**AWS- Professional Exam Questions Dumps**

Q1(R) You have an application running on an EC2 instance, which will allow users to download files from a private S3 bucket using a pre-signed URL. Before generating the URL, the application should verify the existence of the file in S3. How should the application use AWS credentials to access the S3 bucket securely?

1. Use the AWS account access keys; the application retrieves the credentials from the source code of the application.
2. Create an IAM role for EC2 that allows list access to objects In the S3 bucket; launch the Instance with the role, and retrieve the role’s credentials from the EC2 instance metadata.
3. Create an IAM user for the application with permissions that allow list access to the S3 bucket; the application retrieves the 1AM user credentials from a temporary directory with permissions that allow read access only to the Application user.
4. Create an IAM user for the application with permissions that allow list access to the S3 bucket; launch the instance as the IAM user, and retrieve the IAM user’s credentials from the EC2 instance user data

Q2( R) You are designing a data leak prevention solution for your VPC environment. You want your VPC Instances to be able to access software depots and distributions on the Internet for product updates. The depots and distributions are accessible via third party CDNs by their URLs. You want to explicitly deny any other outbound connections from your VPC instances to hosts on the internet. Which of the following options would you consider?

1. Configure a web proxy server in your VPC and enforce URL-based rules for outbound access Remove default routes.
2. Implement security groups and configure outbound rules to only permit traffic to software depots.
3. Move all your instances into private VPC subnets remove default routes from all routing tables and add specific routes to the software depots and distributions only.
4. Implement network access control lists to all specific destinations, with an Implicit deny as a rule.

Q3. (R) You are running a successful multitier web application on AWS and your marketing department has asked you to add a reporting tier to the application. The reporting tier will aggregate and publish status reports every 30 minutes from user-generated information that is being stored in your web application s database. You are currently running a Multi-AZ RDS MySQL instance for the database tier. You also have implemented Elasticache as a database caching layer between the application tier and database tier. Please select the answer that will allow you to successfully implement the reporting tier with as little impact as possible to your database.

1. Continually send transaction logs from your master database to an S3 bucket and generate the reports off the S3 bucket using S3 byte range requests.
2. Generate the reports by querying the synchronously replicated standby RDS MySQL instance maintained through Multi-AZ.
3. Launch a RDS Read Replica connected to your Multi AZ master database and generate reports by querying the Read Replica.
4. Generate the reports by querying the ElastiCache database caching tier.

Q4. (R) A company is running a batch analysis every hour on their main transactional DB, running on an RDS MySQL instance, to populate their central Data Warehouse running on Redshift. During the execution of the batch, their transactional applications are very slow. When the batch completes they need to update the top management dashboard with the new data. The dashboard is produced by another system running on-premises that is currently started when a manually-sent email notifies that an update is required. The on-premises system cannot be modified because is managed by another team. How would you optimize this scenario to solve performance issues and automate the process as much as possible?

1. Replace RDS with Redshift for the batch analysis and SNS to notify the on-premises system to update the dashboard
2. Replace RDS with Redshift for the oaten analysis and SQS to send a message to the on-premises system to update the dashboard
3. Create an RDS Read Replica for the batch analysis and SNS to notify me on-premises system to update the dashboard
4. Create an RDS Read Replica for the batch analysis and SQS to send a message to the on-premises system to update the dashboard.

Q5. (R-230 ) Your fortune 500 company has under taken a TCO analysis evaluating the use of Amazon S3 versus acquiring more hardware The outcome was that ail employees would be granted access to use Amazon S3 for storage of their personal documents. Which of the following will you need to consider so you can set up a solution that incorporates single sign-on from your corporate AD or LDAP directory and restricts access for each user to a designated user folder in a bucket? (Choose 3 Answers)

1. Setting up a federation proxy or identity provider
2. Using AWS Security Token Service to generate temporary tokens
3. Tagging each folder in the bucket
4. Configuring IAM role
5. Setting up a matching IAM user for every user in your corporate directory that needs access to a folder in the bucket

Q6. (R-21) You are responsible for a web application that consists of an Elastic Load Balancing (ELB) load balancer in front of an Auto Scaling group of Amazon Elastic Compute Cloud (EC2) instances. For a recent deployment of a new version of the application, a new Amazon Machine Image (AMI) was created, and the Auto Scaling group was updated with a new launch configuration that refers to this new AMI. During the deployment, you received complaints from users that the website was responding with errors. All instances passed the ELB health checks. What should you do in order to avoid errors for future deployments? (Choose 2 answer)

1. Add an Elastic Load Balancing health check to the Auto Scaling group. Set a short period for the health checks to operate as soon as possible in order to prevent premature registration of the instance to the load balancer.
2. Enable EC2 instance CloudWatch alerts to change the launch configuration’s AMI to the previous one. Gradually terminate instances that are using the new AMI.
3. Set the Elastic Load Balancing health check configuration to target a part of the application that fully tests application health and returns an error if the tests fail.
4. Create a new launch configuration that refers to the new AMI, and associate it with the group. Double the size of the group, wait for the new instances to become healthy, and reduce back to the original size. If new instances do not become healthy, associate the previous launch configuration.
5. Increase the Elastic Load Balancing Unhealthy Threshold to a higher value to prevent an unhealthy instance from going into service behind the load balancer.

Q7. (R-242) You are designing a connectivity solution between on-premises infrastructure and Amazon VPC. Your servers on-premises will be communicating with your VPC instances. You will be establishing IPSec tunnels over the Internet You will be using VPN gateways, and terminating the IPSec tunnels on AWS supported customer gateways. Which of the following objectives would you achieve by implementing an IPSec tunnel as outlined above? Choose 4 answers

1. End-to-end protection of data in transit
2. End-to-end Identity authentication
3. Data encryption across the Internet
4. Protection of data in transit over the Internet
5. Peer identity authentication between VPN gateway and customer gateway
6. Data integrity protection across the Internet

Q8. (R-197)A company is building a voting system for a popular TV show, viewers win watch the performances then visit the show’s website to vote for their favorite performer. It is expected that in a short period of time after the show has finished the site will receive millions of visitors. The visitors will first login to the site using their Amazon.com credentials and then submit their vote. After the voting is completed the page will display the vote totals. The company needs to build the site such that can handle the rapid influx of traffic while maintaining good performance but also wants to keep costs to a minimum. Which of the design patterns below should they use?

1. Use CloudFront and an Elastic Load balancer in front of an auto-scaled set of web servers, the web servers will first call the Login With Amazon service to authenticate the user then process the users vote and store the result into a multi-AZ Relational Database Service instance.
2. Use CloudFront and the static website hosting feature of S3 with the Javascript SDK to call the Login With Amazon service to authenticate the user, use IAM Roles to gain permissions to a DynamoDB table to store the users vote.
3. Use CloudFront and an Elastic Load Balancer in front of an auto-scaled set of web servers, the web servers will first call the Login with Amazon service to authenticate the user, the web servers will process the users vote and store the result into a DynamoDB table using IAM Roles for EC2 instances to gain permissions to the DynamoDB table.
4. Use CloudFront and an Elastic Load Balancer in front of an auto-scaled set of web servers, the web servers will first call the Login With Amazon service to authenticate the user, the web servers win process the users vote and store the result into an SQS queue using IAM Roles for EC2 Instances to gain permissions to the SQS queue. A set of application servers will then retrieve the items from the queue and store the result into a DynamoDB table.

Q9. (R-22) You are designing a personal document-archiving solution for your global enterprise with thousands of employee. Each employee has potentially gigabytes of data to be backed up in this archiving solution. The solution will be exposed to the employees as an application, where they can just drag and drop their files to the archiving system. Employees can retrieve their archives through a web interface. The corporate network has high bandwidth AWS Direct Connect connectivity to AWS. You have a regulatory requirement that all data needs to be encrypted before being uploaded to the cloud. How do you implement this in a highly available and cost-efficient way?

1. Manage encryption keys on-premises in an encrypted relational database. Set up an on-premises server with sufficient storage to temporarily store files, and then upload them to Amazon S3, providing a client-side master key.
2. Mange encryption keys in a Hardware Security Module (HSM) appliance on-premises serve r with sufficient storage to temporarily store, encrypt, and upload files directly into Amazon Glacier.
3. Manage encryption keys in Amazon Key Management Service (KMS), upload to Amazon Simple Storage Service (S3) with client-side encryption using a KMS customer master key ID, and configure Amazon S3 lifecycle policies to store each object using the Amazon Glacier storage tier.
4. Manage encryption keys in an AWS CloudHSM appliance. Encrypt files prior to uploading on the employee desktop, and then upload directly into Amazon Glacier.

Q10.(R-225) You are migrating a legacy client-server application to AWS. The application responds to a specific DNS domain (e.g. www.example.com) and has a 2-tier architecture, with multiple application servers and a database server. Remote clients use TCP to connect to the application servers. The application servers need to know the IP address of the clients in order to function properly and are currently taking that information from the TCP socket. A Multi-AZ RDS MySQL instance will be used for the database. During the migration you can change the application code, but you have to file a change request. How would you implement the architecture on AWS in order to maximize scalability and high availability?

