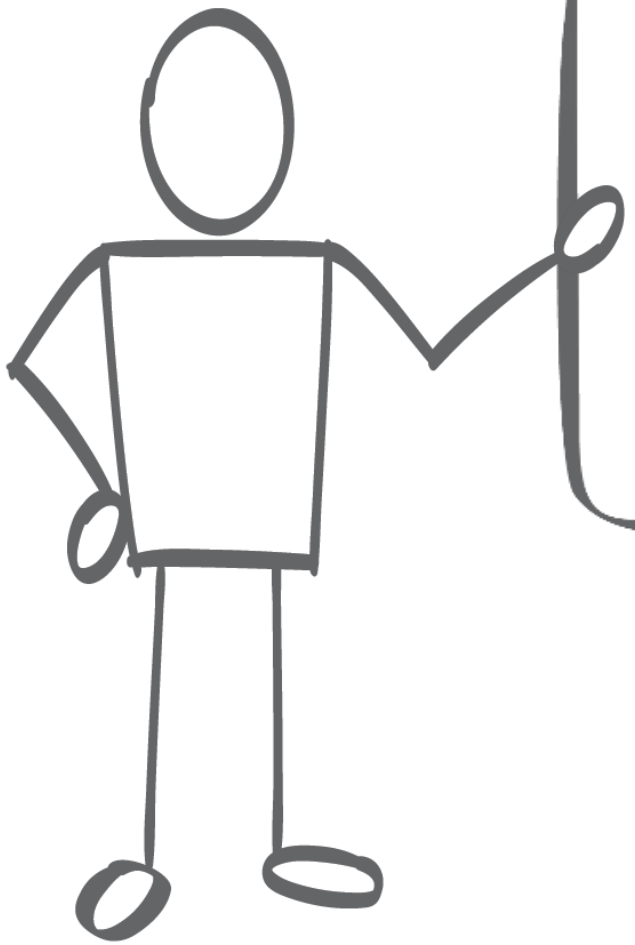


AWS Overview

Course Contents

- Introduction to Amazon Web Services(AWS)
- Creating the Free Tier Account on AWS
- Navigate the AWS Management Console
- Understand the Foundational Services
  - Amazon Simple Storage Service (S3)
  - Amazon Elastic Compute Cloud (EC2)
  - Amazon Relational Database Services (RDS)
- Knowledge check
- Scenario based case study.

