AWS Certified Solutions Architect — Associate (SAA-C02)

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Introduction

Faizal Khan

Founder & CEO
Ecomm India Cloud IT

- Digital Transformation to the AWS cloud
- Cloud Architecting, Implementation & Monitoring
- 16 Years of IT Infrastructure Management Experience
- JP Morgan Chase, Bank of America, Dell, ITC

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Agenda

- About the Course
- Course Duration
- Training Do's & Don'ts
- Topics
- Pre-requisites

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About the Course

- Focuses on cloud Architecture and administering services within AWS.
- Needs a good understanding of IT Infrastructure.
- Covers AWS sysops & developer tools from an architect perspective.
- Focused on knowledge & hands-on than remembering answers.
- Intended to make you a thorough cloud professional.
- Opens up other specializations on the cloud.

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Course Duration

- 4 Week Course.
- 5 days a week Monday thru Friday.
- Up to 2.5hrs per day in a single session.
- Session time includes both theory & hands-on labs.

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Dos & Don’ts

- Join the session on time or few mins before it starts. Topics you missed will not be repeated making it difficult to grasp the entire concept.
- Keep the mic muted when not speaking and after asking a question.
- Be courteous and respectful to everyone in the batch.
- Do not argue or constantly interrupt. If you disagree on a point, save the conversation for after the session.
- Wait for a topic to be explained in full before raising questions.
- Do not answer questions asked by others unless you’ve been called upon.
- Do not hoard the mic and time and use up all the question time. Allow others to ask their questions as well.
- Delete all resources created during the labs after each session is over.

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Course Core Topics

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1. Intro to Cloud Computing & AWS
2. EC2 Instances
3. EBS Volumes
4. Elastic Load balancers (ELB)
5. S3 Storage & Glacier
6. EFS, FSx, Storage GW & Snow
7. Virtual Private Cloud (VPC)
8. Route53 DNS
9. Security - IAM & Encryption (KMS)
10. Databases 1 — RDS & Aurora
11. Databases 2 — DynamoDB & ElastiCache
12. CI/CD through Elastic Beanstalk
13. CloudFront & Global Accelerator
14. CloudWatch & Autoscaling
15. CloudFormation & CLI
16. ECS, EKS, Lambda & API GW
17. SQS, Kinesis, SNS, SES & MQ
18. Other AWS Services
19. Project
20. Organization Billing & Exam Review

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Pre-requisites

- Create a free AWS Account.
- Personal Computer or work system without security limitations. i.e. ability to install applications like Putty, HeidiSQL etc.
- Domain Name for Route 53 (Free for attendees)

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Agenda

- Introduction to Cloud Computing
- Cloud Service Models & Deployment Models
- Introduction to AWS
- AWS Global Infrastructure (Regions & AZs)
- AWS Shared Security Model
- Q & A

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Module 1

Introduction to Cloud Computing

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Cloud Computing Fundamentals

- What is the “Cloud”?

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Cloud Computing Fundamentals

- What is the “Cloud”?

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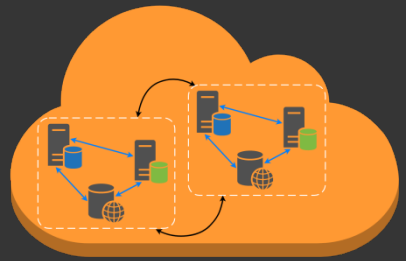
What is the “Cloud”?

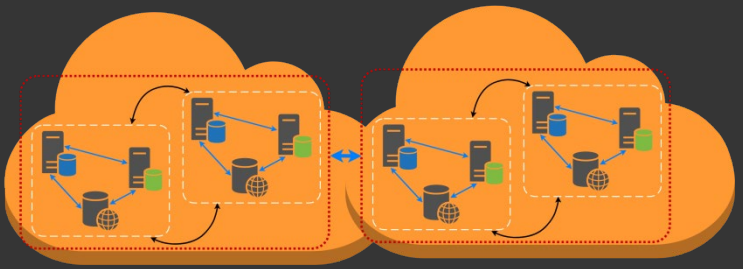
Multiple Systems working together to act like a single system

→ Cloud



Multiple groups of cloud systems supporting the same functions

→ Load Balanced Cloud



Multiple data centers that have multiple groups of cloud systems performing the same functions

→ Multi-Region / High Availability Cloud

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Cloud Computing Fundamentals

- What is the “Cloud”?

