



AMAZON WEBSERVICE FUNDAES

By OSTD Competency



AGENDA

- ✓ AWS CLOUD PRACTITIONER
- ✓ AWS DEVELOPER ASSOCIATE
- ✓ AWS SOLUTION ARCHITECT ASSOCIATE
- ✓ AWS SYSOPS ADMINISTRATOR

AWS EC2 - QUICK KNOWLEDGE TEST - SAMPLE



- ✓ A radio station runs a contest where day at noon they make an announcement that generates an immediate spike in traffic that requires 8 Amazon EC2 instances to process. All other times the web site requires 2 EC2 instances.

Which is the most cost-effective way to meet these requirements?

- ☐ Create an Auto Scaling group with a minimum capacity of 2 and scale up based up on CPU utilization.
- ☐ Create an Auto Scaling group with a minimum capacity of 8 at all the times.
- ☐ Create an Auto Scaling group with a minimum capacity of 2 and set a schedule to scale up at 11:40 am.
- ☐ Create an Auto Scaling group with a minimum capacity of 2 and scale up based upon memory utilization.

✓ Answer – C:

Create an Auto Scaling group with a minimum capacity of 2 and set a schedule to scale up at 11:40 am.

Reason :

- ~~Create an Auto Scaling group with a minimum capacity of 2 and scale up based up on CPU utilization.~~-(delay in launching instances)
- ~~Create an Auto Scaling group with a minimum capacity of 8 at all the times.~~(Overprovisioned)
- ~~Create an Auto Scaling group with a minimum capacity of 2 and scale up based upon memory utilization.~~-(not a native CloudWatch event)

AWS CLOUD PRACTITIONER

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST



✓ Which AWS Cloud service helps in quick deployment of resources which can make use of different programming languages such as .Net and Java?

- ☐ AWS Elastic Beanstalk
- ☐ AWS Elastic Compute Cloud (Amazon EC2)
- ☐ AWS SQS
- ☐ AWS VPC

✓ Answer – A:

- AWS Elastic Beanstalk is an easy-to-use service for deploying and scaling web applications and services developed with Java, .NET, PHP, Node.js, Python, Ruby, Go, and Docker on familiar servers such as Apache, Nginx, Passenger, and IIS.

For more information on enabling AWS Elastic beanstalk, please refer to the below URL:

<https://aws.amazon.com/elasticbeanstalk/?p=tile>.

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST



- ✓ You are requested to expose your serverless application implemented with AWS Lambda to HTTP clients.(using HTTP Proxy)
Which of the following AWS services can you use to accomplish the task?

- ☐ AWS Route53
- ☐ AWS Elastic Beanstalk
- ☐ AWS API Gateway
- ☐ AWS Elastic Load Balancing (ELB)
- ☐ AWS Lightsail

✓ Answer – C and D:

- Option D is CORRECT because AWS documentation mentions it “Application Load Balancers now support invoking Lambda functions to serve HTTP(S) requests. This enables users to access serverless applications from any HTTP client, including web browsers.
- Option C is CORRECT because API Gateway + Lambda is a common pattern for exposing serverless functions via HTTP/HTTPS. AWS documentation mentions it “Creating, deploying, and managing a REST application programming interface (API) to expose backend HTTP endpoints, AWS Lambda functions, or other AWS services”

Reason :

- Option A is INCORRECT because Route53 is a Domain Name System and not an HTTP proxy.
- Option E is INCORRECT because AWS Lightsail has a completely different goal. It is a service to speed up provisioning of AWS resources.
- Option B is INCORRECT because AWS Elastic Beanstalk has a completely different goal. It is a service that makes easier for developers to quickly deploy and manage applications in the AWS Cloud. Developers simply upload their application, and Elastic Beanstalk automatically handles the deployment details of capacity provisioning, load balancing, auto-scaling, and application health monitoring.

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST



✓ Which of the following services allows you to analyze EC2 Instances against pre-defined security templates to check for vulnerabilities?