1. File a change request to implement Alias Resource support in the application. Use Route 53 Alias Resource Record to distribute load on two application servers in different Azs.
2. File a change request to implement Latency Based Routing support in the application. Use Route 53 with Latency Based Routing enabled to distribute load on two application servers in different Azs.
3. File a change request to implement Cross-Zone support in the application. Use an ELB with a TCP Listener and Cross-Zone Load Balancing enabled, two application servers in different AZs.
4. File a change request to implement Proxy Protocol support in the application. Use an ELB with a TCP Listener and Proxy Protocol enabled to distribute load on two application servers in different Azs.

Q11. You are designing an SSL/TLS solution that requires HTTPS clients to be authenticated by the Web server using client certificate authentication. The solution must be resilient. Which of the following options would you consider for configuring the web server infrastructure? (Choose 2 answers)

1. Configure ELB with TCP listeners on TCP/443. And place the Web servers behind it.
2. Configure your Web servers with EIPs. Place the Web servers in a Route53 Record Set and configure health checks against all Web servers.
3. Configure ELB with HTTPS listeners, and place the Web servers behind it.
4. Configure your web servers as the origins for a CloudFront distribution. Use custom SSL certificates on your CloudFront distribution.

Q12. (R-224) Your company produces customer commissioned one-of-a-kind skiing helmets combining nigh fashion with custom technical enhancements Customers can show off their Individuality on the ski slopes and have access to head-up-displays. GPS rear-view cams and any other technical innovation they wish to embed in the helmet. The current manufacturing process is data rich and complex including assessments to ensure that the custom electronics and materials used to assemble the helmets are to the highest standards Assessments are a mixture of human and automated assessments you need to add a new set of assessment to model the failure modes of the custom electronics using GPUs with CUDA, across a cluster of servers with low latency networking. What architecture would allow you to automate the existing process using a hybrid approach and ensure that the architecture can support the evolution of processes over time?

1. Use AWS Data Pipeline to manage movement of data & meta-data and assessments Use an auto-scaling group of G2 instances in a placement group.
2. Use Amazon Simple Workflow (SWF) to manages assessments, movement of data & meta-data Use an auto-scaling group of G2 instances in a placement group.
3. Use Amazon Simple Workflow (SWF) to manages assessments movement of data & meta-data Use an auto-scaling group of C3 instances with SR-IOV (Single Root I/O Virtualization).
4. Use AWS data Pipeline to manage movement of data & meta-data and assessments use auto-scaling group of C3 with SR-IOV (Single Root I/O virtualization).

Q13. (R- 220) You have deployed a three-tier web application in a VPC with a CIDR block of 10.0.0.0/28 You initially deploy two web servers, two application servers, two database servers and one NAT instance tor a total of seven EC2 instances The web. Application and database servers are deployed across two availability zones (AZs). You also deploy an ELB in front of the two web servers, and use Route53 for DNS Web (Traffic gradually increases in the first few days following the deployment, so you attempt to double the number of instances in each tier of the application to handle the new load unfortunately some of these new instances fail to launch. Which of the following could be the root caused? (Choose 2 answers)

1. AWS reserves the first and the last private IP address in each subnet’s CIDR block so you do not have enough addresses left to launch all of the new EC2 instances
2. The Internet Gateway (IGW) of your VPC has scaled-up, adding more instances to handle the traffic spike, reducing the number of available private IP addresses for new instance launches
3. The ELB has scaled-up, adding more instances to handle the traffic spike, reducing the number of available private IP addresses for new instance launches
4. AWS reserves one IP address in each subnet’s CIDR block for Route53 so you do not have enough addresses left to launch all of the new EC2 instances
5. AWS reserves the first four and the last IP address in each subnet’s CIDR block so you do not have enough addresses left to launch all of the new EC2 instances

Q14. You require the ability to analyze a customer’s clickstream data on a website so they can do behavioral analysis. Your customer needs to know what sequence of pages and ads their customer clicked on. This data will be used in real time to modify the page layouts as customers click through the site to increase stickiness and advertising click-through. Which option meets the requirements for captioning and analyzing this data?

1. Log clicks in weblogs by URL store to Amazon S3, and then analyze with Elastic MapReduce
2. Push web clicks by session to Amazon Kinesis and analyze behavior using Kinesis workers
3. Write click events directly to Amazon Redshift and then analyze with SQL
4. Publish web clicks by session to an Amazon SQS queue then periodically drain these events to Amazon

RDS and analyze with SQL.

Q15. Your company hosts a social media website for storing and sharing documents. The web application allows user to upload large files while resuming and pausing the upload as needed. Currently, files are uploaded to your PHP front end backed by Elastic load Balancing and an autoscaling fleet of Amazon Elastic Compute Cloud (EC2) instances that scale upon average of bytes received (NetworkIn). After a file has been uploaded, it is copied to Amazon Simple Storage Service (S3). Amazon EC2 instances use an AWS Identity and Access Management (IAM) role that allows Amazon S3 uploads. Over the last six months, your user base and scale have increased significantly, forcing you to increase the Auto Scaling group’s Max parameter a few times. Your CFO is concerned about rising costs and has asked you to adjust the architecture where needed to better optimize costs. Which architecture change could you introduce to reduce costs and still keep your web application secure and scalable?

1. Replace the Auto Scaling launch configuration to include c3.8xlarge instances; those instances can potentially yield a network throughput of 10gbps.
2. Re-architect your ingest pattern, have the app authenticate against your identity provider, and use your identity provider as a broker fetching temporary AWS credentials from AWS Secure Token Service (GetFederationToken). Securely pass the credentials and S3 endpoint/prefix to your app. Implement client side logic to directly upload the file to Amazon S3 using the given credentials and S3 prefix.
3. Re-architect your ingest pattern, and move your web application instances into a VPC public subnet. Attach a public IP address for each EC2 instance (using the Auto Scaling launch configuration settings). Use Amazon Route 53 Round Robin records set and HTTP health check to DNS load balance the app requests; this approach will significantly reduce the cost by bypassing Elastic Load Balancing.
4. Re-architect your ingest pattern, have the app authenticate against your identity provider, and use your identity provider as a broker fetching temporary AWS credentials from AWS Secure Token Service (GetFederationToken). Securely pass the credentials and S3 endpoint/prefix to your app. Implement clientside logic that used the S3 multipart upload API to directly upload the file to Amazon S3 using the given credentials and S3 prefix.

Q16. Your company previously configured a heavily used, dynamically routed VPN connection between your on-premises data center and AWS. You recently provisioned a DirectConnect connection and would like to start using the new connection. After configuring DirectConnect settings in the AWS Console, which of the following options win provide the most seamless transition for your users?

1. Delete your existing VPN connection to avoid routing loops configure your DirectConnect router with the appropriate settings and verity network traffic is leveraging DirectConnect.
2. Configure your DirectConnect router with a higher BGP priority man your VPN router, verify network traffic is leveraging Directconnect and then delete your existing VPN connection.
3. Update your VPC route tables to point to the DirectConnect connection configure your DirectConnect router with the appropriate settings verify network traffic is leveraging DirectConnect and then delete the VPN connection.
4. Configure your DirectConnect router, update your VPC route tables to point to the Direct Connect connection, configure your VPN connection with a higher BGP priority. And verify network traffic is leveraging the DirectConnect connection.

Q17. A corporate web application is deployed within an Amazon Virtual Private Cloud (VPC) and is connected to the corporate data center via an IPSec VPN. The application must authenticate against the on-premises LDAP server. After authentication, each logged-in user can only access an Amazon Simple Storage Space (S3) keyspace specific to that user. Which two approaches can satisfy these objectives? (Choose 2 answers)

1. Develop an identity broker that authenticates against IAM security Token service to assume a IAM role in order to get temporary AWS security credentials.The application calls the identity broker to get AWStemporary security credentials with access to the appropriate S3 bucket.
2. The application authenticates against LDAP and retrieves the name of an IAM role associated with the user. The application then calls the IAM Security Token Service to assume that IAM role. The application can use the temporary credentials to access the appropriate S3 bucket.
3. Develop an identity broker that authenticates against LDAP and then calls IAM Security Token Service to get IAM federated user credentials. The application calls the identity broker to get IAM federated user credentials with access to the appropriate S3 bucket.
4. The application authenticates against LDAP the application then calls the AWS identity and Access Management (IAM) Security service to log in to IAM using the LDAP credentials the application can use the IAM temporary credentials to access the appropriate S3 bucket.
5. The application authenticates against IAM Security Token Service using the LDAP credentials the application uses those temporary AWS security credentials to access the appropriate S3 bucket.