The NIST definition lists five essential characteristics of cloud computing:

1. On-demand self-service
2. Broad network access
3. Resource pooling
4. Rapid elasticity or expansion
5. Measured service

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Cloud Computing Models

3 Types of **“Service Models”**

(Software, Platform and Infrastructure)

3 Types of **“Deployment models“**

(Private, Public and Hybrid)

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Cloud Servicing Models

SaaS (Software as a Service)

PaaS (Platform as a Service)

IaaS (Infrastructure as a Service)

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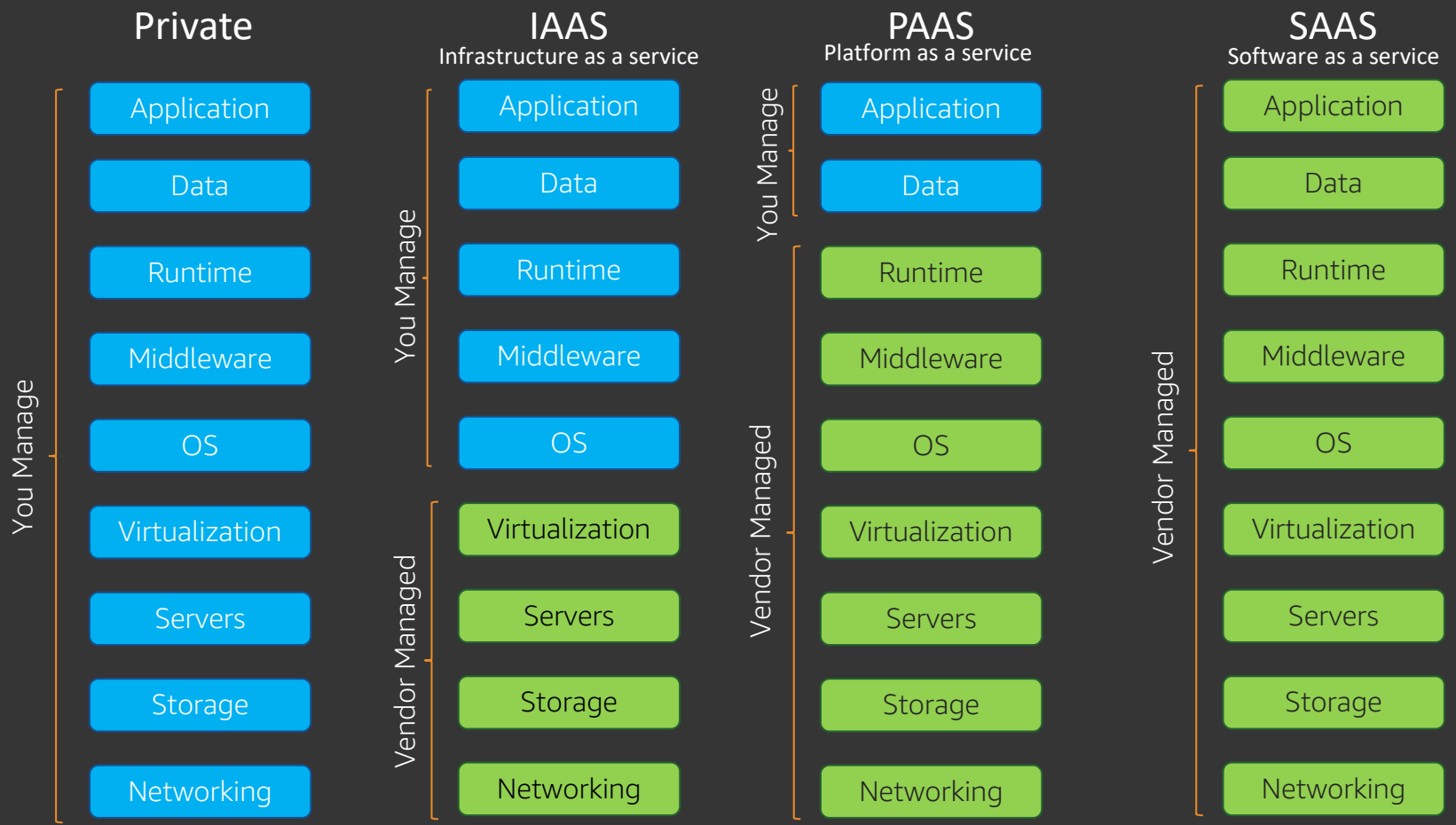

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Cloud Deployment Models

Private	Privately Built Cloud e.g. Openstack
Public	AWS, Azure, Google Cloud
Hybrid	Combination of Private & Public

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Leading Cloud Providers

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Module 2

History & Introduction to AWS

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Introduction to AWS

- Officially Launched in 2006.
- First service – SQS (Simple Queuing Service)
- Designed from extensive knowledge building Amazon.com.
- Innovation and Customer Focused with millions of active users worldwide.
- Adds capacity equal to 1 Fortune 500 every single day.

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What is AWS?

AWS is a Cloud Infrastructure & Services Platform that helps users build highly scalable cloud backends to deliver applications and services in a highly available & on-demand manner.

