Preparation Exam: Certified Developer - Associate for AWS (June 2018)

Exam Session - Failed

Repeat session

Overall Results

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Score

43/100

Answers

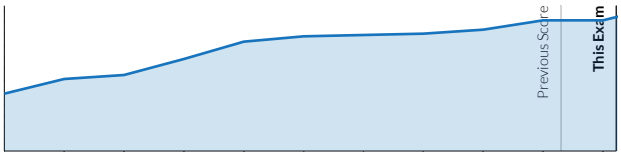
Correct	43%
Incorrect	57%
Skipped	0%

Time spent

1h 45m

Progress

Overall



	Score	Rank
Previous Score	222	907th
This Exam	**248** +26	785th

Assessed skills

Your score has been updated for the following skills

Security for AWS — **571** +186
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Development for AWS NEW — **409**
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Deployment for AWS NEW — **277**
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Containers for AWS — **267** -6
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AWS	▲ 392
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Areas

- Deployment

Learning Path

Your score: 36%

Required score: 35%

Development

Your score: 50%

Required score: 35%

Refactoring

Your score: 29%

Required score: 35%

Monitoring and Troubleshooting

Your score: 13%

Required score: 35%

Security

Your score: 63%

Required score: 35%

Learning Path

Review answers

Wrong	37
Correct	28

#1

RDS

You are managing the migration of company databases to AWS, specifically to Amazon RDS. Your company requires high availability, which you have built into the design with a multi-AZ configuration. You have implemented your design, and are just about ready to move it in to production. What additional step can you take to ensure a successful deployment?

A Test failover for your DB instance to see how long it takes, and ensure that your programmatic connection to the new database is working.

B Test failover for your DB instance and ensure that the read replica has been promoted to primary database in time to meet RTO objectives.

C Test failover for your DB instance and ensure that the autoscaling group spins up a new database instance to be the standby server.

✓ Test failover for your DB instance to see how long it takes and ensure that Amazon automatically facilitates the connection to the new database.

Learning Path

Explanation

The Amazon RDS Service Level Agreement requires that you follow best practice guidelines. One of them is to test failover for your DB instance to understand how long the process takes for your use case and to ensure that the application that accesses your DB instance can automatically connect to the new DB instance after failover. Failover will occur in a multi-AZ configuration to a standby server. Read replicas are for scaling, not high availability, and are not involved in the failover process.

http://docs.aws.amazon.com/Ama...

#3

ELB

You have a web application that performs thousands of financial prolonged transactions per hour. While you would like to use HTTPS to protect the sensitive data, SSL/TLS processing requires additional CPU and memory resources from both the web server and the client. This can put a considerable load on web servers handling your thousands of SSL/TLS sessions. How might you mitigate this situation?

A Use IPSec with IKE with pre-shared keys instead of HTTPS

✓ Use ESP/AH instead of HTTPS and double the number of EC2 instance used

C Offload SSL/TLS to server certificates on Elastic Load Balancing based on the server common name (CN), or Alternative Name (AN/SAN)

D Offload HTTPS processing on Elastic Load Balancing

Explanation

Offloading HTTPS processing on Elastic Load Balancing minimizes the impact to web servers while still protecting data in transit.

https://d0.awsstatic.com/white...

#7

VPC

A hospital wants to switch over to Amazon VPC, and wants to connect the hospital office network to the Amazon VPC environment and migrate all medical records to the VPC. The hospital just spent a significant portion of its budget to bury fiber optic cable to reduce network latency in preparation for the migration of all its records to the VPC. This means that the VPC needs to be highly available at all times to support patient emergencies. However, the hospital doesn't have a team to dedicated to implementing high availability solutions for VPN endpoints. Which network design pattern to connect to the Amazon VPC environment would make the most sense for the hospital?

Learning Path

A Establish a IPsec VPN connection from the hospital's main office equipment to a hospital-managed software VPN appliance running inside one of the hospitals Amazon VPC instances.

B Establish a hub-and-spoke model for connecting the hospital offices using AWS VPN CloudHub.

✓ Establish a private, encrypted connection from the hospital's network to its Amazon VPC instance using AWS Direct Connect.

D Establish a hardware-based, IPsec VPN connection from the hospital's network to the AWS-managed network equipment attached to the hospital's Amazon VPC.

