



DAY - 2

OVERVIEW

AMAZON WEB SERVICES

AWS Architecture and Design



1. Day 1 Overview of Cloud Computing
2. **Day 2 Overview of AWS**
3. Day 3 Amazon EC2*
4. Day 4 Amazon EBS *
5. Day 5 Amazon CloudWatch *
6. Day 6 Amazon S3*
7. Day 7 Amazon Elastic Load Balancer *
8. Day 8 Amazon Auto Scaling *
9. Day 9 Amazon VPC *
10. Day 10 Amazon IAM *
11. Day 11 Amazon RDS
12. Day 12 Amazon Route 53 *
13. Day 13 Amazon DynamoDB* & Glacier
14. Day 14 Amazon Cloudfront* & Import Export & Amazon SES *
15. Day 15 Amazon ElasticBeanStalk & Amazon Cloudformation & Amazon OpsWorks
16. Day 16 AWS Economics & AWS Account Overview *
17. Day 17 AWS Architecture
18. Day 18 AWS Certification Preparation

[With Hands on Demo]

Amazon Web Services (AWS)



- What is AWS?
- Overview of AWS Products
- Basic Keywords for AWS
- Security Mechanism

Three Parts of Amazon

1 Consumer/Retail Business

amazon.com[®]

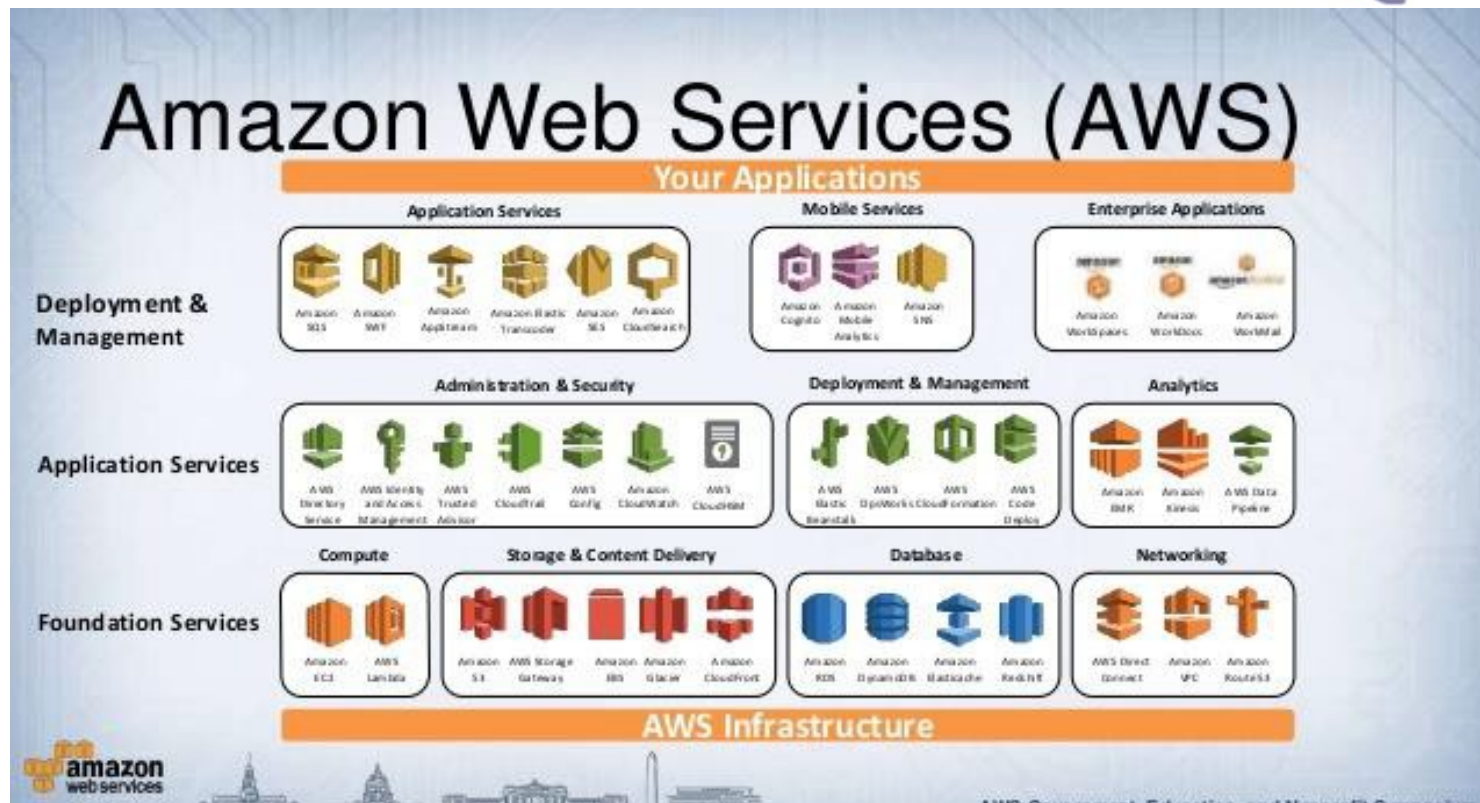
2 Seller Business



3

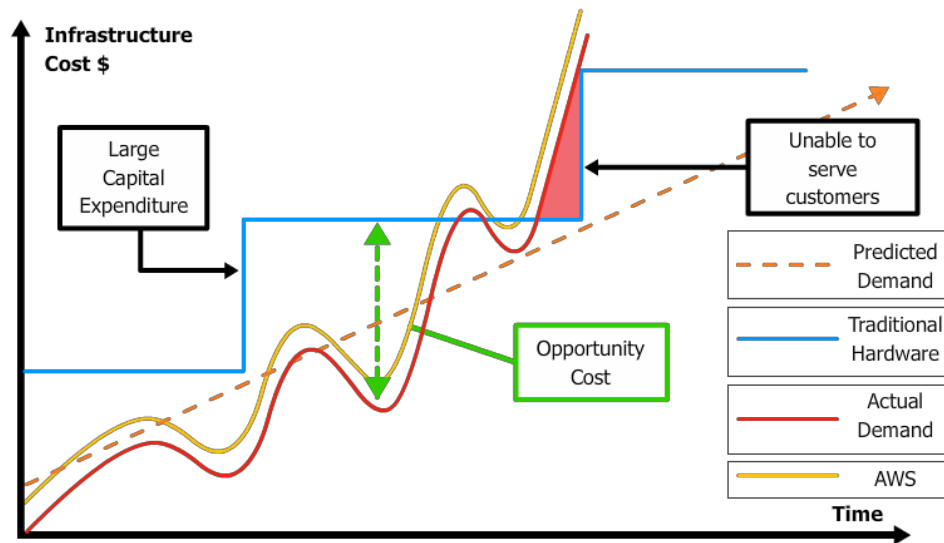
amazon
web services[™]

IT Infrastructure Business



Why AWS?

Elastic and Pay-Per Use Infrastructure



Amazon Cloud Growth



2004 amazon.com	2014 amazon web services
\$7B+ retail business	Every day, AWS adds enough server capacity to power that entire \$7B enterprise
8,000+ employees	
A whole lot of servers	

Ref: AWS re:Invent 2014

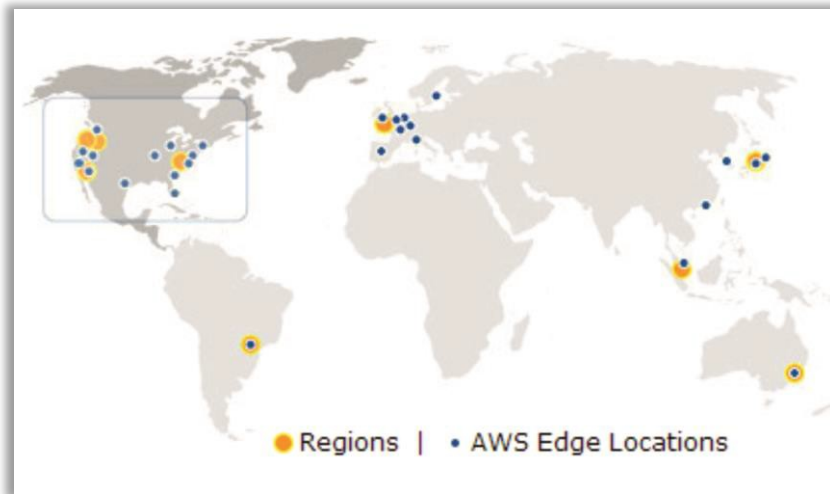
AWS Use Cases



- Backup - Archive
- Application Hosting
- Media Sharing (Image/ Video)
- Media Distribution
- Academic Computing
- Search Engines
- Social Networking
- Scalable Applications
- SaaS / PaaS Hosting

