Q1) Which of the following instance types are available as Amazon EBS-backed only? (Choose 2 answers)

- ✅ Compute-optimized C3
- ⬤ Compute-optimized C4
- ⬤ General purpose M3
- ⬤ General purpose T2
- ✅ Storage-optimized 12

Q2) Which of the following notification endpoints or clients are supported by Amazon Simple Notification Service? (Choose 2 answers)

- ⬤ Simple Network Management Protocol
- ✅ Short Message Service
- ⬤ File Transfer Protocol
- ⬤ CloudFront distribution
- ✅ Email

Q3) A company is building software on AWS that requires access to various AWS services. Which configuration should be used to ensure mat AWS credentials (i.e., Access Key ID/Secret Access Key combination) are not compromised?

- ⬤ Assign an IAM role to the Amazon EC2 instance.
- ⬤ Store the AWS Access Key ID/Secret Access Key combination in software comments.
- ✅ Enable Multi-Factor Authentication for your AWS root account.
- **Explanation:-**Refer: https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_mfa_enable_virtual.html
- ⬤ Assign an IAM user to the Amazon EC2 Instance.

Q4)

You manually launch a NAT AMI in a public subnet. The network is properly configured. Security groups and network access control lists are property configured. Instances in a private subnet can access the NAT. The NAT can access the Internet. However, private instances cannot access the Internet.

What additional step is required to allow access from the private instances?

- ⬤ Enable Source/Destination Check on the private Instances.
- ⬤ Enable Source/Destination Check on the NAT instance.
- ⬤ Disable Source/Destination Check on the private instances.
- ✅ Disable Source/Destination Check on the NAT instance.
- **Explanation:-**Disabling source/destination checks. In the navigation pane, choose Instances. Select the NAT instance, choose Actions, Networking, Change Source/Dest. For the NAT instance, verify that this attribute is disabled. Refer: https://docs.aws.amazon.com/vpc/latest/userguide/VPC_NAT_Instance.html

Q5) A company is deploying a two-tier, highly available web application to AWS. Which service provides durable storage for static content while utilizing lower Overall CPU resources for the web tier?

- ⬤ Amazon EC2 instance store
- ✅ Amazon S3
- **Explanation:-** Amazon Simple Storage Service is storage for the Internet. It is designed to make web-scale computing easier for developers. Amazon S3 has a simple web services interface that you can use to store and retrieve any amount of data, at any time, from anywhere on the web. Refer: https://docs.aws.amazon.com/AmazonS3/latest/dev/Welcome.html
- ⬤ Amazon EBS volume
- ⬤ Amazon RDS instance

Q6) The Trusted Advisor service provides insight regarding which four categories of an AWS account?

- ⬤ Performance, cost optimization, access control, and connectivity
- ✅ Performance, cost optimization, security, and fault tolerance
- **Explanation:-**AWS Trusted Advisor provides best practices in four categories: cost optimization, security, fault tolerance, and performance improvement. Refer: https://www.amazonaws.cn/en/support/trustedadvisor/#:~:text=AWS%20Trusted%20Advisor%20provides%20best,fault%20tolerance%2C%20and%20performance%20improvement.
- ⬤ Security, access control, high availability, and performance
- ⬤ Security, fault tolerance, high availability, and connectivity

Q7) Which of the following are true regarding encrypted Amazon Elastic Block Store (EBS) volumes? (Choose 2 answers)

- ⬤ Available to all instance types
- ✅ Snapshots are automatically encrypted
- **Explanation:-**This feature is supported on all Amazon EBS volume types (General Purpose (SSD), Provisioned IOPS (SSD), and Magnetic). You can access encrypted Amazon EBS volumes the same way you access existing volumes; encryption and decryption are handled transparently and they require no additional action from you, your Amazon EC2 instance, or your application. Snapshots of encrypted Amazon EBS volumes are automatically encrypted, and volumes that are created from encrypted Amazon EBS snapshots are also au
- ✅ Supported on all Amazon EBS volume types
- **Explanation:-**This feature is supported on all Amazon EBS volume types (General Purpose (SSD), Provisioned IOPS (SSD), and Magnetic). You can access encrypted Amazon EBS volumes the same way you access existing volumes; encryption and decryption are handled transparently and they require no additional action from you, your Amazon EC2 instance, or your application. Snapshots of encrypted Amazon EBS volumes are automatically encrypted, and volumes that are created from encrypted Amazon EBS snapshots are also au
- ⬤ Existing volumes can be encrypted
- ⬤ shared volumes can be encrypted

Q8) When will you incur costs with an Elastic IP address (EIP)?

