1.

A solutions architect has created a new AWS account and must secure AWS account root user access.

Which combination of actions will accomplish this? (Select TWO.)

A. Ensure the root user uses a strong password.
B. Enable multi-factor authentication to the root user.
C. Store root user access keys in an encrypted Amazon S3 bucket
D. Add the root user to a group containing administrative permissions.
E. Apply the required permissions to the root user with an inline policy document.

Answer: AB

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2.

A company's application runs on Amazon EC2 instances behind an Application Load Balancer (ALB). The instances run in an Amazon EC2 Auto Scaling group across multiple Availability Zones. On the first day of every month at midnight, the application becomes much slower when the month-end financial calculation batch executes. This causes the CPU utilization of the EC2 instances to immediately peak to 100%, which disrupts the application.

What should a solutions architect recommend to ensure the application is able to handle the workload and avoid downtime?

A. Configure an Amazon CloudFront distribution in front of the ALB.
B. Configure an EC2 Auto Scaling simple scaling policy based on CPU utilization.
C. Configure an EC2 Auto Scaling scheduled scaling policy based on the monthly schedule.
D. Configure Amazon ElastiCache to remove some of the workload from the EC2 instances.

Answer: C

3.

A company is migrating from an on-premises infrastructure to the AWS Cloud. One of the company's applications stores files on a Windows file server farm that uses Distributed File System Replication (DFSR) to keep data in sync. A solutions architect needs to replace the file server farm.

Which service should the solutions architect use?

A. Amazon EFS
B. Amazon FSx
C. Amazon S3
D. AWS Storage Gateway

Answer: B

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4.

A company's website is used to sell products to the public. The site runs on Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer (ALB). There is also an Amazon CloudFront distribution, and AWS WAF is being used to protect against SQL injection attacks. The ALB is the origin for the CloudFront distribution. A recent review of security logs revealed an external malicious IP that needs to be blocked from accessing the website.

What should a solutions architect do to protect the application?

A. Modify the network ACL on the CloudFront distribution to add a deny rule for the malicious IP address.
B. Modify the configuration of AWS WAF to add an IP match condition to block the malicious IP address.
C. Modify the network ACL for the EC2 instances in the target groups behind the ALB to deny the malicious IP address.
D. Modify the security groups for the EC2 instances in the target groups behind the ALB to deny the malicious IP address.

Answer: B

5.

A marketing company is storing CSV files in an Amazon S3 bucket for statistical analysis. An application on an Amazon EC2 instance needs permission to efficiently process the CSV data stored in the S3 bucket.

Which action will MOST securely grant the EC2 instance access to the S3 bucket?

A. Attach a resource-based policy to the S3 bucket.
B. Create an IAM user for the application with specific permissions to the S3 bucket.
C. Associate an IAM role with least privilege permissions to the EC2 instance profile.
D. Store AWS credentials directly on the EC2 instance for applications on the instance to use for API calls.

Answer: C

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6.

A solutions architect is designing a solution where users will be directed to a backup static error page if the primary website is unavailable. The primary website's DNS records are hosted in Amazon Route 53 where their domain is pointing to an Application Load Balancer (ALB).

Which configuration should the solutions architect use to meet the company's needs while minimizing changes and infrastructure overhead?

A. Point a Route 53 alias record to an Amazon CloudFront distribution with the ALB as one of its origins. Then, create custom error pages for the distribution.
B. Set up a Route 53 active-passive failover configuration. Direct traffic to a static error page hosted within an Amazon S3 bucket when Route 53 health checks determine that the ALB endpoint is unhealthy.
C. Update the Route 53 record to use a latency-based routing policy. Add the backup static error page hosted within an Amazon S3 bucket to the record so the traffic is sent to the most responsive endpoints.
D. Set up a Route 53 active-active configuration with the ALB and an Amazon EC2 instance hosting a static error page as endpoints. Route 53 will only send requests to the instance if the health checks fail for the ALB.

Answer: B

7.

A solutions architect is designing the cloud architecture for a new application being deployed on AWS. The process should run in parallel while adding and removing application nodes as needed based on the number of jobs to be processed. The processor application is stateless. The solutions architect must ensure that the application is loosely coupled, and the job items are durably stored.