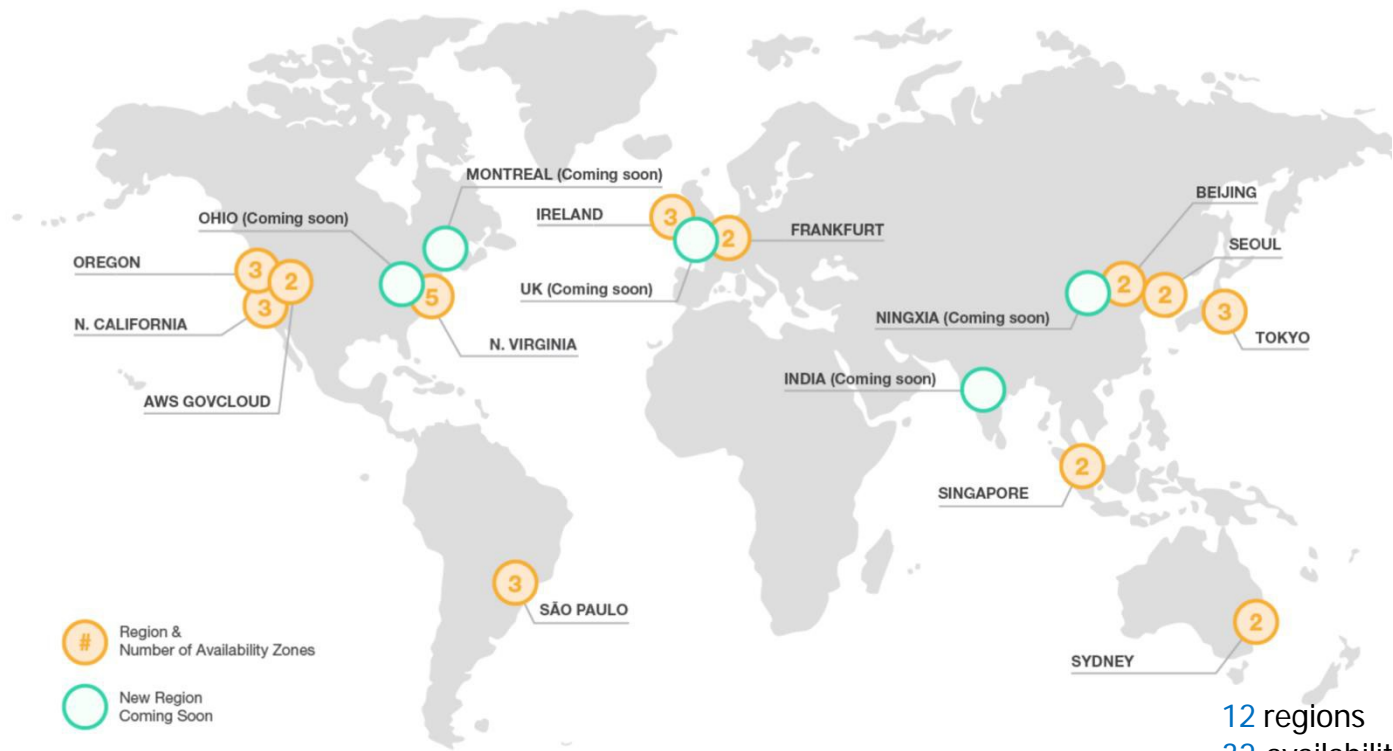
Regions & Zones

- Amazon EC2 provides the ability to place instances in multiple locations
 - » Amazon EC2 locations are composed of Availability Zones and Regions
- By launching instances in separate Regions, you can design your application to be closer to specific customers or to meet legal or other requirements
 - » By launching instances in separate Availability Zones, you can protect your applications from the failure of a single location