Explanation

Establishing a hardware-based, IPsec VPN connection from the hospital's network to the AWS-managed network equipment attached to the hospital's Amazon VPC is the most suitable option for the hospital. Since the hospital just invested in better internet connectivity infrastructure to reduce network latency, reusing existing VPN

equipment and internet connections makes the most sense. This approach also allows the hospital to leverage an AWS-managed VPN endpoint that includes automated multi–data center redundancy and failover built into the AWS side of the VPN connection so the hospital doesn't have to worry about implementing its own redundancy and failover solutions.

http://media.amazonwebservices...

#8

For the sake of more robust application recovery, you would like to make sure that even if a connection established to a server is experiencing issues, that connection will be reestablished to a new server within 10 minutes. How might you accomplish this? (Choose 2 answers)

A Use the AWS SDK to change the default client configuration

B Use the current settings for your instances because they are set to establish new HTTP connections every 10 minutes.

✓ Use the ClientConfiguration.setConnectionTTL method

✓ Use the ClientConfiguration.setConnectionTimeout method

Learning Path

Explanation

This action must be done through the SDK. By default, the SDK will attempt to reuse HTTP connections as long as possible. In failure situations where a connection is established to a server that has been brought out of service, having a finite TTL can help with application recovery. For example, setting a 10 minute TTL will ensure that even if you have a connection established to a server that is experiencing issues, you'll reestablish a connection to a new server within 10 minutes. To set the HTTP connection TTL, use the ClientConfiguration.setConnectionTTL method.

http://docs.aws.amazon.com/sdk...

#9

Amazon ECS

You are asked to establish a baseline for normal Amazon ECS performance in your environment by measuring performance at various times and under different load conditions. To establish a baseline, Amazon recommends that you should, at a minimum, monitor the CPU and ___ for your Amazon ECS clusters and the CPU and ___ metrics for your Amazon ECS services.

A memory utilization; memory reservation and utilization

B concurrent connections; memory reservation and utilization

✓ memory reservation and utilization; concurrent connections

D memory reservation and utilization; memory utilization

Explanation

As you monitor Amazon ECS, store historical monitoring data so that you can compare it with current performance data, identify normal performance patterns and performance anomalies, and devise methods to address issues.

To establish a baseline, you should, at a minimum, monitor the following items:

· The CPU and memory reservation and utilization metrics for your Amazon ECS clusters

· The CPU and memory utilization metrics for your Amazon ECS services

http://docs.aws.amazon.com/Ama...

Learning Path

#10

CodeDeploy

What are the parameters that you need to specify for a deployment in AWS CodeDeploy?

A A revision, a deployment group, and a deployment configuration

B An AppSpec file only

✓ A deployment file, an AppSpec file, and an application configuration

D A revision group and a deployment file

Explanation

There are three parameters you specify for a deployment in AWS CodeDeploy. The three parameters are:

- A Revision, which specifies what to deploy.
- A Deployment group, which specifies where to deploy.

- A Deployment configuration, which is an optional parameter that specifies how to deploy.

http://aws.amazon.com/codedepl...

#12

CloudFormation

You have been assigned to a client who has an existing AWS cloud environment. They are already using CloudFormation to deploy infrastructure. You also learn that they are using Lambda functions to interact with CloudFormation. Which section of a CloudFormation template will you use to define the Lambda version?

✓ Mappings

B CloudFormation can not interact with Lambda

C Parameters

D Transform

Learning Path

Explanation

For serverless applications (also referred to as Lambda-based applications), the Transform section of CloudFormation specifies the version of the AWS Serverless Application Model (AWS SAM) to use. When you specify a transform, you can use AWS SAM syntax to declare resources in your template. The model defines the syntax that you can use and how it is processed.

You can also use the `AWS::Include` transform to work with template snippets that are stored separately from the main AWS CloudFormation template. You store your snippet files in an Amazon S3 bucket and then reuse the functions across multiple templates.

http://docs.aws.amazon.com/AWS...

#13

VPC

Your company uses multiple Amazon VPCs and is setting up a new office. The company is deciding on the best way to connect this new, remote office network with the company's Amazon VPC environment.

Due to the fact it is a new office, no VPN equipment or internet connections exist yet, so this office can design any connection design it desires. The highest priorities are:

- A predictable network performance
- A private connection avoiding the public internet
- Reduced bandwidth costs
- Minimal administration required to maintain the high availability of network endpoints

Which VPC connection option best fit your requirements to connect your new office to one of your VPCs?

A Connect via AWS Direct Connect.

B Configure a VPN connection with a hardware VPN.

✓ Configure a VPN connection with a software VPN.

D Use a hub-and-spoke model with AWS VPN CloudHub.