- ⬤ When it is allocated and associated with a running instance.

When it is allocated and associated with a stopped instance.

Costs are incurred regardless of whether the EIP is associated with a running instance.

✅ When an EIP is allocated.

Explanation:-An Elastic IP address doesn't incur charges as long as all the following conditions are true:

The Elastic IP address is associated with an EC2 instance.
The instance associated with the Elastic IP address is running.
The instance has only one Elastic IP address attached to it.
Note: If the address is from a BYOIP address pool, you're never charged for that address.
Refer: https://aws.amazon.com/premiumsupport/knowledge-center/elastic-ip-charges/

Q9) Which set of Amazon S3 features helps to prevent and recover from accidental data loss?

Access controls and server-side encryption

✅ Object versioning and Multi-factor authentication

Explanation:-With S3 Versioning, you can easily preserve, retrieve, and restore every version of an object stored in Amazon S3, which allows you to recover from unintended user actions and application failures. To prevent accidental deletions, enable Multi-Factor Authentication (MFA) Delete on an S3 bucket. Refer: https://aws.amazon.com/s3/features/#:~:text=With%20S3%20Versioning%2C%20you%20can,Delete%20on%20an%20S3%20bucket.

Object lifecycle and service access logging

Website hosting and Amazon S3 policies

Q10)

You have a load balancer configured for VPC, and all back-end Amazon EC2 instances are in service. However, your web browser times out when connecting to the load balancer's DNS name.

Which options are probable causes of this behavior? (Choose 2 answers)

The load balancer is not configured in a private subnet with a NAT instance.

✅ The security groups or network ACLs are not property configured for web traffic.

The Amazon EC2 instances do not have a dynamically allocated private IP address

✅ The load balancer was not configured to use a public subnet with an Internet gateway configured

The VPC does not have a VGW configured.

Q11)

A company is deploying a new two-tier web application in AWS. The company has limited staff and requires high availability, and the application requires complex queries and table joins.

Which configuration provides the solution for the company's requirements?

MySQL Installed on two Amazon EC2 Instances in a single Availability Zone

Amazon RDS for MySQL with Multi-AZ

Amazon ElastiCache

✅ Amazon DynamoDB

Explanation:-Amazon DynamoDB is a key-value and document database that delivers single-digit millisecond performance at any scale. It's a fully managed, multiregion, multimaster, durable database with built-in security, backup and restore, and in-memory caching for internet-scale applications. Refer: https://aws.amazon.com/dynamodb/

Q12) You need to pass a custom script to new Amazon Linux instances created in your Auto Scaling group. Which feature allows you to accomplish this?

✅ EC2Config service

Explanation:-Windows AMIs for Windows Server 2012 R2 and earlier include an optional service, the EC2Config service (EC2Config.exe). EC2Config starts when the instance boots and performs tasks during startup and each time you stop or start the instance. EC2Config can also perform tasks on demand. Refer: https://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/ec2config-service.html

User data

IAM roles

AWS Config

Q13)

You have a distributed application that periodically processes large volumes of data across multiple Amazon EC2 Instances. The application is designed to recover gracefully from Amazon EC2 instance failures. You are required to accomplish this task in the most costeffective way.

Which of the following will meet your requirements?

Reserved instances

✅ Spot Instances

Explanation:-A Spot Instance is an unused EC2 instance that is available for less than the On-Demand price. Because Spot Instances enable you to request unused EC2 instances at steep discounts, you can lower your Amazon EC2 costs significantly. The hourly price for a Spot Instance is called a Spot price. Refer: https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-spot-instances.html

Dedicated instances

On-Demand instances

Q14) What is the minimum time Interval for the data that Amazon CloudWatch receives and aggregates?

✅ One minute

Explanation:-The minimum resolution supported by CloudWatch is 1-second data points, which is a high-resolution metric, or you can store metrics at 1-minute granularity. Sometimes metrics are received by Cloudwatch at varying intervals, such as 3-minute or 5-minute intervals. If you do not specify that a metric is high resolution, by setting the StorageResolution field in the PutMetricData API request, then by default CloudWatch will aggregate and store the metrics at 1-minute resolution. Depending on the age of data requested, metrics will be available at the resolutions defined in the retention schedules above. For example, if you request for 1-minute data for a day from 10 days ago, you will receive the 1440 data points. However, if you request for 1-minute data from 5 months back, the UI will automatically change the granularity to 1-hour and the GetMetricStatistics API will not return any output. Refer: https://aws.amazon.com/cloudwatch/faqs/

Five seconds

One second

● Three minutes
● Five minutes

Q15) How are snapshots for an EBS volume created when it is the root device for an instance?