Q18. You are running a news website in the eu-west-1 region that updates every 15 minutes. The website has a world-wide audience it uses an Auto Scaling group behind an Elastic Load Balancer and an Amazon RDS database Static content resides on Amazon S3, and is distributed through Amazon CloudFront. Your Auto Scaling group is set to trigger a scale up event at 60% CPU utilization, you use an Amazon RDS extra large DB instance with 10.000 Provisioned IOPS its CPU utilization is around 80%. While freeable memory is in the 2 GB range. Web analytics reports show that the average load time of your web pages is around 1.5 to 2 seconds, but your SEO consultant wants to bring down the average load time to under 0.5 seconds. How would you improve page load times for your users? (Choose 3 answers)

1. Lower the scale up trigger of your Auto Scaling group to 30% so it scales more aggressively.
2. Add an Amazon ElastiCache caching layer to your application for storing sessions and frequent DB queries
3. Configure Amazon CloudFront dynamic content support to enable caching of re-usable content from your site
4. Switch the Amazon RDS database to the high memory extra-large Instance type
5. Set up a second installation in another region, and use the Amazon Route 53 latency-based routing feature to select the right region.

Q19. A customer has established an AWS Direct Connect connection to AWS. The link is up and routes are being advertised from the customer’s end, however the customer is unable to connect from EC2 instances inside its VPC to servers residing in its datacenter. Which of the following options provide a viable solution to remedy this situation? (Choose 2 answers)

1. Add a route to the route table with an iPsec VPN connection as the target.
2. Enable route propagation to the virtual pinnate gateway (VGW).
3. Enable route propagation to the customer gateway (CGW).
4. Modify the route table of all Instances using the ‘route’ command.
5. Modify the Instances VPC subnet route table by adding a route back to the customer’s on-premises environment.

Q20. Your website is serving on-demand training videos to your workforce. Videos are uploaded monthly in high resolution MP4 format. Your workforce is distributed globally often on the move and using company-provided tablets that require the HTTP Live Streaming (HLS) protocol to watch a video. Your company has no video transcoding expertise and it required you may need to pay for a consultant. How do you implement the most cost-efficient architecture without compromising high availability and quality of video delivery’?

1. A video transcoding pipeline running on EC2 using SQS to distribute tasks and Auto Scaling to adjust the number of nodes depending on the length of the queue. EBS volumes to host videos and EBS snapshots to incrementally backup original files after a few days. CloudFront to serve HLS transcoded videos from EC2.
2. Elastic Transcoder to transcode original high-resolution MP4 videos to HLS. EBS volumes to host videos and EBS snapshots to incrementally backup original files after a few days. CloudFront to serve HLS transcoded videos from EC2.
3. Elastic Transcoder to transcode original high-resolution MP4 videos to HLS. S3 to host videos with Lifecycle Management to archive original files to Glacier after a few days. CloudFront to serve HLS transcoded videos from S3.
4. A video transcoding pipeline running on EC2 using SQS to distribute tasks and Auto Scaling to adjust the number of nodes depending on the length of the queue. S3 to host videos with Lifecycle Management toarchive all files to Glacier after a few days. CloudFront to serve HLS transcoded videos from Glacier.

Q21. A web company is looking to implement an external payment service into their highly available application deployed in a VPC Their application EC2 instances are behind a public lacing ELB Auto scaling is used to add additional instances as traffic increases under normal load the application runs 2 instances in the Auto Scaling group but at peak it can scale 3x in size. The application instances need to communicate with the payment service over the Internet which requires whitelisting of all public IP addresses used to communicate with it. A maximum of 4 whitelisting IP addresses are allowed at a time and can be added through an API. How should they architect their solution?

1. Route payment requests through two NAT instances setup for High Availability and whitelist the Elastic IP addresses attached to the NAT instances.
2. Whitelist the VPC Internet Gateway Public IP and route payment requests through the Internet Gateway.
3. Whitelist the ELB IP addresses and route payment requests from the Application servers through the ELB.
4. Automatically assign public IP addresses to the application instances in the Auto Scaling group and run a script on boot that adds each instances public IP address to the payment validation whitelist API.

Q22.Your must architect the migration of a web application to AWS. The application consists of Linux web servers running a custom web server. You are required to save the logs generated from the application to a durable location. What options could you select to migrate the application to AWS? (Choose 2)

1. Create an AWS Elastic Beanstalk application using the custom web server platform. Specify the web server executable and the application project and source files. Enable log file rotation to Amazon Simple Storage Service (S3).
2. Create Dockerfile for the application. Create an AWS OpsWorks stack consisting of a custom layer. Create custom recipes to install Docker and to deploy your Docker container using the Dockerfile. Create customer recipes to install and configure the application to publish the logs to Amazon CloudWatch Logs.
3. Create Dockerfile for the application. Create an AWS OpsWorks stack consisting of a Docker layer that uses the Dockerfile. Create custom recipes to install and configure Amazon Kineses to publish the logs into Amazon CloudWatch.
4. Create a Dockerfile for the application. Create an AWS Elastic Beanstalk application using the Docker platform and the Dockerfile. Enable logging the Docker configuration to automatically publish the application logs. Enable log file rotation to Amazon S3.
5. Use VM import/Export to import a virtual machine image of the server into AWS as an AMI. Create an Amazon Elastic Compute Cloud (EC2) instance from AMI, and install and configure the Amazon CloudWatch Logs agent. Create a new AMI from the instance. Create an AWS Elastic Beanstalk application using the AMI platform and the new AMI.

Q23. You are designing a social media site and are considering how to mitigate distributed denial-of-service (DDoS) attacks. Which of the below are viable mitigation techniques? (Choose 3 answers)

1. Add multiple elastic network interfaces (ENIs) to each EC2 instance to increase the network bandwidth.
2. Use dedicated instances to ensure that each instance has the maximum performance possible.
3. Use an Amazon CloudFront distribution for both static and dynamic content.
4. Use an Elastic Load Balancer with auto scaling groups at the web. App and Amazon Relational Database Service (RDS) tiers
5. Add alert Amazon CloudWatch to look for high Network in and CPU utilization.
6. Create processes and capabilities to quickly add and remove rules to the instance OS firewall.

Q24. An International company has deployed a multi-tier web application that relies on DynamoDB in a single region For regulatory reasons they need disaster recovery capability In a separate region with a Recovery Time Objective of 2 hours and a Recovery Point Objective of 24 hours. They should synchronize their data on a regular basis and be able to provision me web application rapidly using CloudFormation. The objective is to minimize changes to the existing web application, control the throughput of DynamoDB used for the synchronization of data and synchronize only the modified elements. Which design would you choose to meet these requirements?

1. Use AWS data Pipeline to schedule a DynamoDB cross region copy once a day, create a “Lastupdated” attribute in your DynamoDB table that would represent the timestamp of the last update and use it as a filter.
2. Use EMR and write a custom script to retrieve data from DynamoDB in the current region using a SCAN operation and push it to DynamoDB in the second region.
3. Use AWS data Pipeline to schedule an export of the DynamoDB table to S3 in the current region once a day then schedule another task immediately after it that will import data from S3 to DynamoDB in the other region.
4. Send also each Ante into an SQS queue in me second region; use an auto-scaling group behind the SQS queue to replay the write in the second region.

Q25. Refer to the architecture diagram above of a batch processing solution using Simple Queue Service (SQS) to set up a message queue between EC2 instances which are used as batch processors Cloud Watch monitors the number of Job requests (queued messages) and an Auto Scaling group adds or deletes batch servers automatically based on parameters set in Cloud Watch alarms. You can use this architecture to implement which of the following features in a cost effective and efficient manner?

1. Reduce the overall lime for executing jobs through parallel processing by allowing a busy EC2 instance that receives a message to pass it to the next instance in a daisy-chain setup.
2. Implement fault tolerance against EC2 instance failure since messages would remain in SQS and worn can continue with recovery of EC2 instances implement fault tolerance against SQS failure by backing up messages to S3.
3. Implement message passing between EC2 instances within a batch by exchanging messages through SQS.
4. Coordinate number of EC2 instances with number of job requests automatically thus Improving cost effectiveness.
5. Handle high priority jobs before lower priority jobs by assigning a priority metadata field to SQS messages.

Q26.You are designing an intrusion detection prevention (IDS/IPS) solution for a customer web application in a single VPC. You are considering the options for implementing IOS IPS protection for traffic coming from the nternet. Which of the following options would you consider? (Choose 2 answers)

1. Implement IDS/IPS agents on each Instance running In VPC
2. Configure an instance in each subnet to switch its network interface card to promiscuous mode and analyze network traffic.
3. Implement Elastic Load Balancing with SSL listeners In front of the web applications
4. Implement a reverse proxy layer in front of web servers and configure IDS/IPS agents on each reverse proxy server.