Amazon History

1994: Jeff Bezos Incorporated the Company

1995: Amazon.com Launched Online Bookstore

2005: Amazon Publishing Launched

2006: Amazon Web Services (AWS) Launched

2007: Kindle Launched

2011: Amazon Fresh Launched

2012: Amazon Game Studios Launched

2013: Amazon Art Launched

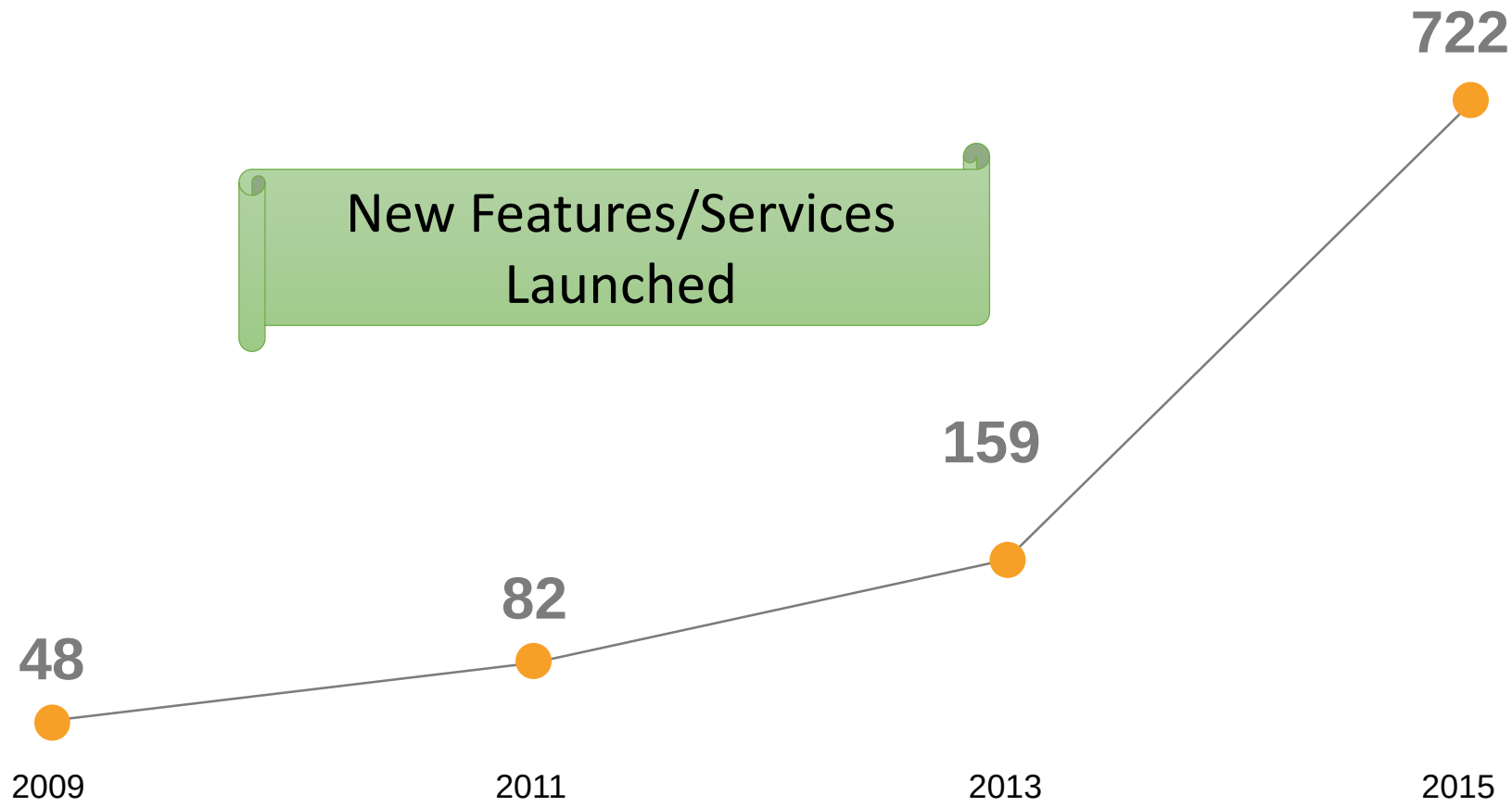
2014: Amazon Prime Now Launched

2015: Amazon Home Services & Amazon Echo Launched

Amazon Web Services (AWS)

Enable businesses and developers to use web services to build scalable, sophisticated applications.

AWS Rapid Pace of Innovation



AWS Customers

Enterprise Customers

Startup Customers

Public Sector Customers

Six Advantages & Benefits of AWS Cloud Computing

Trade capital expense for variable expense.

Increase speed and agility.

Benefit from massive economies of scale.

Stop spending money on running and maintaining data centers.

Stop guessing capacity.

Go global in minutes.

Gartner Magic Quadran Worldwide

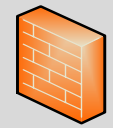
Source: Gartner (May 2015)

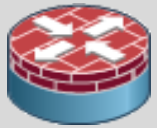
Gartner "Magic Quadrant for Cloud Infrastructure as a Service, Worldwide," Lydia Leong, Douglas Toombs, Bob Gill, May 18, 2015. This Magic Quadrant graphic was published by Gartner, Inc. as part of a larger research note and should be evaluated in the context of the entire report. The Gartner report is available at http://aws.amazon.com/resources/analyst-reports/. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