Ref: <http://aws.amazon.com/about-aws/globalinfrastructure/>

Regions & Zones

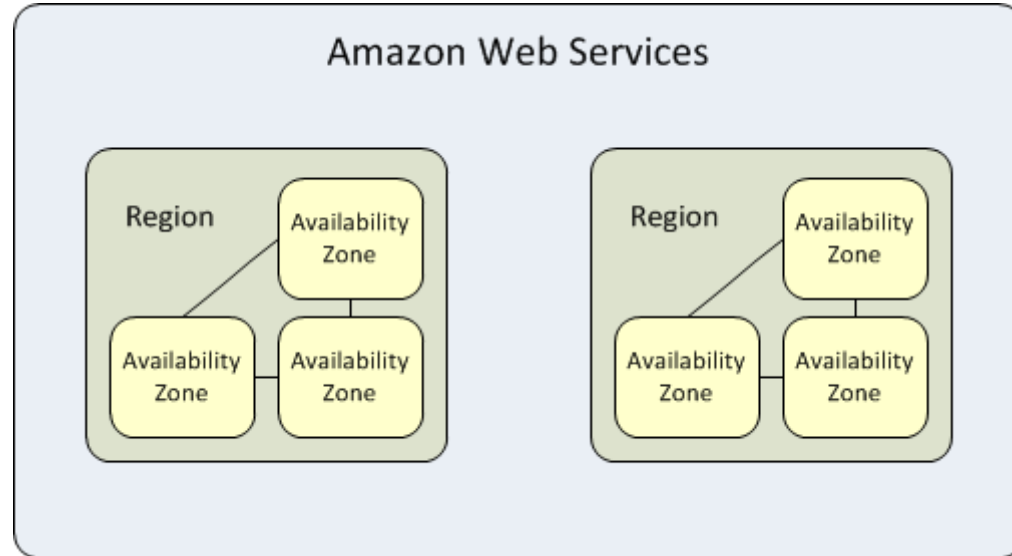


12 regions
32 availability zones
54 edge locations

<http://harish11g.blogspot.in/2012/07/amazon-availability-zones-aws-az.html>



Regions & Zones



Amazon Cloud Characteristics



- Availability & Reliability
- Scalability & Elasticity
- Performance
- Flexible (Numerous options of Programming, APIs , Access)
- Secure

AWS Services



Compute & Networking

[EC2](#)

Virtual Servers in the Cloud

[VPC](#)

Virtual Secure Network

[ELB](#)

Load Balancing Service

[Auto Scaling](#)

Automatically scale up and down

[Route 53](#)

Scalable Domain Name System

[Elastic MapReduce](#)

Managed Hadoop Framework

[Direct Connect](#)

Dedicated Network Connection to AWS

[Container Service](#)

Run and manage docker container

[AWS Lambda](#)

Run app without server in response to event

Mobile Services & Enterprise

[Amazon Cognito](#)

User identity & data synchronization

[Amazon Mobile Analytics](#)

Collect, visualize, and understand app usage data

[Amazon Workdocs](#)

enterprise storage and sharing

[Amazon Workspaces](#)

Desktop Computing

[Amazon DeviceFarm](#)

Physical devices for testing

Storage and Content Delivery

[S3](#)

Scalable Storage in the Cloud

[EBS](#)

Networked Attached Block Device

[CloudFront](#)

Global Content Delivery Network

[Glacier](#)

Archive Storage in the Cloud

[Storage Gateway](#)

Integrates On-Premises IT with Cloud

Storage

[Import Export](#)

Ship Large Datasets

[AWS EFS](#)

Managed File system from AWS

Cross-Service

[Support](#)

Phone & email fast-response 24x7

[Support](#)

[Marketplace](#)

Bull and sell Software and Apps

[Management Console](#)

UI to manage AWS services

[SDKs, IDE kits and CLIs](#)

Develop, integrate and manage services

Database

[DynamoDB](#)

Predictable and Scalable NoSQL Data Store

[ElastiCache](#)

In-Memory Cache

[RDS](#)

Managed Relational Database

[Redshift](#)

Managed Petabyte-Scale Data

Warehouse

[Data Migration Service](#)

Migrate DB with minimal downtime

App Services

[CloudSearch](#)

Managed Search Service

[Elastic Transcoder](#)

Easy-to-use Scalable Media Transcoding

[SES](#)

Email Sending Service

[SNS](#)

Push Notification Service

[SQS](#)

Message Queue Service

[API Gateway](#)

Managed Gateway Service

[SWF](#)

Workflow Service for Coordinating App

Deployment, Management & Analytics

[CloudFormation](#)

Templated AWS Resource Creation

[CloudWatch](#)