Q27. Your company is getting ready to do a major public announcement of a social media site on AWS. The website is running on EC2 instances deployed across Large DB Instance. The site performs a high number of small reads and writes per second and relies on an eventual consistency model. After comprehensive tests you discover that there is read contention on RDS MySQL. Which are the best approaches to meet these requirements? (Choose 2 answers)

1. Deploy ElastiCache in-memory cache running in each availability zone
2. Implement sharding to distribute load to multiple RDS MySQL instances
3. Increase the RDS MySQL Instance size and Implement provisioned IOPS
4. Add an RDS MySQL read replica in each availability zone

Q28. Company B is launching a new game app for mobile devices. Users will log into the game using their existing social media account to streamline data capture. Company B would like to directly save player data and scoring information from the mobile app to a DynamoDS table named Score Data When a user saves their game the progress data will be stored to the Game state S3 bucket. What is the best approach for storing data to DynamoDB and S3?

1. Use an EC2 Instance that is launched with an EC2 role providing access to the Score Data DynamoDB table and the GameState S3 bucket that communicates with the mobile app via web services.
2. Use temporary security credentials that assume a role providing access to the Score Data DynamoDB table and the Game State S3 bucket using web identity federation.
3. Use Login with Amazon allowing users to sign in with an Amazon account providing the mobile app with access to the Score Data DynamoDB table and the Game State S3 bucket.
4. Use an IAM user with access credentials assigned a role providing access to the Score Data DynamoDB table and the Game State S3 bucket for distribution with the mobile app.

Q29. You are implementing a URL whitelisting system for a company that wants to restrict outbound HTTP’S connections to specific domains from their EC2-hosted applications you deploy a single EC2 instance running proxy software and configure It to accept traffic from all subnets and EC2 instances in the VPC. You configure the proxy to only pass through traffic to domains that you define in its whitelist configuration You have a nightly maintenance window or 10 minutes where ail instances fetch new software updates. Each update Is about 200MB In size and there are 500 instances In the VPC that routinely fetch updates After a few days you notice that some machines are failing to successfully download some, but not all of their updates within the maintenance window. The download URLs used for these updates are correctly listed in the proxy’s whitelist configuration and you are able to access them manually using a web browser on the instances. What might be happening? (Choose 2 answers)

1. You are running the proxy on an undersized EC2 instance type so network throughput is not sufficient for all instances to download their updates in time.
2. You are running the proxy on a sufficiently-sized EC2 instance in a private subnet andits network throughput is being throttled by a NAT running on an undersized EC2 instance.
3. The route table for the subnets containing the affected EC2 instances is not configured to direct network traffic for the software update locations to the proxy.
4. You have not allocated enough storage to the EC2 instance running the proxy so the network buffer is filling up, causing some requests to fail.
5. You are running the proxy in a public subnet but have not allocated enough EIPs to support the needed network throughput through the Internet Gateway (IGW).

Q30. An AWS customer runs a public blogging website. The site users upload two million blog entries a month. The average blog entry size is 200 KB. The access rate to blog entries drops to negligible 6 months after publication and users rarely access a blog entry 1 year after publication. Additionally, blog entries have a high update rate during the first 3 months following publication, this drops to no updates after 6 months. The customer wants to use CloudFront to improve his user’s load times. Which of the following recommendations would you make to the customer?

1. Duplicate entries into two different buckets and create two separate CloudFront distributions where S3 access is restricted only to Cloud Front identity
2. Create a CloudFront distribution with “US Europe” price class for US/Europe users and a different CloudFront distribution with “All Edge Locations” for the remaining users.
3. Create a CloudFront distribution with S3 access restricted only to the CloudFront identity and partition the blog entry’s location in S3 according to the month it was uploaded to be used with CloudFront behaviors.
4. Create a CloudFront distribution with Restrict Viewer Access Forward Query string set to true and minimum TTL of 0.

Q31. You are responsible for a legacy web application whose server environment is approaching end of life You would like to migrate this application to AWS as quickly as possible, since the application environment currently has the following limitations: The VM’s single 10GB VMDK is almost full; Me virtual network interface still uses the 10Mbps driver, which leaves your 100Mbps WAN connection completely underutilized;It is currently running on a highly customized. Windows VM within a VMware environment; You do not have me installation media;This is a mission critical application with an RTO (Recovery Time Objective) of 8 hours. RPO (Recovery Point Objective) of 1 hour. How could you best migrate this application to AWS while meeting your business continuity requirements?

1. Use the EC2 VM Import Connector for vCenter to import the VM into EC2.
2. Use Import/Export to import the VM as an ESS snapshot and attach to EC2.
3. Use S3 to create a backup of the VM and restore the data into EC2.
4. Use me ec2-bundle-instance API to Import an Image of the VM into EC2

Q32. A customer has a 10 GB AWS Direct Connect connection to an AWS region where they have a web application hosted on Amazon Elastic Computer Cloud (EC2). The application has dependencies on an on-premises mainframe database that uses a BASE (Basic Available. Sort stale Eventual consistency) rather than an ACID (Atomicity. Consistency isolation. Durability) consistency model. The application is exhibiting undesirable behavior because the database is not able to handle the volume of writes. How can you reduce the load on your on-premises database resources in the most cost-effective way?

1. Use an Amazon Elastic Map Reduce (EMR) S3DistCp as a synchronization mechanism between the on-premises database and a Hadoop cluster on AWS.
2. Modify the application to write to an Amazon SQS queue and develop a worker process to flush the queue to the on-premises database.
3. Modify the application to use DynamoDB to feed an EMR cluster which uses a map function to write to the on-premises database.
4. Provision an RDS read-replica database on AWS to handle the writes and synchronize the two databases using Data Pipeline.

Q33. An enterprise wants to use a third-party SaaS application. The SaaS application needs to have access to issue several API commands to discover Amazon EC2 resources running within the enterprise’s account The enterprise has internal security policies that require any outside access to their environment must conform to the principles of least privilege and there must be controls in place to ensure that the credentials used by the SaaS vendor cannot be used by any other third party. Which of the following would meet all of these conditions?

1. From the AWS Management Console, navigate to the Security Credentials page and retrieve the access and secret key for your account.
2. Create an IAM user within the enterprise account assign a user policy to the IAM user that allows only the actions required by the SaaS application create a new access and secret key for the user and provide these credentials to the SaaS provider.
3. Create an IAM role for cross-account access allows the SaaS provider’s account to assume the role and assign it a policy that allows only the actions required by the SaaS application.
4. Create an IAM role for EC2 instances, assign it a policy that allows only the actions required tor the SaaS application to work, provide the role ARN to the SaaS provider to use when launching their application instances.

Q34.Your company currently has a 2-tier web application running in an on-premises data center. You have experienced several infrastructure failures in the past two months resulting in significant financial losses. Your CIO is strongly agreeing to move the application to AWS. While working on achieving buy-in from the other company executives, he asks you to develop a disaster recovery plan to help improve Business continuity in the short term. He specifies a target Recovery Time Objective (RTO) of 4 hours and a Recovery Point Objective (RPO) of 1 hour or less. He also asks you to implement the solution within 2 weeks. Your database is 200GB in size and you have a 20Mbps Internet connection. How would you do this while minimizing costs?

1. Create an EBS backed private AMI which includes a fresh install of your application. Develop a CloudFormation template which includes your AMI and the required EC2, AutoScaling, and ELB resources to support deploying the application across Multiple- Availability-Zones. Asynchronously replicate transactions from your on-premises database to a database instance in AWS across a secure VPN connection.
2. Deploy your application on EC2 instances within an Auto Scaling group across multiple availability zones. Asynchronously replicate transactions from your on-premises database to a database instance in AWS across a secure VPN connection.
3. Create an EBS backed private AMI which includes a fresh install of your application. Setup a script in your data center to backup the local database every 1 hour and to encrypt and copy the resulting file to an S3 bucket using multi-part upload.
4. Install your application on a compute-optimized EC2 instance capable of supporting the application’s average load. Synchronously replicate transactions from your on-premises database to a database instance in AWS across a secure Direct Connect connection.

Q35. You would like to create a mirror image of your production environment in another region for disaster recovery purposes. Which of the following AWS resources do not need to be recreated in the second region? (Choose 2 answers)

1. Route 53 Record Sets
2. IAM Roles
3. Elastic IP Addresses (EIP)
4. EC2 Key Pairs
5. Launch configurations
6. Security Groups

Q36. A web design company currently runs several FTP servers that their 250 customers use to upload and download large graphic files They wish to move this system to AWS to make it more scalable, but they wish to maintain customer privacy and Keep costs to a minimum. What AWS architecture would you recommend?

1. ASK their customers to use an S3 client instead of an FTP client. Create a single S3 bucket Create an IAM user for each customer Put the IAM Users in a Group that has an IAM policy that permits access to sub directories within the bucket via use of the ‘username’ Policy variable.
2. Create a single S3 bucket with Reduced Redundancy Storage turned on and ask their customers to use an S3 client instead of an FTP client Create a bucket for each customer with a Bucket Policy that permits access only to that one customer.
3. Create an auto-scaling group of FTP servers with a scaling policy to automatically scale-in when minimum network traffic on the auto-scaling group is below a given threshold. Load a central list of ftp users from S3 as part of the user Data startup script on each Instance.
4. Create a single S3 bucket with Requester Pays turned on and ask their customers to use an S3 client instead of an FTP client Create a bucket tor each customer with a Bucket Policy that permits access only to that one customer.

