Exam : **AWS-Solutions-Associate**

Title : AWS Certified Solutions Architect - Associate

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NO.1 A company is building a two-tier web application to serve dynamic transaction-based content. The data tier is leveraging an online transactional processing (OLTP) database. What services should you leverage to enable an elastic and scalable web tier?

A. Elastic Load Balancing, Amazon EC2, and Auto Scaling

B. Elastic Load Balancing, Amazon RDS with Multi-AZ, and Amazon S3

C. Amazon RDS with Multi-AZ and Auto Scaling

D. Amazon EC2, Amazon DynamoDB, and Amazon S3

Answer: C

NO.2 A Solutions Architect is designing a solution that will include a database in Amazon RDS. Corporate security policy mandates that the database, its logs, and its backups are all encrypted. Which is the MOST efficient option to fulfill the security policy using Amazon RDS?

A. Launch an Amazon RDS instance with encryption enabled Enable encryption for logs and backups

B. Launch an Amazon RDS instance Enable encryption for the database, logs, and backups

C. Launch an Amazon RDS instance with encryption enabled Logs and backups are automatically encrypted

D. Launch an Amazon RDS instance. Enable encryption for backups Encrypt logs with a database-engine feature

Answer: B

NO.3 A Solutions Architect is designing an elastic application that will have between 10 and 50 Amazon EC2 concurrent instances running, dependent on load. Each instance must mount storage that will read and write to the same 50 GB folder. Which storage type meets the requirements?

A. Amazon S3

B. Amazon EFS

C. Amazon EBS volumes

D. Amazon EC2 instance store

Answer: B

NO.4 A company is storing data on Amazon Simple Storage Service (S3). The company's security policy mandates that data is encrypted at rest. Which of the following methods can achieve this? Choose 3 answers

A. Use Amazon S3 server-side encryption with AWS key management Service managed keys

B. Use Amazon S3 server-side encryption with customer-provided keys

C. Use Amazon S3 server-side encryption with EC2 key pair

D. Use Amazon S3 bucket policies to restrict access to the data at rest

E. Encrypt the data on the client-side before ingesting to Amazon S3 using their own master key

F. Use SSL to encrypt the data while in transit to Amazon S3

Answer: A B E

NO.5 You are migrating an existing enterprise application to AWS. It requires standard file system access from multiple instances. It also requires high storage throughput with consistently low latencies. You are looking for a storage solution that will grow and shrink capacity automatically.

How can you accomplish this in AWS?

A. Create an Amazon S3 bucket that the application can for its storage requirements

B. Launch an Amazon Redshift cluster with dense storage nodes to use with the application

C. Create an Amazon EFS file system and mount it on all of the application instances

D. Launch an EBS-backed EC2 instance. Create and share an NFS amount with application

Answer: C

NO.6 You have a web application running on six Amazon EC2 instances, consuming about 45% of resources on each instance. You are using auto-scaling to make sure that six instances are running at all times. The number of requests this. Which of the following architectural choices should you make ?

A. Deploy 3 EC2 instances in one availability zone and 3 in another availability zone and use Amazon Elastic Load Balancer

B. Deploy 3 EC2 instances In one region and 3 other region and use Amazon Elastic Load Balancer

C. Deploy 2 EC2 instances in three regions and use Amazon Elastic Load Balancer

D. Deploy 6 EC2 instances in one availability zone and use Amazon Elastic Load Balancer

Answer: A

NO.7 A company has two different types of reporting needs on their 200-GB data warehouse:
Data scientists run a small number of concurrent ad hoc SQL queries that can take several minutes each to run.
Display screens throughout the company run many fast SQL queries to populate dashboards.
Which design would meet these requirements with the LEAST cost?

A. Replicate relevant data between Amazon Redshift and Amazon DynamoDB. Data scientists use Redshift. Dashboards use DynamoDB.

B. Configure auto-replication between Amazon Redshift and Amazon RDS. Data scientists use Redshift.
Dashboards use RDS.

C. Use Amazon Redshift for both requirements, with separate query queues configured in workload management.

D. Use Amazon Redshift for Data Scientists. Run automated dashboard queries against Redshift and store the results in Amazon ElastiCache. Dashboards query ElastiCache.

Answer: D

NO.8 A Solutions Architect is creating an application running in an Amazon VPC that needs to access AWS Systems Manager Parameter Store Network security rules prohibit any route table entry with a 0.0.0.0/0 destination.
What infrastructure addition will allow access to the AWS service while meeting the requirements?

A. VPC peering

B. NAT instance

C. NAT gateway

D. AWS Private Link

Answer: D

NO.9 A Solution Architect is reviewing an application that writes data to an Amazon DynamicDB table on a daily base Random table reads occur many times per second.

The company needs to allow thousands of low-latency reads and avoid any negative impact to the rest of the application.

What should the Solution Architect do to meets the company's' goals?

A. Use DynamoDB Accelerator to cache reads.

B. Increase DynamoDB write capacity units.

C. Add Amazon SQS to decouple requests.

D. Add Amazon SQS to decouple requests.

E. Implement Amazon Kinesis to decouple request

Answer: B

NO.10 A gaming application is heavily dependent o caching and uses Amazon ElasticCache for Redis. The application performance was recently degraded due to failure of the cache node.

What should a Solutions Architect recommend to minimize performance degradation it the future?

A. Migrate from ElasticCache to Amazon RDS

B. Configure automatic backup to save cache data

C. Configure ElasticCache Multi-AZ with automatic failover

D. Use Auto Scaling to provision cache nodes based on CPU usage

Answer: C

NO.11 An application launched on Amazon EC2 instances needs to publish personally identifiable information (PII) about customers using Amazon SNS. The application is launched in private subnets within an Amazon VPC.

Which is the MOST secure way to allow the application to access service endpoints in the same region?

A. Use an internet gateway

B. Use AWS Private link.

C. Use a NAT gateway

D. Use a proxy instance.

Answer: B

NO.12 A workload consists of downloading an image from an Amazon S3 bucket, processing the image, and moving to another Amazon S3 bucket. An Amazon EC2 instance runs a scheduled task every hour to perform the operation.

How should a Solutions Architect redesign the process so that it is highly available?

A. Change the Amazon EC2 instance to compute optimized

B. Launch a second Amazon EC2 instance to monitor the health of the first

C. Trigger a Lambda function when a new object is uploaded

D. Install copy the images to an attached Amazon EBS volume

Answer: C

NO.13 A new application is being deployed on Amazon EC2. The application needs to read/write up to 3 TB of data lo an external data store and requires read-after-write consistency across all AWS

regions for writing new objects into this data store. Which is the MOST cost-effective data storage service that meets these requirements?

A. Amazon EBS

B. Amazon Glacier

C. Amazon EFS

D. Amazon S3

Answer: D

Explanation

Amazon S3 Glacier is an extremely low-cost storage service that provides secure, durable, and flexible storage for data backup and archival. With Amazon S3 Glacier, customers can reliably store their data for as little as

$0.004 per gigabyte per month. Amazon S3 Glacier enables customers to offload the administrative burdens of operating and scaling storage to AWS, so that they don't have to worry about capacity planning, hardware provisioning, data replication, hardware failure detection and repair, or time-consuming hardware migrations.

NO.14 As part of a migration strategy, a Solutions Architect needs to analyze workloads that can be optimized for performance and cost. The Solutions Architect has identified a stateless application that serves static content as a potential candidate to move to the cloud. The Solutions Architect has the flexibility to choose an identity solution between Facebook, Twitter, and Amazon.

Which AWS solution offers flexibility and ease of use, and the LEAST operational overhead for this migration?

A. Use AWS Identity and Access Management (IAM) for managing identities, and migrate the application to run on Amazon S3, Amazon API Gateway, and AWS Lambda.

B. Use a third-party solution for managing identities, and migrate the application to run on Amazon S3, EC2 Spot Instances, and Amazon EC2.

C. Use Amazon Cognito for managing identities, and migrate the application to run on Amazon S3, Amazon API Gateway, and AWS Lambda.

D. Use Amazon Cognito for managing identities, and migrate the application to run on Amazon S3, EC2 Spot Instances, and Amazon EC2.

Answer: A

NO.15 What is required in order to make a single web server in VPC (Virtual Private Cloud) publicity accessible?

Choose 4 answers

A. Configure an internet gateway

B. Associate an Elastic IP to the web server

C. Set up a NAT instance

D. Alter the web server's security group to allow inbound web traffic on ports being used to serve web traffic

E. Configure the routing table of the subnet

F. Add a CNAME record to your Route 53 hosted zone

Answer: A B D E

NO.16 An internet-facing multi-tier web application must be highly available. An ELB Classic Load Balancer is deployed in front of the web tier. Amazon EC2 instances at the web application tier are deployed evenly across two Availably Zones. The database is deployed using RDS Multi-AZ. A NAT instance is launched for Amazon EC2 instances and database resources to access the Internet. These instances are not assigned with public IP addresses.
Which component poses a potential single point of failure in this architecture?

A. Amazon EC2

B. NAT instance

C. ELB Classic Load Balancer

D. Amazon RDS

Answer: C

NO.17 A company is migrating on-premises database to AWS. The company's backend application produces a large amount of database queries for reporting purposes, and the company wants to offload some of these reads to a Read Replica, allowing the primary to continue performing efficiently.
Which AWS database platforms will accomplish this? (Select TWO.)

A. Amazon RDS for Oracle

B. Amazon RDS for PostgreSQL

C. Amazon RDS for MariaDB

D. Amazon DynamoDB

E. Amazon RDS for Microsoft SQL Server

Answer: B D

NO.18 A Solution Architect is building an application that will run for eight hours, Monday through Friday. This application will also run a weekly batch process every Saturday night that consistently takes four hours to complete.
Which is the MOST cost- effective computer solution?

A. Spot Instances

B. Standard Reserved Instances

C. On-Demand Instances

D. Scheduled Reserved Instances

Answer: D

NO.19 A media company asked a Solutions Architect to design a highty available storage solution to serve as a centralized document store for their Amazon EC2 instances. The storage solution needs to be POSIX-compliant scale dynamically and be able to serve up to 100 concurrent EC2 instances.
Which solution meets these requirements?

A. Create an Amazon S3 bucket and store all of the documents in this bucket.

B. Create an Amazon EBS volume and allow multiple users to mount that volume to their EC2 instance(s)

C. Use Amazon Glacier to store all of the documents

D. Create an Amazon Elastic File System (Amazon EFS) to store and share the documents.

Answer: D

NO.20 A team has developed a new web application in an AWS Region that has three Availability Zones: AZ-a, AZ-b, and AZ-c. This application must be fault tolerant and needs at least six Amazon EC2 instances running at all times. The application must tolerate the loss of connectivity to any single Availability Zone so that the application can continue to run.
Which configurations will meet these requirements? (Select TWO)
A. AZ-a with six EC2 instances, AZ-b with six EC2 instances, and AZ-c with no EC2 instances.
B. AZ-a with four EC2 instances, AZ-b with two EC2 instances, and AZ-c with two EC2 instances.
C. AZ-awith two EC2 instances, AZ-b with two EC2 instances, and AZ-c with two EC2 instances.
D. AZ-a with three EC2 instances, AZ-b with three EC2 instances, and AZ-c with no EC2 instances.
E. AZ-awith three EC2 instances,AZ-bwith three EC2 instances, andAZ-c with three EC2 instances.
Answer: C E

NO.21 An application hosted on AWS uses object storage for storing internal reports that are accessed daily by the CFO Currently, these reports are publicly available. How should a Solutions Architect re-design this architecture lo prevent unauthorized access to these reports?
A. Encrypt the files on the client side and store the files on Amazon Glacier, then decrypt the reports on the client side.
B. Move the files to Amazon ElastiCache and provide a username and password for downloading the reports.
C. Specify the use of AWS KMS server-side encryption at the time of an object creation on Amazon S3.
D. Store the files on Amazon S3 and use the application to generate S3 pre-signed URLs to users.
Answer: D

NO.22 A company is running a series of national TV campaigns. These 30 second advertisements will introduce sudden traffic peaks targeted at a Node .js application. The company experts traffic to increase from five requests each minute to more than 5,000 requests each minutes.
Which AWS service should a Solution Architecture use to ensure traffic surges can be handled?
A. AWS Lambda
B. Amazon ElasticCache
C. Size EC2 instance to handle peak load
D. An Auto Scaling group for EC2 instance.
Answer: A

NO.23 A company is launching a static website using the zone apex (mycompany.com). The company wants to use Amazon Route 53 for DNS. Which steps should the company perform to implement a scalable and cost-effective solution? (Select TWO)
A. Host the website on an Amazon EC2 instance with ELB and Auto Scaling, and map a Route S3 abas record to the ELB endpoint
B. Host the website using AWS Elastic Beanstalk, and map a Route 53 alias record to the Beanstalk stack.
C. Host the website on an Amazon EC2 instance, and map a Route 53 alias record to the public IP

address of the Amazon EC2 instance.

D. Serve the website from an Amazon S3 bucket and map a Route 53 alias record to the website endpoint

E. Create a Route 53 hosted zone, and set the NS records of the domain to use Route 53 name servers.

Answer: A D

NO.24 A company collects click-stream data from amazon EC2 instances that are in an auto scaling group. The age data feeds a centralized dashboard and is critical to the company's business. Which method will help ensure data is collected before an auto scaling policy terminates an instance from the auto scaling group?

A. Use Auto Scaling lifecycle hooks

B. Trigger Amazon S3 event notifications

C. Implement Amazon kinesis as a log collector

D. Snapshot the Amazon EC2 instance Elastic Block Store volumes

Answer: A

NO.25 A customer needs corporate IT governance and cost oversight of all AWS resources consumed by its divisions.

The divisions wants to maintain administrative control of the discrete AWS resources they consume and keep those resources separate from the resources of other divisions. Which of the following options, when used together, will support the autonomy/control of divisions while enabling corporate IT to maintain governance and oversight? Choose 2 answers

A. Enable IAM cross-account access for all corporate IT administrators in each child account.

B. Create separate VPCs for each division within the corporate IT AWS account

C. Use AWS Consolidated Billing and disable AWS root account access for the child accounts

D. Use AWS Consolidated billing to link the divisions accounts to a parent corporate account

E. Write all child AWS CloudTrail and Amazon CloudWatch logs to each child account's Amazon S3 log bucket

Answer: C E

NO.26 A Solutions Architect is building a multi-tier website. The web servers will be in a public subnet, and the database servers will be in a private subnet. Only the web servers can be accessed from the internet.

The database servers must have Internet access for software updates. Which solution meets these requirements?

A. Assign Elastic IP addresses to the database instances

B. Allow Internet traffic on the private subnet through the network ACL

C. Use a NAT Gateway.

D. Use an egress-only internet Gateway

Answer: C

NO.27 An insurance company stores all documents related to annual policies for the duration of the policies. The documents are created once and then stored until they are required, typically at the end

of the policy. A document must be capable of being retrieved immediately. The company is now moving their document management to the AWS Cloud.
Which service should a Solutions Architect recommend as a cost-effective solution that meets the company's requirements?

A. Amazon RDS MySQL

B. Amazon S3 Standard-Infrequent Access

C. Amazon Glacier

D. Amazon S3 Standard

Answer: B

NO.28 How can you secure data at rest on an EBS volume?

A. Attach the volume to an instance using EC2's SSL interface.

B. Write the data randomly instead of sequentially.

C. Encrypt the volume using the S3 server-side encryption service.

D. Create an IAM policy that restricts read and write access to the volume.

E. Use an encrypted file system on top of the EBS volume.

Answer: E

NO.29 A company's new web application running on Amazon EC2 across multiple Availability Zones (AZs) will be heavily accessed during regular business hours After business hours, usage will be minimal. What fleet-scaling approach should be used to size the EC2 fleet to handle the traffic demands?

A. Manual scaling across all AZs

B. Provisioning tor peak traffic

C. Scheduled scaling

D. Programmatic termination of all instances in one AZ during off-peak hours

Answer: C

NO.30 A Solutions Architect is designing a solution to store a large quantity of event data in Amazon S3. The Architect anticipates that the workload will consistently exceed 100 requests each second. What should the Architect do in Amazon S3 to optimize performance?

A. Randomize a key name prefix.

B. Store the event data in separate buckets.

C. Randomize the key name suffix.

D. Use Amazon S3 Transfer Acceleration.

Answer: A
Explanation
Reference https://docs.aws.amazon.com/AmazonS3/latest/dev/request-rate-perf-considerations.html

NO.31 A company is writing a new service running on Amazon EC2 that must create thumbnail images of thousands of images in a large archive. The system will write scratch data to storage during the process.
Which storage service is best suited for this scenario?

A. EC2 instance store

B. Amazon EFS

C. Amazon CloudSearch

D. Amazon EBS Throughput Optimized HDD (st1)

Answer: B

NO.32 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 EC2 instance?

A. Create a new load balancer, and register the Amazon EC2 instqance with it

B. Create a CloudFront distribution, and configure the Amazon EC2 instance as the origin

C. Create an Auto Scaling group from the instance using the CreateAutoScalingGroup action

D. Create a launch configuration from the instance using the CreateLaunchConfiguration action

Answer: C

NO.33 An application running in a private subnet accesses an Amazon DynamoDB table. There is a security requirement that the data never leave the AWS network.

How should this requirement be met?

A. Configure a network ACL on DynamoDB to limit traffic to the private subnet

B. Enable DynamoDB encryption at rest using an AWS KMS key.

C. Add a NAT gateway and configure the route table on the private subnet

D. Create a VPC endpoint for DynamoDB and configure the endpoint policy

Answer: D

NO.34 A client has set up an Auto Scaling group associated with a load balancer. The client has noticed that instances launched by the Auto Scaling group are reported unhealthy as the result of an Elastic Load Balancing (ELB) health check, but these unhealthy instances are not being terminated. What can a Solutions Architect do to ensure that the instances marked unhealthy will be terminated and replaced?

A. Increase the value for the health check interval set on the ELB load balancer.

B. Change the thresholds set on the Auto Scaling group health check.

C. Change the health check type to ELB for the Auto Scaling group.

D. Change the health check set on the ELB load balancer to use TCP rather than HTTP checks.

Answer: B

NO.35 A Solutions Architect is designing a Lambda function that calls an API to list all running Amazon RDS instances.

How should the request be authorized?

A. Create an IAM access and secret key, and store it in the Lambda function.

B. Create an IAM role to the Lambda function with permissions to list all Amazon RDS instances.

C. Create an IAM role to Amazon RDS with permissions to list all Amazon RDS instances.

D. Create an IAM access and secret key, and store it in an encrypted RDS database.

Answer: C

NO.36 An Organization has a long-running image processing application that runs on Spot Instances that will terminated when interrupted. A highly available workload must be designed to respond to Spot Instance interruption notices. The solution must include a two-minute warning when there is not enough capacity.

How can these requirements be met?

A. Use Amazon CloudWatch Events to invoke an AWS Lambda function that can launch On-Demand Instances

B. Regularly store data from the application on Amazon DynamoDB. Increase the maximum number of instances in the AWS Auto Scaling group.

C. Manually place a bid for additional Spot Instances at a higher price in the same AWS Region and Availability Zone

D. Ensure that the Amazon Machine Image associated with the application has the latest configurations for the launch configuration

Answer: A

NO.37 A company runs a legacy application with a single-tier architecture on an Amazon EC2 Instance. Disk I/O is low, with occasional small spikes during business hours. The company requires the instance to be stopped from 8 PM to 8 AM daily.

Which storage option is MOST appropriate for this workload?

A. Amazon EC2 instance storage

B. Amazon EBS General Purpose SSD (gp2) storage

C. Amazon S3

D. Amazon EBS Provision IOPS SSD (io1) storage

Answer: B

NO.38 An instance is launched into a VPC subnet with the network ACL configured to allow all inbound traffic and deny all outbound traffic. The instance's security group is configured to allow SSH form any IP address and deny all outbound traffic. What changes need to be made to allow SSH access to the instance?

A. The outbound security group needs to be modified to allow outbound traffic

B. The outbound network ACL needs to be modified to allow outbound traffic

C. Both the outbound security group and outbound network ACL need to modified to allow outbound traffic

D. Nothing, it can be accessed from any IP using SSH

Answer: C

NO.39 A user in account A has created a bucket and added a bucket policy allowing all actions for a user in account

B. the user in account B has uploaded a file to the bucket, specifying Amazon S3 server-side encryption (SSE) and Amazon S3 reduced redundancy storage (RRS). Using the AWS management console, the user in account A attempts to download the file from the bucket but gets an "Access Denied" error. What is causing the error?

A. Account A user has not granted READ permission to itself

B. Account B user has not granted READ permission to account A user

C. SSE and RRS cannot be used on an object at the same time

D. An SSE object cannot be copied between two different accounts

Answer: B

NO.40 An organization is currently hosting a large amount of frequently accessed data consisting of key-value pairs and semi-structured documents in their data center. They are planning to move this data to AWS.

Which of one of the following services MOST effectively meets their needs?

A. Amazon Redshift

B. Amazon RDS

C. Amazon DynamoDB

D. Amazon Aurora

Answer: C

NO.41 A company uses Amazon S3 for storing a variety of files. A Solutions Architect needs to design a feature that will allow users to instantly restore any deleted files within 30 days of deletion. Which is the Most cost-efficient solution?

A. Create lifecycle policies that move the objects to Amazon Glacier and delete them after 30 days

B. Enable cross-region replication. Empty the replica bucket every 30 days using an AWS Lambda function

C. Enable versioning and create a lifecycle policy to remove expired versions after 30 days

D. Enable versioning and MFA Delete. Using a Lambda function, remove MFA delete from objects more than 30 days old

Answer: C

NO.42 A credit card processing application, hosted on an on-premises server, needs to communicate directly with a database hosted on an Amazon EC2 instance running in a private subnet of a VPC. Compliance requirement state that end-to-end communication should be encrypted.

Which solution will ensure that this requirement is met?

A. Use HTTPS for traffic over VPC peering between the VPC and the on-premises datacenter

B. Use HTTPS for traffic over the internet between the on-premises server and the Amazon EC2 instance

C. Use HTTPS for traffic over a VPN connection between the VPC and the on-premises datacenter

D. Use HTTPS for traffic over gateway VPC endpoints that have configured for the Amazon EC2 instance

Answer: C

NO.43 Which of the following statements are true about Amazon Route 53 resource records?
Choose 2 answers

A. An Alias record can map one DNS name to another Amazon Route 53 DNS name.

B. A CNAME record can be created for your zone apex.

C. An Amazon Route 53 CNAME record can point to any DNS record hosted anywhere.

D. TTL can be set for an Alias record in Amazon Route 53.

E. An Amazon Route 53 Alias record can point to any DNS record hosted anywhere.

Answer: A C

Explanation

https://aws.amazon.com/route53/faqs/

Amazon Route 53 offers 'Alias' records (an Amazon Route 53-specific virtual record). Alias records are used to map resource record sets in your hosted zone to Amazon Elastic Load Balancing load balancers, Amazon CloudFront distributions, AWS Elastic Beanstalk environments, or Amazon S3 buckets that are configured as websites.

Alias records work like a CNAME record in that you can map one DNS name (example.com) to another

'target' DNS name (elb1234.elb.amazonaws.com).

http://docs.a

ws.amazon.com/Route53/latest/DeveloperGuide/resource-record-sets-choosing-alias-non-alias.html

A CNAME record can point to any DNS record hosted anywhere, including to the resource record set that Amazon Route 53 automatically creates when you create a policy record.

NO.44 You are migrating a MySQL database to Amazon RDS. You have allocated enough block storage for the initial migration. You expect data storage requirements to grow slowly over time: How can you expand the storage capacity of your Amazon RDS database instance in the future?

A. Allocate additional storage as needed. Plan for a brief database outage during the allocation.

B. Migrate the data base to a larger instance type as needed. Plan for a period of reduced performance during the migration

C. Migrate the database to a larger instance type as needed. Plan for a brief database outage during the migration

D. Allocate additional storage as needed. Plan for a period of reduced performance during the allocation

Answer: C

NO.45 You need a solution to distribute traffic evenly across all of the containers for a task running on Amazon ECS.

Your task definitions define dynamic host port mapping for your containers. What AWS feature provides this functionality?

A. All elastic Load balancing instances support dynamic host port mapping

B. Application load balancers support dynamic host port mapping

C. CloudFront custom origins support dynamic host port mapping

D. Classic load balancers support dynamic host port mapping

Answer: B

NO.46 A Solutions Architect is designing a ride-sharing application. The application needs consistent and single-digit millisecond latency In addition the application must integrate with a highly scalable and fully managed database service to track GPS coordinates and user data for all nodes.

Which database service should the Solutions Architect use to meet these performance requirements ?

A. Amazon RDS

B. Amazon Redshift

C. Amazon DynamoDB

D. Amazon Aurora

Answer: C

NO.47 During performance testing of an application, the Amazon RDS database caused a performance bottleneck.

What steps can be taken to improve the database performance? (Choose two.)

A. Change the RDS database instance to multiple Availability Zones.

B. Scale up to a larger RDS instance type.

C. Redirect read queries to RDS read replicas.

D. Scale out using an Auto Scaling group for RDS.

E. Use RDS in a separate AWS Region.

Answer: B C

NO.48 After reviewing their logs, a startup company noticed larger, random spikes in traffic to their web application.

The company wants to configure a cost-efficient Auto Scaling solution to support high availability of the web application. Which scaling plan should a Solution Architect recommend to meet the company's needs?

A. Dynamic

B. Scheduled

C. Manual

D. Lifecycle

Answer: A

NO.49 A Solution Architect is designing a disaster recovery solution for a 5 TB Amazon Redshift cluster. The recovery site must be at least 500 miles (805 kilometers) from the live site.

How should the Architect meet these requirements?

A. Use AWS CloudFormation to deploy the cluster in a second region.

B. Take a snapshot of the cluster and copy it to another Availability Zone.

C. Modify the Redshift cluster to span two regions.

D. Enable cross-region snapshots to a different region.

Answer: C

NO.50 A company's Data Analysis team needs to perform real-time complex queries against a database. As the team grows, the complex queries are slowing down production transactions. The current environment has an Amazon RDS database with the largest instance type and is still experiencing performance issues.

Which solution will reduce costs and resolve the performance issues?

A. Implement an Amazon RDS Read Replica of the production database to be used by the Data Analysis team and reduce the RDS database instance size.

B. Implement Amazon ElastiCache and run the query against ElastiCache directly

C. Implement Amazon EC2 instances to run a cluster of the production database and remove the RDS database instance.

D. Implement a larger Amazon RDS database instance type and apply Reserved Instances by submitting a limit increase request

Answer: B

NO.51 A company needs to deploy services to an AWS region which they have not previously used. The company currently has an AWS identity and Access Management (IAM) role for the Amazon EC2 instances, which permits the instance to have access to Amazon DynamoDB. The company wants their EC2 instances in the new region to have the same privileges. How should the company achieve this?

A. Create a new IAM role and associated policies within the new region

B. Assign the existing IAM role to the Amazon EC2 instances in the new region

C. Copy the IAM role and associated policies to the new region and attach it to the instances

D. Create an Amazon Machine Image (AMI) of the instance and copy it to the desired region using the AMI Copy feature

Answer: B

NO.52 How can an EBS volume that is currently attached to an EC2 instance be migrated from one Availability Zone to another?

A. Simply create a new volume in the other AZ and specify the original volume as the source

B. Detach the volume and attach it to another EC2 instance in the other AZ

C. Create a snapshot of the volume, and create a new volume from the snapshot in the other AZ

D. Detach the volume, then use the ec2-migrate-volume command to move it to another AZ

Answer: C

NO.53 A Lambda function must execute a query against an Amazon RDS database in a private subnet. Which steps are required to allow the Lambda function to access the Amazon RDS database (Select TWO.)

A. Create a VPC Endpoint for Amazon RDS

B. Create the Lambda function within the Amazon RDS VPC.

C. Change the ingress rules of Lambda security group, allowing the Amazon RDS security group

D. Change the ingress rules of the Amazon RDS security group, allowing the Lambda security group

E. Add an Internet Gateway (IGW) to the VPC route the private subnet to the IGW

Answer: A D

NO.54 A company needs to store data for 5 years The company will need to have immediate and highly available access to the data at any point in time, but will not require frequent access.
What lifecycle action should be taken to meet the requirements while reducing costs?

A. Transition objects from Amazon S3 Standard to Amazon S3 StandardInfrequent Access (S3 Standard-IA)

B. Transition objects to expire after 5 years

C. Transition objects from Amazon S3 Standard to Amazon S3 One ZoneInfrequent Access (S3 One Zone-IA).

D. Transition objects from Amazon S3 Standard to the GLACIER storage class.

Answer: A

NO.55 An e-commerce application is hosted in AWS. The last time a new product was launched, the application experienced a performance issue due to an enormous spike in traffic. Management decided that capacity must be doubled the week after the product is launched.
Which is the MOST efficient way for management to ensure that capacity requirements are met?

A. Add a Step Scaling policy.

B. Add a Dynamic Scaling policy.

C. Add a Scheduled Scaling action.

D. Add Amazon EC2 Spot Instances.

Answer: A

NO.56 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 cost-effective way. Which of the following will meet your requirements?

A. Spot Instances

B. Reserved instances

C. Dedicated instances

D. On-Demand instances

Answer: A

NO.57 A customer need to capture all client connection information from their load balancer every five minutes. The company wants to use this data for analyzing traffic patterns and troubleshooting their applications. Which of the following options meets the customer requirements?

A. Enable access logs on the load balancer

B. Enable Amazon CloudWatch metrics on the load balancer

C. Enable AWS CloudTrail for the load balancer

D. Install the Amazon CloudWatch logs agent on the load balancer

Answer: A

NO.58 A customer set up an Amazon VPC with one private subnet and one public subnet with a NAT gateway The VPC will contain a group of Amazon EC2 instances. All instances will configure themselves at startup by downloading a bootstrap script from an Amazon S3 bucket with a policy that only allows access from the customer's Amazon EC2 instances and then deploys an application through GIT A Solutions Architect has been asked to design a solution that provides the highest level of security regarding network connectivity to the Amazon EC2 instances.
How should the Architect design the infrastructure?

A. Place the Amazon EC2 instances in the public subnet, with no EIPs; route outgoing traffic through the internet gateway.

B. Place the Amazon EC2 instances in a public subnet, and assign EIPs; route outgoing traffic through the NAT gateway

C. Place the Amazon EC2 instances in a private subnet, and assign EIPs; route outgoing traffic through the internet gateway.

D. Place the Amazon EC2 instances in a private subnet, with no EIPs; route outgoing traffic through the NAT gateway

Answer: D

NO.59 A customer needs to deploy a NoSQL-based datastore to Amazon EC2 instances. The NoSQL software has native replication for durability of the data store. Which of the following storage options is the most cost-effective and performs best for the data store?

A. Amazon EBS Magnetic volumes

B. Amazon EBS provisioned IOPS volumes

C. Amazon EBS general purpose SSD volumes

D. SSD-based Amazon EC2 instance store volumes

Answer: B

NO.60 When creation of an EBS snapshot is initiated, but not completed, the EBS volume:

A. Can be used while the snapshot is in progress

B. Cannot be used until the snapshot completes

C. Can be used in read-only mode while the snapshot is in progress

D. Cannot be detached or attached to an EC2 instance until the snapshot completes

Answer: A

NO.61 Your application provides data transmission services. Files containing data to be transformed are first uploaded to Amazon S3 and then transformed by a fleet of sport EC2 instances. Files submitted by your premium customers must be transformed with the highest Priority. How should you implement such a system?

A. Use two SQS queues. One for high priority messages, the other for default priority. Transformation instances first poll the high priority queue, if there is no message; they poll the default priority queue
.

B. Use Route latency based-routing to send high priority tasks to the closet transformation instances.

C. Use a DynamoDB table with an attribute defining the priority level. Transformation instances will scan the table for tasks, sorting results by priority level

D. Use a single SQS queue. Each message contains the priority contains the priority level. Transformation instances poll high=priority messages first

Answer: A

NO.62 A company has an application that accesses a MySQL database installed on a single EC2 instance. The instance recently experienced a fault and brought down the entire application for several hours. The company wants to address the issue but is concerned about spending too much time modifying application code or managing the legacy application.
What should the Solutions Architect recommend to remove this single point of failure with the FEWEST changes to the application code and the LEAST amount of administrative effort?

A. Implement a caching layer by using Amazon ElastiCache to store query results of frequently accessed information.

B. Deploy a second EC2 instance with MySQL installed, and configure replication between this instance and the existing MySQL instance.

C. Migrate the database to an RDS MySQL Multi-AZ DB instance, and point the application servers to the new RDS instance.

D. Create a DynamoDB table to use as a cache layer, and update the application to query data from Amazon DynamoDB before querying MySQL.

Answer: C

NO.63 A Solutions Architect a VPC. Instances in a private subnet must to be able to establish IPv6 traffic to the Internet. The design must scale automatically and not incur any additional cost.
This can be accomplished with:

A. An egress-only internet gateway

B. A NAT Gateway

C. A custom NAT Instance

D. A VPC endpoint

Answer: D

NO.64 A Solution Architect is designing a two-tier application for maximum security, with a web tier running on EC2 instances and the data stored in an RDS DB instance. The web tier should accept user access only through HTTPS connections (port 443) from the Internet, and the data must be encrypted in transit to and from the database.
What combination of steps will MOST securely meet the stated requirements? (Choose two.)

A. Create a security group for the web tier instances that allows inbound traffic only over port 443.

B. Enforce Transparent Data Encryption (TDE) on the RDS database.

C. Create a network ACL that allows inbound traffic only over port 443.

D. Configure the web servers to communicate with RDS by using SSL, and issue certificates to the web tier EC2 instances.

E. Create a customer master key in AWS KMS and apply it to encrypt the RDS instance.

Answer: C D

NO.65 You are building a solution for a customer to extend their on-premises data centre to AWS. The customer requires a 50-Mbps dedicated and private connection to their VPC. Which AWS product or feature satisfies this requirement?

A. Amazon VPC peering

B. Elastic IP Addresses

C. Amazon VPC virtual private gateway

D. AWS Direct Connect

Answer: D

NO.66 A Solutions Architect must select the storage type tor a big data application that requires very high sequential I/O. The data must persist if the instance is stopped. Which of the following storage types will provide the best fit at the LOWEST cost for the application?

A. An Amazon EC2 instance store local SSD volume

B. An Amazon EBS provisioned IOPS SSD volume

C. An Amazon EBS throughput optimized HDD volume

D. An Amazon EBS general purpose SSD volume

Answer: C

NO.67 An organization runs an online media site, hosted on-premises. An employee posted a product review that contained videos and pictures. The review went viral and the organization needs to handle the resulting spike in website traffic.

What action would provide an immediate solution?

A. Redesign the website to use Amazon API Gateway, and use AWS Lambda to deliver content.

B. Add server instances using Amazon EC2 and use Amazon Route 53 with a failover routing policy.

C. Serve the images and videos via an Amazon CloudFront distribution created using the news site as the origin.

D. Use Amazon ElasticCache for Redis for caching and reducing the load requests from the origin.

Answer: B

NO.68 A company has a website running on Amazon EC2. The application DNS name points to an Elastic IP address associated with the EC2 instance In the event of an attack on the website coming horn a specific IP address the company wants a way to Nock the offending IP address.

Which tool or service should a Solutions Architect recommend to block the IP address?

A. Security groups

B. Network ACL

C. AWSWAF

D. AWS Shield

Answer: C

NO.69 A company has gigabytes of web log files stored in an Amazon S3. A Solutions Architect wants to copy those files into Amazon Redshift for analysis. The company's security policy mandates that data is encrypted at rest both in the Amazon Redshift cluster and the Amazon S3 bucket.

Which process will fulfill the security requirements?

A. Enable server-side encryption on the Amazon S3 bucket. Launch an unencrypted Amazon Redshift cluster. Copy the data into the Amazon Redshift cluster

B. Enable server-side encryption on the Amazon S3 bucket. Copy data from the Amazon S3 bucket into an unencrypted Redshift cluster. Enable encryption on the cluster

C. Launch an encrypted Amazon Redshift cluster. Copy the data from the Amazon S3 bucket into the Amazon Redshift cluster. Copy data back to the Amazon S3 bucket in encrypted form

D. Enable server-side encryption on the Amazon S3 bucket. Launch an encrypted Amazon Redshift cluster.

Copy the data into the Amazon Redshift cluster.

Answer: C

NO.70 A company creates business-critical 30 images every night. The images are batch-processed every Friday and require an uninterrupted 48 hours to complete.

What is the MOST cost-effective Amazon EC2 pricing model for this scenario?

A. On-Demand Instances

B. Scheduled Reserved Instances

C. Reserved Instances

D. Spot Instances

Answer: D

NO.71 A Solutions Architect is concerned that the current security group rules for a database tier are too permissive and may permit requests that should be restricted. Below are the current security group permissions for the database tier:

Protocol: TCP

Port Range: 1433 (MS SQL)

Source: ALL

Currently, the only identified resource that needs to connect to the databases is the application tier consisting of an Auto Scaling group of EC2 instances.

What changes can be made to this security group that would offer the users LEAST privilege?

A. Change the source to -1 to remove source IP addresses previously unseen.

B. Change the source to the VPC CIDR block.

C. Change the source to the application instances IDs.

D. Change the source to the security group ID attached to the application instances.

Answer: C

NO.72 A development team is building an application win front-end and backend application tiers. Each tier consists of Amazon EC2 instances behind on ELB Classic Load Balancer. The instances run in Auto Scaling groups across multiple Availability Zones. The network team has allocated the 10.0.0.0/24 address space for this application. Only the front-end load balancer should be exposed to the Internet. There are concerns about the limited size of the address space and the ability of each tier to scale.

What should the VPC subnet design be in each Availability Zone?

A. One public subnet for the load balancer tier, one public subnet for the front-end tier, and one private subnet for the backend tier

B. One shared public subnet for all tiers of the application

C. One public subnet for the load balancer tier and one shared private subnet for the application tiers

D. One shared private subnet for all tiers of the application

Answer: A

NO.73 Application servers currently deployed in a private subnet require the ability to integrate with a third-party service accessible through the Internet.

Which changes are required to provide outbound Internet connectivity In the VPC without providing inbound Internet connectivity to the application servers?

A. Create a NAT Gateway without attaching an Internet Gateway to the VPC

B. Create a NAT Gateway and attach an Internet Gateway to the VPC.

C. Attach an Internet Gateway to the VPC without creating a NAT Gateway.

D. Attach a Virtual Private Gateway to the VPC and create a NAT Gateway.

Answer: B

Explanation

NAT Gateway Basics

To create a NAT gateway, you must specify the public subnet in which the NAT gateway should reside. For more information about public and private subnets, see Subnet Routing. You must also specify an Elastic IP address to associate with the NAT gateway when you create it. After you've created a NAT gateway, you must update the route table associated with one or more of your private subnets to point Internet-bound traffic to the NAT gateway. This enables instances in your private subnets to communicate with the internet.

Each NAT gateway is created in a specific Availability Zone and implemented with redundancy in that zone.

You have a limit on the number of NAT gateways you can create in an Availability Zone. For more information, see Amazon VPC Limits.

Note

If you have resources in multiple Availability Zones and they share one NAT gateway, in the event that the NAT gateway's Availability Zone is down, resources in the other Availability Zones lose internet access. To create an Availability Zone-independent architecture, create a NAT gateway in each Availability Zone and configure your routing to ensure that resources use the NAT gateway in the same Availability Zone.

If you no longer need a NAT gateway, you can delete it. Deleting a NAT gateway disassociates its Elastic IP address, but does not release the address from your account.

The following diagram illustrates the architecture of a VPC with a NAT gateway. The main route table sends internet traffic from the instances in the private subnet to the NAT gateway. The NAT gateway sends the traffic to the internet gateway using the NAT gateway's Elastic IP address as the source IP address.

A VPC with public and private subnets and a NAT gateway
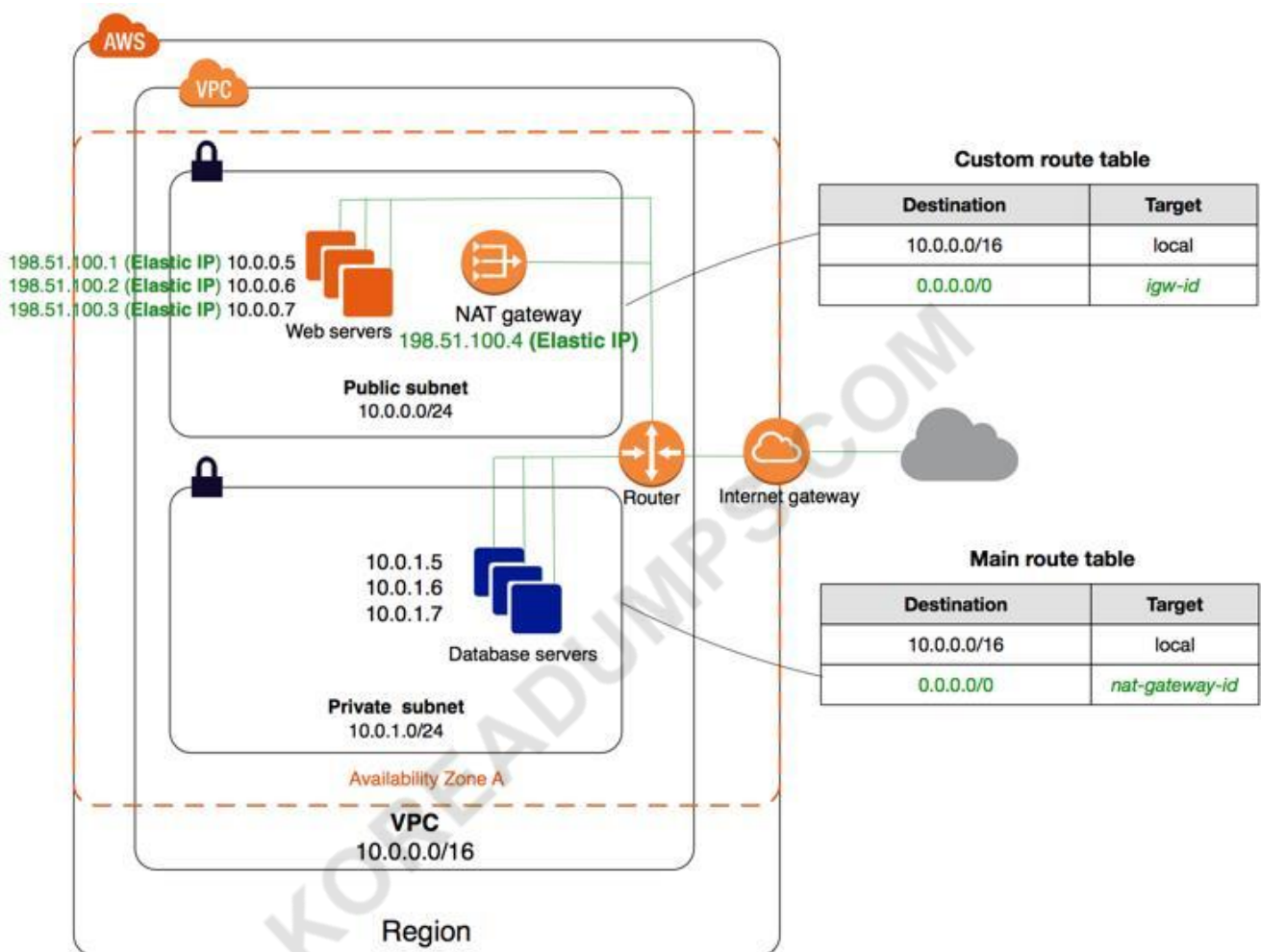
NO.74 A stray Amazon EC2 r3.8xlarge instance is running in your AWS account. Before terminating it, you want to find the owner to confirm that it is not needed.