Which design should the solutions architect use?

A. Create an Amazon SNS topic to send the jobs that need to be processed. Create an Amazon Machine Image (AMI) that consists of the processor application. Create a launch configuration that uses the AMI. Create an Auto Scaling group using the launch configuration. Set the scaling policy for the Auto Scaling group to add and remove nodes based on CPU usage.

B. Create an Amazon SQS queue to hold the jobs that need to be processed. Create an Amazon Machine Image (AMI) that consists of the processor application. Create a launch configuration that uses the AMI. Create an Auto Scaling group using the launch configuration. Set the scaling policy for the Auto Scaling group to add and remove nodes based on network usage.

C. Create an Amazon SQS queue to hold the jobs that needs to be processed. Create an Amazon Machine Image (AMI) that consists of the processor application. Create a launch template that uses the AMI. Create an Auto Scaling group using the launch template. Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of items in the SQS queue.

D. Create an Amazon SNS topic to send the jobs that need to be processed. Create an Amazon Machine Image (AMI) that consists of the processor application. Create a launch template that uses the AMI. Create an Auto Scaling group using the launch template. Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of messages published to the SNS topic.

Answer: C

8.

A company has a legacy application that processes data in two parts. The second part of the process takes longer than the first, so the company has decided to rewrite the application as two microservices running on Amazon ECS that can scale independently.

How should a solutions architect integrate the microservices?

A. Implement code in microservice 1 to send data to an Amazon S3 bucket Use S3 event notifications to invoke microservice 2.
B. Implement code in microservice 1 to publish data to an Amazon SNS topic. Implement code in microservice 2 to subscribe to this topic.
C. Implement code in microservice 1 to send data to Amazon Kinesis Data Firehose. Implement code in microservice 2 to read from Kinesis Data Firehose.
D. Implement code in microservice 1 to send data to an Amazon SQS queue. Implement code in microservice 2 to process messages from the queue.

Answer: D

9.

A solutions architect at an ecommerce company wants to back up application log data to Amazon S3. The solutions architect is unsure how frequently the logs will be accessed or which logs will be accessed the most. The company wants to keep costs as low as possible by using the appropriate S3 storage class.

Which S3 storage class should be implemented to meet these requirements?

A. S3 Glacier
B. S3 Intelligent-Tiering
C. S3 Standard-Infrequent Access (S3 Standard-IA)
D. S3 One Zone-Infrequent Access (S3 One Zone-IA)

Answer: B

10.

A security team wants to limit access to specific services or actions in all of the team's AWS accounts. All accounts belong to a large organization in AWS Organizations. The solution must be scalable and there must be a single point where permissions can be maintained.

What should a solutions architect do to accomplish this?

A. Create an ACL to provide access to the services or actions.
B. Create a security group to allow accounts and attach it to user groups.
C. Create cross-account roles in each account to deny access to the services or actions.
D. Create a service control policy in the root organizational unit to deny access to the services or actions.

Answer: D

11.

A company's website runs on Amazon EC2 instances behind an Application Load Balancer (ALB). The website has a mix of dynamic and static content. Users around the globe are reporting that the website is slow.

Which set of actions will improve website performance for users worldwide?

A. Create an Amazon CloudFront distribution and configure the ALB as an origin. Then update the Amazon Route 53 record to point to the CloudFront distribution.
B. Create a latency-based Amazon Route 53 record for the ALB. Then launch new EC2 instances with larger instance sizes and register the instances with the ALB.
C. Launch new EC2 instances hosting the same web application in different Regions closer to the users. Then register the instances with the same ALB using cross-Region VPC peering
D. Host the website in an Amazon S3 bucket in the Regions closest to the users and delete the ALB and EC2 instances. Then update an Amazon Route 53 record to point to the S3 buckets.

Answer: A

12.

A company wants to migrate a high performance computing (HPC) application and data from on-premises to the AWS Cloud. The company uses tiered storage on premises with hot high-performance parallel storage to support the application during periodic runs of the application, and more economical cold storage to hold the data when the application is not actively running.