Q37. Your company has HQ in Tokyo and branch offices all over the world and is using a logistics software with a multi-regional deployment on AWS in Japan, Europe and US. The logistic software has a 3-tier architecture and currently uses MySQL 5.6 for data persistence. Each region has deployed its own database In the HQ region you run an hourly batch process reading data from every region to compute cross-regional reports that are sent by email to all offices this batch process must be completed as fast as possible to quickly optimize logistics how do you build the database architecture in order to meet the requirements’?

1. For each regional deployment, use RDS MySQL with a master in the region and a read replica in the HQ region
2. For each regional deployment, use MySQL on EC2 with a master in the region and send hourly EBS snapshots to the HQ region
3. For each regional deployment, use RDS MySQL with a master in the region and send hourly RDS snapshots to the HQ region
4. For each regional deployment, use MySQL on EC2 with a master in the region and use S3 to copy data files hourly to the HQ region
5. Use Direct Connect to connect all regional MySQL deployments to the HQ region and reduce network latency for the batch process

Q38.Your customer wishes to deploy an enterprise application to AWS which will consist of several web servers, several application servers and a small (50GB) Oracle database information is stored, both in the database and the file systems of the various servers. The backup system must support database recovery whole server and whole disk restores, and individual file restores with a recovery time of no more than two hours. They have chosen to use RDS Oracle as the database Which backup architecture will meet these requirements?

1. Backup RDS using automated daily DB backups Backup the EC2 instances using AMIs and supplement with file-level backup to S3 using traditional enterprise backup software to provide file level restore.
2. Backup RDS using a Multi-AZ Deployment Backup the EC2 instances using Amis, and supplement by copying file system data to S3 to provide file level restore.
3. Backup RDS using automated daily DB backups Backup the EC2 instances using EBS snapshots and supplement with file-level backups to Amazon Glacier using traditional enterprise backup software to provide file level restore
4. Backup RDS database to S3 using Oracle RMAN Backup the EC2 instances using Amis, and supplement with EBS snapshots for individual volume restore.

Q39. Your company runs a customer facing event registration site. This site is built with a 3-tier architecture with web and application tier servers and a MySQL database The application requires 6 web tier servers and 6 application tier servers for normal operation, but can run on a minimum of 65% server capacity and a single MySQL database. When deploying this application in a region with three availability zones (AZs) which architecture provides high availability?

1. A web tier deployed across 2 AZs with 3 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer), and an application tier deployed across 2 AZs with 3 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB and one RDS (Relational Database Service) instance deployed with read replicas in the other AZ.
2. A web tier deployed across 3 AZs with 2 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer) and an application tier deployed across 3 AZs with 2 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB and one RDS (Relational Database Service) Instance deployed with read replicas in the two other AZs.
3. A web tier deployed across 2 AZs with 3 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer) and an application tier deployed across 2 AZs with 3 EC2 instances m each AZ inside an Auto Scaling Group behind an ELS and a Multi-AZ RDS (Relational Database Service) deployment.
4. A web tier deployed across 3 AZs with 2 EC2 (Elastic Compute Cloud) instances in each AZ Inside an Auto Scaling Group behind an ELB (elastic load balancer). And an application tier deployed across 3 AZs with 2 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB and a Multi-AZ RDS (Relational Database services) deployment.

Q40 . An AWS customer is deploying an application mat is composed of an AutoScaling group of EC2 Instances. The customers security policy requires that every outbound connection from these instances to any other service within the customers Virtual Private Cloud must be authenticated using a unique x 509 certificate that contains the specific instance-id. In addition, an x 509 certificates must Designed by the customer’s Key management service in order to be trusted for authentication. Which of the following configurations will support these requirements?

1. Configure an IAM Role that grants access to an Amazon S3 object containing a signed certificate and configure me Auto Scaling group to launch instances with this role Have the instances bootstrap get the certificate from Amazon S3 upon first boot.
2. Embed a certificate into the Amazon Machine Image that is used by the Auto Scaling group Have the launched instances generate a certificate signature request with the instance’s assigned instance-id to the Key management service for signature.
3. Configure the Auto Scaling group to send an SNS notification of the launch of a new instance to the trusted key management service. Have the Key management service generate a signed certificate and send itdirectly to the newly launched instance.
4. Configure the launched instances to generate a new certificate upon first boot Have the Key management service poll the Auto Scaling group for associated instances and send new instances a certificate signature (hat contains the specific instance-id.

Q41. You require the ability to analyze a large amount of data, which is stored on Amazon S3 using Amazon Elastic Map Reduce. You are using the cc2 8x large Instance type, whose CPUs are mostly idle during processing. Which of the below would be the most cost efficient way to reduce the runtime of the job?

1. Create more smaller flies on Amazon S3.
2. Add additional cc2 8x large instances by introducing a task group.
3. Use smaller instances that have higher aggregate I/O performance.
4. Create fewer, larger files on Amazon S3.

Q42. Your department creates regular analytics reports from your company’s log files All log data is collected in Amazon S3 and processed by daily Amazon Elastic MapReduce (EMR) jobs that generate daily PDF reports and aggregated tables in CSV format for an Amazon Redshift data warehouse.Your CFO requests that you optimize the cost structure for this system.Which of the following alternatives will lower costs without compromising average performance of the system or data integrity for the raw data?

1. Use reduced redundancy storage (RRS) for all data In S3. Use a combination of Spot Instances and Reserved Instances for Amazon EMR jobs. Use Reserved Instances for Amazon Redshift.
2. Use reduced redundancy storage (RRS) for PDF and .csv data in S3. Add Spot Instances to EMR jobs. Use spot instances for Amazon Redshift.
3. Use reduced redundancy storage (RRS) for PDF and .csv data In Amazon S3. Add Spot Instances to Amazon EMR jobs. Use Reserved Instances for Amazon Redshift.
4. Use reduced redundancy storage (RRS) for all data in Amazon S3. Add Spot Instances to Amazon EMR jobs. Use Reserved Instances for Amazon Redshift.

Q43. You currently operate a web application In the AWS US-East region. The application runs on an auto-scaled layer of EC2 instances and an RDS Multi-AZ database Your IT security compliance officer has tasked you to develop a reliable and durable logging solution to track changes made to your EC2. IAM And RDS resources. The solution must ensure the integrity and confidentiality of your log data Which of these solutions would you recommend?

1. Create a new CloudTrail trail with one new S3 bucket to store the logs and with the global services option selected Use IAM roles S3 bucket policies and Multi Factor Authentication (MFA) Delete on the S3 bucket that stores your logs.
2. Create a new CloudTrail with one new S3 bucket to store the logs Configure SNS to send log file delivery notifications to your management system Use IAM roles and S3 bucket policies on the S3 bucket mat stores your logs.
3. Create a new CloudTrail trail with an existing S3 bucket to store the logs and with the global services option selected Use S3 ACLs and Multi Factor Authentication (MFA) Delete on the S3 bucket that stores your logs.
4. Create three new CloudTrail trails with three new S3 buckets to store the logs one for the AWS Management console, one for AWS SDKs and one for command line tools Use IAM roles and S3 bucket policies on the S3 buckets that store your logs.

Q44. A large real-estate brokerage is exploring the option of adding a cost-effective location based alert to their existing mobile application The application backend infrastructure currently runs on AWS Users who opt in to this service will receive alerts on their mobile device regarding real-estate otters in proximity to their location. For the alerts to be relevant delivery time needs to be in the low minute count the existing mobile app has 5 million users across the US. Which one of the following architectural suggestions would you make to the customer?

1. The mobile application will submit its location to a web service endpoint utilizing Elastic Load Balancing and EC2 instances: DynamoDB will be used to store and retrieve relevant offers EC2 instances will communicate with mobile earners/device providers to push alerts back to mobile application.
2. Use AWS DirectConnect or VPN to establish connectivity with mobile carriers EC2 instances will receive the mobile applications ‘ location through carrier connection: RDS will be used to store and relevant offers EC2 instances will communicate with mobile carriers to push alerts back to the mobile application
3. The mobile application will send device location using SQS. EC2 instances will retrieve the relevant others from DynamoDB AWS Mobile Push will be used to send offers to the mobile application
4. The mobile application will send device location using AWS Mobile Push EC2 instances will retrieve the relevant offers from DynamoDB EC2 instances will communicate with mobile carriers/device providers to push alerts back to the mobile application.

