AWS
User Groups
Colombo

Introduction to the AWS Cloud Platform

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Agenda

- Introduction to AWS cloud platform and its benefits
- AWS Global Infrastructure
- Accessing AWS Services
- Interacting with AWS Services
- Best Practices for managing AWS Accounts
- Common AWS services
- Demo

What is AWS Cloud?

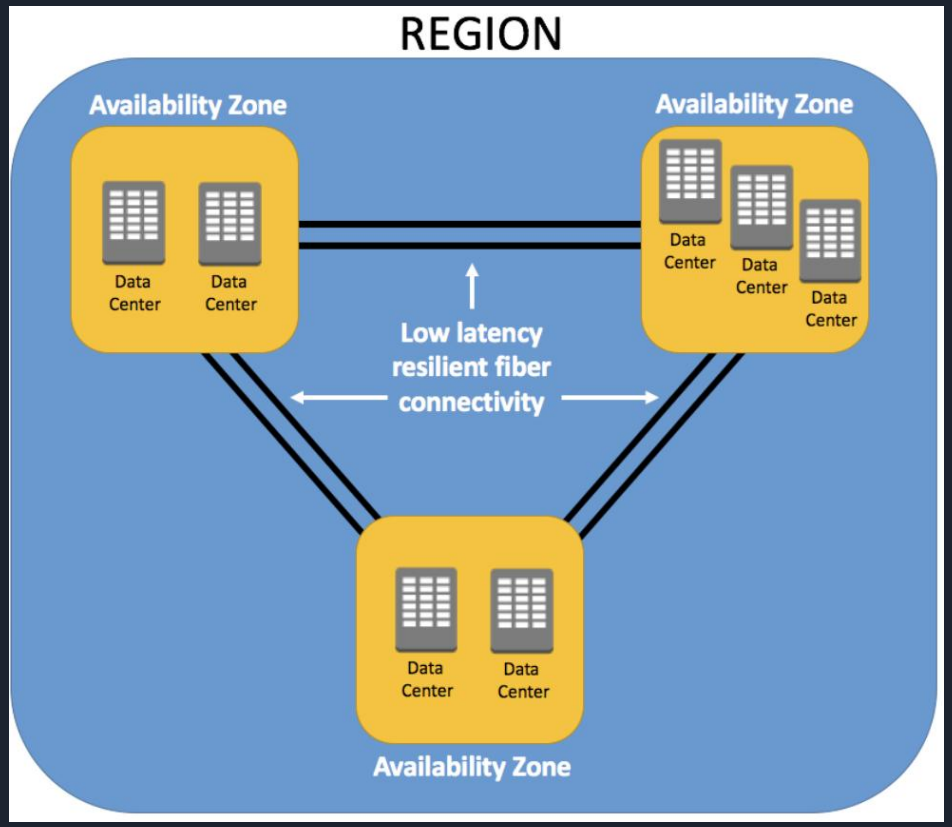
- AWS Cloud is a **cloud computing platform** that provides a wide range of services, including **compute, storage, databases, security, networking, analytics, machine learning, and DevOps etc...**
- AWS Cloud is a **highly scalable** and **reliable** platform that can be used to **build and deploy** applications of all sizes and complexity.
- AWS Cloud is also a **cost-effective platform**, as you **only pay for the resources that you use.**

