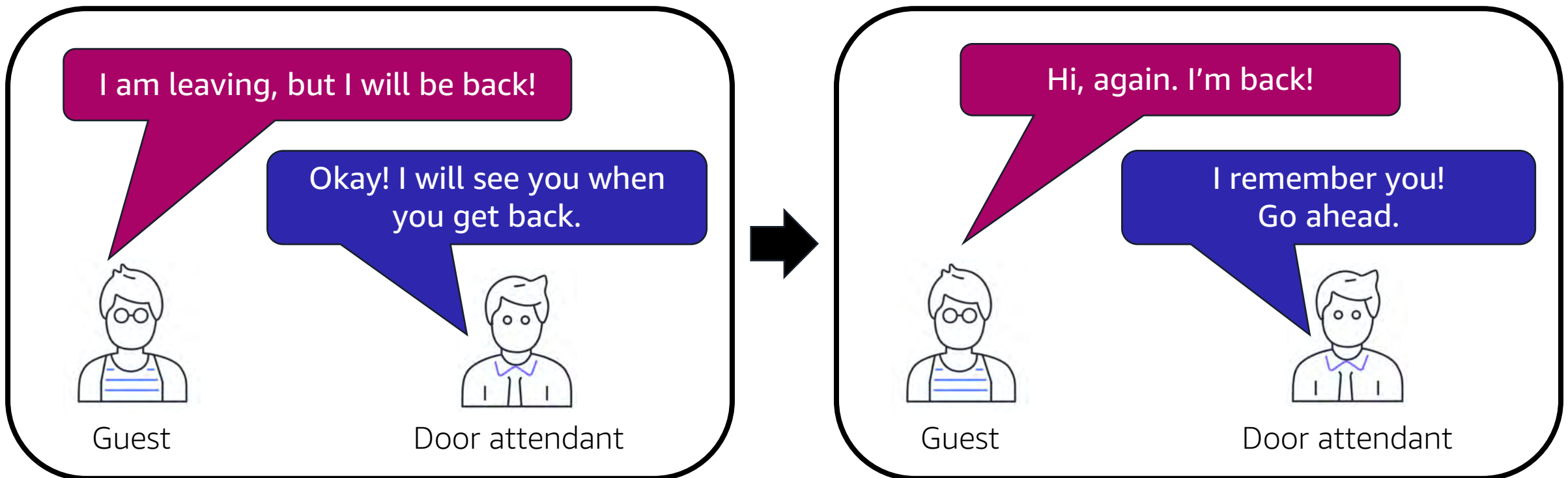
Security group



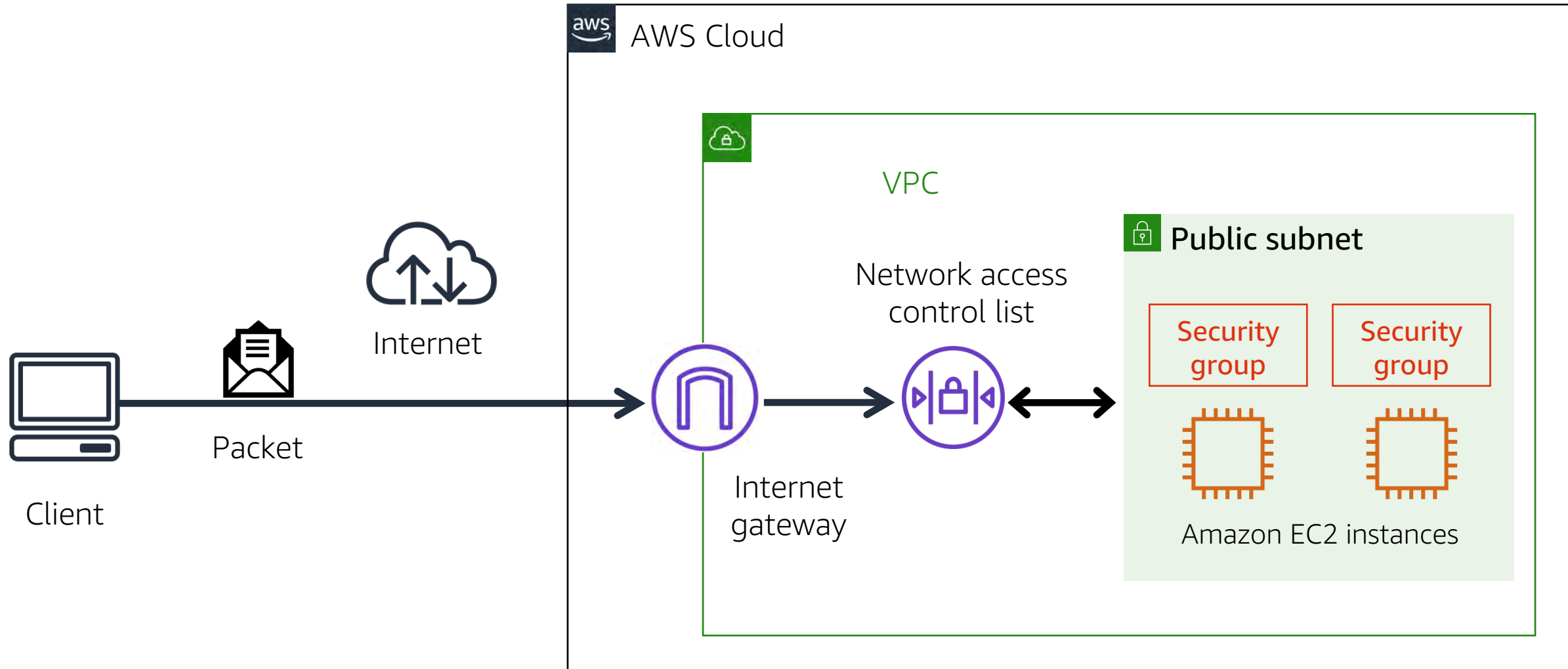
Amazon EC2 instance

Stateful packet filtering

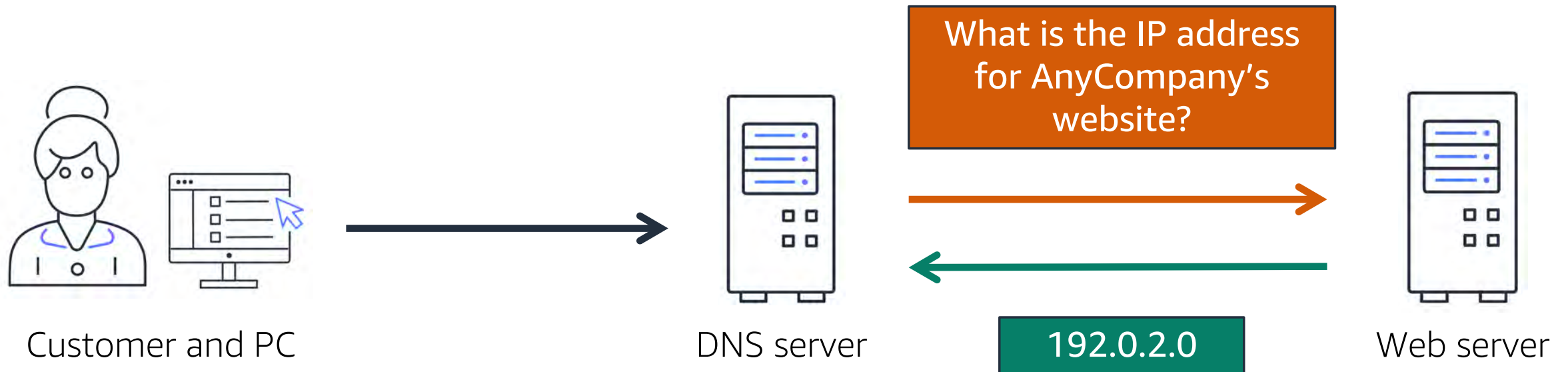
- Security groups perform **stateful** packet filtering.
- They remember previous decisions that were made for incoming packets.



Network traffic in a VPC



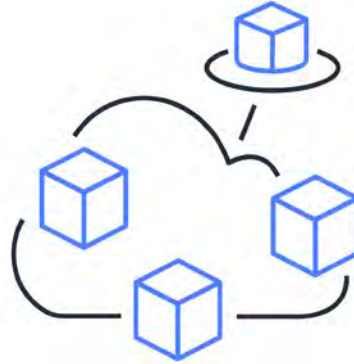
Domain Name System (DNS)



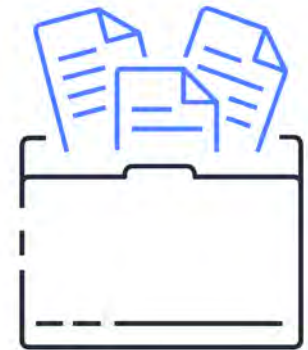
Amazon Route 53



Route users to internet applications

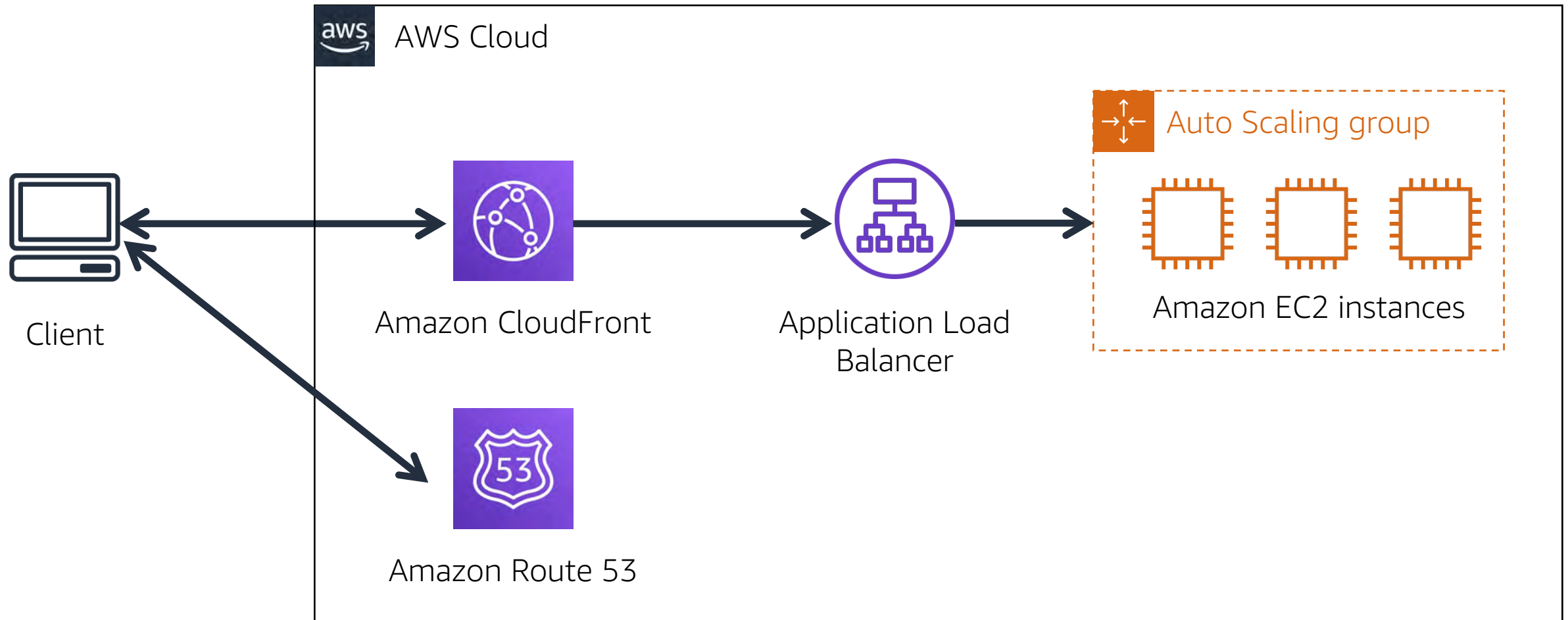


Connect user requests to infrastructure in AWS and outside of AWS



Manage DNS records for domain names

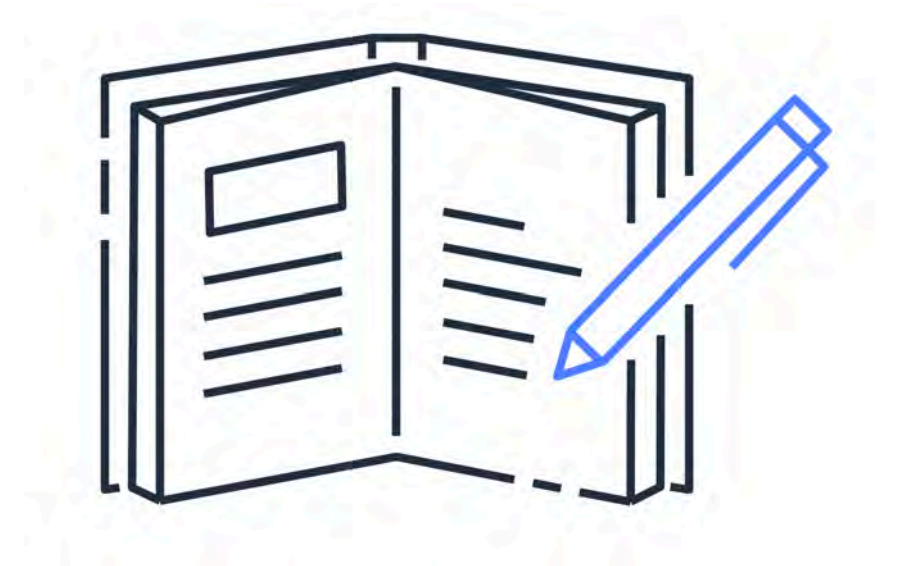
Amazon Route 53 and CloudFront



Module 4 summary

In this module, you learned about:

- Structuring and connecting to a VPC
- Securing VPC resources with network access control lists and security groups
- Using Amazon Route 53 and Amazon CloudFront to deliver content



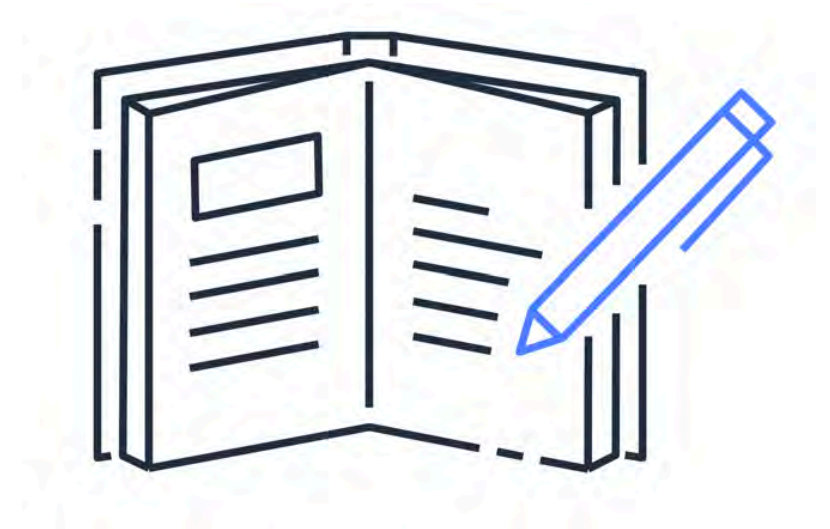
Module 5

Storage and Databases

Module 5 objectives

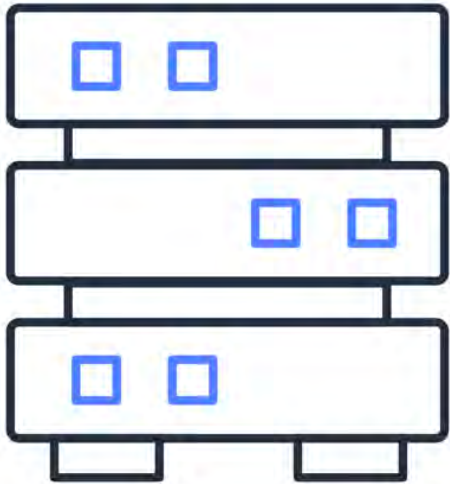
In this module, you will learn how to:

- Summarize the basic concept of storage and databases
- Describe Amazon Elastic Block Store (Amazon EBS) benefits
- Describe Amazon Simple Storage Service (Amazon S3) benefits
- Describe Amazon Elastic File System (Amazon EFS) benefits
- Summarize various storage solutions
- Describe Amazon Relational Database Service (Amazon RDS) benefits
- Describe Amazon DynamoDB benefits
- Summarize various database services



AWS storage

AWS storage types



Block storage



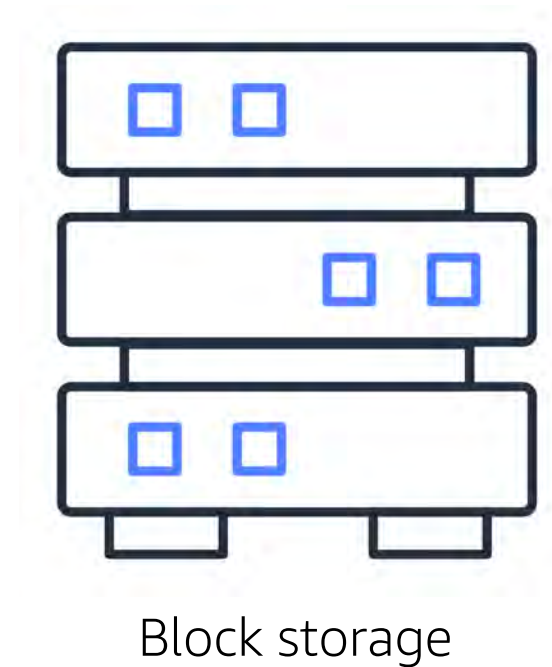
Object storage



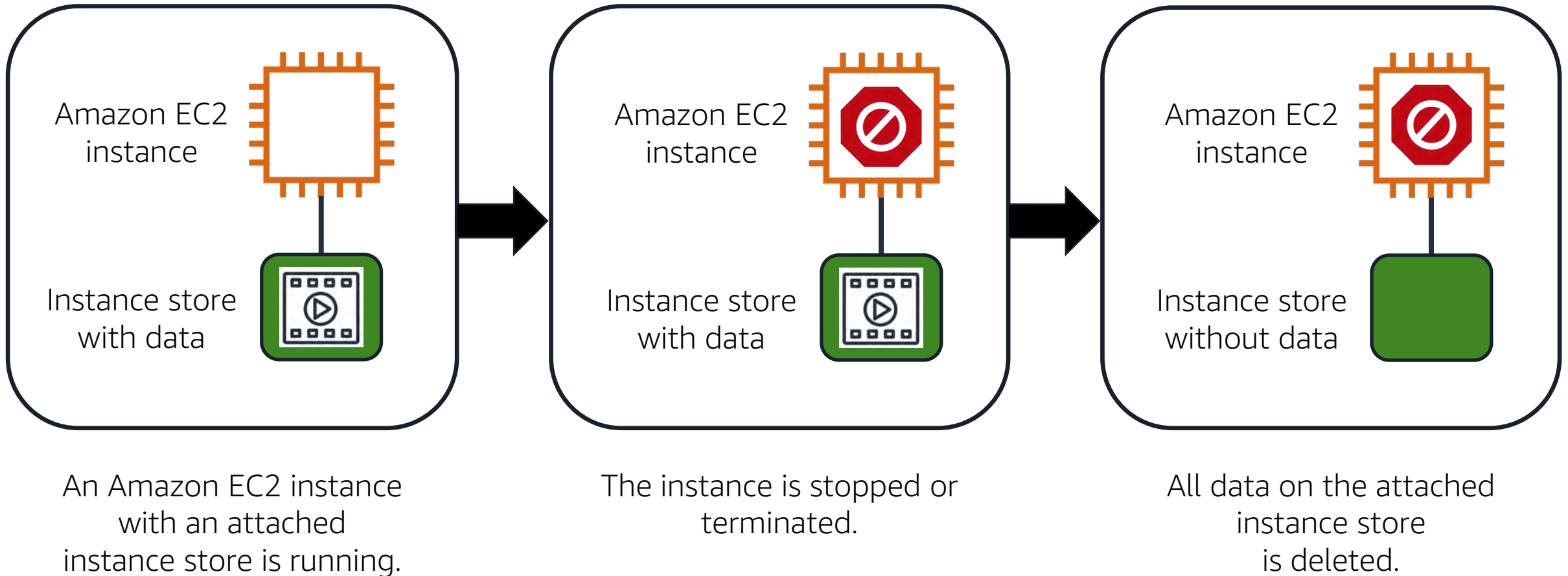
File storage

Block storage

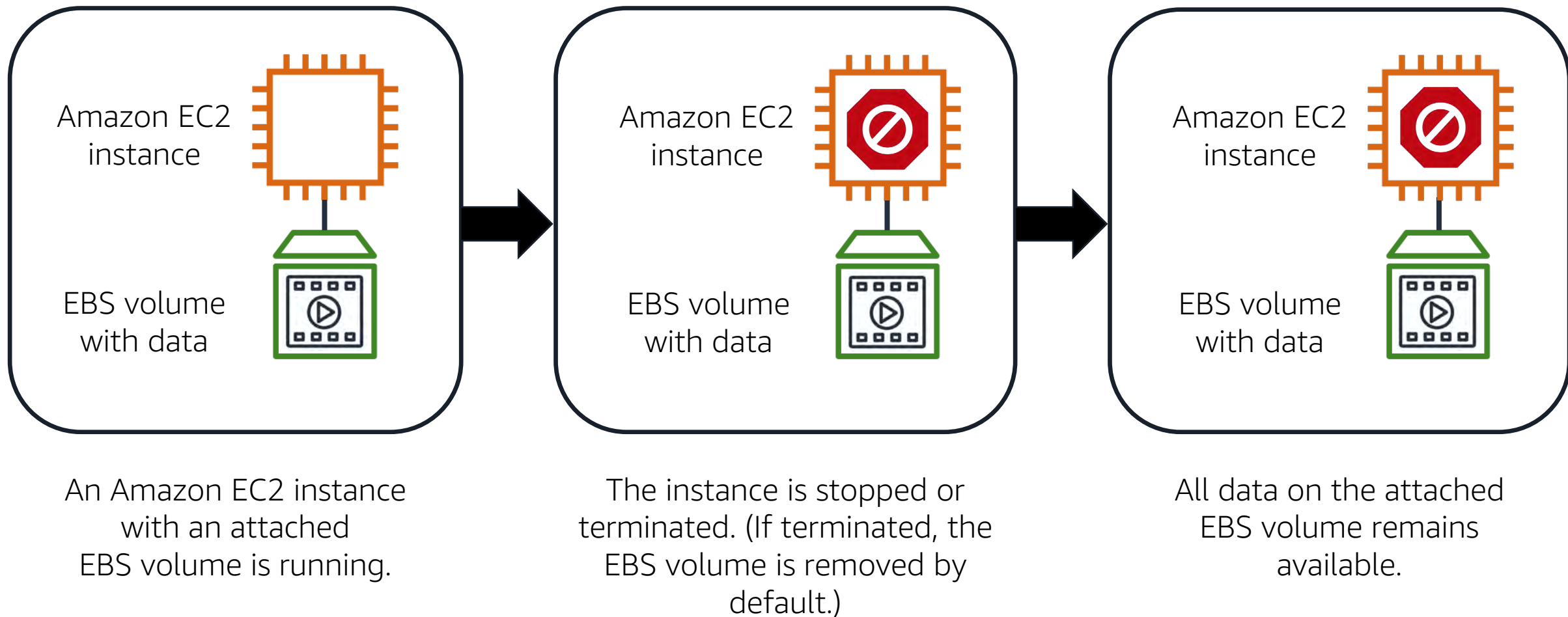
- In **block storage**, files are separated into equal-sized pieces (blocks) of data.
- Block storage is used for applications that run on Amazon EC2 instances.



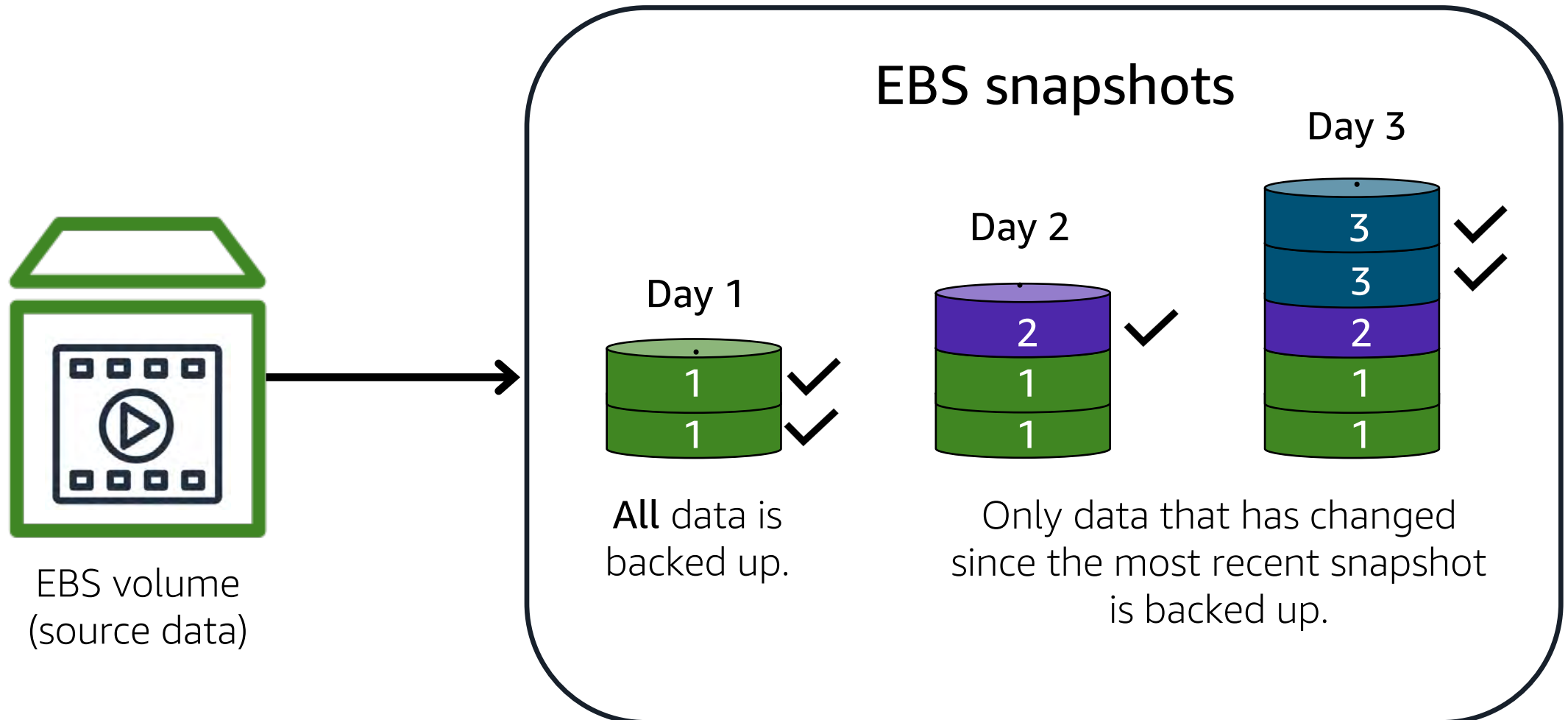
Instance store



Amazon EBS volumes

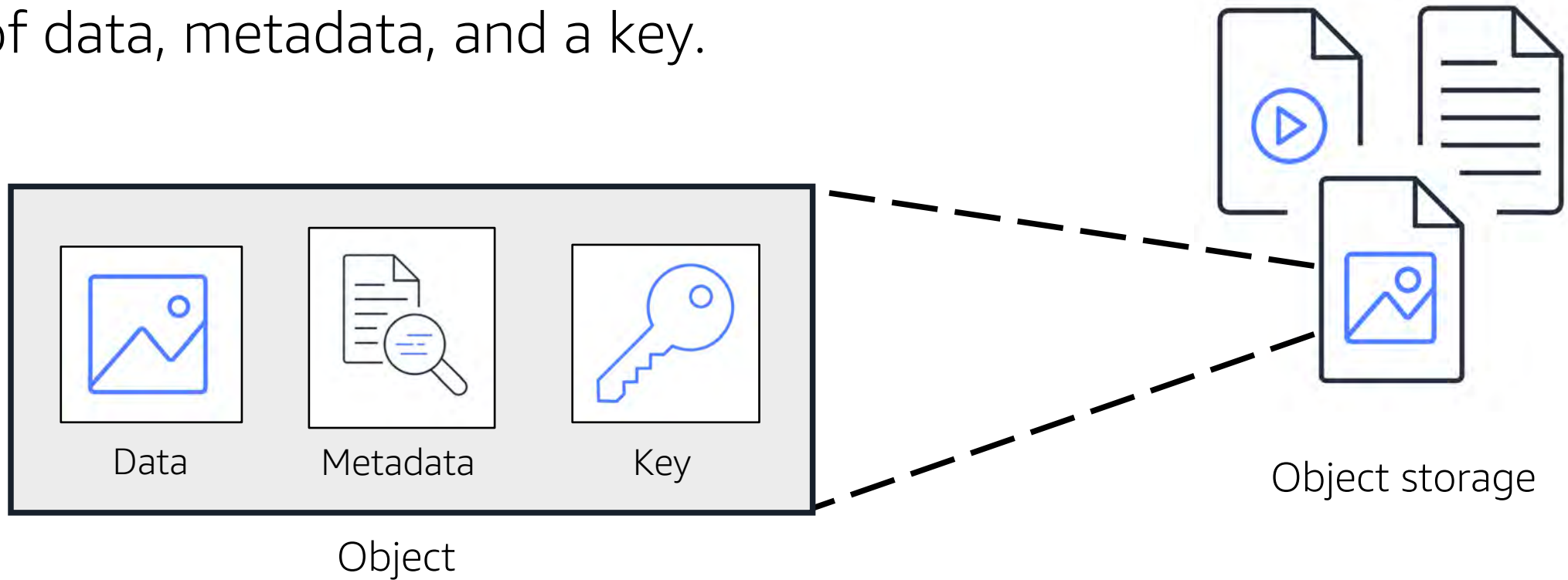


Amazon EBS snapshots

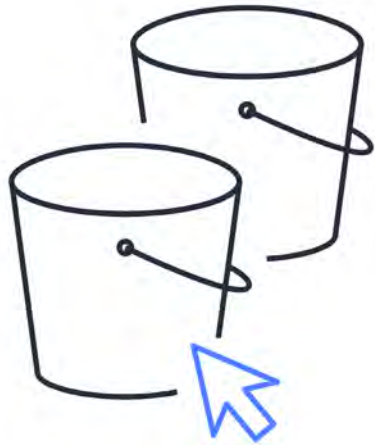


Object storage

In **object storage**, each object consists of data, metadata, and a key.