Which combination of solutions should a solutions architect recommend to support the storage needs of the application? (Select TWO.)

A. Amazon S3 for cold data storage
B. Amazon EFS for cold data storage

C. Amazon S3 for high-performance parallel storage
D. Amazon FSx for Lustre for high-performance parallel storage
E. Amazon FSx for Windows for high-performance parallel storage

Answer: AD

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13.

A company has on-premises servers running a relational database. The current database serves high read traffic for users in different locations. The company wants to migrate to AWS with the least amount of effort. The database solution should support disaster recovery and not affect the company's current traffic flow.

Which solution meets these requirements?

A. Use a database in Amazon RDS with Multi-AZ and at least one read replica
B. Use a database in Amazon RDS with Multi-AZ and at least one standby replica
C. Use databases hosted on multiple Amazon EC2 instances in different AWS Regions
D. Use databases hosted on Amazon EC2 instances behind an Application Load Balancer in different Availability Zones.

Answer: A

14.

A media streaming company collects real-time data and stores it in a disk-optimized database system. The company is not getting the expected throughput and wants an in-memory database storage solution that performs faster and provides high availability using data replication.

Which database should a solutions architect recommend?

A. Amazon RDS for MySQL
B. Amazon RDS for PostgreSQL
C. Amazon ElastiCache for Redis
D. Amazon ElastiCache for Memcached

Answer: C

15.

A company's application is running on Amazon EC2 instances within an Auto Scaling group behind an Elastic Load Balancer. Based on the application's history, the company anticipates a spike in traffic during a holiday each year. A solutions architect must design a strategy to ensure that the Auto Scaling group proactively increases capacity to minimize any performance impact on application users.

Which solution will meet these requirements?

A. Create an Amazon CloudWatch alarm to scale up the EC2 instances when CPU utilization exceeds 90%.
B. Create a recurring scheduled action to scale up the Auto Scaling group before the expected period of peak demand.
C. Increase the minimum and maximum number of EC2 instances in the Auto Scaling group during the peak demand period.
D. Configure an Amazon Simple Notification Service (Amazon SNS) notification to send alerts when there are autoscaling: EC2_INSTANCE_LAUNCH events.

Answer: B

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16.

A company has a two-tier application architecture that runs in public and private subnets. Amazon EC2 instances running the web application are in the public subnet and a database runs on the private subnet. The web application instances and the database are running in a single Availability Zone (AZ).

Which combination of steps should a solutions architect take to provide high availability for this architecture? (Select TWO.)

A. Create new public and private subnets in the same AZ for high availability.
B. Create an Amazon EC2 Auto Scaling group and Application Load Balancer spanning multiple AZs.
C. Add the existing web application instances to an Auto Scaling group behind an Application Load Balancer.
D. Create new public and private subnets in a new AZ. Create a database using Amazon EC2 in one AZ.
E. Create new public and private subnets in the same VPC, each in a new AZ. Migrate the database to an Amazon RDS multi-AZ deployment.

Answer: BE

17.

A financial services company has a web application that serves users in the United States and Europe. The application consists of a database tier and a web server tier. The database tier consists of a MySQL database hosted in us-east-1. Amazon Route 53 geoproximity routing is used to direct traffic to instances in the closest Region. A performance review of the system reveals that European users are not receiving the same level of query performance as those in the United States.

Which changes should be made to the database tier to improve performance?

A. Migrate the database to Amazon RDS for MySQL. Configure Multi-AZ in one of the European Regions.

B. Migrate the database to Amazon DynamoDB. Use DynamoDB global tables to enable replication to additional Regions.

C. Deploy MySQL instances in each Region. Deploy an Application Load Balancer in front of MySQL to reduce the load on the primary instance.

D. Migrate the database to an Amazon Aurora global database in MySQL compatibility mode. Configure read replicas in one of the European Regions.

Answer: D

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18.

A solutions architect is tasked with transferring 750 TB of data from a network-attached file system located at a branch office to Amazon S3 Glacier. The solution must avoid saturating the branch office's low-bandwidth internet connection.

What is the MOST cost-effective solution?