Where can you find the identity that launched this instance?

A. CloudTrail logs

B. VPC flow logs

C. ELB access logs

D. Operating system logs

Answer: A

NO.75 Your Amazon EC2 instances must access the AWS API, so you created a NAT gateway in an existing subnet.

When you try to access the AWS API, you are unsuccessful.

What could be preventing access?

A. The instances need an IAM role granting access to the NAT gateway

B. The NAT gateway subnet does not have a route to an Internet gateway

C. The NAT gateway does not have a route to the virtual private gateway

D. The instances are not in the same subnet as the NAT gateway

Answer: B

NO.76 A Solutions Architect is designing a three-tier web application that includes an Auto Scaling

group of Amazon EC2 Instances running behind an ELB Classic Load Balancer. The security team requires that all web servers must be accessible only through the Load Balancer and that none of the web servers are directly accessible from the Internet.

How should the Architect meet these requirements?

A. Use a Load Balancer installed on an Amazon EC2 instance

B. Configure the web servers' security group to deny traffic from the public Internet

C. Create an Amazon CloudFront distribution in front of the ELB Classic Load Balancer

D. Configure the web tier security group to allow only traffic from the ELB Classic Load Balancer

Answer: D

Explanation

Routing Traffic to an ELB Load Balancer

If you host a website on multiple Amazon EC2 instances, you can distribute traffic to your website across the instances by using an Elastic Load Balancing (ELB) load balancer. The ELB service automatically scales the load balancer as traffic to your website changes over time. The load balancer also can monitor the health of its registered instances and route domain traffic only to healthy instances.

To route domain traffic to an ELB load balancer, use Amazon Route 53 to create an alias record that points to your load balancer. An alias record is a Route 53 extension to DNS. It's similar to a CNAME record, but you can create an alias record both for the root domain, such as example.com, and for subdomains, such as www.example.com. (You can create CNAME records only for subdomains.) Note Route 53 doesn't charge for alias queries to ELB load balancers or other AWS resources.

Prerequisites

Before you get started, you need the following:

* An ELB load balancer. You can use an ELB Classic, Application, or Network Load Balancer. For information about creating a load balancer, see Getting Started with Elastic Load Balancing in the Elastic Load Balancing User Guide Give the load balancer a name that will help you remember what it's for later. The name that you specify when you create a load balancer is the name that you'll choose when you create an alias record in the Route 53 console.

* A registered domain name. You can use Route 53 as your domain registrar, or you can use a different registrar.

* Route 53 as the DNS service for the domain. If you register your domain name by using Route 53, we automatically configure Route 53 as the DNS service for the domain.

For information about using Route 53 as the DNS service provider for your domain, see Making Amazon Route 53 the DNS Service for an Existing Domain.

NO.77 A Solutions Architect is designing a public-facing web application for employees to upload linages to their social media account. The application consists of multiple Amazon EC2 instances behind an elastic load balancer, an Amazon S3 bucket where uploaded images are stored and an Amazon DynamoDB table for storing image metadata.

Which AWS service can the Architect use to automate the process of updating metadata in the DynamoDB table upon image upload?

A. Amazon CloudWatch

B. AWS Cloud Formation

C. AWS Lambda

D. Amazon SQS

Answer: B

NO.78 A customer wants to leverage Amazon Simple Storage Service (S3) and Amazon Glacier as part of their backup and archive infrastructure. The customer plans to use third-party software to support this integration.
Which approach will limit the access of the third party software to only the Amazon S3bucket named "company-backup"?
A. A custom bucket policy limited to the Amazon S3 API in the Amazon Glacier archive company-backup
B. A custom bucket policy limited to the Amazon S3 API in company-backup
C. A custom IAM user policy limited to the Amazon S3 API for the Amazon Glacier archive company-backup
D. A custom IAM user policy limited to the Amazon S3 API in company-backup
Answer: A

NO.79 A user is testing a new service that receives location updates from 3,600 rental cars every hour.
Which service will collect data and automatically scale to accommodate production workload?
A. Amazon EC2
B. Amazon Kinesis Firehose
C. Amazon EBS
D. Amazon API Gateway
Answer: D

NO.80 A Solutions Architect is migrating a company's MySQL database to an Amazon RDS MySQL database. The company requires the database to be resilient with minimum downtime when failures occur.
How can these requirements be met?
A. Enable a read replica in another Availability Zone
B. Enable multiple Availability Zones in a different AWS Region
C. Enable multiple Availability Zones in a same AWS Region
D. Enable Amazon RDS instance snapshots in one Availability Zone
Answer: C

NO.81 What is one key difference between an Amazon EBSbacked and an instancestore backed instance?
A. Amazon EBS-backed instances can be stopped and restarted
B. Instance-store backed instances can be stopped and restarted
C. Auto scaling requires using Amazon EBS-backed instances
D. Virtual Private Cloud requires EBS backed instances
Answer: A

NO.82 You are deploying an application to track GPS coordinates of delivery in the United States. Coordinates are transmitted from each delivery truck once every three seconds. You need to design

an architecture that will enable Realtime processing of these coordinates from multiple consumers. Which service should you use to implement data ingestion?

A. Amazon Kinesis

B. AWS Data Pipeline

C. Amazon AppStream

D. Amazon Simple Queue Service

Answer: A

NO.83 An existing application stores sensitive information on a non-boot Amazon EBS data volume attached to an Amazon Elastic Compute Cloud instance. Which of the following approaches would protect the sensitive data on an Amazon EBS volume?

A. Snapshot the current Amazon EBS volume. Restore the snapshot to a new, encrypted Amazon EBS volume Mount the Amazon EBS volume

B. Create and mount a new, encrypted Amazon EBS volume. Move the data to the new volume. Delete the old Amazon EBS volume

C. Unmount the EBS volume. Toggle the encryption attribute to True. Re-mount the Amazon EBs volume

D. Upload your customer keys to AWS CloudHSM. Associate the Amazon EBS volume with AWS CloudHSM. Re-mount the Amazon EBS volume

Answer: A

NO.84 A business-critical MySql database is running on an Amazon EC2 instance. Storage Performance and durability are important to the application.
Which volume type provides a persistent volume with single-digit millisecond latencies and sustained IOPS performance?

A. Amazon EC2 instance store

B. Amazon EBS Cold HDD

C. Amazon EBS provisioned IOPS SSD

D. Amazon EBS General purpose SSD

Answer: A

NO.85 An environment has an Auto Scaling group across two Availability Zones referred to as AZ-a and AZ-b and a default termination policy AZ-a has four Amazon EC2 instances and AZ-b has three EC2 instances None of the instances is protected from a scale-n How will Auto Scaling proceed 4 there is a scale-in event?

A. Auto Seating selects an instance to terminate randomly

B. Auto Scaling terminates tie instance wilt the oldest launch configuration of all instances

C. Auto Scaling selects the Availability Zone with four EC2 instances and then continues to evaluate

D. Auto Scaling terminates the instance with the closest next billing hour of all instances

Answer: D

NO.86 A call center application consists of a three-tier application using Auto Scaling groups to automatically scale resources as needed. Users report that every morning at 9:00 AM the system becomes very slow for about 15 minutes. A Solution Architect determines that a large percentage of

the call center staff starts work at 9:00 AM, so Auto Scaling does not have enough time to scale out to meet demand.

How can the Architect fix the problem?

A. Change the Auto Scaling group's scale out event to scale based on network utilization.

B. Create an Auto Scaling scheduled action to scale out the necessary resources at 8:30 AM every morning.

C. Use Reserved Instances to ensure the system has reserved the right amount of capacity for the scale-up events.

D. Permanently keep a steady state of instances that is needed at 9:00 AM to guarantee available resources, but leverage Spot Instances.

Answer: A

NO.87 Which of the following are true regarding encrypted Amazon Elastic Block Store (EBS) volumes? Choose 2 answers

A. Snapshots are automatically encrypted

B. Existing volumes can be encrypted

C. Supported on all Amazon EBS volume types

D. Available to all instances types

E. Shared volumes can be encrypted

Answer: A C

NO.88 A customer owns a simple API for their website that receives about 1,000 requests each day and has an average response time of 50 ms. It is currently hosted on one c4.large instance. Which changes to the architecture will provide high availably at the LOWEST cost?

A. Create an Auto Scaling group with a minimum of one instance and a maximum of two instances then use an Application Load Balancer to balance the traffic

B. Recreate the API using Amazon API Gateway and use AWS Lambda as the service backend

C. Create an Auto Scaling group with a minimum and a maximum of two instances, then use an Application Load Balancer to balance the traffic.

D. Recreate the API using Amazon API Gateway and integrate the new API with the existing backend service

Answer: D

NO.89 What is a placement group?

A. A collection of Auto Scaling groups in the same region

B. A feature that enables EC2 instances to interact with each other via high bandwidth, low latency connections

C. A collection of authorized CloudFront edge locations for a distribution

D. A collection of Elastic Load Balancers in the same Region or Availability Zone

Answer: B

NO.90 An application provides a feature that allows users to securely download private and personal files. The web server is currently overwhelmed with serving files for download. A Solutions Architect must find a more effective solution to reduce web server load and costs, and must allow users to

download only their own files Which solution meets all requirements?

A. Store the files securely on Amazon S3 and have the application generate an Amazon S3 pre-signed URL for the user to download.

B. Store the files in an encrypted Amazon EBS volume, and use a separate set of servers to serve the downloads.

C. Have the application encrypts the files and stores them in the local Amazon EC2 Instance Store prior to serving them up for download.

D. Create an Amazon CloudFront distribution to distribute and cache the files.

Answer: A

NO.91 Which of the following are use cases for Amazon DynamoDB? Choose 3 answers

A. Storing BLOB data

B. Managing web sessions

C. Storing JSON documents

D. Storing metadata for Amazon S3 objects

E. Running relational joins and complex updates

F. Storing large amounts of infrequently accessed data

Answer: B C D

NO.92 Which tool analyzes account resources and provides a detailed inventory of changes over time?

A. AWS Config

B. AWS CloudFormation

C. Amazon CloudWatch

D. AWS Service Catalog

Answer: A

NO.93 A Solution Architect works for an insurance company that has a large number of patient health records. Each record will be used once when assessing a patient and will need to be securely stored for seven years to meet regulations. In rare cases the Solution Architect may need to retrieve a patient record in five hours.

Which type of AWS storage would deliver the most cost-effective solution?

A. Amazon S3 Reduced Redundancy Storage

B. Amazon S3

C. Amazon Glacier

D. Amazon S3 Infrequent Access

Answer: C

NO.94 You have a video Trans coding application running on Amazon EC2. Each instance pools a queue to find out which video should be Trans coded, and then runs a Trans coding process.

If this process is interrupted, the video will be Trans coded by another instance based on the queuing system.

You have a large backlog of videos which need to be Trans coded and would like to reduce this backlog by adding more instances. You will need these instances only until the backlog is reduced.

Which type of Amazon EC2 instance should you use to reduce the backlog in the most cost effective way?

A. Dedicated instances

B. Spot instances

C. On-demand instances

D. Reserved instances

Answer: B

NO.95 If you want to setup a web server on EC2 with multiple Virtual Hosts Using distinct SSL certificates you need to:

A. Use an S3 bucket with server side encryption

B. Run your Apache EC2 instance in VPC

C. Create one Amazon Elastic Load Balancer with SSL termination

D. Upload your SSL server certification to Amazon identity and Access Management

Answer: C

NO.96 A company has reproducible data that they want to store on Amazon Web Services. The company may want to retrieve the data on a frequent basis. Which Amazon web services storage option allows the customer to optimize storage costs and still achieve high availability for their data?

A. Amazon S3 Reduced Redundancy Storage

B. Amazon EBS Magnetic Volume

C. Amazon Glacier

D. Amazon S3 Standard Storage

Answer: A

Explanation

Reduced Redundancy Storage (RRS) is an Amazon S3 storage option that enables customers to store noncritical, reproducible data at lower levels of redundancy than Amazon S3's standard storage. ... Reduced Redundancy Storage is: Backed with the Amazon S3 Service Level Agreement for availability.

NO.97 A company wants to expand its web services from us-east-1 into ap-southeast-1. The company stores a large amount of static content on its website, and recently received complaints about slow loading speeds and the website timing out.

What should be done to meet the expansion goal while also addressing the latency and timeout issues?

A. Store the static content in Amazon S3 and enable S3 Transfer Acceleration.

B. Store the static content in an Amazon EBS volume in the ap-southeast-1 region and provision larger Amazon EC2 instances for the website.

C. Use an Amazon Route 53 simple routing policy to distribute cached content across three regions.

D. Use Amazon S3 to store the static content and configure an Amazon CloudFront distribution.

Answer: D

NO.98 A Solutions Architect is working on a PCI-compliant architecture that needs to call an external service provider's API. The external provider requires IP whitelisting to verify the calling party.

How should the Solutions Architect provide the external party with the IP addresses for whitelisting?

A. Use an API Gateway in proxy mode, and provide the API Gateway's IP address to the external service provider.

B. Associate a public elastic network interface to a published stage/endpoint in API Gateway, exposing the AWS Lambda function, and provide the IP address for the public network interface to the external party to whitelist.

C. Deploy the Lambda function in private subnets and route outbound traffic through a NAT gateway. Provide the NAT gateway's Elastic IP address to the external service provider.

D. Provide the external party the allocated AWS IP address range for Lambda functions, and send change notifications by using a subscription to the AmazonIpSpaceChanged SNS topic.

Answer: C

NO.99 A company has a web application that makes requests to a backend API service. The API service is behind an Elastic Load Balancer running on Amazon EC2 instances.
Most backend API service endpoint calls finish very quickly, but one endpoint that makes calls to create objects in an external service takes a long time to complete These long-running calls are causing client timeouts and increasing overall system latency What should be done to minimize the system throughput impact of the slow-running endpoint?

A. Change the EC2 instance size to increase memory and compute capacity

B. Use Amazon SQS to offload the long-running requests for asynchronous processing by separate workers.

C. Increase the load balancer idle timeout to allow the long-running requests to complete.

D. Use Amazon ElastiCache for Redis to cache responses from the external service.

Answer: D

NO.100 An application uses a single-Instance deployment of Amazon RDS MySQL database. The database has intensive read operations, and the heavy load is causing performance issues. How can a user improve performance?

A. Create read replicas

B. Stripe the data across multiple Amazon EBS volumes

C. Switch to a Multi-AZ RDS database

D. Take hourly database snapshots

Answer: A

Explanation

Benefits of Using EBS Volumes

EBS volumes provide several benefits that are not supported by instance store volumes.

* Data availability

When you create an EBS volume in an Availability Zone, it is automatically replicated within that zone to prevent data loss due to failure of any single hardware component. After you create a volume, you can attach it to any EC2 instance in the same Availability Zone. After you attach a volume, it appears as a native block device similar to a hard drive or other physical device. At that point, the instance can interact with the volume just as it would with a local drive. The instance can format the EBS volume with a file system, such as ext3, and then install applications.

An EBS volume can be attached to only one instance at a time, but multiple volumes can be attached to a single instance. If you attach multiple volumes to a device that you have named, you can stripe

data across the volumes for increased I/O and throughput performance.

An EBS volume and the instance to which it attaches must be in the same Availability Zone.

You can get monitoring data for your EBS volumes, including root device volumes for EBS-backed instances, at no additional charge. For more information about monitoring metrics, see Monitoring Volumes with CloudWatch. For information about tracking the status of your volumes, see Amazon CloudWatch Events for Amazon EBS.

NO.101 A Solutions Architect is designing an Amazon VPC. Applications in the VPC must have private connectivity to Amazon DynamoDB in the same AWS Region. The design should route DynamoDB traffic through:

A. VPC peering connection

B. NAT gateway

C. VPC endpoint

D. AWS Direct Connect

Answer: C

NO.102 A Solutions Architect is designing a new architecture that will use an Amazon EC2 Auto Scaling group.

Which of the following factors determine the health check grace period? (Select TWO)

A. How frequently the Auto Scaling group scales up or down.

B. How many Amazon CloudWatch alarms are configured for status checks.

C. How much of the application code is embedded in the AMI.

D. How long it takes for the Auto Scaling group to detect a failure.

E. How long the bootstrap script takes to run.

Answer: A E

NO.103 A company needs to deploy virtual desktops to its customers in a virtual private cloud, leveraging existing security controls. Which set of AWS services and features will meet the company's requirements?

A. Virtual private network connection, AWS Directory services, and Classic Link

B. Virtual private network connection, AWS Directory services, and Amazon Workspaces

C. AWS Directory service, Amazon Workspaces, and AWS Identity and Access Management

D. Amazon Elastic Compute Cloud, and AWS identity and access management

Answer: B

NO.104 A company had decided to store its critical data on the AWS Cloud. Newly uploaded data is frequently accessed for a period of one month, after which the data is no longer frequently accessed. However, there is a requirement for older objects with a specific prefix to be accessed within milliseconds.

What services and features should the company use to meet this requirement is a durable, available, and cost-effective manner?

A. Use the S3 Standard storage class to store the objects for the initial month. After one month, use lifecycle transition policies to change the storage class for objects with the prefix to S3 STANDARD_IA and the rest of the data to Amazon Glacier

B. Use the S3 Standard storage class to store the objects for the initial month. After one month, use lifecycle transition policies to change the storage class for all data to Amazon Glacier

C. Use the S3 STANDARD_IA storage class to store the objects for the initial month. After one month, use lifecycle transition policies to change the storage class for the objects with the prefix to S3 ONEZONE_IA and the rest of the data to Amazon Glacier

D. Use the S3 STANDARD_IA storage class to store the objects for the initial month. After one month, use lifecycle transition policies to change the storage class for all data to S3 ONEZONE_IA

Answer: D

NO.105 A Solutions Architect is designing an application on AWS that will connect to the on-premise data center through a VPN connection. The solution must be able to log network traffic over the VPN. Which service logs this network traffic?

A. AWS CloudTrail

B. logs Amazon VPC flow logs

C. Amazon S3 bucket logs

D. Amazon CloudWatch Logs

Answer: B

Explanation

VPC Flow LogsIn order to provide better support for this important aspect of network monitoring, we are introducing Flow Logs for the Amazon Virtual Private Cloud. Once enabled for a particular VPC, VPC subnet, or Elastic Network Interface (ENI), relevant network traffic will be logged to CloudWatch Logs for storage and analysis by your own applications or third-party tools.

You can create alarms that will fire if certain types of traffic are detected; you can also create metrics to help you to identify trends and patterns.

The information captured includes information about allowed and denied traffic (based on security group and network ACL rules). It also includes source and destination IP addresses, ports, the IANA protocol number, packet and byte counts, a time interval during which the flow was observed, and an action (ACCEPT or REJECT).

NO.106 A Solutions Architect is designing a customer order processing application that will likely have high usage spikes.

What should the Architect do to ensure that customer orders are not lost before being written to an Amazon RDS database? (Choose two.)

A. Use Amazon CloudFront to deliver the application front end.

B. Use Elastic Load Balancing with a round-robin routing algorithm.

C. Have the orders written into an Amazon SQS queue.

D. Scale the number of processing nodes based on pending order volume.

E. Have a standby Amazon RDS instance in a separate Availability Zone.

Answer: A B

NO.107 Which of the following are valid statements about Amazon S3? Choose 2 answers

A. S3 provides read-after-write consistency for any type of PUT or DELETE

B. Partially saved objects are immediately readable with a GET after an overwrite Put

C. Consistency is not guaranteed for any type of PUT and DELETE

D. A successful response to a PUT request only occurs when a complete object is saved

E. S3 provides eventual consistency for overwrite PUTS and DELETES

Answer: A E

NO.108 A customer owns a MySQL database that is accessed by various clients who expect, at most 100 ms latency on requests. Once a record is stored in the database, it is rarely changed Clients only access one record at a time.

Database access has been increasing exponentially due to increased client demand. The resultant load will soon exceed the capacity of the most expensive hardware available for purchase. The customer wants to migrate to AWS, and is willing to change database systems.

Which service would alleviate the database load issue and offer virtually unlimited scalability for the future?

A. Amazon RDS

B. Amazon DynamoDB

C. Amazon Redshift

D. AWS Data Pipeline

Answer: B

NO.109 A Solutions Architect is designing a solution for a media company that will stream large amounts of data from an Amazon EC2 instance. The data streams are typically large and sequential, and must be able to support up to 500 MB/s.

Which storage type will meet the performance requirements of this application?

A. EBS Provisioned IOPS SSD

B. EBS General Purpose SSD

C. EBS Cold HDD

D. EBS Throughput Optimized HDD

Answer: D

NO.110 A Security team reviewed their company's VPC Flow Logs and found that traffic is being directed to the internet. The application in the VPC uses Amazon EC2 instances for compute and Amazon S3 for storage The company's goal is to eliminate internet access and allow the application to continue to function.

What change should be made in the VPC before updating the route table?

A. Create a NAT gateway for Amazon S3 access.

B. Create a VPC endpoint for Amazon S3 access.

C. Create a VPC endpoint for Amazon EC2 access.

D. Create a NAT gateway for Amazon EC2 access.

Answer: B

NO.111 An application publishes Amazon SNS messages in response to several events. An AWS Lambda function subscribes to these messages. Occasionally the function will fail while processing a message, so the original event message must be preserved for root cause analysis.

What architecture will meet these requirements without changing the workflow?

A. Subscribe an Amazon SQS queue to the Amazon SNS topic and trigger the Lambda function from

the queue.

B. Configure Lambda to write failures to an SQS Dead Letter Queue.

C. Configure a Dead Letter Queue for the Amazon SNS topic.

D. Configure the Amazon SNS topic to invoke the Lambda function synchronously

Answer: A

NO.112 A company requires operating system permission on a relational database server. What should a Solutions Architect suggest as a configuration for a highly available database architecture?

A. Multiple EC2 instances in a database replication configuration that uses two Availability Zones.

B. A standalone Amazon EC2 instance with a selected database installed.

C. Amazon RDS in a Multi-AZ configuration with Provisioned IOPS.

D. Multiple EC2 instances in a replication configuration that uses two placement groups.

Answer: A

NO.113 A company has a web application running in a Docker container that connects to a MYSQL server in an on-premises data center. The deployment and maintenance of this application are becoming time-consuming and slowing down new feature releases. The company wants to migratehe application to AWS and use services that helps facilitate infrastructure management and deployment .

Which architectures should the company on AWS? (Select Two)

A. Amazon ECS for the web application, and an Amazon RDS for MySQL for the database

B. AWS Elastic Beanstalk Docker Multi-container either for the web application or database

C. AWS Elastic Beanstalk Docker Single Container for the web application, and an Amazon RDS for MySQL for the database

D. AWS CloudFormation with Lambda Custom Resources without VPC for the web application, and an Amazon RDS for MySQL database

E. AWS CloudFormation with Lambda Custom Resources running in a VPC for the web application, and an Amazon RDS for MySQL database

Answer: A C

NO.114 A company has an Amazon RDS-managed online transaction processing system that has very heavy read and write. The Solutions Architect notices throughput issues with the system. How can the responsiveness of the primary database be improved?

A. Use asynchronous replication for standby to maximize throughput during peak demand.

B. Offload SELECT queries that can tolerate stale data to READ replica.

C. Offload SELECT and UPDATE queries to READ replica.

D. Offload SELECT query that needs the most current data to READ replica.

Answer: B

NO.115 A Solutions Architect is building an application that into Amazon RDS. One table in particular is read heavy and minimal latency is critical.

What of the following would provide the highest level of performance?

A. Use Amazon DynamoDB Accelerator

B. Use Amazon RDS read replicas

C. Use Amazon CloudFront

D. Use Amazon ElastiCache

Answer: D

NO.116 A Solutions Architect is designing a workload that requires capacity reservation al all limes using many r4

2xlarge instances. The workload will run 24/7 for the next two years and uses Amazon Linux What Is the MOST cost-effective way to obtain this required compute capacity?

A. Regional Standard Reserved instances

B. Spot Fleet

C. Regional Convertible Reserved Instances

D. Standard Reserved Instances

Answer: D

NO.117 Your company has separate AWS accounts for development and production. Each developer is assigned an IAM user in the development account. Developers occasionally need to access the production account to roll out changes to that environment. Your company does not allow the creation of IAM users in the production account.

What strategy will allow the development team to access the production account?

A. Create an IAM role in the production account. Allow IAM users in the development account to assume the role.

B. Create an IAM group in the development account. Grant IAM users in the development account membership in the group.

C. Create an IAM group in the production account. Grant IAM users in the development account membership in the group.

D. Create an IAM role in the development account. Allow IAM users in the development account to assume the role.

Answer: A

NO.118 A customer has written an application that uses Amazon S3 exclusively as a data store. The application works well until the customer increases the rate at which the application is updating information. The customer now reports that outdated data occasionally appears when the application accesses objects in Amazon S3.

What could be the problem, given that the application logic is otherwise correct?

A. The application is reading parts of objects from Amazon S3 using a range header.

B. The application is reading objects from Amazon S3 using parallel object requests.

C. The application is updating records by writing new objects with unique keys.

D. The application is updating records by overwriting existing objects with the same keys.

Answer: A

NO.119 You have a database application running on two instances in Amazon EC2.This application runs 24x7x365 and has a consistent and predictable workload. You want to choose the most costeffective pricing model. What kind of Amazon EC2 instances should you use?

A. Dedicated instances

B. On-demand instances

C. Reserved instances

D. Spot instances

Answer: C

NO.120 An application consists of microservices. The microservices need to communicate asynchronously and the solution must ensure that each message is consumed only once.
Which service should be used?

A. Amazon Kinesis

B. Amazon SQS

C. Amazon SQS

D. AWS STS

Answer: C

NO.121 A Solutions Architect is designing an application on AWS that uses persistent block storage. Data must beencrypted at rest.
Which solution meets the requirement?

A. Enable SSL on Amazon EC2 instances.

B. Encrypt Amazon EBS volumes on Amazon EC2 instances.

C. Enable server-side encryption on Amazon S3.

D. Encrypt Amazon EC2 Instance Storage.

Answer: B

NO.122 An application runs on multiple Amazon EC2 instances. Each running instance of the application must have access to a shared file system.
Where should the data be stored?

A. Amazon S3

B. Amazon DynamoDB

C. Amazon EFS

D. Amazon EBS

Answer: C

NO.123 A company plans to use an Amazon VPC to deploy a web application consisting of an elastic load balancer, a fleet of web and application servers, and an Amazon RDS MySQL database that should not be accessible from the Internet. The proposed design must be highly available and distributed over two Availability Zones.
What would be the MOST appropriate VPC design for this specific use case?

A. Two public subnets for the elastic load balancer, two public subnets for the web servers, and two public subnets for Amazon RDS.

B. One public subnet for the elastic load balancer, two private subnets for the web servers, and two private subnets for Amazon RDS.

C. One public subnet for the elastic load balancer, one public subnet for the web servers, and one

private subnet for the database.

D. Two public subnets for the elastic load balancer, two private subnets for the web servers, and two private subnets for RDS.

Answer: D

NO.124 As part of securing an API layer built on Amazon API gateway, a Solutions Architect has to authorize users who are currently authenticated by an existing identity provider. The users must be denied access for a period of one hour after three unsuccessful attempts.

How can the Solutions Architect meet these requirements?

A. Use AWS IAM authorization and add least-privileged permissions to each respective IAM role.

B. Use an API Gateway custom authorizer to invoke an AWS Lambda function to validate each user's identity.

C. Use Amazon Cognito user pools to provide built-in user management.

D. Use Amazon Cognito user pools to integrate with external identity providers.

Answer: B

NO.125 A company needs to capture all client connection information from its Application Load Balancer every five minutes. This data will be used to analyze traffic patterns and troubleshoot the application.

How can a Solutions Architect meet this requirement?

A. Enable AWS CloudTrail for the Application Load Balancer.

B. Enable Access Logs on the Application Load Balancer.

C. Install CloudWatch Agent on the Application Load Balancer.

D. Enable CloudWatch metrics on the Application Load Balancer

Answer: B

NO.126 After launching an instance that you intend to serve as a NAT (Network Address Translation) device in a public subnet you modify your route tables to have the NAT device be the target of internet bound traffic of your private subnet. When you try and make an outbound connection to the internet from an instance in the private subnet, you are not successful. Which of the following steps could resolve the issue?

A. Attaching a second Elastic network interface to the instance in the private subnet, and placing it in the public subnet

B. Attaching an Elastic IP address to the instance in the private subnet

C. Disabling the Source/Destination check attribute on the NAT instance

D. Attaching a second Elastic Network interface to the NAT instance, and placing it in the private subnet

Answer: C

NO.127 A Solutions Architect is designing a web application that will be hosted on Amazon EC2 instances in a public subnet. The web application uses a MySQL database in a private subnet. The database should be accessible to database administrators. Which of the following options should the Architect recommend? (Select TWO.)

A. Create a bastion host in a public subnet, and use the bastion host to connect to the database.

B. Log in to the web servers in the public subnet to connect to the database.

C. Perform DB maintenance after using SSH to connect to the NAT Gateway in a public subnet.

D. Create an IPSec VPN tunnel between the customer site and the VPC, and use the VPN tunnel to connect to the database.

**E.** Attach an Elastic IP address to the database.

Answer: A D

Explanation

It is best practise to place your database servers into a private subnet. By definition a private subnet in Amazon Web Service (AWS) is not reachable from the internet. So there is no internet gateway assigned to it. With proper security groups configured you restrict the database access to that (web) servers which need access only.

But that configuration makes it more complicated for managing the database servers, e.g. connecting with SQL clients. Instead of putting your database instance into a public subnet you can configure a bastion host (aka jump box) for acting as an intermediate server. The following picture gives you a quick overview:

aws_architecture
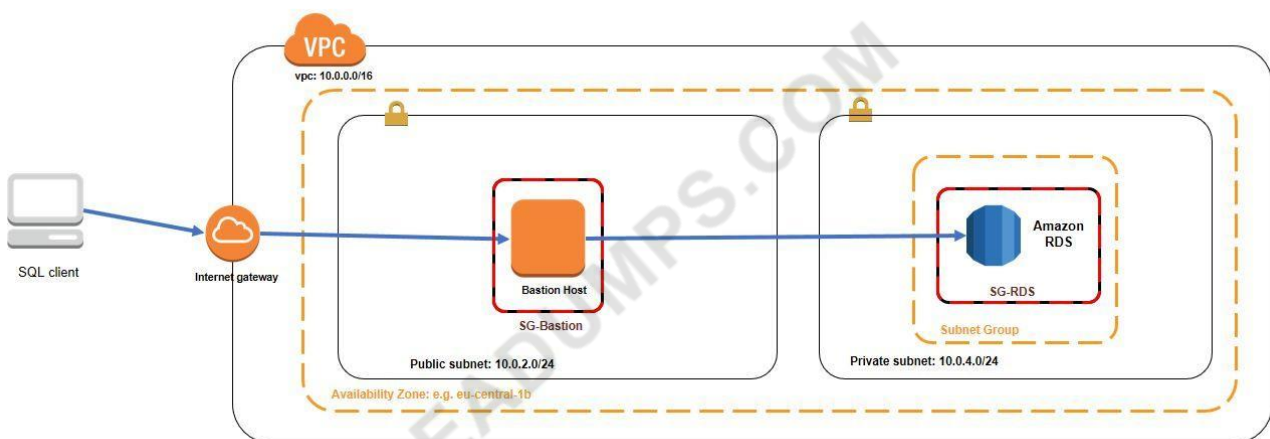
You place a small EC2 instance (e.g. t2.nano) into a public subnet within your VPC. After that you can connect with e.g. Putty (for Windows) to establish a SSH connection and configure it to create an SSH tunnel for the database port.

Please note your security group settings. The bastion host has inbound access for port 22 and your source IP address only (or more which is not recommended). The security group for the RDS instance will allow inbound access for port 3306 (for MySQL) with restriction to the security groups which needs access to the database server (in our case the bastion host). With that configuration you limit the database access to the minimum needed.
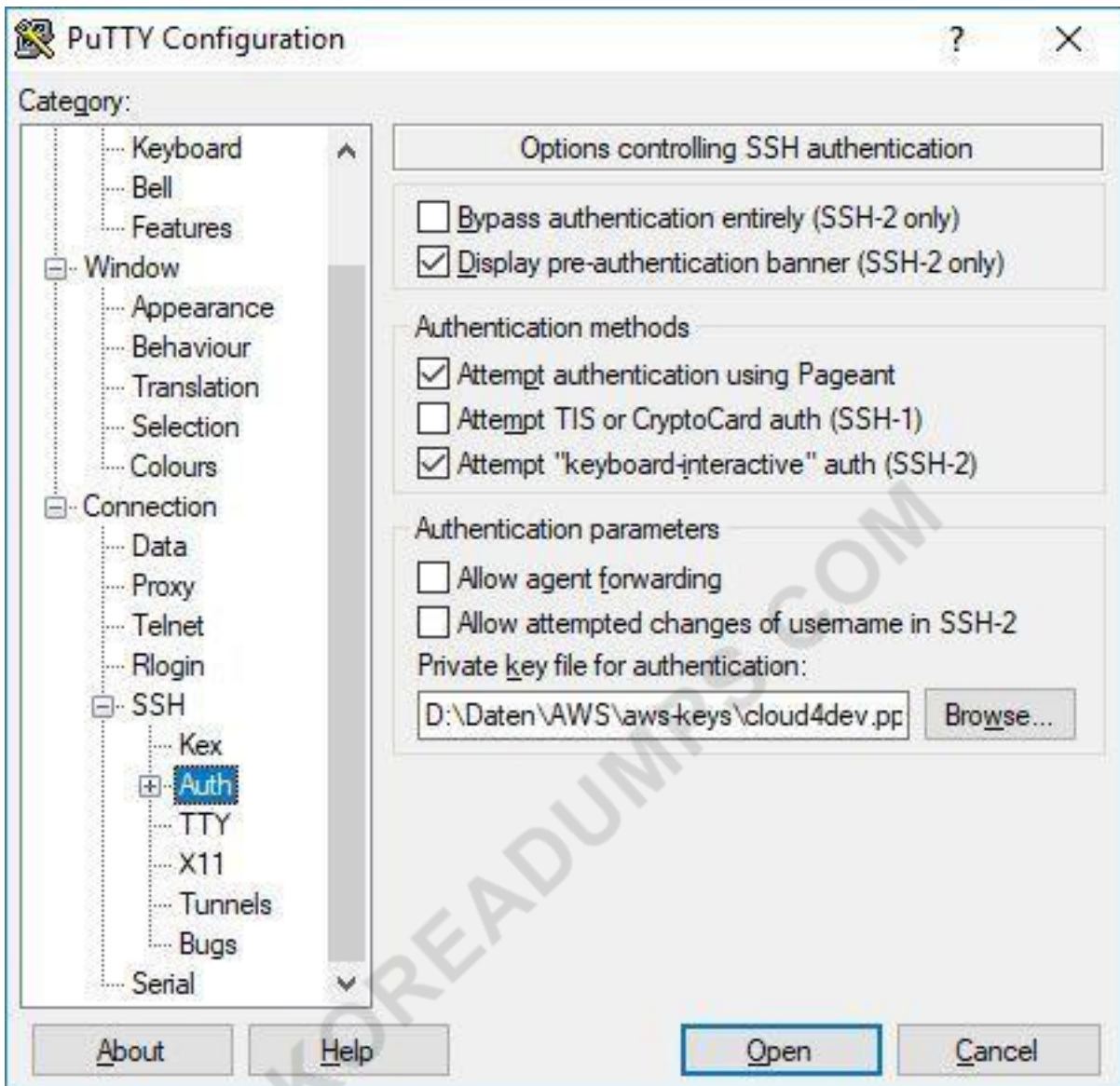
Configuring Putty

At first enter the hostname with ec2-user. This is the public IP address of your bastion host:
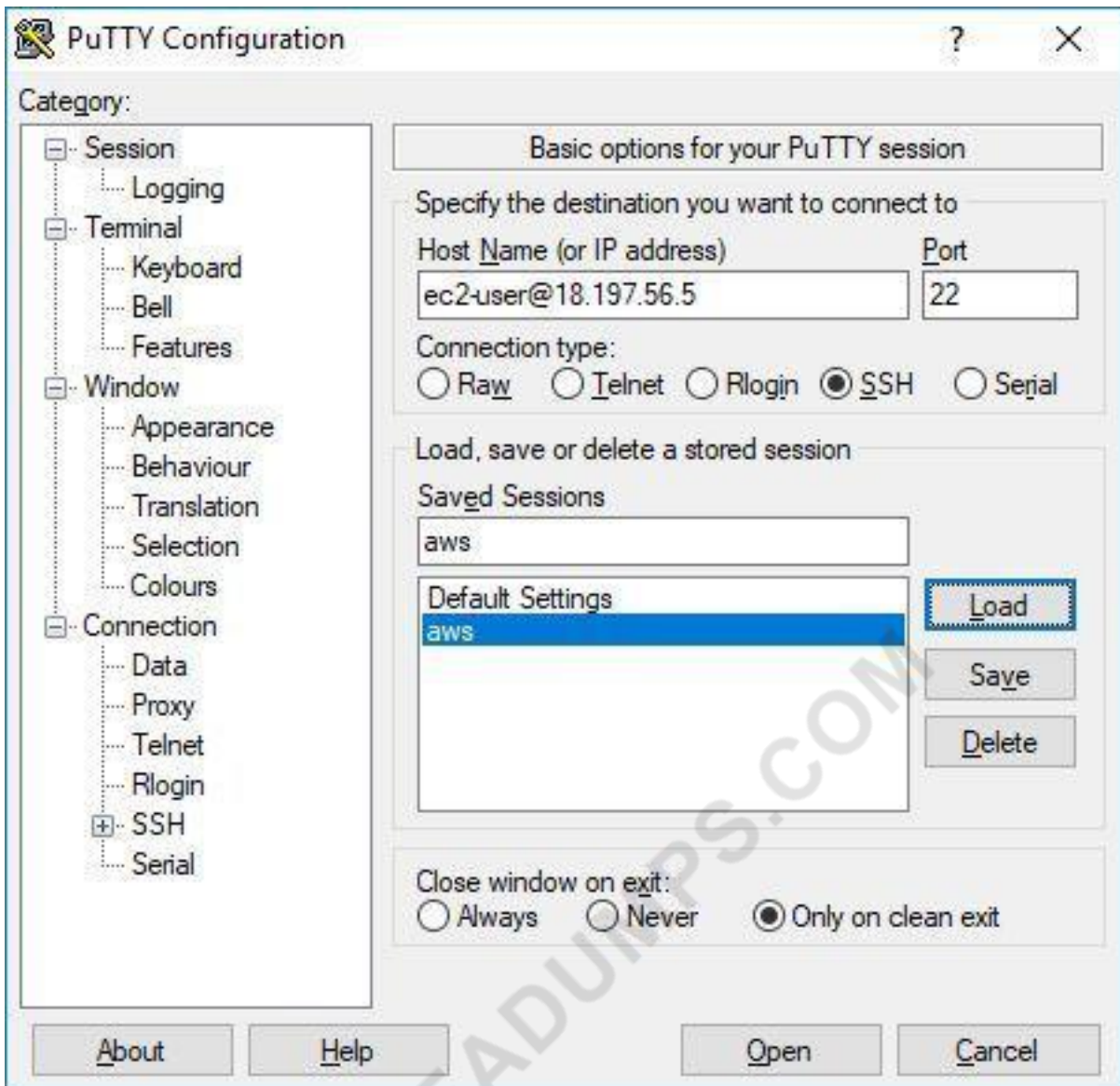
putty1

After that you define your private key for authentication:

putty2

In the last step you enter the SSH tunnel settings for your database instance. In this example we create a tunnel for port 3306 on your local computer to port 3306 on the RDS instance host (DNS name). This is possible, because the bastion host and the database instance are placed within the same VPC and the routing table allows the communication between both subnets.
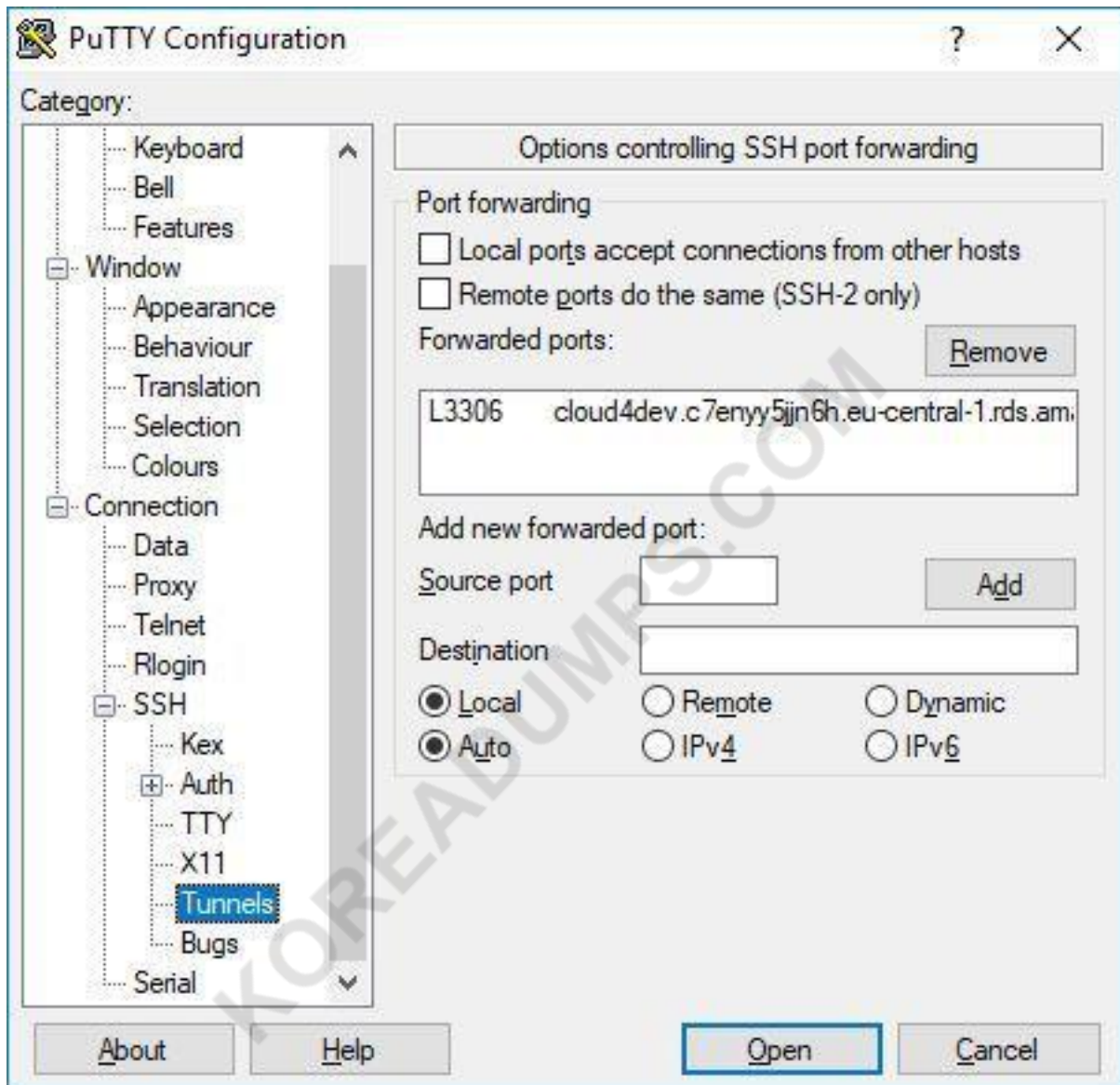
putty3

After establishing the putty connection we can connect to our database on localhost, port 3306:
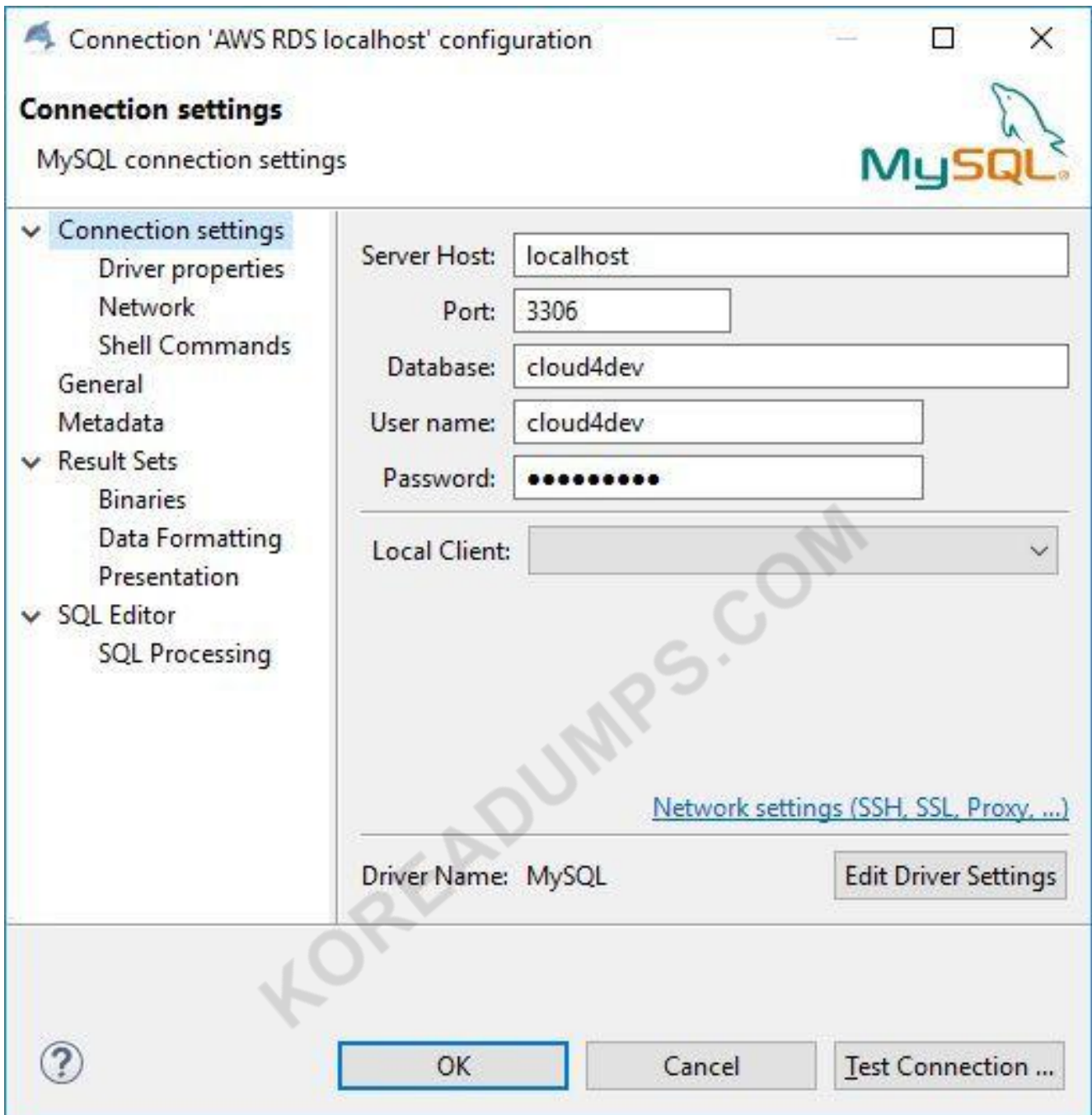
dbweaver1

Making it more convenient ...