Q45. You are the new IT architect in a company that operates a mobile sleep tracking application.When activated at night, the mobile app is sending collected data points of 1 kilobyte every 5 minutes to your backend.The backend takes care of authenticating the user and writing the data points into an Amazon DynamoDB table.Every morning, you scan the table to extract and aggregate last night’s data on a per user basis, and store the results in Amazon S3. Users are notified via Amazon SNS mobile push notifications that new data is available, which is parsed and visualized by the mobile app. Currently you have around 100k users who are mostly based out of North America. You have been tasked to optimize the architecture of the backend system to lower cost. What would you recommend? Choose 2 answers

1. Have the mobile app access Amazon DynamoDB directly Instead of JSON files stored on Amazon S3.
2. Write data directly into an Amazon Redshift cluster replacing both Amazon DynamoDB and Amazon S3.
3. Introduce an Amazon SQS queue to buffer writes to the Amazon DynamoDB table and reduce provisioned write throughput.
4. Introduce Amazon Elasticache to cache reads from the Amazon DynamoDB table and reduce provisioned read throughput.
5. Create a new Amazon DynamoDB table each day and drop the one for the previous day after its data is on Amazon S3.

Q46. You have been asked to design the storage layer for an application. The application requires disk performance of at least 100,000 IOPS. In addition, the storage layer must be able to survive the loss of an individual disk, EC2 instance, or Availability Zone without any data loss. The volume you provide must have a capacity of at least 3 TB. Which of the following designs will meet these objectives?

1. Instantiate a c3.8xlarge instance in us-east-1. Provision 4x1TB EBS volumes, attach them to the instance, and configure them as a single RAID 5 volume. Ensure that EBS snapshots are performed every 15 minutes.
2. Instantiate a c3.8xlarge instance in us-east-1. Provision 3xlTB EBS volumes, attach them to the Instance, and configure them as a single RAID 0 volume. Ensure that EBS snapshots are performed every 15 minutes.
3. Instantiate an i2.8xlarge instance in us-east-1a. Create a RAID 0 volume using the four 800GB SSD ephemeral disks provided with the instance. Provision 3x1TB EBS volumes, attach them to the instance, and configure them as a second RAID 0 volume. Configure synchronous, block-level replication from the ephemeral-backed volume to the EBS-backed volume.
4. Instantiate a c3.8xlarge instance in us-east-1. Provision an AWS Storage Gateway and configure it for 3 TB of storage and 100,000 IOPS. Attach the volume to the instance.
5. Instantiate an i2.8xlarge instance in us-east-1a. Create a RAID 0 volume using the four 800GB SSD ephemeral disks provided with the instance. Configure synchronous, block level replication to an identically configured instance in us-east-1b.

Q47. You have a periodic Image analysis application that gets some files In Input analyzes them and tor each file writes some data in output to a ten file the number of files in input per day is high and concentrated in a few hours of the day. Currently you have a server on EC2 with a large EBS volume that hosts the input data and the results it takes almost 20 hours per day to complete the process What services could be used to reduce the elaboration time and improve the availability of the solution?

1. S3 to store I/O files. SQS to distribute elaboration commands to a group of hosts working in parallel. Auto scaling to dynamically size the group of hosts depending on the length of the SQS queue
2. EBS with Provisioned IOPS (PIOPS) to store I/O files. SNS to distribute elaboration commands to a group of hosts working in parallel Auto Scaling to dynamically size the group of hosts depending on the number of SNS notifications
3. S3 to store I/O files, SNS to distribute evaporation commands to a group of hosts working in parallel. Auto scaling to dynamically size the group of hosts depending on the number of SNS notifications
4. EBS with Provisioned IOPS (PIOPS) to store I/O files SQS to distribute elaboration commands to a group of hosts working in parallel Auto Scaling to dynamically size the group ot hosts depending on the length of the SQS queue.

Q48.You are tasked with moving a legacy application from a virtual machine running Inside your datacenter to an Amazon VPC Unfortunately this app requires access to a number of on-premises services and no one who configured the app still works for your company. Even worse there’s no documentation for it. What will allow the application running inside the VPC to reach back and access its internal dependencies without being reconfigured? (Choose 3 answers)

1. An AWS Direct Connect link between the VPC and the network housing the internal services.
2. An Internet Gateway to allow a VPN connection.
3. An Elastic IP address on the VPC instance
4. An IP address space that does not conflict with the one on-premises
5. Entries in Amazon Route 53 that allow the Instance to resolve its dependencies’ IP addresses
6. A VM Import of the current virtual machine

Q49. You are designing a photo-sharing mobile app. The application will store all pictures in a single Amazon S3 bucket. Users will upload pictures from their mobile device directly to Amazon S3 and will be able to view and download their own pictures directly from Amazon S3. You want to configure security to handle potentially millions of users in the most secure manner possible. What should your server-side application do when a new user registers on the photo-sharing mobile application?

1. Create an IAM user. Update the bucket policy with appropriate permissions for the IAM user. Generate an access key and secret key for the IAM user, store them in the mobile app and use these credentials to access Amazon S3.
2. Create an IAM user. Assign appropriate permissions to the IAM user. Generate an access key and secret key for the IAM user, store them in the mobile app and use these credentials to access Amazon S3.
3. Create a set of long-term credentials using AWS Security Token Service with appropriate permissions. Store these credentials in the mobile app and use them to access Amazon S3.
4. Record the user’s information in Amazon RDS and create a role in IAM with appropriate permissions. When the user uses their mobile app, create temporary credentials using the AWS Security Token Service “AssumeRole” function. Store these credentials in the mobile app’s memory and use them to access Amazon S3. Generate new credentials the next time the user runs the mobile app.
5. Record the user’s information in Amazon DynamoDB. When the user uses their mobile app, create temporary credentials using AWS Security Token Service with appropriate permissions. Store these credentials in the mobile app’s memory and use them to access Amazon S3. Generate new credentials the next time the user runs the mobile app.

Q50. A read only news reporting site with a combined web and application tier and a database tier that receives large and unpredictable traffic demands must be able to respond to these traffic fluctuations automatically. What AWS services should be used meet these requirements?

1. Stateless instances for the web and application tier synchronized using ElastiCache Memcached in an autoscaimg group monitored with CloudWatch and RDS with read replicas.
2. Stateful instances for the web and application tier in an autoscaling group monitored with CloudWatch and RDS with read replicas.
3. Stateful instances for the web and application tier in an autoscaling group monitored with CloudWatch. and multi-AZ RDS.
4. Stateless instances for the web and application tier synchronized using ElastiCache Memcached in an autoscaling group monitored with CloudWatch and multi-AZ RDS.

Q51. Your startup wants to implement an order fulfillment process for selling a personalized gadget that needs an average of 3-4 days to produce with some orders taking up to 6 months you expect 10 orders per day on your first day. 1000 orders per day after 6 months and 10,000 orders after 12 months.Orders coming in are checked for consistency men dispatched to your manufacturing plant for production quality control packaging shipment and payment processing If the product does not meet the quality standards at any stage of the process employees may force the process to repeat a step Customers are notified via email about order status and any critical issues with their orders such as payment failure. Your case architecture includes AWS Elastic Beanstalk for your website with an RDS MySQL instance for customer data and orders. How can you implement the order fulfillment process while making sure that the emails are delivered reliably?

1. Add a business process management application to your Elastic Beanstalk app servers and re-use the ROS database for tracking order status use one of the Elastic Beanstalk instances to send emails to customers.
2. Use SWF with an Auto Scaling group of activity workers and a decider instance in another Auto Scaling group with min/max=1 Use the decider instance to send emails to customers.
3. Use SWF with an Auto Scaling group of activity workers and a decider instance in another Auto Scaling group with min/max=1 use SES to send emails to customers.
4. Use an SQS queue to manage all process tasks Use an Auto Scaling group of EC2 Instances that poll the tasks and execute them. Use SES to send emails to customers.

Q52. You have deployed a web application targeting a global audience across multiple AWS Regions under the domain name.example.com. You decide to use Route53 Latency-Based Routing to serve web requests to users from the region closest to the user. To provide business continuity in the event of server downtime you configure weighted record sets associated with two web servers in separate Availability Zones per region. Dunning a DR test you notice that when you disable all web servers in one of the regions Route53 does not automatically direct all users to the other region. What could be happening? (Choose 2 answers)

1. Latency resource record sets cannot be used in combination with weighted resource record sets.
2. You did not setup an HTTP health check to one or more of the weighted resource record sets associated with me disabled web servers.
3. The value of the weight associated with the latency alias resource record set in the region with the disabled servers is higher than the weight for the other region.
4. One of the two working web servers in the other region did not pass its HTTP health check.
5. You did not set “Evaluate Target Health” to “Yes” on the latency alias resource record set associated with example com in the region where you disabled the servers.

Q53. You’re running an application on-premises due to its dependency on non-x86 hardware and want to use AWS for data backup. Your backup application is only able to write to POSIX-compatible block-based storage. You have 140TB of data and would like to mount it as a single folder on your file server Users must be able to access portions of this data while the backups are taking place. What backup solution would be most appropriate for this use case?