A. Create a site-to-site VPN tunnel to an Amazon S3 bucket and transfer the files directly. Create a bucket policy to enforce a VPC endpoint.
B. Order 10 AWS Snowball appliances and select an S3 Glacier vault as the destination. Create a bucket policy to enforce a VPC endpoint.
C. Mount the network-attached file system to Amazon S3 and copy the files directly. Create a lifecycle policy to transition the S3 objects to Amazon S3 Glacier.
D. Order 10 AWS Snowball appliances and select an Amazon S3 bucket as the destination. Create a lifecycle policy to transition the S3 objects to Amazon S3 Glacier.

Answer: D

19.

A company's production application runs online transaction processing (OLTP) transactions on an Amazon RDS MySQL DB instance. The company is launching a new reporting tool that will access the same data. The reporting tool must be highly available and not impact the performance of the production application.

How can this be achieved?

A. Create hourly snapshots of the production RDS DB instance.
B. Create a Multi-AZ RDS Read Replica of the production RDS DB instance.
C. Create multiple RDS Read Replicas of the production RDS DB instance. Place the Read Replicas in an Auto Scaling group.
D. Create a Single-AZ RDS Read Replica of the production RDS DB instance. Create a second Single-AZ RDS Read Replica from the replica.

Answer: B

20.

A company allows its developers to attach existing IAM policies to existing IAM roles to enable faster experimentation and agility. However, the security operations team is concerned that the developers could attach the existing administrator policy, which would allow the developers to circumvent any other security policies.

How should a solutions architect address this issue?

A. Create an Amazon SNS topic to send an alert every time a developer creates a new policy
B. Use service control policies to disable IAM activity across all accounts in the organizational unit.
C. Prevent the developers from attaching any policies and assign all IAM duties to the security operations team.
D. Set an IAM permissions boundary on the developer IAM role that explicitly denies attaching the administrator policy.

Answer: D

21.

A product team is creating a new application that will store a large amount of data. The data will be analyzed hourly and modified by multiple Amazon EC2 Linux instances. The application team believes the amount of space needed will continue to grow for the next 6 months.

Which set of actions should a solutions architect take to support these needs?

A. Store the data in an Amazon EBS volume. Mount the EBS volume on the application instances.
B. Store the data in an Amazon EFS file system. Mount the file system on the application instances.
C. Store the data in Amazon S3 Glacier. Update the vault policy to allow access to the application instances.
D. Store the data in Amazon S3 Standard-Infrequent Access (S3 Standard-IA). Update the bucket policy to allow access to the application instances.

Answer: B

22.

A gaming company has multiple Amazon EC2 instances in a single Availability Zone for its multiplayer game that communicates with users on Layer 4. The chief technology officer (CTO) wants to make the architecture highly available and cost-effective.

What should a solutions architect do to meet these requirements? (Select TWO.)

A. Increase the number of EC2 instances.
B. Decrease the number of EC2 instances.
C. Configure a Network Load Balancer in front of the EC2 instances.
D. Configure an Application Load Balancer in front of the EC2 instances.
E. Configure an Auto Scaling group to add or remove instances in multiple Availability Zones automatically.

Answer: CE

23.

A company hosts an application on multiple Amazon EC2 instances. The application processes messages from an Amazon SQS queue, writes to an Amazon RDS table and deletes the message from the queue. Occasional duplicate records are found in the RDS table. The SQS queue does not contain any duplicate messages.

What should a solutions architect do to ensure messages are being processed once only?

A. Use the CreateQueue API call to create a new queue.
B. Use the AddPermission API call to add appropriate permissions.
C. Use the ReceiveMessage API call to set an appropriate wait time.
D. Use the Change MessageVisibility API call to increase the visibility timeout.

Answer: D

24.

A solutions architect is designing an application for a two-step order process. The first step is synchronous and must return to the user with little latency. The second step takes longer, so it will be implemented in a separate component. Orders must be processed exactly once and in the order in which they are received.

How should the solutions architect integrate these components?

A. Use Amazon SQS FIFO queues
B. Use an AWS Lambda function along with Amazon SQS standard queues.
C. Create an SNS topic and subscribe an Amazon SQS FIFO queue to that topic.
D. Create an SNS topic and subscribe an Amazon SQS Standard queue to that topic.

