



**AWS Certified Solutions**  
**Architect - Associate**

# **Module 2**

## **Overview of AWS**



# Agenda

- ☐ What is AWS ?
- ☐ Why AWS ?
- ☐ AWS Timelines
- ☐ AWS Benefits
- ☐ AWS Global Infrastructure
- ☐ AWS Availability zone
- ☐ Edge Location
- ☐ Sign-up AWS account

# What is AWS ??

- ❑ Amazon Web Services (AWS) is a subsidiary of Amazon.com that provides on demand cloud computing platforms to individuals, companies and governments, on a paid subscription basis.
- ❑ Enable businesses and developers to use web services to build scalable, sophisticated applications.



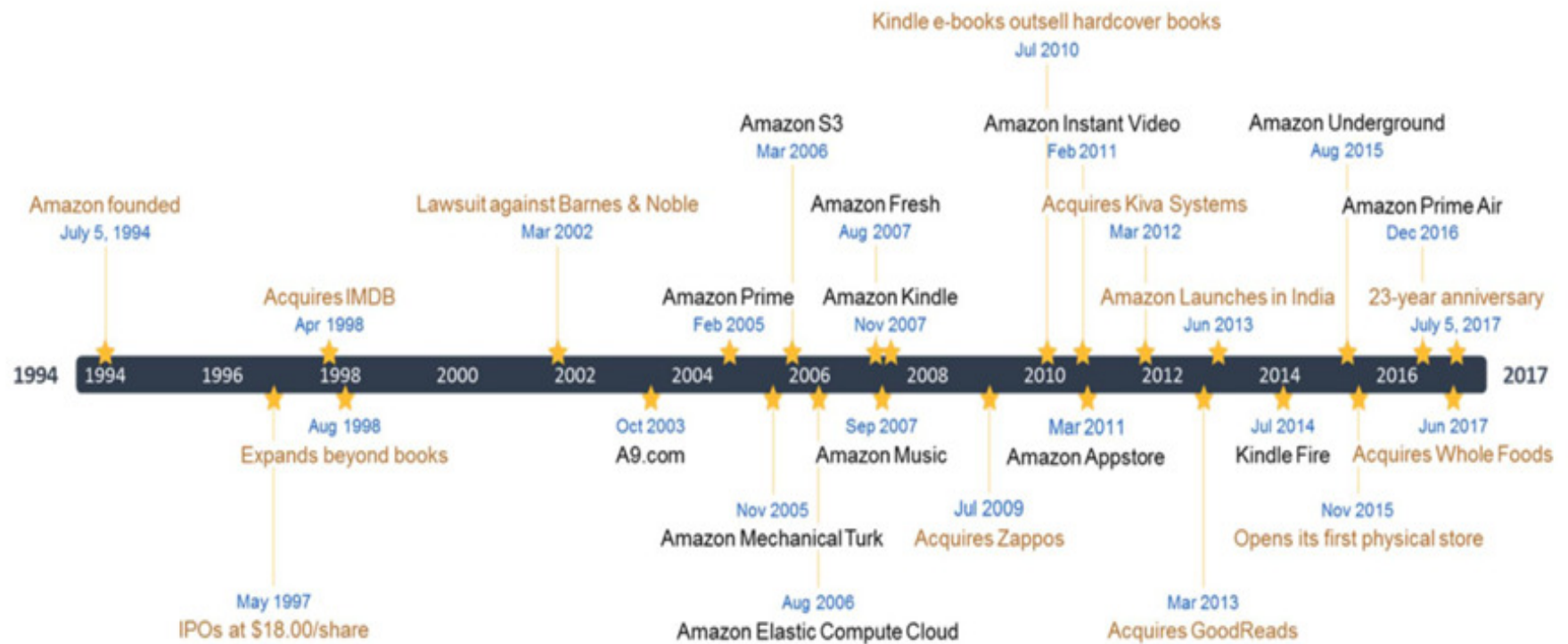
# Why AWS ??

- ❑ Gartner June' 17 magic quadrant for Cloud Infra, AWS is the leader in the Cloud Computing market.
- ❑ Gartner says, AWS is the most mature, enterprise-ready provider, with the deepest capabilities for governing a large number of users and resources.
- ❑ AWS dominates the public cloud market with a 47.1% market share (Q1' 17).
- ❑ AWS is the most popular public cloud infra platform, comprising 41.5% of workloads (Feb' 17 report).
- ❑ AWS certification is fast becoming the must have certificates for any IT professional working with Cloud.



