

AWS Cloud Practitioner Certification Preparation 2021

- <https://aws.amazon.com/certification/certified-cloud-practitioner/>
<https://aws.amazon.com/certification/certification-prep/>

65 Multi-Choice Questions | 90 minutes | USD 100 | [Take Exam Online](#) | [Sample Questions](#)

Refresher: [AWS Cloud Practitioner Essentials \(digital\)](#)

Whitepapers: [Overview of Amazon Web Services](#) | [How AWS Pricing Works](#) | [AWS Support Plans](#)

■ Introduction to AWS

Cloud Computing Defined:

On-demand Delivery of IT resources, via the internet, with a pay-as-you-go pricing.

AWS Cloud Services platform delivers:

- Compute power
- Storage
- Database services
- Other IT resources
(Data analytics, Machine learning, Internet of Things etc.)

AWS Global Infrastructure

- Regions
Separate, isolated geographic areas that contain Availability Zones
- Availability Zones
Isolated locations within a geographical region, containing one or more data centers
- Edge Locations
Locations designed to deliver content to end users

Leveraging AWS Global Infrastructure allows you to build more highly available, fault tolerant, and scalable IT infrastructures than traditional on-premise datacenters.

AWS supports 3 different management

- Web-based AWS Management Console (plus mobile app)
 - Command Line Interface (CLI)
-

interfaces to access your account:

- Software Development Kits (SDKs)

What're the benefits of cloud computing?

- Trade Capex for Opex
- Massive Economies of Scale
- Stop Guessing Capacity
- Increase Speed & Agility
- Stop Spending Money on Running & Maintaining Datacenters
- Go Global in Minutes

What sets AWS apart?

- AWS' customer obsession, pace of innovation, enterprise leadership, security, service categories, global infrastructure.

AWS Partner Network (APN)

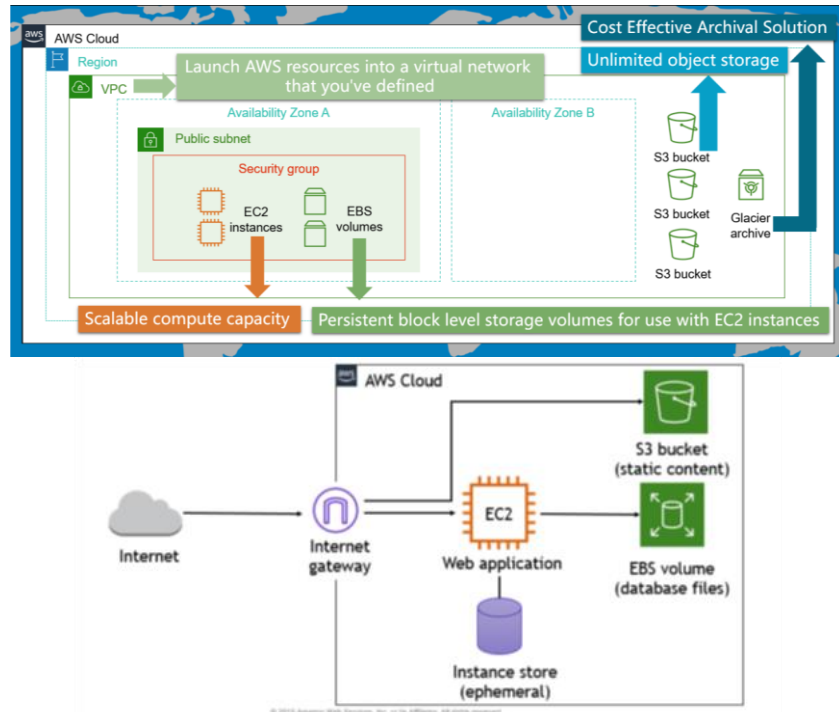
- APN Consulting Partners help customers design, architect, build, migrate, and manage their workloads and applications on AWS and includes Managed Service Providers (MSP).
- APN Technology Partners provide hardware, connectivity services, and software solutions that are hosted on or integrated with the AWS Cloud and may include Independent Software Vendors (ISV).

Video Link

- [Who's Building on AWS?](#)
- Visit [AWS Customer Success site](#) to find use cases to help inspire solution design and build confidence with customers.