This is all fine but we can do it even more convenient. One solution is to place all Putty settings into a batch file:

```
@ECHO OFF
SET PUTTY_EXE=C:\Putty\putty.exe
start %PUTTY_EXE% ec2-user@18.197.56.5 -i d:\my_private_key.ppk -L
3306:demo.abc.eu-central-1.rds.amazonaws.com:3306
```
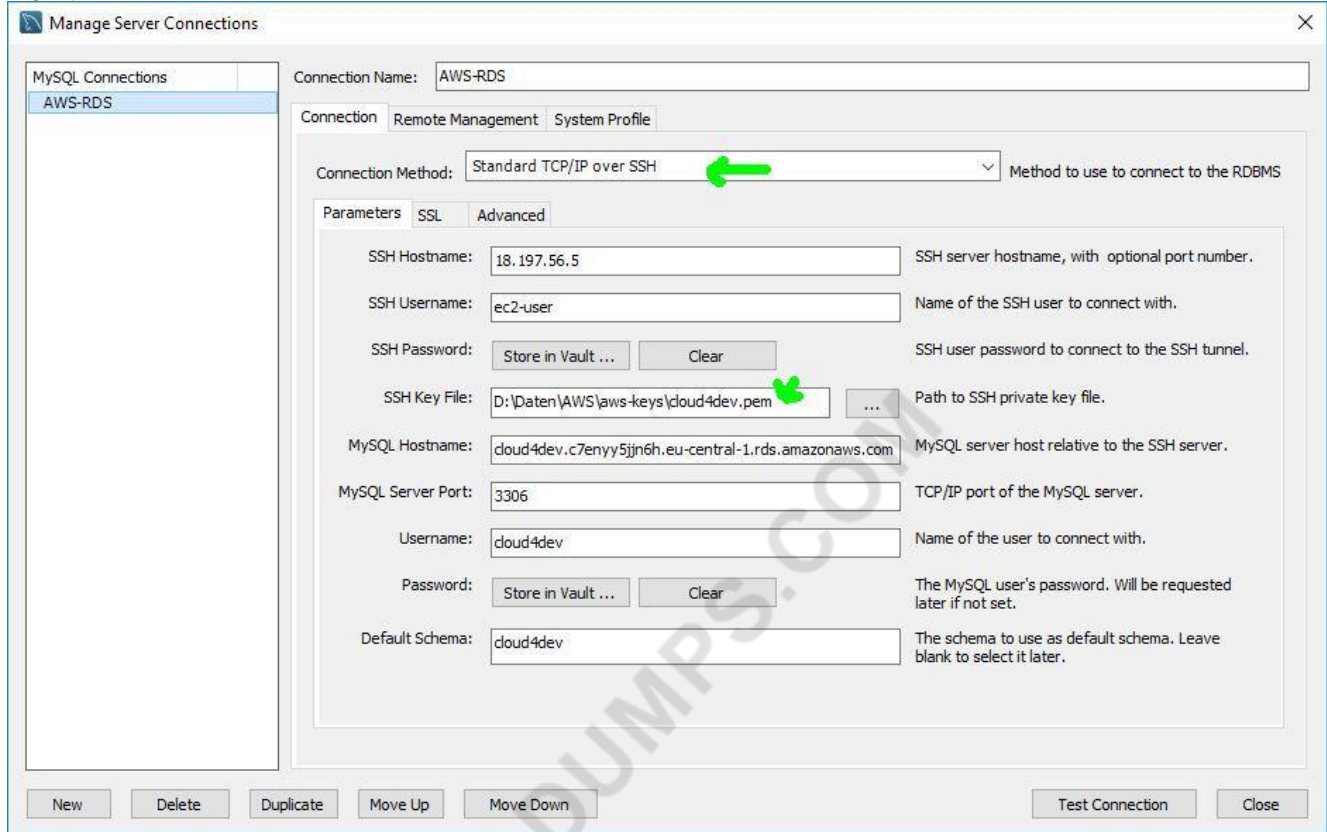
After saving it to a batch file we can start the SSH tunnel by a double-click.

Another solution depends on your SQL Client. In some clients like e.g. DBWeaver or the MySQL Workbench you can configure a TCP connection over SSH directly. With that option you can configure it all in that client.

No Putty configuration or batch file to be started.

mysql_workbench

Be sure to select "Standard TCP/IP over SSH" and the correct private key format.

NO.128 A company is storing application data in Amazon S3 bucket across multiple AWS Regions. Company policy requires that encryption keys be generated at the company headquarters, but the encryption keys may be stored in AWS after generation. The Solutions Architect plans to configure cross-region replication.

Which solution will encrypt the data while requiring the LEAST amount of operational overhead?

A. Configure the application to write to an S3 bucket using client-side encryption.

B. Configure S3 buckets to encrypt using AES-256.

C. Configure S3 object encryption using AWS CLI with Server_Side Encryption with AWS KMS_managed keys (SSE-KMS)

D. Configure S3 bucket to use Server-Side encryption with AWS KMS-Management Keys (SSE-KMS) with imported key met--- in both region.

Answer: C

NO.129 When will you incur costs with an Elastic IP address (EIP)?

A. When an EIP is allocated.

B. When it is allocated and associated with a running instance.

C. When it is allocated and associated with a stopped instance.

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

Answer: C

NO.130 During a review of business applications, a Solutions Architect identifies a critical application with a relational database that was built by a business user and is running on the user's desktop. To

reduce the risk of a business interruption, the Solutions Architect wants to migrate the application to a highly available, multi-tiered solution in AWS.

What should the Solutions Architect do to accomplish this with the LEAST amount of disruption to the business?

A. Create an import package of the application code for upload to AWS Lambda, and include a function to create another Lambda function to migrate data into an Amazon RDS database.

B. Create an image of the user's desktop, migrate it to Amazon EC2 using VM Import, and place the EC2 instance in an Auto Scaling group.

C. Pre-stage new Amazon EC2 instances running the application code on AWS behind an Application Load Balancer and an Amazon RDS Multi-AZ DB instance.

D. Use AWS DMS to migrate the backend database to an Amazon RDS Multi-AZ DB instance. Migrate the application code to AWS Elastic Beanstalk.

Answer: A

NO.131 Which auto scaling features allow you to scale ahead of expected increases in load? Choose 2 answers

A. Cooldown period

B. Metric-based scaling

C. Health check grace period

D. Scheduled scaling

E. Lifecycle hooks

F. Desired capacity

Answer: C D

NO.132 A company has a legacy application using a proprietary file system and plans to migrate the application to AWS.

Which storage service should the company use?

A. Amazon DynamoDB

B. Amazon S3

C. Amazon EBS

D. Amazon EFS

Answer: D

Explanation

Friendly interfaces to S3. These methods make it simple to use S3 with your existing native applications.

Rather than lifting and shifting large datasets at once, these help you integrate existing process flows like backup and recovery or continuous Internet of Things streams directly with cloud storage.

NO.133 You are working with customer who has 10 TB of archival data that they want to migrate to Amazon Glacier.

The customer has a 1Mbps connection to the Internet. Which service or feature provide the fastest method of getting the data into Amazon Glacier?

A. Amazon Glacier multipart upload

B. AWS Storage Gateway

C. VM Import/Export

D. AWS Import/Export

Answer: D

NO.134 Which set of Amazon S3 features helps to prevent and recover from accidental data loss?

A. Object lifecycle and service access logging

B. Object versioning and Multi-factor authentication

C. Access controls and server-side encryption

D. Website hosting and Amazon S3 policies

Answer: B

NO.135 The application tier for a workload runs on EC2 instances that are unevenly distributed across two Availability Zones. The instances are behind a Network Load Balancer and are accessed through layer 4 TCP connections.

The instances in the lesser populated Availability Zone are failing as the result of high CPU utilization. Which configuration change can help mitigate the issue?

A. Modify the Network Load Balancer to enable sticky sessions

B. Modify the Network Load Balance to enable cross-zone load balancing

C. Switch to using an Application Load Balancer and enable sticky sessions

D. Switch to using an Application Load Balancer and enable cross-zone load balancing

Answer: D

NO.136 An on-premises workload consists of a single server with an Apache instance end a MySQL database. The Solutions Architect plans to migrate on-premises database to MySQL on Amazon RDS using multiple Availability Zones. What solution ensures that the remaining workload win be highly available?

A. Provision the workload in an Auto Scaling group, with a minimum of two servers Use an Amazon Route

53 DNS-weighted routing policy to direct traffic to healthy servers.

B. Provision the workload in an Auto Scaling group across Availability Zones, with a minimum of two Amazon EC2 instances Use an Application Load Balancer in front of an Auto Scaling group

C. Provision at least two EC2 instances across two separate regions Use an Application Load Balancer to direct traffic between the instances

D. Provision the workload in an Auto Scaling group across Availability Zones, with a minimum of two servers Use a Route 53 DNS simple routing policy to direct traffic to healthy servers

Answer: B

NO.137 A Company requires scalable shared storage to be accessed from hundreds of Linux-based Amazon EC2 instances in a single region.

Which option provides the greatest levels of availability and performance?

A. Mount an Amazon S3 bucket as a volume by using third-party tools like s3fs

B. Implement a file gateway in the same region, and present it to the EC2 instances

C. Use Amazon EFS and mount it from different Availability Zones

D. Design an LVM-based NFS server, and add more Provisioned IOPS volumes to it when more space

is needed

Answer: C

NO.138 An application runs on EC2 instances behind an Elastic Load Balancing Application Load Balancer. The instances run in an EC2 Auto Scaling group across multiple Availability Zones. The application provides a RESTful interface with both synchronous and asynchronous operations. The asynchronous operations requireup to 5 minutes to complete. Although the application must remain available at all times, after business hours, the traffic going to the application is greatly reduced and often results in the Auto Scaling group running the minimum number of On-Demand Instances. What should the Solutions Architect recommend to optimize the cost of the environment after business hours?

A. Change the Availability Zones in which the instances were created to another Availability Zone in the same region with a lower cost.

B. Replace all On-Demand Instances with Spot Instances in the Auto Scaling group.

C. Purchase Reserved Instances for the minimum number of Auto Scaling instances.

D. Reduce the number of minimum instances to 0. New requests to the Application Load Balancer create new instances.

Answer: B

NO.139 Your web application front end consists of multiple EC2 instances behind an Elastic Load Balancer. You configured ELB to perform health checks on these EC2 instances, if an instance fails to pass health checks, which statement will be true?

A. The instance gets terminated automatically by the ELB.

B. The instance gets quarantined by the ELB for root cause analysis.

C. The instance is replaced automatically by the ELB.

D. The ELB stops sending traffic to the instance that failed its health check.

Answer: D

NO.140 A retail company operates an e-commerce environment that runs on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Amazon EC2 Auto Scaling group. Images are hosted in an Amazon S3 bucket using a custom domain name. During a flash sale with 10,000 simultaneous users, some images on the website are not loading.

What should be done to resolve the performance issue?

A. Move the images to the EC2 instances in the Auto Scaling group

B. Enable Transfer Acceleration for the S3 bucket

C. Configure an Amazon CloudFront distribution with the S3 bucket as the origin.

D. Increase the number of minimum, desired, and maximum EC2 instances in the Auto Scaling group

Answer: C

NO.141 You try to connect via SSH to a newly created Amazon EC2 instance and get one of the error messages:

"Network error: Connection timed out" or "Error connecting to [instance], reason: -> Connection timed out connect," You have confirmed that the network and security group rules are configured correctly and the instance is passing status checks. What steps should you take to identify the source

of the behavior? Choose 2 answers

A. Verify that your IAM user policy has permission to launch Amazon EC2 instances

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

C. Verify that the Amazon EC2 instance was launched with the proper IAM role

D. Verify that your federation trust to AWS has been established

E. Verify that the private key file corresponds to the Amazon EC2 key pair assigned at launch

Answer: C E

NO.142 A Company must collect temperature data form thousands of remote weather devices. The company must also store this data in a data warehouse to run aggregations and visualizations. Which services will meet these requirements? (Select Two.)

A. Amazon Kinesis Data Firehose

B. Amazon SQS

C. Amazon Redshift

D. Amazon SNS

E. Amazon DynamoDB

Answer: A C

NO.143 Which of the following approaches help improve the availability of an application on AWS?. Choose 2 answer

A. Using multiple Availability zones

B. Using placement groups

C. Using Amazon virtual private cloud

D. Using AutoScaling to replace lost capacity

E. Using the largest available instance type

Answer: A D

NO.144 A Solutions Architect has been given the following requirements for a company's VPC:

* The solution is a two-tiered application with a web tier and a database tier.

* All web traffic to the environment must be directed from the Internet to an Application Load Balancer.

* The web servers and the databases should not obtain public IP addresses or be directly accessible from the public Internet.

* Because of security requirements, databases may not share a route table or subnet with any other service.

* The environment must be highly available within the same VPC for all services.

What is the minimum number of subnets that the Solutions Architect will need based on these requirements and best practices?

A. 2

B. 3

C. 4

D. 6

Answer: B

NO.145 A legacy application needs to interact with local stooge using iSCSI. A team needs to design a reliable storage solution to provision all new storage on AWS.

Which storage solution meets the legacy application requirements?

A. AWS Snowball storage for the legacy application until the application can be re-architected

B. AWS Storage Gateway in cached mode for the legacy application storage to write data to Amazon S3

C. AWS Storage Gateway in stored mode for the legacy application storage to write data to Amazon S3

D. An Amazon S3 volume mounted on the legacy application server locally using the File Gateway service

Answer: C

NO.146 An application generates audit logs of operational activities Compliance requirements mandate that the application retain the logs for 5 years How can these requirements be met?

A. Save the logs in an Amazon S3 bucket and enable Multi-Factor Authentication Delete (MFA Delete) on the bucket

B. Save the logs in an Amazon EFS volume and use Network File System version 4 (NFSv4) locking with the volume

C. Save the logs in an Amazon Glacier vault and use the Vault Lock feature.

D. Save the logs in an Amazon EBS volume and lake monthly snapshots

Answer: C

NO.147 A Solutions Architect is creating a multi-tiered architecture for an application that includes a public-facing web tier. Security requirements state that the Amazon EC2 instances running in the application tier must not be accessible directly from the internet.

What should be done to accomplish this?

A. Create a multi-VPC peering mesh with network access rules limiting communications to specific ports Implement an internet gateway on each VPC for external connectivity

B. Place all instances in a single AmazonVPC with AWS WAF as the web frontend communication conduit. Configure a NAT gateway for external communications.

C. Use VPC peering to peer with on-premises hardware. Direct enterprise traffic through the VPC peer connection to the instances hosted in the private VPC.

D. Deploy the web and application instances in a private subnet Provision an Application Load Balancer in the public subnet Install an internet gateway and use security groups to control communications between the layers.

Answer: D

NO.148 You have a load balancer configured for VPC, and all backend 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 behaviour?

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

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

C. The security groups or network ACLs are nor properly configured for web traffic

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

E. The VPC does not have a VGW configured

Answer: A C

NO.149 A mobile application serves scientific articles from individual files in an Amazon S3 bucket. Articles older than 30 days are rarely read. Articles older than 60 days no longer need to be available through the application, but the application owner would like to keep them for historical purposes. Which cost-effective solution BEST meets these requirements?

A. Create a Lambda function to move files older than 30 days to Amazon EBS and move files older than 60 days to Amazon Glacier.

B. Create a Lambda function to move files older than 30 days to Amazon Glacier and move files older than 60 days to Amazon EBS.

C. Create lifecycle rules to move files older than 30 days to Amazon S3 Standard Infrequent Access and move files older than 60 days to Amazon Glacier.

D. Create lifecycle rules to move files older than 30 days to Amazon Glacier and move files older than 60 days to Amazon S3 Standard Infrequent Access.

Answer: C

NO.150 A company has a popular multi-player mobile game hosted in its on-premises datacenter. The current infrastructure can no longer keep up with demand end the company is considering a move to the cloud.

Which solution should a Solutions Architect recommend as me MOST scalable and cost- effective solution to meet these needs?

A. Amazon EC2 and an Application Load Balancer

B. Amazon S3 and Amazon CloudFront

C. Amazon EC2 and Amazon Elastic Transcoder

D. AWS Lambda and Amazon API Gateway

Answer: D

NO.151 A Solutions Architect must select the most cost-efficient architecture for a service that responds to web requests. These web requests are small and query a DynamoDB table. The request rate ranges from zero to several hundred each second, without any predictable patterns.

What is the MOST cost-efficient architecture for this service?

A. Network Load Balancer/Amazon EC2

B. Application Load Balancer/Amazon ECS

C. API Gateway/AWS Lambda

D. AWS Elastic Beanstalk/AWS Lambda

Answer: A

NO.152 A company's website receives 50.000 requests each second, and the company wants 10 use multiple applications to analyze the navigation patterns of the users on their website so that the experience can Be personalized.

What can a Solutions Architect use to collect page clicks for the website and process them sequentially for each user?

A. Amazon Kinesis Stream

B. Amazon SQS standard queue

C. Amazon SQS FIFO queue

D. AWS CloudTrail trail

Answer: A

NO.153 A Solutions Architect is designing a solution that includes a managed VPN connection. To monitor whether the VPN connection is up or down, the Architect should use:

A. an external service to ping the VPN endpoint from outside the VPC

B. AWS CloudTrail to monitor the endpoint

C. the CloudWatch TunnelState Metric

D. an AWS Lambda function that parses the VPN connection logs.

Answer: C

NO.154 A company has an Amazon RDS database backing its production website. The Sales team needs to run queries against the database to track training program effectiveness. Queries against the production database cannot impact performance, and the solution must be easy to maintain. How can these requirements be met?

A. Use an Amazon Redshift database. Copy the product database into Redshift and allow the team to query it.

B. Use an Amazon RDS read replica of the production database and allow the team to query against it.

C. Use multiple Amazon EC2 instances running replicas of the production database, placed behind a load balancer.

D. Use an Amazon DynamoDB table to store a copy of the data.

Answer: A

NO.155 You are building a system to distribute confidential training videos to employees. Using cloud front, what method could be used to serve content that is stored in S3, but not publically accessible from S3 directly?

A. Add the CloudFront account security group "amazon-ct/amazon-cf-sg" to the appropriate S3 bucket policy

B. Create an Origin Access identity for CLoudFront and grant access to the objects in your S3 bucket to that OAI

C. Create an identity and Access Amangeement User for CloudFornt and grant Access to the objects in your S3 bucket to that IAM user

D. Create a S3 bucket policy that lists the Cloudfront distribution ID as the Principle and the target as the Amazon Resource Name

Answer: B

NO.156 An online retailer has a series of flash sales occurring every Friday Sales traffic will increase during the sales only and the platform will handle the increased load. The platform is a three-tier application The web tier runs on Amazon EC2 instances behind an Application Load Balancer. Amazon CloudFront is used to reduce web server load, but many

requests for dynamic content must go to the web servers.

What should be done to the web tier to reduce costs without impacting performance or reliability?

A. Use T-series instances.

B. Purchase scheduled Reserved Instances.

C. Implement Amazon ElastiCache.

D. Use Spot Instances.

Answer: B

NO.157 When creation of an EBS snapshot is initiated, but not completed, the EBS volume:

A. Cannot be detached or attached to an EC2 instance until the snapshot completes

B. Can be used while the snapshots is in progress

C. Cannot be used until the snapshot completes

D. Can be used in read-only mode while the snapshot is in progress

Answer: B

NO.158 You have established a virtual private cloud (VPC) peering relationship between VPC 1 and VPC 2. VPC 1 has routes to VPC 2, yet hosts in VPC 1 cannot connect to hosts in VPC 2. Which of the following is a possible cause?

A. Security groups applied to VPC 2 are blocking the traffic

B. The network access control list applied to VPC 2 denies by default

C. The subnet route table in VPC 2 does not have routes to VPC 1

D. The VPCs have not been attached to a virtual private gateway

Answer: B

NO.159 You have an environment that consists of a public subnet using Amazon VPC and 3 instances that are running in this subnet. These three instances can successfully communicate with other hosts on the internet. you launch a fourth instance in the same subnet, using the same AMI and security group configuration you used for the others, but find that this instance cannot be accessed from the internet. What should you do to enable internet access?

A. Configure a publically routable IP Address in the host OS of the fourth instance

B. Deploy a NAT instance into the public subnet

C. Modify the routing table for the public subnet

D. Assign an elastic IP address to the fourth instance

Answer: D

NO.160 A company is launching a dynamic website, and the Operations team expects up to 10 times the traffic on the launch date. This website is hosted on Amazon EC2 instances and traffic is distributed by Amazon Route 53.

A Solutions Architect must ensure that there is enough backed capacity to meet user demands. The Operations team wants to scale down as quickly as possible after the launch.

What is the MOST cost-effective and fault-tolerant solution that will meet the company's customer demands?

(Select TWO.)

A. Set up an Application Load Balancer to distribute traffic to multiple EC2 instances

B. Set up an Auto Scaling group across multiple Availability Zones for the website, and create scale-out and scale-m policies

C. Create an Amazon CloudWatch alarm to send an email through Amazon SNS when EC2 instances experience higher loads

D. Create an AWS Lambda function to monitor website load time, run it every 5 minutes. and use the AWS SDK to create a new instance if website load time is longer than 2 seconds

E. Use Amazon CloudFront to cache the website content during launch, and set a TTL for cache content to expire after the launch date

Answer: A B

NO.161 A Solutions Architect needs to design an Amazon EC2 duster to analyze data that is currently stored in Amazon S3. A key requirement is to utilize the fastest storage service available when analyzing the data locally on the Amazon EC2 instance.

Which of the following storage types should the Architect choose to meet the requirement?

A. AWS Storage Gateway

B. Amazon EBS using Provisioned IOPS (PIOPS)

C. Amazon EC2 instance (ephemeral) Store

D. Amazon Glacier

Answer: B

NO.162 A company will host a static website within an Amazon S3 bucket The website will serve millions of users globally, and the company wants to minimize data transfer costs.

What should the Solutions Architect do to ensure costs are kept to a minimum?

A. Implement an AWS Auto Scaling group for the website to ensure it grows with use.

B. Use cross-region replication to copy the website to an additional S3 bucket in a different region

C. Create an Amazon CloudFront distribution, with the S3 bucket as the origin server.

D. Move the website to large compute-optimized Amazon EC2 instances.

Answer: C

NO.163 A company needs to monitor the read and write IOPs metrics for their AWS MySQL RDS instances and send real-time alerts to their operations team. Which AWS services can accomplish this?

Choose 2 answers

A. Amazon Simple Email Service

B. Amazon CloudWatch

C. Amazon Simple Queue Service

D. Amazon Route 53

E. Amazon Simple Notification Service

Answer: B E

NO.164 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?

A. Create a new peering connection Between Prod and Dev along with appropriate routes.

B. Create a new entry to Prod in the Dev route table using the peering connection as the target.

C. Attach a second gateway to Dev. Add a new entry in the Prod route table identifying the gateway as the target.

D. The VPCs have non-overlapping CIDR blocks in the same account. The route tables contain local routes for all VPCs.

Answer: A

NO.165 Your company has set up an application in eu-west1 with a disaster recovery site in eu-central-1. You want to be notified of any AWS API activity in regions other than these two.
How can you monitor AWS API activity in other regions?

A. Create a CloudWatch alarm for CloudTrail events

B. Create a CloudWatch alarm for SSH key usage

C. Create a CloudWatch alarm for Trusted Advisor

D. Create a CloudWatch alarm for VPC flow logs

Answer: A

NO.166 Which AWS service allows you to collect and process e-commerce data for near real-time analysis?

A. Amazon Redshift

B. Amazon DynamoDB

C. Amazon Elastic Map reduce

D. Amazon ElasticCache

Answer: C

NO.167 A data analytics startup company asks a Solutions Architect to recommend an AWS data store option for indexed data.
The data processing engine will generate and input more than 64 TB of processed data every day. with item sizes reaching up to 300 KB The startup is flexible with data storage models and is more interested in a database that requires minimal effort to scale with a growing dataset size.
Which AWS data store service should the Architect recommend?

A. Amazon RDS

B. Amazon Redshift

C. Amazon DynamoDB

D. Amazon S3

Answer: C

NO.168 A Solutions Architect designed a system based on Amazon Kinesis Data Streams. After the workflow was put into production, the company noticed it performed slowly and identified Kinesis Data Streams as the problem.
One of the streams has a total of 10 Mb/s throughput.
What should the Solutions Architect recommend to improve performance?

A. Use AWS Lambda to preprocess the data and transform the records into a simpler format, such as CSV.

B. Run the Me rgeshard command to reduce the number of shards that the consumer can more easily process.

C. Change the workflow to use Amazon Kinesis Data Firehose to gain a higher throughput.

D. Run the UpdateshardCount command tu increase the number of shards in the stream.

Answer: D

NO.169 You have an Amazon EC2 instance in a VPC that is in a stopped state. Which of the following actions can you perform on this instance?

A. Change security groups

B. Disable detailed monitoring

C. Attach to an Auto Scaling group

D. Detach the network interface

Answer: C

NO.170 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 EC2 instance?

A. EC2Config service

B. IAM roles

C. User Data

D. AWS Config

Answer: C

NO.171 Which technique can be used to integrate AWS IAM (Identity and Access Management) with an on-premise LDAP (Lightweight Directory Access Protocol) directory service?

A. Use an IAM policy that references the LDAP account identifiers and the AWS credentials.

B. Use SAML (Security Assertion Markup Language) to enable single sign-on between AWS and LDAP.

C. Use AWS Security Token Service from an identity broker to issue short-lived AWS credentials.

D. Use IAM roles to automatically rotate the IAM credentials when LDAP credentials are updated.

E. Use the LDAP credentials to restrict a group of users from launching specific EC2 instance types.

Answer: B

NO.172 What conditions could cause a Multi-AZ Amazon RDS failover to occur? (Choose two.)

A. The RDS instance is stopped manually

B. A replica of the RDS instance is created in a different region

C. An Availability Zone becomes unavailable

D. Another master user is created

E. A failure of the primary database instance

Answer: C E

NO.173 A Solutions Architect is designing a web application that is running on an Amazon EC2 instance. The application stores data in DynamoDB. The Architect needs to secure access to the DynamoDB table.

What combination of steps does AWS recommend to achieve secure authorization? (Select two.)

A. Store an access key on the Amazon EC2 instance with rights to the Dynamo DB table.

B. Attach an IAM user to the Amazon EC2 instance.

C. Create an IAM role with permissions to write to the DynamoDB table.

D. Attach an IAM role to the Amazon EC2 instance.

E. Attach an IAM policy to the Amazon EC2 instance.

Answer: A C

NO.174 A company is launching a new slake website on Amazon S3 and Amazon CloudFront The company wants to ensure that all web requests go through only CloudFront How can a Solutions Architect meet this requirement?

A. Configure the S3 bucket policy to allow only CloudFront IP addresses to read objects.

B. Create 1AM users in a group mat has read access to the S3 bucket Configuration CloudFront to pass credential to the S3 bucket

C. Create a CloudFront origin access identity (OAI) then update the S3 bucket policy to allow the OAI read access

D. Convert the S3 bucket to an EC2 instance then give CloudFront access to the instance by using security groups

Answer: C

NO.175 Your customers located around the globe require low-latency access to private video files. Which configuration meets these requirements?

A. Use Amazon CloudFront with signed URLs

B. Use Amazon EC2 with provisioned IOPS Amazon EBS volumes

C. Use Amazon S3 with signed URLs

D. Use Amazon S3 with access control lists

Answer: A

NO.176 A Solutions Architect is helping a customer migrate an application to AWS. The application is composed of a fleet of Linux servers that currently use a shared file system to read and write data. One of the goals of moving this application to AWS is to increase the reliability of the storage tier. What solution would increase reliability while minimizing the operational overhead of managing this infrastructure?

A. Create an EBS volume and mount it to all the servers.

B. Create an EFS file system and mount it to all the servers.

C. Create an S3 bucket that can be accessed through an S3 VPC Endpoint.

D. Create two EC2 instances in separate Availability Zones that act as file servers.

Answer: B

NO.177 A Solutions Architect is designing network architecture for an application that has compliance requirements.

The application will be hosted on Amazon EC2 instances in a private subnet and will be using Amazon S3 for storing data. The compliance requirements mandate that the data cannot traverse the public Internet.

What is the MOST secure way to satisfy this requirement?

A. Use a NAT Instance.

B. Use a NAT Gateway.

C. Use a VPC endpoint.

D. Use a Virtual Private Gateway.

Answer: C

NO.178 You need to configure an Amazon S3 bucket to serve static assets for your public-facing web application.

Which methods ensure that all objects uploaded to the bucket are set to public read? Choose 2 answers

A. Set permissions on the object to public read during upload

B. Configure the bucket ACL to sell all objects to public read

C. Configure the bucket policy to set all objects to public read

D. Use AWS identity and access Management roles to set the bucket to public read

E. Amazon S3 objects default to public read, so no action is needed

Answer: B C

NO.179 A legacy application running on premises requires a Solutions Architect to be able to open a firewall to allow access to several Amazon S3 buckets. The Architect has a VPN connection to AWS in place. How should the Architect meet this requirement?

A. Create an 1AM role that allows access from the corporate network to Amazon S3

B. Configure a proxy on Amazon EC2 and use an Amazon S3 VPC endpoint.

C. Use Amazon API Gateway to do IP whitelisting.

D. Configure IP whitelisting on the customer's gateway

Answer: B

NO.180 An on-premises workload consists of a single server with an Apache instance and a MYSQL database. The Solutions Architect plans to migrate the on-premises database to MYSQL on Amazon RDS using multiple Availability Zones.

What solution ensure that the remaining workload will be highly available?

A. Provision the workload in an Auto Scaling group, with a minimum of two servers. Use an Amazon Route 53 DNS-weighted routing policy to direct traffic to healthy servers

B. Provision the workload in an Auto Scaling group across Availability Zones, with a minimum of two Amazon EC2 instances. Use an Application Load Balancer in front of an Auto Scaling group

C. Provision at least two EC2 instances across two separate regions. Use an Application Load Balancer to direct traffic between the instances

D. Provision the workload in an Auto Scaling group across Availability Zones, with a minimum of two servers. Use a Route 53 DNS simple routing policy to direct traffic to healthy servers

Answer: D

NO.181 You are trying to use SSH to connect from your laptop to an Amazon EC2 instance over the internet. You cannot establish a connection. What could be the problem?

A. The network ACL is set to deny all outbound TCP traffic to your laptop IP address

B. The IAM access key on your laptop does not have console access to the Amazon EC2 instance

C. There is no security group and no network ACL associated with the Amazon EC2 instance

D. The security group does not allow any outbound TCP traffic to your laptop IP address

Answer: D

NO.182 A Solutions Architect plans to migrate NAT instances to NAT gateway. The Architect has NAT instances with scripts to manage high availability.

What is the MOST efficient method to achieve similar high availability with NAT gateway?

A. Remove source/destination check on NAT instances.

B. Launch a NAT gateway in each Availability Zone.

C. Use a mix of NAT instances and NAT gateway.

D. Add an ELB Application Load Balancer in front of NAT gateway.

Answer: B

NO.183 A Solutions Architect notices slower response times from an application. The CloudWatch metrics on the MySQL RDS indicate Read IOPS are high and fluctuate significantly when the database is under load.

How should the database environment be re-designed to resolve the IOPS fluctuation?

A. Change the RDS instance type to get more RAM.

B. Change the storage type to Provisioned IOPS.

C. Scale the web server tier horizontally.

D. Split the DB layer into separate RDS instances.

Answer: B

NO.184 A company is evaluating Amazon S3 as a data storage solution for their daily analyst reports. The company has implemented stringent requirements concerning the security of the data at test Specifically, the CISO asked for the use of envelope encryption with separate permissions for the use of an envelope key, automated rotation of the encryption keys, and visibility into when an encryption key was used and by whom.

Which steps should a Solutions Architect take to satisfy the security requirements requested by the CISO?

A. Create an Amazon S3 bucket to store the reports and use Server-Side Encryption with Customer-Provided Keys (SSE-C)

B. Create an Amazon S3 bucket to store the reports and use Server-Side Encryption with Amazon S3Managed Keys (SSE-S3)

C. Create an Amazon S3 bucket to store the reports and use Server-Side Encryption with AWS KMS-Managed Keys (SSE-KMS)

D. Create an Amazon S3 bucket to store the reports and use Amazon S3 versioning with Server- Side Encryption with Amazon S3-Managed Keys (SSE-S3)

Answer: C

NO.185 A Solutions Architect is designing a database solution that must support a high rate of random disk reads and writes. It must provide consistent performance, and requires long-term persistence.

Which storage solution BEST meets these requirements?

A. An Amazon EBS Provisioned IOPS volume

B. An Amazon EBS General Purpose volume

C. An Amazon EBS Magnetic volume

D. An Amazon EC2 Instance Store

Answer: A

NO.186 Developers are creating a new online transaction processing (OLTP) application for a small database that is very read-write intensive. A single table in the database is updated continuously throughout the day, and the developers want to ensure that the database performance is consistent. Which Amazon EBS storage option will achieve the MOST consistent performance to help maintain application performance?

A. Provisioned IOPS SSD

B. General Purpose SSD

C. Cold HDD

D. Throughput Optimized HDD

Answer: A

NO.187 A company plans to use Amazon GuardDuty to detect unexpected and potentially malicious activity. The company wants to use Amazon CloudWatch to ensure that when findings occur, remediation takes place automatically Which CloudWatch feature should be used to trigger an AWS Lambda function to perform the remediation?

A. Events

B. Dashboards

C. Metrics

D. Alarms

Answer: A

NO.188 A workload in an Amazon VPC consist of an Elastic Load Balancer that distributes incoming requests across a fleet of six Amazon EC2 instances. Each EC2 instance stores and retrieves data from an Amazon DynamoDB table.

Which of the following provisions will ensure that this workload a highly available?

A. Provision DynamoDB tables across a minimum of two Availability Zones

B. Provision the EC2 instances evenly across a minimum of two Availability Zones in two regions

C. Provision the EC2 instances evenly across a minimum of two Availability Zones in a single region

D. Provision the Elastic Load Balancer to distribute connections across multiple Availability Zones

Answer: D

NO.189 For which of the following use cases are Simple Queue Service (SQS) and Amazon EC2 an appropriate solution? Choose 2 answers

A. Using as a distributed session store for your web application

B. Managing a multi-step and multi-decision checkout process of an e-commerce website

C. Using as an SNS endpoint to trigger execution of video transcoding jobs

D. Orchestrating the execution or distributed and auditable business processes

E. Using as an encrypted to collect thousands of data points per hour from a distributed fleet of sensors

Answer: D E

NO.190 You are designing a scalable web application with stateless web servers. Which service or feature is well suited to store user session information?

A. Amazon SQS

B. Amazon EBS

C. Amazon DynamoDB

D. Amazon EC2 instance store

Answer: C

NO.191 Which requirements must be met in order for a Solutions Architect to specify that an Amazon EC2 instance should stop rather than terminate when its Spot Instance is interrupted? (Choose two.)

A. The Spot Instance request type must be one-time.

B. The Spot Instance request type must be persistent.

C. The root volume must be an Amazon EBS volume.

D. The root volume must be an instance store volume.

E. The launch configuration is changed.

Answer: B C

NO.192 Which features can be used to restrict access to data in S3? Choose 2 answers

A. Set an S3 ACL on the bucket or the object.

B. Create a CloudFront distribution for the bucket.

C. Set an S3 bucket policy.

D. Enable IAM Identity Federation

E. Use S3 Virtual Hosting

Answer: C D

Reference:

http://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/private-content-restricting-access-to-s3.

NO.193 You have an Amazon EC2 instance with data stored in an Amazon elastic block store (EBS) volume. You want to make the data available in another region. Which of the following methods should be used for making the data in the Amazon EBS volume available to the newly launched Amazon EC2 instance?

A. Detach the Amazon EBS volume and attach it to the newly launched Amazon EC2 instance

B. Snapshot the Amazon EBS volume and copy it to the other region. Create a new Amazon EBS volume from the snapshot, and attach it to the newly launched Amazon EC2 instance

C. Copy the Amazon EBS volume to the other region, create a new Amazon EBS volume from that, and then attach it to newly launched Amazon EC2 instance

D. Use AWS Import/Export to copy the Amazon EBS volume to the other region and attach it to newly launched instance

Answer: B

NO.194 A Solution Architect is designing a solution for a dynamic website, "example.com," that is deployed in two regions: Tokyo, Japan and Sydney, Australia. The Architect wants to ensure that users located in Australia are directed to the website deployed in the Sydney region and users located in Japan are directed to the website in the Tokyo region when they browse to "example.com." Which service should the Architect use to achieve this goal with the LEAST administrative effort?