Amazon Simple Storage Service



Store objects in buckets



Set permissions to control
access to objects



Choose from a range of
storage classes for
different use cases

Amazon S3 storage classes

S3 Standard

- Designed for frequently accessed data
- Stores data in a minimum of three Availability Zones

S3 Standard-IA

- Ideal for infrequently accessed data
- Similar to S3 Standard but has a lower storage price and higher retrieval price

S3 One Zone-IA

- Stores data in a single Availability Zone
- Has a lower storage price than S3 Standard-IA

Amazon S3 storage classes

S3 Intelligent-Tiering

- Ideal for data with unknown or changing access patterns
- Requires a small monthly monitoring and automation fee per object

S3 Glacier

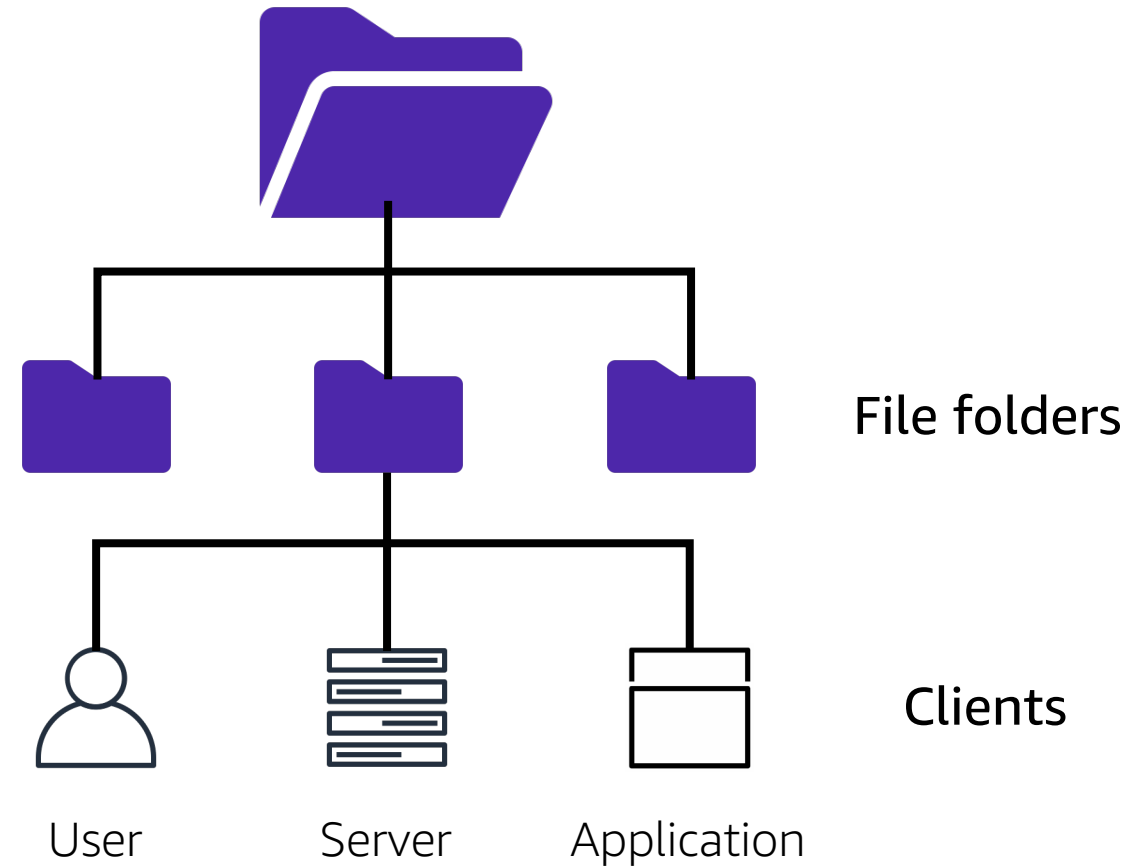
- Low-cost storage designed for data archiving
- Able to retrieve objects within a few minutes to hours

S3 Glacier Deep Archive

- Lowest-cost object storage class
- Able to retrieve objects within 12 hours

File storage

In **file storage**, multiple clients can access data that is stored in shared file folders.



Amazon Elastic File System



Store data in a scalable
file system



Provide data to thousands
of Amazon EC2 instances
concurrently



Store data in and across
multiple Availability
Zones

AWS databases

Relational database

| ID | Product name | Size | Price |
|----|----------------------------|--------|--------|
| 1 | Medium roast ground coffee | 12 oz. | \$5.30 |
| 2 | Dark roast ground coffee | 20 oz. | \$9.27 |

Nonrelational database

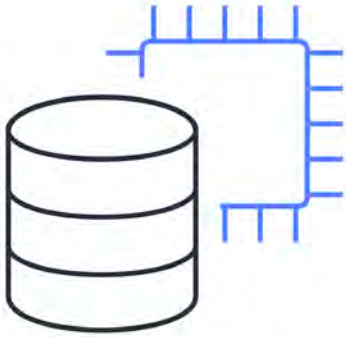
| Key | Value |
|-----|--|
| 1 | Name: John Doe Address: 123 Any Street Favorite drink: Medium latte |
| 2 | Name: Mary Major Address: 100 Main Street Birthday: July 5, 1994 |

- In a **relational database**, data is stored in a way that relates it to other pieces of data.
- Relational databases use **structured query language (SQL)** to store and query data.

| ID | Product name | Size | Price |
|----|----------------------------|--------|--------|
| 1 | Medium roast ground coffee | 12 oz. | \$5.30 |
| 2 | Dark roast ground coffee | 20 oz. | \$9.27 |

Example of data in a relational database

Amazon Relational Database Service



Operate and scale a
relational database in
the AWS Cloud



Automate time-consuming
administrative tasks



Store and transmit
data securely

Amazon RDS database engines

- Amazon Aurora
- PostgreSQL
- MySQL
- MariaDB
- Oracle Database
- Microsoft SQL Server



Amazon RDS

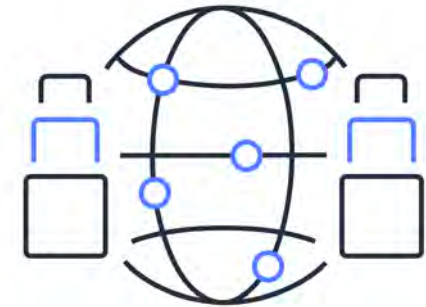
Amazon Aurora



Store data in an enterprise-class relational database



Reduce database costs by eliminating unnecessary input/output (I/O) operations



Replicate six copies of data across three Availability Zones

Nonrelational databases

- A **nonrelational database** uses structures other than rows and columns to organize data.
- For example, with **key-value pairs**, data is organized into items (keys), and items have attributes (values).

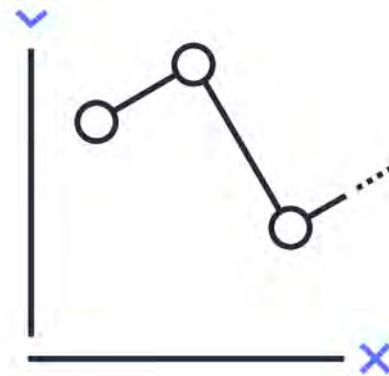
| Key | Value |
|-----|--|
| 1 | Name: John Doe Address: 123 Any Street Favorite drink: Medium latte |
| 2 | Name: Mary Major Address: 100 Main Street Birthday: July 5, 1994 |

Example of data in a nonrelational database

Amazon DynamoDB



Amazon DynamoDB is a serverless key-value database.



It automatically scales to adjust for capacity changes and maintain consistent performance.



It is designed to handle over 10 trillion requests per day.

AWS Database Migration Service

Migrate relational databases, nonrelational databases, and other types of data stores

Example



MySQL database
(Source)



AWS Database
Migration Service
(AWS DMS)



Amazon Aurora
(Target)

Amazon RDS and Amazon DynamoDB

For each scenario, should you use **Amazon RDS** or **Amazon DynamoDB**?

Amazon RDS

1. Storing data in a relational database

2. Running a serverless database

DynamoDB

DynamoDB

3. Storing data in a key-value database

4. Using SQL to organize data

Amazon RDS

DynamoDB

5. Scaling up to 10 trillion requests per day

6. Storing data in an Amazon Aurora database

Amazon RDS

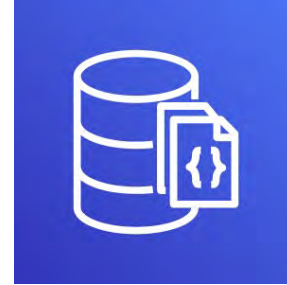
Additional database services

Additional database services



Amazon Redshift

Query and analyze data across a data warehouse



Amazon DocumentDB

Run MongoDB workloads in a document database service



Amazon Neptune

Run applications that use highly connected datasets



Amazon QLDB

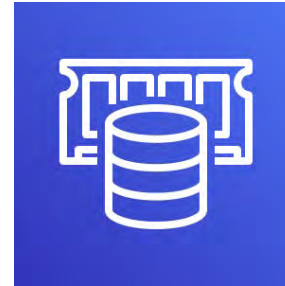
Review a complete history of changes to your application data

Additional database services



Amazon Managed Blockchain

Run a decentralized ledger database



Amazon ElastiCache

Add caching layers to improve database read times



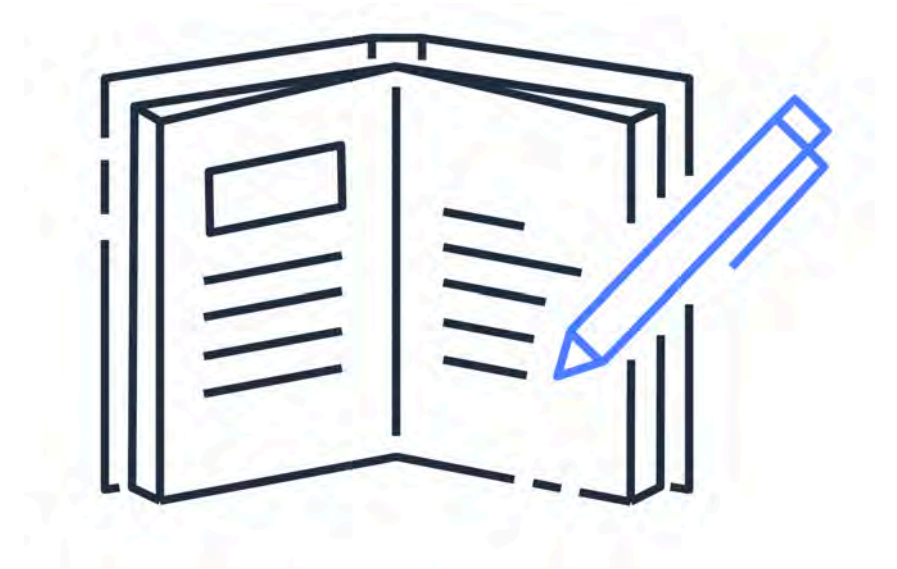
Amazon DynamoDB Accelerator

Improve DynamoDB response times from single-digit milliseconds to microseconds

Module 5 summary

In this module, you learned about:

- AWS storage services and resources
- Amazon S3 storage classes
- AWS database services



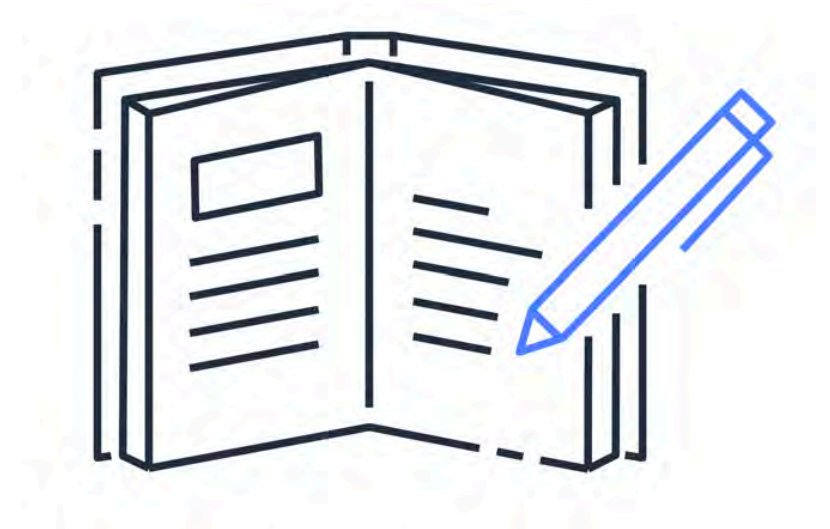
Module 6

Security

Module 6 objectives

In this module, you will learn how to:

- Explain the benefits of the shared responsibility model
- Describe multi-factor authentication (MFA)
- Differentiate among the AWS Identity and Access Management (IAM) security levels
- Explain AWS Organizations benefits
- Describe security policies
- Summarize the benefits of compliance with AWS
- Explain additional AWS security services



Shared responsibility model

Shared responsibility model

| Customers | Customer Data | | |
|-----------|--|------------------------|-------------------------------|
| | Platform, Applications, Identity and Access Management | | |
| | Operating Systems, Network and Firewall Configuration | | |
| | Client-side Data Encryption | Server-side Encryption | Networking Traffic Protection |

| AWS | Software | | | |
|-----|------------------------------------|--------------------|----------------|------------|
| | Compute | Storage | Database | Networking |
| | Hardware/AWS Global Infrastructure | | | |
| | Regions | Availability Zones | Edge Locations | |

Customers: Security **IN** the cloud

| Customers | Customer Data | | |
|-----------|--|------------------------|-------------------------------|
| | Platform, Applications, Identity and Access Management | | |
| | Operating Systems, Network and Firewall Configuration | | |
| | Client-side Data Encryption | Server-side Encryption | Networking Traffic Protection |

Examples of customer responsibilities include:

- Instance operating system
- Applications
- Security groups
- Host-based firewalls
- Account management

AWS: Security **OF** the cloud

| AWS | Software | | | |
|-----|------------------------------------|--------------------|----------------|------------|
| | Compute | Storage | Database | Networking |
| | Hardware/AWS Global Infrastructure | | | |
| | Regions | Availability Zones | Edge Locations | |

Examples of AWS responsibilities include:

- Physical security of data centers
- Hardware and software infrastructure
- Network infrastructure
- Virtualization infrastructure

Review: Shared responsibility model

Are these tasks the responsibilities of **customers** or **AWS**?

Customers

1. Configuring security groups on Amazon EC2 instances

2. Maintaining network infrastructure

AWS

AWS

3. Implementing physical security controls at data centers

4. Patching software on Amazon EC2 instances

Customers

AWS

5. Maintaining servers that run Amazon EC2 instances

6. Setting permissions for Amazon S3 objects

Customers

AWS Identity and Access Management (IAM)



AWS Identity and Access Management (IAM) allows you to manage access to AWS services and resources.

IAM features



IAM user



IAM policy



IAM group

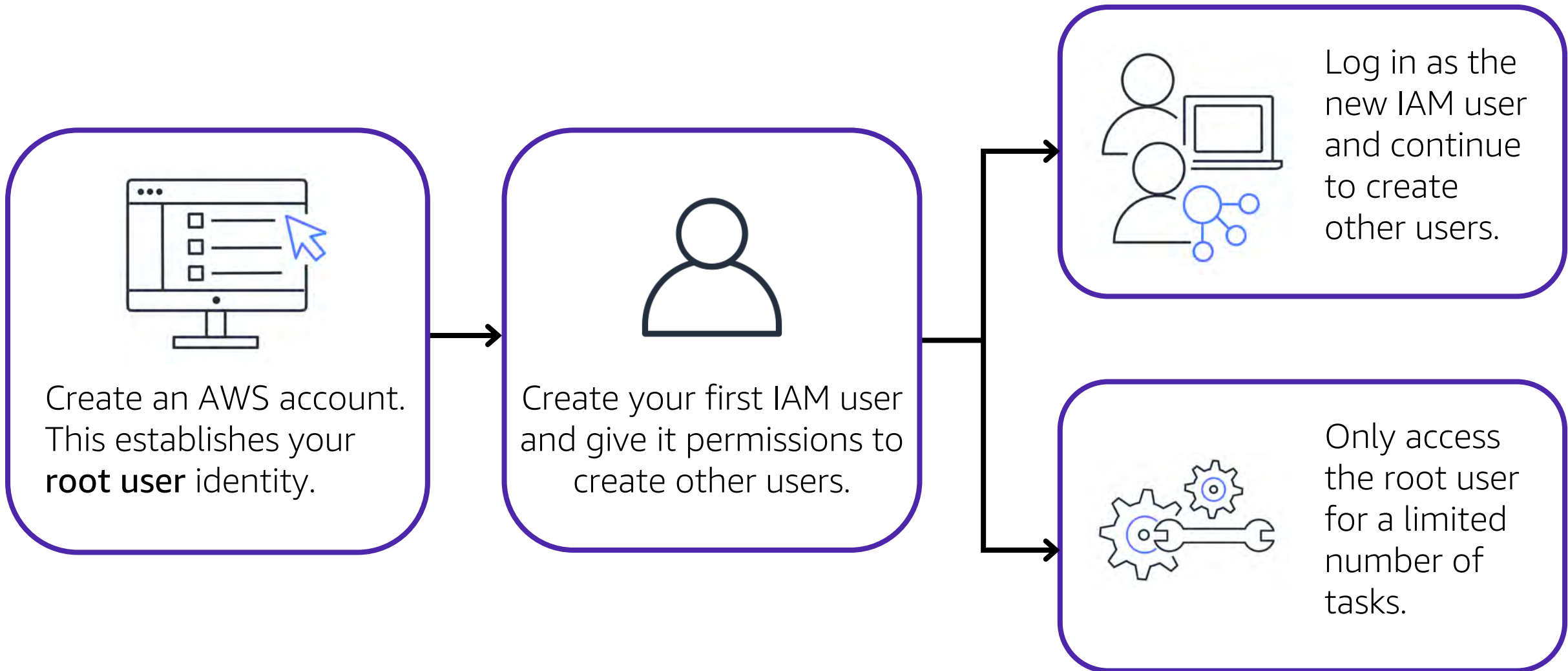


IAM role



Multi-factor authentication

AWS account root user



An **IAM user** is an identity that represents a person or application that interacts with AWS services and resources.