■ Getting Started with the Cloud

Basic “Lift & Shift” services



(Compute) Amazon EC2

Scalable compute capacity. To increase availability of cloud-hosted application, run multiple EC2 instances across multiple Availability Zones.

https://docs.aws.amazon.com/ec2/?id=docs_gateway

Right-size capacity

<https://docs.aws.amazon.com/whitepapers/latest/cost-optimization-right-sizing/introduction>

EC2 instance family types optimized to fit different use cases:

General Purpose | Compute Optimised

Memory Optimised | Accelerated Computing

Storage Optimised

<https://aws.amazon.com/ec2/instance-types/>

(Storage) Amazon EBS

Persistent block level storage volumes for use with EC2 instances. Well suited to both database-style applications that rely on random reads and writes, and to throughput-intensive applications that perform long, continuous reads and writes.

https://docs.aws.amazon.com/ebs/?id=docs_gateway

(Storage)
Amazon S3

Object storage service that can be used to store and retrieve any amount of data, at any time, from anywhere on the web.

https://docs.aws.amazon.com/s3/?id=docs_gateway

S3 Glacier is a low-cost object storage service designed for data archiving.

(Network)
Amazon VPC

Launch AWS resources into a virtual network that you've defined.

https://docs.aws.amazon.com/vpc/?id=docs_gateway

Network Access Control Lists (NACLs) provide protection at the subnet level. Security Groups provide protection at the instance level.

Build One Yourself

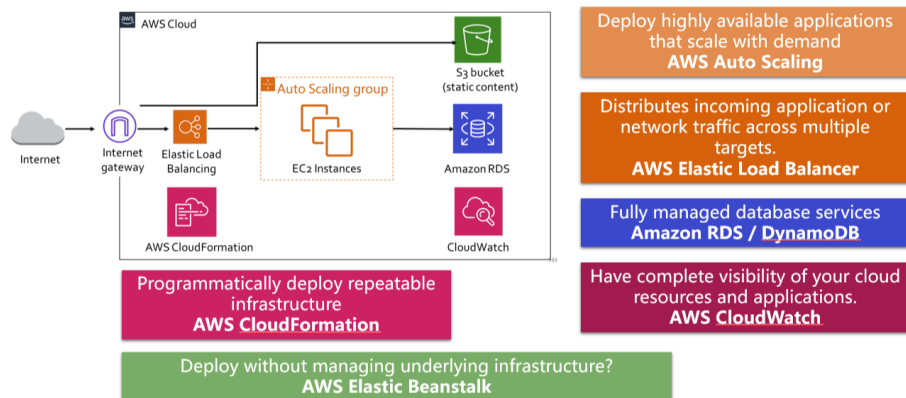
<https://docs.aws.amazon.com/vpc/latest/userguide/working-with-vpcs.html>

Video Links

[Arterys](#) – Amazon EC2 G2 instances, render 3D MRI scans in 10 minutes.

■ Building on the Cloud

Improved
architecture with
efficient tools



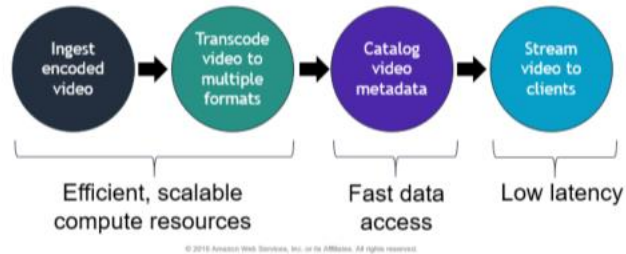
(Monitor)
Amazon
CloudWatch

Have complete visibility of your cloud resources and applications.

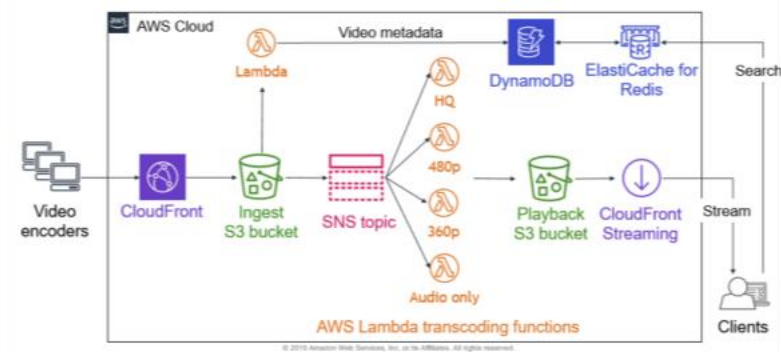
https://docs.aws.amazon.com/cloudwatch/?id=docs_gateway