A. Amazon CloudFront with geolocation routing

B. Amazon Route 53

C. Application Load Balancer

D. Network Load Balancer deployed across multiple regions

Answer: B

NO.195 Which of the following notification endpoints or clients are supported by Amazon Simple Notification Service? Choose 2 answers

A. Email

B. CloudFront distribution

C. File Transfer Protocol

D. Short Message Service

E. Simple Network Management Protocol

Answer: B C

NO.196 How can an EBS volume that is currently attached to an EC2 instance be migrated from one Availability Zone to another?

A. Detach the volume and attach it to another EC2 instance in the other AZ

B. Create a snopshot of the volume, and create a new volume from the snapshot in the other AZ

C. Detach the volume, then use the ec2-migrate-volume command to move it to another AZ

D. Simply create a new volume in the other AZ and specify the original volume as the source

Answer: B

NO.197 An application server needs to be in a private subnet without access to the internet. The solution must retrieve and files to an Amazon S3 bucket.
How should a Solution Architect design a solution to meet these requirements?

A. Use Amazon S3 VPC endpoints

B. Deploy a proxy server

C. Use a NAT Gateway

D. Use a private Amazon S3 bucket

Answer: A

NO.198 A media company has deployed a multi-tier architecture on AWS. Web servers are deployed in two Availability Zones using an Auto Scaling group with a default Auto Scaling termination policy.

The web servers' Auto Scaling group currently has 15 instances running.
Which instance will be terminated first during a scale-in operation?

A. The instance with the oldest launch configuration.

B. The instance in the Availability Zone that has most instances.

C. The instance closest to the next billing hour.

D. The oldest instance in the group.

Answer: B

NO.199 A Solutions Architect must deploy a MYSQL database hosted on Amazon EC2 instances in an Amazon VPC with a private subnet, supporting IPv4. The instances hosting the database may not receive inbound internet traffic, but must be capable of initiating outbound connections for downloads and updates.
With goals of scalability and reduction operation overhead, which AWS service or capability should be used to accomplish these requirements?

A. Internet gateway

B. NAT gateway

C. NAT instance

D. Egress-only internet gateway

Answer: B

NO.200 When an EC2 instance that is backed by an s3based AMI is terminated .What happens to the data on the root volume?

A. Data is unavailable until the instance is restarted

B. Data is automatically deleted

C. Data is automatically saved as an EBS snapshot

D. Data is automatically saved as an EBS volume

Answer: B

NO.201 A solutions architect needs to convert potential single points of failure to a highly-available configuration. The currently architecture contains amazon EC2 instances with databases running in one availability zone.
Web-tier resources have not been given public addresses, but still require internet access.
Which solution should the architect use to maintain high availability?

A. Use ELB Classic Load Balancer with the web tier Deploy EC2 instances in two Availability Zones and enable Multi-AZ RDS Deploy a NAT gateway in one Availability Zone

B. Use ELB Classic Load Balancer with the web tier Deploy EC2 instances in two Availability Zones and enable Multi-AZ RDS Deploy NAT gateways in both Availability Zones

C. Use ELB Classic Load Balancer with the database tier Deploy Amazon EC2 instances in two Availability Zones and enable Multi-AZ RDS Deploy NAT gateways in both Availability Zones

D. Use ELB Classic Load Balancer with the database tier Deploy Amazon EC2 instances in two Available Zones and enable Multi-AZ RDS Deploy a NAT gateway in one Availability Zone

Answer: C

NO.202 Which services can invoke AWS lambda functions?

A. Amazon Route53

B. Amazon Redshift

C. Elastic Load Blanching

D. Amazon DynamoDB

E. Amazon SNS

Answer: D E

NO.203 Your organization is looking for a solution that can help the business with streaming data. Several services will require access to read and process the same stream concurrently. What AWS service meets the business requirements?

A. Amazon Kinesis Firehose

B. Amazon CloudFront

C. Amazon SQS

D. Amazon Kinesis Streams

Answer: D

NO.204 Your Amazon VPC has a pubic subnet with a route that sends all internet traffic to the internet gateway. An Amazon EC2 instance in the Public subnet has an assigned private IP address. The instance belongs to a security group set to allow all outbound traffic. The instance cannot access the internet. Why could the internet be unreachable from this instance?

A. The instance "source/destination check" property must be enabled

B. The instance security group must allow all inbound traffic

C. The instance does not have a public IP address

D. The internet gateway security group must allow all outbound traffic

Answer: C

NO.205 A Solutions Architect is designing a microservices-based application using Amazon ECS. The application includes a WebSocket component, and the traffic needs to be distributed between microservices based on the URL.
Which service should the Architect choose to distribute me workload?

A. ELB Classic Load Balancer

B. Amazon Route 53 DNS

C. ELB Application Load Balancer

D. Amazon CloudFront

Answer: C

NO.206 An application is used to process customer orders using an Amazon EC2 instance which saves the orders to an Amazon Aurora database. Occasionally, when traffic high, the workload does not process orders fast enough.
What will ensure that the orders are written to the database as quickly as possible?

A. Use Application Load Balancer and an Auto Scaling group to distribute the load across multiple instances. Write orders to an Amazon SQS queue. Use EC2 instances in an Auto Scaling group to read from the SQS queue and process orders into the database.

B. Increase the instance size of the web server when traffic is high. Write orders as messages to Amazon SNS ensuring the database is subscribed to the SNS topic

C. Use an Application Load Balancer and an Auto Scaling group to distribute the load across multiple instances. Write orders to an SQS queue. When instances have spare CPU available, read from the SQS queue and process orders into the database

D. Use an Application Load Balancer and an Auto Scaling group to distribute the load across multiple instances. Write order as messages to SNS, ensuring that the database is subscribed to the SNS topic

Answer: A

NO.207 You manually launch a NAT AMI in a public subnet. The network in properly configured. Security groups and network access control lists are properly 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?

A. Enable Source/Destination check on the private instances

B. Enable Source/Destination check on the NAT instance

C. Disable Source/Destination check on the private instance

D. Disable Source/Destination check on the NAT instance

Answer: D

NO.208 You have configured mycorp.com as an Amazon route 53 private hosted zone for Amazon virtual private cloud. Amazon elastic compute cloud (EC2) instances in your eu-east-1 virtual private cloud successfully resolve to internal.mycorp.com. You are extending your infrastructure to a VPC in eu-west-1. Why are Amazon EC2 instance in eu-west-1 unable to resolve to internal.mycorp.com?

A. The VPC in eu-west 1 is not associated to the private hosted zone

B. The DHCP options set in eu-west-1 requires the private hosted zone name server IP addresses

C. The enableDnsHostnames attribute of the VPC in eu-west-1 should be set to false

D. A second private hosted zone for Amazon VPC is requires for eu-west-1

Answer: B

NO.209 What are characteristics Os Amazon S3?
Choose 2 answers

A. S3 allows you to store unlimited amounts of data

B. S3 offers Provisioned IOPS

C. S3 allows you to store objects of virtually unlimited size

D. S3 should be used to host a relational database

E. Objects are directly accessible via a URL

Answer: A E

NO.210 Your company moved into AWS and created separate AWs accounts per department. To address latency and bandwidth challenges, the company ordered a single AWS Direct Connect circuit. How should you allocate the cost of the data transfer over AWS Direct Connect back to each department ?

A. Configure a connection per department and ta each with the department account number. Use details usage reports

B. Configure a connection per department and set the Connection Owner to the department's AWS account number

C. Configure virtual interfaces and tag each with the department account number. Use detail usage reports

D. Configure virtual interfaces and set the virtual interface owner to the department's AWS account number

Answer: C

NO.211 You have an application running on an Amazon Elastic Compute Cloud instance, that uploads 5 GB video objects to Amazon Simple Storage Service (S3). Video uploads are taking longer than expected, resulting in poor application performance. Which method will help improve performance of your application?

A. Enable enhanced networking

B. Use Amazon S3 multipart upload

C. Leveraging Amazon CloudFront, use the HTTP POST method to reduce latency.

D. Use Amazon Elastic Block Store Provisioned IOPs and use an Amazon EBS-optimized instance

Answer: B

NO.212 A Solution Architect is designing a solution with AWS Lambda where different environments require different database passwords. What should the Architect do to accomplish this in a secure and scalable way?

A. Create a Lambda function for each individual environment

B. Use Amazon DynamoDB to store environment variables

C. Use encrypted AWS Lambda environment variables

D. Implement a dedicated Lambda function for distributing environment variables

Answer: C

NO.213 A customer is deploying a production portal application on AWS. The database tier has structured data. The company requires a solution that is easily manageable and highly availability. How can these requirements be met?

A. Deploy the database on multiple Amazon EC2 instances backed by Amazon EBS across multiple Availability Zones

B. Use Amazon RDS with a multiple Availability Zone option

C. Use RDS with a single Availability Zone option and schedule periodic database snapshots

D. Use Amazon DynamoDB

Answer: B

NO.214 An application runs on Amazon EC2 instances in multiple Availability Zones (AZs) behind an Application Load Balancer. The load balancer is in public subnets; the EC2 instances are in private subnets and must not be accessible from the internet. The EC2 instances must call external services on the internet If one AZ becomes unavailable, the remaining EC2 instances must still be able to call the external services How should these requirements be met?

A. Create a NAT gateway attached to the VPC. Add a route to the gateway to each private subnet route table

B. Configure an internet gateway. Add a to the gateway to each private subnet route table.

C. Create a NAT instance in the private subnet of each AZ. Update the route tables for each private subnet to direct internet-bound traffic to the NAT instance.

D. Create a NAT gateway in each AZ. Update the route tables for each private subnet to direct internet-bound traffic to the NAT gateway.

Answer: D

NO.215 A company wants to improve latency by hosting images within a public Amazon S3 bucket fronted by an Amazon CloudFront distribution. The company wants to restrict access to the S3 bucket to include the CloudFront distribution only, while also allowing CloudFront to continue proper functionality.

What should be done after making the bucket private to restrict access with the LEAST operational overhead?

A. Create a CloudFront origin access identity and create a security group that allows access from CloudFront.

B. Create a CloudFront origin access identity and update the bucket policy to grant access to it.

C. Create a bucket policy restricting all access to the bucket to include CloudFront IPs only.

D. Enable the CloudFront option to restrict viewer access and update the bucket policy to allow the distribution.

Answer: A

NO.216 A company is designing a website that will be hosted on Amazon S3.

How should users be prevented from linking directly to the assets m the 53 bucket?

A. Create a static website then update the bucket policy lo require users to access the resources with the static website URL

B. Create an Amazon CloudFront distribution with an Origin Access Identity (OAI) and update the bucket policy to grant permission to the (OAI) only

C. Create a static website then configure an Amazon Route 53 record set with an alias pointing to the state website Provide this URL to users

D. Create an Amazon CloudFront distribution with an AWS WAF web ACL that permits access to the server through the distribution only

Answer: B

NO.217 Two Auto Scaling applications, Application A and Application B, currently run within a shared set of subnets.

A Solutions Architect wants to make sure that Application A can make requests to Application B, but Application B should be denied from making requests to Application A.

Which is the SIMPLEST solution to achieve this policy?

A. Using security groups that reference the security groups of the other application

B. Using security groups that reference the application server's IP addresses

C. Using Network Access Control Lists to allow/deny traffic based on application IP addresses

D. Migrating the applications to separate subnets from each other

Answer: C

NO.218 A mobile client requires data from several application-layer services to populate its user interface. What can the application team use to decouple the client interface from the underlying services behind them?

A. Application Load Balancer

B. Amazon API Gateway

C. Amazon Cognito

D. AWS Device Farm

Answer: C

NO.219 A team is launching a marketing campaign and the peak database read activity in Amazon Aurora for MYSQL is expected to increase. A Solutions Architect decides to add two Read Replicas to the cluster.

How should the Solutions Architect ensure that the connections for read activities are load balanced?

A. Reader endpoint for Amazon Aurora

B. Cluster endpoint for Amazon Aurora

C. Primary DB instance endpoint for Amazon Aurora

D. Replica DB instances endpoint for Aurora

Answer: A

NO.220 A company plans to use AWS for all new batch processing workloads. The company's developers use Docker containers for the new batch processing. The system design must accommodate critical and non-critical batch processing workloads 24/7.

How should a Solutions Architect design this architecture in a cost-efficient manner?

A. Purchase Reserved Instances to run all containers. Use Auto Scaling groups to schedule jobs.

B. Host a container management service on Spot Instances. Use Reserved Instances to run Docker containers.

C. Use Amazon ECS orchestration and Auto Scaling groups: one with Reserve Instances, one with Spot Instances.

D. Use Amazon ECS to manage container orchestration. Purchase Reserved Instances to run all batch workloads at the same time.

Answer: C

NO.221 A Solutions Architect is building a multi-tier website. The web servers will be in a public subnet, and the database servers will be in a private subnet. Only the web servers can be accessed from the Internet. The database servers must have Internet access for software updates.

Which solution meets the requirements?

A. Assign Elastic IP addresses to the database instances.

B. Allow Internet traffic on the private subnet through the network ACL.

C. Use a NAT Gateway.

D. Use an egress-only Internet Gateway.

Answer: C

NO.222 You're building an API backend available at services.yourcompany.com. The API is implemented with API Gateway and Lambda. You successfully tested the API using curd. You

implemented Javascript to call the API from a webpage on your corporate website, www.yourcompany.com. When you access that page in your browser, you get the following error: "The same origin policy disallows reading he remote resource" How can you allow your corporate webpages to invoke the API?

A. Disable CORS in the API gateway

B. Enable CORS in the Javascript frontend

C. Disable CORS in the Javascript frontend

D. Enable CORS in the API gateway

Answer: D

NO.223 Using only AWS services .you intend to automatically scale a fleet of stateless of stateless web servers based on CPU and network utilization metrics. Which of the following services are needed? Choose 2 answers

A. Auto Scaling

B. Amazon Simple Notification Service

C. AWS Cloud Formation

D. CloudWatch

E. Amazon Simple Workflow Service

Answer: A D

NO.224 A Solutions Architect is designing an application that stores objects encrypted in an Amazon S3 bucket. The company's security requirements state that the encryption key is stored by the organization. Which methods meet this requirement? (Select TWO.)

A. Use S3 server-side encryption with customer-provided keys.

B. Use S3 client-side encryption.

C. Use S3 server-side encryption with Amazon S3 managed keys

D. Use S3 server-side encryption with AWS KMS managed keys.

E. Use S3 server-side encryption with the company's own keys imported into AWS KMS

Answer: A B

NO.225 A company is designing a hybrid IT architecture and requires a private connection between an on-premises data center and their virtual private cloud (VPC). Which of the following would enable the company to achieve this? Choose 2 answers

A. VPN connection

B. AWS Direct connect

C. AWS DataPipeline

D. Amazon Route53

E. ClassicLink

Answer: A B

NO.226 Which services allow the customer to retain full administrative privileges of the underlying EC2 instances?
Choose 2 answers

A. Amazon Relational Database Service

B. Amazon Elastic Map Reduce

C. Amazon ElastiCache

D. Amazon DynamoDB

E. AWS Elastic Beanstalk

Answer: C E

NO.227 A Solutions Architect created an Amazon VPC with two public subnets and two private subnets. A corporate security mandate requires all Amazon EC2 instance be launched in a private subnet. However, when an EC2 instance running Apache on ports 80 and 443 is launched in the private subnet, no external internet traffic can connect with the server.
What actions should be taken address this situation?

A. Ensure the security group attached to the EC2 instance allows HTTP traffic on port 80 and HTTPS traffic on port 443. Ensure external DNS resolution directs to the IP address of the EC2 instance

B. Launch a NAT Gateway in the private subnet, change the default route to the NAT Gateway, and attach a public Elastic IP address to the NAT Gateway. Ensure external DNS resolution directs to the Elastic IP address

C. Launch an internet-facing Application Load Balancer with the EC2 instance as its endpoint. Ensure external DNS resolution directs to the Application Load Balancer

D. Attach the EC2 instance to an Auto Scaling group in the private subnet. Ensure external DNS resolution directs to the Auto Scaling group

Answer: C

NO.228 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

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

B. The security groups or network ACLs are not properly configured for web traffic

C. The VPC does not have a VGW configured

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

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

Answer: A B

NO.229 A customer has an application that is used by enterprise customers outside of AWS. Some of these customers use legacy firewall that cannot whitelist by DNS name, but can whitelist based only on IP address. The application is currently deployed in two Availability zones, with the one EC2 instance in each that has Elastic IP addresses. The customers wants to whitelist only two IP addresses, but the two existing EC2 instance cannot sustain the amount of traffic.
What can a Solution Architect do to support the customer and allow for more capacity? (Select TWO)

A. Create a Network Load Balancer with an interface in each subnet, and assign a static IP address to each subnet

B. Create additional EC2 instances and put them on standby. Remap an Elastic IP address to a standby instance in the event of a failure

C. Use Amazon Route 53 with a weighted, round-robin routing policy across the Elastic IP addresses to resolve one at a time

D. Add additional EC2 instances with Elastic IP addresses, and register them with Amazon Route 53

E. Switch the two existing EC2 instances for an Auto Scaling group, and register them with the Network Load Balancer

Answer: A E

NO.230 An application must access data in an Amazon RDS Aurora DB instance.
Which methods will allow this? (Select TWO)

A. Retrieve credentials from AWS KMS

B. Create a user in the database

C. Enable IAM database authentication

D. Enable AWS Security Token Service

E. Create a user in the database parameter group

Answer: B C

NO.231 A Solutions Architect needs to design an architecture for a new, mission-critical batch processing billing application. The application is requited to run Monday. Wednesday, and Friday from 5 AM to 11 AM. Which is the MOST cost-effective Amazon EC2 pricing model?

A. Amazon EC2 Spot Instances

B. On-Demand Amazon EC2 Instances

C. Scheduled Reserved instances

D. Dedicated Amazon EC2 Instances

Answer: A

NO.232 A large media site has multiple applications in Amazon ECS. A Solutions Architect needs to use content metadata and route traffic to specific services.
What is the MOST efficient method to perform this task?

A. Use an AWS Classic Load Balancer with a host-based routing option to route traffic to the correct service.

B. Use the AWS CLI to update Amazon Route 53 hosted zone to route traffic as services get updated.

C. Use an AWS Application Load Balancer with host-based routing option to route traffic to the correct service.

D. Use Amazon CloudFront to manage and route traffic to the correct service.

Answer: A

NO.233 An organization is planning a migration from on-premises workloads to AWS, and needs a design that will provide greater operational transparency.
Which service should be built into the architecture to automate the capture and publishing of custom metrics that will provide this required transparency?

A. Amazon CloudWatch

B. AWS CloudTrail

C. AWS Developer Tools

D. AWS X-Ray

Answer: B

NO.234 A Solutions Architect must design an Amazon DynamoDB table to store data about customer activities. The data is used to analyze recent customer behavior, so data that is less than a week old is heavily accessed and older data is accessed infrequently. Data that is more than one month old never needs to be referenced by the application but needs to be archived for year-end analytics.

A. Use DynamoDB time-to-live settings to expire items after a certain time period

B. Provision a higher write capacity unit to minimize the number of partitions

C. Create separate tables for each week's data with higher throughput for the current week

D. Pre-process data to consolidate multiple records to minimize write operations

E. Export the old table data from DynamoDB to Amazon S3 using AWS Data Pipeline and delete the old table

Answer: A E

NO.235 Which Amazon elastic compute cloud feature can you query from within the instance to access instance properties?

A. Instance user data

B. Amazon Machine Image

C. Resource tags

D. Instance metadata

Answer: D

NO.236 A Solutions Architect is designing a solution that retains traffic information between network interfaces. The traffic information will then be monitored for anomalies by an InfoSec team using Amazon CloudWatch.
What approach should the Architect take?

A. Save all inbound requests to Amazon DynamoDB

B. Maintain traffic history on each Amazon EC2 instance

C. Enable Amazon VPC Flow Logs

D. Save all inbound requests to Amazon S3

Answer: C

NO.237 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.
Which of the following bastion deployment scenarios will meet this requirement?

A. Deploy a Windows Bastion host on the corporate network that has RDP access to all intances in the VPC

B. Deploy a Windows Bastion host with an Elastic IP address in the public subnet, and allow SSH access to the bastion from anywhere

C. 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

D. Deploy a Windows Bastion host with an auto-assigned Public subnet, and allow RDP access to the

bastion from only the corporate public IP addresses

Answer: D

NO.238 A Solutions Architect is designing a VPC. Instances in a private subnet must be able to establish IPv6 to the Internet. The design must scale automatically and not incur any additional cost. This can be accomplished with.

A. an egress-only internet gateway

B. a NAT gateway

C. a custom NAT instance

D. a VPC endpoint

Answer: A

NO.239 A reporting application running on Amazon EC2 stores data in an Amazon Aurora MySQL cluster that is read-heavy. End-of-month reporting activities put additional heavy read demands on the database. Over the past months, the Operations team has had to increase and decrease the size of the instances in the database cluster several times to accommodate end-of-month reporting demands, incurring downtime in the process.

Management wants to eliminate the downtime but is unwilling to incur the cost of permanently provisioning larger instances.

Which solution meets the requirements with the FEWEST changes to the application code?

A. Use Amazon ElasticCache to implement a query-caching solution

B. Migrate frequently queried data to Amazon DynamoDB to query for reporting

C. Add a read replica to the Amazon Aurora cluster, and use this instance for reporting

D. Create an Auto Scaling policy to add and remove read replicas from the cluster automatically

Answer: C

NO.240 A Solutions Architect needs a storage solution for a fleet of Linux web application servers. The solution should provide file system interface and be able to support millions of files. Which AWS service should the Architect choose?

A. Amazon S3

B. Amazon EFS

C. Amazon EBS

D. Amazon ElastiCache

Answer: B

NO.241 A Solutions Architect is designing the storage layer for a production relational database. The database will run on Amazon EC2. The database is accessed by an application that performs intensive reads and writes, so the database requires the LOWEST random I/O latency.

Which data storage method fulfills the above requirements?

A. Store data m a filesystem backed by Amazon Elastic File System (EFS)

B. Store data in Amazon S3 and use a third-party solution to expose Amazon S3 as a filesystem to the database server

C. Store data in Amazon DynamoDB and emulate relational database semantics

D. Stripe data across multiple Amazon EBS volumes using RAID 0

Answer: D

NO.242 You've been tasked with choosing a datastore to persist GPS coordinates for a new app. The service needs consistent, single-digit-millisecond latency at any scale. Which AWS service meets your requirements?

A. Amazon S3

B. Amazon Redshift

C. Amazon RDS

D. Amazon DynamoDB

Answer: D

Explanation

Amazon DynamoDB is a fast and flexible 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. Its flexible data model, reliable performance, and automatic scaling of throughput capacity, makes it a great fit for mobile, web, gaming, ad tech, IoT, and many other applications. Start today by downloading the local version of DynamoDB, then read our Getting Started Guide.

NO.243 A Solution Architect is building an online shopping application where users will be able to browser items, add items to a cart, and purchase the items. Images of items will be stored in Amazon S3 bucket organized by item category. When an item is no longer available for purchase, the item will be deleted from the S# bucket.

Occasionally. During test. Item images deleted from the S3 bucket are still visible to some users.

What is a flaw in this design approach?

A. Defining S3 by item may cause partition distribution, which will impact performance.

B. Amazon S3 DELETE request are eventually consistent, which may cause other users to view items that already been purchased.

C. Amazon S3 DELETE request apply a lock to the S3 bucket during the operation, causing other users to be blocked.

D. Using Amazon S3 for persistence exposes the application to a single point of failure.

Answer: B

NO.244 Which of the following items are required to allow an application deployed on an EC2 instance to write data to a Dynamo DB table? Assume that no security keys are allowed to be stored on the EC2 instance? Choose 2 answers

A. Add an IAM Role to a running EC2 instance

B. Launch an EC2 instance with the IAM Role included in the launch configuration

C. Create an IAM User that allows write access to the DynamoDB table

D. Create an IAM role that allows write access to the DynamoDB table

E. Launch an EC2 instance with the IAM user included in the launch configuration

F. Add an IAM user to a running EC2 instance

Answer: B D

NO.245 Which set of Amazon 53 features helps to prevent and recover from accidental data loss?

A. Object lifecycle and service access logging

B. Object versioning and Multi-factor authentication

C. Access controls and server-side encryption

D. Website hosting and Amazon S3 policies

Answer: B

NO.246 A business team requires a structured storage solution to store all of a company's historical sales data.
Currently there are 4 TB of data, which will grow to hundreds of terabytes within a few years. The team must be able to regularly run queries against the data using current business intelligence tools Fast performance is required despite the dataset growth.
Which solution should the company use?

A. Amazon Redshift

B. Amazon Aurora

C. Amazon DynamoDB

D. Amazon S3

Answer: A

NO.247 You have decided to change the instance type for instances running in your application tier that is using Auto Scaling. In which area below would you change the instance type definition?

A. Auto Scaling tags

B. Auto Scaling policy

C. Auto Scaling group

D. Auto Scaling launch configuration

Answer: D

NO.248 A Solutions Architect is designing a mobile application that will capture receipt images to track expenses. The Architect wants to store the images on Amazon S3. However, uploading images through the web server will create too much traffic. What is the MOST efficient method to store images from a mobile application on Amazon S3?

A. Upload directly to S3 using a pre-signed URL

B. Upload to a second bucket, and have a Lambda event copy the image to the primary bucket

C. Upload to a separate Auto Scaling group of servers behind an ELB Classic Load Balancer, and have them write to the Amazon S3 bucket

D. Expand the web server fleet with Spot Instances to provide the resources to handle the images

Answer: C

NO.249 A Solutions Architect is designing a service that must have four Amazon EC2 instances running between 8 AM and 6 PM daily. The service requires one EC2 instance outside of those hours. What is the MOST cost-effective way to provide enough compute?

A. Use one Amazon EC2 Reserved Instance and use an Auto Scaling group to add and remove EC2 instances based on CPU utilization.

B. Use one Amazon EC2 On-Demand instance and use an Auto Scaling group to add and remove EC2 instances based on CPU utilization.

C. Use one Amazon EC2 On-Demand instance and use an Auto Scaling Group scheduled action to add three EC2 Spot instances at 7:30 AM and remove three instances at 6:10 PM.

D. Use one Amazon EC2 Reserved Instance and use an Auto Scaling Group scheduled action to add three EC2 On-Demand instances at 7:30 AM and remove three instances at 6:10 PM.

Answer: B

NO.250 A company is building a critical ingestion service on AWS that will receive 1,000 incoming events per second.

The events must be processed in order, and no events may be lost. Multiple applications will need to process each event. The company will expose the service as RESTful calls through an API Gateway.

What should a Solutions Architect use to receive the events based on these requirements?

A. Amazon Kinesis Data Stream

B. Amazon DynamoDB

C. Amazon SQS

D. Amazon SNS

Answer: A

NO.251 You are configuring your company's application to use Auto Scaling and need to move user state information.

Which of the following AWS services provides a shared data store with durability and low latency?

A. Amazon Simple Storage Service

B. Amazon DynamoDB

C. Amazon EC2 instance storage

D. AWS ElasticCAche Memcached

Answer: A

NO.252 How can a user track memory usage in an EC2 instance?

A. Call Amazon CloudWatch to retrieve the memory usage metric data that exists for the EC2 Instance

B. Assign an 1AM role to the EC2 instance with an 1AM policy granting access to the desired metric.

C. Use an instance type that supports memory usage reporting to a metric by default

D. Place en agent on the EC2 instance to push memory usage to an Amazon CloudWatch custom metric.

Answer: D

NO.253 An application produces monthly reports that must be immediately accessible for up to 7days. After 7 days, the data can be archived. Compliance policies require that the archived data be retrievable within 24 hours of a request.

What is the MOST cost-effective approach to satisfy the compliance requirement?

A. Store the data in Amazon S3 Standard storage with a lifecycle rule to transition the data to Amazon S3 Standard-Infrequent Access (S3 Standard-IA) after 7 days, then transition lo the GLACIER storage class after 30 days.

B. Store the data in Amazon S3 Standard storage with a lifecycle rule 10 transition the data 10 Amazon S3 Standard-Infrequent Access (S3 Standard-IA) after 7 days.

C. Store the data in Amazon S3 Standard storage with a lifecycle rule 10 transition the data to the GLACIER storage class after 30 days.

D. Store the data in Amazon S3 Standard storage with a lifecycle rule to transition the data to the GLACIER storage class after 7 days.

Answer: D

NO.254 You are tasked with setting up a Linux bastion host for access to Amazon EC2 instances running in your VPC.

Only clients connecting from the corporate external public IP address 72.34.51.100 should have SSH access to the host. Which option will meet the customer requirement?

A. Security Group Inbound Rule: Protocol - TCP. Port Range - 22, Source 72.34.51.100/32

B. Security Group Inbound Rule: Protocol - UDP, Port Range - 22, Source 72.34.51.100/32

C. Network ACL Inbound Rule: Protocol - UDP, Port Range - 22, Source 72.34.51.100/32

D. Network ACL Inbound Rule: Protocol - TCP, Port Range-22, Source 72.34.51.100/0

Answer: A

NO.255 A Solutions Architect is designing a system that will store Personally Identifiable Information (PII) in an Amazon S3 bucket. Due to compliance and regulatory requirements, both the master keys and unencrypted data should never be sent to AWS.

What Amazon S3 encryption technique should the Architect choose?

A. Amazon S3 client-side encryption with an AWS KMS-managed customer master key (CMK)

B. Amazon S3 server-side encryption with an AWS KMS-managed key

C. Amazon S3 client-side encryption with a client-side master key

D. Amazon S3 server-side encryption with a customer-provided key

Answer: C

NO.256 Employees from several companies use an application once a year during a specific 30- day period. The periods are different for each company. Traffic to the application spikes during these 30-day periods.

How can the application be designed to handle these traffic spikes?

A. Use an Amazon Route 53 to cache static elements of the website requests

B. Use Amazon S3 to cache static elements of the website requests

C. Use an Auto Scaling group to scale the number of EC2 instances to match the site traffic

D. Use Amazon CloudFront to serve static assets to decrease the load on the EC2 instances

Answer: B

NO.257 An AWS workload in a VPC is running a legacy database on an Amazon EC2 instance. Data is stored on a

200GB Amazon EBS (gp2) volume. At peak load times, logs show excessive wait time.

What solution should be implemented to improve database performance using persistent storage?

A. Migrate the data on the Amazon EBS volume to an SSD-backed volume.

B. Change the EC2 instance type to one with EC2 instance store volumes.

C. Migrate the data on the EBS volume to provisioned IOPS SSD (io1).

D. Change the EC2 instance type to one with burstable performance.

Answer: C

NO.258 A Solutions Architect is designing a VPC. Instances in a private subnet must be able to establish IPv6 traffic to the Internet. The design must scale automatically and not incur any additional cost. This can be accomplished with:
A. an egress-only internet gateway
B. a NAT gateway
C. a custom NAT instance
D. a VPC endpoint
Answer: A

NO.259 What is the minimum interval for the data that Amazon CloudWatch receives and aggregates?
A. One second
B. Five seconds
C. One minutes
D. Three minute
E. Five minutes
Answer: C

NO.260 How can you secure data at rest on an EBS volume?
A. Create an IAM policy that restricts read and write access to the volume
B. Use an encrypted file system on top of the EBS volume
C. Write the data randomly instead of sequentially
D. Encrypt the volume using the S3 server-side encryption service
E. Attach the volume to an insurance using EC2 SSL interface
Answer: B

NO.261 A Solutions Architect is designing a shared file system for a company. Multiple users will be accessing it at any given time. Different teams will have their own directories, and the company wants to secure files so that users can access only files owned by their team. How should the Solutions Architect design this?
A. Use Amazon EFS and control permissions by using file-level permissions.
B. Use Amazon S3 and control permissions by using ACLs.
C. Use Amazon EFS and control permissions by using security groups.
D. Use AWS Storage Gateway and control permissions by using AWS Identity and Access Management (IAM)
Answer: D

NO.262 A customer has a public-facing web application hosted on a single amazon Elastic compute Cloud (EC2) instance and serving videos directly from an amazon simple storage service bucket. Which of the following will restrict third parties from directly accessing the video assets in the bucket?

A. Use a bucket policy to only allow the public IP address of the Amazon EC2 instance hosting the customer website

B. Use a bucket policy to only allow referrals from the main website URL

C. Launch the website Amazon EC2 instance using an IAM role that is authorized to access the videos

D. restrict access to the bucket to the public CIDR range of the company locations

Answer: A

NO.263 A company has configured and peered two VPCs : VPC-1 and VPC-2. VPC-1 contains only private subnets, and VPC-2 contains only public subnets. The company uses a single AWS Direct Connect connection and private virtual interface to connect their on-premises network with VPC-1. Which two methods increase the fault tolerance of the connection to VPC-1? Choose 2 answers

A. Establish a hardware VPN over the internet between VPC-2 and then the on-premises network

B. Establish a hardware VPN over the internet between VPC-1 and then the on-premises network

C. Establish a new AWS direct connect connection and private virtual interface in the same region as VPC-2

D. Establish a new AWS direct connect connection and private virtual interface in a different AWS region than VPC-1

E. Establish a new AWS direct connect connection and private virtual interface in the same AWS region as VPC-1

Answer: A D

NO.264 A company hosts a two-tier application that consists of a publicly accessible web server that communicates with a private database. Only HTTPS port 443 traffic to the web server must be allowed from the internet.

Which of the following options will achieve these requirements? (Select Two.)

A. Security group rule that allows inbound internet traffic for port 443

B. Security group rule that drives all inbound internet traffic expect port 443

C. Network ACL rule that allows port 443 inbound and all ports outbound for internet traffic

D. Security group rule that allows internet traffic for port 443 in both inbound and outbound

E. Network ACL rule that allows port 443 for both inbound and outbound for all Internet traffic

Answer: A E

NO.265 A company hosts a popular web application. The web application connects to a database running in a private VPC subnet. The web servers must be accessible only to customers on an SSL connection. The RDS MySQL database server must be accessible only from the web servers. How should the Architect design a solution to meet the requirements without impacting running applications?

A. Create a network ACL on the web server's subnet, and allow HTTPS inbound and MySQL outbound.
Place
both database and web servers on the same subnet.

B. Open an HTTPS port on the security group for web servers and set the source to 0.0.0.0/0. Open the MySQL port on the database security group and attach it to the MySQL instance. Set the source to Web Server Security Group.

C. Create a network ACL on the web server's subnet, and allow HTTPS inbound, and specify the source as
0.0.0.0/0. Create a network ACL on a database subnet, allow MySQL port inbound for web servers, and deny all outbound traffic.
D. Open the MySQL port on the security group for web servers and set the source to 0.0.0.0/0. Open the HTTPS port on the database security group and attach it to the MySQL instance. Set the source to Web Server Security Group.
Answer: D

NO.266 Which service should an organization use if it requires an easily managed and scalable platform to host its web application running on Nginx?
A. AWS Lambda
B. Auto Scaling
C. AWS Elastic Beanstalk
D. Elastic Load Balancing
Answer: C

NO.267 A Solution Architect is designing a three-tier web application. The Architect wants to restrict access to the database tier to accept traffic from the application servers only. However, these application servers are in an Auto Scaling group and may vary in quantity.
How should the Architect configure the database servers to meet the requirements?
A. Configure the database security group to allow database traffic from the application server IP addresses.
B. Configure the database security group to allow database traffic from the application server security group.
C. Configure the database subnet network ACL to deny all inbound non-database traffic from the applicationtier subnet.
D. Configure the database subnet network ACL to allow inbound database traffic from the application-tier subnet.
Answer: C

NO.268 A manufacturing company captures data from machines running at customer sites. Currently, thousands of machines send data every 5 minutes, and this is expected to grow to hundreds of thousands of machines in the near future. The data is logged with the intent to be analyzed in the future as needed.
What is the SIMPLEST method to store this streaming data at scale?
A. Create an Amazon Kinesis Firehouse delivery stream to store the data in Amazon S3.
B. Create an Auto Scaling group of Amazon EC2 servers behind ELBs to write the data into Amazon RDS.
C. Create an Amazon SQS queue, and have the machines write to the queue.
D. Create an Amazon EC2 server farm behind an ELB to store the data in Amazon EBS Cold HDD volumes.
Answer: B

NO.269 A Solutions Architect is building an application that stores object data. Compliance requirements state that the data stored is immutable.
Which service meets these requirements?

A. Amazon S3

B. Amazon Glacier

C. Amazon EFS

D. AWS Storage Gateway

Answer: B

NO.270 A Solution Architect is designing a new application that will be hosted on EC2 instances. This application has the following traffic requirements:
* Accept HTTP (80) HTTPS (443) traffic from the internet
* Accept FTP (21) traffic from only the finance team servers at 10.10.2.0/24 Which of the following AWS CloudFormation snippets correctly declares inbound security group rules that meet the requirements and prevent unauthorized access to additional services on the instance?
A)
B)
C)
D)

A. Option A

B. Option B

C. Option C

D. Option D

Answer: C

NO.271 Your company wants to start working with AWS, but has not yet opened an account. With which of the following services should you begin local development?

A. Amazon DynamoDB

B. Amazon Simple Queue Service

C. Amazon Simple Email Service

D. Amazon CloudSearch

Answer: A

NO.272 Which of the following techniques should an Amazon DynamoDB customer follow the maximize throughput?

A. Create tables with as few partition keys as possible

B. Create tables with a partition key that has a large number of distinct values requested uniformly

C. Create tables with a partition key that has a small number of distinct values requested uniformly

D. Create tables with only range keys

Answer: B

NO.273 Which AWS Services are valid origins for an Amazon CloudFront distribution?
Choose 2 answers

A. Amazon RDS

B. Amazon Glacier

C. ELB Classic Load Balancer

D. Amazon DynamoDB

E. Amazon S3

Answer: B E

NO.274 A company processes mobile chat messages. Throughput can increase dramatically, and the Amazon EC2 infrastructure cannot handle the fluctuating demand. Messages are received in an Amazon Kinesis Data Stream, and the processor instances are deployed in an Auto Scaling group. A CloudWatch alarm, which uses Amazon SNS to tiger a Lambda function, automatically scales the Kinesis Data Stream. The processor instances' application code and configuration are stored in an S3 bucket.

How can a Solution Architect improve the launch time of new instances in the Auto Scaling group?

A. Reduce the values of the Default Cooldown and Health Check Grace Period settings for the Auto Scaling group

B. Change the scale-out rules for the Auto Scaling group to launch instances at a lower threshold on the Kinesis CloudWatch alarm

C. Modify the Lambda function to change the number of Auto Scaling group members when it updates the Kinesis Shard count

D. Update the launch configuration to use a custom Amazon Machine Image (AMI) with all the software pre-installed. Use user data scripts to pull the configuration at launch from Amazon S3

Answer: A

NO.275 A company is creating a web application that will run on an Amazon EC2 instance. The application on the instance needs access to an Amazon DynamoDB table for storage What should be done to meet these requirements?

A. Create another AWS account root user with permissions to the DynamoDB table.

B. Create an JAM role and assign the role to the EC2 instance with permissions to the DynamoDB table.

C. Create an identity provider and assign the identity provider to the EC2 instance with permissions to the DynamoDB table.

D. Create identity federation with permissions to the DynamoDBtable

Answer: B

NO.276 A legacy build management application stores artifacts in an NFS shared filesystem accessed by 400 servers.

The company is migrating its infrastructure to AWS.

Which storage service should be used for build management?

A. Amazon S3

B. Amazon EFS

C. Amazon EBS

D. Amazon EC2 Instance Storage

Answer: B

NO.277 A news organization plans to migrate their 20 TB video archive to AWS. The files are rarely accessed, but when they are a request is made in advance and a 3- to 5-hour retrieval time frame is acceptable However, when there is a breaking news story, the editors require access to archived footage within minutes.

Which storage solution meets the needs of this organization while providing the LOWEST cost of storage?

A. Store the archive in Amazon S3 Reduced Redundancy Storage.

B. Store the archive in Amazon Glacier and use standard retrieval for all content

C. Store the archive in Amazon Glacier and pay the additional charge for expedited retrieval when needed

D. Store the archive in Amazon S3 with a lifecycle policy to move this to S3 Infrequent Access after 30 days.

Answer: A

NO.278 A team has an application that detects new ejects being uploaded into an Amazon S3 bucket. The uploads trigger a Lambda function to write object metadata into an Amazon DynamoDB table and RDS PostgreSQL database. Which action should the team lake to ensure high availability?

A. Enable cross-region replication in the Amazon S3 bucket

B. Create a Lambda function for each Availability Zone the application is deployed in.

C. Enable multi-AZ on the RDS PostgreSQL database

D. Create a DynamoDB stream for the DynamoDB table

Answer: C

NO.279 You are architecting a web application that will be backed by a relational database. The application will be read-heavy, and database queries will be computationally intensive.

How can you improve overall application response for users?

A. Use data Pipeline to replicate your relational data across all of your web tier nodes

B. Use Amazon SQS to distribute messages among workers that are less busy

C. Use ElastiCache to store critical pieces of data in memory for low-latency access

D. Use an Auto Scaling group and ELB Classic Load Balancer for the application tier

Answer: A

NO.280 A colleague asked for your advice about how to easily deploy, monitor, and scale a three-tier LAMP (Linux, Apache, MySQL, PHP) application on AWS. Your colleague has time and staffing constraints and wants to deploy and manage the application with minimal effort.

What AWS service would you suggest?

A. Data Pipeline

B. Elastic Beanstalk

C. CloudFormation

D. CodeDeploy

Answer: D

Explanation

AWS CodeDeploy automates code deployments to any instance, including Amazon EC2 instances and on-premises servers. AWS CodeDeploy makes it easier for you to rapidly release new features, helps

you avoid downtime during application deployment, and handles the complexity of updating your applications.

NO.281 A Solution Architect is investigating purchasing options for a batch processing application on Amazon EC2 The batch job downloads an image from an Amazon S3 bucket, adds copyright information and uploads it back to Amazon S3, it normally takes 5 to 10 hours process all the files uploaded each week The application has built-in capabilities to process files in parallel, recover from the instance and continue the processing from where it left off.

What is the MOST cost-effective purchasing option the Solutions Architect can recommend?