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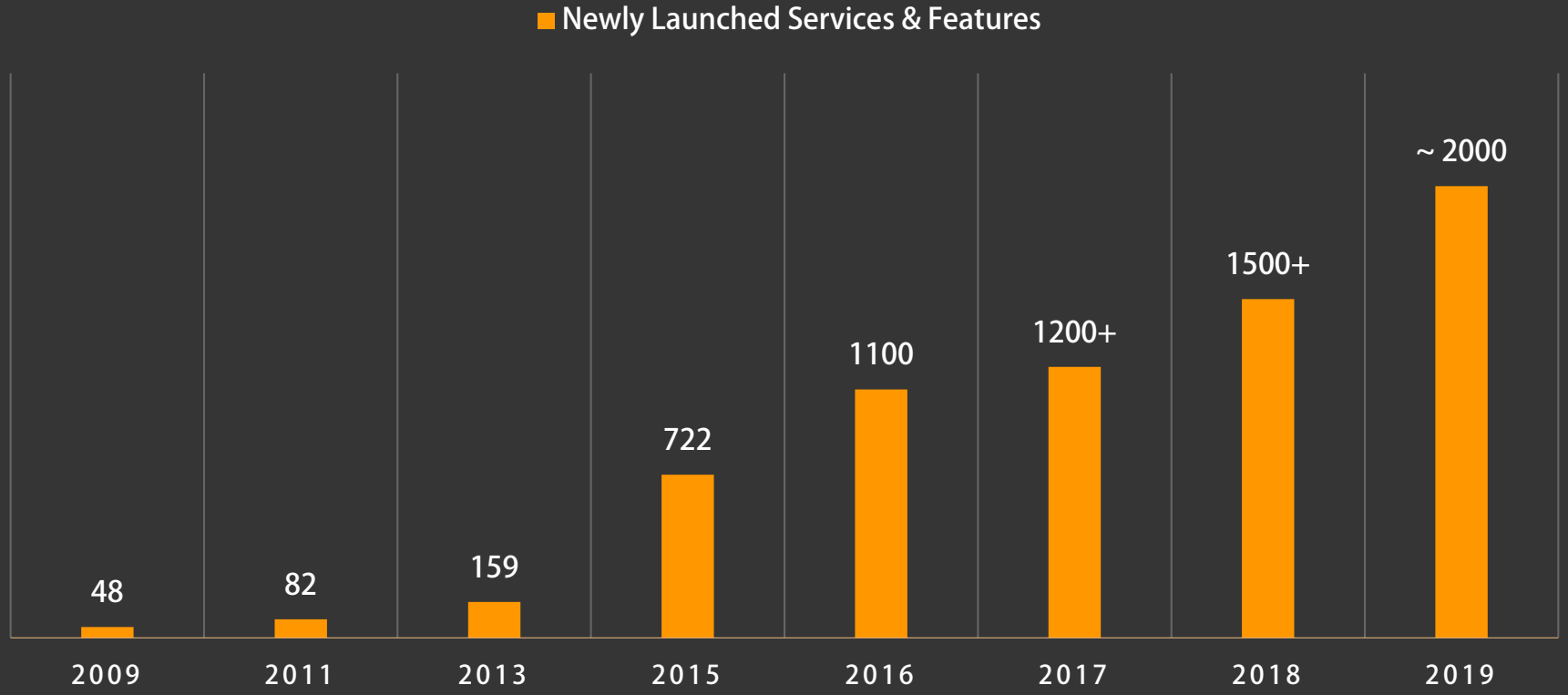
AWS RAPID PACE OF INNOVATION



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AWS positioned as a leader in the Gartner Magic Quadrant for Cloud Infrastructure as a Service (IAAS)

AWS is positioned highest in execution and furthest in vision within the Leaders Quadrant