● Pause instance, unmount volume and snapshot
● Terminate instance and snapshot
● Unencrypt volume and snapshot dynamically
✅ Stop instance, unmount volume and snapshot

Explanation:-You can take a snapshot of an attached volume that is in use. However, snapshots only capture data that has been written to your Amazon EBS volume at the time the snapshot command is issued. This might exclude any data that has been cached by any applications or the operating system. If you can pause any file writes to the volume long enough to take a snapshot, your snapshot should be complete. However, if you can't pause all file writes to the volume, you should unmount the volume from within the instance, issue the snapshot command, and then remount the volume to ensure a consistent and complete snapshot. You can remount and use your volume while the snapshot status is pending. Refer: https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-creating-snapshot.html

---

Q16) What cloud compute components are configured by tenants and not Amazon AWS support engineers? (Select three)

✅ Guest operating system
✅ Virtual appliances
● Upstream physical switch
● Hypervisor
✅ Applications and databases
● RDS

Q17) What three attributes are used to define a launch configuration template for an Auto-Scaling group?

● Private IP address
✅ Instance type

Explanation:-Keep the following considerations in mind when creating a launch template for use with an Auto Scaling group:

Launch templates give you the flexibility of launching one type of instance, or a combination of instance types and On-Demand and Spot purchase options. For more information, see Auto Scaling Groups with Multiple Instance Types and Purchase Options. Launching instances with such a combination is not supported:

If you specify a Spot Instance request in Additional Details

In EC2-Classic

If you configure a network type (VPC or EC2-Classic), subnet, and Availability Zone for your template, these settings are ignored in favor of what is specified in the Auto Scaling group.

If you specify a network interface, you must configure the security group as part of the network interface, and not in the Security Groups section of the template.

You cannot specify multiple network interfaces.

You cannot assign specific private IP addresses. When an instance launches, a private address is allocated from the CIDR range of the subnet in which the instance is launched. For more information on specifying CIDR ranges for your VPC or subnet, see the Amazon VPC User Guide.

To specify an existing network interface to use, its device index must be 0 (eth0). For this scenario, you must use the CLI or API to create the Auto Scaling group. When you create the group using the CLI create-auto-scaling-group command or API CreateAutoScalingGroup action, you must specify the Availability Zones parameter instead of the subnet (VPC zone identifier) parameter.

You cannot use host placement affinity or target a specific host by choosing a host ID.

Support for Dedicated Hosts (host tenancy) is only available if you specify a host resource group. For more information, see Host Resource Groups in the AWS License Manager User Guide. Note that each AMI based on a license configuration association can be mapped to only one host resource group at a time.

Refer: https://docs.aws.amazon.com/autoscaling/ec2/userguide/create-launch-template.html

● Elastic IP
✅ Security group
✅ AMI

Q18) What three characteristics or limitations differentiate EC2 instance types?

✅ Virtualization type
✅ EBS volume only
● Application type
✅ VPC only

Explanation:-When you launch an instance, the instance type that you specify determines the hardware of the host computer used for your instance. Each instance type offers different compute, memory, and storage capabilities and are grouped in instance families based on these capabilities. Select an instance type based on the requirements of the application or software that you plan to run on your instance. Refer: https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/instance-types.html

● AWS service selected

Q19) Select two difference between HVM and PV virtualization types?

● HVM doesn't support enhanced networking
● PV provides better performance than HVM for most instance types
✅ HVM is similar to bare metal hypervisor architecture
✅ HVM supports all current generation instance types

Explanation:-Linux Amazon Machine Images use one of two types of virtualization: paravirtual (PV) or hardware virtual machine (HVM). The main differences between PV and HVM AMIs are the way in which they boot and whether they can take advantage of special hardware extensions (CPU, network, and storage) for better performance.

Paravirtual guests traditionally performed better with storage and network operations than HVM guests because they could leverage special drivers for I/O that avoided the overhead of emulating network and disk hardware, whereas HVM guests had to translate these instructions to emulated hardware. Now PV drivers are available for HVM guests, so operating systems that cannot be ported to run in a paravirtualized environment can still see performance advantages in storage and network I/O by using them. With these PV on HVM drivers, HVM guests can get the same, or better, performance than paravirtual guests.