A. Standard Reserved Instances

B. ScheduledReserved Instances

C. Spot Instances

D. On-Demand Instances

Answer: B

NO.282 If you want to launch Amazon Elastic Compute Cloud (EC2) instances and assign each instance a predetermined private IP address you should:

A. Launch the instance from a private Amazon Machine Image (AMI).

B. Assign a group of sequential Elastic IP address to the instances.

C. Launch the instances in the Amazon Virtual Private Cloud (VPC).

D. Launch the instances in a Placement Group.

E. Use standard EC2 instances since each instance gets a private Domain Name Service (DNS) already.

Answer: C

NO.283 A web application running on Amazon EC2 instances writes data synchronously to an Amazon DynamoDB table configured for 60 write capacity units. During normal operation the application writes 50 KB/s to the tale, but can scale up to 500 KB/ s during peak hours. The application is currently throttling errors from the DynamoDB table during peak hours.

What is the MOST cost-efficient change to support the increased traffic with minimal changes to the application?

A. Use Amazon SQS to manage the write operations to the DynamoDB table.

B. Change DynamoDB table configuration to 600 write capacity units.

C. Increase the number of Amazon EC2 instances to support the traffic.

D. Configure Amazon DynamoDB Auto Scaling to handle the extra demand

Answer: D

NO.284 When you put objects in Amazon 53, what is the indication that an object was successfully stored?

A. A HTTP 200 result code and MD5 checksum, taken together, indicate that the operation was successful

B. A success code is inserted into the S3 object metadata

C. Amazon S3 is engineered for 99.999999999% durability. Therefore there is no need to confirm that data was inserted.

D. Each S3 account has a special bucket named_ s3_logs. Success codes are written to this bucket

with a timestamp and checksum

Answer: A

NO.285 An Administrator is hosting on application on a single Amazon EC2 instance, which users can access by the public hostname. The administrator is adding a second instance, but does not want users to have to decide between many public hostnames.

Which AWS service will decouple the users from specific Amazon EC2 instances?

A. Amazon SQS

B. Auto Scaling group

C. Amazon EC2 security group

D. Amazon ELB

Answer: D

NO.286 You are working with a customer who is using Chef configuration management in their data center. Which service is designed to let the customer leverage existing Chef recipes in AWS?

A. Amazon Simple Workflow Service

B. AWS Elastic Beanstalk

C. AWS CloudFormation

D. AWS OpsWorks

Answer: D

Reference: http://aws.amazon.com/opsworks/

NO.287 A company is creating a web application that allows customers to view photos in their web browsers The website is hosted in us-east-1 Amazon EC2 instances behind an Application Load Balancer Users will be located in many places around the world Which solution should provide all users with the fastest photo viewing experience?

A. Implement an AWS Auto Scaling group for the web server instances behind the Application Load Balancer

B. Enable Amazon CloudFront for the website and specify the Application Load Balancer as the origin.

C. Move the photos into an Amazon S3 bucket and enable static website hosting

D. Enable Amazon ElastiCache in the web server subnet.

Answer: B

NO.288 A Solutions Architect must build a secure document -storage platform that allows clients to access data stored on Amazon S3. Documents must be readily available for the first 15 days. After that, documents need not be readily available, and storage costs should be reduced as much as possible.

Which of the following approaches will satisfy these requirements?

A. Create a lifecycle rule to transition the documents from the STANDARD storage class to the STANDARD_IA storage class after 15 days, and then to the GLACIER storage class after an additional 15 days.

B. Create a lifecycle rule to transition the documents from the STANDARD storage class to the GLACIER storage class after 30 days.

C. Create a lifecycle rule to transition documents from the STANDARD storage class to the

STANDARD_IA storage class after 30 days and then to the GLACIER storage class after an additional 30 days.

D. Create a lifecycle rule to transition the documents from the STANDARD storage class to the GLACIER storage class after 15 days.

Answer: A

NO.289 A company plans to migrate a website to AWS to use a serverless architecture. The website contains both static and dynamic content and is accessed by users across the world. The website should maintain sessions for returning users to improve the user experience.

Which service should a Solutions Architect use for a cost-efficient solution with the LOWEST latency?

A. Amazon S3, AWS Lambda, Amazon API Gateway, and Amazon DynamoDB

B. Amazon CloudFront, AWS Lambda, API Gateway, and Amazon RDS

C. Amazon CloudFront, Elastic Load Balancing, Amazon EC2, and Amazon RDS

D. Amazon S3, Amazon CloudFront, AWS Lambda, Amazon API Gateway, and Amazon DynamoDB.

Answer: D

NO.290 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?

A. Enable AWS CloudTrail to audit all Amazon S3 bucket access.

B. Enable server access logging for all required Amazon S3 buckets.

C. Enable the Requester Pays option to track access via AWS Billing

D. Enable Amazon S3 event notifications for Put and Post.

Answer: B

NO.291 A Solutions Architect has a two-tier blog application with a single Amazon EC2 instance web server and Amazon RDS MySQL Multi-AZ DB instances. The Architect is re-architecting the application for high availability by adding instances in a second Availability Zone.

Which additional services will improve the availability of the application? (Select TWO)

A. Auto Scaling group

B. AWS CloudTrail

C. ELB Classic Load Balancer

D. Amazon DynamoDB

E. Amazon ElasitCache

Answer: A C

NO.292 An instance is launched into a VPC subnet with the network ACL configured to allow all inbound traffic and deny all outbound traffic. The instance's security group is configured to allow SSH from any IP address and deny all outbound traffic. What changes need to be made to allow SSH access to the instance?

A. The outbound security group needs to be modified to allow outbound traffic.

B. The outbound network ACL needs to be modified to allow outbound traffic.

C. Nothing, it can be accessed from any IP address using SSH.

D. Both the outbound security group and outbound network ACL need to be modified to allow

outbound traffic.

Answer: B

Explanation

http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_ACLs.html

NO.293 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 web tier?

A. Amazon S3

B. Amazon EBS volume

C. Amazon RDS instance

D. Amazon EC2 instance store

Answer: A

NO.294 A company has an application running as a service in Amazon ECS using the Amazon E.C2 launch type. The application code makes AWS API calls to publish messages to Amazon SQS What is the MOST secure method of giving the application permission to publish messages to Amazon SQS?

A. Use AWS 1AM to grant SOS permissions to the role used by the launch configuration for the Auto Scaling group of the ECS cluster.

B. Create a new identity and access management (1AM) user with SQS permissions, and then update the task definition to declare the access key ID and secret access key as environment variables.

C. Create a new identity and access management (1AM) role with SOS permissions, and then update the task definition to use this role for the task role setting

D. Update the security group used by the ECS cluster to allow access to Amazon SQS

Answer: A

NO.295 A company is setting up a new website for online sales. The company will have a web tier and a database tier.

The web tier consists of load-balanced, auto-scaled Amazon

EC2 instances in multiple Availability Zones (AZs). The database tier is an Amazon RDS Multi-AZ deployment. The EC2 instances must connect securely to the database.

How should the resources be launched?

A. EC2 instances public subnet RDS database instances: public subnet Load balancer public subnet

B. EC2 instances public subnet RDS database instances: private subnet Load balancer private subnet

C. EC2 instances private subnet RDS database instances: public subnet Load balancer public subnet

D. EC2 instances private subnet RDS database instances: private subnet Load balancer public subnet

Answer: D

NO.296 A client is migrating a legacy web application to the AWS Cloud. The current system uses an Oracle database as a relational database management system solution. Backups occur every night, and the data is stored onpremises. The Solutions Architect must automate the backups and identity a storage solution while keeping costs low.

Which AWS service will meet these requirements?

A. Amazon RDS

B. Amazon RedShift

C. Amazon DynamoDB Accelerator

D. Amazon ElastiCache

Answer: A

NO.297 A photo sharing service stores pictures in Amazon Simple Storage Service (S3) and allows application signin using an Open ID Connect compatible identity provider. Which AWS Security Token approach to temporary access should you use for the Amazon S3 operations?

A. SAML-based identity Federation

B. Cross-Account Access

C. AWS identity and Access Management roles

D. Web identity Federation

Answer: A

NO.298 A Solutions Architect needs to design an architecture for a new mission-critical belch processing billing application. The application is required to run Monday. Wednesday and Friday from 5 AM to 11 AM Which is the MOST cost-effective Amazon EC2 pricing model?

A. Amazon EC2 Spot Instances

B. On-Demand Amazon EC2 instances

C. Scheduled Reserved Instances

D. Dedicated Amazon EC2 instances

Answer: A

NO.299 You have created an API powered by API Gateway and AWS Lambda. Because of a new feature release, you expect traffic volume on your API to increase 10-fold. Which configuration should you use?

A. Use one Lambda function with API gateway as the trigger. Increase the amount of memory configured for the lambda function

B. Use one Lambda function with API gateway as the trigger. AWS Lambda will allocate capacity to match the rate of incoming events

C. Use multiple API Gateway endpoints, each triggering a Lambda function. You are charged per call, not per endpoint

D. Use multiple copies of the Lambda function, each with API gateway as th trigger. You are charged per request, not per function

Answer: A

NO.300 An organization wants to migrate a legacy Ruby-on Rails application to AWS. The application is not used frequently, but it must be scalable during peak use. The organization requires minimal code changes, if any, to the application.

Which of the following solutions will meet the organization's requirements for moving the application to AWS?

A. Migrate the application to AWS Lambda

B. Deploy the application to an EC2 instance

C. Host the application on Amazon S3, and use Amazon CloudFront to cache static assets

D. Create an AWS Elastic Beanstalk deployment for the application with satisfactory scaling criteria

Answer: D

NO.301 A Solutions Architect needs to design a solution that will enable a security learn to detect, review and perform root cause analysis of security incidents that occur in a cloud environment. The Architect must provide a centralized view of all API for current and future AWS regions.
How should the Architect accomplish this task?

A. Enable AWS CloudTtail logging in each individual region Repeat this for all future regions.

B. Enable Amazon CloudWatch logs for all AWS services across all regions and aggregate them in a single Amazon S3 bucket

C. Enable AWS Trusted Advisor security checks and report all security incidents tor all regions.

D. Enable AWS CloudTrail by creating a new trail and apply the trail to all regions

Answer: D

NO.302 A company has a legal requirement to store point-in-time copies of its Amazon RDS PostgreSQL database instance in facilities that are at least 200 miles apart.
Use of which of the following provides the easiest way to comply with this requirement?

A. Cross-region read replica

B. Multiple Availability Zone snapshot copy

C. Multiple Availability Zone read replica

D. Cross-region snapshot copy

Answer: C

NO.303 A customer's security team requires the logging of all network access attempts to Amazon EC2 instances in their production VPC on AWS.Which configuration will meet the security team's requirement?

A. Enable CloudTrail for the production VPC.

B. Enable both CloudTrail and VPC Flow Logs for the AWS account.

C. Enable both CloudTrail and VPC Flow Logs for the production VPC.

D. Enable VPC Flow Logs for the production VPC.

Answer: D

Explanation

Amazon VPC provides features that you can use to increase and monitor the security for your VPC:

* Security groups - Act as a firewall for associated Amazon EC2 instances, controlling both inbound and outbound traffic at the instance level

* Network access control lists (ACLs) - Act as a firewall for associated subnets, controlling both

* inbound and outbound traffic at the subnet level

* Flow logs - Capture information about the IP traffic going to and from network interfaces in your VPC When you launch an instance in a VPC, you can associate one or more security groups that you've created.

Each instance in your VPC could belong to a different set of security groups. If you don't specify a security group when you launch an instance, the instance automatically belongs to the default security group for the VPC. For more information about security groups, see Security Groups for Your VPC You can secure your VPC instances using only security groups; however, you can add network ACLs as a second layer of defense. For more information about network ACLs, see Network ACLs.

You can monitor the accepted and rejected IP traffic going to and from your instances by creating a flow log for a VPC, subnet, or individual network interface. Flow log data is published to CloudWatch Logs, and can help you diagnose overly restrictive or overly permissive security group and network ACL rules. For more information, see VPC Flow Logs.

You can use AWS Identity and Access Management to control who in your organization has permission to create and manage security groups, network ACLs and flow logs. For example, you can give only your network administrators that permission, but not personnel who only need to launch instances. For more information, see Controlling Access to Amazon VPC Resources.

Amazon security groups and network ACLs don't filter traffic to or from link-local addresses (169.254.0.0/16) or AWS-reserved IPv4 addresses-these are the first four IPv4 addresses of the subnet (including the Amazon DNS server address for the VPC). Similarly, flow logs do not capture IP traffic to or from these addresses.

These addresses support the services: Domain Name Services (DNS), Dynamic Host Configuration Protocol (DHCP), Amazon EC2 instance metadata, Key Management Server (KMS-license management for Windows instances), and routing in the subnet. You can implement additional firewall solutions in your instances to block network communication with link-local addresses.

NO.304 A Solutions Architect plans to migrate a load balancer tier from a data center to AWS. Several websites have multiple domains that require secure balancing. The Architect decides to use Elastic Load Balancing Application Load Balancers.
What is the MOST efficient method for achieving secure communication?
A. Create a wildcard certificate and upload it to the Application Load Balancer.
B. Create an SNI certificate and upload it to the Application Load Balancer.
C. Create a secondary proxy server to terminate SSL traffic before the traffic reaches the Application Load Balancer.
D. Let a third-party Certificate Manager manage certificates required to all domains and upload them to the Application Load Balancer.
Answer: D

NO.305 You have been asked to design a NAT solution for your company's VPC-based web application. Traffic from the private subnets varies throughout the day from 500 Mbps to spikes of 7 Gbps. What is the most cost-effective and scalable solution?
A. Move the internet gateway for the VPC to a public subnet: route all internet traffic through the internet gateway
B. Create an Amazon EC2 NAT instance with a second elastic network interface in a public subnet; route all private subnet internet traffic through the NAT gateway
C. Create an Auto Scaling group of Amazon EC2 NAT instances in a public subnet; route all private subnet internet traffic through the NAT gateway
D. Create a NAT gateway in a public subnet; route all private subnet internet traffic through the NAT gateway
Answer: D

NO.306 You are tasked with migrating a high throughput, distributed, fault-tolerant NoSQL data store to AWS. The system is extremely disk-IO intensive. Which instance family is best suited for this workload?

A. I2

B. T2

C. HS!

D. R3

Answer: A

NO.307 You have just created an Amazon Relational Database Service (RDS) PostgreSQL instances in Amazon VPC and are unable to connect. Which of the following may be causing connection issues to your Amazon RDS endpoint? Choose 3 answers

A. Incorrect rules in VPC security groups

B. Incorrect rules in DB security groups

C. Amazon RDS endpoint port restrictions on the local firewall

D. An incorrect configuration in the Options Group

E. An incorrect Amazon RDS DB instance type

F. The Amazon RDS instance is not yet in a running state

Answer: B C F

NO.308 You have a Cassandra cluster running in private subnets in an Amazon VPC. A new application in a different Amazon VPC needs access to the database.
How can the new application access the database?

A. Set up a VPC peering connection between the two Amazon VPCs.

B. Set up a dual-homed instance with ENIs in both Amazon VPCs.

C. Set up a NAT Gateway in the application's Amazon VPC.

D. Set up a NAT Gateway in the database's Amazon VPC.

Answer: A

NO.309 A Solutions Architect is architecting a workload that requires a performant object-based storage system that must be shared with multiple Amazon EC2 instances. Which AWS service meets this requirement?

A. Amazon EFS

B. Amazon S3

C. Amazon EBS

D. Amazon ElastiCache

Answer: A

NO.310 A Solutions Architect is designing a web application. The web and application tiers need to access the Internet, but they cannot be accessed from the Internet.
Which of the following steps is required?

A. Attach an Elastic IP address to each Amazon EC2 instance and add a route from the private subnet to the public subnet.

B. Launch a NAT gateway in the public subnet and add a route to it from the private subnet.

C. Launch Amazon EC2 instances in the public subnet and change the security group to allow outbound traffic on port 80.

D. Launch a NAT gateway in the private subnet and deploy a NAT instance in the private subnet.
Answer: B

NO.311 A Solutions Architect was tasked with reviewing several templates that build VPCs and ensuring that they meet specific security requirements. After reviewing the templates, the Architect realizes that all of the templates are missing important security best practices.
What should the Architect do to implement security best practices in an efficient manner?
A. Use VPC peering to enforce network consistency
B. Restrict users from deploying an AWS CloudFormation template
C. Provide the teams a nested AWS CloudFormation template that builds the VPC correctly
D. Create AWS Identity and Access Management (IAM) policies that enforce the corporate VPC architecture standards
Answer: C

NO.312 Which route needs to be added to your routing table in order to allow connections to the internet from your subnet?
A. Destination: 0.0.0.0/0 target: 0.0.0.0/24
B. Destination: 0.0.0.0/0 target: your internet Gateway
C. Destination: 10.0.0.0/32 target: your Virtual Gateway
D. Destination: 0.0.0.0/33 target: your internet gateway
Answer: B

NO.313 You are running a web application with four Amazon EC2 instances across two Availability Zones. The instances are in an Auto Scaling group behind an ELB Classic Load Balancer. A scaling event adds one instance to the group. After the event, you notice that, although all instances are serving traffic, some instances are serving more traffic than others.
Which of the following could be the problem?
A. sticky bits is not enables on the ELB Classic Load Balancer
B. A SSL/TLS certificate has not been deployed on the ELB Classic Load Balancer
C. Cross-zone load balancing is not configuring on the ELB Classic Load Balancer
D. Access logs are not enabled on the ELB Classic Load Balancer
Answer: C

NO.314 A company is looking for a fully-managed solution to store its players' state information for a rapidly growing game. The application runs on multiple Amazon EC2 nodes, which can scale according to the incoming traffic.
The request can be routed to any of the nodes, therefore, the state information must be stored in a centralized database. The players' state information needs to be read with strong consistency and needs conditional updates for any changes. Which service would be MOST cost-effective, and scale seamlessly?
A. Amazon S3
B. Amazon DynamoDB
C. Amazon RDS
D. Amazon Redshift

Answer: B

NO.315 A Solutions Architect is designing a solution that can monitor memory and disk space utilization of all Amazon EC2 instances running Amazon Linux and Windows. Which solution meets this requirement?

A. Default Amazon CloudWatch metrics

B. Custom Amazon CloudWatch metrics

C. Amazon inspector resource monitoring

D. Detailed monitoring of Amazon EC2 instances

Answer: A

NO.316 A company wants to analyze all of its sales information aggregated over the last 12 months. The company expects there to be over 10TB of data from multiple sources. What service should be used?

A. Amazon DynamoDB

B. Amazon Aurora MySQL

C. Amazon RDS MySQL

D. Amazon Redshift

Answer: D

NO.317 A startup is building an application to track the high scores for a popular video game. Their Solution Architect is tasked with designing a solution to allow real-time processing of scores from millions of players worldwide.
Which AWS service should the Architect use to provide reliable data ingestion from the video game into the datastore?

A. AWS Data Pipeline

B. Amazon Kinesis Firehose

C. Amazon DynamoDB Streams

D. Amazon Elasticsearch Service

Answer: B

NO.318 You have a web portal composed of two services. Each service musts scale independently. Both services should be served under the same domain.
Which configuration allows this?

A. Use one AWS Classic Load Balancer. Create a redirect in the web server based on users' source IPs.

B. Use two AWS Application Load Balancer; one for each service. Assign the same CNAME to both.

C. Use one AWS Application Load Balancer. Specify listener rules to route requests to each service.

D. Use two AWS Classic Load Balancers; one for each service. Assign the same CNAME to both.

Answer: B

NO.319 A Solutions Architect is deploying a new production MySQL database on AWS. It is critical that the database is highly available. What should the Architect do to achieve this goal with Amazon RDS?

A. Create a read replica of the primary database and deploy it in a different AWS Region

B. Enable multi-AZ to create a standby database in a different Availability Zone

C. Enable multi-AZ to create a standby database in a different AWS Region

D. Create a read replica of the primary database and deploy it in a different Availability Zone

Answer: B

NO.320 Which of the following categories are available from Amazon elastic compute cloud instance metadata ?
Choose two answers

A. Instance ID

B. Elastic Load Balancing health status

C. Auto Scaling launch configuration

D. Bucket device mapping

E. Bucket ID

Answer: A C

NO.321 Which of the following actions can Cloud Formation trigger when launching Amazon Linux EC2 instance?

A. Download and install software

B. Attach the instance to an Elastic Map Reduce job flow

C. Change the password for the root user

D. Create custom files on the file system

E. Change the EC2 instance metadata

Answer: A D

NO.322 A company has a workflow that uploads video files from their data center to AWS for transcoding. They use Amazon EC2 worker instances that pull transcoding jobs from SQS.
Why is SQS an appropriate service for this scenario?

A. SQS decouples the transcoding task from the upload.

B. SQS can accommodate message payloads of any size.

C. SQS checks the health of the worker instances.

D. SQS synchronously provides transcoding output.

Answer: C

NO.323 A company has a workflow that sends video files from their onpremise system to AWS for Trans coding. They use EC2 worker instances that pull Trans coding jobs from SQS an appropriate service for this scenario?

A. SQS synchronously provides transcoding output

B. SQS guarantees the order of the messages

C. SQS checks the health of the worker instances

D. SQS helps to facilitate horizontal scaling of encoding tasks

Answer: D

NO.324 A workload is an Amazon VPC consists of an Elastic Load Balancer that distributes incoming

requests across a fleet of six Amazon EC2 instances. Each EC2 instance stores and retrieves data from an Amazon DynamoDB table.

Which of the following provisions will ensure that this workload is highly available?

A. Provision DynamoDB tables across a minimum of two Availability Zones

B. Provision the EC2 instances evenly across a minimum of two Availability Zones

C. Provision the EC2 instances evenly across a minimum of two Availability Zones in a single region

D. Provision the Elastic Load Balancer to distribute connections across multiple Availability Zones

Answer: D

NO.325 You run an adsupported photo sharing website using S3 to serve photos to visitors of your site. At some point you find out that other sites have been linking to the photos on your site, Causing loss to your business. What is an effective method to mitigate this?

A. Use CloudFront distributions for static content

B. Store photos on an EBS volume of the web server

C. Block the IPs of the offering websites in Security Groups

D. Remove public read access and use signed URLs with expiry dates

Answer: D

NO.326 Your Amazon VPC has a public subnet with a route that sends all Internet traffic to the Internet gateway. An Amazon EC2 instance in the public subnet has an assigned private IP address. The instance belongs to a security group set to allow all outbound traffic. The instance cannot access the Internet.

Why could the Internet be unreachable from the instance?

A. The instance does not have a public IP address.

B. The internet gateway security group must allow all outbound traffic.

C. The instance security group must allow all inbound traffic.

D. The instance "Source/Destination check" property must be enabled.

Answer: A

NO.327 A customer is complaining that requests made to theirload balancer are closing prematurely. The customer also mentions that the issue only happens when waiting for the multi-week report to be generated. Which option will resolve the customer's issue?

A. Adjust the timeout on health check settings

B. Increase the idle timeout on registered instances

C. Disable connection draining on the load balancer

D. Enable stickiness on the load balancer

Answer: C

NO.328 As part of securing an API layer but on Amazon API Gateway, a Solutions Architect has to authorize users who are currently authenticated by an existing identity provider. The users must be denied access for a period of one hour after three unsuccessful attempts.

How can be Solutions Architect meet these requirements?

A. Use AWS IAM authorization and add least-privileged permissions to each respective IAM role

B. Use an API Gateway custom authorizer to invoke an AWS Lambda function to validate each user's

identity

C. Use Amazon Cognito user pools to provide built-in user management

D. Use Amazon Cognito user pools to integrate with external identity providers

Answer: B

NO.329 A company has asked the Solutions Architect to modify its AWS-hosted internal application to allow for load balancing. The customer requests always come from the company domain (example.net). The company requires that incoming HTTP and HTTPS traffic is routed based on the path element of the URL in the request.

Which implementation can satisfy all requirements?

A. Configure a Network Load Balancer with listeners for appropriate path patterns for the target groups.

B. Configure an Application Load Balancer with host-based routing based on the domain field in the HTTP header.

C. Configure a Network Load Balancer and enable cross-zone load balancing to ensure that all EC2 instances are used.

D. Configure an Application Load Balancer with listeners for appropriate path patterns for the target group.

Answer: B

NO.330 In order to optimize performance for a compute cluster that requires low internode latency. Which of the following feature should you use?

A. EC2 dedicated instances

B. Placement Groups

C. Multiple Availability Zones

D. VPC private subnets

E. AWS Direct Connect

Answer: B

NO.331 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?

A. Deploy a Windows Bastion host on the corporate network that has RDP access to all instances in the VPC.

B. Deploy a Windows Bastion host with an Elastic IP address in the public subnet and allow SSH access to the bastion from anywhere.

C. 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.

D. 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.

Answer: D

NO.332 A customer is hosting their company website on a cluster of web servers that are behind a public-facing load balancer. The customer also uses Amazon Route S3 to manage their public DNS. How should the customer configure the DNS zone apex record to point to the load balancer?

A. Create a CNAME record pointing to the load balancer DNS name

B. Create a CNAME record aliased to the load balancer DNS name

C. Create an A record pointing to the IP address of the load balancer

D. Create an A record aliased to the load balancer DNS name

Answer: B

NO.333 A Solutions Architect is designing solution with AWS Lambda where different environments require different database passwords.

What should the Architect do to accomplish this in a secure and scalable way?

A. Create a Lambda function for each individual environment.

B. Use Amazon DynamoDB to store environmental variables.

C. Use encrypted AWS Lambda environmental variables.

D. Implement a dedicated Lambda function for distributing variables.

Answer: C

NO.334 You are deploying an application to track GPS coordinates of delivery trucks in the United States. Coordinates are transmitted from each delivery truck once every three seconds. You need to design an architecture that will enable real-time processing of these coordinates from multiple consumers. Which service should you use to implement data ingestion?

A. Amazon Kinesis

B. Amazon Simple Queue Service

C. Amazon AppStream

D. AWS Data Pipeline

Answer: A

NO.335 A company uses AWS Elastic Beanstalk to deploy a web application running on c4.large instances. Users are reporting high latency and failed requests. Further investigation reveals that the EC2 instances are running at or near 100% CPU utilization.

What should a Solutions Architect do to address the performance issues?

A. Use time-based scaling to scale the number of instances based on periods of high load.

B. Modify the scaling triggers in Elastic Beanstalk to use the CPUUtilization metric.

C. Swap the c4.large instances with the m4.large instance type.

D. Create an additional Auto Scaling group, and configure Amazon EBS to use both Auto Scaling groups to increase the scaling capacity.

Answer: D

NO.336 A Solution Architect needs to deploy an HTTP/HTTPS service on Amazon EC2 instances with support for WebSockets using load balancers.

How can the Architect meet these requirements?

A. Configure a Network Load Balancer

B. Configure an Application Load Balancer

C. Configure a Classic Load Balancer

D. Configure a Layer-4 Balancer

Answer: B

NO.337 A company has an application that generates invoices and makes the invoices available online. Invoices are stored as PDFs in an Amazon S3 bucket. Customers typically only view each invoice during the month it is issued. However, past invoices need to be immediately available . There are concerns over rising storage costs as the company gains more customers.
What is the MOST cost-effective method to store the data?

A. Use Amazon S3 for current invoices. Set up lifecycle rules to migrate invoices to the GLACIER storage class after 30 days.

B. Store the invoices as text files. Use Amazon CloudFront to convert the invoices from text to PDF when customers download invoices.

C. Store the invoices as binaries in an Amazon RDS database instance. Retrieve them from the database when customers request invoices.

D. Use Amazon S3 for current invoices. Set up lifecycle rule~ o migrate invoices to Amazon S3 Standard-Infrequent Access (S3 Standard-IA) after 30 days.

Answer: D

NO.338 You originally built a VPC for a two-tier application. The subnets for the web and data tiers use all the IP address space in the VPC. Now you want to add subnets for an application tier.
How can you accommodate the new subnets in your VPC?

A. Change the CIDR block for the VPC to create enough free address space for the new subnets

B. Create the new subnets in the VPC; the VPC will automatically scale to accommodate the new subnets

C. Build a new VPC that can accommodate all the subnets, and migrate the application to the new VPC

D. Reduce the CIDR block ranges of the existing subnets to make room for the new subnets

Answer: A

NO.339 An application is running on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Auto Scaling group across multiple Availability Zones. Four instances are required to handle a predictable traffic load. The Solutions Architect wants to ensure that the operation is fault-tolerant up to the loss of one Availability Zone.
Which is the MOST cost-efficient way to meet these requirements?

A. Deploy two instances in each of three Availability Zones

B. Deploy two instances in each of two Availability Zones

C. Deploy four instances in each of two Availability Zones

D. Deploy one instance in each of three Availability Zones

Answer: A

NO.340 You have been asked to design a fault-tolerant and scalable web application across three

availability zones.

The presentation logic will reside on web servers behind an ELB classic load balancer, and the application logic will reside on a set of app servers behind a second load balancer. How should you use auto scaling groups?

A. Deploy two Auto Scaling groups: one for the web servers in all Availability zones and one for the app servers in all Availability zones

B. Deploy three auto scaling groups: one for each Availability zone that includes both web and app servers

C. Deploy six auto scaling groups: a web server group in each Availability zone and an app server group in each availability zone

D. Deploy one auto scaling group that includes al the web and app servers across all availability zones

Answer: B

NO.341 When designing an Amazon SOS message-processing solution, messages in the queue must be processed before the maximum retention time has elapsed Which actions will meet this requirement? (Select TWO)

A. Use AWS STS to process the messages.

B. Use Amazon EBS-optimized Amazon EC2 instances to process the messages.

C. Use Amazon EC2 instances in an Auto Scaling group with scaling triggered based on the queue length

D. Increase the SOS queue attribute for the message retention period

E. Convert the SOS queue to a first-in first-out (FIFO) queue.

Answer: C D

NO.342 A company has a requirement to control traffic entering and exiting subnets within its VPC. This includes the ability to explicitly allow or deny certain types of traffic.

This can be accomplished by implementing:

A. security groups

B. network ACLs

C. route tables

D. virtual private gateways

Answer: B

NO.343 A company wants to migrate a three-tier web application to AWS. The company wants to control the placement of the instances and have visibility into underlying sockets and cores for licensing purposes.

Which compute model should a Solutions Architect choose to accomplish this task?

A. EC2 Reserved Instances

B. EC2 Spot Instances

C. EC2 Dedicated Hosts

D. EC2 Placement Groups

Answer: C

NO.344 A Solutions Architect has a multi-layer application running in Amazon VPC. The application

has an ELB Classic Load Balancer as the front end in a public subnet, and an Amazon EC2-based reverse proxy that performs content-based routing to two backend Amazon EC2 instances hosted in a private subnet. The Architect sees tremendous traffic growth and is concerned that the reverse proxy and current backend setup will be insufficient.

Which actions should the Architect take to achieve a cost-effective solution that ensures the application automatically scales to meet traffic demand? (Select TWO)

A. Replace the Amazon EC2 reverse proxy with an EL8 internal Classic Load Balancer

B. Add Auto Scaling to the Amazon EC2 backend fleet

C. Add Auto Scaling to the Amazon EC2 reverse proxy layer

D. Use t2 burstable instance types for the backend fleet

E. Replace both the frontend and reverse proxy layers with an ELB Application Load Balancer

Answer: B C

NO.345 An application running on Amazon EC2 has been experiencing performance issues when accessing an Amazon RDS for Oracle database. The database has been provisioned correctly for average workloads, but there are several usage spikes each day that have saturated the database, causing the application to time out.

The application is write-heavy, updating information more often than reading information. A Solutions Architect has been asked to review the application design.

What should the Solutions Architect recommend to improve performance?

A. Put an Amazon ElastiCache cluster in front of the database and use lazy loading to limit database access during peak periods.

B. Put an Amazon Elasticsearch domain in front of the database and use a Write-Through cache to reduce database access during peak periods.

C. Configure an Amazon RDS Auto Scaling group to automatically scale the RDS instance during load spikes.

D. Change the Amazon RDS instance storage type from General Purpose SSD to provisioned IOPS SSD.

Answer: D

NO.346 Which of the following services natively encrypts data at rest within an AWS region? Choose 2 answers

A. Amazon DynamoDB

B. Amazon CloudFront

C. Amazon Simple Queue Service

D. Amazon Glacier

E. AWS storage Gateway

Answer: D E

NO.347 A client application requires operating system privileges on a relational database server.

What is an appropriate configuration for highly available database architecture?

A. A standalone Amazon EC2 instance

B. Amazon RDS in a multi-AZ configuration

C. Amzon EC2 instances in a replication configuration utilizing a single Availability Zone

D. Amazon EC2 instances in a replication configuration utilizing two different Availability Zones

Answer: D

NO.348 An application calls a service run by a vendor. The vendor charges based on the number of calls. The finance department needs to know the number of calls that are made to the service to validate tie being statements.

How can a Solutions Architect design a system to durably store me number of calls without requiring changes to the application?

A. Call the service through an internet gateway

B. Decouple the application from the service with an Amazon SOS queue

C. Publish a custom Amazon Cloud Watch metric that counts calls to the service

D. Call the service through a VPC peering connection

Answer: B

NO.349 An on-premises database is experiencing significant performance problems when running SQL queries. With

10 users, the lookups are performing as expected. As the number of users increases, the lookups take three times longer than expected to return values to an application.

Which action should a Solutions Architect take to maintain performance as the user count increases?

A. Use Amazon SQS.

B. Deploy Multi-AZ RDS MySQL

C. Configure Amazon RDS with additional read replicas.

D. Migrate from MySQL to RDS Microsoft SQL Server.

Answer: D

NO.350 A website experiences unpredictable traffic. During peak traffic times, the database is unable to keep up with the write request.

Which AWS service will help decouple the web application from the database?

A. Amazon SQS

B. Amazon EFS

C. Amazon S3

D. AWS Lambda

Answer: A

NO.351 Your company runs an application that generates several thousand 1-GB reports a month. Approximately 10% of these reports will be accessed once during the first 30 days and must be Available on demand. After 30 days, reports are no longer accessed as a part of normal business processes but must be retained for compliance reasons. Which architecture would meet these requirements with the lowest cost?

A. Upload the reports to Amazon S3 Standard storage class. Set a lifecycle configuration on the bucket to transition the reports to Amazon Glacier after 30 days

B. Upload the report s to Amazon S3 standard- infrequent Access storage class. Set a lifecycle configuration on the bucket to transition the reports to Amazon Glacier after 30 days

C. Upload the reports to Amazon Glacier. When reports are requests, copy them to Amazon S3

standard storage class for access. Delete the copied reports after they have been viewed

D. Upload the reports to Amazon S3 standard- infrequent access storage class. When reports are requests, copy them to Amazon S3 standard storage class for access. Delete the copied reports after they have been viewed.

Answer: A

NO.352 A company must collect temperature data from thousands of remote weather devices. The company must also store this data in a data warehouse to run aggregations and visualizations. Which services will meet these requirements? (Choose two.)

A. Amazon Kinesis Data Firehouse

B. Amazon SQS

C. Amazon Redshift

D. Amazon SNS

E. Amazon DynamoDB

Answer: A B

NO.353 An application is running in a single AWS region. The business team adds a requirement to run the application in a second region for multi-region high availability. A Solutions Architect needs to enable traffic to be distributed to multiple regions for high availability.

Which AWS service meets the requirements?

A. Amazon Route 53

B. Elastic Load Balancing

C. Amazon CloudFront

D. Amazon S3 Website Hosting

Answer: A

NO.354 A company will run different data analytic jobs on large petabyte-scale datasets, using standard SOL and existing business intelligence tools. The data is mostly structured, but part of the data is unstructured and resides in Amazon S3.

What technology should be used to support this use case?

A. An Amazon Aurora database cluster with 15 replicas distributed across Availability Zones.

B. Amazon Redshift with Amazon Redshift Spectrum.

C. Amazon DynamoDB with Amazon DynamoDB Accelerator (DAX)

D. Amazon ElastiCache for Redis with cluster mode enabled.

Answer: B

NO.355 An application uses an Amazon SQS queue as a transport mechanism to deliver data to a group of EC2 instances for processing. The application owner wants to add a mechanism to archive the incoming data without modifying application code on the EC2 instances.

How can this application be re-architected to archive the data without modifying the processing instances?

A. Trigger a Lambda function by using Amazon CloudWatch Events to retrieve messages from the SQS queue and archive to Amazon S3.

B. Use an Amazon SNS topic to fan out the data to the SQS queue in addition to a Lambda function

that records the data to an S3 bucket.

C. Set up an Amazon Kinesis Data Stream so that multiple instances can receive data. Add a separate EC2 instance that is configured to archive all data it receives.

D. Write the data to an S3 bucket, and use an SQS queue for S3 event notifications to tell the instances where to retrieve the data.

Answer: B

NO.356 A company is launching an application that it expects to be very popular. The company needs a database that can scale with the rest of the application. The schema will change frequently. The application cannot afford any downtime for database changes.

Which AWS service allows the company to achieve these objectives?

A. Amazon Redshift

B. Amazon DynamoDB

C. Amazon RDS MySQL

D. Amazon Aurora

Answer: A

NO.357 You have a web application running on six Amazon EC2 instances, consuming about 45% of resources on each instance. You are using autoscaling to make sure that six instances are running at all times. The number of requests this application processes is consistent and does not experience spikes. The application is critical to your business and you want high availability at all times. you want the load to be distributed evenly between all instances. you also want to use the same Amazon Machine image(AMI) for all instances .which of the following architectural choices should you make?

A. Deploy 2 EC2 instances in three regions and use Amazon Elastic Load Balancer

B. Deploy 6 EC2 instances in one availability zone and use Amazon Elastic Load Balancer

C. Deploy 3 EC2 instances in one availability zone and 3 in another availability zone and use Amazon Elastic Load Balancer

D. Deploy 3 EC2 instances in one region and 3 in another region and use Amazon Elastic Load Balancer

Answer: C

NO.358 What Is the MOST cost-efficient way to host a scalable website with only static content?

A. An Auto Scaling group

B. An Amazon EC2 instance

C. An Amazon S3 bucket

D. An Elastic Beanstalk stack

Answer: C

NO.359 For which of the following use cases are Simple Workflow Service (SWF) and Amazon EC2 an appropriate solution? Choose 2 answers

A. Using as an endpoint to collect thousands of data points per hour from a distributed fleet of sensors

B. Managing a multi-step and multi-decision checkout process of an e-commerce website

C. Orchestrating the execution of distributed and auditable business processes

D. Using as an SNS (Simple Notification Service) endpoint to trigger execution of video transcoding jobs

E. Using as a distributed session store for your web application

Answer: B C

NO.360 An application stack includes an Elastic Load Balancer in a public subnet a fleet of Amazon EC2 instances in an Auto Scaling group, and an Amazon RDS MySQL cluster Users connect to the application from the Internet. The application servers and database must be secure.

How should a Solutions Architect perform this task?

A. Create a private subnet for the Amazon EC2 instances and a public subnet for the Amazon RDS cluster.

B. Create a private subnet tor the Amazon EC2 instances and a private subnet for the Amazon RDS cluster.

C. Create a public subnet for the Amazon EC2 instances and a private subnet for the Amazon RDS cluster.

D. Create a public subnet for the Amazon EC2 instances and a public subnet for the Amazon RDS cluster.

Answer: C

NO.361 A company needs to deploy services to an AWS region which they not previously used. The company currently has an AWS identity and Access Management (IAM) role for their Amazon EC2 instances, which permits the instance to have access to Amazon DynamoDB. The company wants their EC2 instances in the new region to have the same privileges. How should the company achieve this?

A. Create a new IAM role and associated policies within the new region

B. Assign the existing IAM role to the Amazon EC2 instances in the new region

C. Copy the IAM role and associated policies to the new region and attach it to the instances

D. Create the Amazon Machine Image of the instance and copy it to the desired region using the AMI Copy feature

Answer: B

NO.362 A company is building software on AWS that requires access to various AWS services. Which configuration should be used to ensure that AWS credentials (i.e., Access Key ID/secret access key combination) are not compromised?

A. Enable Multi-factor Authentication for your AWS root account

B. Assign an IAM role to the Amazon EC2 instance

C. Store the AWS Access key ID/secret Access Key combination in software comments

D. Assign an IAM user to the Amazon EC2 instance

Answer: B

NO.363 A Solution Architect is trying to bring a data warehouse workload to an Amazon EC2 instance. The data will reside in Amazon EBS volumes and full table scans will be executed frequently. What type of Amazon AWS EBS volume would be most suitable in this scenario?

A. Throughput Optimized HDD (st1)

B. Provisioned IOPS SSD (io1)

C. General Purpose SSD (gp2)

D. Cold HDD (sc1)

Answer: A

NO.364 Which of the following are true regarding encrypted amazon elastic block store (EBS) volumes? Choose 2 answers

A. Available to all instance types

B. Existing volumes can be encrypted

C. Supported on all Amazon EBS volume types

D. Snapshots are automatically encrypted

E. Shared volumes can be encrypted

Answer: C D

NO.365 Your application contains thousands of Images in an Amazon RDS MySQL instance. These images are frequently accessed and the number of images is growing rapidly. Which should you implement to reduce cost and improve application performance?

A. Create two Amazon RDS My SQL read replicas in different regions, and migrate the images to the cross-region read replicas

B. Migrate the images to Amazon Glacier, and allow the end users to access the images through Amazon CloudFront

C. Migrate the images to Amazon Elastic Block Store volumes, and allow the end users to access the images through Amazon CloudFront

D. Migrate the images to Amazon Simple Storage Service, and allow the end udders to access the images through Amazon CloudFront

Answer: D

NO.366 A Solutions Architect needs to use AWS to implement pilot light disaster recovery for a three- tier web application hosted in an on-premises datacenter.

Which solution allows rapid provision of a working, fully-scaled production environment?

A. Continuously replicate the production database server to Amazon RDS Use AWS CloudFormation to deploy the application and any additional servers if necessary

B. Continuously replicate the production database server to Amazon RDS Create one application load balancer and register on-premises servers Configure ELB Application Load Balancer to automatically deploy Amazon EC2 instances for application and additional servers if the on- premises application is down.

C. Use a scheduled Lambda function to replicate the production database to AWS Use Amazon Route 53 health checks to deploy the application automatically to Amazon S3 if production is unhealthy

D. Use a scheduled Lambda function to replicate the production database to AWS Register on-premises servers to an Auto Scaling group and deploy the application and additional servers if production is unavailable.

Answer: A

NO.367 A customer needs to capture all client connection information from their load balancer

every five minutes. The company wants to use data for analyzing traffic patterns and troubleshooting their applications. Which of the following options meets the customer requirements?