*Gartner, Magic Quadrant for Cloud Infrastructure as a Service, Worldwide, Smith, Dennis, Leong, Lydia, Bala, Raj, May 2018 G00336148
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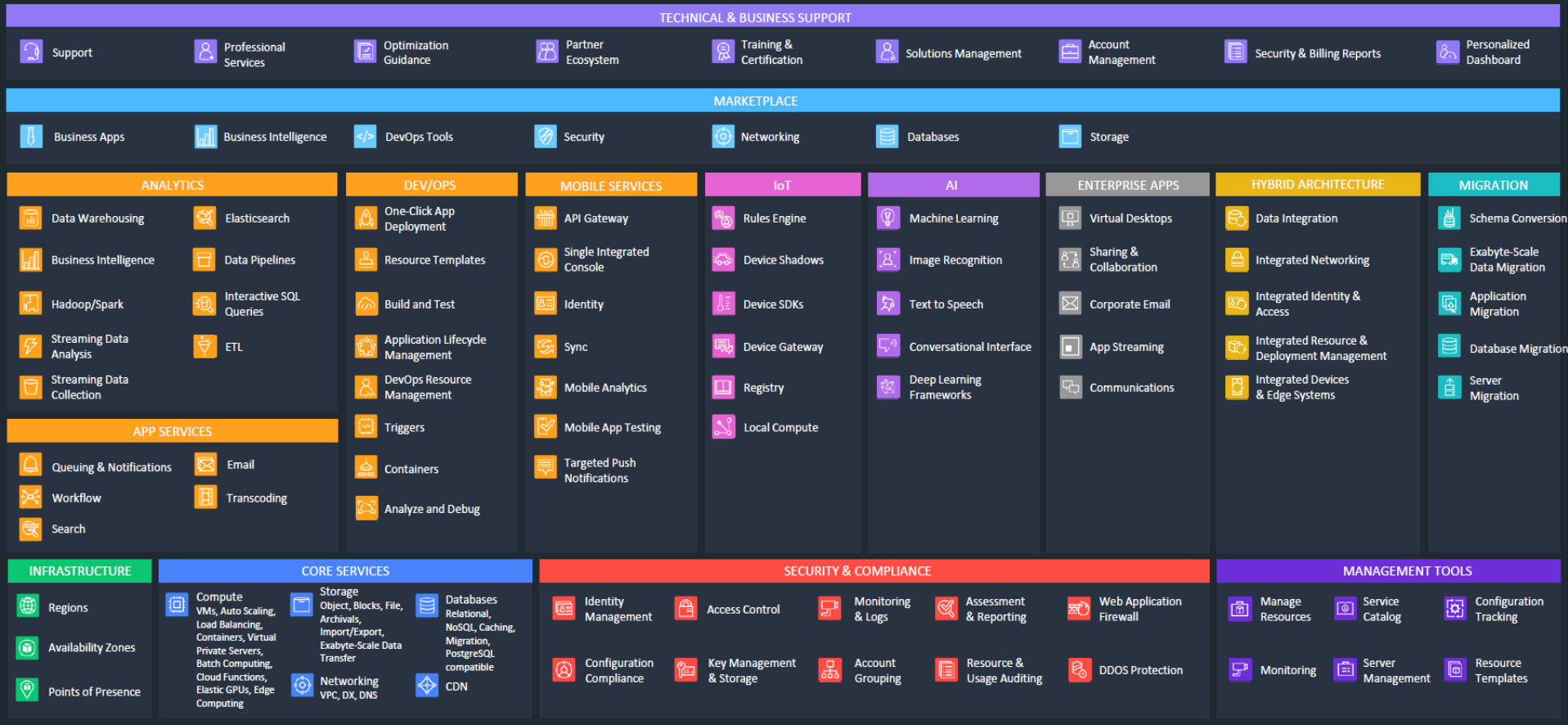