AWS Core Infrastructure and Services

Traditional Infrastructure

Amazon Web Services

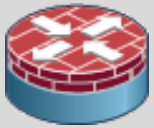

Firewalls


ACLs


Administrators

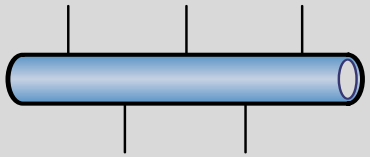
Security


Security Groups


NACLs


AWS IAM

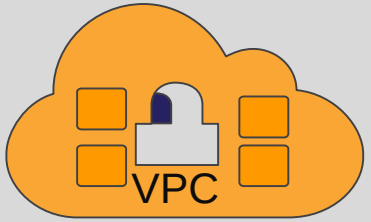

Router


Network Pipeline


Switch

Networking


ELB

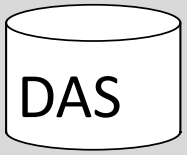


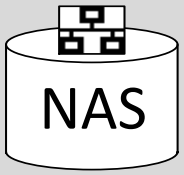

On-Premises Servers

Servers


AMI


Amazon EC2 Instances





Storage and Database


Amazon EBS


Amazon EFS


Amazon S3


Amazon RDS

AWS Cloud Computing

Applications

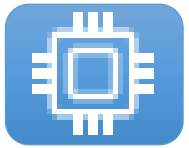

Virtual Desktops


Collaboration and Sharing

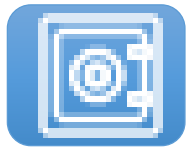
Platform Services

Databases	Analytics	App Services	Deployment and Management	Mobile Services
Relational	Cluster Computing	Queuing	Containers	Identity
No SQL	Real-time	Orchestration	Dev/ops Tools	Sync
Caching	Data Warehouse	App Streaming	Resource Templates	Mobile Analytics
	Data Workflows	Transcoding	Usage Tracking	Notifications
		Email	Monitoring and Logs	
		Search		

Foundation Services


Compute
(Virtual, Auto-scaling and Load Balancing)


Networking


Storage
(Object, Block and Archive)

Infrastructure

Regions

Availability Zones


Edge Locations

AWS Foundation Services

Compute

Amazon EC2

AWS Lambda

Amazon EC2 Container Service

Elastic Load Balancing

AWS Elastic Beanstalk

Auto Scaling

Network

Amazon VPC

Amazon Route 53

AWS Direct Connect

Storage

Amazon S3

Amazon CloudFront

Amazon Glacier

Amazon Elastic File System

AWS Storage Gateway

AWS Import/Export Snowball

Security & Identity

AWS Identity and Access Management

AWS KMS

AWS Directory Service

AWS Cloud HSM

AWS WAF

Applications

Amazon WorkDocs

Amazon WorkSpaces

Amazon WorkMail

AWS Platform Services

Databases

- Amazon RDS
- Amazon DynamoDB
- Amazon ElastiCache
- Amazon Redshift
- AWS Database Migration Service

Analytics

- Amazon EMR
- AWS Data Pipeline
- Amazon Elasticsearch Service
- Amazon Machine Learning
- Amazon Kinesis

App Services

- Amazon SES
- Amazon AppStream
- Amazon SWF
- Amazon Elastic Transcoder
- Amazon CloudSearch
- Amazon SQS
- Amazon API Gateway

Management Tools

- AWS CloudFormation
- AWS Config
- AWS CloudTrail
- AWS Service Catalog
- AWS OpsWorks
- Amazon CloudWatch
- Trusted Advisor
- AWS Certificate Manager

Developer Tools

- AWS CodeCommit
- AWS CodeDeploy
- AWS CodePipeline

Mobile Services

- Amazon Cognito
- AWS Device Farm
- Amazon SNS
- Amazon Mobile Analytics
- Mobile Hub