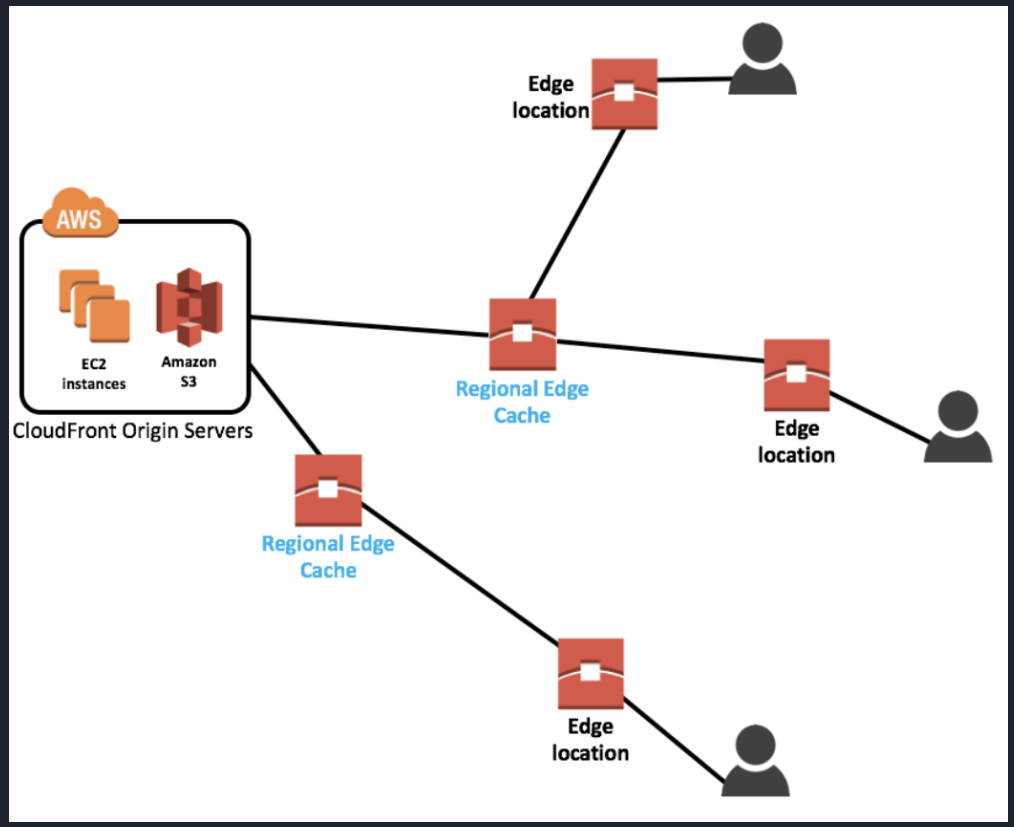
Benefits of using AWS Cloud?

- **Scalability** - Easily add/ remove resources as required
- **Reliability** - Backed by reliable AWS network with proven track record of uptime and performance
- **Cost-effectiveness** - Pay only for what you use
- **Security** - Wide range of security features and services to protect your data
- **Innovation** - 200+ fully featured services for a wide range of technologies, industries, and use cases

AWS Global Infrastructure

- AWS Global infrastructure consists of a **network of data centers located around the world**. These data centers are organized into **Regions** and **Availability Zones.**
- A **Region** is a **geographical area that contains multiple Availability Zones**. An Availability Zone is a logically isolated section of a Region.
- **AWS Edge Locations are locations around the world where AWS content is cached**. This allows users to access AWS content with lower latency and improved performance.
- **Regional Edge Caches are caches of frequently accessed AWS content that are located in close proximity to AWS customers**. This allows users to access AWS content with even lower latency and improved performance.


REGION
Availability Zone
Availability Zone
Data Center
Data Center
Data Center
Data Center
Data Center
Low latency resilient fiber connectivity
Data Center
Data Center
Availability Zone


Edge location
AWS
EC2 instances
Amazon S3
CloudFront Origin Servers
Regional Edge Cache
Edge location
Regional Edge Cache
Edge location

The AWS Cloud spans 102 Availability Zones within 32 geographic regions around the world, with announced plans for 12 more Availability Zones and 4 more AWS Regions in Canada, Malaysia, New Zealand, and Thailand.