Best practice: Create individual IAM users for each person who needs to access AWS.



IAM user

An **IAM policy** is a document that grants or denies permissions to AWS services and resources.

Best practice: Follow the security principle of least privilege.



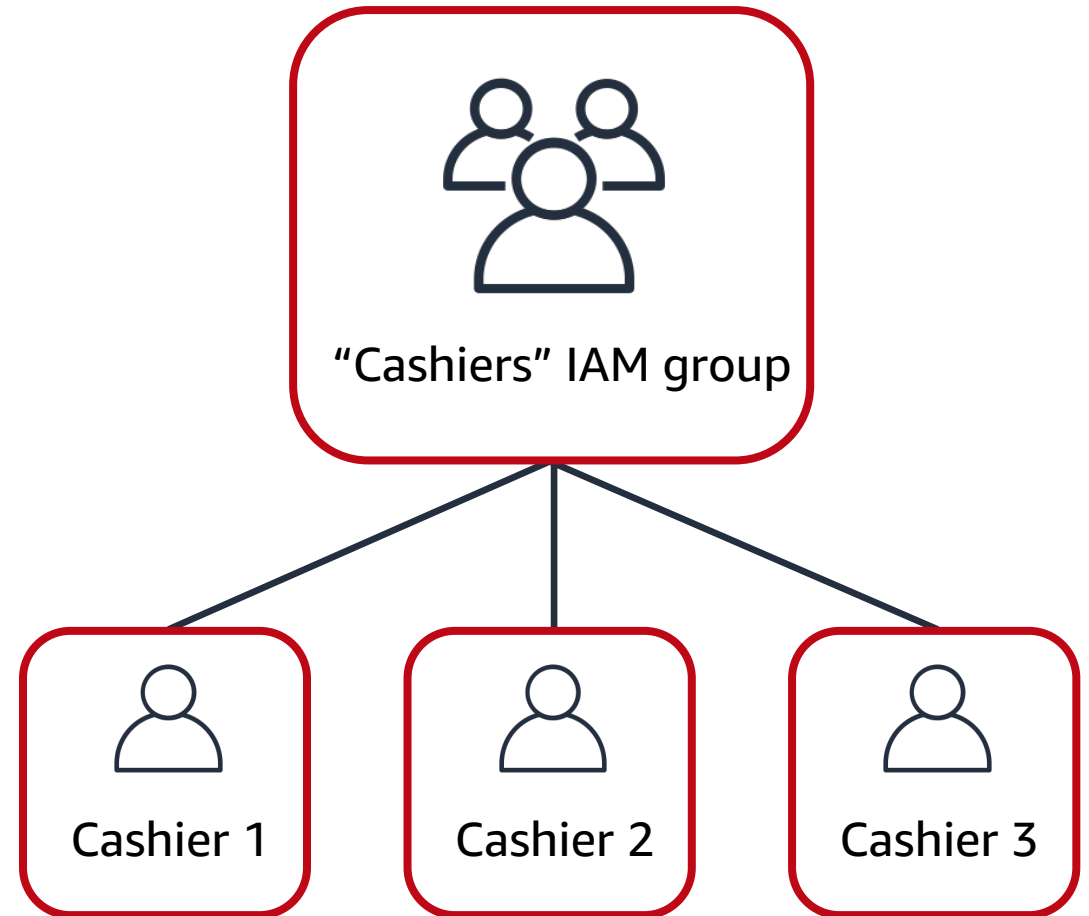
IAM policy

IAM groups

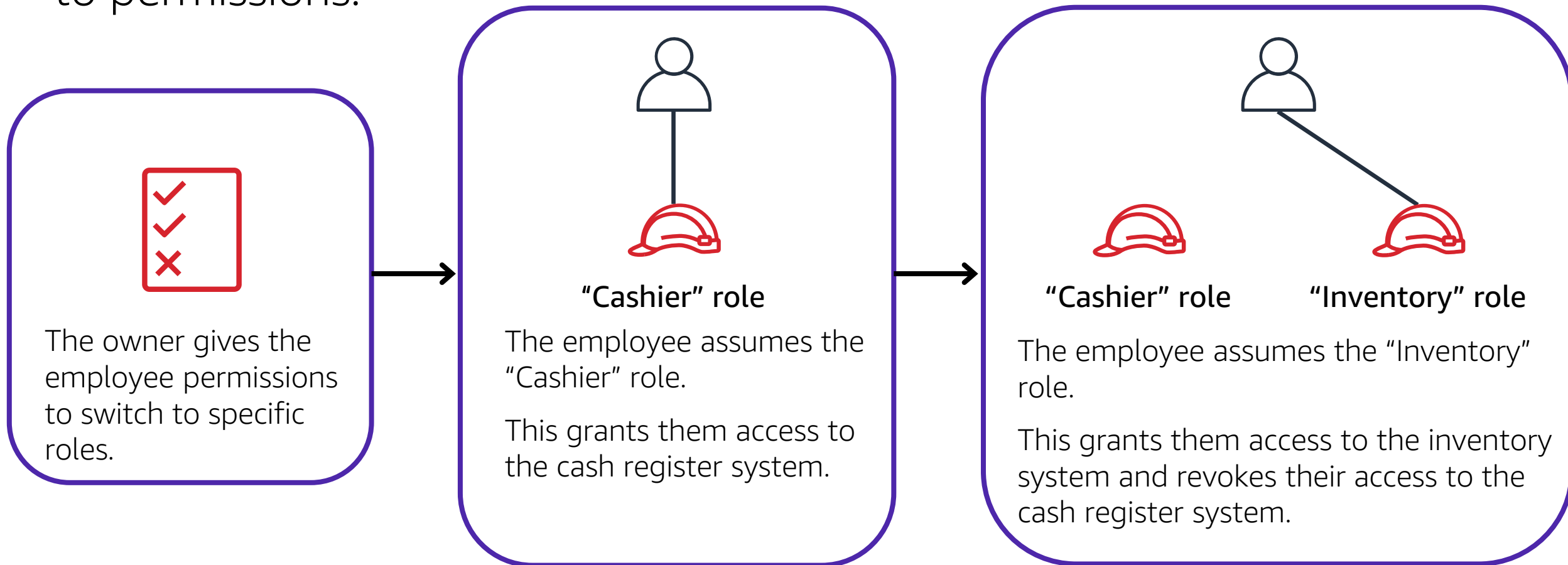
An **IAM group** is a collection of IAM users.

Best practice: Attach IAM policies to IAM groups, rather than to individual IAM users.

Members inherit the policies assigned to the group.



An **IAM role** is an identity that you can assume to gain temporary access to permissions.



Multi-factor authentication

Multi-factor authentication provides an extra layer of protection for your AWS account.

IAM user ID: AIDACKCEVSQ6C2EXAMPLE

Password: *****

To sign in to an AWS website, a user enters their IAM user ID and password.



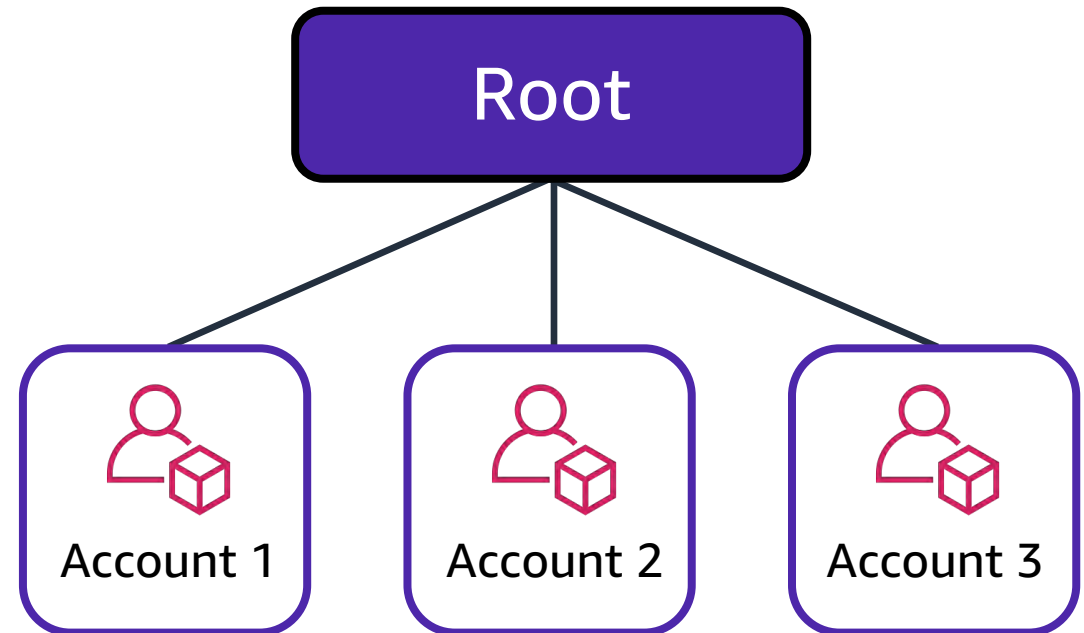
The user is prompted to provide an authentication response from their AWS MFA device.



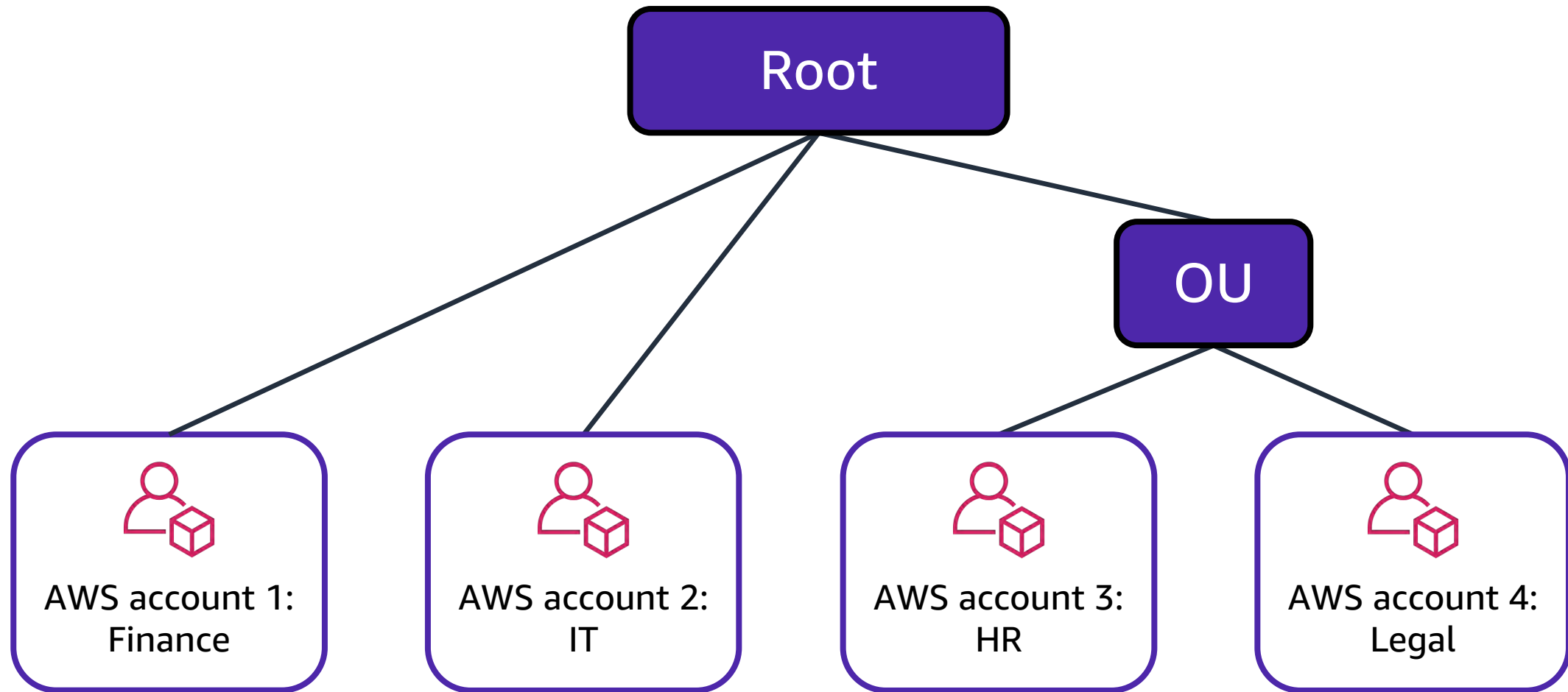
The user is successfully authenticated and can access the requested AWS services or resources.

AWS Organizations

- **AWS Organizations** helps customers consolidate and manage multiple AWS accounts in a central location.
- Use **service control policies (SCPs)** to centrally control permissions for the accounts in your organization.



Example: Organizational units

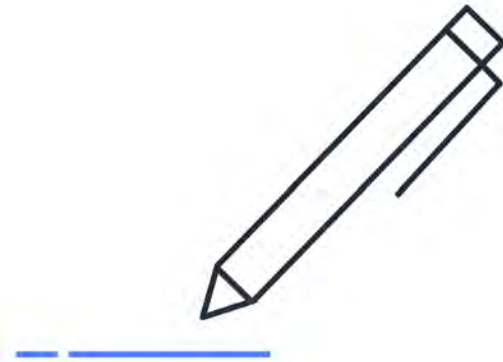


Compliance

AWS Artifact provides on-demand access to security and compliance reports and select online agreements.



Access AWS compliance reports on demand



Review, accept, and manage agreements with AWS



Access compliance reports from third-party auditors

Assurance programs

Global



USA



Europe



Asia Pacific



Customer Compliance Center

The **Customer Compliance Center** contains resources to help you learn more about AWS compliance.