Refer:

● HVM doesn't support current generation instance types

Q20)

A customer is running a multi-tier web application farm in a virtual private cloud (VPC) that is not connected to their corporate network. They are connecting to the VPC over the Internet to manage all of their Amazon EC2 instances running in both the public and private subnets. They have only authorized the bastion-security-group with Microsoft Remote Desktop Protocol (RDP) access to the application instance security groups, but the company wants to further limit administrative access to all of the instances in the VPC.

Which of the following Bastion deployment scenarios will meet this requirement?

✅ Deploy a Windows Bastion host with an auto-assigned Public IP address in the public subnet, and allow RDP access to the bastion from only the corporate public IP addresses.
● Deploy a Windows Bastion host with an Elastic IP address in the private subnet, and restrict RDP access to the bastion from only the corporate public IP addresses.
● Deploy a Windows Bastion host with an Elastic IP address in the public subnet and allow SSH access to the bastion from anywhere.
● Deploy a Windows Bastion host on the corporate network that has RDP access to all instances in the VPC.

Q21) Which of the following statements are true about Amazon Route 53 resource records? (Choose 2 answers)

● An Amazon Route 53 Alias record can point to any DNS record hosted anywhere.
● TTL can be set for an Alias record in Amazon Route 53.
✅ An Amazon Route 53 CNAME record can point to any DNS record hosted anywhere.
● A CNAME record can be created for your zone apex.
✅ An Alias record can map one DNS name to another Amazon Route 53 DNS name.

Q22)

You are building an automated transcription service in which Amazon EC2 worker instances process an uploaded audio file and generate a text file. You must store both of these files in the same durable storage until the text file is retrieved. You do not know what the storage capacity requirements are.

Which storage option is both cost-efficient and scalable?

✅ A single Amazon S3 bucket
Explanation:-Refer: https://aws.amazon.com/s3/
● A single Amazon Glacier vault
● Multiple Amazon EBS volume with snapshots
● Multiple instance stores

Q23) Which of the following are true regarding AWS CloudTrail? (Choose 3 answers)

✅ Logs can be delivered to a single Amazon S3 bucket for aggregation.
● CloudTrail is enabled on a per-service basis.
✅ CloudTrail is enabled on a per-region basis
● CloudTrail is enabled by default
● CloudTrail is enabled globally
✅ CloudTrail is enabled for all available services within a region.

Q24) You have a content management system running on an Amazon EC2 instance that is approaching 100% CPU utilization. Which option will reduce load on the Amazon EC2instance?

● Create a launch configuration from the instance using the CreateLaunchConfiguration action
● Create an Auto Scaling group from the instance using the CreateAutoScalingGroup action
✅ Create a CloudFront distribution, and configure the Amazon EC2 instance as the origin
Explanation:-Refer: https://aws.amazon.com/cloudfront/getting-started/EC2/
● Create a load balancer, and register the Amazon EC2 instance with it

Q25) A t2.medium EC2 instance type must be launched with what type of Amazon Machine Image (AMI)?

✅ An Amazon EBS-backed Hardware Virtual Machine AMI
Explanation:-Virtualization type: Choose whether instances launched from this AMI use paravirtual (PV) or hardware virtual machine (HVM) virtualization. Refer: https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/creating-an-ami-ebs.html
● An Instance store Paravirtual AMI
● An Instance store Hardware Virtual Machine AMI
● An Amazon EBS-backed Paravirtual AMI

Q26)

A US-based company is expanding their web presence into Europe. The company wants to extend their AWS infrastructure from Northern Virginia (us-east-1) into the Dublin (eu-west1) region.

Which of the following options would enable an equivalent experience for users on both continents?

✅ Use Amazon Route 53, and apply a weighted routing policy to distribute traffic across both regions.
● Use Amazon Route 53, and apply a geolocation routing policy to distribute traffic across both regions.
● Use a public-facing load balancer per region to load-balance web traffic, and enable sticky sessions.
● Use a public-facing load balancer per region to load-balance web traffic, and enable HTTP health checks.

Q27)

A customer wants to track access to their Amazon Simple Storage Service (S3) buckets and also use this information for their internal security and access audits.

Which of the following will meet the Customer requirement?