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Module 3

Regions

Availability Zones

Points of Presence

CORE GLOBAL INFRASTRUCTURE

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AWS Regions

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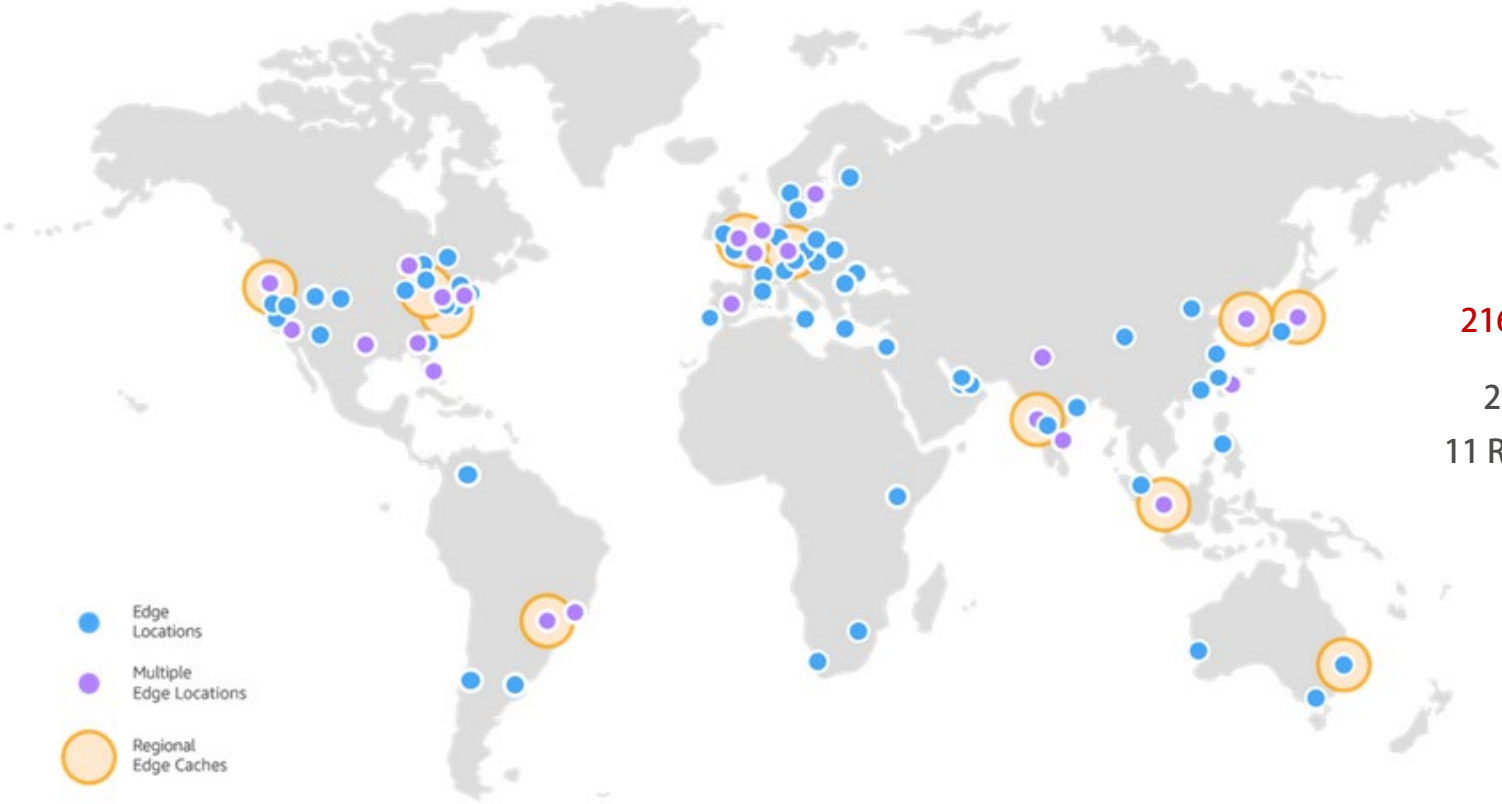
AWS Edge Locations



216 Points of Presence

205 Edge Locations

11 Regional Edge Caches

84 cities

42 countries

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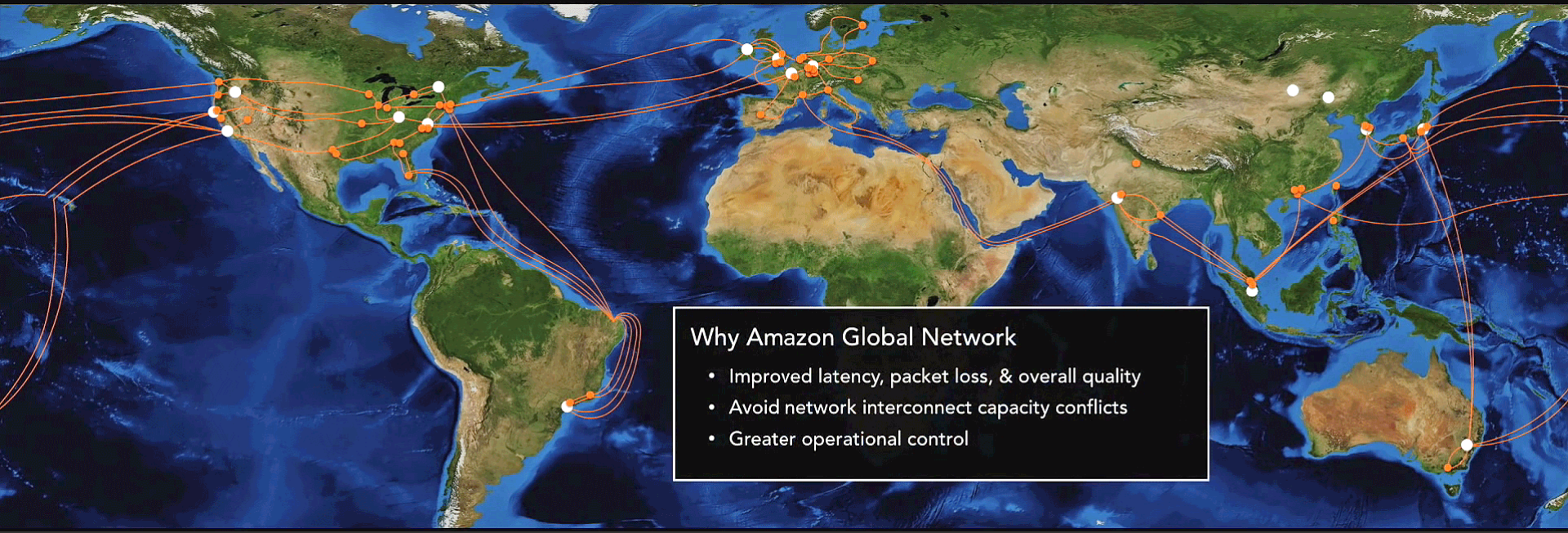
AWS Global Network