Discover compliance stories from companies in regulated industries



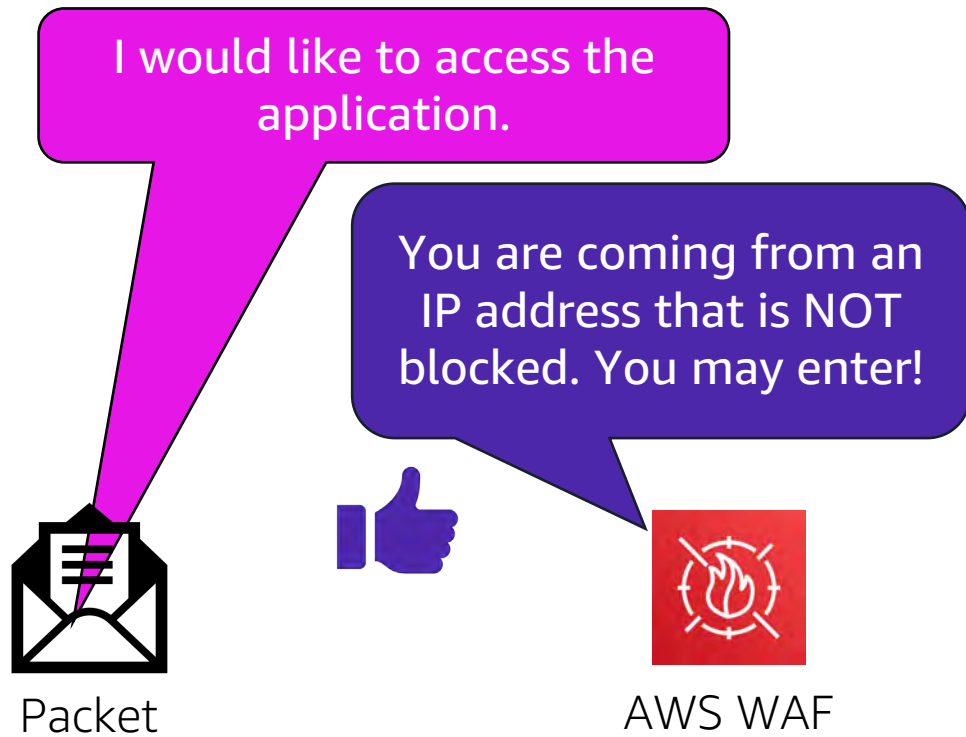
Access compliance technical papers and documentation



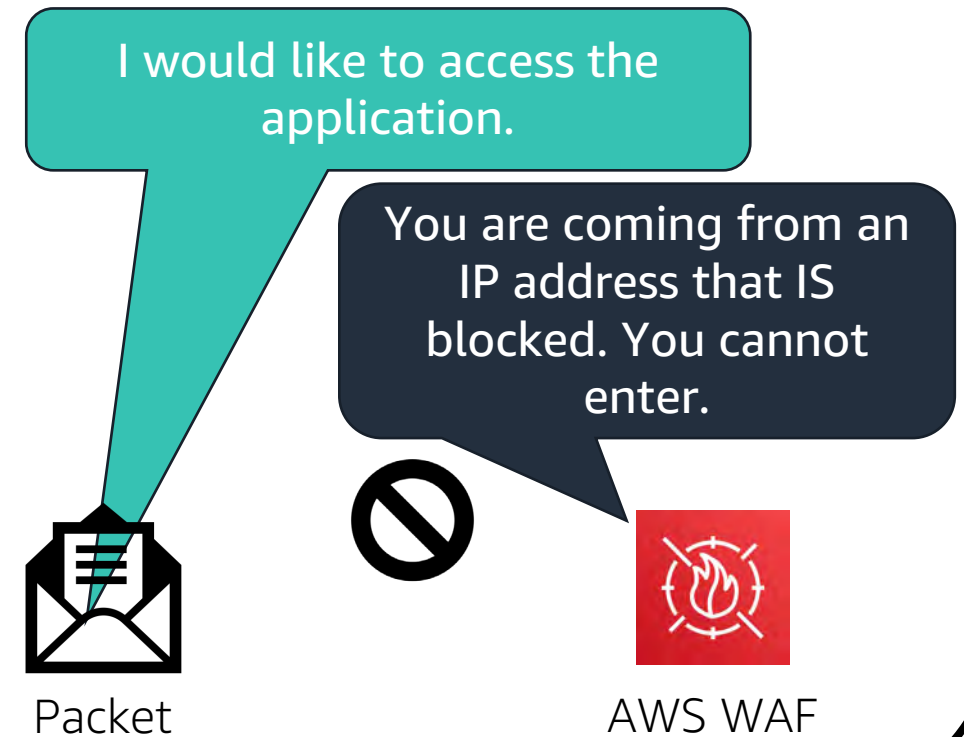
Complete the auditor learning path

Application security

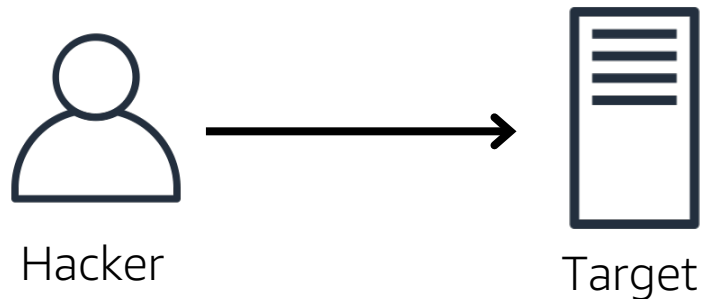
Request from a customer



Malicious request from a hacker

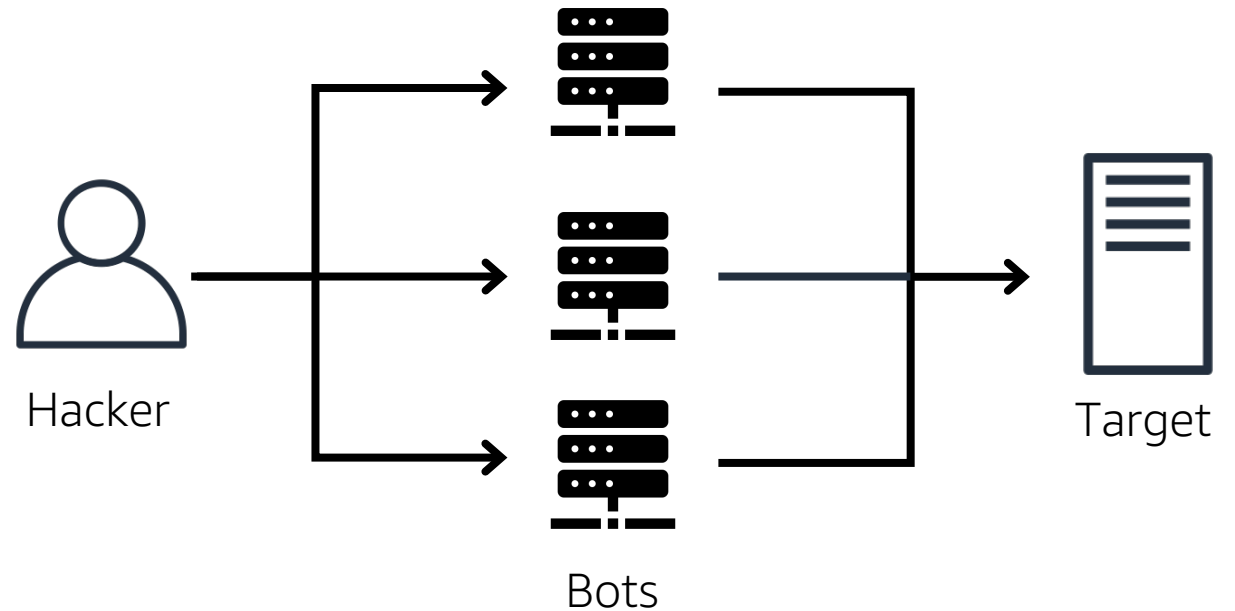


Denial of service attack



The attack originates from a **single** source.

Distributed denial of service attack



The attack originates from **multiple** sources.

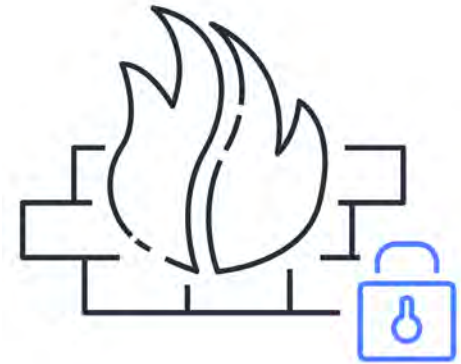
AWS Shield provides protection against distributed denial of service (DDoS) attacks.



Protect applications
against DDoS attacks



Integrate AWS Shield
Advanced with other
AWS services



Write custom web ACL
rules with AWS WAF to
mitigate complex
DDoS attacks

Amazon Inspector allows you to perform automated security assessments on your applications.



Automatically conduct
application security
assessments



Identify security
vulnerabilities and deviations
from best practices



Receive recommendations
for how to fix security
issues

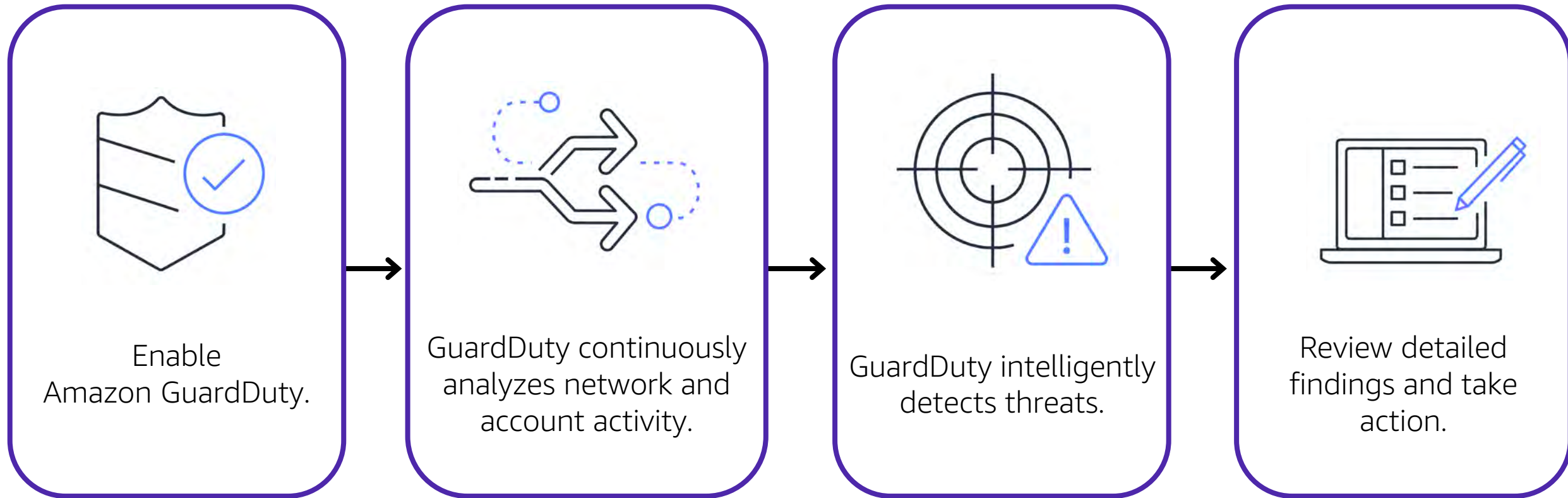
Additional security services

- **AWS Key Management Service (AWS KMS)** helps customers perform encryption operations through the use of cryptographic keys.
- You can choose the specific levels of access control that you need for your keys.



AWS KMS

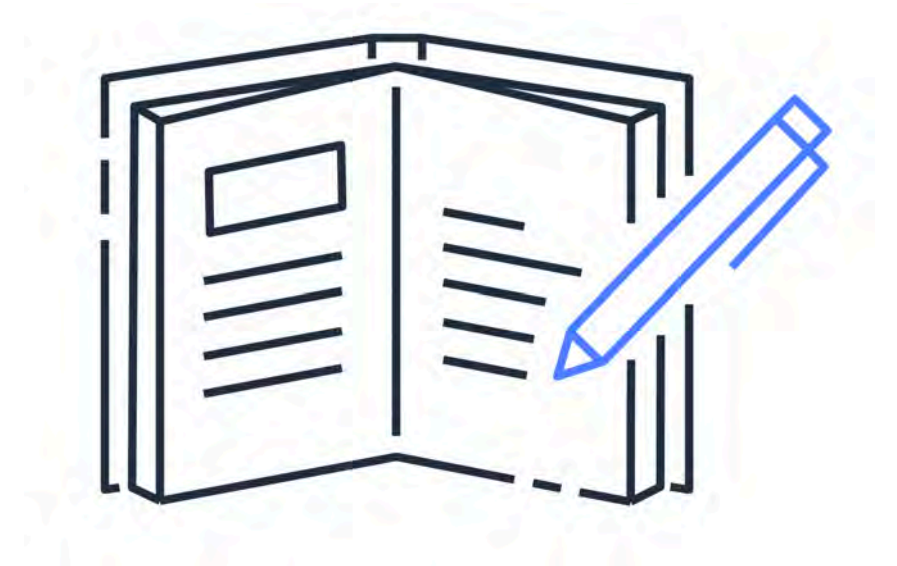
Amazon GuardDuty provides intelligent threat detection for AWS products and services.



Module 6 summary

In this module, you learned about:

- Shared responsibility model
- AWS Identity and Access Management features
- Methods of managing multiple accounts in AWS Organizations
- AWS services for application security and encryption
- AWS compliance resources



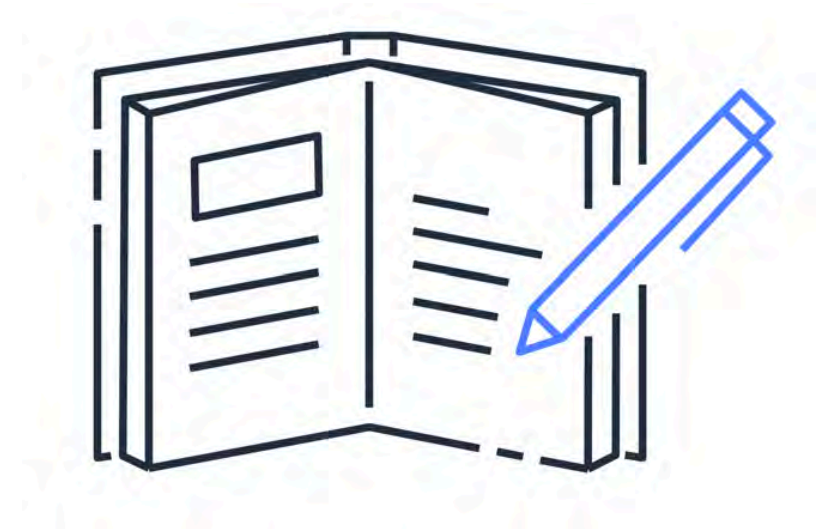
Module 7

Monitoring and Analytics

Module 7 objectives

In this module, you will learn how to:

- Summarize approaches to monitoring in AWS
- Describe Amazon CloudWatch benefits
- Describe AWS CloudTrail benefits
- Describe AWS Trusted Advisor benefits



Amazon CloudWatch

Coffee shop metrics

Metrics

Thresholds

Actions



Average customer wait time
over the past hour



Greater than 5 minutes



Open another register



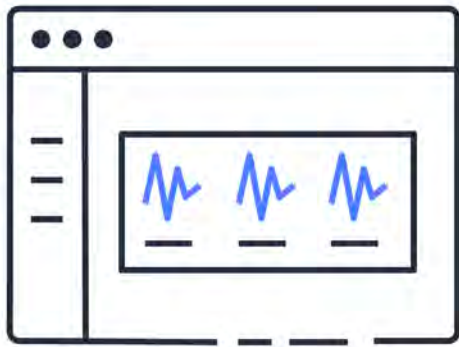
Number of remaining
pastries for sale



Fewer than 10 pastries



Bake another batch
of pastries



Monitor your AWS and on-premises infrastructure and resources in real time



Access all of your metrics from a single location



Configure automatic alerts and actions in response to metrics

Amazon CloudWatch dashboard

Amazon RDS metrics

2.06 %

20.1 GB

0.38 /s

0.23 /s

CPUUtilization

FreeStorageSpace

WriteIOPS

ReadIOPS

Amazon EC2 metrics

xa

Bytes

26.7k

18.0k

9.35k

13:00 13:30 14:00 14:30 15:00 15:30

NetworkIn NetworkOut

Amazon EBS metrics

xa

Bytes

8.13k

7.70k

7.26k

13:00 13:30 14:00 14:30 15:00 15:30

VolumeWriteBytes

AWS CloudTrail



Track user activities and API requests throughout your AWS infrastructure



Filter logs generated by API calls to assist with operational analysis and troubleshooting



Automatically detect unusual account activity

What happened?

New IAM user (Mary) created



Who made the request?

IAM user John



When did this occur?

January 1, 2021 at 9:00 AM



How was the request
made?

Through the AWS Management Console



Knowledge check question



Which tasks can you perform using AWS CloudTrail? (Select TWO.)

- A. Monitor your AWS infrastructure and resources in real time
- B. Track user activities and API requests throughout your AWS infrastructure
- C. View metrics and graphs to monitor the performance of resources
- D. Filter logs to assist with operational analysis and troubleshooting
- E. Configure automatic actions and alerts in response to metrics

Knowledge check answer



Which tasks can you perform using AWS CloudTrail? (Select TWO.)