Resource and application Monitoring

[Data Pipeline](#)

Orchestration for Data-Driven Workflows

[Elastic Beanstalk](#)

AWS Application Container

[IAM](#)

Secure AWS Access Control

[OpsWorks](#)

DevOps Application Management Service

[CloudHSM](#)

Hardware-based key storage for compliance

[Amazon Kinesis](#)

Realtime processing of Streaming data

[AWS CloudTrail](#)

AWS API Calls

[AWS AppStream](#)

Streaming of games

[AWS Directory Service](#)

Connect with on-premise / cloud directory

[AWS CodeDeploy](#)

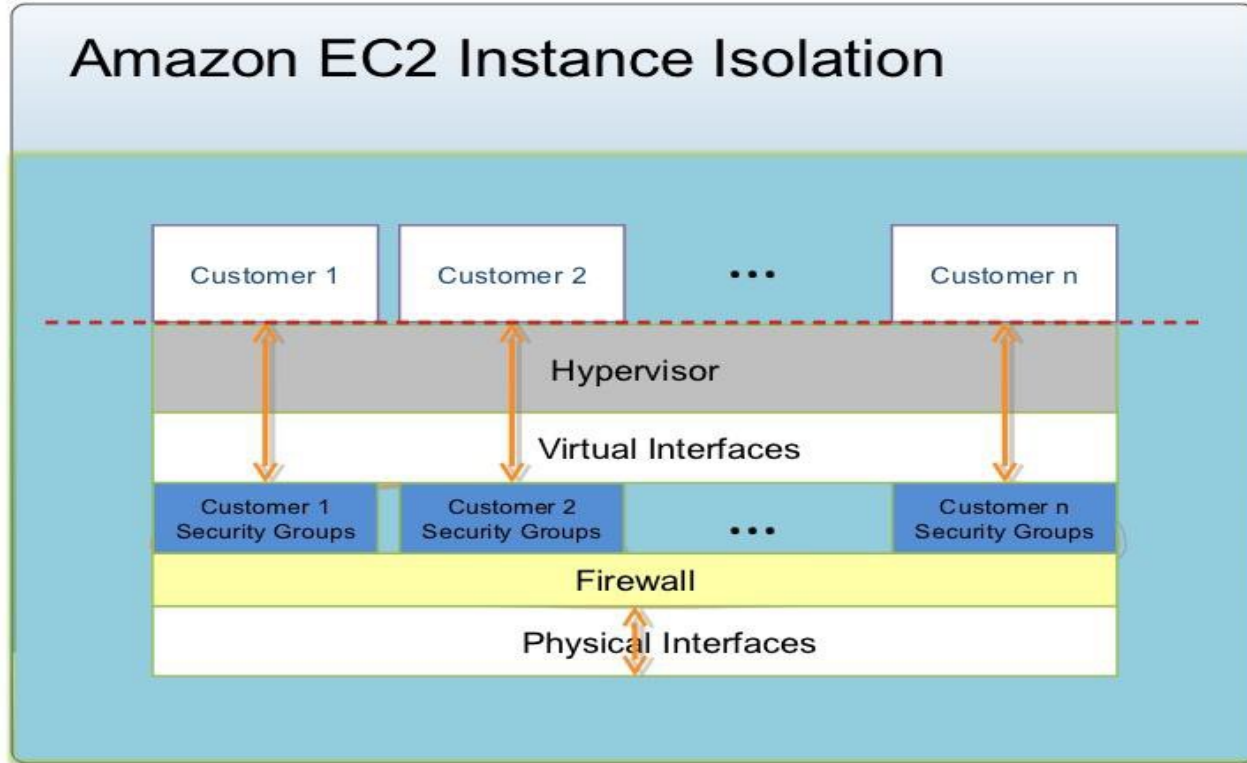
Automated Code Deployment

[AWS Config](#)