Learning Path

Explanation

Establish a private connection from your new office's network to your Amazon VPC using AWS Direct Connect is the most suitable option in this case. This option provides predictable network performance, reduces bandwidth costs, and doesn't require that customers be responsible for implementing high availability solutions for all VPN endpoints. The downside of this option (possible requiring additional telecom and hosting provider relationships) is mitigated in this instance because the office is new and would need to provision a whole new network anyway.

http://media.amazonwebservices...

#15

DynamoDB

You are attempting to use the DELETE action in your DynamoDB command line using an update call. However, it is encountering an error. What might be some good things to check for before you try the action again? (Choose 3 answers)

✓ Check to see if the attribute you're calling DELETE is nested.

B Check to see if you are calling DELETE on an empty set.

✓ Check to see if you're performing more than one action in a single expression.

✓ Check the data type of the attribute you're calling DELETE on.

Explanation

The DELETE action only supports set data types, so you would want to check that the data type is a set. Specifying an empty set will cause an error. It also only works on top-level attributes, not nested attributes. Multiple actions can be performed in a single expression, so that would NOT cause an error.

http://docs.aws.amazon.com/ama...

#16

EC2

You want to SSH into an EC2 instance but receive this warning message when you attempt to login:

Permissions 0777 for '.ssh/my_private_key.pem' are too open.
It is required that your private key files are NOT accessible by others.
This private key will be ignored.
bad permissions: ignore key: .ssh/my_private_key.pem
Permission denied (publickey).

How could you fix this error?

A Verify that my_private_key.pm is not a hidden file.

✓ Restrict the access settings on my_private_key.pem to allow read and write privileges only for those in your VPC subnet.

C Restrict the access settings on my_private_key.pem to allow read and write privileges only for yourself.

D Verify that you are connecting with the appropriate user name for your AMI.

Explanation

If your private key can be read or written to by anyone but you, then SSH ignores your key and you see the following warning message shown in this question. To rectify the issue, restrict the key file so that only you have read and write privileges and try using

SSH again.

http://docs.aws.amazon.com/AWS...

#19

EBS

You are attempting to copy an EBS-backed Amazon Machine Image (AMI) from an us-west region to an us-east region. Unfortunately, when you launch the new AMI us-east region instance, it doesn't contain the EBS snapshot from the us-west instance like you expected. What is the most likely reason for this?

A The EBS snapshot being copied from was encrypted and your user account doesn't have the permissions to use the encryption key.

B EBS-backed AMIs are a special-case of AMIs and cannot be copied across AWS regions.

C AMIs cannot actually be copied across AWS regions.

✓ When copying an EBS-backed AMI into a different AWS region, EBS snapshots are not automatically copied over. You must manually copy these snapshots over.

Learning Path

Explanation

Copying a source AMI results in an identical but distinct target AMI with its own unique identifier. In the case of an Amazon EBS-backed AMI, each of its backing snapshots is, by default, copied to an identical but distinct target snapshot. The one exception is when you choose to encrypt the snapshot. If you attempt to copy an encrypted snapshot without having permissions to use the encryption key, the operation fails silently.

http://docs.aws.amazon.com/AWS...

#20

EBS

A user has deployed an application on an EBS backed EC2 instance. For a better performance of application, it requires dedicated EC2 to EBS traffic. How can the user achieve this?

A Launch the EC2 instance as EBS enhanced with PIOPS EBS

B Launch the EC2 instance with Enhanced Networking and PIOPS EBS

C Launch the EC2 instance as EBS optimized with PIOPS EBS

✓ Launch the EC2 instance as EBS dedicated with PIOPS EBS

Explanation

Any application which has performance sensitive workloads and requires minimal variability with dedicated EC2 to EBS traffic should use provisioned IOPS EBS volumes, which are attached to an EBS-optimized EC2 instance or it should use an instance with 10 Gigabit network connectivity. Launching an instance that is EBS-optimized provides the user with a dedicated connection between the EC2 instance and the EBS volume.

http://docs.aws.amazon.com/AWS...

Learning Path

#23

AWS CodePipeline

In the AWS CodePipeline console, when a stage is complete, by default the revision will transition to the next stage in the pipeline. You decide to disable a transition between stages. What will be the consequence of this action?

A The pipeline will still continue to run all actions in the stages before and after the transition.

B The pipeline will run all actions in the stages before the transition, but will not run any stages or actions after that stage until you enable the transition.

✓ The pipeline will stop running all actions instantaneously.

D The pipeline will run from the beginning.

Explanation

In the AWS CodePipeline console, if you decide to disable a transition between stages, your pipeline will run all actions in the stages before that transition, but will not run any stages or actions after that stage until you enable that transition.

http://docs.aws.amazon.com/cod...