Accessing AWS Services

- AWS IAM (Identity and Access Management) - service that allows you to manage user access to your AWS resources.
  - IAM allows you to create **Users** and **Groups**, and assign them permissions policies to specific AWS resources. Users have long term credentials.
  - IAM **Roles** - Very similar to a user, in that it is an identity with permission policies that determine what the identity can and cannot do in AWS. But no credentials.
  - IAM Policies - Documents that specify the permissions that are granted to users, groups, or roles. Used to determine what actions a user, role, or member of a user group can perform, on which AWS resources, and under what conditions.

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Interacting with AWS Services

- AWS Management Console
- AWS Command Line Interface
- Software Development Kits

mine what actions a user, role, or member of a user group can perform, on which AWS resources, and under what conditions.

Best Practices for managing AWS Accounts

- Use strong passwords, enable password policy and enable multi-factor authentication.
- Create IAM users and roles and assign them permissions to specific AWS resources.
- Use security groups, Network Access Controls and VPCs to protect your resources.
- Implement monitoring and logging to track your AWS usage and identify potential problems.

Common AWS Services

- Compute
  - Amazon Elastic Compute Cloud (EC2)
  - Amazon Elastic Container Service (ECS)
  - AWS Lambda
- Storage
  - Amazon Simple Storage Service (S3)
  - Amazon Elastic Block Store (EBS)
  - Amazon Elastic File System (EFS)

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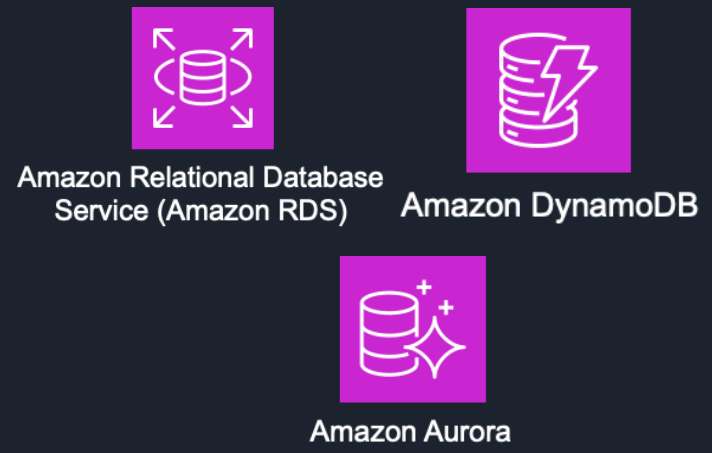
Common AWS Services

- Databases
  - Amazon Relational Database Service (RDS)
  - Amazon DynamoDB
  - Amazon Aurora



- Networking and Content Delivery
  - Amazon Virtual Private Cloud (VPC)
  - Amazon Route 53
  - Amazon CloudFront

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Common AWS Services

- Analytics
  - Amazon Redshift
  - Amazon Athena
  - Amazon Kinesis

Amazon Redshift

Amazon Kinesis

Amazon Athena

- Machine Learning
  - Amazon SageMaker
  - Amazon Rekognition
  - Amazon Comprehend
  - Amazon BedRock

Amazon Rekognition

Amazon SageMaker

Amazon Comprehend

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Common AWS Services

- DevOps
  - AWS CodePipeline
  - AWS CodeDeploy
- Management & Governance
  - AWS CloudFormation
  - Amazon CloudWatch
  - Amazon CloudTrail

AWS CodePipeline

AWS CodeDeploy

Amazon CloudWatch

AWS CloudFormation

AWS CloudTrail

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Common AWS Services

- Application Integration
  - Amazon SNS
  - Amazon SQS
  - Amazon EventBridge
  - AWS Step Functions

Amazon Simple Notification Service (Amazon SNS)

Amazon Simple Queue Service (Amazon SQS)