# AWS Timeline

★ Company milestones   ★ Product launches



# Benefits

**Trade Capital expense for variable expense**

**Benefit from massive economies of scale**

**Increase speed and agility**

**Stop guessing about capacity**

**Stop spending money running and maintaining data centers**


**Go global in minutes**

# AWS : Services





## Compute

-  **EC2**  
Virtual Servers in the Cloud
-  **Lambda**  
Run Code in Response to Events
-  **EC2 Container Service**  
Run and Manage Docker Containers


## Storage & Content Delivery

-  **S3**  
Scalable Storage in the Cloud
-  **Elastic File System** PREVIEW  
Fully Managed File System for EC2
-  **Storage Gateway**  
Integrates On-Premises IT Environments with Cloud Storage
-  **Glacier**  
Archive Storage in the Cloud
-  **CloudFront**  
Global Content Delivery Network








## Database

-  **RDS**  
MySQL, Postgres, Oracle, SQL Server, and Amazon Aurora
-  **DynamoDB**  
Predictable and Scalable NoSQL Data Store
-  **ElastiCache**  
In-Memory Cache
-  **Redshift**  
Managed Petabyte-Scale Data Warehouse Service







## Networking

-  **VPC**  
Isolated Cloud Resources
-  **Direct Connect**  
Dedicated Network Connection to AWS
-  **Route 53**  
Scalable DNS and Domain Name Registration





## Administration & Security

-  **Directory Service**  
Managed Directories in the Cloud
-  **Identity & Access Management**  
Access Control and Key Management
-  **Trusted Advisor**  
AWS Cloud Optimization Expert
-  **CloudTrail**  
User Activity and Change Tracking
-  **Config**  
Resource Configurations and Inventory
-  **CloudWatch**  
Resource and Application Monitoring
-  **Service Catalog**  
Personalized Catalog of AWS Resources








## Deployment & Management

-  **Elastic Beanstalk**  
AWS Application Container
-  **OpsWorks**  
DevOps Application Management Service
-  **CloudFormation**  
Templated AWS Resource Creation
-  **CodeDeploy**  
Automated Deployments
-  **CodeCommit**  
Managed Git Repositories
-  **CodePipeline**  
Continuous Delivery





## Analytics

-  **EMR**  
Managed Hadoop Framework
-  **Kinesis**  
Real-time Processing of Streaming Big Data
-  **Data Pipeline**  
Orchestration for Data-Driven Workflows
-  **Machine Learning**  
Build Smart Applications Quickly and Easily

## Application Services

-  **SQS**  
Message Queue Service
-  **SWF**  
Workflow Service for Coordinating Application Components
-  **AppStream**  
Low Latency Application Streaming
-  **Elastic Transcoder**  
Easy-to-use Scalable Media Transcoding
-  **SES**  
**Email Sending Service**
-  **CloudSearch**  
Managed Search Service
-  **API Gateway**  
Build, Deploy and Manage APIs

## Mobile Services

-  **Cognito**  
User Identity and App Data Synchronization
-  **Device Farm**  
Test Android and Fire OS apps on real devices in the Cloud
-  **Mobile Analytics**  
Understand App Usage Data at Scale
-  **SNS**  
Push Notification Service