#25

EBS

A user has stored data on an encrypted EBS volume. The volume was encrypted using the EBS default encryption process, which creates a AWS managed KMS customer master key for the user upon encrypting the volume.

Now the user wants to share the data with another AWS account. The AWS account needs the data to be decrypted. Which of the choices below can achieve this?

✓ Create a snapshot and share access to it. Then grant access to the AWS Managed CMK used to encrypt the volume, then the user can decrypt the volume access the data directly.

B Create an AMI from the volume and share the AMI.

C Copy the data to an unencrypted volume in your account, create a unencrypted snapshot and share access to it.

D Take an unencrypted snapshot and share access to it with the other account.

Explanation

AWS EBS supports encryption of the volume. It also supports creating volumes from existing snapshots provided the snapshots are created from encrypted volumes. If the user is having data on an encrypted volume and is trying to share it with others, he has to copy the data from the encrypted volume to a new unencrypted volume. Only then can the user share it as unencrypted volume data. Otherwise the snapshot cannot be shared.

It is not possible to share access to a volume encrypted in the default process with an AWS managed CMK. The encryption would need to be done with a custom CMK in order to grant access to it to another account.

http://docs.aws.amazon.com/AWS...

#28

EC2

You are a DevOps engineer responsible for supporting your company's AWS infrastructure, consisting of multiple EC2 instances running in a VPC, DynamoDB, SQS, and S3. You are working on provisioning a new S3 bucket, which will ultimately contain sensitive data. How can you encrypt that data in-flight, into, and out of S3? (Choose 2 answers)

✓ Enable encryption in the bucket policy.

✓ Encrypt it on the client-side before uploading.

C Set the server-side encryption option on upload.

D Use the encrypted SSL/TLS endpoint.

Explanation

To encrypt your S3 objects in-flight, you need to use the TLS endpoint; alternatively, you can encrypt the data yourself on the client side before upload.

http://docs.aws.amazon.com/Ama...

Learning Path

#30

SQS

A user's application sends data to a log file. The server hosting the log file is also frequently managing higher priority workloads. When the server is processing higher priority workloads, it is unavailable to receive log files from the user's application.

Whenever the log server is available, the user would like it to receive log data. Which AWS services can helps deliver messages to a server that is frequently unavailable?

A AWS Simple Email Service

B AWS Simple Workflow

✓ AWS Simple Notification Service

D AWS Simple Queue Service

Explanation

The user can use SQS to transmit any volume of data without losing messages or requiring other services to always be available. Using SQS, the application has to just send the data to SQS and SQS transmits it to the log file whenever it is available.

This flexibility regarding the message recipient's availability is why SQS is ideal.

http://aws.amazon.com/sqs/

#31

SQS

You are working as a Development Lead for a large, multi-national client. You are reviewing the merits of SQS with management. They ask you about using SQS in multiple regions. What can you tell them about SQS use for multiple regions? (Choose 2 answers)

A Amazon SQS pricing is the same for all regions

✓ You will be charged a fee for data transfers across regions between SQS and Lambda functions or EC2 instances

✓ FIFO messages queues can be multi-regional because FIFO is supported in all regions.

D Each Amazon SQS message queue is independent within region so you cannot share messages between regions.

Explanation

You cannot share messages between regions. Each Amazon SQS message queue is independent within each region. Pricing is the same in all regions except China. You can transfer data between Amazon SQS and Amazon EC2 or AWS Lambda free of charge within a single region. When you transfer data between Amazon SQS and Amazon EC2 or AWS Lambda in different regions, you will be charged the normal data transfer rate.

https://aws.amazon.com/sqs/faq...

#33

Docker Amazon ECS

You are running a development environment with three containers together on your Docker host. You now need to set up a production environment, and decide to use a similar approach, but soon you discover that this is probably

not a good idea. Which of the following statements explains why this is not a good idea?

✓ Task definitions can only have 3 container definitions and your application stack might require more in the future.

B Changes to one component can impact all three components.

C Each component is not easy to scale because you can not scale every container with different size.

D Every container in a task definition must land on a unique and a separate container instance, which does not limit your instance choices to the largest sizes.

Explanation

In your development environment, you probably run all three containers together on your Docker host. You might be tempted to use the same approach for your production environment, but this approach has several drawbacks:

- Changes to one component can impact all three components, which may be a larger scope for the change than you want
- Each component is more difficult to scale because you have to scale every container proportionally
- Task definitions can only have 10 container definitions and your application stack might require more, either now or in the future
- Every container in a task definition must land on the same container instance, which may limit your instance choices to the largest sizes

http://docs.aws.amazon.com/Ama...