Answer: A

25.

A solutions architect is designing a high performance computing (HPC) workload on Amazon EC2. The EC2 instances need to communicate to each other frequently and require network performance with low latency and high throughput.

Which EC2 configuration meets these requirements?

A. Launch the EC2 instances in a cluster placement group in one Availability Zone.
B. Launch the EC2 instances in a spread placement group in one Availability Zone.
C. Launch the EC2 instances in an Auto Scaling group in two Regions and peer the VPCs.
D. Launch the EC2 instances in an Auto Scaling group spanning multiple Availability Zones.

Answer: A

26.

A company is planning to use Amazon S3 to store images uploaded by its users. The images must be encrypted at rest in Amazon S3. The company does not want to spend time managing and rotating the keys, but it does want to control who can access those keys.

What should a solutions architect use to accomplish this?

A. Server-Side Encryption with keys stored in an S3 bucket
B. Server-Side Encryption with Customer-Provided Keys (SSE-C)
C. Server-Side Encryption with Amazon S3-Managed Keys (SSE-S3)
D. Server-Side Encryption with AWS KMS-Managed Keys (SSE-KMS)

Answer: D

27.

An Amazon EC2 administrator created the following policy associated with an IAM group containing several users:

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": "ec2:TerminateInstances",
            "Resource": "*",
            "Condition": {
                "IpAddress": {
                    "aws:SourceIp": "10.100.100.0/24"
                }
            }
        },
        {
            "Effect": "Deny",
            "Action": "ec2:*",
            "Resource": "*",
            "Condition": {
                "StringNotEquals": {
                    "ec2:Region": "us-east-1"
                }
            }
        }
    ]
}
```

What is the effect of this policy?

What is the effect of this policy?

A. Users can terminate an EC2 instance in any AWS Region except us-east-1.
B. Users can terminate an EC2 instance with the IP address 10.100.100.1 in the us-east-1 Region.
C. Users can terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254.

D. Users cannot terminate an EC2 instance in the us-east-1 Region when the user's source IP is 10.100.100.254.

Answer: A

28.

A company is running an ecommerce application on Amazon EC2. The application consists of a stateless web tier that requires a minimum of 10 instances, and a peak of 250 instances to support the application's usage. The application requires 50 instances 80% of the time.

Which solution should be used to minimize costs?

A. Purchase Reserved Instances to cover 250 instances.
B. Purchase Reserved Instances to cover 80 instances. Use Spot Instances to cover the remaining instances.
C. Purchase On-Demand Instances to cover 40 instances. Use Spot Instances to cover the remaining instances.
D. Purchase Reserved Instances to cover 50 instances. Use On-Demand and Spot Instances to cover the remaining instances.

Answer: D

29.

An application running on AWS uses an Amazon Aurora Multi-AZ deployment for its database. When evaluating performance metrics, a solutions architect discovered that the database reads are causing high I/O and adding latency to the write requests against the database.

What should the solutions architect do to separate the read requests from the write requests?

A. Enable read through caching on the Amazon Aurora database
B. Update the application to read from the Multi-AZ standby instance
C. Create a read replica and modify the application to use the appropriate endpoint.
D. Create a second Amazon Aurora database and link it to the primary database as a read replica

Answer: C

30.

An application runs on Amazon EC2 instances across multiple Availability Zones. The instances run in an Amazon EC2 Auto Scaling group behind an Application Load Balancer. The application performs best when the CPU utilization of the EC2 instances is at or near 40%.

What should a solutions architect do to maintain the desired performance across all instances in the group?

A. Use a simple scaling policy to dynamically scale the Auto Scaling group.
B. Use a target tracking policy to dynamically scale the Auto Scaling group
C. Use an AWS Lambda function to update the desired Auto Scaling group capacity.
D. Use scheduled scaling actions to scale up and scale down the Auto Scaling group

Answer: B

31.

A company runs a multi-tier web application that hosts news content. The application runs on Amazon EC2 instances behind an Application Load Balancer. The instances run in an EC2 Auto Scaling group across multiple Availability Zones and use an Amazon Aurora database. A solutions architect needs to make the application more resilient to periodic increases in request rates

Which architecture should the solutions architect implement? (Select TWO.)