- A. Monitor your AWS infrastructure and resources in real time
- B. Track user activities and API requests throughout your AWS infrastructure (correct)
- C. View metrics and graphs to monitor the performance of resources
- D. Filter logs to assist with operational analysis and troubleshooting (correct)
- E. Configure automatic actions and alerts in response to metrics

AWS Trusted Advisor



Receive real-time
guidance for improving
your AWS environment



Compare your
infrastructure to AWS best
practices in five categories



Evaluate and implement
guidance at all stages of
deployment

AWS Trusted Advisor dashboard



Number of items for which **no problems** have been detected



Number of recommended **investigations**



Number of recommended **actions**

Cost Optimization



0  9  0 

\$7,516.85

Potential monthly savings

Performance



3  7  0 

Security



2  4  11 

Fault Tolerance



0  15  5 

Service Limits

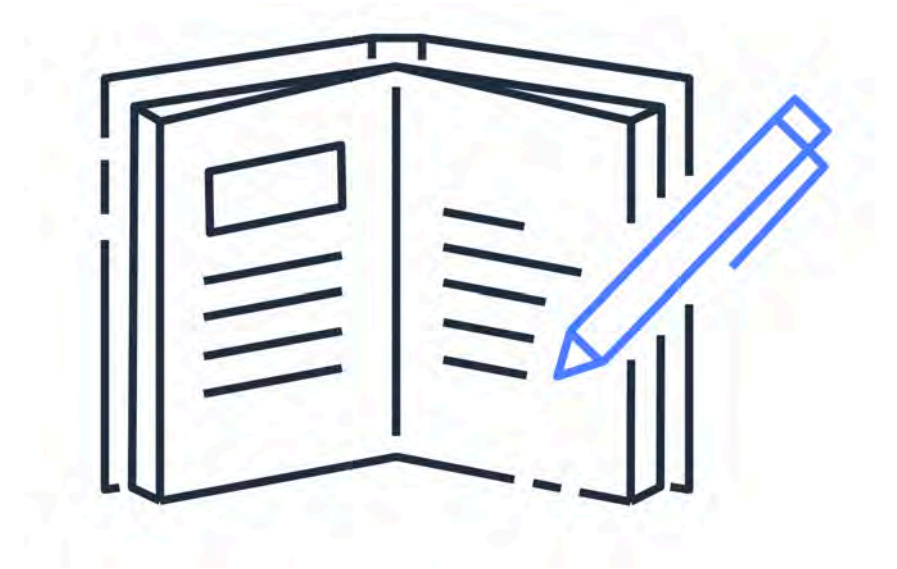


37  0  1 

Module 7 summary

In this module, you learned about:

- Amazon CloudWatch
- AWS CloudTrail
- AWS Trusted Advisor



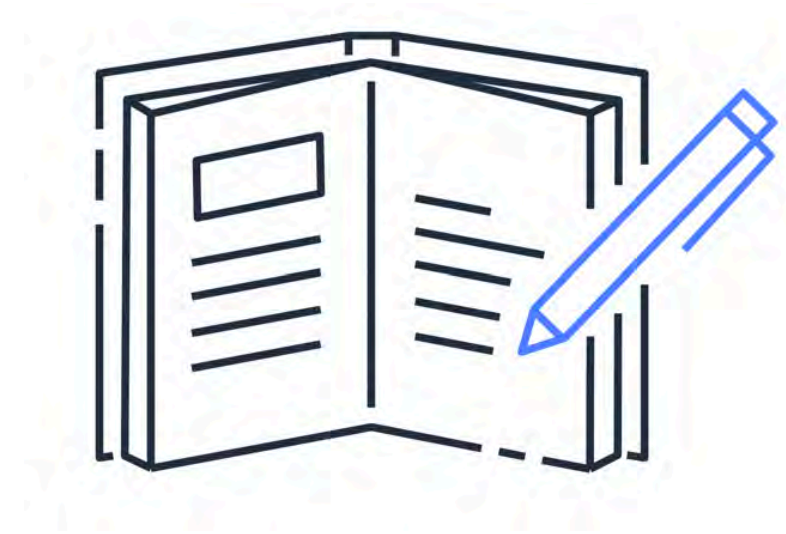
Module 8

Pricing and Support

Module 8 objectives

In this module, you will learn how to:

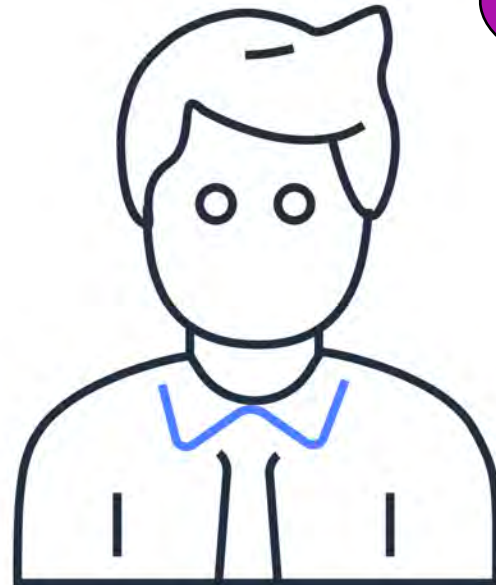
- Describe AWS pricing and support models
- Describe the AWS Free Tier
- Describe key benefits of AWS Organizations and consolidated billing
- Explain AWS Budgets benefits
- Explain AWS Cost Explorer benefits
- Explain AWS Pricing Calculator benefits
- Distinguish among the AWS Support plans
- Describe AWS Marketplace benefits



AWS pricing and support

How can I budget
and pay for AWS
services?

Where can I find
support and third-
party software?

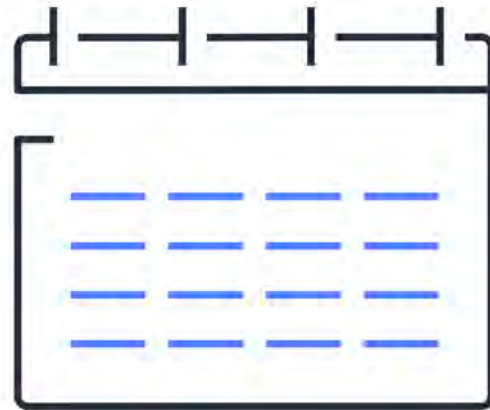


AWS pricing

AWS Free Tier categories



Always free



12 months free



Trials

Pay as you go

Pay only for the resources that you use without provisioning capacity in advance


Pay less when you reserve

Reduce costs by reserving capacity in services such as Amazon Elastic Compute Cloud (Amazon EC2) and Amazon Relational Database Service (Amazon RDS)

Pay less with volume-based discounts

Receive savings through volume-based discounts as your usage increases

AWS Pricing Calculator

 pricing calculator

FeedbackEnglish▼Contact Sales

[AWS Pricing Calculator](#) > [My Estimate](#) > [Add Amazon EC2](#)

Step 1
Select service

Step 2
Configure Amazon EC2

Configure Amazon EC2 [Info](#)

Region

US East (Ohio) ▼

☒ Quick estimate
Choose this option for fast and easy route to a ballpark estimate based on minimum requirements or a specific instance search. The estimate assumes consistent utilization.

☐ Advanced estimate
Choose this option for a more detailed estimate that accounts for workload, data transfer costs, additional storage options, and other, less common instance requirements. For example, you know that you get a lot of traffic on Mondays but not much traffic throughout the rest of the week, and you want an estimate that takes this workload into account.

EC2 instance specifications [Info](#)

Operating system

Choose which operating system you'd like to run Amazon EC2 instances on.

Linux ▼

AWS Lambda pricing

- Pay only for the compute time you use
- Pay for the number of requests for your functions
- Save by signing up for a Compute Savings Plan



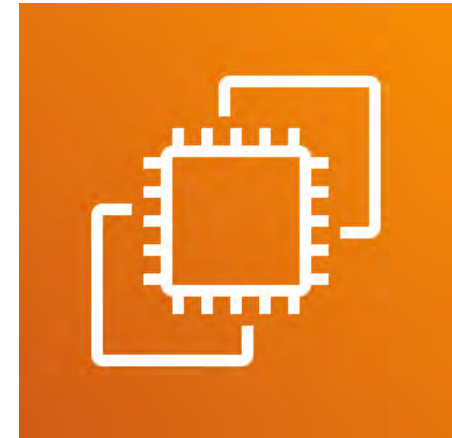
AWS Lambda

Example: AWS Lambda service charges

| | | | |
|---|------------------|--|---------------|
| ▼ Lambda | | | \$0.00 |
| ▼ US East (N. Virginia) | | | \$0.00 |
| AWS Lambda Lambda-GB-Second | | | \$0.00 |
| AWS Lambda - Compute Free Tier - 400,000 GB-Seconds - US East (Northern Virginia) | 254.575 seconds | | \$0.00 |
| AWS Lambda Request | | | \$0.00 |
| AWS Lambda - Requests Free Tier - 1,000,000 Requests - US East (Northern Virginia) | 680.000 Requests | | \$0.00 |

Amazon EC2 pricing

- Pay only for the time that your On-Demand Instances run
- Reduce costs by using Spot Instances for recommended use cases
- Save by signing up for a Compute Savings Plan
- Amazon EC2 pricing:
<https://aws.amazon.com/ec2/pricing>
-



Amazon Elastic Compute
Cloud

Example: Amazon EC2 service charges

| | | |
|--|--------------|--------|
| ▼ Elastic Compute Cloud | | \$0.00 |
| ▼ US East (N. Virginia) | | \$0.00 |
| Amazon Elastic Compute Cloud running Linux/UNIX | | \$0.00 |
| \$0.00 per Linux t2.micro instance-hour (or partial hour) under monthly free tier | 106.512 Hrs | \$0.00 |
| EBS | | \$0.00 |
| \$0.00 per GB-month of General Purpose (SSD) provisioned storage under monthly free tier | 11.294 GB-Mo | \$0.00 |
| Elastic Load Balancing - Application | | \$0.00 |
| \$0.00 per Application LoadBalancer-hour (or partial hour) under monthly free tier | 268.000 Hrs | \$0.00 |

Amazon S3 pricing is based on four factors:

- Storage
- Requests and data retrievals
- Data transfer
- Management and replication



Amazon Simple Storage
Service

Example: Amazon S3 service charges

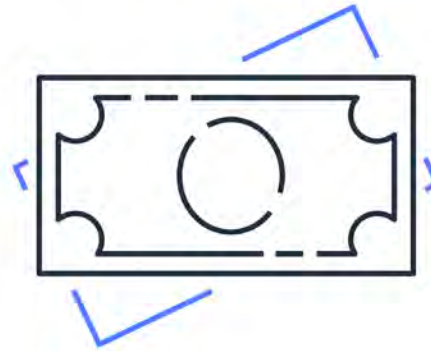
| | | |
|---|------------------|--------|
| ▼ Simple Storage Service | | \$0.00 |
| ▼ US East (N. Virginia) | | \$0.00 |
| Amazon Simple Storage Service Requests-Tier1 | | \$0.00 |
| \$0.00 per request - PUT, COPY, POST, or LIST requests under the monthly global free tier | 185.000 Requests | \$0.00 |
| Amazon Simple Storage Service Requests-Tier2 | | \$0.00 |
| \$0.00 per request - GET and all other requests under the monthly global free tier | 923.000 Requests | \$0.00 |
| Amazon Simple Storage Service TimedStorage-ByteHrs | | \$0.00 |
| \$0.000 per GB - storage under the monthly global free tier | 0.159 GB-Mo | \$0.00 |
| ▼ US East (Ohio) | | \$0.00 |
| Amazon Simple Storage Service USE2-Requests-Tier2 | | \$0.00 |
| \$0.00 per request - GET and all other requests under the monthly global free tier | 4.000 Requests | \$0.00 |
| Amazon Simple Storage Service USE2-TimedStorage-ByteHrs | | \$0.00 |
| \$0.000 per GB - storage under the monthly global free tier | 0.000001 GB-Mo | \$0.00 |

Consolidated billing

Consolidated billing



Receive a single bill
for all the AWS
accounts in your
organization

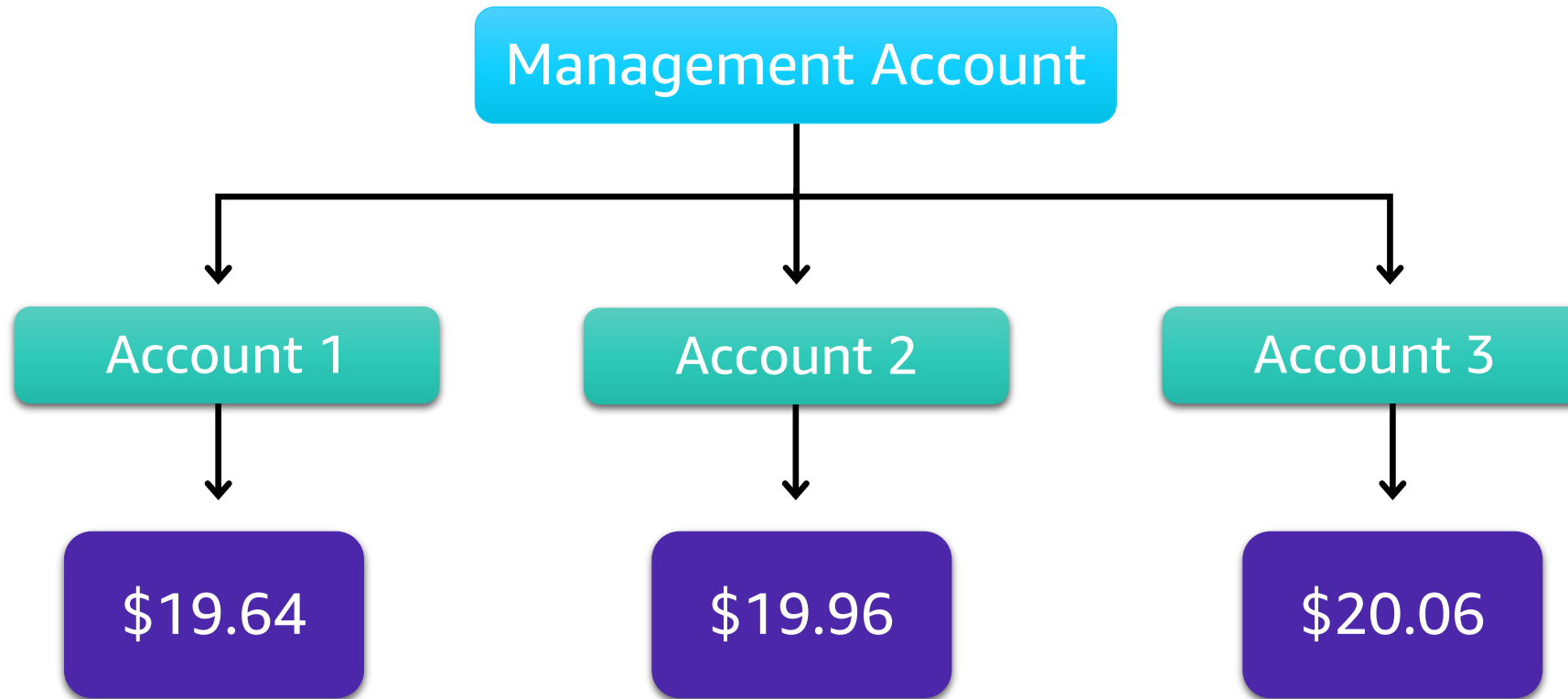


Review itemized
charges that have been
incurred by each
account



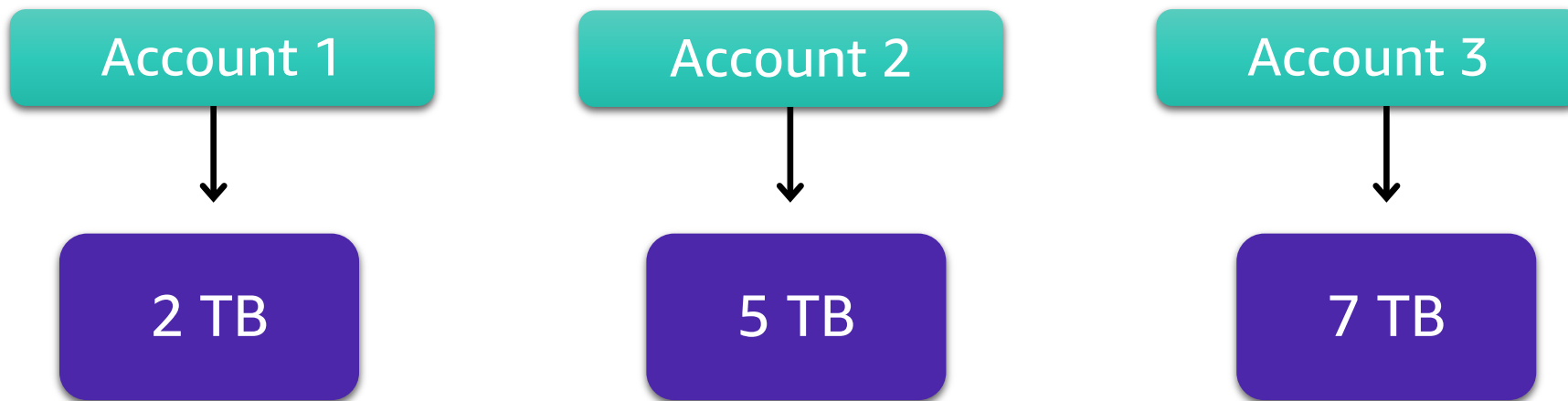
Share savings across
the accounts in your
organization