- ☐ AWS Trusted Advisor
- ☐ AWS Inspector
- ☐ AWS WAF
- ☐ AWS Shield

✓ Answer – B:

- Amazon Inspector enables you to analyze the behavior of your AWS resources and helps you to identify potential security issues. Using Amazon Inspector, you can define a collection of AWS resources that you want to include in an assessment target. You can then create an assessment template and launch a security assessment run of this target.

Reason :

- For more information on AWS Inspector, please refer to the below URL:
https://docs.aws.amazon.com/inspector/latest/userguide/inspector_introduction.html

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST



- ✓ There is a requirement to collect important metrics from AWS RDS and EC2 Instances. Which AWS service would be helpful to fulfill this requirement?

- ☐ Amazon CloudFront
- ☐ Amazon Cloud Search
- ☐ Amazon CloudWatch
- ☐ Amazon Config

✓ Answer – C:

- Amazon CloudWatch is a monitoring service for AWS cloud resources and the applications you run on AWS. You can use Amazon CloudWatch to collect and track metrics, collect and monitor log files, set alarms, and automatically react to changes in your AWS resources

Reason :

- For more information on AWS Cloudwatch, please refer to the URL below:

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

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST



✓ Which of the following Amazon Web Services can be referred to as a serverless service?

- ☐ AWS Lambda
- ☐ Elastic Load Balancing
- ☐ Amazon SNS
- ☐ Amazon DynamoDB

✓ Answer – A, C and D:

- The serverless concept refers to the ability to leverage compute processing functions without the infrastructure overhead. AWS Lambda is a serverless online code scripting platform within AWS that allows the user to write, edit and run code functions in various languages including JSON. These functions can be triggered to call or invoke other AWS applications in the user's build. AWS Cloud9 is a serverless online integrated development environment (IDE) used to author, edit, run debug code of various languages - <https://aws.amazon.com/serverless/>
- Option D is correct. With DynamoDB, there are no servers to provision, patch, or manage and no software to install, maintain, or operate

Reason :

- Option B is incorrect because Elastic Load Balancing can be described as a fully-managed service but not serverless.

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST



- ✓ You are planning on deploying a video based application onto the AWS Cloud. These videos will be accessed by users across the world. Which of the below services can help stream the content in an efficient manner to the users across the globe?

- ☐ Amazon SES
- ☐ Amazon Cloudtrail
- ☐ Amazon CloudFront
- ☐ Amazon S3

✓ Answer – C:

- Amazon CloudFront is a web service that gives businesses and web application developers an easy and cost effective way to distribute content with low latency and high data transfer speeds. Like other AWS services, Amazon CloudFront is a self-service, pay-per-use offering, requiring no long term commitments or minimum fees. With CloudFront, your files are delivered to end-users using a global network of edge locations.

Reason :

- For more information on CloudFront, please visit the Link:
<https://aws.amazon.com/cloudfront/>

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST



- ✓ Your company is moving a large application to AWS using a set of EC2 instances. A key requirement is reusing existing server-bound software licensing. Which of the following options is the best for satisfying the requirement?

- ☐ EC2 Dedicated Instances
- ☐ EC2 Reserved Instances
- ☐ EC2 Dedicated Hosts
- ☐ EC2 Spot Instances

- ✓ Answer – C: - Dedicated Hosts

- Option C is CORRECT because instances run on a dedicated hardware where AWS gives visibility of physical characteristics. AWS documentation mentions this with the following sentence: “...Dedicated Host gives you additional visibility and control over how instances are placed on a physical server, and you can consistently deploy your instances to the same physical server over time. As a result, Dedicated Hosts enable you to use your existing server-bound software licenses and address corporate compliance and regulatory requirements.”

Reason :

- Refer NEXT SLIDES.

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST (CONT.)

✓ Answer – C: - Dedicated Hosts .

