



AWSOME DAY

ONLINE CONFERENCE

9 JUNE 2022 | APAC

Introduction to AWS services

Networking & security

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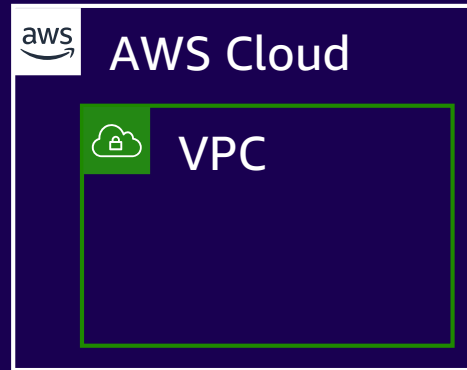
Senior Technical Trainer
Amazon Web Services

Networking

Amazon Virtual Private Cloud (Amazon VPC)



Amazon
VPC



Your private
network space in
the AWS Cloud



Provides logical
isolation for
your workloads



Allows custom access
controls and security
settings for your resources

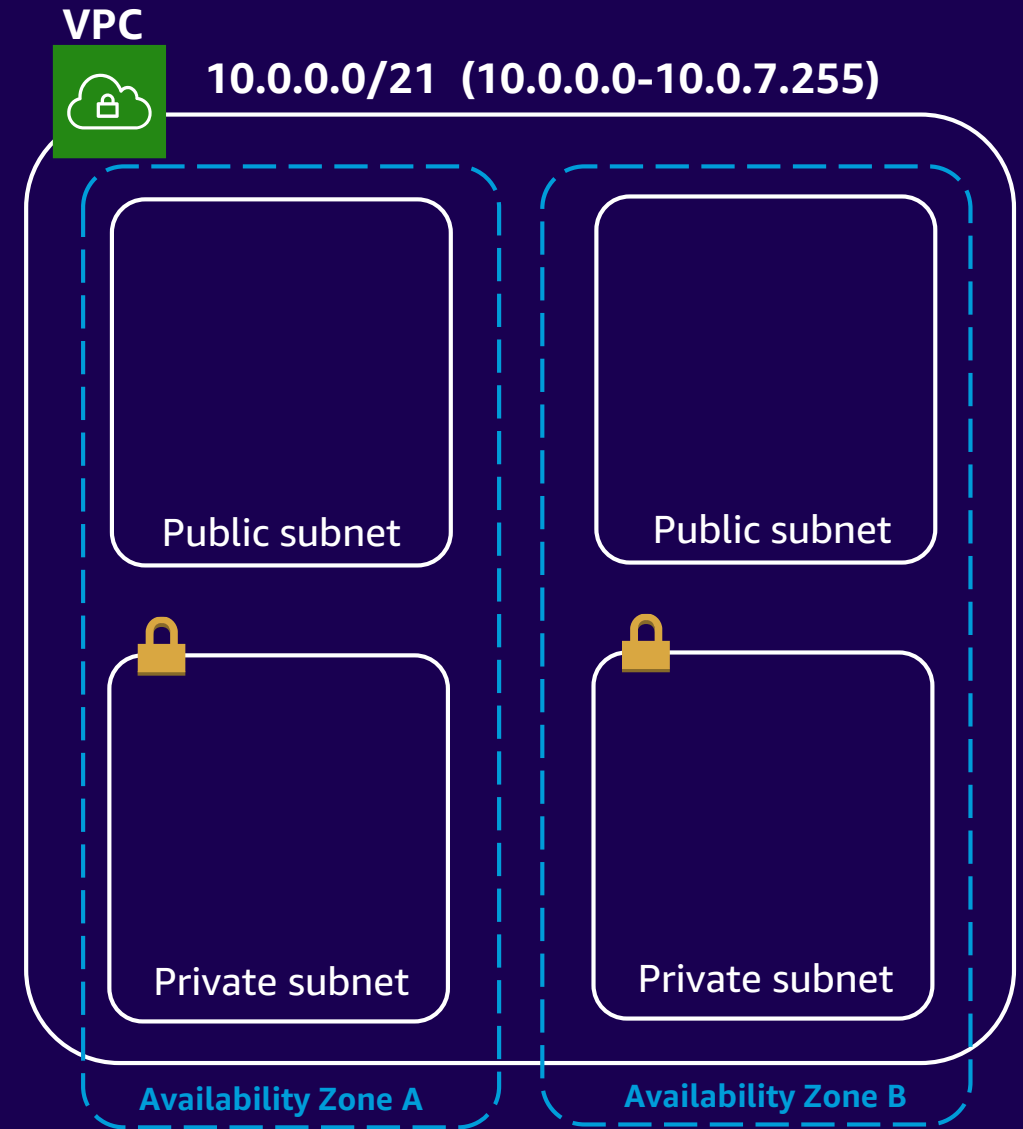
Using subnets to divide your VPC

A subnet is a segment or partition of a VPC's IP address range where you can isolate a group of resources

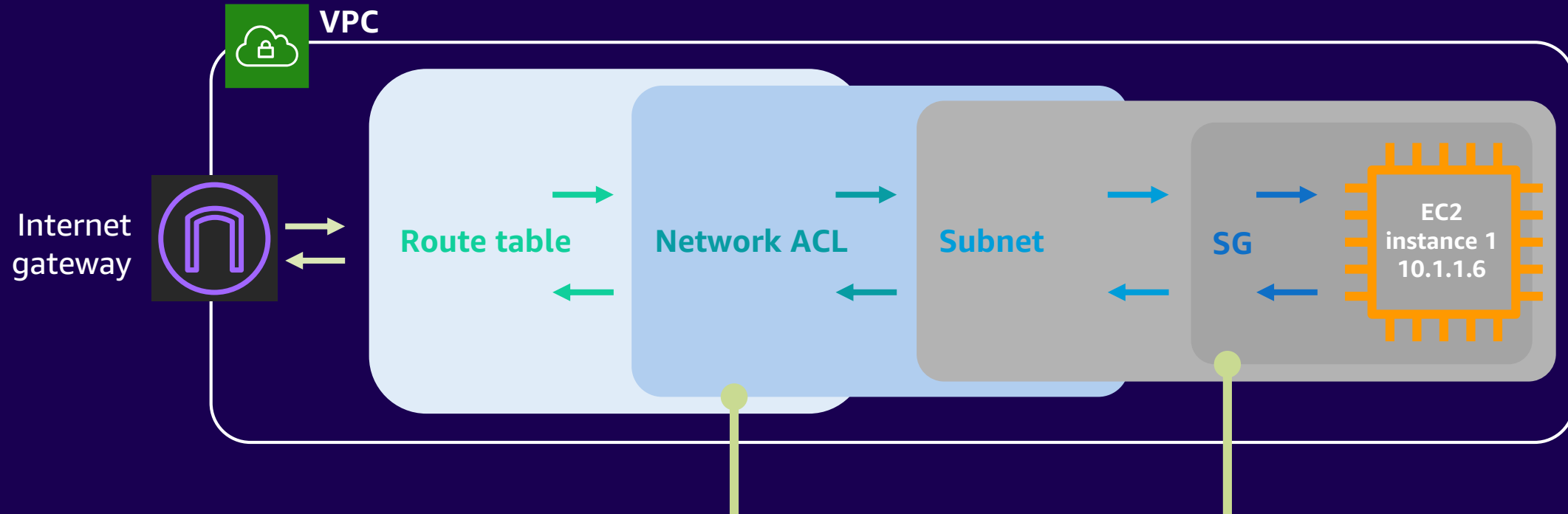
Subnets define internet accessibility

Private subnets

- No routing table entry to an internet gateway
- Not directly accessible from the public internet