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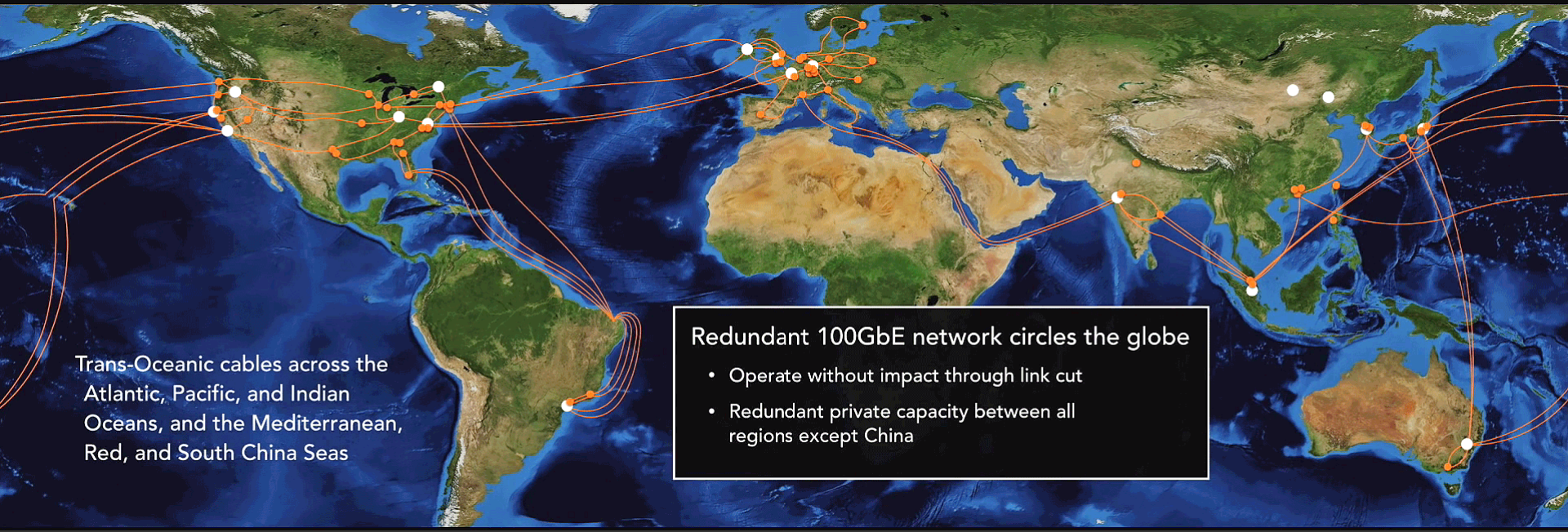
AWS Global Network



Visualization >>

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Regions & Availability Zones

Regions

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

Availability Zones

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

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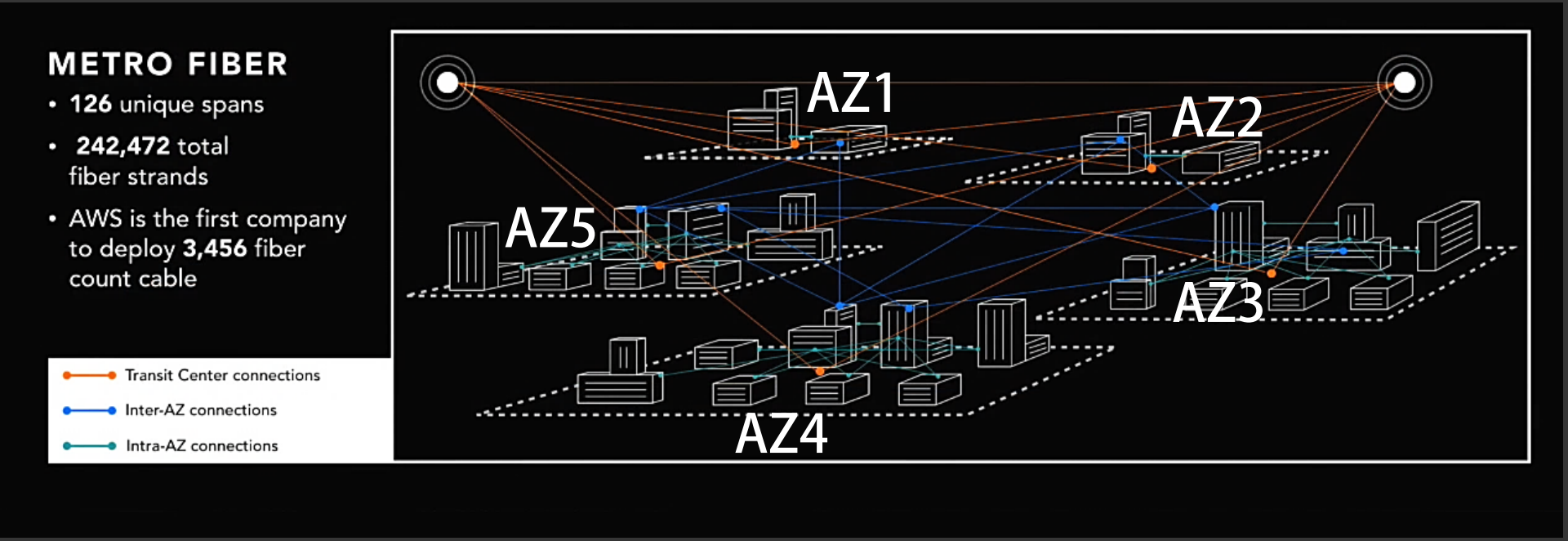
Multi-AZ Connectivity