#38

Lambda

After having written a Lambda function which you wrote in a stateless style as required, you realise that because it is stateless it will not store some of the data that you wish to keep. Which of the following is a true statement in relation to storing persistent states when writing a Lambda function code?

✓ Any persistent state can only be stored in Amazon S3.

B Any persistent state can only be stored in the AWS Storage Gateway.

C Any persistent state can be stored in Amazon S3, Amazon DynamoDB, or another Internet-available storage service.

D Any persistent state cannot be stored.

Explanation

Your Lambda function code must be written in a stateless style and must have no affinity with the underlying compute infrastructure.

Local file system access, child processes, and similar artifacts are limited to the lifetime of the request, and any persistent state should be stored in **Amazon S3, Amazon DynamoDB, or another cloud storage service.**

https://aws.amazon.com/lambda/...

#41

Learning Path

You've deployed an application in a custom AMI image into the Amazon cloud. It is deployed in a separate VPC. You would like to take advantage of being able to failover to another instance without having to reconfigure the application. Which of these solutions could be utilized? (Choose 2 answers)

A Add a secondary private IP address to the primary network interface that could then be used to move to a failover instance.

✓ Utilize Cloud Watch health checks for failover.

✓ Use load balancing to balance traffic to additional instances.

D Use an additional elastic network interface for failover to another instance.

Explanation

The ENI can only be attached to an instance hosted in a VPC. When you move a network interface from one instance to another, network traffic is redirected to the new instance. Some network and security appliances, such as load balancers, network address translation (NAT) servers, and proxy servers prefer to be configured with multiple network interfaces. You can create and attach secondary network interfaces to instances in a VPC that are running these types of applications and configure the additional interfaces with their own public and private IP addresses, security groups, and source/destination checking.

http://docs.aws.amazon.com/AWS...

#42

ElastiCache

What is one reason that AWS does not recommend that you configure your ElastiCache so that it can be accessed from outside AWS?

A The NAT instance serves as a single point of failure.

✓ The ElastiCache cluster becomes more prone to failures.

C The performance of the ElastiCache cluster is no longer controllable.

D The metrics reported by CloudWatch are more difficult to report.

Learning Path

Explanation

One of the reasons that AWS does not recommend that you configure your ElastiCache so that it can be accessed from outside AWS is that the NAT instance serves as a single point of failure. Here are other reasons that this practice is not recommended:

- The NAT instance is acting as a proxy between clients and multiple clusters. The addition of a proxy impacts the performance of the cache cluster. The impact increases with number of cache clusters you are accessing through the NAT instance.
- The traffic from clients to the NAT instance is unencrypted. Therefore, you should avoid sending sensitive data via the NAT instance.
- The NAT instance adds the overhead of maintaining another instance.

http://docs.aws.amazon.com/Ama...

#43

Your development team is developing a mobile application. They would like to store user information in S3 but they have some security concerns. You instruct them to review Web Identity Federation and the AssumeRoleWithWebIdentity API. The temporary security credentials created by AssumeRoleWithWebIdentity can be used to make API calls to any AWS service, with which of the following exceptions listed below? (Choose 2 answers)

A GetS3ACL

B GetFederationTokens

✓ GetS3Bucket

✓ GetSessionTokens

Explanation

AssumeRoleWithWebIdentity returns a set of temporary security credentials for users who have been authenticated in a mobile or web application with a web identity provider. The temporary security credentials created by AssumeRoleWithWebIdentity can be used to make API calls to any AWS service with the following exception: you cannot call the STS service's GetFederationToken or GetSessionToken APIs.

http://docs.aws.amazon.com/STS...

#44

Learning Path

CodeDeploy

AWS CodeDeploy is a deployment service that automates application deployments to (choose 3):

A On-Premises Instances

✓ Lambda Functions

✓ EC2 Instances

✓ API Gateway

Explanation

Answers "EC2 Instances", "On-Premises Instances", and "Lambda Functions" are correct. AWS CodeDeploy is a deployment service that automates application deployments to Amazon EC2 instances, on-premises instances, or serverless Lambda functions.

https://docs.aws.amazon.com/co...

#45

CloudFormation

You are replicating your company's AWS infrastructure in another region, creating a disaster recovery environment. To achieve this, you modify your CloudFormation template to use the new DR region. However, when you run the deployment, it fails. What are some possible reasons for this? (Choose 3 answers)

- ✓ Resource identifiers such will be different from region to region.
- ✓ The disaster recovery region has a different number of availability zones.
- C EC2 key pairs will differ from region to region.
- ✓ Route53 records will differ from region to region.