1. Use Storage Gateway and configure it to use Gateway Cached volumes.
2. Configure your backup software to use S3 as the target for your data backups.
3. Configure your backup software to use Glacier as the target for your data backups.
4. Use Storage Gateway and configure it to use Gateway Stored volumes.

Q54. You are looking to migrate your Development (Dev) and Test environments to AWS. You have decided to use separate AWS accounts to host each environment. You plan to link each accounts bill to a Master AWS account using Consolidated Billing. To make sure you Keep within budget you would like to implement a way for administrators in the Master account to have access to stop, delete and/or terminate resources in both the Dev and Test accounts. Identify which option will allow you to achieve this goal.

1. Create IAM users in the Master account with full Admin permissions. Create cross-account roles in the dev and Test accounts that grant the Master account access to the resources in the account by inheriting permissions from the Master account.
2. Create IAM users and a cross-account role in the Master account that grants full Admin permissions to the Dev and Test accounts.
3. Create IAM users in the Master account Create cross-account roles in the Dev and Test accounts that have full Admin permissions and grant the Master account access.
4. Link the accounts using Consolidated Billing. This will give IAM users in the Master account access to resources in the Dev and Test accounts

Q55. Your company has recently extended its datacenter into a VPC on AWS to add burst computing capacity as needed Members of your Network Operations Center need to be able to go to the AWS Management Console and administer Amazon EC2 instances as necessary You don’t want to create new IAM users for each NOC member and make those users sign in again to the AWS Management Console Which option below will meet the needs for your NOC members?

1. Use OAuth 2 0 to retrieve temporary AWS security credentials to enable your NOC members to sign in to the AWS Management Console.
2. Use web Identity Federation to retrieve AWS temporary security credentials to enable your NOC members to sign in to the AWS Management Console.
3. Use your on-premises SAML 2.0-compliant identity provider (IDP) to grant the NOC members federated access to the AWS Management Console via the AWS single sign-on (SSO) endpoint.
4. Use your on-premises SAML 2.0-compliam identity provider (IDP) to retrieve temporary security credentials to enable NOC members to sign in to the AWS Management Console.

Q56. A newspaper organization has a on-premises application which allows the public to search its back catalogue and retrieve individual newspaper pages via a website written in Java They have scanned the old newspapers into JPEGs (approx 17TB) and used Optical Character Recognition (OCR) to populate a commercial search product. The hosting platform and software are now end of life and the organization wants to migrate Its archive to AWS and produce a cost efficient architecture and still be designed for availability and durability. Which is the most appropriate?

1. Use S3 with reduced redundancy lo store and serve the scanned files, install the commercial search application on EC2 Instances and configure with auto-scaling and an Elastic Load Balancer.
2. Model the environment using CloudFormation use an EC2 instance running Apache webserver and an open source search application, stripe multiple standard EBS volumes together to store the JPEGs and search index.
3. Use S3 with standard redundancy to store and serve the scanned files, use CloudSearch for query processing, and use Elastic Beanstalk to host the website across multiple availability zones.
4. Use a single-AZ RDS MySQL instance lo store the search index 33d the JPEG images use an EC2 instance to serve the website and translate user queries into SQL.
5. Use a CloudFront download distribution to serve the JPEGs to the end users and Install the current commercial search product, along with a Java Container Tor the website on EC2 instances and use Route53 with DNS round-robin.

Q57. Your company is storing millions of sensitive transactions across thousands of 100-GB files that must be encrypted in transit and at rest. Analysts concurrently depend on subsets of files, which can consume up to 5 TB of space, to generate simulations that can be used to steer business decisions. You are required to design an AWS solution that can cost effectively accommodate the long-term storage and in-flight subsets of data.

1. Use Amazon Simple Storage Service (S3) with server-side encryption, and run simulations on subsets in ephemeral drives on Amazon EC2.
2. Use Amazon S3 with server-side encryption, and run simulations on subsets in-memory on Amazon EC2.
3. Use HDFS on Amazon EMR, and run simulations on subsets in ephemeral drives on Amazon EC2.
4. Use HDFS on Amazon Elastic MapReduce (EMR), and run simulations on subsets in-memory on Amazon Elastic Compute Cloud (EC2).
5. Store the full data set in encrypted Amazon Elastic Block Store (EBS) volumes, and regularly capture snapshots that can be cloned to EC2 workstations.
6. Your customer is willing to consolidate their log streams (access logs application logs security logs etc.) in one single system. Once consolidated, the customer wants to analyze these logs in real time based on heuristics. From time to time, the customer needs to validate heuristics, which requires going back to data samples extracted from the last 12 hours? What is the best approach to meet your customer’s requirements?
7. Send all the log events to Amazon SQS, setup an Auto Scaling group of EC2 servers to consume the logs and apply the heuristics.
8. Send all the log events to Amazon Kinesis, develop a client process to apply heuristics on the logs
9. Configure Amazon CloudTrail to receive custom logs, use EMR to apply heuristics the logs
10. Setup an Auto Scaling group of EC2 syslogd servers, store the logs on S3, use EMR to apply heuristics on the logs

Q59. You have launched an EC2 instance with four (4) 500 GB EBS Provisioned IOPS volumes attached. The EC2 instance is EBS-Optimized and supports 500 Mbps throughput between EC2 and EBS. The four EBS volumes are configured as a single RAID 0 device, and each Provisioned IOPS volume is provisioned with 4,000 IOPS (4,000 16KB reads or writes), for a total of 16,000 random IOPS on the instance. The EC2 instance initially delivers the expected 16,000 IOPS random read and write performance. Sometime later, in order to increase the total random I/O performance of the instance, you add an additional two 500 GB EBS Provisioned IOPS volumes to the RAID. Each volume is provisioned to 4,000 IOPs like the original four, for a total of 24,000 IOPS on the EC2 instance. Monitoring shows that the EC2 instance CPU utilization increased from 50% to 70%, but the total random IOPS measured at the instance level does not increase at all. What is the problem and a valid solution?

The EBS-Optimized throughput limits the total IOPS that can be utilized; use an EBSOptimized instance that provides larger throughput.

1. Small block sizes cause performance degradation, limiting the I/O throughput; configure the instance device driver and file system to use 64KB blocks to increase throughput.
2. The standard EBS Instance root volume limits the total IOPS rate; change the instance root volume to also be a 500GB 4,000 Provisioned IOPS volume.
3. Larger storage volumes support higher Provisioned IOPS rates; increase the provisioned volume storage of each of the 6 EBS volumes to 1TB.
4. RAID 0 only scales linearly to about 4 devices; use RAID 0 with 4 EBS Provisioned IOPS volumes, but increase each Provisioned IOPS EBS volume to 6,000 IOPS.

Q60. 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?

1. Disabling the Source/Destination Check attribute on the NAT instance
2. Attaching an Elastic IP address to the instance in the private subnet
3. Attaching a second Elastic Network Interface (ENI) to the NAT instance, and placing it in the private subnet
4. Attaching a second Elastic Network Interface (ENI) to the instance in the private subnet, and placing it in the public subnet

Q61. You deployed your company website using Elastic Beanstalk and you enabled log file rotation to S3. An Elastic Map Reduce job is periodically analyzing the logs on S3 to build a usage dashboard that you share with your CIO. You recently improved overall performance of the website using Cloud Front for dynamic content delivery and your website as the origin. After this architectural change, the usage dashboard shows that the traffic on your website dropped by an order of magnitude. How do you fix your usage dashboard’?

1. Enable Cloud Front to deliver access logs to S3 and use them as input of the Elastic Map Reduce job.
2. Turn on Cloud Trail and use trail log tiles on S3 as input of the Elastic Map Reduce job
3. Change your log collection process to use Cloud Watch ELB metrics as input of the Elastic Map Reduce job
4. Use Elastic Beanstalk “Rebuild Environment” option to update log delivery to the Elastic Map Reduce job.
5. Use Elastic Beanstalk ‘Restart App server(s)” option to update log delivery to the Elastic Map Reduce job.

Q62. You are developing a new mobile application and are considering storing user preferences in AWS.2w This would provide a more uniform cross-device experience to users using multiple mobile devices to access the application. The preference data for each user is estimated to be 50KB in size Additionally 5 million customers are expected to use the application on a regular basis. The solution needs to be cost-effective, highly available, scalable and secure, how would you design a solution to meet the above requirements?

1. Setup an RDS MySQL instance in 2 availability zones to store the user preference data. Deploy a public facing application on a server in front of the database to manage security and access credentials
2. Setup a DynamoDB table with an item for each user having the necessary attributes to hold the user preferences. The mobile application will query the user preferences directly from the DynamoDB table. Utilize STS. Web Identity Federation, and DynamoDB Fine Grained Access Control to authenticate and authorize access.
3. Setup an RDS MySQL instance with multiple read replicas in 2 availability zones to store the user preference data .The mobile application will query the user preferences from the read replicas. Leverage the MySQL user management and access privilege system to manage security and access credentials.
4. Store the user preference data in S3 Setup a DynamoDB table with an item for each user and an item attribute pointing to the user’ S3 object. The mobile application will retrieve the S3 URL from DynamoDB and then access the S3 object directly utilize STS, Web identity Federation, and S3 ACLs to authenticate and authorize access.