Internet of Things

- AWS IoT

AWS Global Infrastructure

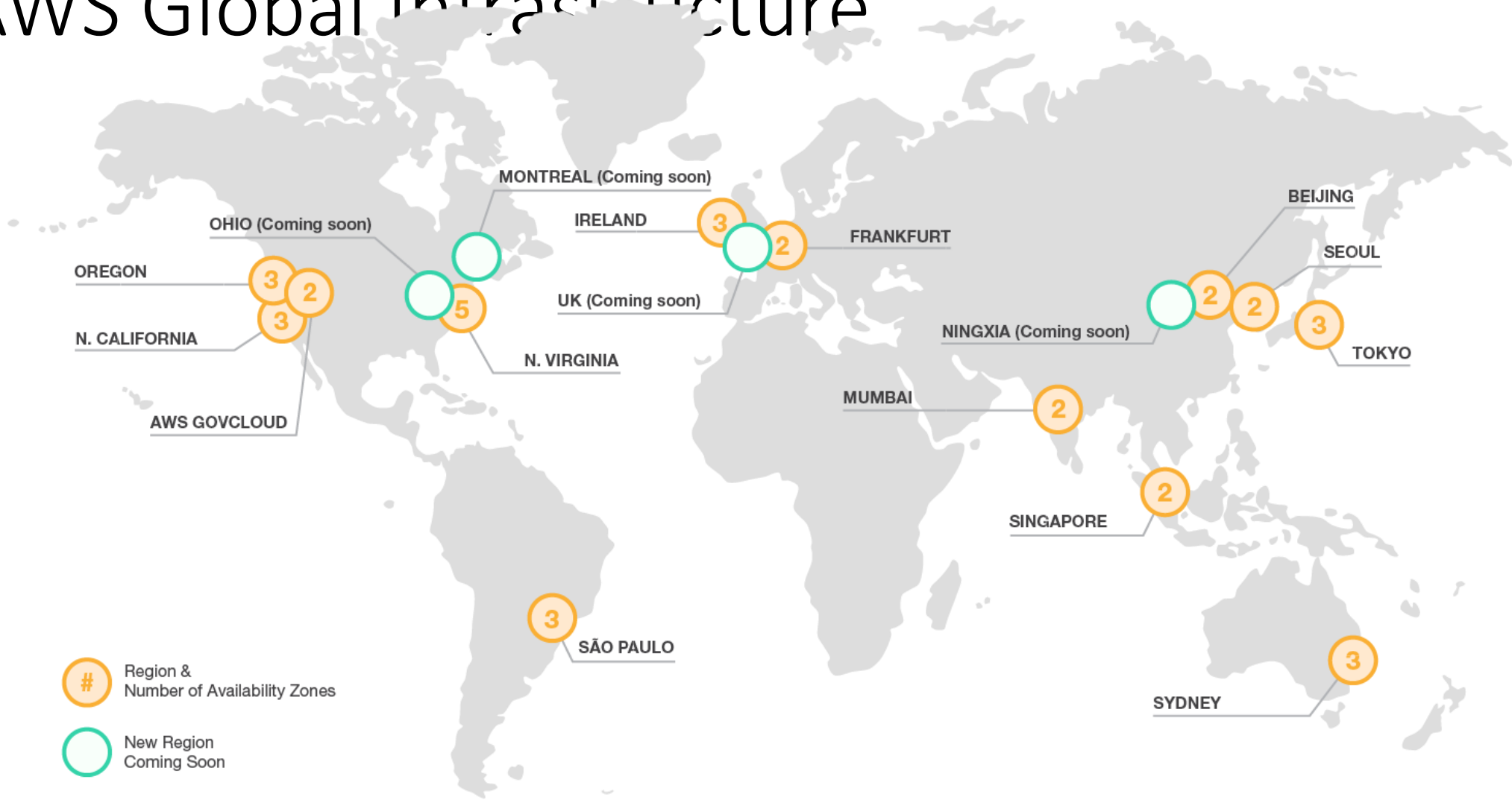
Regions

- Geographic locations
- Consists of at least two Availability Zones(AZs)

Availability Zones

- Clusters of data centers
- Isolated from failures in other Availability Zones

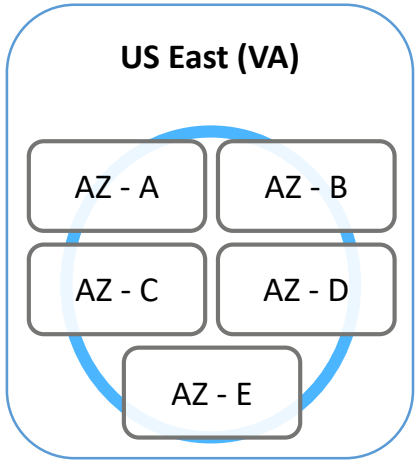
AWS Global Infrastructure

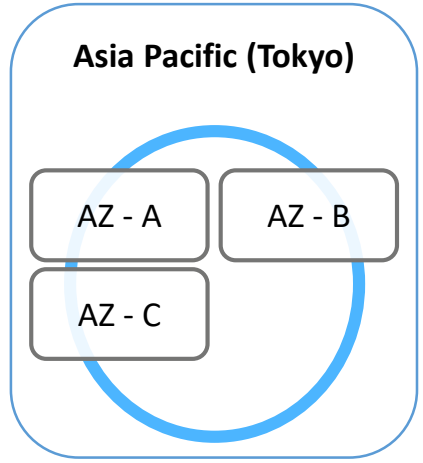


AWS Global Infrastructure

At least 2 AZs per region.