A. Enable access logs on the load balancer

B. Enable AWS CloudTrail for the load balancer

C. Enable Amazon CloudWatch metrics on the load balancer

D. Install the Amazon CloudWatch Logs agent on the load balancer

Answer: A

NO.368 In AWS, which security aspects are the customer's responsibility? Choose 4 answers

A. Life-Cycle management of IAM credentials

B. Security Group and ACL settings

C. Controlling physical access to compute resources

D. Path management on the EC2 instance's operating system

E. Encryption of EBS volumes

F. Decommissioning storage devices

Answer: A B D E

NO.369 An application on an Amazon EC2 instance routinely stops responding to requests and requires a reboot to recover. The application logs are already exported into Amazon CloudWatch, and you notice that the problem consistently follows the appearance of a specific message in the log. The application team is working to address the bug, but has not provided a date for the fix.
What workaround can you implement to automate recovery of the instance until the fix is deployed?

A. Create an Amazon CloudWatch alarm on instance memory usage; based on that alarm, trigger an Amazon CloudWatch action to reboot the instance

B. Create a AWS CloudTrail alarm on low CPU; based on that alarm, trigger an Amazon SNS message to the Operations team

C. Create an Amazon CloudWatch alarm on an Amazon CloudWatch Logs for that message; based on that alarm, trigger an Amazon CloudWatch action to reboot the instance

D. Create an AWS CloudTrail alarm to detect the deadlock; based on that alarm, trigger an Amazon SNS message to the Operations team

Answer: C

NO.370 An instance is launched into a VPC subnet with the network ACL configures to allow all inbound traffic and deny all outbound traffic. The instance's security group is configured to allow SSH from any IP address and deny all outbound traffic. What changes need to be made to allow SSH access to instance?

A. The outbound security group needs to be modified to allow outbound traffic

B. Both the outbound security group and outbound network ACL need to be modified to allow outbound traffic

C. The outbound network ACL needs to be modified to allow outbound traffic

D. Nothing, it can be accessed from any IP address using SSH

Answer: B

NO.371 Which of the following are true regarding AWS Cloud Trail?

Choose 3 answers

A. CloudTrail is enabled globally

B. CloudTrail is enabled by default

C. CloudTrail is enabled on a per-region basis

D. CloudTrail is enabled on a per-service basis

E. Logs can be delivered to a single Amazon S3 bucket for aggregation

F. Logs can only be processes and delivered to the region in which they are generated

Answer: A C E

NO.372 A solutions architect is designing a multi container-based web application. Parts of the web application,
/orders event, must scale independently while maintaining a single fully qualified domain name.
Which AWS services will help Architect build this platform? (Select TWO).

A. Amazon ELB Application Load Balancer

B. Amazon ELB Classic Load Balancer

C. Amazon EC2 Container Service

D. Amazon Dynamo

E. Amazon SQS

Answer: A B

NO.373 An application uses an Amazon RDS MySQL cluster for the database layer. Database growth requires periodic resizing of the instance. Currently, administrators check the available disk space manually once a week.
How can this process be improved?

A. Use the largest instance type for the database.

B. Use AWS CloudTrail to monitor storage capacity.

C. Use Amazon CloudWatch to monitor storage capacity.

D. Use Auto Scaling to increase storage size.

Answer: D

NO.374 A company is running its application in a single region on Amazon EC2 with Amazon EBS and Amazon S3 as part of the storage design.
What should be done to reduce data transfer costs?

A. Create a copy of the compute environment in another region.

B. Convert the application to run on Lambda@Edge

C. Create an Amazon CloudFront distribution with Amazon S3 as the origin

D. Replicate Amazon S3 data to buckets in regions closer to the requester.

Answer: C

NO.375 A company is developing a data lake solution in Amazon S3 to analyze large-scale datasets. The solution makes infrequent SQL queries only In addition the company wants to minimize infrastructure costs Which AWS service should be used to meet these requirements?

A. Amazon Athena

B. Amazon Redshift Spectrum

C. Amazon RDS for PostgreSQL

D. Amazon Aurora

Answer: A

NO.376 A company's Amazon RDS MySQL DB instance may be rebooted tor maintenance and to apply patches. This database is critical and potential user disruption must be minimized What should the Solutions Architect do in this scenario?

A. Set up an RDS MySQL cluster

B. Create an RDS MySQL Read Replica

C. Set RDS MySQL to Multi-AZ

D. Create an Amazon EC2 instance MySQL cluster

Answer: C

NO.377 A company hosts a website on premises. The website has a mix of static and dynamic content, but users experience latency when loading static files. Which AWS service can help reduce latency?

A. Amazon CloudFront with on-premises servers as the origin

B. ELB Application Load Balancer

C. Amazon Route 53 latency-based routing

D. Amazon EFS to store and serve static files

Answer: A

NO.378 Your Amazon RDS MySQL DB instance runs on the largest available instance type. The DB instance runs at near capacity for CPU and network bandwidth. You expect traffic to increase and are looking for ways you can continue to scale your database. Which strategies allow you to continue to scale and take on more traffic?

A. Create a cross-region read replica of the master database; configure the app to send read-only calls to the replica

B. Convert the DB instance to a m=Multi-AZ deployment; configure the app to send read-only calls to the standby

C. Create additional database accounts in the DB instance; configure the app servers to make calls using different account credentials

D. Create a read replica of the master database in another Availability Zone; configure the app to send read-only calls to the replica.

E. Create an Amazon Elasticache cluster; configure the app to retrieve frequently accessed data and queries from the cache.

Answer: D E

NO.379 A Solutions Architect is designing a web application that runs on Amazon EC2 instances behind a load balancer. All data in transit must be encrypted Which solutions will meet the encryption requirement? (Select TWO)

A. Use an Application Load Balancer (ALB) in pass through mode, then terminate SSL on EC2 instances.

B. Use an Application Load Balancer (ALB) with a TCP listener, then terminate SSL on EC2 instances.

C. Use an Network Load Balancer (NLB) with a TCP listener, then terminate SSL on EC2 instances.

D. Use an Application Load Balancer (ALB) with an HTTPS listener, then install SSL certificates on the ALB and EC2 instances.

E. Use a Network Load Balancer (NLB) with an HTIPS listener, then install SSL certificates on the NLB and EC2 instances.

Answer: A D

NO.380 A client application requires operating system privileges on a relational database server. What is an appropriate configuration for a highly available database architecture?

A. A standalone Amazon EC2 instance

B. Amazon RDS in a Multi-AZ configuration

C. Amazon EC2 instances in a replication configuration utilizing a single Availability Zone

D. Amazon EC2 instances in a replication configuration utilizing two different Availability Zones

Answer: D

Explanation

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-regions-availability-zones.html

NO.381 A web application runs on Amazon EC2 instances behind an ELB Application Load Balancer. The instance run in an EC2 Auto Scaling group across multiple availability Zones. Every night, the Auto Scaling group doubles in size. traffic analytics shows that users in a particular region requesting the same static content locally on the EC2 instances.

How can a Solutions Architect reduce the need to scale and improve application performance for the users?

A. Re-deploy the application in a new VPC that is closer to the users making the requests

B. Create an Amazon CloudFront distribution tor the silo and redirect user traffic to the distribution

C. Store the contents on Amazon EFS instead of the EC2 root volume

D. implement Amazon Redshift to create a repository of the content closer to the users

Answer: C

NO.382 You are running a mobile media application and are considering API Gateway for the client entry point. What benefits would this provide? Choose 2 answers

A. Caching API responses

B. Intrusion prevention

C. IP blacklisting

D. Load balancing

E. Throttling traffic

Answer: A E

Explanation

API Logging, Caching, Throttling, Bursting and Monitoring

Instead of invoking the backend API for every client call, developers can configure caching which will improve performance. Cache settings allow developers to control the way the cache key is built and the time-to-live (TTL) of the data stored for each method. The management API can be invoked to invalidate the cache. The pricing for this feature is based on the size of the cache.

Developers need to protect their backend APIs from deliberate misuse. They may also want to restrict the rate at which the API is invoked. Through throttling, it is possible to set a rate limit of API requests to avoid sudden spikes. API Gateway can also be configured to handle bursts of API calls for specific scenarios. Clients can include automatic retry logic when they receive a 429 HTTP response as a result of throttling. With the right configuration of cache and throttling, developers can increase the performance while securing the backend API.

Since API Gateway is a crucial element of an application, it needs to be monitored for uptime. For custom gateways, administrators need to configure native monitoring combined with agents. Amazon API Gateway integrates with CloudWatch, the one-stop monitoring service for all AWS services. By configuring an IAM role that has write access to CloudWatch logs, API Gateway can be monitored for a variety of metrics.

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Configuring Caching, Logging, Monitoring and Throttling

NO.383 A retail company runs hourly flash sales and has a performance issue on its Amazon RDS for PostgreSOL database. The Database Administrators have identified that the issue with performance happens when finance and marketing employees refresh sales dashboards that are used for reporting real-time sales data.

What should be done to resolve the issue without impacting performance?

A. Create a Read Replica of the RDS PostgreSOL database and point the dashboards at the Read Replica

B. Move data from the RDS PostgreSQL database to Amazon Redshift nightly and point the dashboards at Amazon Redshift.

C. Monitor the database with Amazon CloudWatch and increase the instance size, as necessary Make no changes to the dashboards.

D. Take an hourly snapshot of the RDS PostgreSOL database, and load the hourly snapshots to another database to which the dashboards are pointed

Answer: A

NO.384 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-west-1) region. Which of the following options would enable an equivalent experience for users on both

continents?

A. Use a public-facing load balancer per region to load-balancer web traffic, and enable HTTP health checks

B. Use a public-facing load balancer per region to load balancer web traffic, and enable sticky sessions

C. Use Amazon Route S3, and apply a geolocation routing policy to distribution traffic across both regions

D. Use Amazon Route S3, and apply a weighted routing policy to distribute traffic across both regions

Answer: C

NO.385 Which of the following are characteristics of Amazon VPC subnets? Choose 2 answers

A. Each subnet spans at least 2 Availability Zones to provide a high-availability environment.

B. Each subnet maps to a single Availability Zone.

C. CIDR block mask of/25 is the smallest range supported.

D. By default, all subnets can route between each other, whether they are private or public.

E. Instances in a private subnet can communicate with the Internet only if they have an Elastic IP.

Answer: B D

NO.386 A web application is running on Amazon EC2 instances behind an Elastic Load Balancing Application Load Balancer (ALB). The EC2 instances should receive no traffic, except for web requests to the application.

Based on these requirements, what security group rules should be put on the Amazon EC2 instances?

A. An inbound rule allowing traffic from the security group attached to the ALB

B. An inbound rule allowing traffic from the network ACLs attached to the ALB

C. An outbound rule allowing traffic to the security group attached to the ALB

D. An outbound rule blocking all traffic to the internet

Answer: A

NO.387 A photo-sharing service stores pictures in Amazon Simple Storage Service (S3) and allows application sign-in using an opened connect-compatible identity provider. Which AWS Security Token Service approach to temporary access should you use for the Amazon S3 operations?

A. Cross-Account Access

B. AWS identity and Access Management roles

C. SAML-based Identity Federation

D. Web identity Federation

Answer: C

NO.388 Which of the following are characteristics of a reserved instance?

A. It is specific to an Amazon Machine Image(AMI)

B. It can be applied to instances launched by Auto Scaling

C. It can be migrated across Availability Zones

D. It can be used to lower Total Cost of Ownership (TCO) of a system

E. It is specific to an insurance Type

Answer: C D E

NO.389 A web application runs on 10 EC2 instances launched from a single customer Amazon Machine Image (AMI).
The EC2 instances are behind an Internet Application Load Balancer. Amazon Route 53 provides DNS for the application.
How should a Solutions Architect automate recovery when a web server instance stops replying to request?

A. Launch the instances in an Auto Scaling group with an Elastic Load Balancing health check.

B. Launch instances in multiple Availability Zones and set the load balancer to Multi-AZ.

C. Add CloudWatch alarm actions for each instance to restart if the Status Check (Any) fails.

D. Add Route 53 records for each instance with an instance health check.

Answer: A

NO.390 A Solutions Architect is designing an application in AWS. The Architect must not expose the application or database tier over the Internet for security reasons. The application must be low-cost and have a scalable front end. The databases and application tier must have only one-way Internet access to download software and patch updates.
Which solution helps to meet these requirements?

A. Use a NAT Gateway as the front end for the application tier and to enable the private resources to have Internet access

B. Use an Amazon EC2-based proxy server as the front end for the application tier, and a NAT Gateway to allow Internet access for private resources

C. Use an ELB Classic Load Balancer as the front end for the application tier, and an Amazon EC2 proxy server to allow Internet access for private resources

D. Use an ELB Classic Load Balancer as the front end for the application tier, and a NAT Gateway to allow Internet access for private resources

Answer: D
Explanation
You configure your load balancer to accept incoming traffic by specifying one or more listeners. A listener is a process that checks for connection requests. It is configured with a protocol and port number for connections from clients to the load balancer and a protocol and port number for connections from the load balancer to the targets.
Elastic Load Balancing supports three types of load balancers: Application Load Balancers, Network Load Balancers, and Classic Load Balancers. There is a key difference between the way you configure these load balancers. With Application Load Balancers and Network Load Balancers, you register targets in target groups, and route traffic to the target groups. With Classic Load Balancers, you register instances with the load balancer.

NO.391 An application stores data in a My SQL database hosted on an EC2 instance. A Solutions Architect must address reports of high latency and dropped requests. The web tier EC2 instances are mostly idle, but the database instance has a large number of read requests that result in a large-disk read queue.
Which solution will address the problems?

A. Provision all the EC2 instances, both web tier and database, in a placement group

B. Provision a database replica, and place a Network Load Balancer in front of both databases

C. Import the database into a Multi-AZ RDS instance, and direct the read-only queries to the standby instance

D. Cache database query results in an Amazon ElastiCache cluster, and check the cluster for cached results before calling the database

Answer: D

NO.392 A workload consists of downloading an image from an Amazon S3 bucket, processing the image, and moving it to another Amazon S3 bucket. An Amazon EC2 instance runs a scheduled task every hour to perform the operation.

How should a Solutions Architect redesign the process so that it is highly available?

A. Charge the Amazon EC2 instance to compute optimized

B. Launch a second Amazon EC2 instance to monitor the health of the first

C. Trigger a Lambda function when a new object is uploaded

D. Initially copy the images to an attached Amazon EBS volume.

Answer: C

NO.393 A company is developing an application to deliver dynamic content to users around the globe The content should be customized according to a user's device and be delivered with very low latency.

Which service should be used?

A. Amazon API Gateway

B. Amazon CloudFront

C. AmazonS3

D. Lambda@Edge

Answer: D

NO.394 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. Multiple instances stores

B. A single Amazon S3 bucket

C. Multiple Amazon EBS volume with snapshots

D. A single Amazon Glacier vault

Answer: C

NO.395 A company is using Amazon S3 for backups from an on-premises environment. Regulatory requirements state that data must be retained for at least 7 years The data is infrequently accessed for 35 days, but needs to be instantly available. After 35 days, the data is rarely accessed.

Which combination of actions will provide the MOST cost-effective solution? (Select TWO)

A. Change the backup so the data goes to Amazon S3 Standard-Infrequent Access (S3 Standard-IA) directly

B. Create an S3 lifecycle policy that moves the data to the GLACIER storage class after 7 years.

C. Change the backup so the data goes to Amazon Glacier directly

D. Create an S3 lifecycle policy that moves the data to Amazon S3 Standard infrequent Access (S3 Standard-IA) after 35 days

E. Creates an S3 lifecycle policy that moves the data to the GLACIER storage class after 35 days

Answer: A D

NO.396 A solutions Architecture is developing a new web application on AWS. The services must scale to support an increasing load. The Architecture wants to focus an software development and deployment new features rather than provisioning or managing servers.
Which AWS service is appropriate?

A. Auto Scaling

B. Elastic Beanstalk

C. EC2 Container Server

D. CloudFormation

Answer: B

NO.397 An application tier currently hosts two web services on the same set of instances, listening on different ports.
Which AWS service should a Solutions Architect use to route traffic to the service based on the incoming request path?

A. AWS Application Load Balancer

B. Amazon CloudFront

C. Amazon Route 53

D. AWS Classic Load Balancer

Answer: A

NO.398 To meet compliance standards, a company must have encrypted archival data storage. Data will be accessed infrequently, with lead times when in advance of when archived data must be recovered. The company requires that the storage be secure, durable and provided at the lowest price per 1TB of data stored.
What type of stooge should be used?

A. Amazon S3

B. Amazon EBS

C. Amazon Glacier

D. Amazon EFS

Answer: C

NO.399 An organization must process a stream erf large-volume hashtag data in real time and needs to run custom SQL queries on the data to gel insights on certain lags. The organization needs this solution to be elastic and does not want to manage clusters.
Which of the following AWS services meets these requirements?

A. Amazon Elasticsearch Service

B. Amazon Athena

C. Amazon Redshift

D. Amazon Kinesis Data Analytics

Answer: D

NO.400 A company's development team plans to create an Amazon S3 bucket that contains millions of images. The team wants to maximize the read performance of Amazon S3.

Which naming scheme should the company use?

A. Add a date as the prefix.

B. Add a sequential id as the suffix.

C. Add a hexadecimal hash as the suffix.

D. Add a hexadecimal hash as the prefix.

Answer: D

NO.401 After creating a new IAM user which of the following must be done before they can successfully make API calls?

A. Create a set of Access Keys for the user

B. Enable Multi-Factor Authentication for the user

C. Add a password to the user

D. Assign a Password Policy to the user

Answer: A

NO.402 An administrator is hosting an application on a single amazon EC2 instance. Which users can access by the public hostname. The administrator is adding a second instance but does not want users to have to decide between many public hostnames.

Which AWS service will decouple the users from specific amazon EC2 instances?

A. Amazon SQS

B. Auto Scaling group

C. Amazon EC2 security group

D. Amazon ELB

Answer: D

NO.403 A Solutions Architect is designing a solution to send Amazon CloudWatch Alarm notifications to a group of users on a smartphone mobile application.

What are the key steps to this solution? (Choose two.)

A. Configure the CloudWatch Alarm to send the notification to an Amazon SNS topic whenever there is an alarm.

B. Configure the CloudWatch Alarm to send the notification to a mobile phone number whenever there is an alarm.

C. Configure the CloudWatch Alarm to send the notification to the email addresses whenever there is an alarm.

D. Create the platform endpoints for mobile devices and subscribe the SNS topic with platform endpoints.

E. Subscribe the SNS topic with an Amazon SQL queue, and poll the messages continuously from the queue.

Use each mobile platform's libraries to send the message to the mobile application.

Answer: A D

NO.404 When an EC2 EBSbackend (EBS root) instance is stopped. What happens to the data on any Ephemeral store volumes?

A. Data is automatically saved in an EBS volume

B. Data will be deleted and will no longer be accessible

C. Data is unavailable until the instance is restarted

D. Data is automatically saved as an EBS snapshot

Answer: B

NO.405 A company is designing a new application to collect data on user behavior for analysis a later time. Amazon Kinesis Data Streams will be used to receive user interaction events.

What should be done to ensure the event data is retained indefinitely?

A. Configure the stream to write records to an attached Amazon EBS volume.

B. Configure an Amazon Kinesis Data Firehose delivery stream to store data on Amazon S3.

C. Configure the stream data retention period to retain the data indefinitely.

D. Configure an Amazon EC2 consumer to read from the data stream and store records in Amazon SQS.

Answer: B

NO.406 An organization runs an online voting system for a television program. During broadcasts, hundreds of thousands of votes are submitted within minutes and sent to a front-end feet of auto-scaled Amazon EC2 instances. The EC2 instances push the votes to a RBDMS database. The database is unable to keep up with the front-end connection requests.

What is the MOST efficient and cost-effective way of ensuring that votes are processes in a timely manner?

A. Each front-end node should send votes to an Amazon SQS queue. Provision worker instances to read the SQS queues and process the message information into the RBDMS database

B. As the load on the database increases, horizontally-scale the RDBMS database with additional memory-optimized instances. When voting has ended, scale down the additional instances

C. Re-provision the RDBMS database with larger, memory-optimized instances. When voting ends, re-provision the back-end database with similar instances

D. Send votes from each front-end node to Amazon DynamoDB. Provision worker instances to process the votes in DynamoDB into the RDBMS database

Answer: A

NO.407 A customer is running two Amazon EC2 instances, Server1 and server2, in different subnets of the same VPC.

Server1 can ping Server2, but server2 cannot ping Server1. What could explain this behavior? Choose 2 answers

A. There is no route from server2 to server 1 defined in the route table

B. The ingress rules for Server1's security group do not allow ICMP traffic

C. The two servers are not located in the same Availability Zone

D. The operating system firewall on server1 is blocking traffic from server 2

E. The ingress rules for server2 security group do not allow ICMP traffic

Answer: A D

NO.408 A Solutions Architect must migrate a monolithic on-premises application to AWS. It is a web application with a load balancer, web server, application server, and relational database. The key requirement driving the migration is that the application should perform better and be more elastic. Which of the following architectures would meet these requirements?

A. Re-host the application on Amazon EC2 with lift and shift of existing application code. Configure an Elastic Load Balancing load balancer to handle incoming requests. Use Amazon CloudWatch alarms to receive notification of scaling issues. Increase and decrease the size of the Amazon EC2 instances using AWS CLI or AWS Management Console as required.

B. Re-architect the application as a three-tier application. Move the database to Amazon RDS. Use read replicas and Amazon ElastiCache with RDS for better performance. Use an Application Load Balancer to forward incoming requests to web and application servers running on-premises.

C. Re-platform the application as a three-tier application. Use Elastic Load Balancing for incoming requests. Use EC2 for web and application tiers. Use RDS at the database tier. Use CloudWatch alarms and Auto Scaling for horizontal scaling at the web tier.

D. Re-architect the application as Service Oriented Architecture (SOA). Run database and application servers on-premises. Run web-facing EC2 servers. Use an Enterprise Service Bus to handle communications between different parts of the application running on-premises and in the cloud.

Answer: A

NO.409 An organization uses Amazon S3 to store video content served via its website. It only has rights to deliver this content to users within its own country and needs to restrict access.
How can the organization ensure that these files are only accessible from within its country?

A. Use a custom Amazon S3 bucket policy to allow access only to users inside the organization's country

B. Use Amazon CloudFront and Geo Restriction to allow access only to users inside the organization's country

C. Use an Amazon S3 bucket ACL to allow access only to users inside the organization's country

D. Use file-based ACL permissions on each video file to allow access only to users inside the organization's country

Answer: B

NO.410 A Solutions Architect is defining a shared Amazon S3 bucket where corporate applications will save objects.
How can the Architect ensure that when an application uploads an object to the Amazon S3 bucket, the object is encrypted?

A. Set a CORS configuration.

B. Set a bucket policy to encrypt all Amazon S3 objects.

C. Enable default encryption on the bucket.

D. Set permission for users.

Answer: C

NO.411 A Solutions Architect is building an application on AWS that will require 20,000 IOPS on a particular volume to support a media event. Once the event ends, the IOPS need is no longer required. The marketing team asks the Architect to build the platform to optimize storage without incurring downtime.

How should the Architect design the platform to meet these requirements?

A. Change the Amazon EC2 instant types.

B. Change the EBS volume type to Provisioned IOPS.

C. Stop the Amazon EC2 instance and provision IOPS for the EBS volume.

D. Enable an API Gateway to change the endpoints for the Amazon EC2 instances.

Answer: B

NO.412 A company is developing several critical long-running applications hosted on Docker. How should a Solutions Architect design a solution to meet the scalability and orchestration requirements on AWS?

A. Use Amazon ECS and Service Auto Scaling.

B. Use Spot Instances for orchestration and for scaling containers on existing Amazon EC2 Instances.

C. Use AWS OpsWorks to launch containers in new Amazon EC2 instances.

D. Use Auto scaling groups to launch containers on existing Amazon EC2 instances.

Answer: A

NO.413 You have a web application running on Elastic Beanstalk using a RDS database instance. Using Amazon ElastiCache to store your web session data instead of storing it in the relational database will: Choose 2 answers

A. Improve read/write performances of your session data

B. Improve write performance by using ElasticCache to write to your database

C. Reduce the load on your database instance

D. Improve availability of your session data in an AZ failover scenario

Answer: A C

NO.414 An application generates audit logs of operational activities. Compliance requirements mandate that the application retain the logs for 5 years How can these requirements be met?

A. Save the logs in an Amazon S3 bucket and enable Multi-Factor Authentication Delete (MFA Delete) on the bucket

B. Save the logs in an Amazon EFS volume and use Network File System version 4 (NFSv4) locking with the volume.

C. Save the logs in an Amazon Glacier vault and use the Vault Lock feature.

D. Save the logs in an Amazon EBS volume and take monthly snapshots

Answer: C

NO.415 You are launching an application in an Auto Scaling group. To store the user session state, you need a structured storage service with durability and low latency.

Which service meets your needs?

A. Amazon DynamoDB

B. Amazon EC2 instance storage

C. Amazon S3

D. Amazon ElastiCache

Answer: A

NO.416 A Solutions Architect is designing the storage layer for a production relation database. The database will run on Amazon EC2. The database is accessed by an application that performs intensive reads and writes, so the database requires the LOWEST random I/O latency.
Which data storage method fulfils the above requirements?

A. Store data in a filesystem backed by Amazon Elastic File System (EFS)

B. Store data Amazon S3 and use a third-party solution to expose Amazon S3 as a filesystem to the database server

C. Store data in Amazon DynamoDB and emulate relational database semantics

D. Stripe data across multiple Amazon EBS volume using RAID 0

Answer: D

NO.417 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?

A. Create a new peering connection between Prod and Dev along with appropriate routes

B. Create a new entry to Prod in the Dev route table using the peering connection as the target

C. Attach a security gateway to Dev. Add a new entry in the Prod route table identifying the gateway as the target

D. The VPCs have non-overlapping CIDR blocks in the same account. The route tables contain local routes for all VPCs

Answer: A

NO.418 What services will help identify Amazon EC2 instances with underutilized CPU Capacity?
Choose 2 answers

A. AWS trusted advisor

B. Amazon EC2 usage reports

C. AWS CloudTrail

D. Amazon CloudWatch

E. Cost Explorer

Answer: C D

NO.419 You bid $0.22 for an Amazon EC2 Spot Instance when the market price was $0.20. For 90 minutes, the market price remained at $0.20. Then the market price changed to $0.25, and your instance was terminated by AWS.
What was your cost of running the instance for the entire duration?

A. $0.47

B. $0.20

C. $0.22

D. $0.40

Answer: C

NO.420 Legacy applications currently send messages through a single Amazon EC2 instance, which then routes the messages to the appropriate destinations. The Amazon EC2 instance is a bottleneck and single point of failure, so the company would like to address these issues.

Which services could address this architecture use case? (Select TWO)

A. Amazon SNS

B. AWS STS

C. Amazon SQS

D. Amazon Route 53

E. AWS Glue

Answer: A C

NO.421 You have an Amazon EC2 instance that belongs to two security groups. The first security group has a rule that allows ingress traffic to TCP port 80 from IP address 206.251.8.21 and the second security group has a rule that allows ingress traffic to TCP ports 80 and 443 from everywhere.

Which traffic is allowed to the Amazon EC2 instance?

A. Only ingress traffic to TCP port 80 from everywhere

B. Only ingress traffic to TCP port 80 from 206.251.8.21

C. Only ingress traffic to TCP ports 80 and 443 from everywhere

D. Only ingress traffic to TCP ports 80 and 443 from 206.251.8.21

Answer: D

NO.422 An e-commerce application places orders in an Amazon SOS queue. When a message is received. Amazon EC2 worker instances process the request. The EC2 instances are in an Auto Scaling group. How should the architecture be designed to scale up and down with the LEAST amount of operational overhead?

A. Use an Amazon CloudWatch alarm on the EC2 CPU lo scale the Auto Scaling group up and down

B. Use an EC2 Auto Scaling health check tor messages processed on the EC2 instances to scale up or down

C. Use an Amazon CloudWatch alarm based on the number of visible messages to scale the Auto Scaling group up or down

D. Use an Amazon CloudWatch alarm based on the CPU to scale the Auto Scaling group up or down

Answer: C

NO.423 A customer is leveraging Amazon simple storage service in eu-west-1 to store static content for a web-based property. The customer is storing objects using the standard storage class. Where are the customer's objects replicated ?

A. A single facility in eu-west-1 and a single facility in eu-central-1

B. A single facility in ru-west-1 and a single facility in us-east-1

C. Multiple facilities in eu-west-1

D. A single facility in eu-west-1

Answer: C

NO.424 A company is designing a failover strategy in Amazon Route 53 for its resources between two AWS Regions.
The company must have the ability to route a user's traffic to the region with least latency, and if both regions are healthy, Route 53 should route traffic to resources in both regions.
Which strategy should the Solutions Architect recommend?

A. Configure active-active failover using Route 53 latency DNS records.

B. Configure active-passive failover using Route 53 latency DNS records.

C. Configure active-active failover using Route 53 failover DNS records.

D. Configure active-passive failover using Route 53 failover DNS records.

Answer: A

NO.425 A Solutions Architect needs to design a centralized logging solution for a group of web applications running on Amazon EC2 instances. The solution requires minimal development effort due to budget constraints.
Which of the following should the Architect recommend?

A. Create a corntab job script in each instance to push the logs regularly to Amazon S3

B. Install and configure Amazon CloudWatch Logs agent in the Amazon EC2

C. Enable Amazon CloudWatch Events in the AWS Management Console

D. Enable AWS CloudTrail to map all API calls invoked by the applications

Answer: B

NO.426 A company has a Node.js application running on Amazon EC2 that currently retrieves data for customers from a DynamoDB table. The company is seeing many repeat queries for the same items, and the number of queries is continuing to increase as the application gains popularity.
What solution will reduce the number of read capacity units (RCUs) required while minimizing the amount of refactoring that must be done to the application?

A. Use Amazon ElastiCache to provide a caching layer

B. Use a Lambda function to make concurrent requests for caching

C. Use Amazon DynamoDB Accelerator (DAX) to provide a caching layer

D. Obtain Reserved Capacity for Amazon DynamoDB to manage the increased number of queries

Answer: D

NO.427 A company is using Amazon S3 as its local repository for weekly analysis reports. One of the company-wide requirements is to secure data at rest using encryption. The company chose Amazon S3 server-wide encryption. The company wants to know how the object is decrypted when a GET request is issued.
Which of the following answers this question?

A. The user needs to place a PUT request to decrypt the object

B. The user needs to decrypt the object using a private key

C. Amazon S3 manages encryption and decryption automatically

D. Amazon S3 provides a server-side key for decrypting the object

Answer: C

NO.428 A data processing application runs on an 13 large EC2 instance with a single 100-GB EBS gp2 volume. The application stores temporary data in a small database (less than 30 GB) located on the EBS root volume. The application .s struggling to process the data fast enough, and a Solutions Architect has determined that the I/O speed of the temporary database is the bottleneck What is the MOST cost-efficient way to improve the database response times?

A. Enable E3S optimization on the instance and keep the temporary files on the existing volume

B. Put the temporary database on a new 50-GB EBS gp2 volume

C. Move the temporary database onto instance storage

D. Put the temporary database on a new 50-GB EBS io1 volume with a 3-K IOPS provision

Answer: B

NO.429 An application requires block storage for file updates. The data is 500 GB and must continuously sustain 100 MiB/s of aggregate read/write operations.
Which storage option is appropriate for this application?

A. Amazon S3

B. Amazon EFS

C. Amazon EBS

D. Amazon Glacier

Answer: B

NO.430 A company is moving to AWS Management has identified as set of approved AWS services that meet all deployment requirements. the company would like to restrict access to all other unapproved services to which employees would have access.
Which solution meets these requirements with the LEAST amount of operational overhead?

A. Configure the AWS Trusted Advisor service utilization compliance report Subscribe to Amazon SNS notification from Trusted Advisor. Create custom AWS Lambda function that can automatically the use of unauthorized services.

B. Use AWS Config to evaluate the configuration settings of AWS resources. Subscribe to Amazon SNS notification from AWS Config a custom AWS Lambda function that can automatically remediate the use of unauthorized services.

C. Configure AWS Organization Create an organizational unit (OU) and place all AWS accounts into the OU. Apply a service control policy (SCP) to the OU that the use of certain services.

D. Create a custom AWS AM policy Deploy the policy to each account using AWS CloudFormation StackSets. Include deny statements in the policy to restrict the use of certain services. Attach the policies to all IAM users in each account.

Answer: A

NO.431 A restaurant reservation application needs the ability to maintain a waiting list. When & customer tries to reserve a table, and none are available, the customer must be put on the waiting list, and the application must notify the customer when a table becomes free What service should the Solutions Architect recommend to ensure that the system respects the order in which the customer requests are put onto the waiting list?

A. Amazon SNS

B. AWS Lambda with sequential dispatch

C. A FIFO queue in Amazon SQS

D. A standard queue in Amazon SQS

Answer: C

NO.432 A Solutions Architect must review an application deployed on EC2 instances that currently stores multiple
5-GB files on attached instance store volumes. The company recently experienced a significant data loss after stopping and starting their instances and wants to prevent the data loss from happening again. The solution should minimize performance impact and the number of code changes required.
What should the Solutions Architect recommend?

A. Store the application data in Amazon S3

B. Store the application data in an EBS volume

C. Store the application data in Amazon ElastiCache

D. Store the application data in Amazon DynamoDB

Answer: B

NO.433 A Solutions Architect is designing a photo application on AWS. Every time a user uploads a photo to Amazon S3, the Architect must insert a new item to a DynamoDB table.
Which AWS-managed service is the BEST fit to insert the item?

A. Lambda@Edge

B. AWS Lambda

C. Amazon API Gateway

D. Amazon EC2 instances

Answer: B

NO.434 A Solutions Architect needs to convert potential single points of failure to a highly-available configuration.
The current architecture contains Amazon EC2 instances with databases running in one Availability Zone.
Web-tier resources have not been given public addresses, but still require Internet access.
Which solution should the Architect use to maintain high availability?

A. Use ELB Classic Load Balancer with the web user. Deploy EC2 instances in two Availability Zones and enable Multi-AZ RDS Deploy a NAT gateway in one Availability Zone.

B. Use ELB Classic Load Balancer with the web tier. Deploy EC2 instances in two Availability Zones and enable Multi-AZ RDS Deploy NAT gateways in both Availability Zones

C. Use ELB Classic Load Balancer with the database tier. Deploy Amazon EC2 instances in two Availability Zones and enable Multi-AZ RDS. Deploy NAT gateways in both Availability Zones

D. Use ELB Classic Load Balancer with the database tier. Deploy Amazon EC2 instances in two Availability Zones and enable Multi-AZ RDS. Deploy a NAT gateway in one Availability Zone

Answer: B

Explanation

Classic Load Balancer provides basic load balancing across multiple Amazon EC2 instances and

operates at both the request level and connection level. Classic Load Balancer is intended for applications that were built within the EC2-Classic network. We recommend Application Load Balancer for Layer 7 and Network Load Balancer for Layer 4 when using Virtual Private Cloud (VPC).

NO.435 A company wants to migrate a highly transactional database to AWS Requirements state that the database has more than 6 TB of data and will grow exponentially.
Which solution should a Solutions Architect recommend?
A. Amazon Aurora
B. Amazon Redshift
C. Amazon DynamoDB
D. Amazon RDS MySQL
Answer: A

NO.436 Which of the following are valid statements about Amazon S3? Choose 2 answers
A. S3 provides read-after-write consistency for any type of PUT or DELETE.
B. Consistency is not guaranteed for any type of PUT or DELETE.
C. A successful response to a PUT request only occurs when a complete object is saved.
D. Partially saved objects are immediately readable with a GET after an overwrite PUT.
E. S3 provides eventual consistency for overwrite PUTS and DELETES.
Answer: C E

NO.437 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 EC2 instance?
A. Create a load balancer, and register the Amazon EC2 instance with it
B. Create a CloudFront distribution, and configure the Amazon EC2 instance as the origin
C. Create an Auto Scaling group from the instance using the CreateAutoScalingGroup action
D. Create a launch configuration from the instance using the CreateLaunchConfiguration action
Answer: C

NO.438 A company is preparing to give AWS Management Console access to developers. Company policy mandates identity federation and role based access control. Roles are currently assigned using groups in the corporate Active Directory. What combination of the following will give developers access to the AWS console?
Choose 2 answers
A. AWS Directory Service AD connector
B. AWS Directory Service Simple AD
C. AWS identity and Access Management groups
D. AWS identity and Access Management roles
E. AWS identity and Access Management users
Answer: A D

NO.439 A customer is looking for a storage archival solution for 1,000 TB of data. The customer requires that the solution be durable and data be available within a few hours of requesting it, but not exceeding a day. The solution should be as cost-effective as possible. To meet security

compliance policies, data must be encrypted at rest. The customer expects they will need to fetch the data two times in a year.

Which storage solution should a Solutions Architect recommend to meet these requirements?

A. Copy data to Amazon S3 buckets by using server-side encryption. Move data to Amazon S3 to reduce redundancy storage (RRS).

B. Copy data to encrypted Amazon EBS volumes, then store data into Amazon S3.

C. Copy each object into a separate Amazon Glacier vault, and let Amazon Glacier take care of encryption.

D. Copy data to Amazon S3 with server-side encryption. Configure lifecycle management policies to move data to Amazon Glacier after 0 days.

Answer: D

NO.440 A Solution Architecture is designing a new workload where an AWS Lambda function will access an Amazon DynamoDB table.

What is the MOST secure name of granting the Lambda function access to the DynamoDB table?

A. Create an identity and access management (IAM) role with the necessary permissions to access the DynamoDB table, and assign the role to the Lambda function.

B. Create a DynamoDB user name and password and give them to the Developer to use in the Lambda function.

C. Create an identity and access management (IAM) user, and create access and secret keys for the user.

Give the user the necessary permission to access the DynamoDB table. Have the Developer use these keys to access the resources.

D. Create an identity and access management (IAM) role allowing access from AWS Lambda and assign the role to the DynamoDB table.

Answer: D

NO.441 A Solutions Architect has designed a VPC that meets all necessary security requirements for their organization. Any applications deployed in the organization must use this VPC design.

How can project teams deploy, manage, and delete VPCs that meet this design with the LEAST administrative effort?

A. Deploy an AWS CloudFormation template that defines components of the VPC.

B. Run a script that uses the AWS Command Line Interface to deploy the VPC.

C. Clone the existing authorized VPC for each new project.

D. Use AWS Elastic Beanstalk to deploy both the VPC and the application.

Answer: B

NO.442 Which aspects of Amazon EC2 security are the responsibility of AWS? Choose 2 answers

A. Virtualization Infrastructure

B. Physical security of hardware

C. Guest operating systems

D. Application authentication

E. VPC and security group configuration

Answer: B C

Explanation
AWS Security Responsibilities
* AWS is responsible for protecting the global infrastructure that runs all of the services offered in the AWS cloud. This infrastructure is comprised of the hardware, software, networking, and facilities that run AWS services.
* AWS provide several reports from third-party auditors who have verified their compliance with a variety of computer security standards and regulations
* AWS is responsible for the security configuration of its products that are considered managed services for e.g. RDS, DynamoDB
* For Managed Services, AWS will handle basic security tasks like guest operating system (OS) and database patching, firewall configuration, and disaster recovery.

NO.443 A web application stores all data in an Amazon RDS Aurora database instance. A Solutions Architect wants to provide access to the data for a detailed report for the Marketing team, but is concerned that the additional load on the database will affect the performance of the web application.
How can the report be created without affecting the performance of the application?
A. Create a read replica of the database.
B. Provision a new RDS instance as a secondary master.
C. Configure the database to be in multiple regions.
D. Increase the number of provisioned storage IOPS.
Answer: B

NO.444 A Solutions Architect is designing a web application for document sharing. The users will upload documents that are then made available to other users. There will be tens of thousands of these documents.
What is the MOST cost-effective storage solution?
A. Amazon EFS
B. Amazon S3
C. Amazon Glacier
D. Amazon EBS
Answer: A

NO.445 A Solutions Architect is designing a solution that must store and retrieve session data and JSON documents.
The solution must provide high availability strong consistency, and data durability. Which solution meets these requirements?
A. Amazon EBS volume with Provisioned IOPS
B. Amazon EC2 instance store
C. Amazon SQS
D. Amazon DynamoDB table
Answer: D

NO.446 Which security functions are based on AWS STS? Choose 2 answers

A. Adding conditions to managed policies

B. Using Web federated identity to authenticate users

C. Using IAM roles with Amazon EC2 instances

D. Assigning managed policies to IAM groups

E. Using access keys to authenticate IAM users

Answer: B E

NO.447 A Solutions Architect is designing an application that requires having six Amazon EC2 instances running at all times. The application will be deployed in the sa-east-1 region, which has three Availability Zones: sa-east-la, sa-east-1b, and sa-east-1c.

Which action will provide 100 percent fault tolerance and the LOWEST cost in the event that one Availability Zone in the region becomes unavailable?

A. Deploy six Amazon EC2 instances in sa-east-1a, six Amazon EC2 instances in sa-east-1b, and six Amazon EC2 instances in sa-east-lc.

B. Deploy six Amazon EC2 instances in sa-east-1a, four Amazon EC2 instances in sa-east-lb, and two Amazon EC2 instances in sa-east-1c.

C. Deploy three Amazon EC2 instances in sa-east-1a, three Amazon EC2 instances in sa-east-1b, and three Amazon EC2 instances in sa-east-1c.

D. Deploy two Amazon EC2 instances in sa-east-1a, two Amazon EC2 instances in sa-east-1b, and two Amazon EC2 instances in sa-east-1c.

Answer: C

NO.448 What would happen to an RDS (Relational Database Service) multiAvailability Zone deployment if the primary DB instance fails?

A. The IP of the primary DB instance is switched to the standby DB instance

B. A new DB instance is created in the standby availability zone

C. The canonical name record (CNAME) is changed from primary to standby

D. The RDS DB instance reboots

Answer: C

NO.449 After launching an instance that you intend to serve as NAT (Network Address Translation) device in a public subnet you modify your route tables to have the NAT device be the target of internet bound traffic of your private subnet. When you try and make an outbound connection to the internet from an instance in the private subnet, you are not successful. Which of the following steps could resolve the issue?

A. Disabling the Source/Destination check attribute on the NAT instance

B. Attaching an Elastic IP address to the instance in the private subnet

C. Attaching a second Elastic Network Interface(ENI) to the instance in the private subnet, and placing it in the public subnet

D. Attaching a second Elastic Network Interface to the NAT instance, and placing it in the private subnet

Answer: A

NO.450 Your application currently stores data on an unencrypted EBS volume. A new security policy

mandates that all data must be encrypted at rest. How can you encrypt the data?