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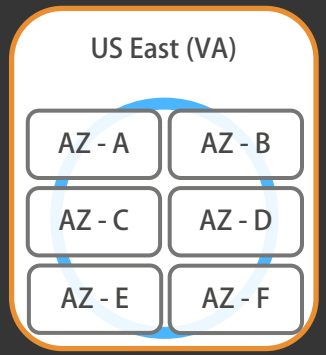
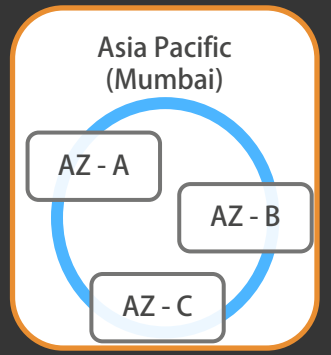
Availability Zones

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
    - Us-east-1f
  - Asia Pacific (Mumbai)
    - ap-south-1a
    - ap-south-1b
    - ap-south-1c





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

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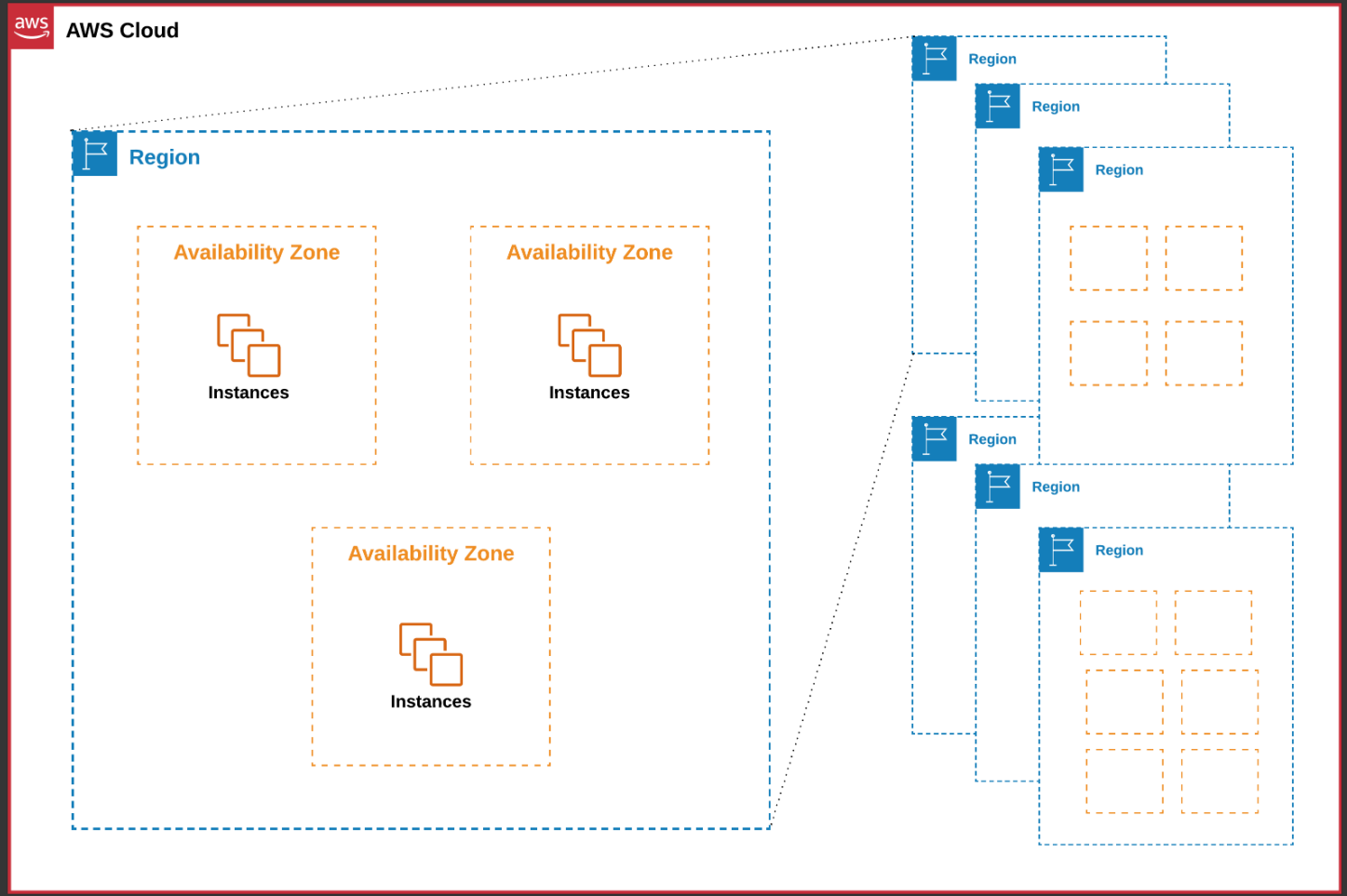
High Availability with Multi-AZ