Structure your infrastructure

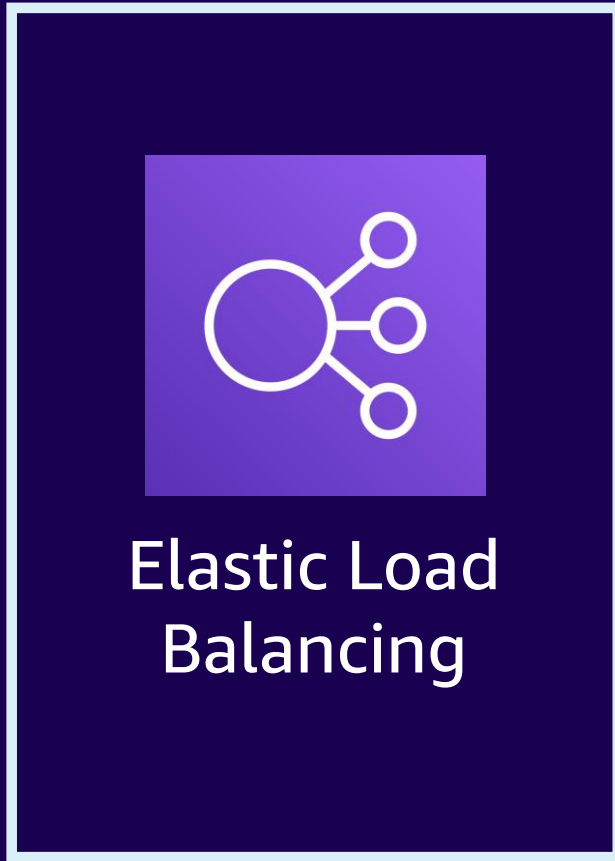


- **Network access control lists (ACLs)**
- Allow/deny traffic in and out of subnets
- Hardens security as a secondary level of defense at the subnet level

Security groups

- Used to allow traffic to/from at the network interface (instance) level
- Usually administered by application developers

Elastic Load Balancing (ELB)



A managed load balancing service that distributes incoming application traffic across multiple Amazon EC2 instances, containers, and IP addresses