Learning Path

Explanation

Resource ID's such as subnet and AMI id's, as well as key pairs, will differ from region to region. You can use the GetAZ function to list all available zones within a region.

http://docs.aws.amazon.com/AWS...

#47

CloudFormation CloudWatch

You are attempting to launch this AWS Cloudformation template (in YAML):

AWSTemplateFormatVersion: "2010-09-09"
Description: A sample template
Resources:
MyEC2Instance:
Type: "AWS::EC2::Instance"
Properties:
ImageId: "ami-2f726546"
InstanceType: t1.micro
KeyName: testkey
BlockDeviceMappings:
-
DeviceName: /dev/sdm
Ebs:
VolumeType: io1
Iops: 200

DeleteOnTermination: false
VolumeSize: 20

Unfortunately, it fails every time. You would like to troubleshoot, but the AWS CloudFormation Console does not provide enough information, and you do not currently have Amazon CloudWatch enabled. What is another option to obtain more information on why your template is failing?

✓ View Trusted Advisor checks and logs

B View AWS Lambda logs

C View cloud-init and cfn logs

D View IAM permission logs

Explanation

The YAML AWS CloudFormation template provisions an EC2 instance with an ami-2f726546 AMI ID, t1.micro instance type, testkey key pair name, and an Amazon EBS volume. For Amazon EC2 issues, viewing the cloud-init and cfn logs gives more details. These logs are published on the Amazon EC2 instance in the /var/log/ directory. These logs capture processes and command outputs while AWS CloudFormation is setting up your instance.

http://docs.aws.amazon.com/AWS...

#49

By default, HTTP traffic is unencrypted. Using SSL/TLS protection for HTTP traffic (aka HTTPS) is the industry standard for secure access to web applications. AWS provide support for SSL/TLS within its services. In which cases below would SSL/TLS protect your data? (Choose 3 answers)

✓ Prevent SQL injection attacks in your Amazon RDS hosted MySQL database that is accessible to your web application.

✓ Protect against man-in-the-middle attacks when using AWS Lambda to process data.

✓ Prevent the accidental modification of your scientific data when downloading it from Amazon Redshift.

D Prevent any accidental information disclosure over a public network when uploading confidential data to Amazon DynamoDB.

Explanation

SSL/TLS is great for encrypting server traffic, but cannot handle malicious attacks such as Distributed Denial of Services and SQL injections.

https://d0.awsstatic.com/white...

#51

Elastic Beanstalk

You have just launched your first AWS Elastic Beanstalk application and it is up and running in a few minutes. However, you now need to deploy new application versions to the existing resources you just launched. How long will this typically take?

A At least 30 minutes

B Much faster than the original applications launched

C Much slower than the original applications launched

✓ The same time as the original applications launched

Explanation

Deploying new application versions to existing resources in AWS Elastic Beanstalk happens much faster (typically under a minute) and once again is mostly dependent on the size of the new application version.

https://aws.amazon.com/elastic...

#52

S3

You have an application that is generating a log file every 5 minutes and you need to store these log files appropriately. The requirements for storing the log files are:

- They should be quickly retrievable when needed, as they may be required only for verification in case of some major issue.
- The logs will need to be accessed frequently, as all log data is retrieved and compiled from the files into a bi-monthly report.
- The logs are essential to quarterly audits, so the storage solution must offer a high level of durability.
- Cost should also be minimized for the storage service as much as possible.

Which of the storage options below is the best choice to meet these requirements?

A Amazon S3 RRS

B Amazon S3 Glacier

C Amazon S3 Standard

✓ Amazon S3 Standard - Infrequent Access

Learning Path

Explanation

Amazon S3 stores objects according to their storage class. There are technically four major storage classes: Standard, Standard - Infrequent Access, Reduced Redundancy Storage (RRS) and Glacier.

Standard is for Amazon S3 and provides very high durability. Standard - Infrequent Access is designed for with a minimum data amount required and paid storage for at least 30 days. Glacier is for archival and the files are not available over the internet. Reduced Redundancy Storage is for less critical files.

Until recently, Reduced Redundancy was a little cheaper as it provides less durability in comparison to S3's other storage options. However, Standard is now the cheaper option.

For example, Reduced Redundancy Storage is now $0.024 per GB for the first TB of storage and $0.0236 per GB for the next 49 TB. Standard is $0.023 per GB for the first 50 TB.