○ Enable server access logging for all required Amazon S3 buckets.
○ Enable the Requester Pays option to track access via AWS Billing
✅ Enable AWS CloudTrail to audit all Amazon S3 bucket access.
Explanation:-Choose Properties. Choose Object-level logging. Choose an existing CloudTrail trail in the drop-down menu. The trail you select must be in the same AWS Region as your bucket, so the drop-down list contains only trails that are in the same Region as the bucket or trails that were created for all Regions. Refer: https://docs.aws.amazon.com/AmazonS3/latest/user-guide/enable-cloudtrail-events.html#:~:text=Choose%20Properties.,were%20created%20for%20all%20Regions.
○ Enable Amazon S3 event notifications for Put and Post.

Q28)

A company has an AWS account that contains three VPCs (Dev, Test, and Prod) in the same region. Test is peered to both Prod and Dev. All VPCs have non-overlapping CIDR blocks. The company wants to push minor code releases from Dev to Prod to speed up time to market.

Which of the following options helps the company accomplish this?

○ The VPCs have non-overlapping CIDR blocks in the same account. The route tables contain local routes for all VPCs.
○ Attach a second gateway to Dev. Add a new entry in the Prod route table identifying the gateway as the target.
○ Create a new entry to Prod in the Dev route table using the peering connection as the target.
✅ Create a new peering connection Between Prod and Dev along with appropriate routes.

Q29) Which of the following are use cases for Amazon DynamoDB? (Choose 3 answers)

○ Storing metadata for Amazon S3 objects.
✅ Storing JSON documents.
Explanation:-Storing large amounts of infrequently accessed data. Amazon DynamoDB is ideal for existing or new applications that need a flexible NoSQL database with low read and write latencies, and the ability to scale storage and throughput up or down as needed without code changes or downtime. Refer: https://aws.amazon.com/dynamodb/#:~:text=Use%20cases-,Ad%20Tech,%2C%20ad%20targeting%2C%20and%20attribution.
○ Managing web sessions.
○ Storing BLOB data.
✅ Running relational joins and complex updates.
✅ Storing large amounts of infrequently accessed data.

Q30)

You are designing a web application that stores static assets in an Amazon Simple Storage Service (S3) bucket. You expect this bucket to immediately receive over 150 PUT requests per second.

What should you do to ensure optimal performance?

○ Add a random prefix to the key names.
○ Amazon S3 will automatically manage performance at this scale.
○ Use a predictable naming scheme, such as sequential numbers or date time sequences, in the key names
✅ Use multi-part upload.
Explanation:-Multipart upload allows you to upload a single object as a set of parts. Each part is a contiguous portion of the object's data. You can upload these object parts independently and in any order. If transmission of any part fails, you can retransmit that part without affecting other parts. Refer: https://docs.aws.amazon.com/AmazonS3/latest/dev/uploadobjusingmpu.html#:~:text=Multipart%20upload%20allows%20you%20to,part%20without%20affecting%20other%20parts.

Q31) What deployment service enables tenants to replicate an existing AWS stack?

✅ CloudFormation
Explanation:-AWS CloudFormation is a service that gives developers and businesses an easy way to create a collection of related AWS and third party resources and provision them in an orderly and predictable fashion. Refer: https://aws.amazon.com/cloudformation/faqs/
○ Beanstalk
○ RedShift
○ EMR

Q32) What three services can invoke a Lambda function?

○ EC2 instance
✅ CloudWatch event
✅ SNS topic
Explanation:-List of services that invoke Lambda functions asynchronously: Amazon Simple Storage Service.
1. Amazon Simple Notification Service.
2. Amazon Simple Email Service.
3. AWS CloudFormation.
4. Amazon CloudWatch Logs.
5. Amazon CloudWatch Events.
6. AWS CodeCommit.
7. AWS Config.

Refer: https://aws.amazon.com/blogs/architecture/understanding-the-different-ways-to-invoke-lambda-functions/

○ security group
✅ S3 bucket notification

Q33) What two services enable automatic polling of a stream for new records only and forward them to an AWS storage service?

○ DynamoDB
✅ Lambda
✅ Kinesis
○ SNS

Q34)

Your company is deploying a web site with dynamic content to customers in US, EU and APAC regions of the world. Content will

include live streaming videos to customers. SSLcertificates are required for security purposes.

Select the AWS service delivers all requirements and provides the lowest latency?