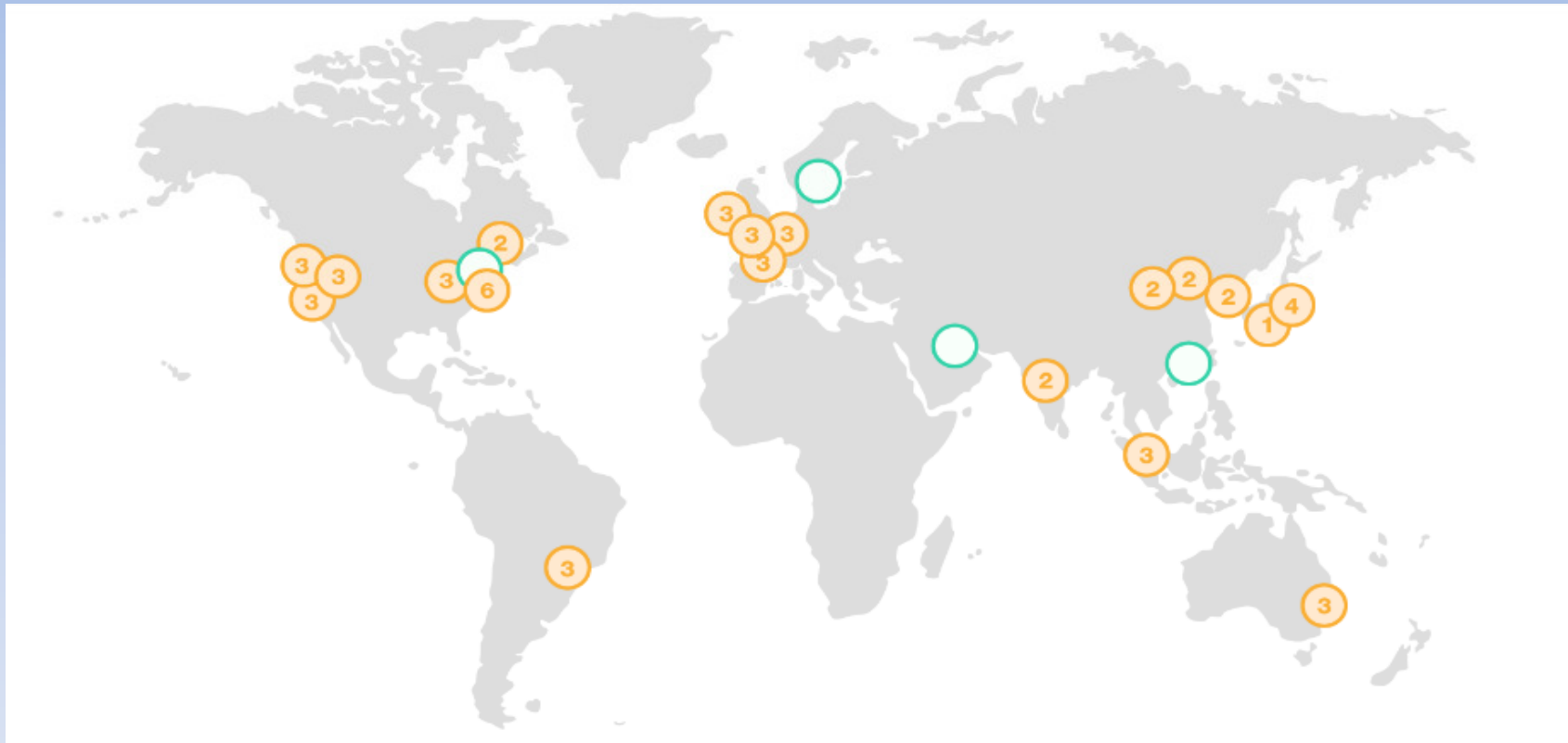
## Enterprise Applications

-  **WorkSpaces**  
Desktops in the Cloud
-  **WorkDocs**  
Secure Enterprise Storage and Sharing Service
-  **WorkMail** PREVIEW  
Secure Email and Calendaring Service



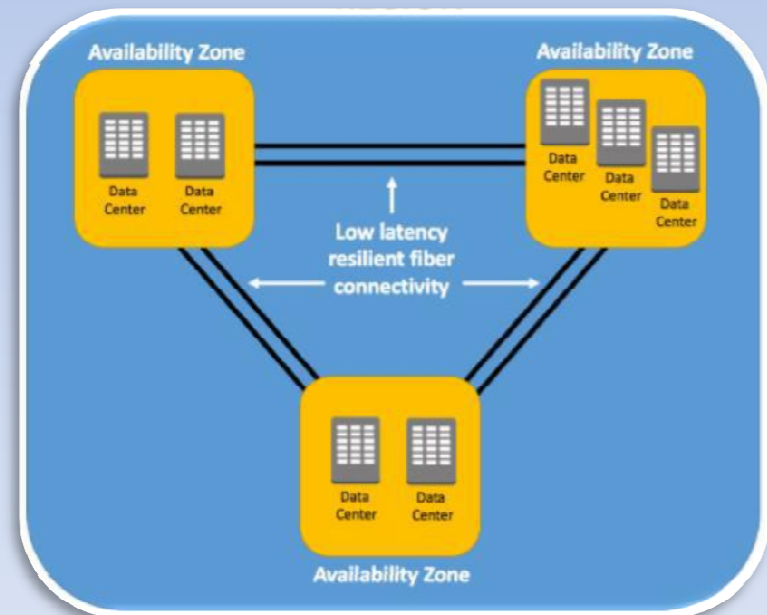
# AWS Global Infrastructure

The AWS Cloud spans 54 Availability Zones within 18 geographic Regions and 1 Local Region around the world, with announced plans for 12 more Availability Zones and four more Regions in Bahrain, Hong Kong SAR, Sweden, and a second AWS GovCloud Region in the US.