While in the past S3 RRS would be ideal, now S3 Standard is the better choice when considering both durability and cost. So the best choice is the S3 Standard Storage class

https://aws.amazon.com/s3/pric...

#53

EC2

You work for a medical research firm that is hosting their complex DNA ChIP-sequencing algorithm on one large Amazon EC2 instance. However, the algorithm takes a great deal of processing power and only a handful of users can run the algorithm on that one instance. Often, you need at least three or four instances running to accommodate for demand. However, leaving four large EC2 instances running all the time is quite expensive, especially when demand is irregular.

What might be a good solution to the problem of fluctuating demand?

✓ Use AWS Lambda to write metrics out to the Lambda log. When metrics are above a certain threshold, have Amazon Simple Notification Service send out an email for the admin to add another EC2 instance.

B Use AWS Lambda to write metrics out to the Lambda log. When metrics are above a certain threshold, call AWS CloudTrail to trigger an Auto Scaling policy that starts up another instance.

C Have two Auto Scaling policies (scale-in and scale-out) and use Amazon CloudWatch to kick-off the correct policy according to demand.

D Have one Auto Scaling policy (scale-out) and use AWS CloudTrail to monitor metrics, kicking-off the policy when demand is high.

Learning Path

Explanation

If you want to dynamically scale your instances, you need to use Auto Scaling in conjunction with Amazon CloudWatch. In this case, you want to scale out when you have high demand, and scale in when demand drops, so you would need two Auto Scaling policies that fire based on metrics from CloudWatch.

http://docs.aws.amazon.com/aut...

#56

AWS CodeCommit

Which of the following is the reason to choose AWS CodeCommit over a versioned S3 bucket?

A Amazon S3 is designed only for users, while AWS CodeCommit is designed only for data administrators.

✓ Amazon S3 versioning supports tracking batched changes that span multiple files but doesn't support recovering past versions of individual files.

C Amazon S3 is designed only for software developers, while AWS CodeCommit is designed only for users.

D Amazon Simple Storage Service (Amazon S3) versioning supports recovering past versions of individual files but doesn't support tracking batched changes that span multiple files.

Explanation

AWS CodeCommit's main function is for collaborative software development as it manages batches of changes across multiple files, offers parallel branching, and includes version differencing ("diffing"). Amazon S3 versioning, on the other hand, supports recovering past versions of individual files but doesn't support tracking batched changes that span multiple files or other features needed for collaborative software development.

http://aws.amazon.com/codecomm...

Learning Path

#57

Lambda API Gateway

You have been tasked with setting up AWS Lambda such that all Lambda invocations are made over HTTP using the Amazon API Gateway instead of through an AWS SDK. What are some options for creating a Lambda function which is to be invoked through the Amazon API Gateway? Assume that a deployment package has already been created. (Choose 3 answers)

✓ Upload your deployment package to an Amazon S3 bucket. Then call the Lambda CLI create-function command and specify the bucket and package name.

✓ Upload your deployment package to Amazon Redshift. Then call the Lambda CLI create-function command and specify the Redshit instance and package name.

C Use the AWS Lamdba console.

✓ Call the Lambda CLI create-function command, uploading the deployment package from your local machine in the process.

Explanation

You must create a deployment package, after which you have the option of uploading it either locally, or from an Amazon S3 bucket to the API Gateway. You can do this step either through the AWS CLI or the AWS Lambda console.

http://docs.aws.amazon.com/lam...

#58

Direct Connect Cognito DynamoDB Redshift

You are starting a business and would like to create a mobile app for your business. The app experience should be tailored to each individual customer, requiring that users have individual accounts, but would only be storing some simple text data. You are also have budget concerns. Which Amazon Web Services products would best suit your needs? (Choose 2 answers)

✓ Amazon DynamoDB

B Amazon Redshift

✓ Amazon EC2 instance

D Amazon Cognito

Learning Path

Explanation

To build a mobile app, you need, at the very least, a backend database (DynamoDB) and, in this case, the ability for users to sign-in (Congito).

Amazon DynamoDB is a NoSQL database service for all applications that need consistent, single-digit millisecond latency at any scale. It is a fully managed cloud database and supports both document and key-value store models. It is designed for fast processing of small data, which dynamically grows and changes. Since the app is only storing some user text data, the data requirements are small, making Redshift an inappriopriate choice. Using an Amazon EC2 instance in also overkill and would require manual maintenance.