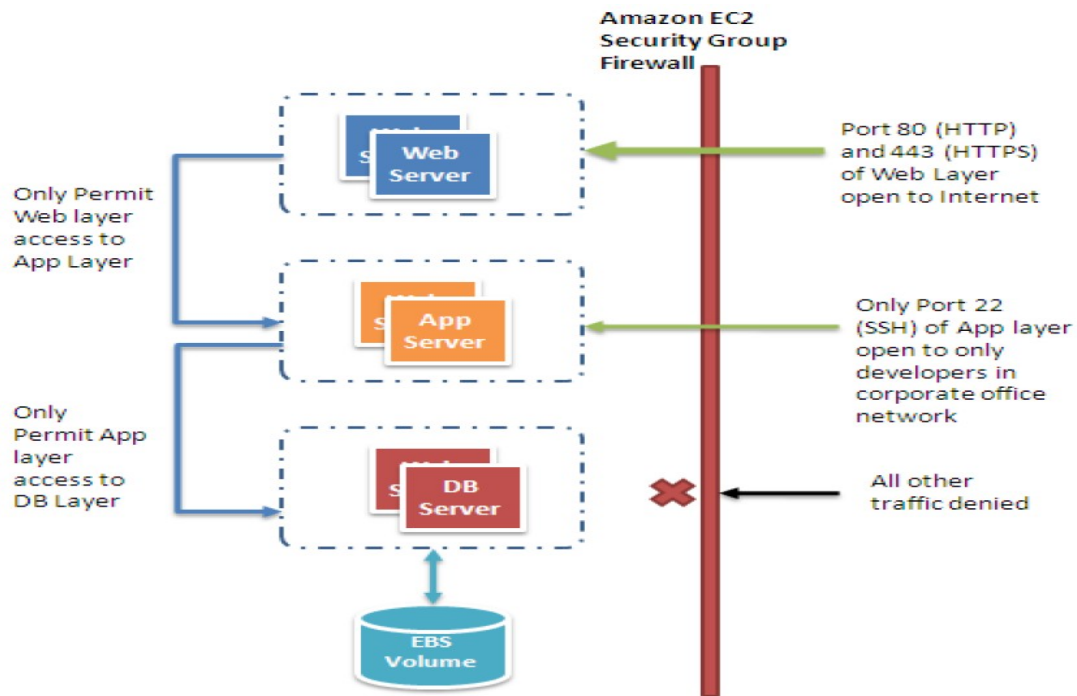
Detailed Inventory of AWS Services

[AWS Key Management Service](#)