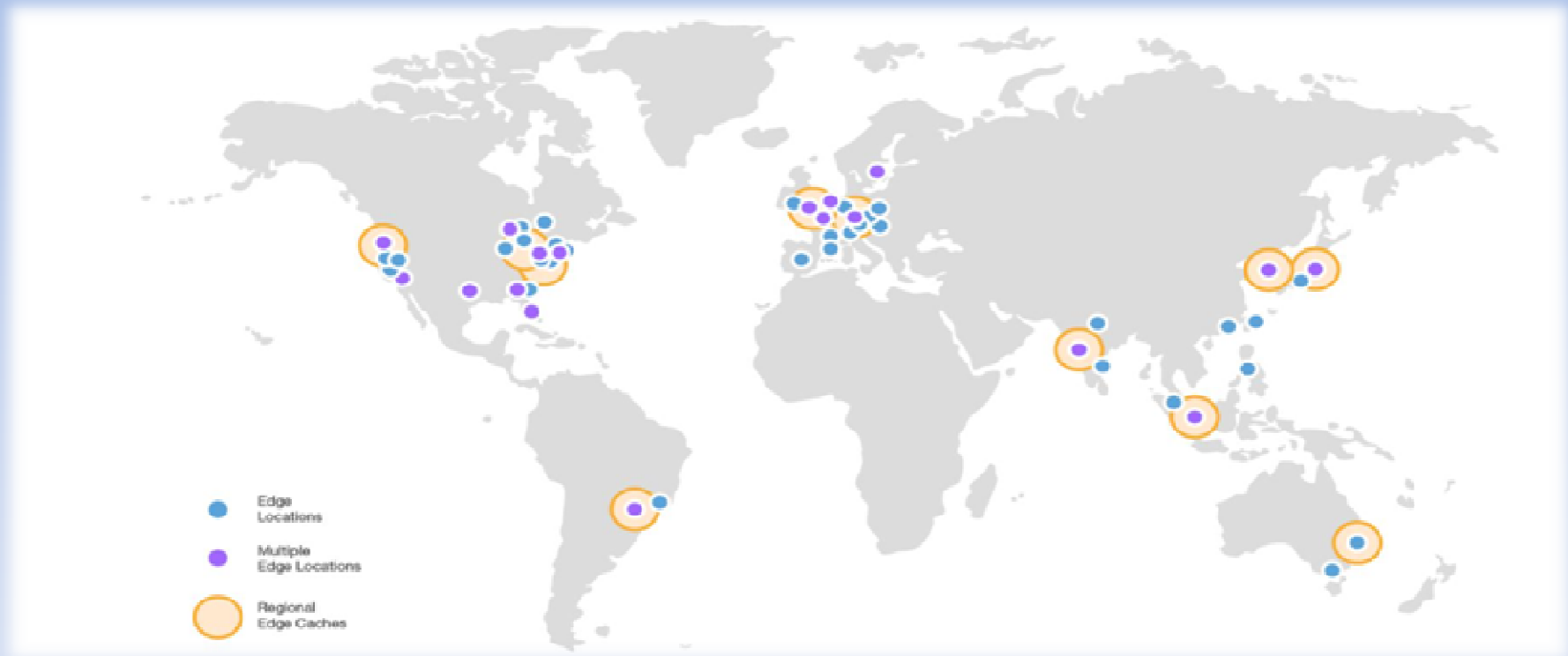
# AWS Availability Zone

- ❑ High Availability Through Multiple Availability Zones.
- ❑ In each region there will be at least two availability zones for fault tolerance.
- ❑ An AZ is a combination of one or more data centers in a given region.
- ❑ It is a logical grouping of data centers in a given region for service high availability.
- ❑ A datacenter is a location where actual physical data resides.
- ❑ A single or couple of data centers are clubbed in to one AZ.



# AWS Edge location

The AWS have global network of 98 Edge locations (87 Points of Presence and 11 Regional Edge Caches) in 50 cities across 23 countries.



# AWS Edge location

- ☐ To deliver content to end users with lower latency, Amazon uses a global network of edge locations and regional edge caches across countries and cities for content delivery.
- ☐ Edge Locations are AWS sites deployed in major cities and highly populated areas across the globe.
- ☐ Edge Locations are not used to deploy your main infrastructures such as EC2.
- ☐ Edge Locations are used by AWS services such as AWS Cloud Front to cache data and reduce latency for end user access by using the Edge Locations as a global Content Delivery Network (CDN).
- ☐ As a result, Edge Locations are primarily used by end users who are accessing and using your services.

# AWS account Sign-Up

- ❑ Create and activate a new Amazon Web Services account

<https://aws.amazon.com/free/>

Payment method: Credit or Debit Card

Support plan: Basic

- ❑ Accounts are usually activated within a few minutes, but account activation can take up to 24 hours.

- ❑ When your account is fully activated you'll receive confirmation email.

- ❑ After you receive this email, you should have full access to all AWS services.