- ⦿ S3
- ✅ CloudFront

Explanation:-Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds, all within a developer-friendly environment. Refer: https://aws.amazon.com/cloudfront/

- ⦿ DynamoDB
- ⦿ Redis

Q35) What is the difference between Warm Standby and Multi-Site fault tolerance? (Select two)

- ⦿ DNS Route 53 is not required for Warm Standby
- ⦿ Multi-Site provides active/standby load balancing
- ✅ Multi-Site provides active/active load balancing
- ⦿ Warm Standby enables lower RTO and most recent RPO
- ✅ Multi-Site enables lower RTO and most recent RPO

Q36) What AWS best practice is recommended for creating fault tolerant systems?

- ✅ Horizontal scaling
- ⦿ Security groups
- ⦿ Elastic IP (EIP)
- ⦿ Vertical scaling
- ⦿ RedShift

Q37) What two statements correctly describe versioning for protecting data at rest on S3 buckets?

- ⦿ Saves multiple versions of a single file
- ✅ Restores deleted files
- ⦿ Overwrites most current file version
- ⦿ Enabled by default
- ✅ disabled by default

Q38) What two methods are recommended by AWS for protecting EBS data at rest?

- ✅ Snapshots
- ✅ Encryption

Explanation:-You can achieve data protection in transit in two ways: encrypt the connection using Secure Sockets Layer (SSL), or use client-side encryption (where the object is encrypted before it is sent). Both methods are valid for protecting your application data. Refer: https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/security-data-protection-encryption.html

- ⦿ Replication
- ⦿ VPN

Q39) What happens when read or write requests exceed capacity units (throughput capacity) for a DynamoDB table or index? (Select two)

- ⦿ DynamoDB automatically increases read/write units if provisioned throughput is enabled
- ✅ HTTP 400 code is returned (Bad Request)
- ⦿ HTTP 500 code is returned (Server Error)
- ✅ DynamoDB can throttle requests so that requests are not exceeded

Explanation:-Provisioned throughput is the maximum amount of capacity that an application can consume from a table or index. If your application exceeds your provisioned throughput capacity on a table or index, it is subject to request throttling. Throttling prevents your application from consuming too many capacity units. When a request is throttled, it fails with an HTTP 400 code (Bad Request) and a ProvisionedThroughputExceededException. The AWS SDKs have built-in support for retrying throttled requests (see Error Retries and Exponential Backoff), so you do not need to write this logic yourself. Refer: https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadWriteCapacityMode.html

- ⦿ DynamoDB automatically increases read/write units

Q40) What read consistency method provides lower latency for GetItem requests?

- ⦿ Strongly consistent
- ✅ Eventually consistent

Explanation:-DynamoDB uses eventually consistent reads, unless you specify otherwise. Read operations (such as GetItem, Query, and Scan) provide a ConsistentRead parameter. If you set this parameter to true, DynamoDB uses strongly consistent reads during the operation. Refer: https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadConsistency.html

- ⦿ Strongly persistent
- ⦿ Write consistent

Q41)

You must specify strongly consistent read and write capacity for your DynamoDB database. You have determined read capacity of 128 Kbps and write capacity of 25 Kbps is required for your application.

What is the read and write capacity units required for DynamoDB table?

- ⦿ 16 read units, 2.5 write units
- ⦿ 1 read unit, 1 write unit
- ✅ 32 read units, 25 write units

Explanation:-BatchWriteItem—Writes up to 25 items to one or more tables. DynamoDB processes each item in the batch as an individual PutItem or DeleteItem request (updates are not supported). So DynamoDB first rounds up the size of each item to the next 1 KB boundary, and then calculates the total size. The result is not necessarily the same as the total size of all the items. For example, if BatchWriteItem writes a 500-byte item and a 3.5 KB item, DynamoDB calculates the size as 5 KB (1 KB + 4 KB), not 4 KB (500 bytes + 3.5 KB). Refer: https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/switching.capacitymode.html

- ⦿ 64 read units, 10 write units

Q42) What DynamoDB capacity management technique is based on the tenant specifying an upper and lower range for read/write capacity units?

⬤ Reserved capacity

✅ Auto scaling

Explanation:-DynamoDB auto scaling actively manages throughput capacity for tables and global secondary indexes. With auto scaling, you define a range (upper and lower limits) for read and write capacity units. You also define a target utilization percentage within that range. DynamoDB auto scaling seeks to maintain your target utilization, even as your application workload increases or decreases. With DynamoDB auto scaling, a table or a global secondary index can increase its provisioned read and write capacity to handle sudden increases in traffic, without request throttling. When the workload decreases, DynamoDB auto scaling can decrease the throughput so that you don't pay for unused provisioned capacity. Refer: https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadWriteCapacityMode.html#HowItWorks.ProvisionedThroughput.Manual

⬤ Provisioned throughput

⬤ Demand

⬤ General purpose

Q43) What is the maximum volume size of a MySQLRDS database?