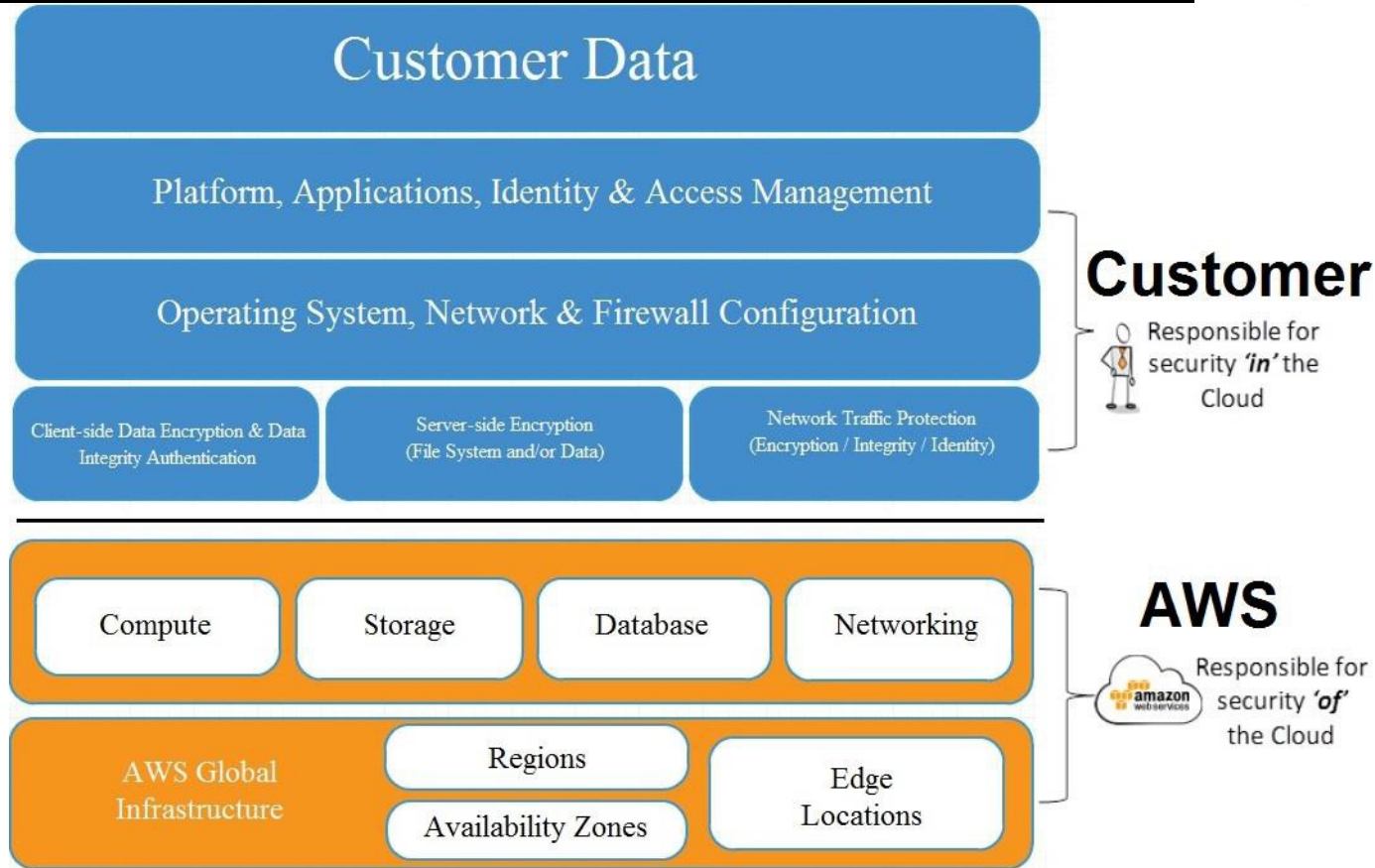
Create and Control encryption keys



Amazon Security



Amazon Security



Amazon Security



→ Certifications and Accreditations

- » SOC 1 (formerly SAS70)
- » SOC 2
- » SOC 3
- » PCI DSS Level 1
- » ISO 27001
- » FedRAMPsm
- » FISMA
- » DIACAP
- » ITAR
- » FIPS 140-2

→ Certification for payment card data security

→ Routine, comprehensive audits and risk assessment for customer data

→ Identity and Access Management & MFA

→ Hardware Security Modules (HSMs) (Dedicated, hardware-based key management)

→ AWS Govt. Cloud

<http://aws.amazon.com/security>

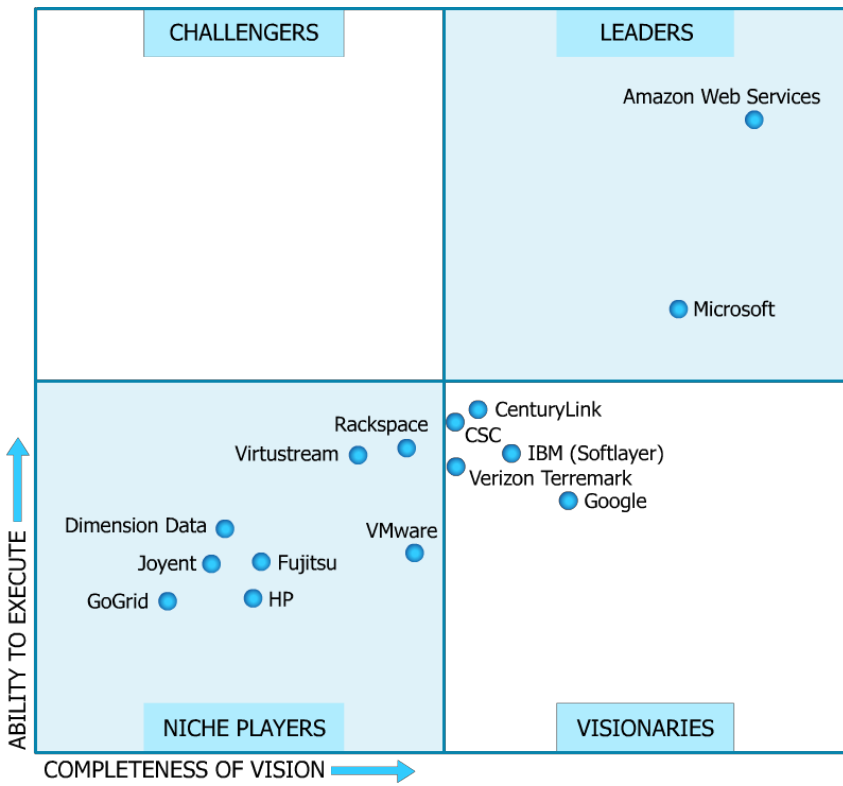
Why AWS



- Global Infrastructure
- Massive Compute & Storage Power
- Content Distribution
- Managed DB
- Easy Deployment and Management
- Big Data
- Ecosystem of other products / software / Solution Providers
- Flexible Support Models
- The most innovative features in Cloud