- Option C is CORRECT because instances run on a dedicated hardware where AWS gives visibility of physical characteristics. AWS documentation mentions this with the following sentence: “...Dedicated Host gives you additional visibility and control over how instances are placed on a physical server, and you can consistently deploy your instances to the same physical server over time. As a result, Dedicated Hosts enable you to use your existing server-bound software licenses and address corporate compliance and regulatory requirements.”

Reason :

- Option A is INCORRECT because despite instances run on a single-tenant hardware AWS does not give visibility to sockets and cores required for reusing server bound licenses. AWS highlights this in the comparison table at the following link:
<https://aws.amazon.com/ec2/dedicated-hosts/>
Option B is INCORRECT because Reserved Instances are only a purchasing option and there's no way to control the hardware where these instances are running on.
- Option D is INCORRECT because Spot Instances are only a purchasing option.

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST



- ✓ Using Content Delivery Network (CDN) an administrator would like to serve varying types of content based on the viewer's browser cookies. Which is the most appropriate serverless technique that can be used to achieve this?

- ☐ AWS CodeCommit
- ☐ AWS Lambda@Edge
- ☐ AWS CodeStar
- ☐ Amazon Cloud9

✓ Answer – B:

- Option B is CORRECT because AWS Lambda@Edge is a serverless service that makes it possible to run event-triggered functions on Edge Locations within the AWS Content Delivery Network. Using AWS CloudFront, an administrator can introduce decision-making and compute processing closer to the viewer's location, thereby improving on their browsing experience.

Reason :

- Refer NEXT SLIDES

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST (CONT.)

✓ Answer – B:

- Option B is CORRECT because AWS Lambda@Edge is a serverless service that makes it possible to run event-triggered functions on Edge Locations within the AWS Content Delivery Network. Using AWS CloudFront, an administrator can introduce decision-making and compute processing closer to the viewer's location, thereby improving on their browsing experience.

Reason :

- Option A. is INCORRECT because AWS CodeCommit is inappropriate in addressing the scenario, it is a service that allows for the management of software development versions as well as software development assets such. These include binary files, documents and source code.
- Option C. is INCORRECT because AWS CodeStar is a service used to manage software development projects. It is not the appropriate Option for the scenario. CodeStar project makes it possible to develop, build and deploy applications
- Option D. is INCORRECT because it is not the best solution though it can be used in the scenario to write, run and deploy code. It is an integrated development environment (IDE) that can accommodate various runtimes.

AWS CLOUD PRACTITIONER - QUICK KNOWLEDGE TEST



✓ Why is Amazon DynamoDB service best-suited for implementation in mobile, Internet of Things (IoT) and gaming applications?

- ☐ DynamoDB is a fully-managed database instance with no infrastructure overheads
- ☐ DynamoDB has a flexible data model and single-digit millisecond latency
- ☐ Whilst in operation, DynamoDB instances are spread across at least three geographically distinct centers, AWS Regions
- ☐ DynamoDB supports eventual and strongly consistent reads

✓ Answer – B:

- The use cases mentioned in the scenario have unstructured data in common, therefore, the most appropriate attribute of Amazon DynamoDB is its flexible data model and single-digit millisecond latency.

Reason :