A. Create a snapshot of the volume. Create a new, encrypted volume from the snapshot. Replace the volume.

B. Create a snapshot of the volume. Make an encrypted copy of the snapshot. Create a new volume from the new snapshot. Replace the volume.

C. Modify the EBS settings to encrypt the volume. You do need to detach the volume or stop the instance.

D. Stop the instance. Detach the volume. Modify the EBS settings to encrypt the volume. Reattach the volume. Start the instance.

Answer: C

NO.451 A retail company has sensors placed in its physical retail stores. The sensors send messages over HTTP when customers interact with in-store product displays. A Solutions Architect needs to implement a system for processing those sensor messages; the results must be available for the Data Analysis team.

Which architecture should be used to meet these requirements?

A. Implement an Amazon API Gateway to server as the HTTP endpoint. Have the API Gateway trigger an AWS Lambda function to process the messages, and save the results to an Amazon DynamoDB table.

B. Create an Amazon EC2 instance to server as the HTTP endpoint and to process the messages. Save the results to Amazon S3 for the Data Analysis team to download.

C. Use Amazon Route 53 to direct incoming sensor messages to a Lambda function to process the message and save the results to a Amazon DynamoDB table.

D. Use AWS Direct Connect to connect sensors to DynamoDB so that data can be written directly to a DynamoDB table where it can be accessed by the Data Analysis team.

Answer: A

NO.452 A Solutions Architect is trying to bring a data warehouse workload to an Amazon EC2 instance. The data will reside in Amazon EBS volumes and full table scans will be executed frequently. What type of Amazon EBS volume would be most suitable in this scenario?

A. Throughput Optimized HDD (st1)

B. Provisioned IOPS SSD (io1)

C. General Purpose SSD (gp2)

D. Cold HDD (sc1)

Answer: D

NO.453 A company is deploying a reporting application on Amazon EC2. The application is expected to generate

1,000 documents every hour and each document will be

800 MB. The company is concerned about strong data consistency and file locking, as various applications hosted on other EC2 instances will process the report documents in parallel when they become available.

What storage solution will meet these requirements with the LEAST amount of administrative overhead?

A. Amazon EFS

B. Amazon S3

C. Amazon ElastiCache

D. Amazon EBS

Answer: A

NO.454 Users submit requests to a service that takes several minutes to process. A Solutions Architect needs to ensure that these requests are processed at least once, and that the service has the ability to handle large increases in the number of requests.

How should these requirements be met?

A. Put the requests into an Amazon SOS queue and configure Amazon EC2 instances to poll the queue

B. Publish the message to an Amazon SNS topic that an Amazon EC2 subscriber can receive and process.

C. Save the request to an Amazon DynamoDB tablewith a DynamoDB stream that triggers an Amazon EC2 Spot Instance.

D. Use Amazon S3 to store the requests and configure an event notification to have Amazon EC2 instances process the new object

Answer: A

NO.455 A website keeps a record of user actions using a globally unique identifier (GUID) retrieve from Amazon Aurora in place of the user name within the audit record security protocols state that the GUID state that the GUID content must not leave the company's VPN.

As the web traffic has increase, the number of web servers and azure read replicas has also increased to keep up with the user record for the GUID.

What should be done to reduce the number of read replicas required while improving performance?

A. Keep the user name and GUID in memory on the web server instance so that the association can be remade on demand Remove the record after 30 minutes

B. Deploy a Amazon ElastiCache for Redis server into the infrastructure and store the user name and GUID there Retrieve the GUID from ElastiCache when required

C. Encrypt the GUID using Base64 and store it in the users session cookie Decrypt the GUID when an audit record is needed

D. Change the GUID to an MD5 hash of the user name, so that the value can be calculated on demand without referring to the database

Answer: B

NO.456 A client reports that they want see an audit log of any changes made to AWS resources in their account.

What can the client do to achieve this?

A. Set up Amazon Cloudwatch monitors on services they own.

B. Enable AWS CloudTrail logs to be delivered to an Amazon S3 bucket.

C. Use Amazon CloudWatch Events to pars logs.

D. Use AWS OpsWorks to manage their resources.

Answer: B

NO.457 A Solutions Architect is designing a solution to monitor weather changes by the minute. The frontend application is hosted on Amazon EC2 instances. The backend must be scalable to a virtually unlimited size, and data retrieval must occur with minimal latency.
Which AWS service should the Architect use to store the data and achieve these requirements?
A. Amazon S3
B. Amazon DynamoDB
C. Amazon RDS
D. Amazon EBS
Answer: A

NO.458 An organization designs a mobile application for their customers to upload photos to a site
The application needs a secure login with MFA. The organization wants to limit the initial build time and maintenance of the solution.
Which solution should a Solutions Architect recommend to meet the requirements?
A. Use Amazon Cognito Identity with SMS-based MFA
B. Edit AWS IAM policies to require MFA for all users.
C. Federate IAM against corporate AD that requires MFA.
D. Use Amazon API Gateway and require SSE for photos.
Answer: A

NO.459 An Autoscaling group spans 3 AZs and currently has 4 running EC2 instances. When Auto scaling needs to terminate an EC2 instance, by default, Auto scaling will:
A. Send an SNS notification, if configured to do so
B. Allow at least five minutes for Windows/Linux shutdown scripts to complete, before terminating the instance
C. Randomly select one of the 3 AZs, and then terminate an instance in that AZ
D. Terminate an instance in the AZ which currently has 2 running EC2 instances
E. Terminate the instance with the least active network connections if multiple instances meet this criterion, one will be randomly selected
Answer: A D

NO.460 Which combination of two policies enables AWS identity and access management cross-account access?
Choose 2 answers
A. Permission policy
B. Bucket policy
C. Key policy
D. Trust policy
E. Access policy
Answer: A B

NO.461 A media company has more than 100TB of data to be stored and retrieved infrequently. However the company occasionally receives requests for data within an hour The company needs a

low- cost retrieval method to handle the requests.

Which service meets this requirement?

A. Amazon S3 Standard

B. Amazon Glacier standard retrievals

C. Amazon Glacier bulk retrievals

D. Amazon S3 Standard Infrequent Access

Answer: D

NO.462 A company is using Amazon DynamoDB to stage its product catalog, which is 1 GB. Since a product entry, on average, consists of 100 KB of data, and the average traffic is about 250 requests per second, the database administrator has provisioned 3,000 RCU of read capacity throughput. However, some products are very popular and users are experiencing delays or timeouts due to throttling.

What improvement offers a long-term solution to this problem?

A. Increase the throughput provisioning to 6,000 RCUs

B. Use Amazon DynamoDB Accelerator to maintain the frequently ready items

C. Augment Amazon DynamoDB by storing only the key product attributes, with the details stored on Amazon S3

D. Change the partition key to consist of a hash of product key and product type, instead of just the product key

Answer: B

NO.463 You are deploying an application to collect votes for a very popular television show. Millions of users will submit votes using mobile devices. The votes must be collected into a durable, scalable, and highly available data store for real-time public tabulation. Which service should you use?

A. Amazon DynamoDB

B. Amazon Redshift

C. Amazon Kinesis

D. Amazon Simple Queue Service

Answer: C

NO.464 A Solutions Architect is designing a stateful web application that will run for one year (24/7) and then be decommissioned. Load on this platform will be constant, using a number of r4.8xlarge instances. Key drivers for this system include high availability is not required.

What is the MOST cost-effective way to purchase compute for this platform?

A. Scheduled Reserved instances

B. Convertible Reserved Instances

C. Standard Reserved instances

D. Spot Instances

Answer: C

NO.465 A company needs to monitor the read and write IOPs metrics for their AWS MySQL RDS instance and send real-time alerts to their operations team. Which AWS services can accomplish this? Choose 2 answers

A. Amazon Simple Email Service

B. Amazon CloudWatch

C. Amazon Simple Queue Service

D. Amazon Route 53

E. Amazon Simple Notification Service

Answer: B E

NO.466 An application runs on Amazon EC2 instances in an Auto Scaling group. When instances are terminated, the Systems Operations team cannot determine the root cause, because the logs reside on the terminated instances and are lost.

How can the root cause be determined?

A. Use ephemeral volumes to store the log files

B. Use scheduled Amazon CloudWatch Event to take regular Amazon EBS snapshots

C. Use an Amazon CloudWatch agent to push the logs to Amazon CloudWatch Logs

D. Use AWS CloudTrail to pull the logs from the Amazon EC2 instances

Answer: C

NO.467 Per the AWS Acceptable Use Policy, Penetration testing of EC2 instances:

A. Are expressly prohibited under all circumstances

B. May be performed by AWS, and is periodically performed by AWS

C. May be performed by the customer on their own instances, only if performed from EC2 instances

D. May be performed by the customer on their own instances with prior authorization from AWS

E. May be performed by AWS, and will be performed by AWS upon customer request

Answer: D

NO.468 You're building an API backend available at services.yourcompany.com. The API is implemented with API Gateway and Lambda. You successfully tested the API using curl. You implemented JavaScript to call the API from a webpage on your corporate website, www.yourcompany.com. When you access that page in your browser, you get the following error: "The same origin policy disallows reading the remote resource"

How can you allow your corporate webpages to invoke the API?

A. Enable CORS in the API Gateway

B. Enable CORS in the JavaScript frontend

C. Disable CORS in the JavaScript frontend

D. Disable CORS in the API Gateway

Answer: A

NO.469 Which of the following instance types are available as Amazon EBS backend only?

A. General purpose T2

B. General purpose M3

C. Compute-optimized C4

D. Compute-optimized C3

E. Storage-optimized I2

Answer: A C

NO.470 How can the domain's zone apex, for example,"myzoneapexdomain.com", be pointed towards an Elastic Load Balancer?

A. By using an AAAA record

B. By using an Amazon Route 53 CNAME record

C. By using an Amazon Route 53 Alias record

D. By using an A record

Answer: C

NO.471 A company wants to improve the performance of their web application after receiving customer complaints.
An analysis concluded that the same complex database queries were causing increased latency.
What should a Solutions Architect recommend to improve the application's performance?

A. Migrate the database to MySQL.

B. Use Amazon RedShift to analyze the queries.

C. Integrate Amazon ElastiCache into the application.

D. Use a Lambda-triggered request to the backend database.

Answer: C

NO.472 A company with an existing AWS VPC is experiencing an increasing number of malicious attacks from a particular IP address range. The company wants to block all access from these IP addresses while the abuse patterns are being investigated.
How can access from the specified IPs be denied quickly and temporarily?

A. User an AWS Marketplace solution to block access from the specified IP range

B. Leverage NAT gateway on each instance to block access form the specified IP range

C. Use network ACLs to block access from the specified IP range

D. Create a rule in the security groups to block access from the specified IP range

Answer: C

NO.473 You are working with a customers who is using chef configuration management in their data center. Which service is designed to let the customer leverage existing chef recipes in AWS?

A. AWS CloudFormation

B. AWS OpsWorks

C. AWS Elastic Beanstalk

D. Amazon Simple Workflow Service

Answer: B

NO.474 A Solution Architect is designing a new social media application. The application must provide a secure method for uploading profile photos. Each user should be able to upload a profile photo into a shared storage location for one week after their profile is created.
Which approach will meet all of these requirements?

A. Use Amazon Kinesis with AWS CloudTrail for auditing the specific times when profile photos are uploaded.

B. Use Amazon EBS volumes with IAM policies restricting user access to specific time periods

C. Use Amazon S3 with the default private access policy and generate pre-signed URLs each time a new site profile is created

D. Use Amazon CloudFront with AWS CloudTrail for auditing the specific times when profile photos are uploaded.

Answer: C

NO.475 Which of the following approaches provides the lowest cost for Amazon Elastic Block Store snapshots while giving you the ability to fully restore data?

A. Maintain a single snapshot: the latest snapshot is both incremental and complete

B. Maintain the most current snapshots, archive the original and incremental to Amazon Glacier

C. Maintain a volume snapshot: subsequent snapshots will overwrite one another

D. Maintain two snapshots: the original snapshot and the latest incremental snapshot

Answer: A

NO.476 A Solution Architect is designing a high-performance job that runs on Amazon EC2 instance in private subnet.

To allow the application to download patches, the infrastructure must be altered to allow the instance to access external endpoints. Any changes to the infrastructure must involve minimal ongoing system management effort.

What will allow the EC2 instances to access the endpoint while meeting these requirements?

A. NAT gateway

B. Elastic IP address

C. AWS Direct Connect

D. Virtual gateway

Answer: A

NO.477 Which procedure for backing up a relational database on EC2 that is using a set of RAIDed EBS volumes for storage minimizes the time during which the database cannot be written to and results in a consistent backup?

A. 1 stop the EC2 instance, 2 snapshot the EBS volume

B. 1 suspend disk I/O, 2 create an image of the EC2 instance, 3 resume disk I/O

C. 1 detach EBS volumes, 2 start EBS snapshot of volumes, 3 re-attach EBS volumes

D. 1 suspend disk I/O, 2 start EBS snapshot of volumes, 3 wait for snapshots to complete, 4 resume disk I/O

E. 1 suspend disk I/O,2 start EBS snapshot of volumes, 3 resume disk I/O

Answer: C

NO.478 A company maintains an application on an on-premises server. The company wants to automatically redirect users to a static maintenance page hosted on Amazon S3 when the application is unavailable.

What is the MOST efficient method to ensure the users are automatically redirected?

A. Use an Amazon Route 53 failover routing policy, and configure the application as primary and the Amazon S3 static page as secondary.

B. Use Amazon CloudWatch Events to trigger an AWS Lambda function that changes the DNS to point to the static page.

C. Use an Amazon Route 53 weighted routing policy, and configure the application higher and the Amazon S3 static page lower.

D. Use Amazon Route 53 to set up multiple A records for both the application and Amazon S3.

Answer: A

NO.479 A company is using an Amazon S3 bucket located in us-west-2 to serve videos to their customers. Their customers are located all around the world and the videos are requested a lot during peak hours. Customers in Europe complain about experiencing slow downloaded speeds, and during peak hours, customers in all locations report experiencing HTTP 500 errors.
What can a Solutions Architect do to address these issues?

A. Place an elastic load balancer in front of the Amazon S3 bucket to distribute the load during peak hours.

B. Cache the web content with Amazon CloudFront and use all Edge locations for content delivery.

C. Replicate the bucket in eu-west-1 and use an Amazon Route 53 failover routing policy to determine which bucket it should serve the request to.

D. Use an Amazon Route 53 weighted routing policy for the CloudFront domain name to distribute the GET request between CloudFront and the Amazon S3 bucket directly.

Answer: D

NO.480 Which of the following features ensures even distribution of traffic to Amazon EC2 instances in multiples Availability Zones registered with a load balancer?

A. An Amazon Route 53 latency routing policy

B. Elastic Load Balancing request routing

C. An Amazon Route 53 weighted routing policy

D. Elastic Load Balancing cross-zone load balancing

Answer: D

NO.481 A company processed 10 TB of raw data to generate quarterly reports Although it is unlikely to be used again, the raw data needs to be preserved for compliance and auditing purposes.
What is the MOST cost-effective way to store the data in AWS?

A. Amazon EBS Cold HOD (sc1)

B. Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA)

C. Amazon S3 Standard-Infrequent Access (S3 Standard-IA)

D. Amazon Glacier

Answer: D

NO.482 A user is designing a new service that receives location updates from 3.600 rental cars every hour. The cars upload their location to an Amazon S3 bucket. Each location must be checked tor distance from the original rental location. Which services will process the updates and automatically scale?

A. Amazon EC2 and Amazon EBS

B. Amazon Kinesis Firehouse and Amazon S3

C. Amazon ECS and Amazon RDS

D. Amazon S3 events and AWS Lambda

Answer: B

NO.483 An application run in a VPC o Amazon EC2 instances behind an Application Load Balancer. Traffic to the Amazon EC2 instances must be limited to traffic from the Application Load Balancer. Based on these requirements, the security group configuration should only allow traffic from:

A. the public IPs of the Application Load Balancer nodes

B. the IP range of the Application Load Balancer subnets

C. the security group attached to the Application Load Balancer

D. the VPC CIDR

Answer: C

NO.484 A Solution Architect must design a monitoring solution that gives the Security team visual access to all Amazon S3 bucket-level API operations.
What should the Solution Architect use to provide this information?

A. AWS CloudTrail logging for management events

B. Amazon CloudWatch Logs

C. AWS CloudTrail logging for data events

D. S3 Server Access logging

Answer: C

NO.485 A three-tier application is being created to host small news articles. The application is expected to serve millions of users. When breaking news. Which design meets these requirements while minimizing costs?

A. Use Auto Scaling groups to increase the number of Amazon EC2 instances delivering the web application.

B. Use Auto Scaling groups to increase the size of the Amazon RDS instances delivering the database

C. Use Amazon DynamoDB strongly consistent reads to adjust for the increase in traffic.

D. Use Amazon DynamoDB Accelerator (DAX) to cache read operations to the database

E. the site must handle very large spikes in traffic without significantly impacting database.

Answer: A

Explanation

Amazon RDS is a managed relational database service that provides you six familiar database engines to choose from, including Amazon Aurora, MySQL, MariaDB, Oracle, Microsoft SQL Server, and PostgreSQL.

This means that the code, applications, and tools you already use today with your existing databases can be used with Amazon RDS. Amazon RDS handles routine database tasks such as provisioning, patching, backup, recovery, failure detection, and repair.

Amazon RDS makes it easy to use replication to enhance availability and reliability for production workloads.

Using the Multi-AZ deployment option, you can run mission-critical workloads with high availability and built-in automated fail-over from your primary database to a synchronously replicated secondary database.

Using Read Replicas, you can scale out beyond the capacity of a single database deployment for read-heavy database workloads.

NO.486 An application has a web tier that runs on EC2 instances in a public subnet. The application tier instances run in private subnets across two Availability Zones. All traffic is IPv4 only, and each subnet has its own custom route table.

A new feature requires that application tier instances can call an external service over the Internet; however, they must still not be accessible to Internet traffic.

What should be done to allow the application servers to connect to the Internet, maintain high availability, and minimize administrative overhead?

A. Add an Amazon egress-only internet gateway to each private subnet. Alter each private subnet's route table to include a route from 0.0.0.0/0 to the egress-only internal gateway in the same Availability Zone.

B. Add an Amazon NAT Gateway to each public subnet. Alter each private subnet's route table to include a route from 0.0.0.0/0 to the NAT Gateway in the same Availability Zone.

C. Add an Amazon NAT instance to one of the public subnets Alter each private subnet's route table to include a route from 0.0.0.0/0 to the Internet gateway in the VPC.

D. Add an Amazon NAT Gateway to each private subnet. Alter each private subnet's route table to include a route from 0.0.0.0/0 to the NAT Gateway in the other Availability Zone.

Answer: A

NO.487 A Solutions Architect needs to allow developers to have SSH connectivity to web servers. The requirements are as follows:

* Limit access to users originating from the corporate network
* Web servers cannot have SSH access directly from the Internet
* Web servers reside in a private subnet

Which combination of steps must the Architect complete to meet these requirements? (Select TWO)

A. Create a bastion host that authenticates users against the corporate directory.

B. Create a bastion host with security group rules that only allow traffic from the corporate network

C. Attach an IAM role to the bastion host with relevant permissions

D. Configure the web servers' security group to allow SSH traffic from a bastion host

E. Deny all SSH traffic from the corporate network in the inbound network ACL.

Answer: B D

NO.488 An application relies on messages being sent and received in order. The volume will never exceed more than
300 transactions each second.
Which service should be used?

A. Amazon SQS

B. Amazon SNS

C. Amazon ECS

D. AWS STS

Answer: A

NO.489 An AWS Lambda function requires access to an Amazon RDS for SQL Server instance. It is against company policy to store passwords in Lambda functions.

How can a Solution Architect enable the Lambda function to retrieve the database password without violating company policy?

A. Add an IAM policy for IAM database access to the Lambda execution role

B. Store a one-way hash of the password in the Lambda function

C. Have the Lambda function use the AWS Systems Manager Parameter Store

D. Connect to the Amazon RDS for SQL Server instance by using a role assigned to the Lambda function

Answer: B

NO.490 An organization hosts 10 microservices, each in an Auto Scaling group behind individual Classic Load Balancers Each EC2 instance is running at optimal load.

Which of the following actions would allow the organization to reduce costs without impacting performance?

A. Reduce the number of EC2 instances behind each Classic Load Balancer

B. Change instance types in the Auto Scaling group launch configuration.

C. Change the maximum size but leave the desired capacity of the Auto Scaling groups

D. Replace the Classic Load Balancers with a single Application Load Balancer

Answer: A

NO.491 How can software determine the public and private IP addresses of the Amazon EC2 instance that it is running on?

A. Use ipconfig or ifconfig command

B. Query the local instance metadata

C. Query the appropriate Amazon CloudWatch metric

D. Query the local instance userdata

Answer: B

NO.492 A Solutions Architect is designing the architecture for a web application that will be hosted on AWS Internet users will access the application using HTTP and HTTPS How should the Architect design the traffic control requirements?

A. Use a network ACL to allow outbound ports for HTTP and HTTPS Deny other traffic for inbound and outbound.

B. Use a network ACL to allow inbound ports for HTTP and HTTPS Deny other traffic for inbound and outbound

C. Allow inbound ports for HTTP and HTTPS In the security group used by the web servers.

D. Allow outbound ports for HTTP and HTTPS in the security group used by the web servers

Answer: C

NO.493 You are using an m1.small EC2 instance with one 300GB EBS volume to host a relational database. You determined that write throughput to the database needs to be increased. Which of the following approaches can help achieve this? Choose 2 answers

A. Add an EBS volume and place into RAID 5

B. Use an array of EBS volumes

C. Place the instance in an Auto Scaling Group

D. Increase the size of the EC2 instance

E. Enable multi-AZ mode

F. Put the database behind an Elastic Load Balancer

Answer: B D

NO.494 A customer is running two Amazon EC2 instances, Server1 and Server2, in different subnets of the same VPC.

Server1 can ping Server2, but Server2 cannot ping Server1.What could explain this behavior? Choose 2 answers

A. The ingress rules for Server1's security group do not allow ICMP traffic

B. The ingress rules for Server2's security group do not allow ICMP traffic

C. The two servers are not located in the same Availability Zone

D. There is no route from Server2 to Server1 defined in the route table

E. The operating system firewall on Server1 is blocking traffic from Server2

Answer: A E

NO.495 A social networking portal experiences latency and throughput issues due to an increased number of users.

Application servers use very large datasets from an Amazon RDS database, which creates a performance bottleneck on the database.

Which AWS service should be used to improve performance?

A. Auto Scaling

B. Amazon SQS

C. Amazon ElastiCache

D. ELB Application Load Balancer

Answer: C

NO.496 A company has an application that uses Amazon CloudFront for content that is hosted on an Amazon S3 bucket. After an unexpected refresh, the users are still seeing old content. Which step should the Solutions Architect take to ensure that new content is displayed?

A. Perform a cache refresh on the CloudFront distribution that is serving the content

B. Perform an invalidation on the CloudFront distribution that is serving the content

C. Create a new cache behavior path with the updated content

D. Change the TTL value tor removing the old objects.

Answer: B

NO.497 At t2.medium EC2 instance type must be launched with what type of amazon machine image (AMI)?

A. An instance store Hardware Virtual Machine AMI

B. An instance store Paravirtual AMI

C. An Amazon EBS-backed Hardware Virtual Machine AMI

D. An Amazon EBS-backed paravirtual AMI

Answer: C

NO.498 Your company runs an application that generates several thousand 1-GB reports a month. Approximately 10% of these reports will be accessed once during the first 3 days and must be available on demand. After 30 days, reports are no longer accessed as a part of normal business processes but must be retained for compliance reasons.
Which architecture would meet these requirements with the lowest cost?

A. Upload the reports to Amazon S3 Standard - Infrequent Access storage class. Set a lifecycle configuration on the bucket to transition the reports to Amazon Glacier after 30 days.

B. Upload the reports to Amazon Glacier. When reports are requested, copy them to Amazon S3 Standard storage class for access. Delete the copied reports after they have been viewed.

C. Upload the reports to Amazon S3 Standard storage class. Set a lifecycle configuration on the bucket to transition the reports to Amazon Glacier after 30 days.

D. Upload the reports to Amazon S3 Standard - Infrequent Access storage class. When reports are requested, copy them to Amazon S3 Standard storage class for access. Delete the copied reports after they have been viewed.

Answer: C

NO.499 Your company's IT policies mandate that all critical data must be duplicated in two physical locations at least
100 miles apart.
What storage option meets this requirement?

A. One Amazon S3 bucket

B. Two Amazon S3 buckets in the same region

C. One Amazon Glacier archive

D. Two Amazon S3 buckets in different regions

Answer: A

NO.500 A company is rolling out a new web service, but is unsure how many customers the service will attract.
However, the company is unwilling to accept any downtime.
What could a Solutions Architect recommend to the company in order to keep track of customers' current session date?

A. Amazon EC2

B. Amazon RDS

C. AWS CloudTrail

D. Amazon DynamoDB

Answer: D

NO.501 Within a VPC, you need to allow a wide range of ports, and block several non-contiguous ports within the range. Which option will allow you to do this ?

A. Using a network ACL, place a DENY rule for ports to be blocked ahead of the ALLOW rule for the wide range of ports

B. Using a network ACL, place a DENY rule for ports to be blocked after the ALLOW rule for the wide range of ports

C. Using a security group, place a DENY rule for ports to be blocked ahead of the ARROW rule for the wide range of ports

D. Using a security group, place a DENY rule for ports to be blocked after the ALLOW rule for the wide range of ports

Answer: B

NO.502 Which of the following items are required to allow an application deployed on an EC2 instance to write data to a DynamoDB table? Assume that to security keys are allowed to be stored on the EC2 instance.

A. Launch an EC2 instance with the IAM user included in the launch configuration

B. Create an IAM user that allows write access to the DynamoDB table

C. Add an IAM user to a running EC2 instance

D. Create an IAM role that allows write access to the DynamoDB table

E. Add an IAM role to a running EC2 instance

F. Launch an EC2 instance with the IAM role included in the launch configuration

Answer: D F

NO.503 A company expects its user base to increase live times over one year Its application is hosted in one region and uses an Amazon RDS MySQL database an ELB Application Load Balancer and Amazon ECS to host the website and its micro services. Which design changes should a Solutions Architect recommend 10 support the expected growth'? (Select TWO)

A. Move static files from ECS to Amazon S3

B. Use an Amazon Route 53 geolocation routing policy

C. Scale the environment based on real-time AWS CloudTrail togs

D. Create a dedicated Elastic: Load Balancer for each microservice

E. Create RDS read replicas and change the application to use these replicas

Answer: D

NO.504 A company is running both their website and human resources (HR) application within the same virtual private cloud (VPC). For company compliance and security reasons, the instances running their HR application stack must not share hardware with other AWS customers. The website owner wants to keep their infrastructure costs as low as possible. How can the company ensure that all of the requirements are met within a single VPC?

A. Create the VPC with Dedicated tenancy, launch the HR instances in placement groups, and launch the website instances in Shared tenancy

B. Create the VPC with dedicated tenancy, launch the HR instances in Default tenancy, and launch the website instances in Shared tenancy

C. Create the VPC with Default tenancy, launch the HR instances in placement groups, and launch the website instances in Shared tenancy

D. Create the VPC with default tenancy, launch the HR instances in Dedicated tenancy, and launch the website instances in Shared tenancy

Answer: D

NO.505 A Solutions Architect must design a solution that encrypts data in Amazon S3 Corporate policy mandates encryption keys be generated and managed on premises. Which solution should the Architect use to meet the security requirements?

A. AWS CloudHSM

B. SSE-KMS. Server-side encryption with AWS KMS managed keys

C. SSE-S3 Server-side encryption with Amazon-managed master key

D. SSE-C Server-side encryption with customer-provided encryption keys

Answer: D

Explanation

Protecting Data Using Server-Side Encryption with AWS KMS-Managed Keys (SSE-KMS) Server-side encryption is about protecting data at rest. AWS Key Management Service (AWS KMS) is a service that combines secure, highly available hardware and software to provide a key management system scaled for the cloud. AWS KMS uses customer master keys (CMKs) to encrypt your Amazon S3 objects. You use AWS KMS via the Encryption Keys section in the IAM console or via AWS KMS APIs to centrally create encryption keys, define the policies that control how keys can be used, and audit key usage to prove they are being used correctly. You can use these keys to protect your data in Amazon S3 buckets.

The first time you add an SSE-KMS-encrypted object to a bucket in a region, a default CMK is created for you automatically. This key is used for SSE-KMS encryption unless you select a CMK that you created separately using AWS Key Management Service. Creating your own CMK gives you more flexibility, including the ability to create, rotate, disable, and define access controls, and to audit the encryption keys used to protect your data.

NO.506 A media company must store 10 TB of audio recordings. Retrieval happens infrequently and requestors agree on an 8-hour turnaround time.

What is the MOST cost-effective solution to store the files?

A. Amazon S3 Standard - Infrequent Access (Standard - IA)

B. EBS Throughput Optimized HDD (st1)

C. EBS Cold HDD (sc1)

D. Amazon Glacier

Answer: D

NO.507 A Solution Architect is developing as AWS Lambda-based service for a social networking game to retrieve information on tourist landmarks stored in an Amazon DynamoDB table. The solutions Architect wants to minimize costs as the service scales to many millions of users through a mobile app.

How can the Solution Architect optimize performance while minimizing costs? (Select TWO)

A. Use DynamoDB Accelerator (DAX), and configure Auto Scaling of read throughput on the DynamoDB table

B. Configure AppSync to cache responses on the mobile client, and the configure Auto Scaling of reads on the DynamoDB table

C. Configure Amazon CloudFront, specify an appropriate TTL for response caching, and configure the DynamoDB table as the origin

D. Authorize mobile clients to communicate directly with DynamoDB through AWS STS token, and configure DynamoDB for global replication and Auto Scaling

E. Expose the Lambda function through the Amazon API Gateway, configure the endpoint with caching, and configure Auto Scaling of read throughput on the DynamoDB table

Answer: A E

NO.508 When an EC2 EBS-backed (EBS root) instance is stopped, what happens to the data on any ephemeral store volumes?

A. Data is unavailable until the instance is restarted

B. Data will be deleted and will no longer be accessible

C. Data is automatically saved in an EBS snapshot

D. Data is automatically saved in an EBS volume

Answer: B

NO.509 When will you incur costs with an Elastic IP address (EIP)?

A. When an EIP is allocated

B. When it is allocated and associated with a running instance

C. When it is allocated and associated with a stopped instance

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

Answer: C

NO.510 A company has an application that stores sensitive data. The company is required by government regulations to store multiple copies of its data.

What would be the MOST resilient and cost-effective option to meet this requirement?

A. Amazon EFS

B. Amazon RDS

C. AWS Storage Gateway

D. Amazon S3

Answer: D

NO.511 A Solutions Architect has been asked to deliver video content stored on Amazon S3 to specific users from Amazon CloudFront while restricting access by unauthorized users.

How can the Architect implement a solution to meet these requirements?

A. Configure CloudFront to use signed-URLs to access Amazon S3.

B. Store the videos as private objects in Amazon S3, and let CloudFront serve the objects by using only Origin Access Identity (OAI).

C. Use Amazon S3 static website as the origin of CloudFront, and configure CloudFront to deliver the videos by generating a signed URL for users.

D. Use OAI for CloudFront to access private S3 objects and select the Restrict Viewer Access option in CloudFront cache behavior to use signed URLs.

Answer: B

Explanation

Reference

https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/private-content-

restricting-access-to-s3

NO.512 A restaurant reservation application needs the ability to maintain a waiting list. When a customer tries to reserve a table, and none are available, the customer must be put on the waiting list, and the application must notify the customer when a table becomes free.
What service should the Solution Architect recommend to ensure that the system respects the order in which the customer requests are put onto the waiting list?

A. Amazon SNS

B. AWS Lambda with sequential dispatch

C. A FIFO queue in Amazon SQS

D. A standard queue in Amazon SQS

Answer: C

NO.513 An organization has a 3-tier architecture. It uses an Apache web server and an application is running on the Docker platform with Amazon RDS on the backend. The organization wants to migrate the application to AWS and does not want to be responsible for deployment scalability, or capacity provisioning of its resources.
Which service should be used to meet these requirements?

A. AWS OpsWorks

B. Amazon EC2 Elastic Container Service

C. AWS Elastic Beanstalk

D. AWS CloudFormation

Answer: B

NO.514 You have an EC2 Security Group with several running EC2 instances. You change the Security Group rules to allow inbound traffic on a new port and protocol, and launch several new instances in the same Security Group. The new rules apply:

A. Immediately to all instances in the security group.

B. Immediately to the new instances only.

C. Immediately to the new instances, but old instances must be stopped and restarted before the new rules apply.

D. To all instances, but it may take several minutes for old instances to see the changes.

Answer: A

NO.515 A company needs to quickly ensure that all files created in an Amazon S3 bucket in us-east-1 are also available in another bucket in ap-southeast-2. Which option represents the SIMPLEST way to implement this design?

A. Add an S3 lifecycle rule to move any new files from the bucket in us-east-1 to the bucket in ap-southeast-2.

B. Create a Lambda function to be triggered for every new file in us-east-1 that copies the file to the bucket in ap-southeast-2

C. Use SNS to notify the bucket in ap-southeast-2 to create a file whenever a file is cheated in the bucket in us-east-1.

D. Enable versioning and configure cross-region replication from the bucket in us-east-1 to the

bucket in ap-southeast-2.
Answer: A

NO.516 Which of the following does AWS own under the shared security responsibility model?
Choose 3 answers
A. Patching of Amazon Elastic Compute Cloud hypervisors
B. Decommissioning storage devices at end of life
C. Encryption of traffic within a virtual private cloud
D. Physical security of AWS data centers and facilities
E. Logical security of customer SSH private key material
F. Access control within a virtual private cloud
Answer: A B D

NO.517 You have an application running on a single Amazon EC2 instance with a 1 TB Amazon EBS
magnetic volume. Using CloudWatch, you have found that Amazon EBS throughput is poor when the
Amazon EC2 instance is under high network load. Which of the following may help improve
performance?
A. Relaunch the instance as Amazon EBS-optimized
B. Modify the instance to enable enhanced networking
C. Migrate the Amazon EBS volume to a General Purpose volume
D. Migrate the Amazon EBS volume to a provisioned IOPs volume
Answer: D

NO.518 Your existing web application requires a persistent key-value store database that must
service 50,000 reads/second. Your company is looking at 10% growth in traffic and data volume
month over month for the next several years. Which service meets these requirements?
A. Amazon RDS
B. Amazon DynamoDB
C. Amazon SQS
D. Amazon RedShift
Answer: A

NO.519 A company has an application that uses Amazon CloudFront for content that is hosted on an
Amazon S3 bucket. After an unexpected refresh, the users are still seeing old content.
Which step should the Solutions Architect take to ensure that new content is displayed?
A. Perform a cache refresh on the CloudFront distribution that is serving the content.
B. Perform an invalidation on the CloudFront distribution that is serving the content.
C. Create a new cache behavior path with the updated content.
D. Change the TTL value for removing the old objects
Answer: A D

NO.520 A company has thousands of files stored in an Amazon S3 bucket that has a well-defined
access pattern. The files are accessed by an application multiple times a day for the first 30 days Files
are rarely accessed within the next 90 days. After that, the files are never accessed again During the

first 120 days, accessing these files should never take more than a few seconds.
Which lifecycle policy should be used for the S3 objects to minimize costs based on the access pattern?

A. Use Amazon S3 Standard-Infrequent Access (S3 Standard-IA) storage for the first 30 days Then move the files to the GLACIER storage class for the next 90 days. Allow the data to expire after that

B. Use Amazon S3 Standard storage for the first 30 days Then move the files to Amazon S3 Standard-Infrequent Access (S3 Standard-IA) for the next 90 days Allow the data to expire after that.

C. Use Amazon S3 Standard storage for first 30 days. Then move the files to the GLACIER storage class for the next 90 days Allow the data to expire after that.

D. Use Amazon S3 Standard-Infrequent Access (S3 Standard-IA) for the first 30 days. After that. move the data to the GLACIER storage class, where it will be deleted automatically

Answer: B

NO.521 A customer has a single 3-TB volume on-premises that is used to hold a large repository of images and print layout files. This repository is growing at 500 GB a year and must be presented as a single logical volume. The customers is becoming. Which AWS Storage Gateway configuration meets the customer requirements?

A. Gateway-Cached volumes with snapshots scheduled to Amazon S3

B. Gateway-stored volumes with snapshots scheduled to Amazon S3

C. Gateway-Virtual Tape library with snapshots to Amazon S3

D. Gateway-Virtual tape library with snapshots to Amazon Glacier

Answer: C

NO.522 A Solution Architect is considering possible options for improving the security of the data stored on an Amazon EBS volume attacked to an Amazon EC2 instance.
Which solution will improve the security of the data?

A. Use AWS KMS to encrypt the EBS volume.

B. Create an IAM policy that restricts read and write access to the volume.

C. Migrate the sensitive data to an instance store volume.

D. Use Amazon single-on to control login access to the EC2 instance.

Answer: B

NO.523 A Solutions Architect must design a web application that will be hosted on AWS, allowing users to purchase acce4ss to premium, shares content that is stored in an S3 bucket. Upon payment, content will be available for download for 14 days before the user is denied access.
Which of the following would be the LEAST complicated implementation?

A. Use an Amazon CloudFront distribution with an origin access identity (OAI). Configure the distribution with an Amazon S3 origin to provide access to the file through signed URLs. Design a Lambda function to remove that is older than 14 days

B. Use an S3 bucket and provide direct access to the file. Design the application to trace purchases in a DynamoDB table. Configure a Lambda function to remove data that is older than 14 days bases on a query to Amazon DynamoDB

C. Use an Amazon CloudFront distribution with an OAI. Configure the distribution with an Amazon S3 origin to provide access to the file through signed URLs. Design the application to set an expiration of

14 days for the URL
D. Use an Amazon CloudFront distribution with an OAI. Configure the distribution with an Amazon S3 origin to provide access to the file through signed URLs. Design the application to set an expiration of 60 minutes for the URL, and recreate the URL as necessary
Answer: D

NO.524 A company wants to durably store data in 8 KB chunks. The company will access the data once every few months. However, when the company does access the data, it must be done with as little latency as possible.
Which AWS service should a Solutions Architect recommend if cost is NOT a factor?
A. Amazon DynamoDB
B. Amazon EBS Throughput Optimized HDD Volumes
C. Amazon EBS Cold HDD Volumes
D. Amazon ElastiCache
Answer: A

NO.525 A web application experiences high compute costs due to serving a high amount of static web content.
How should the web server architecture be designed to be the MOST cost-efficient?
A. Create an Auto Scaling group to scale out based on average CPU usage.
B. Create an Amazon CloudFront distribution to pull static content from an Amazon S3 bucket.
C. Leverage Reserved Instances to add additional capacity at a significantly lower price.
D. Create a multi-region deployment using an Amazon Route 53 geolocation routing policy.
Answer: B

NO.526 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?
A. Use multi-part upload.
B. Add a random prefix to the key names.
C. Amazon S3 will automatically manage performance at this scale.
D. Use a predictable naming scheme, such as sequential numbers or date time sequences, in the key names
Answer: C

NO.527 A solution architect is designing an application that will encrypt all data in an Amazon Redshift cluster. Which action will encrypt the data at rest?
A. Place the Redshift KMS Default Cluster in a private subnet
B. Use the AWS KMS Default Customer master key
C. Encrypt the Amazon EBS volumes
D. Encrypt the data using SSL/TLS
Answer: B
Explanation
Reference https://docs.aws.amazon.com/redshift/latest/mgmt/working-with-db-encryption.html

NO.528 A company is designing a new application lo collect data on user behavior for analysis at a later time Amazon Kinesis Data Streams will be used to receive user interaction events What should be done to ensure the event data is retained indefinitely?

A. Configure the stream to write records to an attached Amazon EBS volume

B. Configure an Amazon Kinesis Data Firehose delivery stream to store data on Amazon S3

C. Configure the stream data retention period to retain the data indefinitely

D. Configure an Amazon EC2 consumer to read from me data stream and store records in Amazon SOS

Answer: B

NO.529 You need a solution to distribute traffic across all the containers for a task running on Amazon ECS. Your task definitions define dynamic host port mapping for your containers.
What AWS feature provides this functionality?

A. CloudFront custom origins support dynamic host port mapping

B. All Elastic Load Balancing instances support dynamic host port mapping

C. Classic Load Balancers support dynamic host port mapping

D. Application Load Balancers support dynamic host port mapping

Answer: D

NO.530 A Solutions Architect is designing a log-processing solution that requires storage that supports up to 500 MB/s throughput. The data is sequentially accessed by an Amazon EC2 instance. Which Amazon storage type satisfies these requirements?

A. EBS Provisioned IOPS SSD (io1)

B. EBS General Purpose SSD (gp2)

C. EBS Throughput Optimized HDD (st1)

D. EBS Cold HDD (sc1)

Answer: C

NO.531 You have an application running in multiple Availability Zones, to confirm this application can continue to operate at full capacity without performance degradation or downtime. In the event of an Availability Zone failure. You must:

A. Use Spot instances to guarantee supplemental capacity

B. Use Auto Scaling to launch instances in other Availability Zones to replace lost capacity

C. Use dedicated instances in all Availability Zones

D. Have enough running EC2 instances in other Availability Zones

Answer: B

NO.532 An application currently stores objects in Amazon S3-Standard. The application accesses new objects frequently for one week. After one week, they are accessed occasionally for analysis batch jobs. A Solutions Architect has been asked to reduce storage costs for the application while allowing immediate access for batch jobs.
How can costs be reduced without reducing data durability?

A. Create a lifecycle policy that moves Amazon S3 data to Amazon S3 One Zone-Infrequent Access

storage after 7 days. After 30 days, move the data to Amazon Glacier.

B. Keep the data on Amazon S3, and create a lifecycle policy to move S3 data to Amazon Glacier after 7 days.

C. Move all Amazon S3 data to S3 Standard-Infrequent Access storage, and create a lifecycle policy to move the data to Amazon Glacier after 7 days.

D. Keep the data on Amazon S3, then create a lifecycle policy to move the data to S3 Standard-Infrequent Access storage after 7 days.

Answer: A

NO.533 If you're unable to connect via SSH to your EC2 instance. Which of the following should you check and possibly correct to restore connectivity?