✅ 16 TB

Explanation:-Amazon RDS for SQL Server Increases Maximum Database Storage Size to 16TB. You can now create Amazon RDS for SQL Server database instances with up to 16TB of storage, up from 4TB. The new storage limit is available when using the Provisioned IOPS and General Purpose (SSD) storage types. Refer:https://aws.amazon.com/about-aws/whats-new/2017/08/amazon-rds-for-sql-server-increases-maxiumum-database-storage-size-to-16-tb/#:~:text=Amazon%20RDS%20for%20SQL%20Server%20Increases%20Maximum%20Database%20Storage%20Size%20to%2016TB,-Posted%20On%3A%20Aug&text=You%20can%20now%20create%20Amazon,Purpose%20(SSD)%20storage%20types.

⬤ 3 TB

⬤ 6 TB

⬤ unlimited

Q44) What is the maximum size of a DynamoDB record (item)?

⬤ 64 KB

✅ 400 KB

Explanation:-The maximum item size in DynamoDB is 400 KB, which includes both attribute name binary length (UTF-8 length) and attribute value lengths (again binary length). The attribute name counts towards the size limit. Refer: The maximum item size in DynamoDB is 400 KB, which includes both attribute name binary length (UTF-8 length) and attribute value lengths (again binary length). The attribute name counts towards the size limit.

⬤ 1 KB

⬤ 10 KB

Q45)

You have an Elastic Load Balancer assigned to a VPC with public and private subnets. ELB is configured to load balance traffic to a group of EC2 instances assigned to an Auto-Scaling group.

What three statements are correct?

⬤ Cross-zone load balancing is not supported

✅ Security group is assigned to Elastic Load Balancer

⬤ Network ACLis assigned to Elastic Load Balancer

✅ Elastic Load Balancer is assigned to a public subnet

✅ Elastic Load Balancer forwards traffic to primary private IP address (eth0 interface) on each instance

Q46) How does AWS uniquely identify S3 objects?

⬤ Version

✅ Bucket name

Explanation:-Each Amazon S3 object has data, a key, and metadata. The object key (or key name) uniquely identifies the object in a bucket. Object metadata is a set of name-value pairs. The only way to modify object metadata is to make a copy of the object and set the metadata. Refer: https://docs.aws.amazon.com/AmazonS3/latest/dev/UsingMetadata.htm

⬤ Key

⬤ Object tag

Q47) What is the advantage of read-after-write consistency for S3 buckets?

✅ Stale reads for PUT requests in some regions

Explanation:-With this enhancement, Amazon S3 now supports read-after-write consistency in all regions for new objects added to Amazon S3. Read-after-write consistency allows you to retrieve objects immediately after creation in Amazon S3. Refer: https://aws.amazon.com/about-aws/whats-new/2015/08/amazon-s3-introduces-new-usability-enhancements

⬤ Higher throughput for all requests

⬤ No stale reads for PUT of any new object in all regions

⬤ No stale reads for GET requests in a single regions

Q48) What is the maximum single file object size supported with Amazon S3?

⬤ 1 TB

✅ 5 TB

Explanation:-AWS has raised the limit by three orders of magnitude. Individual Amazon S3 objects can now range in size from 1 byte all the way to 5 terabytes (TB). Now customers can store extremely large files as single objects, which greatly simplifies their storage experience. Amazon S3 does the bookkeeping behind the scenes for our customers, so you can now GET that large object just like you would any other Amazon S3 object. Refer: https://aws.amazon.com/blogs/aws/amazon-s3-object-size-limit/

⬤ 5 GB

⬤ 100 GB

Q49) What security problem is solved by using Cross-Origin Resource Sharing (CORS)?

⬤ Permits sharing objects between AWS services

- ✅ Provide security for third party objects within AWS
- ⚪ Enable sharing of web-based files between different buckets
- ✅ Enable HTTP requests from within scripts to a different domain

Q50) What is recommended for migrating 40 TB of data from on-premises to S3 when the internet link is often overutilized?

- ⚪ AWS Multi-Part Upload API
- ⚪ AWS Elasticsearch
- ⚪ AWS Elastic File System
- ⚪ AWS Import/Export
- ✅ AWS Snowball
- ✅ AWS Storage gateway

Q51)

Your company is publishing an online catalog of books that is currently using DynamoDB for storing the information associated with each item. There is a requirement to add images for each book.