Q63. An administrator is using Amazon CloudFormation to deploy a three tier web application that consists of a web tier and application tier that will utilize Amazon DynamoDB for storage when creating the Cloud Formation template. Which of the following would allow the application instance access to the DynamoDB tables without exposing API credentials?

1. Create an Identity and Access Management Role that has the required permissions to read and write from the required DynamoDB table and associate the Role to the application instances by referencing an instance profile.
2. Use the Parameter section in the Cloud Formation template to nave the user input Access and Secret Keys from an already created IAM user that has me permissions required to read and write from the required DynamoDB table.
3. Create an Identity and Access Management Role that has the required permissions to read and write from the required DynamoDB table and reference the Role in the instance profile property of the application instance.
4. Create an identity and Access Management user in the CloudFormation template that has permissions to read and write from the required DynamoDB table, use the GetAtt function to retrieve the Access and secret keys and pass them to the application instance through user-data.

Q64. You are designing a multi-platform web application for AWS. The application will run on EC2 instances and will be accessed from PCs. Tablets and smart phones Supported accessing platforms are Windows, MacOS, IOS and Android Separate sticky session and SSL certificate setups are required for different platform types. Which of the following describes the most cost effective and performance efficient architecture setup?

1. Setup a hybrid architecture to handle session state and SSL certificates on-prem and separate EC2 Instance groups running web applications for different platform types running in a VPC.
2. Set up one ELB for all platforms to distribute load among multiple instance under it Each EC2 instance implements ail functionality for a particular platform.
3. Set up two ELBs The first ELB handles SSL certificates for all platforms and the second ELB handles session stickiness for all platforms for each ELB run separate EC2 instance groups to handle the web application for each platform.
4. Assign multiple ELBS to an EC2 instance or group of EC2 instances running the common components of the web application, one ELB for each platform type Session stickiness and SSL termination are done at the ELBs.

Q66. Your company plans to host a large donation website on Amazon Web Services (AWS). You anticipate a large and undetermined amount of traffic that will create many database writes. To be certain that you do not drop any writes to a database hosted on AWS. Which service should you use?

1. Amazon RDS with provisioned IOPS up to the anticipated peak write throughput.
2. Amazon Simple Queue Service (SQS) for capturing the writes and draining the queue to write to the database.
3. Amazon ElastiCache to store the writes until the writes are committed to the database.
4. Amazon DynamoDB with provisioned write throughput up to the anticipated peak write throughput.

Q67. A 3-tier e-commerce web application is current deployed on-premises and will be migrated to AWS for greater scalability and elasticity The web server currently shares read-only data using a network distributed file system The app server tier uses a clustering mechanism for discovery and shared session state that depends on IPmulticast The database tier uses shared-storage clustering to provide database fall over capability, and uses several read slaves for scaling Data on all servers and the distributed file system directory is backed up weekly to off-site tapes. Which AWS storage and database architecture meets the requirements of the application?

1. Web servers: store read-only data in S3, and copy from S3 to root volume at boot time. App servers: share state using a combination of DynamoDB and IP unicast. Database: use RDS with multi-AZ deployment and one or more read replicas. Backup: web servers, app servers, and database backed up weekly to Glacier using snapshots.
2. Web servers: store read-only data in an EC2 NFS server; mount to each web server at boot time. App servers: share state using a combination of DynamoDB and IP multicast. Database: use RDS with multi-AZ deployment and one or more Read Replicas. Backup: web and app servers backed up weekly via AMIs, database backed up via DB snapshots.
3. Web servers: store read-only data in S3, and copy from S3 to root volume at boot time. App servers: share state using a combination of DynamoDB and IP unicast. Database: use RDS with multi-AZ deployment and one or more Read Replicas. Backup: web and app servers backed up weekly via AMIs, database backed up via DB snapshots.
4. Web servers: store read-only data in S3, and copy from S3 to root volume at boot time. App servers: share state using a combination of DynamoDB and IP unicast. Database: use RDS with multi-AZ deployment. Backup: web and app servers backed up weekly via AMIs, database backed up via DB snapshots.

Q68. Your system recently experienced down time during the troubleshooting process. You found that a new administrator mistakenly terminated several production EC2 instances. Which of the following strategies will help prevent a similar situation in the future? The administrator still must be able to: launch, start stop, and terminate development resources. launch and start production instances.

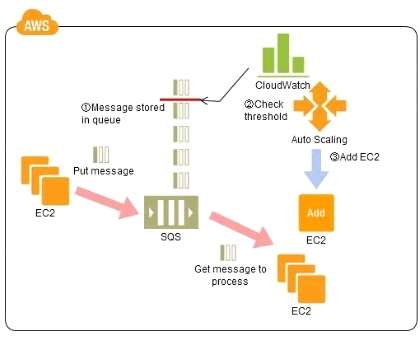
1. Create an IAM user, which is not allowed to terminate instances by leveraging production EC2 termination protection.
2. Leverage resource based tagging, along with an IAM user which can prevent specific users from terminating production, EC2 resources.
3. Leverage EC2 termination protection and multi-factor authentication, which together require users to authenticate before terminating EC2 instances
4. Create an IAM user and apply an IAM role which prevents users from terminating production EC2 instances.

Q68. You have an application running on an EC2 instance which will allow users to download files from a private S3 bucket using a pre-signed URL. Before generating the URL, the application should verify the existence of the file in S3. How should the application use AWS credentials to access the S3 bucket securely?

1. Use the AWS account access keys; the application retrieves the credentials from the source code of the application.
2. Create an IAM role for EC2 that allows list access to objects In the S3 bucket; launch the Instance with the role, and retrieve the role’s credentials from the EC2 instance metadata.
3. Create an IAM user for the application with permissions that allow list access to the S3 bucket; the application retrieves the 1AM user credentials from a temporary directory with permissions that allow read access only to the Application user.
4. Create an IAM user for the application with permissions that allow list access to the S3 bucket; launch the instance as the IAM user, and retrieve the IAM user’s credentials from the EC2 instance user data.

Q 69. A company is building a voting system for a popular TV show, viewers win watch the performances then visit the show’s website to vote for their favorite performer. It is expected that in a short period of time after the show has finished the site will receive millions of visitors. The visitors will first login to the site using their Amazon.com credentials and then submit their vote. After the voting is completed the page will display the vote totals. The company needs to build the site such that can handle the rapid influx of traffic while maintaining good performance but also wants to keep costs to a minimum. Which of the design patterns below should they use?

1. Use CloudFront and an Elastic Load balancer in front of an auto-scaled set of web servers, the web servers will first call the Login With Amazon service to authenticate the user then process the users vote and store the result into a multi-AZ Relational Database Service instance.
2. Use CloudFront and the static website hosting feature of S3 with the Javascript SDK to call the Login With Amazon service to authenticate the user, use IAM Roles to gain permissions to a DynamoDB table to store the users vote.
3. Use CloudFront and an Elastic Load Balancer in front of an auto-scaled set of web servers, the web servers will first call the Login with Amazon service to authenticate the user, the web servers will process the users vote and store the result into a DynamoDB table using IAM Roles for EC2 instances to gain permissions to the DynamoDB table.
4. Use CloudFront and an Elastic Load Balancer in front of an auto-scaled set of web servers, the web servers will first call the Login With Amazon service to authenticate the user, the web servers win process the users vote and store the result into an SQS queue using IAM Roles for EC2 Instances to gain permissions to the SQS queue. A set of application servers will then retrieve the items from the queue and store the result into a DynamoDB table.

Q70. Refer to the architecture diagram below of a batch processing solution using Simple Queue Service (SQS) to set up a message queue between EC2 instances which are used as batch processors Cloud Watch monitors the number of Job requests (queued messages) and an Auto Scaling group adds or deletes batch servers automatically based on parameters set in Cloud Watch alarms. You can use this architecture to implement which of the following features in a cost effective and efficient manner? 

1. Reduce the overall lime for executing jobs through parallel processing by allowing a busy EC2 instance that receives a message to pass it to the next instance in a daisy-chain setup.
2. Implement fault tolerance against EC2 instance failure since messages would remain in SQS and worn can continue with recovery of EC2 instances implement fault tolerance against SQS failure by backing up messages to S3.
3. Implement message passing between EC2 instances within a batch by exchanging messages through
4. SQS.
5. Coordinate number of EC2 instances with number of job requests automatically thus Improving cost effectiveness.
6. Handle high priority jobs before lower priority jobs by assigning a priority metadata field to SQS messages.