Example: Consolidated billing

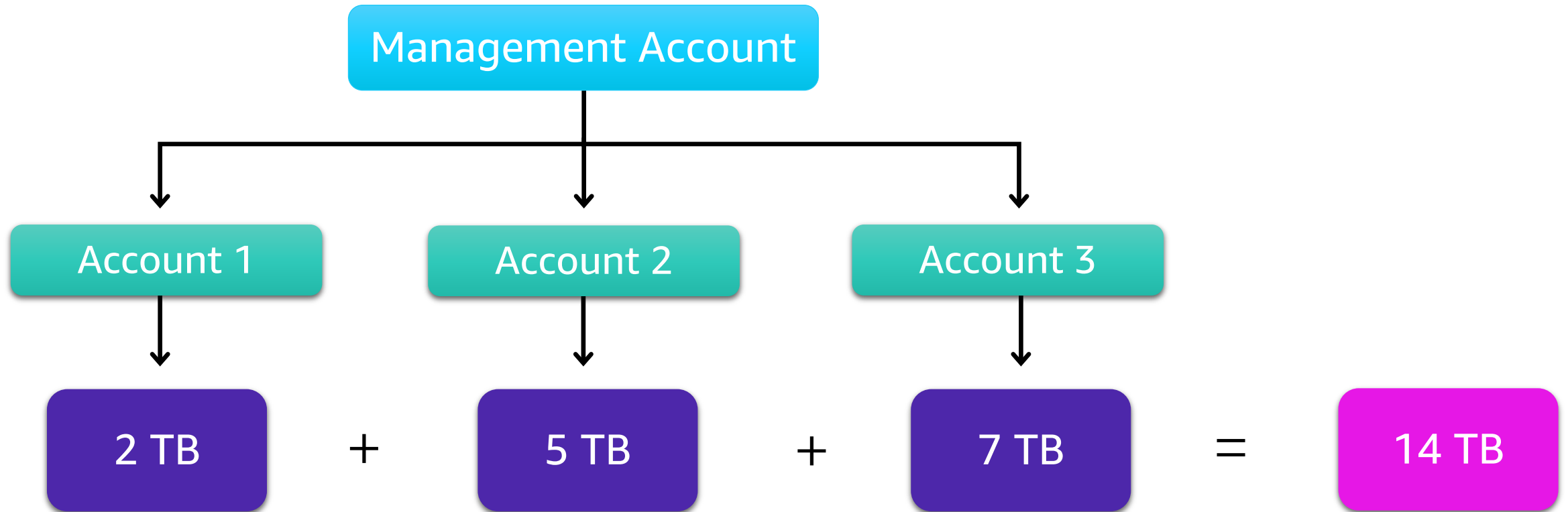


| Monthly Consolidated Bill | |
|----------------------------------|---------|
| Management Account | \$14.14 |
| Account 1 | \$19.64 |
| Account 2 | \$19.96 |
| Account 3 | \$20.06 |
| Total charged to paying account: | \$73.80 |

Example: Volume pricing in Amazon S3



Example: Volume pricing in Amazon S3



AWS pricing tools

AWS Budgets

AWS Budgets is a tool that you can use to set thresholds for your AWS service usage and costs.

AWS Budgets

Filter by budget name

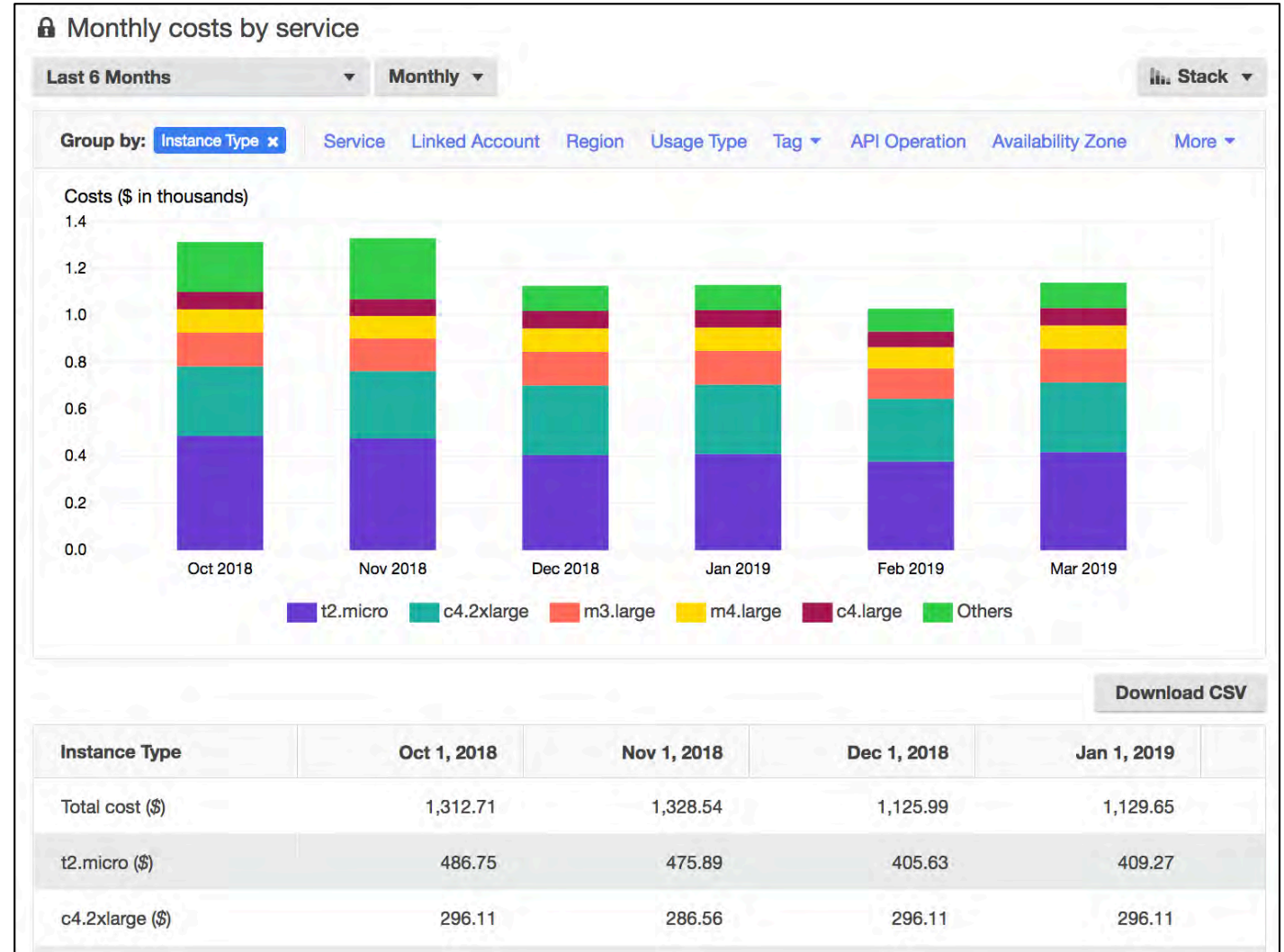
Download CSV

Create budget

| All budgets (7) | Cost budgets (5) | Usage budgets (2) | Reservation budgets (0) | | | | |
|----------------------------|------------------|-------------------|-------------------------|-------------------|-------------------------------|--------------------------------|-----|
| Budget name | Budget type | Current | Budgeted | Forecasted | Current vs. budgeted | Forecasted vs. budgeted | |
| Project Nemo Cost Budget | Cost | \$43.90 | \$45.00 | \$56.33 | <div><div></div></div> 97.55% | <div><div></div></div> 125.17% | ... |
| Eastern US Regional Budget | Cost | \$85.21 | \$100.00 | \$125.28 | <div><div></div></div> 85.21% | <div><div></div></div> 125.28% | ... |
| Total Monthly Cost Budget | Cost | \$141.50 | \$175.00 | \$187.00 | <div><div></div></div> 80.86% | <div><div></div></div> 106.86% | ... |
| Total EC2 Cost Budget | Cost | \$136.90 | \$200.00 | \$195.21 | <div><div></div></div> 68.45% | <div><div></div></div> 97.61% | ... |
| S3 Usage Budget | Usage | 3,601 Requests | 5,500 Requests | 4,675.75 Requests | <div><div></div></div> 65.47% | <div><div></div></div> 85.01% | ... |

AWS Cost Explorer

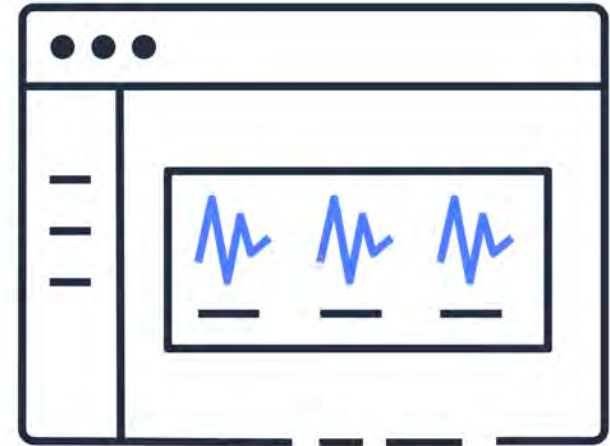
AWS Cost Explorer is a tool that you can use to visualize, understand, and manage your AWS costs and usage over time.



AWS Support plans

Basic Support is free for all AWS customers and includes access to:

- Technical papers, documentation, and support communities
- AWS Personal Health Dashboard
- Seven core AWS Trusted Advisor checks



Developer

- Best-practice guidance
- Client-side diagnostic tools
- Building-block architecture support

Business

- Use-case guidance
- All AWS Trusted Advisor checks
- Limited support for third-party software

Enterprise

- Application architecture guidance
- Infrastructure event management
- Technical Account Manager (TAM)

Technical Account Manager (TAM)

The **Technical Account Manager** is your primary point of contact at AWS.

- Technical Account Managers are included only with the Enterprise Support plan.
- They provide guidance, technical expertise, and best practices.



AWS Marketplace

AWS Marketplace is a digital catalog that provides listings of third-party software that runs on AWS.



Discover thousands
of software products
that run on AWS



Access detailed
information and
reviews for each
product listing



Explore software
solutions by industry
and use case

AWS Marketplace categories



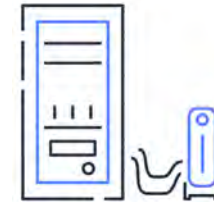
Business
Applications



Data and
Analytics



DevOps



Infrastructure
Software



Internet of
Things (IoT)



Machine
Learning



Migration

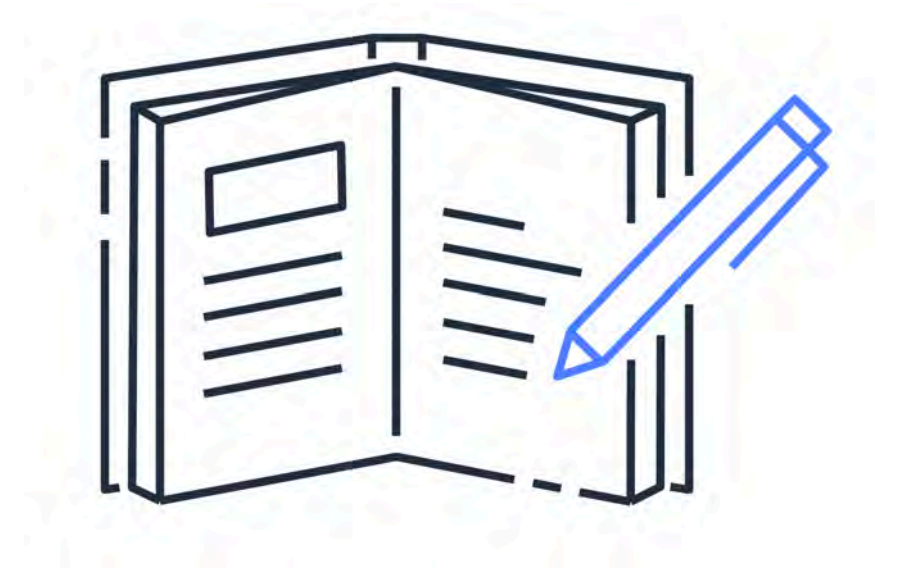


Security

Module 8 summary

In this module, you learned about:

- AWS Free Tier
- Consolidated billing
- Tools for planning, estimating, and reviewing AWS costs
- AWS Support plans
- AWS Marketplace benefits



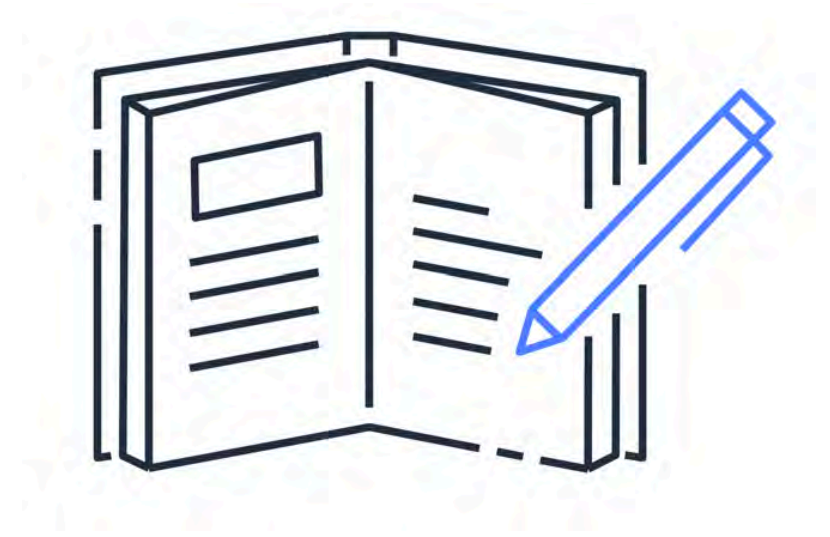
Module 9

Migration and Innovation

Module 9 objectives

In this module, you will learn how to:

- Describe migration and innovation in the AWS Cloud
- Summarize the AWS Cloud Adoption Framework (AWS CAF)
- Summarize the six key factors of a cloud migration strategy
- Describe the benefits of AWS data migration solutions
- Summarize the broad scope of innovative solutions that AWS offers
- Summarize the five pillars of the AWS Well-Architected Framework



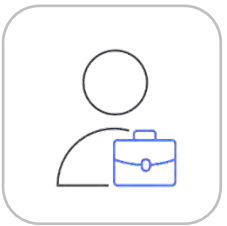
AWS Cloud Adoption Framework

- Provides advice to your company to enable a quick and smooth migration to AWS
- Organizes guidance into six areas of focus, called **perspectives**



Perspectives

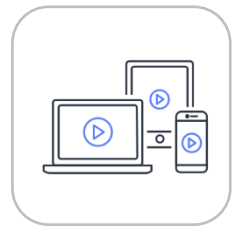
Business



People



Governance



Platform



Security



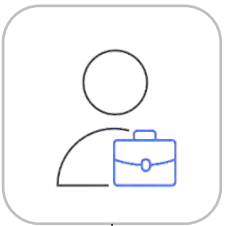
Operations

Business
capabilities

Technical
capabilities

Business perspective

Business



People



Governance



Goal

Ensures that IT aligns with business needs and IT investments link to key business results