A. Adjust security group to permit egress traffic over TCP port 443 from your IP

B. Modify the instance security group to allow ingress of ICMP packets from your IP

C. Apply the most recently released Operating System security patches

D. Configure the IAM role to permit changes to security group settings

E. Adjust the instance's Security Group to permit ingress traffic over port 22 from your IP

Answer: C

NO.534 You are working with a customer who has 10 TB of archival data that they want to migrate to Amazon glacier.

The customer has a 1-Mbps connection to the internet. Which service or feature provides the fastest method of getting the data into Amazon glacier?

A. Amazon Glacier multipart upload

B. AWS storage Gateway

C. VM Import/Export

D. AWS Import/Export

Answer: A

NO.535 A bank is writing new software that is heavily dependent upon database transactions for write consistency. The application will also occasionally generate reports on data m the database, and will do joins across multiple tables. The database must automatically scale as the amount of data grows.

Which AWS service should be used to run the database?

A. Amazon S3

B. Amazon Aurora

C. Amazon DynamoDB

D. Amazon Redshift

Answer: C

NO.536 A company requires that the source, destination, and protocol of all IP packets be recorded when traversing a private subnet.What is the MOST secure and reliable method of accomplishing this goal.

A. Create VPC flow logs on the subnet.

B. Enable source destination check on private Amazon EC2 instances.

C. Enable AWS CloudTrail logging and specify an Amazon S3 bucket for storing log files.

D. Create an Amazon CloudWatch log to capture packet information.

Answer: A

NO.537 A Solutions Architect is developing a solution for sharing files in an organization. The solution must allow multiple users to access the storage service at once from different virtual machines and scale automatically. It must also support file-level locking.

Which storage service meets the requirements of this use case?

A. Amazon S3

B. Amazon EFS

C. Amazon EBS

D. Cached Volumes

Answer: B

NO.538 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?

A. mySQL installed on two Amazon EC2 instances in a single Availability Zone

B. Amazon RDS for MySQL with Multi-AZ

C. Amazon ElasticCache

D. Amazon DynamoDB

Answer: B

NO.539 Your security team requires each Amazon ECS task to have an IAM policy that limits the task's privileges to only those required for its use of AWS services. How can you achieve this?

A. Reboot each Amazon ECS task programmatically to generate new instance metadata for each task

B. Connect to each running Amazon ECS container instance and add discrete credentials

C. Use IAM roles on the Amazon ECS container instances to associate IAM roles with each ECS task on that instance

D. Use IAM roles for Amazon ECS tasks to associate a specific IAM role with each ECS task definition

Answer: D

NO.540 A company plans to deploy a new application in AWS that reads and write information to dataset. The company wants to deploy the application in two different AWS Regions in an active-active configuration. The database need to replicate to keep information in sync.

What should be uses to meet these requirements?

A. Amazon Athena with Amazon S3 cross-region replication

B. AWS Database Migration Service with change data capture

C. Amazon DynamoDB with global tables

D. Amazon RDS PostgreSQL with a cross-region Read Replica

Answer: B

NO.541 If you want to launch Amazon Elastic Compute Cloud (EC2) instances and assign each instance a predetermined private IP address, you should:

A. Assign a group of sequential Elastic IP address to the instances

B. Use standard EC2 instances since each instance gets a private Domain Name Service already

C. Launch the instances in the Amazon Virtual Cloud (VPC)

D. Launch the instances in a placement Group

E. Launch the instances from a private Amazon Machine Image (AMI)

Answer: C

NO.542 A prediction process requires access to a trained model that is stored in an Amazon S3 bucket. The process takes a few seconds to process an image and make a prediction. The process is not overly resource-intensive, does not require any specialized hardware and takes less than 512 MB of memory to run.
What would be the MOST effective compute solution for this use case?

A. Amazon ECS

B. Amazon EC2 Spot instances

C. AWS Lambda functions

D. AWS Elastic Beanstalk

Answer: C

NO.543 A university is running an internal web application on AWS that students can access from the university network to check their exam results. The web application runs on Amazon EC2 instances and pulls results from an Amazon DynamoDB table. Auto Scaling is currently configured to add a new web server when CPU is greater than 80% for 5 minutes. DynamoDB is configured to increase both read and write capacity units by five when utilization is greater than 80%. Exam results are released at 9:00 a.m. each Monday, and 80% of students, attempt to access their unique result within the first 30 minutes. Despite Auto Scaling being enabled, students are complaining of slow response times and errors when they view the site. There are no performance complaints after 9:30 a.m. on Monday.
Which recommendation should a Solutions Architect make to improve performance in a cost-effective manner?

A. Scale out the EC2 instances to ensure that the environment scales up and down based on the highest load.

B. Implement Amazon DynamoDB Accelerator to improve database performance and remove the need to scale the read/write units.

C. Use a scheduled job to scale out EC2 before 9:00 a.m. on Monday and to scale down after 9:30 a.m.

D. Use Amazon CloudFront to cache web request and reduce the load on EC2 and DynamoDB.

Answer: D

NO.544 A company has instances in private subnets that require outbound access to the internet. This requires:

A. Assigning a public IP address to the instance

B. Updating the route table associated with the subnet to point internet traffic through a NAT gateway

C. Updating the security group associated with the subnet to allow ingress on 0.0.0.0/0

D. Routing traffic from the instance through a VPC endpoint that has internet access

Answer: B

NO.545 An application has components running in a public subnet and a private subnet. The components within the private sub net must connect to the internet to receive updates.
How should this be accomplished without moving the components into a public subnet?

A. Add an internet gateway to the private subnet and update the private subnet route table.

B. Add a NAT gateway to the public subnet and update the public subnet route table.

C. Add an internet gateway to the VPC and update the private subnet route table.

D. Add a NAT gateway to the public subnet and update the private subnet route table.

Answer: D

NO.546 A Solutions Architect needs to build a resilient data warehouse using Amazon Redshift. The Architect needs to rebuild the Redshift cluster in another region.
Which approach can the Architect take to address this requirement?

A. Modify the Redshift cluster and configure cross-region snapshots to the other region.

B. Modify the Redshift cluster to take snapshots of the Amazon EBS volumes each day, sharing those snapshots with the other region.

C. Modify the Redshift cluster and configure the backup and specify the Amazon S3 bucket in the other region.

D. Modify the Redshift cluster to use AWS Snowball in export mode with data delivered to the other region.

Answer: B

NO.547 You have a CloudFront distribution configured with the following path patterns:
When users request objects that start with 'static2/', they are receiving 404 response codes. What might be the problem?

A. The "*" path pattern must appear before 'static1/*' path

B. CloudFront distributions cannot have origins in different AWS regions

C. CloudFront distributions cannot have multiple different origin types

D. The '*' path pattern must appear after the 'static2/*' path

Answer: B

NO.548 Which of the following requires a custom Cloud Watch metric to monitor?

A. CPU utilization of an EC2 instance

B. Memory utilization of an EC2 instance

C. Disk usage activity of an EC2 instance

D. Data transfer of an EC2 instance

Answer: B

NO.549 A Solutions Architect needs to configure scaling policies based on Amazon CloudWatch metrics for an Auto Scaling group. The application running on the instances is memory intensive.
How can the Architect meet this requirement?

A. Enable detailed monitoring on the Amazon EC2 instances.

B. Publish custom metrics to CloudWatch from the application.

C. Configuration lifecycle policies for the Amazon EC2 instances.

D. Set up high-resolution alarms for the Auto Scaling group

Answer: B

NO.550 The Trusted Advisor service provides insight regarding which four categories of an AWS account?

A. Security, fault tolerance, high availability, and connectivity

B. Security, access control, high availability, and performance

C. Performance, cost optimization, security, and fault tolerance

D. Performance, cost optimization, access control, and connectivity

Answer: C

NO.551 A Solution Architecture is designing an application that is expected to have millions of users. The architect needs to options to store session data.

Which option is the MOST performance.

A. Amazon ElasticCache

B. Amazon DRS

C. Amazon S3

D. Amazon EFS

Answer: A

NO.552 The AWS CloudHSM service is integrated with which of the following service? Choose 2 answers

A. Amazon Elastic Block Store

B. Amazon Simple Storage Service

C. Amazon redshift

D. Amazon DynamoDB

E. Amazon RDS (Oracle)

Answer: C E

NO.553 An interactive, dynamic website runs on Amazon EC2 instances in a single subnet behind an ELB Classic Load Balancer.

Which design changes will make the site more highly available?

A. Move some Amazon EC2 instances to a subnet in a different way.

B. Move the website to Amazon S3.

C. Change the ELB to an Application Load Balancer.

D. Move some Amazon EC2 instances to a subnet in the same Availability Zone.

Answer: C

NO.554 A Solution Architect is designing an application that uses Amazon EBS volumes. The volumes must be backed up to a different region.

How should the Architect meet this requirement?

A. Create EBS snapshots directly from one region to another.

B. Move the data to an Amazon S3 bucket and enable cross-region replication.

C. Create EBS snapshots and then copy them to the desired region.

D. Use a script to copy data from the current Amazon EBS volume to the destination Amazon EBS volume.

Answer: C

NO.555 A customer has a production application that frequently overwrites and deletes data, the application requires the most up-to-date version of the data every time it is requested. Which storage service should a Solutions Architect recommend to best accommodate this use case?

A. Amazon S3

B. Amazon RDS

C. Amazon Red Shift

D. AWS Storage Gateway

Answer: A

NO.556 You have launched an Amazon Elastic Compute Cloud (EC2) instance into a public subnet with a primary private IP address assigned, an internet gateway is attached to the VPC, and the public route table is configured to send all internet-based internet. Why is the internet unreachable from this instance?

A. The Internet gateway security group must allow all outbound traffic

B. The instance does not have a public IP address

C. The instance "Source/Destination check" property must be enabled

D. The instance security group must allow all inbound traffic

Answer: B

NO.557 An application that runs on an Amazon EC2 instance must make secure calls to Amazon S3 buckets.

Which steps can a Solution Architect take to ensure that the calls are made without exposing credentials?

A. Generate an access key ID and a secret key, and assign an IAM role with least privilege

B. Create an IAM policy granting access to all services and assign it to the Amazon EC2 instance profile

C. Create an IAM role granting least privilege and assign it to the Amazon EC2 instance profile

D. Generate temporary access keys to grant users temporary access to the Amazon EC2 instance

Answer: C

NO.558 A Solutions Architect is architecting a workload that requires a highly available shared block file storage system that must be consumed by multiple Linux applications. Which service meets this requirement?

A. Amazon EFS

B. Amazon S3

C. AWS Storage Gateway

D. Amazon EBS

Answer: D

NO.559 A company is storing a data on Amazon Simple Storage Service (S3). The company's security policy mandates that data is encrypted at rest. Which of the following methods can achieve this? Choose 3 answers

A. Use Amazon S3 server-side encryption with AWS key management service managed keys

B. Use Amazon S3 server-side encryption with customer-provided keys

C. Use Amazon S3 server-side encryption with EC2 key pair

D. Use Amazon S3 bucket policies to restrict access to the data at rest

E. Encrypt the data on the client-side before ingesting to Amazon S3 using their own master key

F. Use SSL to encrypt the data while in transit to Amazon S3

Answer: A B C

NO.560 A Solutions Architect is designing the architecture for a new three-tier web-based e-commerce site that must be available 24/7. Requests are expected to range from 100 to 10,000 each minute. Usage can vary depending on time of day, holidays, and promotions. The design should be able to handle these volumes, with the ability to handle higher volumes if necessary.

How should the Architect design the architecture to ensure the web tier is cost-optimized and can handle the expected traffic? (Select two.)

A. Launch Amazon EC2 instances in an Auto Scaling group behind an ELB.

B. Store all static files in a multi-AZ Amazon Aurora database.

C. Create an CloudFront distribution pointing to static content in Amazon S3.

D. Use Amazon Route 53 to route traffic to the correct region.

E. Use Amazon S3 multi-part uploads to improve upload times.

Answer: A C

NO.561 A company's policy requires that all data stored in Amazon S3 is encrypted. The company wants to use the option with the least overhead and does not manage any encryption keys.

Which of the following options will meet the company's requirements?

A. AWS CloudHSM

B. AWS Trusted Advisor

C. Server Side Encryption (SSE-S3)

D. Server Side Encryption (SSE-KMS)

Answer: C

NO.562 A Solutions Architect is designing an Amazon VPC that requires access to a remote API server using 1Pv6.

Resources within the VPC should not be accessed directly from the internet.

How should this be achieved?

A. Use a NAT gateway and deny public access using security groups

B. Attach an egress-only internet gateway and update the routing tables.

C. Use a NAT gateway and update the routing tables.

D. Attach an internet gateway and deny public access using security groups.

Answer: B

NO.563 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?

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

B. Amazon RDS for MySQL with Multi-AZ

C. Amazon ElastiCache

D. Amazon DynamoDB

Answer: B

NO.564 A team must redesign the application layer of their SaaS Solution so that no matter request volume required at any given time the solution will scale automatically to support the exact needs of that application. The team has decided to give serverless.
Which of the following service would best fit these requirements?

A. Amazon API Gateway and AWS Lambda

B. Amazon Cognito and Amazon DynamoDB

C. Amazon DynamoDB and AWS Code Deploy

D. AWS Lambda and an Application Load Balancer

Answer: A

NO.565 An application on an Amazon EC2 instance routinely stops responding to requests and requires a reboot to recover. The application logs are already exported into Amazon CloudWatch, and you notice that the problem consistently follows the appearance of a specific message in the log. The application team is working to address the bug, but has not provided a date for the fix. What workaround can you implement to automate recovery of the instance until the fix is deployed?

A. Create an Amazon CloudWatch alarm on instance memory usage; based on that alarm, trigger an Amazon CloudWatch action to reboot the instance

B. Create an Amazon CloudWatch alarm on an Amazon CloudWatch Logs filter for that message; based on that alarm trigger an Amazon CloudWatch action to reboot the instance

C. Create an AWS CloudTrail alarm to detect the deadlock; based on that alarm, trigger an Amazon SNS message to the Operations team

D. Create an AWS CloudTrail alarm on low CPU; based on that alarm, trigger an Amazon SNS message to the Operations team

Answer: B

NO.566 An Auto-Scaling group spans 3 AZs and currently has 4 running EC2 instances. When Auto Scaling needs to terminate an EC2 instance by default, AutoScaling will:
Choose 2 answers

A. Allow at least five minutes for Windows/Linux shutdown scripts to complete, before terminating the instance.

B. Terminate the instance with the least active network connections. If multiple instances meet this criterion, one will be randomly selected.

C. Send an SNS notification, if configured to do so.

D. Terminate an instance in the AZ which currently has 2 running EC2 instances.

E. Randomly select one of the 3 AZs, and then terminate an instance in that AZ.

Answer: B D

NO.567 Your company stores financial documents in amazon S3. Aacording to company policy, all financial documents must be retained for a perios of seven years. however documents older than one year are rarely accessed. How can you optimize cost?

A. Create an Amazon S3 lifecycle rule to move objects older than one year to storage Gateway

B. Create an Amazon S3 lifecycle rule to move objects older than one year to Amazon Glacier

C. Create an Amazon S3 event to move objects older than one year to Amazon Glacier

D. Create an Amazon S3 event to move objects older than one year to Storage Gateway

Answer: C

NO.568 A company hosts a website using Amazon API Gateway on the front end. Recently, there has been heavy traffic on the website, and the company wants to control access by allowing authenticated traffic only How should the company limit access to authenticated users only? (Select TWO)

A. Allow users that are authenticated through Amazon Cognito

B. Limit traffic through API Gateway

C. Allow X.509 certificates to authenticate traffic.

D. Deploy AWS KIV1S to identify users.

E. Assign permissions in AWS to allow users.

Answer: A E

NO.569 An organization regularly bocks up their application data. The application backups are required to be stored on Amazon S3 for a certain amount of time, and need to be accessed instantly in the event of a disaster recovery.

Which of the following Amazon S3 storage classes would be the MOST cost-effective option to meet the needs of this scenario?

A. Glacier Storage Class

B. Standard Storage Class

C. Standard - Infrequent Access (IA)

D. Reduced Redundancy Class (RRS)

Answer: C

NO.570 A popular e-commerce application runs on AWS. The application encounters performance issues. The database is unable to handle the amount of queries and load during peak times. The database is running on the RDS Aurora engine on the largest instance size available.

What should an administrator do to improve performance?

A. Convert the database to Amazon Redshift.

B. Create a CloudFront distribution.

C. Convert the database to use EBS Provisioned IOPS.

D. Create one or more read replicas.

Answer: C

NO.571 A workload in an Amazon VPC consist of a single web-server launched from a custom AMI. Session state is stored in database. How should the Solutions Architect modify this workload to be both highly available and scalable?

A. Create a launch configuration with a desired capacity of two web servers across multiple Availability Zones. Create an Auto Scaling group with the AMI ID of the web server image. Use Amazon Route S3 latency-based routing to balance traffic across the Auto Scaling group.

B. Create a launch configuration with the AMI ID of the web server image. Create an Auto Scaling group using the newly-created launch configuration, and a desired capacity of two web servers across multiple regions. Use an Application Load Balancer (ALB) to balance traffic across the Auto Scaling group

C. Create a launch configuration with the AMI ID of the web server image. Create an Auto Scaling group using the newly-created launch configuration, and a desired capacity of two web servers across multiple Availability Zones. Use an ALB to balance traffic across the Auto Scaling group

D. Create a launch configuration with the AMI ID of the web server image. Create an Auto Scaling group using the newly-created launch configuration, and a desired capacity of two web servers across multiple Availability Zones. Use Route 53 weighted routing to balance traffic across the Auto Scaling group

Answer: A

NO.572 One company wants to share the contents of their Amazon S3 bucket with another company Security requirements mandate that only the other company's AWS accounts have access to the contents of the Amazon S3 bucket.
Which Amazon S3 feature will allow secure access to the Amazon S3 bucket?

A. Bucket policy

B. Object lagging

C. CORS configuration

D. Lifecycle policy

Answer: A

Explanation

Cross-origin resource sharing (CORS) defines a way for client web applications that are loaded in one domain to interact with resources in a different domain. With CORS support, you can build rich client-side web applications with Amazon S3 and selectively allow cross-origin access to your Amazon S3 resources.

This section provides an overview of CORS. The subtopics describe how you can enable CORS using the Amazon S3 console, or programmatically by using the Amazon S3 REST API and the AWS SDKs.

NO.573 A client notices that their engineers often make mistakes when creating Amazon SQS queues for their backend system.
Which action should a Solutions Architect recommend to improve this process?

A. Use the AWS CLI to create queues using AWS IAM Access Keys.

B. Write a script to create the Amazon SQS queue using AWS Lambda.

C. Use AWS Elastic Beanstalk to automatically create the Amazon SQS queues.

D. Use AWS CloudFormation Templates to manage the Amazon SQS queue creation

Answer: D

NO.574 A Solutions Architect has a three-tier web application that serves customers worldwide. Analysis reveals that product images take more time to load than expected.

Which action will improve the image load time?

A. Store product images on Amazon EBS-optimized storage volumes

B. Store product images in an Amazon S3 bucket

C. Use an Amazon CloudFront distribution for product images

D. Use an Auto Scaling group to add instances for product images

Answer: C

NO.575 How frequently does the Amazon CloudWatch Logs agent send data by default?

A. Every five seconds

B. Every minute

C. Every five seconds and is configurable by the user

D. Every minute and is configurable by the user

Answer: B

NO.576 A company is using AWS Key Management Service (AWS KMS) to secure their Amazon RDS databases. An auditor has recommended that the company log all use of their AWS KMS keys.

What is me SIMPLEST solution?

A. Associate AWS KMS metrics with Amazon CloudWatch

B. Use AWS CloudTrail to log AWS KMS key usage.

C. Deploy a monitoring agent on the RDS instances

D. Poll AWS KMS periodically with a scheduled job

Answer: B

NO.577 Before approving the use of AWS for a new application, the InfoSec team has asked if it will be possible for specific IP addresses to be blocked from accessing, in the event that a threat is detected from a particular block of IP addresses on the internet.

What could be used to meet this requirement?

A. Security Groups

B. Virtual Private Gateways

C. Internet gateways

D. Network Access Control Lists

Answer: D

NO.578 A Solutions Architect is building a new feature using Lambda to create metadata when a user uploads a picture to Amazon S3 All metadata must be indexed.

Which AWS service should the Architect use to store this metadata?

A. Amazon S3

B. Amazon DynamoDB

C. Amazon Kinesis

D. Amazon EFS

Answer: B

NO.579 A Solution Architecture is designing a new web application on Amazon EC2. The system must make application-specific metric such as application security events, available to the Sysops teams.

How should the Solutions Architect enable this in the design?

A. Install AWS SDK on the application instances Design the application lo use tie AWS SDK to tog events directly to on Amazon S3 bucket

B. install the Amazon Inspector agent on the application instances Design the application to store events m application log files

C. Install the Amazon Cloud Watch Logs agent on the application instances Design the application to store events in application log files

D. Install AWS SDK on the application instances Design the application to use AWS SDK to tog sensitive events directly to AWS CtoudTrail

Answer: B

NO.580 On a single EC2 instance, which configuration provides the highest IOPS performance?

A. Using an EBS-optimized instance using provisioned IOPs volumes

B. Striping across several EBS volumes using standards EBS volumes

C. Using a High 1/0 instance using local instance storage volumes

D. Striping across several EBS volumes using provisioned IOPs volumes

Answer: A

NO.581 An organization is deploying Amazon ElastiCache for Redis and requires password protection to improve their data security posture.

Which solution should a Solutions Architect recommend?

A. Redis Auth

B. AWS Single Sign-On

C. IAM database authentication

D. VPC security group for Redis

Answer: A

NO.582 A company is migrating its data center to AWS. As part of this migration, there is a three-tier web application that has strict data-at-rest encryption requirements. The customer deploys this application on Amazon EC2 using Amazon EBS, and now must provide encryption at-rest.

How can this requirement be met without changing the application?

A. Use AWS Key Management Service and move the encrypted data to Amazon S3.

B. Use an application-specific encryption API with AWS server-side encryption

C. Use encrypted EBS storage volumes with AWS-managed keys

D. Use third-party tools to encrypt the EBS data volumes with Key Management Service Bring Your

Own Keys.

Answer: C

NO.583 An application is running on an Amazon EC2 instance in a private subnet. The application needs to read and write data onto Amazon Kinesis Data Streams, and corporate policy requires that this traffic should not go to the internet.

How can these requirements be met?

A. Configure a NAT gateway in a public subnet and route all traffic to Amazon Kinesis through the NAT gateway.

B. Configure a gateway VPC endpoint for Kinesis and route all traffic to Kinesis through the gateway VPCendpoint.

C. Configure an interface VPC endpoint for Kinesis and route all traffic to Kinesis through the gateway VPC endpoint.

D. Configure an AWS Direct Connect private virtual interface for Kinesis and route all traffic to Kinesis through the virtual interface.

Answer: C

NO.584 A Solutions Architect is designing an architecture for a mobile gaming application. The application is expected to be very popular. The Architect needs to prevent the Amazon ROS MySQL database from becoming a bottleneck due to frequently accessed queries.

Which service or feature should the Architect add to prevent a bottleneck?

A. Multi-AZ feature on the RDS MySQL Database

B. ELB Classic Load Balancer in front of the web application tier.

C. Amazon SQS in front of RDS MySQL Database

D. Amazon ElastiCache in front of the RDS MySQL Database.

Answer: D

NO.585 You Auto Scaling group is configured to launch one new Amazon EC2 instance if the overall CPU load exceeds 65% over a five-minute interval. Occasionally, the Auto Scaling group launches a second Amazon EC2 instance before the first is operational. The second instance is not required and introduces needless compute costs. How can you prevent the Auto Scaling group from launching the second instance?

A. Add a scaling-specific cooldown period to the scaling policy

B. Configure a lifecycle hook for your Auto Scaling group

C. Adjust the CPU threshold that triggers a scaling action

D. Attach a new launch configuration to the Auto Scaling group

Answer: A

NO.586 A customer has a service based out of Oregon, U.S. and Paris, France. The application is storing data in an S3 bucket located in Oregon, and that data is updated frequently. The Paris office is experiencing slow response times when retrieving objects.

What should a Solution Architect do to resolve the slow response times for the Paris office?

A. Set up an S3 bucket based in Paris, and enable cross-region replication from the Oregon bucket to the Paris bucket

B. Create an Application Load Balancer that load balances data retrieval between the Oregon S3 bucket and a new Paris S3 bucket

C. Create a Amazon CloudFront distribution with the bucket located in Oregon as the origin and set the Maximum Time to Live (TTL) for cache behavior to 0

D. Set up an S3 bucket based in Paris, and enable a lifecycle management rule to transition data from the Oregon bucket to the Paris bucket

Answer: A

NO.587 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?

A. Amazon EBS volume

B. Amazon S3

C. Amazon EC2 instance store

D. Amazon RDS instance

Answer: B

NO.588 A Solutions Architect is developing software on AWS that requires access to multiple AWS services, including an Amazon EC2 instance. This is a security sensitive application, and AWS credentials such as Access Key ID and Secret Access Key need to be protected and cannot be exposed anywhere in the system.

What security measure would satisfy these requirements?

A. Store the AWS Access Key ID/Secret Access Key combination in software comments.

B. Assign an IAM user to the Amazon EC2 instance.

C. Assign an IAM role to the Amazon EC2 instance.

D. Enable multi-factor authentication for the AWS root account.

Answer: B

NO.589 When using the following AWS services, which should be implemented in multiple Availability Zones for high availability solutions? Choose 2 answers

A. Amazon Simple Storage Service

B. Amazon Elastic Load Balancing

C. Amazon Elastic Compute Cloud

D. Amazon Simple Notification Service

E. Amazon DynamoDB

Answer: B C

NO.590 Which services can invoke AWS lambda functions? Choose 2 answers

A. Amazon SNS

B. Amazon Reoute53

C. Amazon Redshift

D. Amazon DynamoDB

E. Elastic Load Balancing

Answer: A D

NO.591 A company has asked a Solutions Architect to ensure that data is protected during data transfer to and from Amazon S3. Use of which service will protect the data in transit?

A. AWS KMS

B. HTTPS

C. SFTP

D. FTPS

Answer: B

NO.592 You have been asked to design a NAT solution for your company's VPC-based web application. Traffic from the privatesubnets varies throughout the day from 500 Mbps to spikes of 7 Gbps.

What is the most cost-effective and scalable solution?

A. Create an Amazon EC2 NAT instance with a second elastic network (ENI) in a public subnet; route all private subnet Internet traffic through the NAT gateway.

B. Create an Auto Scaling group of Amazon EC2 NAT instances in a public subnet; route all private subnet Internet traffic through the NAT gateway

C. Move the Internet gateway for the VPC to a public subnet; route all Internet traffic through the Internet gateway

D. Create a NAT gateway in a public subnet; route all private subnet Internet Traffic through the NAT gateway

Answer: D

Explanation

Getting Started

Let's try to see how we can create and configure an AWS NAT Gateway:

* Login to the AWS console, select VPC service and click on NAT Gateways as shown below:Managed NAT gateway - dashboard

* Provide the necessary details, like subnet and Elastic IP, and create the NAT Gateway. You need the select the subnet which you want to be private subnet and your Elastic IP so that it can communicate to Internet.NAT Gateway - create

* Once created you will see this:NAT Gateway - success

* Once the NAT Gateway is created you can edit your routing table to send traffic destined for the Internet toward the gateway. The gateway's internal address will be chosen automatically, and will be in the same subnet as the gateway.

Once the NAT Gateway is configured, you are all set. Your private subnet instances should now be able to communicate with the Internet without much management, monitoring, and configuration overhead.

Sample NAT Gateway architecture: NAT Gateway - design
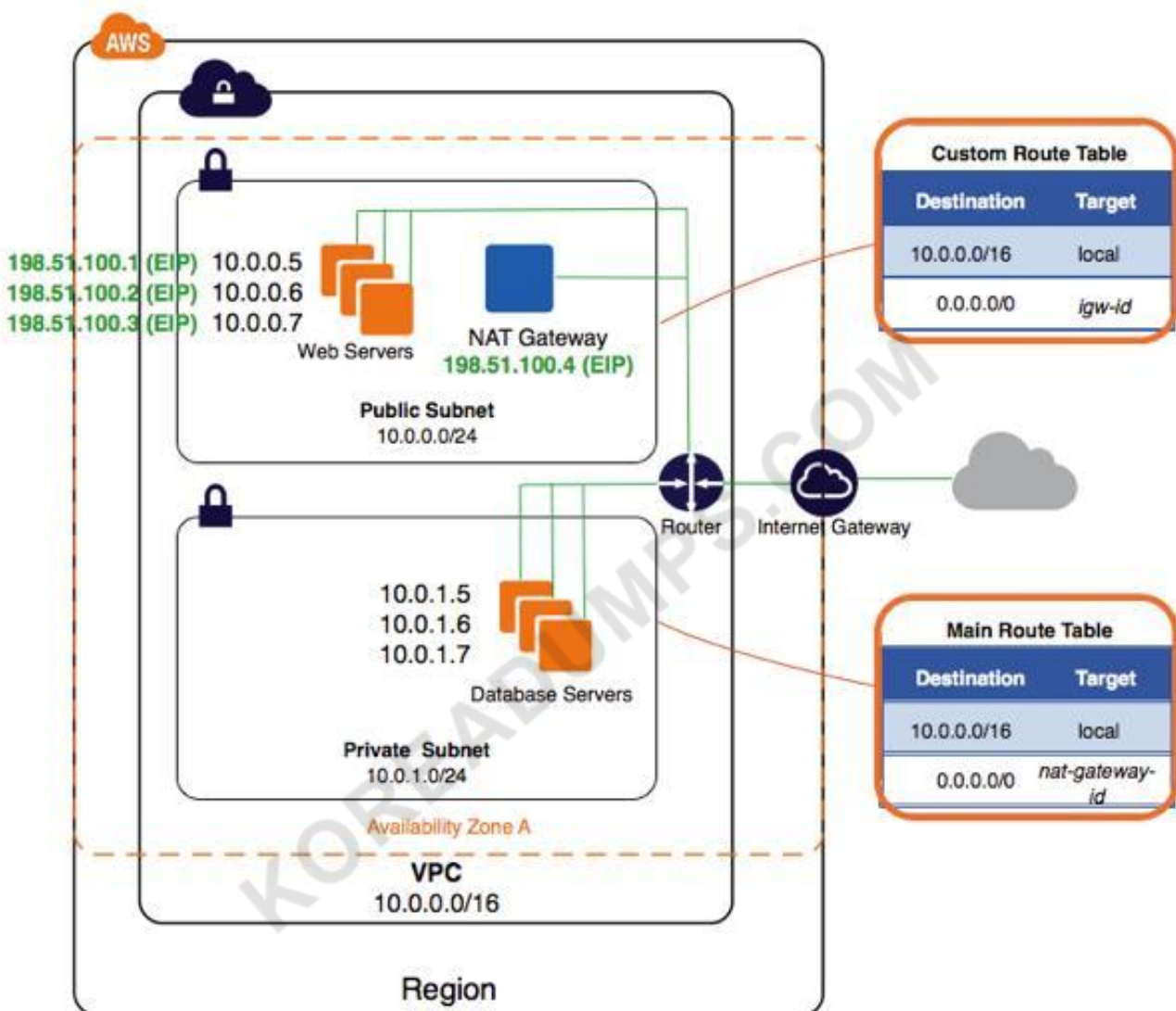
Migrating from an existing NAT instance

If you are already using a NAT instance in your VPC setup, it's time to migrate now, and I can tell you that it's not tough. You only need to make sure that you create the NAT Gateway in the same subnet as your existing NAT instance. Then you need to edit the route table by replacing the existing NAT reference with the internal address of the new gateway. I told you this was very straightforward. You will need to ensure that you don't have any critical tasks running at the time of migration, because changing a route from a NAT instance to the gateway can result in a dropped connection.

This feature was only very recently introduced by AWS, so it's definitely worth sharing. It can resolve lots of existing concerns. Do you have your own experience with this new feature? Why not share it with others.

NO.593 A company is launching a marketing campaign on their website tomorrow and expects a significant increase in traffic. The website is designed as a multi-tiered web architecture, and the increase in traffic could potentially overwhelm the current design.

What should a Solutions Architect do to minimize the effects from a potential failure in one or more of the tiers?

A. Migrate the database to Amazon RDS.

B. Set up DNS failover to a statistic website.

C. Use Auto Scaling to keep up with the demand.

D. Use both a SQL and a NoSQL database in the design.

Answer: C

NO.594 What are characteristics of Amazon S3? Choose 2 answers

A. S3 allows you to store objects of virtually unlimited size.

B. S3 offers Provisioned IOPS.

C. S3 allows you to store unlimited amounts of data.

D. S3 should be used to host a relational database.

E. Objects are directly accessible via a URL.

Answer: C E

Reference: http://docs.aws.amazon.com/A
mazonCloudFront/latest/DeveloperGuide/private-content-restricting-access-to-s3.html

NO.595 A Solutions Architect is designing a microservice to process records from Amazon Kinesis Streams. The metadata must be stored a Amazon DynamoDB. The microservice most be capable of concurrently processing
10.000 records daily as they arrive in the Kinesis stream.
The MOST scalable way to design the microservice is:

A. As an AWS Lambda function

B. As a process on an Amazon EC2 instance.

C. As a Docker container running on Amazon ECS

D. As a Docker container on an EC2 instance

Answer: C

NO.596 A photo-sharing website running on AWS allows users to generate thumbnail images of photos stored in Amazon S3. An Amazon DynamoDB table maintains the locations of photos, and thumbnails are easily re-created from the originals if they are accidentally deleted.
How should the thumbnail images be stored to ensure the LOWEST cost?

A. Amazon S3 Standard-Infrequent Access (S3 Standard-IA) with cross-region replication

B. Amazon S3

C. Amazon Glacier

D. Amazon S3 with cross-region replication

Answer: D

NO.597 A Solution Architect has five web servers serving request for a domain.
A Solutions Architect has live web servers serving requests for a domain.
Which of the following Amazon Route 53 routing policies can distribute traffic randomly among all healthy web servers?

A. Simple

B. Failover

C. Weighted

D. Multivalue Answer

Answer: D

NO.598 You have been asked to design a fault-tolerant and scalable web application across three Availability Zones.
The presentation logic will reside on web server's behinds an ELB Classic Load Balance, and the application logic will reside on a set of app servers behind a second load balancer.
How should you use Auto Scaling groups?
A. Deploy two Auto Scaling groups: one for the web servers in all Availability Zones and one for the app servers in all Availability Zones
B. Deploy six Auto Scaling groups: a web server group in each Availability Zone and an app server group in each Availability Zone
C. Deploy one Auto Scaling group that includes all the web and app servers across all Availability Zones
D. Deploy three Auto Scaling groups: one for each Availability Zone that includes both web and app servers
Answer: A

NO.599 A Solutions Architect is developing a new web application on AWS. The Architect expects the application to become very popular, so the application must scale to support the load. The Architect wants to focus on software development and deploying new features without provisioning or managing instances. Which solution is appropriate?
A. Amazon API Gateway and AWS Lambda
B. Elastic Load Balancing with Auto Scaling groups and Amazon EC2
C. Amazon API Gateway and Amazon EC2
D. Amazon CloudFront and AWS Lambda
Answer: A

NO.600 A Solutions Architect is designing a new application that needs to access data in a different AWS account located within the same region. The data must not be accessed over the Internet. Which solution will meet these requirements with the LOWEST cost?
A. Add rules to the security groups in each account.
B. Establish a VPC Peering connection between accounts.
C. Configure Direct Connect in each account.
D. Add a NAT Gateway to the data account.
Answer: B

NO.601 An online company wants to conduct real-time sentiment analysis about its products from its social media channels using SQL. Which of the following solutions has the LOWEST cost and operational burden?
A. Set up a streaming data ingestion application on Amazon EC2 and connect it to a Hadoop cluster for data processing. Send the output to Amazon S3 and use Amazon Athena to analyze the data.
B. Configure the input stream using Amazon Kinesis Data Streams Use Amazon Kinesis Data Analytics to write SQL queries against the stream.
C. Configure the input stream using Amazon Kinesis Data Streams. Use Amazon Kinesis Data Firehose

to send data to an Amazon Redshift cluster, and then query directly against Amazon Redshift.

D. Set up a streaming data ingestion application on Amazon EC2 and send the output to Amazon S3 using Kinesis Data Firehose. Use Athena to analyze the data

Answer: C

NO.602 An organization design a mobile application for their customers to upload photos to a site. The application needs a secure login with MFA. The organization wants to limit the initial build time and maintenance of the solution.

Which solution should a Solutions Architect recommend to meet the requirements?

A. Use Amazon Cognito Identity with SMS-based MFA

B. Edit AWS IAM policies to require MFA for all users

C. Federate IAM against corporate AD that requires MFA

D. Use Amazon API Gateway and require SSE for photos

Answer: B

NO.603 A Solution Architect is creating a multi-tier architecture for an application that includes a public-facing web tier . Security requirements state that the Amazon EC2 instances running in the application tier must not be accessibility directly from the internet.

requirements state that the Amazon EC2 instances running in the application tier must not be accessible directly from the internet What should be done to accomplish this?

A. Create a multi-VPC peering mesh with network access rules limiting communications to specific ports Implement an internet gateway on each VPC for external connectivity.

B. Place all instances in a single Amazon VPC with AWS WAF" as the web front-end communication conduit Configure a NAT gateway for external communications.

C. Use VPC peering to peer with on-premises hardware Direct enterprise traffic through the VPC peer connection to the instances hosted in the private VPC.

D. Deploy the web and application instances in a private subnet. Provision an Application Load Balancer in the public Install an internet gateway and use security groups to control communications between the layers.

Answer: D

NO.604 A customer has a legacy application with a large amount of data. The files accessed by the application are approximately 10 GB each, but are rarely accessed. However, when files are accessed, they are retrieved sequentially. The customer is migrating the application to AWS and would like to use Amazon EC2 and Amazon EBS.

What is the LEAST expensive EBS volume type for this use case?

A. Cold HDD (sc1)

B. Provisioned IOPS SSD (io1)

C. General Purpose SSD (gp2)

D. Throughput Optimized HDD (st1)

Answer: A

NO.605 A Solutions Architect must design a storage solution for incoming billing reports in CSV format. The data does not need to be scanned frequently and is discarded after 30 days.

Which service will be MOST cost-effective in meeting these requirements?

A. Import the logs into an RDS MySQL instance

B. Use AWS Data Pipeline to import the logs into a DynamoDB table

C. Write the files to an S3 bucket and use Amazon Athena to query the data

D. Import the logs to an Amazon Redshift cluster

Answer: C

NO.606 You have launched an Amazon elastic compute cloud (EC2) instance in a VPC with an attached internet gateway. You assigned a public IP address to the Amazon EC2 instance but cannot connect from your on-premises client via SSH. Which of the following may be the cause of the behavior experienced? Choose 2 answers

A. An incorrect security group rule for inbound SSH traffic

B. An incorrect policy in the AWS IAM service

C. An incorrect AWS IAM role used in the Amazon EC2 instances

D. An incorrect routes in the subnet's route table

E. An incorrect security group rule for outbound SSH traffic

Answer: A B

NO.607 A Solutions Architect is creating a new relational database. The Compliance team will use the database and mandates that data content must be stored across three different Availability Zones. Which of the following options should the Architect use?

A. Amazon Aurora

B. Amazon RDS MySQL with Multi-AZ enabled

C. Amazon DynamoDB

D. Amazon ElastiCache

Answer: A

NO.608 A Solutions Architect is about to deploy an API on multiple EC2 instances in an Auto Scaling group behind an ELB The support team has the following operational requirements

1 They get an alert when the requests per second go over 50,000

2 They get an alert when latency goes over 5 seconds

3 They can validate how many times a day users call the API requesting highly-sensitive data Which combination of steps does the Architect need to take to satisfy these operational requirements? (Select TWO.)

A. Ensure that CloudTrail is enabled

B. Create a custom CloudWatch metric to monitor the API for data access

C. Configure CloudWatch alarms for any metrics the support learn requires

D. Ensure that detailed monitoring for the EC2 instances is enabled

E. Create an application to export and save CloudWatch metrics for longer term trending analysis

Answer: C D

NO.609 A Solutions Architect is designing a highly-available website that is served by multiple web servers hosted outside of AWS. If an instance becomes unresponsive, the Architect needs to remove it from the rotation.

What is the MOST efficient way to fulfill this requirement?

A. Use Amazon CloudWatch to monitor utilization.

B. Use Amazon API Gateway to monitor availably

C. Use an Amazon Elastic Load Balancer

D. Use Amazon Route 53 health checks

Answer: A

NO.610 In order to optimize performance for a compute cluster that requires low inter-node latency, which of the following feature should you use?

A. EC2 Dedicated Instances

B. AWS Direct Connect

C. VPC private

D. Multiple Availability Zones

E. Placement Groups

Answer: E

NO.611 A company wants to improve the performance of their web application after receiving customer complaints. An analysis concluded that the same complex database queries were causing increased latency.

What should a Solutions Architect recommend to improve the application's performance?

A. Migrate the database to MySQL

B. Use Amazon RedShilt to analyze the queries

C. Integrate Amazon ElastiCache into the application

D. Use a Lambda-triggered request to the backend database

Answer: C

NO.612 A company is storing data in an Amazon OynamoDB table and needs to take daily backups and retain them for

6 months.

How should the Solutions Architect meet these requirements without impacting the production workload?

A. Use DynamoDB replication and restore the table from the replica.

B. Use AWS Data Pipeline and create a scheduled job to back up the DynamoDB table daily.

C. Use Amazon CloudWatch Events to trigger an AWS Lambda function that makes an on-demand backup of the table.

D. Use AWS Batch to create a scheduled backup with the default template, then back up to Amazon S3 daily

Answer: B

NO.613 A photo-sharing service stores pictures in Amazon Simple Storage Service (S3) and allows application sign-in using an OpenID Connect-compatible identity provider. Which AWS Security Token Service approach to temporary access should you use for the Amazon S3 operations?

A. SAML-based Identity Federation

B. Cross-Account Access

C. AWS Identity and Access Management roles

D. Web Identity Federation

Answer: D

Explanation

Web identity federation - You can let users sign in using a well-known third-party identity provider such as Loginwith Amazon, Facebook, Google, or any OpenID Connect (OIDC) 2.0 compatible provider. AWS STS webidentity federation supports Login with Amazon, Facebook, Google, and any OpenID Connect (OICD)-compatible identity provider.