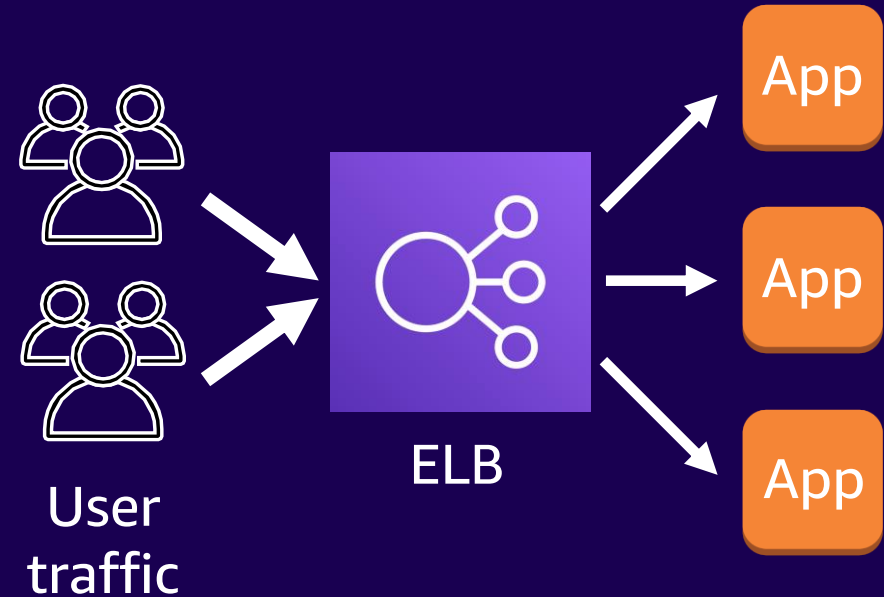
High availability



Health checks



Security features



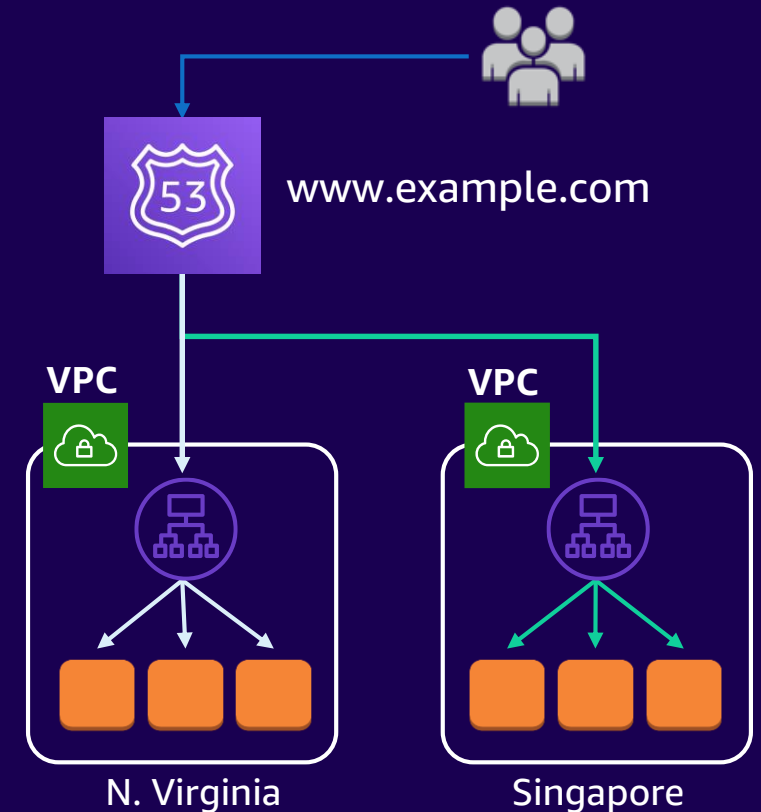
Amazon Route 53



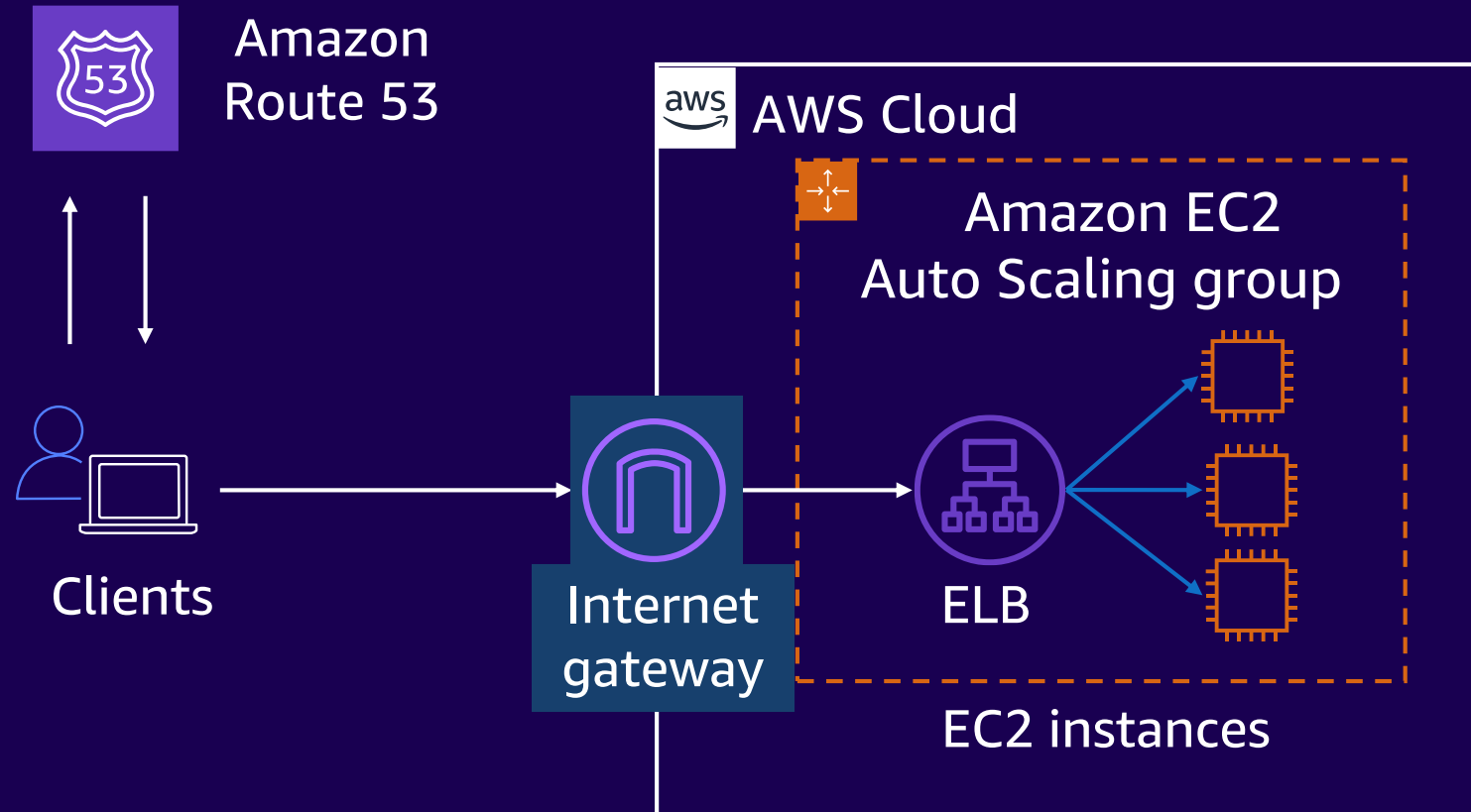
Amazon
Route 53

Route 53 is a highly available and scalable cloud Domain Name System (DNS) service

- DNS translates domain names into IP addresses
- Able to purchase and manage domain names and automatically configure DNS settings
- Provides tools for flexible, high-performance, highly available architectures on AWS
- Multiple routing options



Putting it all together



Security

Security is our top priority



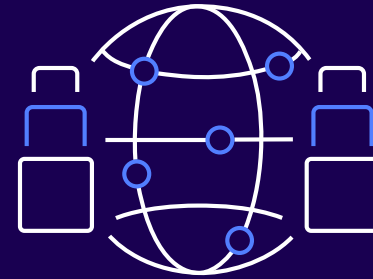
**Designed for
security**



**Constantly
monitored**



**Highly
automated**



**Highly
available**



**Highly
accredited**

Shared responsibility model

Customer
responsibility

Customer data

Platform, applications, identity and access management

Operating system, network, and firewall configuration

Client-side data
encryption and data
integrity authentication

Server-side encryption
(file system and/or data)

Network traffic
protection (encryption,
integrity, identity)

AWS
responsibility

AWS foundation services

Compute

Storage

Databases

Networking

AWS global infrastructure

Regions

Availability Zones

Edge locations



AWS Identity and Access Management (IAM)



IAM

- Securely control access to your AWS resources
- Assign granular permissions to users, groups, or roles
 - Share temporary access to your AWS account
 - Federate users in your corporate network or with an internet identity provider