<http://aws.amazon.com/choosing-a-cloud-platform/>

AWS The Leader



<http://aws.amazon.com/resources/gartner-mq-2014-learn-more/>



As of May 2015

Access AWS



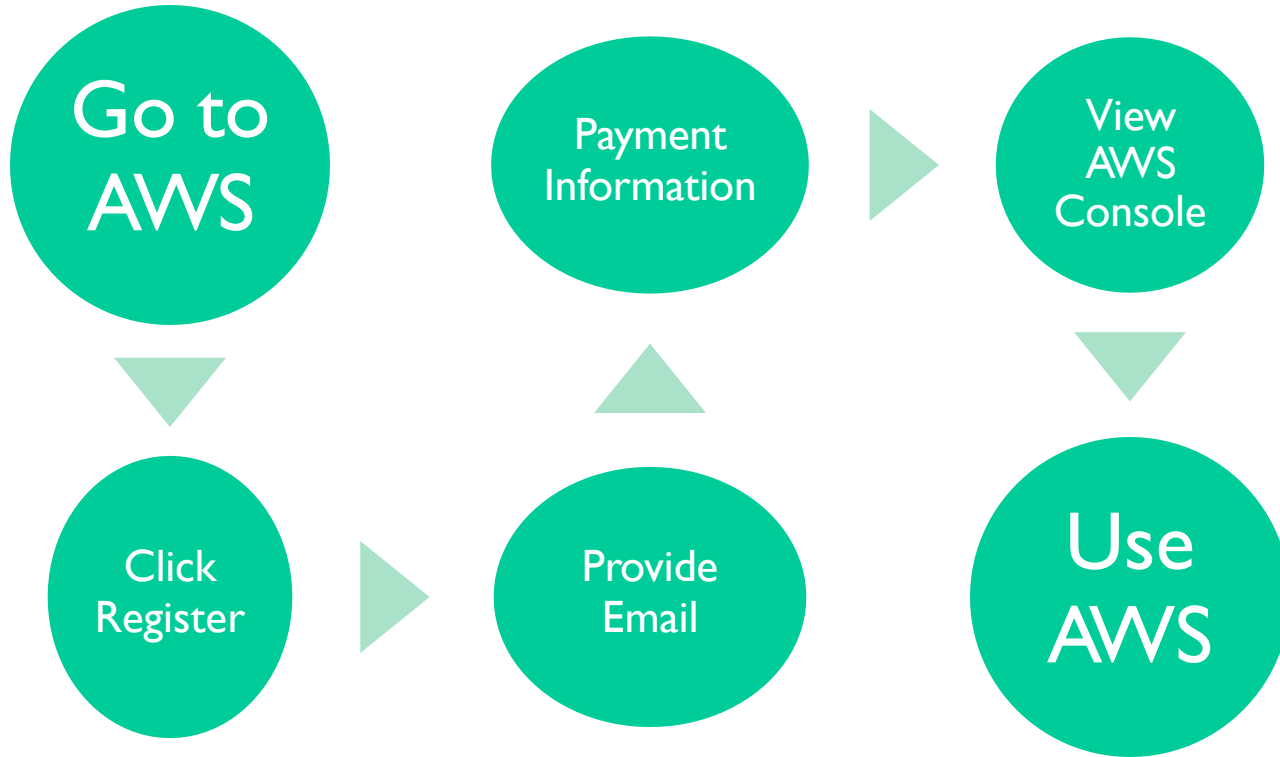
AWS
Management
Console

AWS
Web service
APIs

AWS CLI

AWS SDKs

Getting Started With AWS



Amazon Console & Account Overview

We learned about

- » What is AWS and its use cases
- » AWS Global Infrastructure and Security
- » AWS Console and Signup with AWS

In next session we will have overview about
How to use AWS Elastic Compute Service : EC2

Thank You

Email us – support@intellipaat.com

Visit us - <https://intellipaat.com>