A. Add AWS Shield.
B. Add Aurora Replicas.
C. Add AWS Direct Connect.
D. Add AWS Global Accelerator.
E. Add an Amazon CloudFront distribution in front of the Application Load Balancer.

Answer: BE

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32.

A solutions architect is optimizing a website for an upcoming musical event. Videos of the performances will be streamed in real time and then will be available on demand. The event is expected to attract a global online audience.

Which service will improve the performance of both the real-time and on-demand streaming?

A. Amazon CloudFront
B. AWS Global Accelerator
C. Amazon Route 53
D. Amazon S3 Transfer Acceleration

Answer: A

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33.

A company serves content to its subscribers across the world using an application running on AWS. The application has several Amazon EC2 instances in a private subnet behind an Application Load Balancer (ALB). Due to a recent change in copyright restrictions, the chief information officer (CIO) wants to block access for certain countries.

Which action will meet these requirements?

A. Modify the ALB security group to deny incoming traffic from blocked countries.
B. Modify the security group for EC2 instances to deny incoming traffic from blocked countries.
C. Use Amazon CloudFront to serve the application and deny access to blocked countries.
D. Use ALB listener rules to return access denied responses to incoming traffic from blocked countries.

Answer: C

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34.

A manufacturing company wants to implement predictive maintenance on its machinery equipment. The company will install thousands of IoT sensors that will send data to AWS in real time. A solutions architect is tasked with implementing a solution that will receive events in an ordered manner for each machinery asset and ensure that data is saved for further processing at a later time.

Which solution would be MOST efficient?

A. Use Amazon Kinesis Data Streams for real-time events with a partition for each equipment asset. Use Amazon Kinesis Data Firehose to save data to Amazon S3.
B. Use Amazon Kinesis Data Streams for real-time events with a shard for each equipment asset. Use Amazon Kinesis Data Firehose to save data to Amazon EBS.
C. Use an Amazon SQS FIFO queue for real-time events with one queue for each equipment asset. Trigger an AWS Lambda function for the SQS queue to save data to Amazon EFS.
D. Use an Amazon SQS standard queue for real-time events with one queue for each equipment asset. Trigger an AWS Lambda function from the SQS queue to save data to Amazon S3.

Answer: A

35

A company has deployed an API in a VPC behind an internet-facing Application Load Balancer (ALB). An application that consumes the API as a client is deployed in a second account in private subnets behind a NAT gateway. When requests to the client application increase, the NAT gateway costs are higher than expected. A solutions architect has configured the ALB to be internal.

Which combination of architectural changes will reduce the NAT gateway costs? (Select TWO.)

A. Configure a VPC peering connection between the two VPCs. Access the API using the private address.
B. Configure an AWS Direct Connect connection between the two VPCs. Access the API using the private address.
C. Configure a ClassicLink connection for the API into the client VPC. Access the API using the ClassicLink address.

D. Configure a Private Link connection for the API into the client VPC. Access the API using the Private Link address.
E. Configure an AWS Resource Access Manager connection between the two accounts. Access the API using the private address

Answer: AD

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36.

A company's legacy application is currently relying on a single-instance Amazon RDS MySQL database without encryption. Due to new compliance requirements, all existing and new data in this database must be encrypted.

How should this be accomplished?

A. Create an Amazon S3 bucket with server-side encryption enabled. Move all the data to Amazon S3. Delete the RDS instance.
B. Enable RDS Multi-AZ mode with encryption at rest enabled. Perform a failover to the standby instance to delete the original instance.
C. Take a snapshot of the RDS instance. Create an encrypted copy of the snapshot. Restore the RDS instance from the encrypted snapshot.
D. Create an RDS read replica with encryption at rest enabled. Promote the read replica to master and switch the application over to the new master. Delete the old RDS instance.

Answer: C

37.

A company has a three-tier image-sharing application. It uses an Amazon EC2 instance for the front-end layer, another for the backend tier, and a third for the MySQL database. A solutions architect has been tasked with designing a solution that is highly available, and requires the least amount of changes to the application.