IAM components

Create



Users

A person or application that interacts with AWS



Groups

Collection of users with identical permissions



Roles

Temporary privileges that an entity can assume



Permissions



Policies



IAM

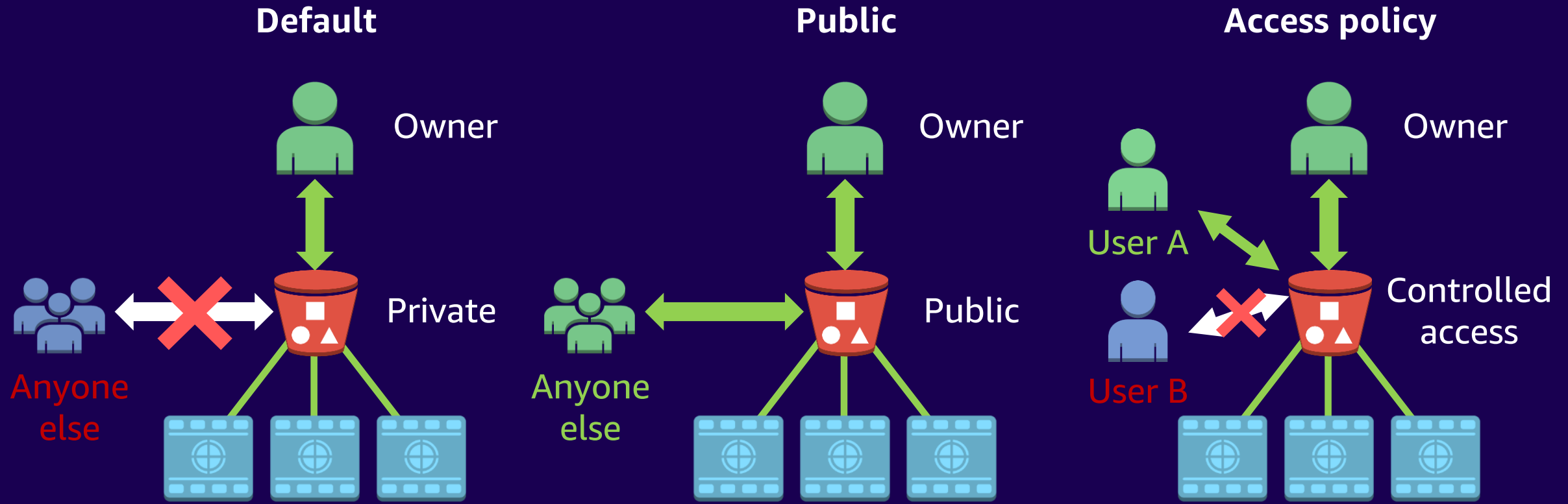
Defines permissions to control which AWS resources users can access

Helps you to meet identity and access control standards

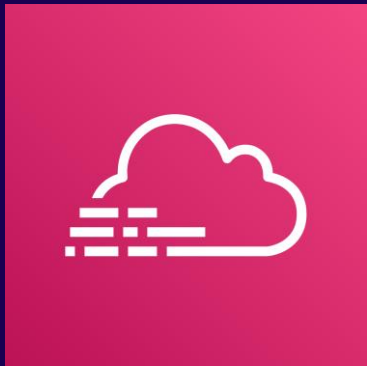
- Authentication
- Authorization

Amazon S3 access control: General

Some services support resource-based policies, such as S3 bucket policies



AWS CloudTrail



AWS
CloudTrail

Track user activity and API usage in your AWS account

- Continuously monitor user activities and record API calls
- Useful for compliance auditing, security analysis, and troubleshooting
- Log files are delivered to Amazon S3 buckets

Who?

What?

When?

Where?

API security-relevant information

What is AWS Trusted Advisor?

A service providing guidance to help you reduce cost, increase performance, and improve security

**Cost
optimization**



0 ✓ 9 ⚠ 0 !

\$7,516.87

Potential monthly savings

Performance



3 ✓ 7 ⚠ 0 !

Security



2 ✓ 4 ⚠ 11 !

**Fault
tolerance**



0 ✓ 15 ⚠ 5 !

**Service
limits**



37 ✓ 0 ⚠ 1 !

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Test your knowledge

Thank you!