AWS Step Functions

Amazon EventBridge

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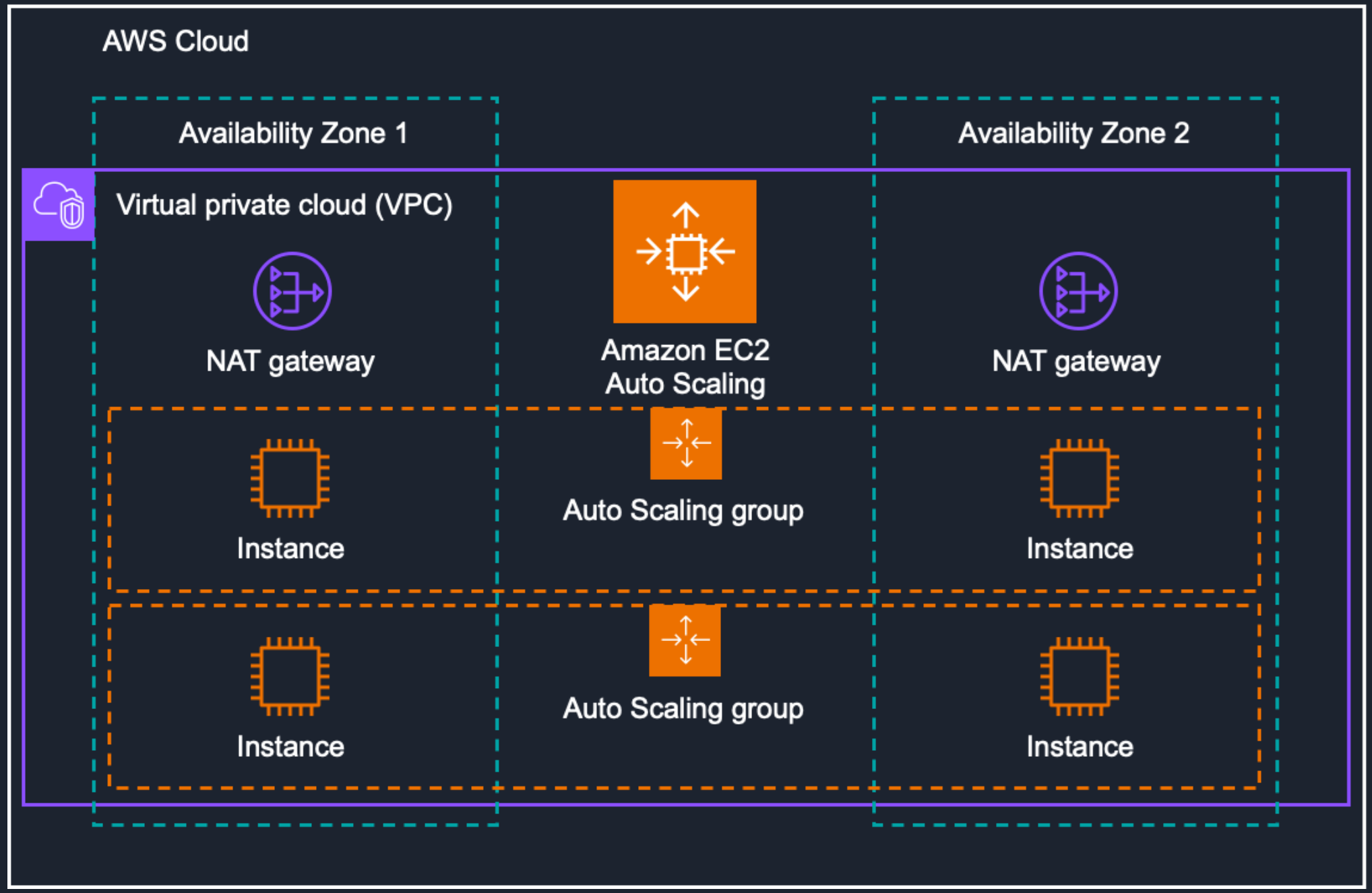
AWS Cloud
Availability Zone 1
Availability Zone 2
Virtual private cloud (VPC)
NAT gateway
Amazon EC2
Auto Scaling
NAT gateway
Auto Scaling group
Instance
Instance
Auto Scaling group
Instance
Instance

DEMO TIME…

Thank You!!!