(Monitor) AWS CloudTrail	Identify which users and accounts called AWS APIs for services that support CloudTrail, the source IP address the calls were made from, and when the calls occurred. https://docs.aws.amazon.com/cloudtrail/?id=docs_gateway
(Management) AWS Auto-scaling	Deploy highly available applications that scale with demand. https://docs.aws.amazon.com/autoscaling/?id=docs_gateway
(Network) AWS Elastic Load Balancing	Application Load Balancing (Layer 7) Network Load Balancing (Layer 4) Classic Load Balancing Distributes incoming application or network traffic across multiple targets.
(Database) Amazon Database Services	Run SQL or NoSQL databases without the management overhead. RDS (SQL) Aurora (an RDS engine) DynamoDB (NoSQL) Elasticache RedShift (data warehouse) DocumentDB (MongoDB compatible) Neptune (graph database)
(Management) AWS CloudFormation	Programmatically deploy repeatable infrastructure. use case: Automate Deployment (across regions), Disaster Recovery, Test Innovation https://docs.aws.amazon.com/cloudformation/?id=docs_gateway
(Application Deployment) AWS Elastic Beanstalk	Deploy your application in the simplest way possible. https://docs.aws.amazon.com/elastic-beanstalk/?id=docs_gateway
(Network) AWS Direct Connect	Provision a dedicated network connection from your premises to AWS. https://docs.aws.amazon.com/directconnect/?id=docs_gateway AWS Direct Connect Partners
(Network) Amazon Route 53	Run a highly available and scalable Domain Name System (DNS) web service. https://docs.aws.amazon.com/route53/?id=docs_gateway

Media Challenge



Solution



(Compute) AWS Lambda

Run code without provisioning, maintaining and administering servers ("serverless" technology)
https://docs.aws.amazon.com/lambda/?id=docs_gateway

(Content Delivery) Amazon CloudFront

Deliver your content across a massively scaled and globally available network
https://docs.aws.amazon.com/cloudfront/?id=docs_gateway

Amazon Simple Notification Service (SNS)

Fully managed pub/sub messaging service
<https://aws.amazon.com/sns/>

Video Links

[Epic Games \(Fortnite\)](#) uses AWS to deliver Fortnite to more than 200 million players around the world, support growth of more than 100 times in just 12 months.

■ AWS Security

AWS Shared Responsibility Model

AWS responsible for “Security of the Cloud”
Customer responsible for “Security in the Cloud”
<https://aws.amazon.com/compliance/shared-responsibility-model/>

AWS Identity & Access Management (IAM)

Control who is authenticated (signed in) and
authorized (has permissions) to use resources.
User | Groups | Roles
https://docs.aws.amazon.com/iam/?id=docs_gateway

Amazon Inspector

Tests the network accessibility of your Amazon EC2 instances and
the security state of your applications that run on those instances.
https://docs.aws.amazon.com/inspector/?id=docs_gateway

AWS Shield

Protection against DDoS attack.
https://docs.aws.amazon.com/shield/?id=docs_gateway

AWS Compliance

AWS Security compliance offerings
<http://aws.amazon.com/compliance/>

[AWS Artifact](#)
Download AWS security and compliance documents such as ISO
certifications and SOC reports.

■ AWS Pricing & Support

Pricing Concepts

Compute, Storage, Data Transfer (out)

Amazon EC2 Instances Purchase Types

On-demand | Reserved | Spot | Savings Plan |
Dedicated Instance/Host
<https://aws.amazon.com/ec2/pricing/>

Amazon EBS Pricing

Volumes | Snapshot | Data Transfer
<https://aws.amazon.com/ebs/pricing/>

Amazon S3 Pricing

<https://aws.amazon.com/s3/pricing/>

Cost estimating tools	Free Tier Simple Monthly Calculator (older version) AWS Pricing Calculator AWS Cost Explorer AWS Trusted Advisor Predetermined environment on AWS Simple Monthly Calculator
AWS Support Plans	https://aws.amazon.com/premiumsupport/plans/

■ AWS Well Architected Framework

Operational Excellence	https://aws.amazon.com/architecture/well-architected/
Security	Helps you design solutions following AWS best practices.
Reliability	Well Architected review compares a customer's workload to the
Performance Efficiency	latest AWS architectural best practices.
Cost Optimization	AWS Well-Architected Tool is available in the AWS Console.

■ What Else Can You Build On AWS?

<u>Resource name</u>	<u>Where to find them</u>
AWS Documentation User guides Developer guides API references Tutorials	https://docs.aws.amazon.com/
AWS Getting Started Guides	https://aws.amazon.com/getting-started/
AWS Quick Starts	https://aws.amazon.com/quickstart/
AWS Solutions	https://aws.amazon.com/solutions/
This is My Architecture Video Series	https://aws.amazon.com/this-is-my-architecture/
AWS CloudFormation Templates	https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/sample-templates-services-us-west-2.html