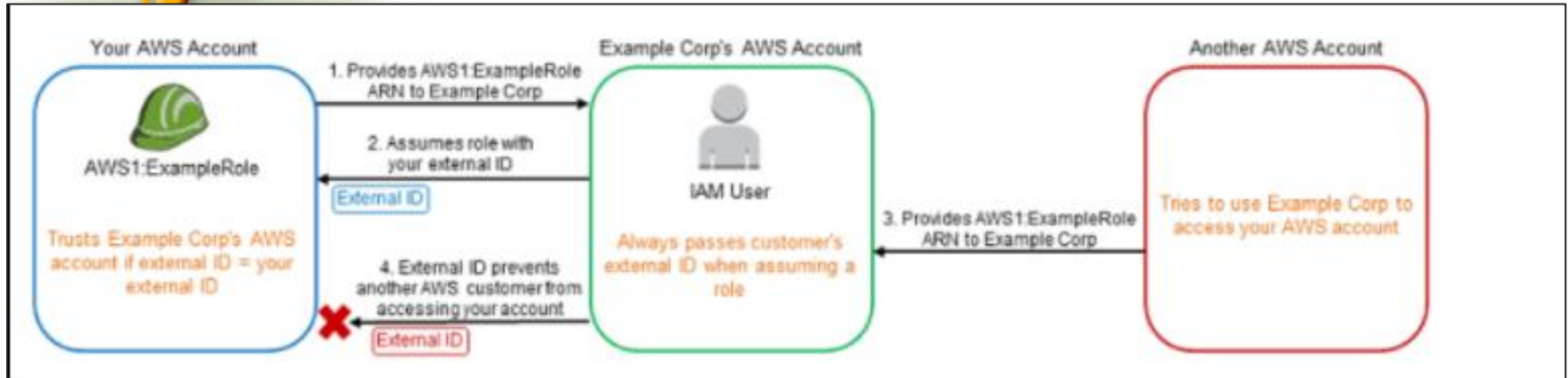
- Option A. is INCORRECT because being fully-managed and having no infrastructure overheads does not distinguish DynamoDB as the best-suited solution for the given use cases.
- Option C. is INCORRECT because the aspect of fault-tolerance, disaster recovery and high availability is also present in Amazon Relational Databases (RDS), this feature does not distinguish the service in accordance with the described use cases.
- Option D. is INCORRECT because this attribute of DynamoDB does not fully justify its exclusive choice over other instances when considered for implementation in the use cases mentioned in the question.

AWS DEVELOPER ASSOCIATE

AWS DEVELOPER - QUICK KNOWLEDGE TEST

- ✓ Your company currently has an S3 bucket hosted in an AWS Account. It holds information that needs be accessed by a partner account. Which is the MOST secure way to allow the partner account to access the S3 bucket in your account. Choose 3 answers from the options given below.

- ☐ Ensure an IAM role is created which can be assumed by the partner account
- ☐ Ensure an IAM user is created which can be assumed by the partner account
- ☐ Ensure the partner uses an external id when making the request
- ☐ Provide the ARN for the role to the partner account



AWS DEVELOPER - QUICK KNOWLEDGE TEST



✓ You are starting to develop an application using AWS services. You are testing the services out by querying them using REST API. Which of the following would be needed to make successful calls to AWS services using REST API's?

- ☐ User name and password
- ☐ SSL certificates
- ☐ Access Keys
- ☐ X.509 certificates

✓ Answer — C:

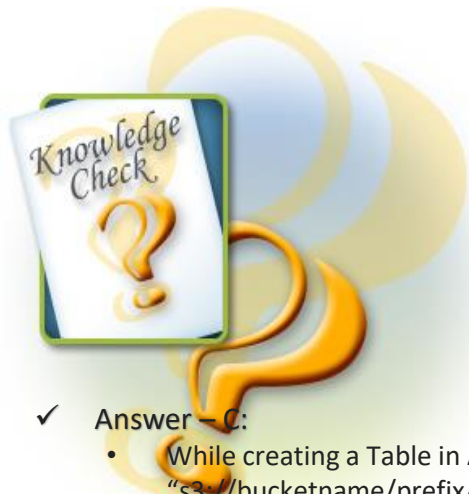
- Access keys consist of an access key ID (for example, AKIAIOSFODNN7EXAMPLE) and a secret access key (for example, wJalrXUtnFEMI/K7MDENG/bPxrFiCYEXAMPLEKEY). You use access keys to sign programmatic requests that you make to AWS if you use the AWS SDKs, REST, or Query API operations.

Reason :

- Because of what is mentioned in the AWS Documentation , all other options are invalid
For more information on Access Keys, please refer to the below URL

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_access-keys.html

AWS DEVELOPER - QUICK KNOWLEDGE TEST



- ✓ A large IT company is using AWS Organisation for managing different accounts across various regions. All AWS Cost & Usage reports across all accounts are saved in S3 bucket in CSV format. As an administrator, you have been asked to use Amazon Athena to query these reports. Which of the following can be used to specify S3 bucket path for Amazon Athena?