What solution is most cost effective and designed for that purpose?

- ⚪ S3
- ⚪ RDS
- ✅ EBS
- ⚪ RedShift
- ⚪ Kinesis

Q52) How is routing enabled by default within a VPC for an EC2 instance?

- ⚪ Custom route table
- ✅ Main route table

Explanation:-When you create a VPC, it automatically has a main route table. The main route table controls the routing for all subnets that are not explicitly associated with any other route table. On the Route Tables page in the Amazon VPC console, you can view the main route table for a VPC by looking for Yes in the Main column. Refer: https://docs.aws.amazon.com/vpc/latest/userguide/VPC_Route_Tables.html#RouteTableDetails

- ⚪ Add a default route
- ⚪ Must be configured explicitly

Q53) What three features are not supported with VPC peering?

- ✅ Transitive routing

Explanation:-VPC peering does not support transitive peering relationships. In a VPC peering connection, your VPC does not have access to any other VPCs with which the peer VPC may be peered. This includes VPC peering connections that are established entirely within your own AWS account.

- ⚪ IPv6 addressing

Explanation:-A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them using private IPv4 addresses or IPv6 addresses. Instances in either VPC can communicate with each other as if they are within the same network. Refer: https://docs.aws.amazon.com/vpc/latest/peering/vpc-pg.pdf

- ✅ Gateways

Explanation:-You can establish peering relationships between VPCs across different AWS Regions (also called InterRegion VPC Peering). This allows VPC resources including EC2 instances, Amazon RDS databases and Lambda functions that run in different AWS Regions to communicate with each other using private IP addresses, without requiring gateways, VPN connections, or separate network appliances.

- ✅ Overlapping CIDR blocks

Explanation:-You cannot create a VPC peering connection between VPCs that have matching or overlapping IPv4 or IPv6 CIDR blocks. Amazon always assigns your VPC a unique IPv6 CIDR block. If your IPv6 CIDR blocks are unique but your IPv4 blocks are not, you cannot create the peering connection.

- ⚪ RedShift
- ⚪ ElastiCache

Q54) What route is used in a VPC routing table for packet forwarding to a Gateway?

- ⚪ 10.0.0.0/16
- ⚪ tenant configured
- ✅ 0.0.0.0/0

Explanation:-0.0.0.0/0 represents all possible IP addresses. In the context of the way routing tables get set up by default on AWS, 0.0.0.0/0 is effectively "all non local addresses". This is because another route presumably exists in the routing table to route the VPC subnet to the local network on the VPC.

- ⚪ static route
- ⚪ 0.0.0.0/16

Q55) You are asked to deploy a web application comprised of multiple public web servers with only private addressing assigned. What Amazon AWS solutions enables multiple servers on a private subnet with only a single EIP required and Availability Zone redundancy?

- ✅ NAT gateway
- ⚪ Virtual private gateway

Explanation:-An elastic network interface is a logical networking component in a VPC that represents a virtual network card. It can include the following attributes:

A primary private IPv4 address from the IPv4 address range of your VPC

One or more secondary private IPv4 addresses from the IPv4 address range of your VPC

One Elastic IP address (IPv4) per private IPv4 address

One public IPv4 address

One or more IPv6 addresses

One or more security groups

A MAC address

A source/destination check flag

A description

Refer: https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-eni.html

- Internet gateway
- NAT instance
- Elastic Network Interface (ENI)

Q56) What is the IP addressing schema assigned to a default VPC?

- 10.0.0.0/16 CIDR block subnetted with 10.0.0.0/24
- 172.16.0.0/16 CIDR block subnetted with 172.16.0.0/24
- ✅ 172.31.0.0/16 CIDR block subnetted with 172.31.0.0/20

Explanation:-When we create a default VPC, we do the following to set it up for you - Create a VPC with a size /16 IPv4 CIDR block (172.31.0.0/16). This provides up to 65,536 private IPv4 addresses. Refer: https://docs.aws.amazon.com/vpc/latest/userguide/default-vpc.html

- 172.16.0.0/24 CIDR block subnetted with 172.31.0.0/18

Q57) What default configuration and components are added by AWS when Default VPC type is selected? (Select three)

- ✅ DNS
- ✅ Security group
- NAT instance
- Virtual private gateway
- ✅ Internet gateway