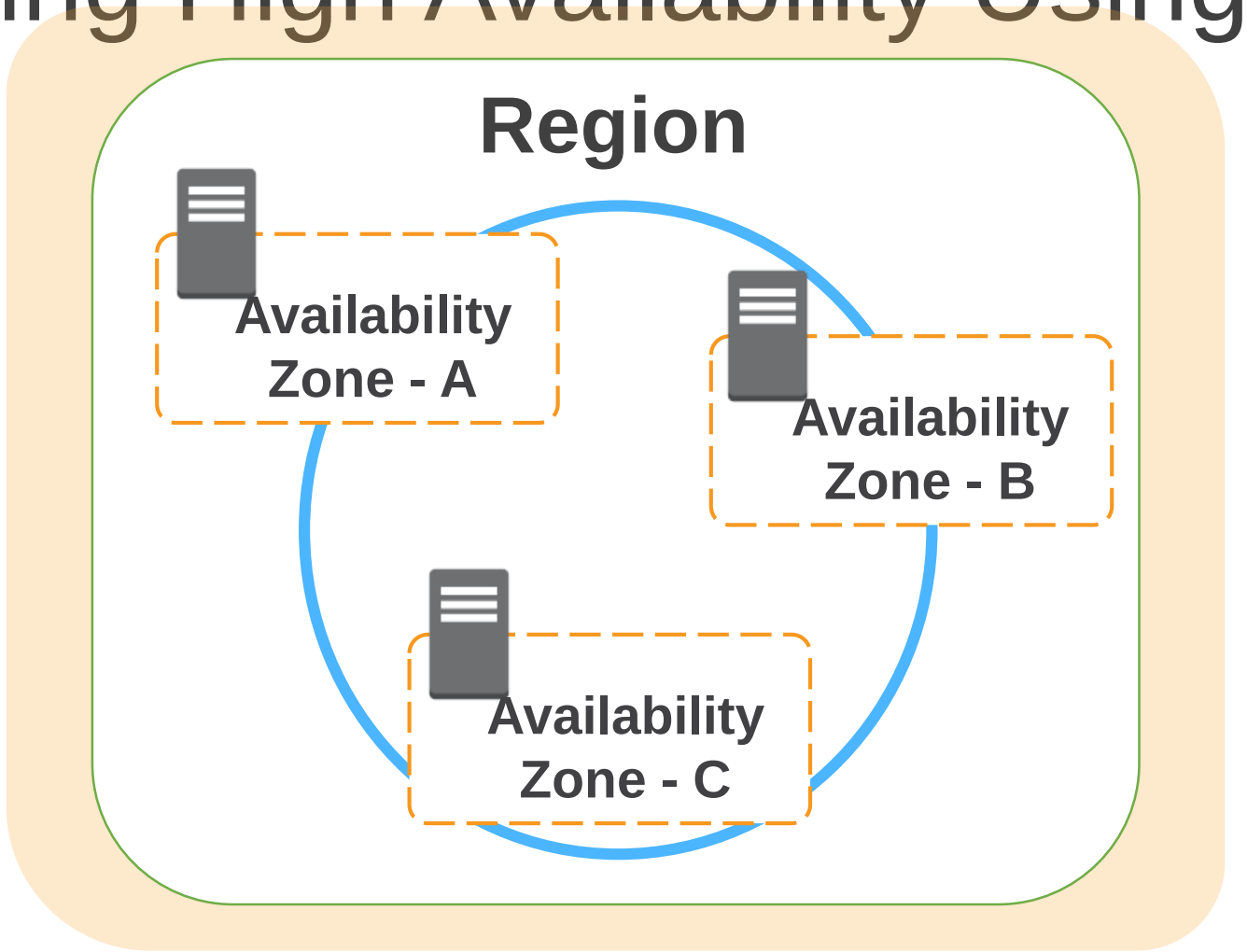
- Examples:
  - US East (N. Virginia)
    - us-east-1a
    - us-east-1b
    - us-east-1c
    - us-east-1d
    - us-east-1e
  - Asia Pacific (Tokyo)
    - ap-northeast-1a
    - ap-northeast-1b
    - ap-northeast-1c





Note: Conceptual drawing only. The number of Availability Zones (AZ) may vary.

Achieving High Availability Using Multi-AZ



AWS Global Infrastructure

50+ AWS Edge Locations:

- Local points-of-presence commonly supporting AWS services like:
  - Amazon Route 53
  - Amazon CloudFront

AWS Management Console Demonstration