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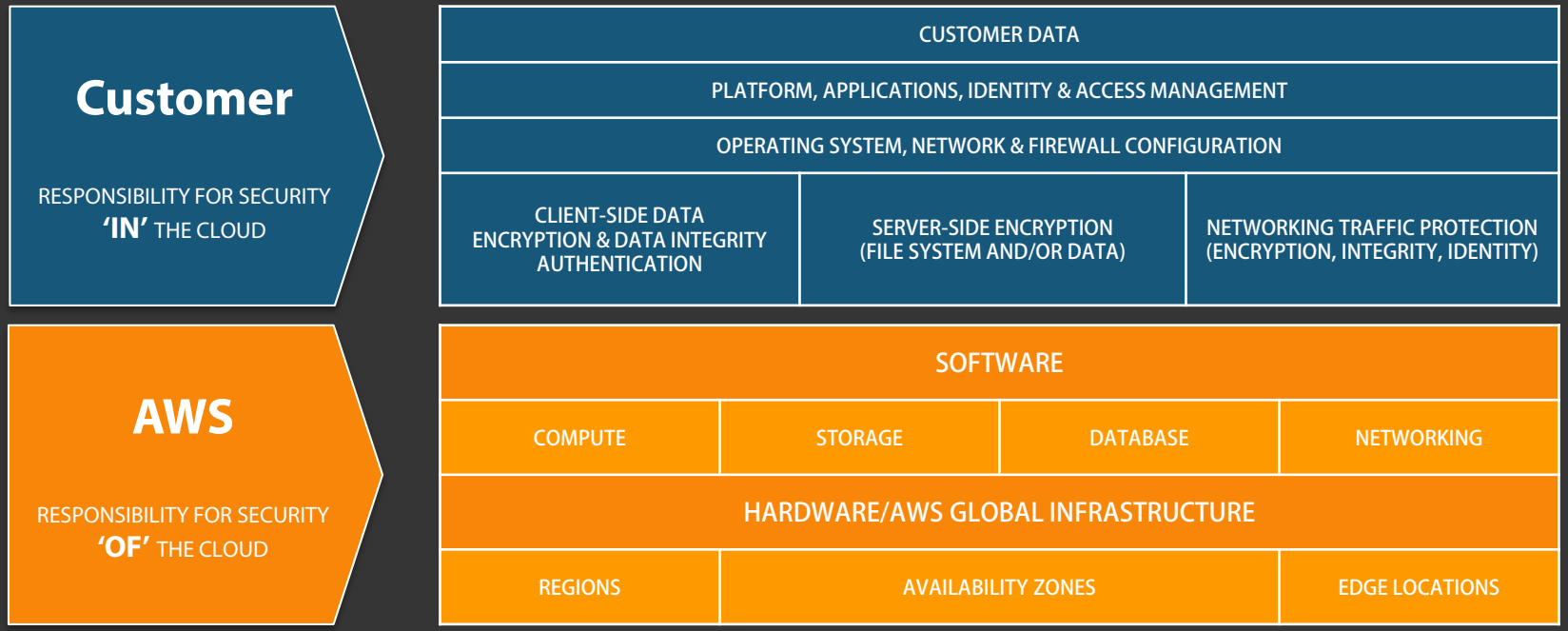
AWS Shared Responsibility Model



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Thank You!

Q & A

TO DO Tasks:

- Register for Free AWS Account
- Verify Training Portal Access

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