Which solution meets these requirements?

A. Use Amazon S3 to host the front-end layer and AWS Lambda functions for the backend layer. Move the database to an Amazon DynamoDB table and use Amazon S3 to store and serve users' images.

B. Use load balanced Multi-AZ AWS Elastic Beanstalk environments for the front-end and backend layers. Move the database to an Amazon RDS instance with multiple read replicas to store and serve users' images.

C. Use Amazon S3 to host the front-end layer and a fleet of Amazon EC2 instances in an Auto Scaling group for the backend layer. Move the database to a memory optimized instance type to store and serve users' images.

D. Use load balanced Multi-AZ AWS Elastic Beanstalk environments for the front-end and backend layers. Move the database to an Amazon RDS instance with a Multi-AZ deployment. Use Amazon S3 to store and serve users' images.

Answer: D

38.

A web application is deployed in the AWS Cloud. It consists of a two-tier architecture that includes a web layer and a database layer. The web server is vulnerable to cross-site scripting (XSS) attacks.

What should a solutions architect do to remediate the vulnerability?

A. Create a Classic Load Balancer. Put the web layer behind the load balancer and enable AWS WAF.
B. Create a Network Load Balancer. Put the web layer behind the load balancer and enable AWS WAF.
C. Create an Application Load Balancer. Put the web layer behind the load balancer and enable AWS WAF.
D. Create an Application Load Balancer. Put the web layer behind the load balancer and use AWS Shield Standard.

Answer: C

39.

A recently acquired company is required to build its own infrastructure on AWS and migrate multiple applications to the cloud within a month. Each application has approximately 50 TB of data to be transferred. After the migration is complete, this company and its parent company will both require secure network connectivity with consistent throughput from their data centers to the applications. A solutions architect must ensure one-time data migration and ongoing network connectivity

Which solution will meet these requirements?

A. AWS Direct Connect for both the initial transfer and ongoing connectivity.
B. AWS Site-to-Site VPN for both the initial transfer and ongoing connectivity.
C. AWS Snowball for the initial transfer and AWS Direct Connect for ongoing connectivity.
D. AWS Snowball for the initial transfer and AWS Site-to-Site VPN for ongoing connectivity.

Answer: C

40.

Organizers for a global event want to put daily reports online as static HTML pages. The pages are expected to generate millions of views from users around the world. The files are stored in an Amazon S3 bucket. A solutions architect has been asked to design an efficient and effective solution.

Which action should the solutions architect take to accomplish this?

A. Generate presigned URLs for the files.
B. Use cross-Region replication to all Regions.
C. Use the geoproximity feature of Amazon Route 53.
D. Use Amazon CloudFront with the S3 bucket as its origin.

Answer: D

41.

A company runs an application on a group of Amazon Linux EC2 instances. The application writes log files using standard API calls. For compliance reasons, all log files must be retained indefinitely and will be analyzed by a reporting tool that must access all files concurrently.

Which storage service should a solutions architect use to provide the MOST cost-effective solution?

A. Amazon EBS
B. Amazon EFS
C. Amazon EC2 instance store
D. Amazon S3

Answer: D

42.

A company's application is running on Amazon EC2 instances in a single Region. In the event of a disaster, a solutions architect needs to ensure that the resources can also be deployed to a second Region.

Which combination of actions should the solutions architect take to accomplish this? (Select TWO.)

A. Detach a volume on an EC2 instance and copy it to Amazon S3.
B. Launch a new EC2 instance from an Amazon Machine Image (AMI) in a new Region.
C. Launch a new EC2 instance in a new Region and copy a volume from Amazon S3 to the new instance.
D. Copy an Amazon Machine Image (AMI) of an EC2 instance and specify a different Region for the destination.
E. Copy an Amazon Elastic Block Store (Amazon EBS) volume from Amazon S3 and launch an EC2 instance in the destination Region using that EBS volume.

Answer: BD

43.

A solutions architect is designing a two-tier web application. The application consists of a public-facing web tier hosted on Amazon EC2 in public subnets. The database tier consists of Microsoft SQL Server running on Amazon EC2 in a private subnet Security is a high priority for the company.

How should security groups be configured in this situation? (Select TWO.)