- ☐ s3.amazon.com/bucketname/prefix/
- ☐ s3://bucketname/prefix/*
- ☐ s3://bucketname/prefix/
- ☐ arn:aws:s3

✓ Answer – C:

- While creating a Table in Amazon Athena , you can specify path of data to be read using LOCATION property. This path is specified as "s3://bucketname/prefix/" . Amazon Athena reads all data stored in this path.

Reason :

- Option A is incorrect as While specifying location for data in S3 bucket, full HTTP path is not required.
- Option B is incorrect as Amazon Athena reads all data from S3 bucket specified & specifying a wildcard * is not required to be added in LOCATION property.
- Option D is incorrect as While specifying location for data in S3 bucket, ARN is not required.

For more information on specifying Table location for Amazon Athena, refer to the following URL,

<https://docs.aws.amazon.com/athena/latest/ug/tables-location-format.html>

AWS DEVELOPER - QUICK KNOWLEDGE TEST

- ✓ Your team member has defined the following bucket policy on one of the buckets

```
{
  "Version": "2012-10-17",
  "Id": "Sample123",
  "Statement": [
    {
      "Sid": "",
      "Effect": "Deny",
      "Principal": "*",
      "Action": "s3:*",
      "Resource": "arn:aws:s3:::examplebucket/*",
      "Condition": { "Null": { "aws:MultiFactorAuthAge": true } }
    }
  ]
}
```

What does this bucket policy do??

- ☐ Allows access to the bucket if the IAM user has succeeded console using a password
- ☐ Allows access to the bucket if the IAM user has succeeded console using Access keys
- ☐ Denies access to the bucket if the user has used an MFA authentication
- ☐ Denies access to the Bucket if the user is not authenticating via MFA device

✓ Answer – D:

When Amazon S3 receives a request with MFA authentication, the `aws:MultiFactorAuthAge` key provides a numeric value indicating how long ago (in seconds) the temporary credential was created. If the temporary credential provided in the request was not created using an MFA device, this key value is null (absent). In a bucket policy, you can add a condition to check this value, as shown in the following example bucket policy. The policy denies any Amazon S3 operation on the `/taxdocuments` folder in the `examplebucket` bucket if the request is not MFA authenticated. To learn more about MFA authentication, see [Using Multi-Factor Authentication \(MFA\) in AWS](#) in the *IAM User Guide*.

```
{
  "Version": "2012-10-17",
  "Id": "123",
  "Statement": [
    {
      "Sid": "",
      "Effect": "Deny",
      "Principal": "*",
      "Action": "s3:*",
      "Resource": "arn:aws:s3:::examplebucket/taxdocuments/*",
      "Condition": { "Null": { "aws:MultiFactorAuthAge": true } }
    }
  ]
}
```

AWS DEVELOPER - QUICK KNOWLEDGE TEST



- ✓ You have configured a Sampling Rule with reservoir size as 60 & fixed rate to 20%. There are 200 requests per second matching the rule defined. How many requests will be sampled per second?

- ☐ 88 requests per second
- ☐ 60 requests per second
- ☐ 40 requests per second
- ☐ 120 requests per second

✓ Answer – A:

- Let us suppose, we specify a value for Reservoir Rate as 60, and Fixed Rate as 20. Now, if your application receives 200 requests in a second, then the total number of requests that would be traced or sampled will be: –
“Reservoir Rate” + Fixed Rate % [(Total Requests – Reservoir Rate)]
 - $60 + (200 - 60) * 20\%$
 - $60 + (140) * 20\%$
 - $60 + 28$
 - 88

Reason :

- Option B,C, & D are incorrect as these values are not matching the reservoir size & fixed rate sampling rate. For more information on Configuring Sampling Rules in the AWS X-Ray Console, refer to the following URL,
<https://docs.aws.amazon.com/xray/latest/devguide/xray-api-sampling.html>



AMAZON WEB SERVICES

THANK YOU