Common roles

- Business managers
- Finance managers
- Budget owners
- Strategy stakeholders



Platform



Security



Operations

People perspective

Business



People



Governance



Platform



Security



Operations

Goal

Supports development of an organization-wide change management strategy for successful cloud adoption

Common roles

- Human resources
- Staffing
- People managers

Governance perspective

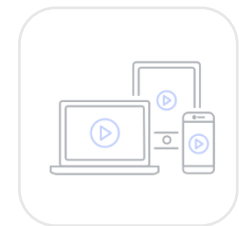
Business



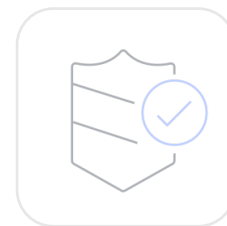
People



Governance



Platform



Security



Operations

Goal

Focuses on the skills and processes to align IT strategy with business strategy

Common roles

- Chief information officer (CIO)
- Program managers
- Enterprise architects
- Business analysts
- Portfolio managers

Platform perspective

Business



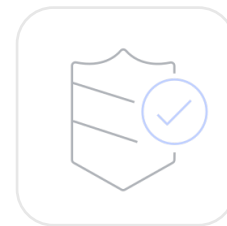
People



Governance



Platform



Security



Operations

Goal

Includes principles and patterns for implementing new solutions in the cloud, and migrating on-premises workloads to the cloud

Common roles

- Chief technology officer (CTO)
- IT managers
- Solutions architects

Security perspective

Business



People



Governance



Platform



Security



Operations

Goal

Ensures that the organization meets security objectives for visibility, auditability, control, and agility

Common roles

- Chief information security officer (CISO)
- IT security managers
- IT security analysts

Operations perspective

Business



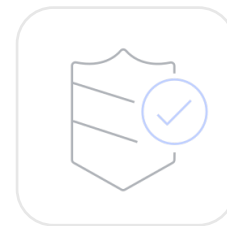
People



Governance



Platform



Security



Operations

Goal

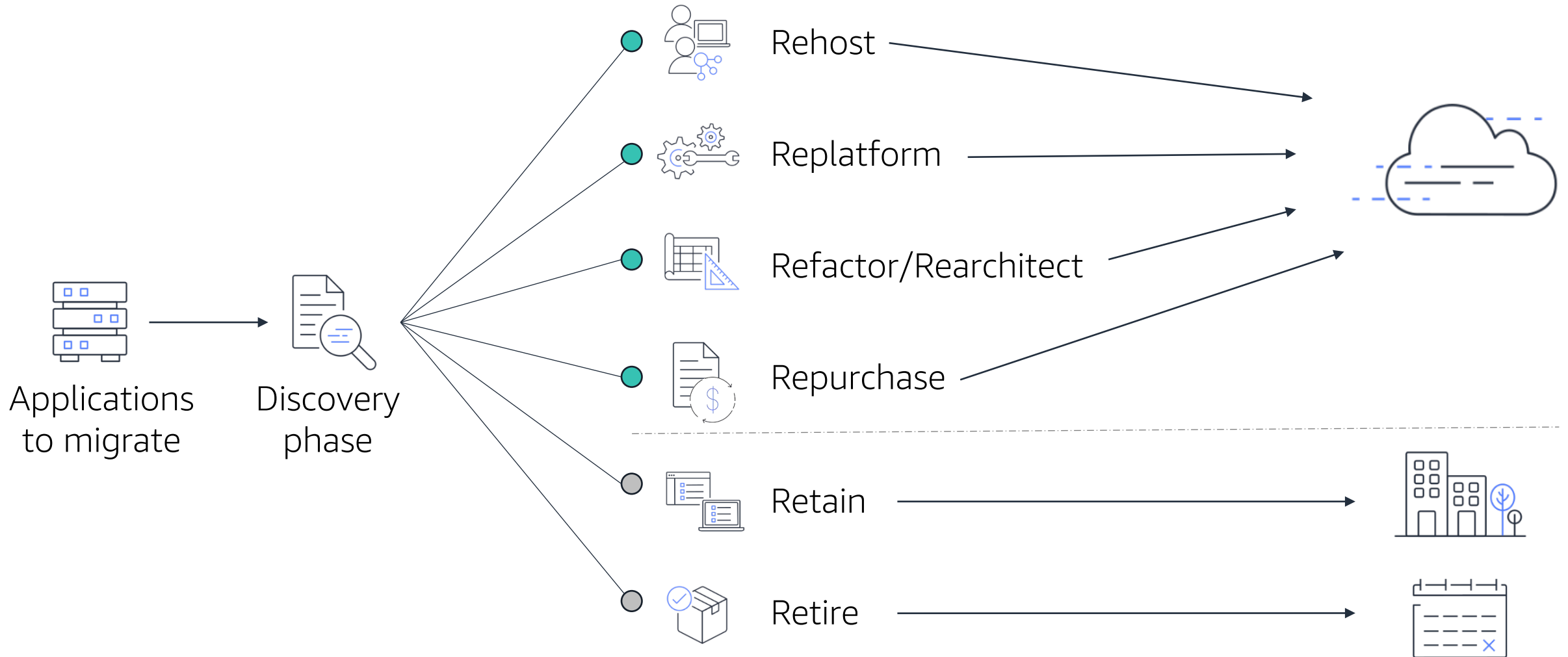
Helps you to enable, run, use, operate, and recover IT workloads to the level agreed on with your business stakeholders

Common roles

- IT operations managers
- IT support managers

Migration strategies

Six migration strategies



AWS Snow Family

AWS Snowcone

- Small, rugged, and secure edge computing and data transfer device
- Features 8 TB of usable storage

AWS Snowball devices

- AWS Snowball Edge Storage Optimized
- AWS Snowball Edge Compute Optimized

AWS Snowmobile

- Exabyte-scale data transfer service for moving large amounts of data to AWS
- Transfers up to 100 PB of data

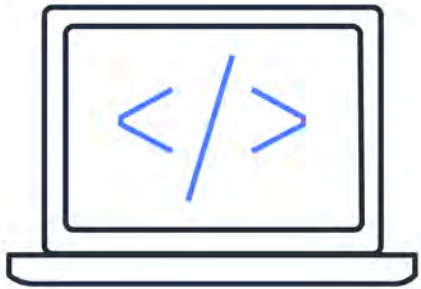
Innovation with AWS

Driving innovation in the cloud involves clearly articulating the following conditions:

- Current state
- Desired state
- Problems you are trying to solve



Consider some of the following innovation paths as you continue on your cloud journey.



Serverless
applications



Artificial intelligence
(AI)



Machine learning
(ML)

AWS Well-Architected Framework

Well-Architected Framework

The **Well-Architected Framework** helps you understand how to design and operate reliable, secure, efficient, and cost-effective systems in the AWS Cloud.

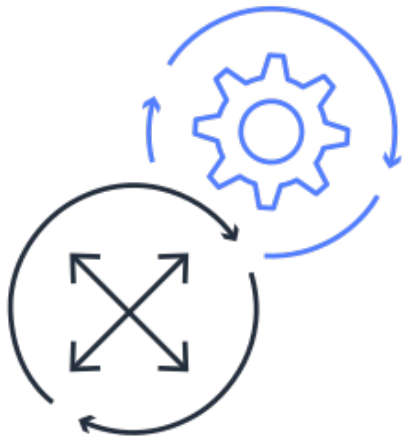
It is based on five pillars:

- Operational excellence
- Security
- Reliability
- Performance efficiency
- Cost optimization



Operational excellence

Run and monitor systems to deliver business value and to continually improve supporting processes and procedures



- Perform operations as code
- Annotate documentation
- Anticipate failure
- Refine operations procedures frequently
- Make frequent, small, reversible changes

Protect information, systems, and assets while delivering business value through risk assessments and mitigation strategies



- Automate security best practices
- Apply security at all layers
- Protect data in transit and at rest

Test recovery procedures, scale horizontally to increase aggregate system availability, and automatically recover from failure



- Recover from infrastructure or service disruptions
- Dynamically acquire computing resources to meet demand
- Mitigate disruptions such as misconfigurations or transient network issues

Performance efficiency

Use computing resources efficiently to meet system requirements and maintain that efficiency as demand changes and technologies evolve



- Experiment more often
- Use serverless architectures
- Go global in minutes

Cost optimization

Run systems to deliver business value at the lowest price point

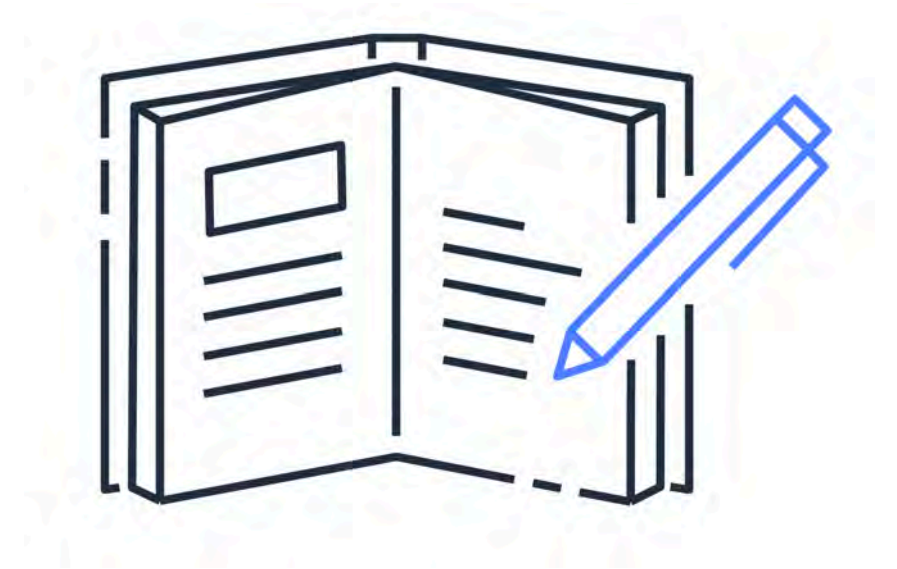


- Adopt a consumption model
- Analyze and attribute expenditure
- Use managed services to reduce cost of ownership

Module 9 summary

In this module, you learned about:

- AWS Cloud Adoption Framework
- Six strategies for migration
- AWS Snow Family
- Innovation with AWS services
- Five pillars of the AWS Well-Architected Framework



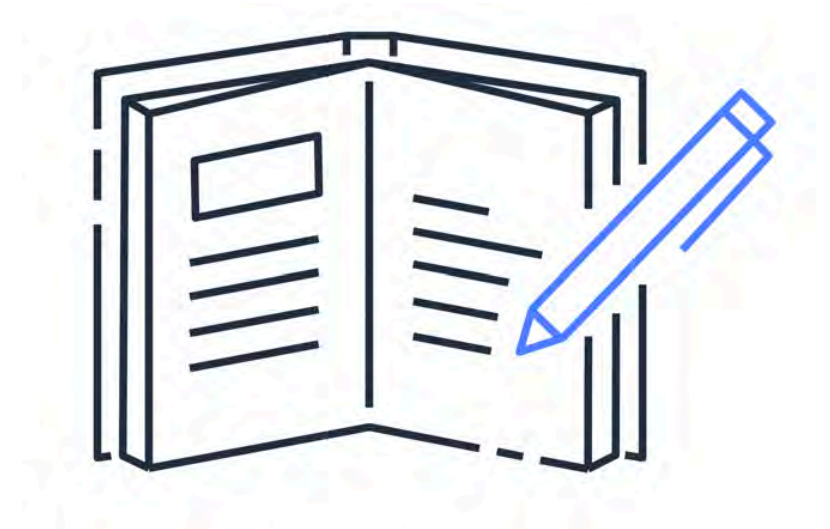
Module 10

AWS Certified Cloud Practitioner Basics

Module 10 objectives

In this module, you will learn how to:

- Determine resources for preparing for the AWS Certified Cloud Practitioner exam
- Evaluate types of questions that are included on the AWS Certified Cloud Practitioner exam



Exam details

Exam domains

| Domain | % of Exam |
|-----------------------------------|-----------|
| Domain 1: Cloud Concepts | 26% |
| Domain 2: Security and Compliance | 25% |
| Domain 3: Technology | 33% |
| Domain 4: Billing and Pricing | 16% |
| Total | 100% |

Learn more at: <https://aws.amazon.com/certification/certified-cloud-practitioner>

Recommended experience

For this exam, you should have:

- Basic understanding of IT services
- At least 6 months experience with the AWS Cloud



- You must complete the exam within 90 minutes.
- The minimum passing score is 700 (the maximum score is 1,000).
- The exam consists of multiple choice and multiple response questions.
- The exam is available in English, Indonesian (Bahasa), Japanese, Korean, and Simplified Chinese.
- A 30-minute time extension is available upon request to non-native English speakers who are taking an exam in English.



- There is no penalty for guessing.
- Unanswered questions are scored as incorrect.
- You can flag questions to review before submitting the exam.



Technical papers and resources

We recommend that you review the following technical papers and resources:

- Overview of Amazon Web Services:
<https://d1.awsstatic.com/whitepapers/aws-overview.pdf>
- Compare AWS Support Plans:
<https://aws.amazon.com/premiumsupport/plans/>
- How AWS Pricing Works:
http://d1.awsstatic.com/whitepapers/aws_pricing_overview.pdf



Exam strategies

1. Read the full question.
2. Predict the answer before looking at the response options.
3. Exclude incorrect response options.



Sample question 1

Multiple choice



AWS Certified Cloud Practitioner exam results are reported as a score from 100–1,000. What is the minimum passing score?

- A. 650
- B. 700
- C. 850
- D. 900

Sample question 1

Multiple choice



AWS Certified Cloud Practitioner exam results are reported as a score from 100–1,000. What is the **minimum** passing score?

- A. 650
- B. 700
- C. 850
- D. 900

Sample question 1

Multiple choice



AWS Certified Cloud Practitioner exam results are reported as a score from 100–1,000. What is the **minimum** passing score?

- A. 650
- B. 700 (correct)**
- C. 850
- D. 900

Sample question 2

Multiple response



Which domains are included on the AWS Certified Cloud Practitioner exam? (Select TWO.)

- A. Security and Compliance
- B. Automation and Optimization
- C. Monitoring and Reporting
- D. Billing and Pricing
- E. Deployment and Provisioning

Sample question 2

Multiple response



Which **domains** are included on the **AWS Certified Cloud Practitioner** exam? (Select TWO.)

- A. Security and Compliance
- B. Automation and Optimization
- C. Monitoring and Reporting
- D. Billing and Pricing
- E. Deployment and Provisioning


Sample question 2: Multiple response



Which **domains** are included on the **AWS Certified Cloud Practitioner** exam? (Select TWO.)

- A. **Security and Compliance (correct)**
- B. Automation and Optimization
- C. Monitoring and Reporting
- D. **Billing and Pricing (correct)**
- E. Deployment and Provisioning

Practice Question 1



1) Why is AWS more economical than traditional data centers for applications with varying compute workloads?

- A) Amazon EC2 costs are billed on a monthly basis.
- B) Users retain full administrative access to their Amazon EC2 instances.
- C) Amazon EC2 instances can be launched on demand when needed.
- D) Users can permanently run enough instances to handle peak workloads.

Practice Question 2

2) Which AWS service would simplify the migration of a database to AWS?

- A) AWS Storage Gateway
- B) AWS Database Migration Service (AWS DMS)
- C) Amazon EC2
- D) Amazon AppStream 2.0

Practice Question 3

3) Which AWS offering enables users to find, buy, and immediately start using software solutions in their AWS environment?

- A) AWS Config
- B) AWS OpsWorks
- C) AWS SDK
- D) AWS Marketplace

Practice Question 4

4) Which AWS networking service enables a company to create a virtual network within AWS?

- A) AWS Config
- B) Amazon Route 53
- C) AWS Direct Connect
- D) Amazon Virtual Private Cloud (Amazon VPC)

Practice Question 5

5) Which of the following is an AWS responsibility under the AWS shared responsibility model?

- A) Configuring third-party applications
- B) Maintaining physical hardware
- C) Securing application access and data
- D) Managing guest operating systems

End of course assessment

Complete the end of course assessment to review your understanding of AWS Cloud concepts:

AWS Partners:

<https://partnercentral.awspartner.com/LmsSsoRedirect?RelayState=%2flearningobject%2fwbc%3fid%3d70046>

Thank you

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