Amazon Cognito lets you add user sign-up and sign-in to your mobile and web apps. With Amazon Cognito, you can save data locally on users devices, allowing your applications to work even when the devices are offline. You can then synchronize data across users devices so that their app experience remains consistent regardless of the device they use.

https://aws.amazon.com/dynamod...

#59

AWS CodeCommit

How are repositories in AWS CodeCommit encrypted?

A Repositories are encrypted with the RSA public-key encryption algorithm.

B Repositories are encrypted by providing IAM access to the AWS Key Management Service (KMS).

✓ Repositories are encrypted by enabling the AWS Key Management Service (KMS).

D Repositories are automatically encrypted at rest.

Explanation

In AWS CodeCommit, repositories are automatically encrypted at rest. No customer action is required. AWS CodeCommit uses AWS Key Management Service (KMS) to perform this encryption.

http://aws.amazon.com/codecomm...

Learning Path

#61

The IPsec protocol suite is made up of various components covering aspects such as confidentiality, encryption, and integrity.

Which statement regard regarding the configuration options to ensure IPsec confidentiality is correct?

A The following protocols may be used to configure IPsec confidentiality, DES, 3DES, AES

✓ The following protocols may be used to configure IPsec confidentiality, DES, 3DES, MD5

C The following protocols may be used to configure IPsec confidentiality, PSK, MD5

D The following protocols may be used to configure IPsec confidentiality, PSK, RSA

Explanation

MD5 and SHA are hashing protocols related to data integrity, not confidentiality.

PSK is short for Pre-Shared Keys. RSA and PSK are related to key exchange.

The only correct IPsec configuration covering confidentiality. DES, 3DES, and AES are all encryption protocols.

https://en.wikipedia.org/wiki/...

#62

DynamoDB

The current price listing for item 789 in your DynamoDB ProductCatalog table needs to be increased by 15 units. Which commands would correctly perform the update? (Choose 3 answers)

A aws dynamodb update-item \ table-name ProductCatalog \ key '{"Id": {"N":"789"}}' \ update-expression "ADD Price :q" \ expression-attribute-values '{":q": {"N": "15"}}' \

✓ aws dynamodb update-item \ table-name ProductCatalog \ key '{"Id": {"N":"789"}}' \ update-expression "SET Price = :p)" \ expression-attribute-values '{":p": {"N": "15"}}' \ return-values ALL_NEW

✓ aws dynamodb update-item \ table-name ProductCatalog \ key '{"Id": {"N":"789"}}' \ update-expression "SET Price = Price - :p" \ expression-attribute-values '{":p": {"N":"-15"}}' \ return-values ALL_NEW

✓ aws dynamodb update-item \ table-name ProductCatalog \ key '{"Id": {"N":"789"}}' \ update-expression "SET Price = Price + :p" \ expression-attribute-values '{":p": {"N":"15"}}' \ return-values ALL_NEW

Explanation

The action "ADD," when performed on an existing attribute that is a number, mathematically adds or subtracts from the existing value.

The action "SET Price = Price + :p", where :p is some value, adds :p to what was previously in "Price."

https://docs.aws.amazon.com/am...

#63

AWS CodeCommit

You have migrated to AWS CodeCommit, but the entire push seems to be failing due to intermittent network issues. What could be a possible solution to this?

A Repush the entire repository.

B Delete the push history from your repository and retry.

C Push your repository in increments or chunks.

✓ Use SSH to push your repository over the network.

Explanation

When migrating to AWS CodeCommit, it is recommended to push your repository in increments or chunks to reduce the chances of intermittent network issues or degraded network performance causing the entire push to fail.

http://docs.aws.amazon.com/cod...

Learning Path

#65

CodeDeploy

Which of the following best describes how to deploy an AWS CodeDeploy application to multiple regions?

A You cannot deploy an AWS CodeDeploy application to multiple regions.

B Define the application in your target regions, copy the application bundle to an Amazon S3 bucket in each region, and then start the deployments using either a serial or parallel rollout across the regions.

C Install the AWS CodeDeploy agent on the Amazon EC2 instances of your target regions, select the application on your target regions, and then start the deployments using a parallel rollout across the regions.

✓ Describe an Amazon EC2 instance in your target regions, install the AWS CodeDeploy agent on the Amazon EC2 instances in your target regions, and then start the deployments using a serial rollout across the regions.

Explanation

AWS CodeDeploy performs deployments with AWS resources located in the same region. If you wish to deploy an application to multiple regions, you should do the following.

- define the application in your target regions
- copy the application bundle to an Amazon S3 bucket in each region
- start the deployments using either a serial or parallel rollout across the regions.

http://aws.amazon.com/codedepl...