A. Configure the security group for the web tier to allow inbound traffic on port 443 from 0.0.0.0/0.
B. Configure the security group for the web tier to allow outbound traffic on port 443 from 0.0.0.0/0.
C. Configure the security group for the database tier to allow inbound traffic on port 1433 from the security group for the web tier.
D. Configure the security group for the database tier to allow outbound traffic on ports 443 and 1433 to the security group for the web tier.
E. Configure the security group for the database tier to allow inbound traffic on ports 443 and 1433 from the security group for the web tier.

Answer: AC

Explanation:

we have 2 refrenced SGs.
webSG >>> allowing https
DBSG>>>>allowing db connection from WebSG

44.

A data science team requires storage for nightly log processing. The size and number of logs is unknown and will persist for 24 hours only.

What is the MOST cost-effective solution?

A. Amazon S3 Glacier
B. Amazon S3 Standard
C. Amazon S3 Intelligent-Tiering
D. Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA)

Answer: B

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45.

A company is hosting a web application on AWS using a single Amazon EC2 instance that stores user-uploaded documents in an Amazon EBS volume. For better scalability and availability, the company duplicated the architecture and created a second EC2 instance and EBS volume in another Availability Zone, placing both behind an Application Load Balancer. After completing this change, users reported that each time they refreshed the website, they could see one subset of their documents or the other, but never all of the documents at the same time.

What should a solutions architect propose to ensure users see all of their documents at once?

A. Copy the data so both EBS volumes contain all the documents.
B. Configure the Application Load Balancer to direct a user to the server with the documents.
C. Copy the data from both EBS volumes to Amazon EFS. Modify the application to save new documents to Amazon EFS.
D. Configure the Application Load Balancer to send the request to both servers. Return each document from the correct server.

Answer: C

46.

A solutions architect is designing a system to analyze the performance of financial markets while the markets are closed. The system will run a series of compute-intensive jobs for 4 hours every night. The time to complete the compute jobs is expected to remain constant, and jobs cannot be interrupted once started. Once completed, the system is expected to run for a minimum of 1 year.

Which type of Amazon EC2 instances should be used to reduce the cost of the system?

A. Spot Instances
B. On-Demand Instances
C. Standard Reserved Instances
D. Scheduled Reserved Instances

Answer: D

47.

A company hosts a static website on-premises and wants to migrate the website to AWS. The website should load as quickly as possible for users around the world. The company also wants the most cost-effective solution.

What should a solutions architect do to accomplish this?

A. Copy the website content to an Amazon S3 bucket. Configure the bucket to serve static webpage content. Replicate the S3 bucket to multiple AWS Regions.
B. Copy the website content to an Amazon S3 bucket. Configure the bucket to serve static webpage content. Configure Amazon CloudFront with the S3 bucket as the origin.
C. Copy the website content to an Amazon EBS-backed Amazon EC2 instance running Apache HTTP Server. Configure Amazon Route 53 geolocation routing policies to select the closest origin.
D. Copy the website content to multiple Amazon EBS-backed Amazon EC2 instances running Apache HTTP Server in multiple AWS Regions. Configure Amazon CloudFront geolocation routing policies to select the closest origin.

Answer: B

48.

A solutions architect is implementing a document review application using an Amazon S3 bucket for storage. The solution must prevent accidental deletion of the documents and ensure that all versions of the documents are available. Users must be able to download, modify, and upload documents

Which combination of actions should be taken to meet these requirements? (Select TWO.)

A. Enable a read-only bucket ACL.
B. Enable versioning on the bucket.
C. Attach an IAM policy to the bucket.
D. Enable MFA Delete on the bucket.
E. Encrypt the bucket using AWS KMS.

Answer: BD

49.

A company built a food ordering application that captures user data and stores it for future analysis. The application's static front end is deployed on an Amazon EC2 instance. The front-end application sends the requests to the backend application running on separate EC2 instance. The backend application then stores the data in Amazon RDS.

What should a solutions architect do to decouple the architecture and make it scalable?

A. Use Amazon S3 to serve the front-end application, which sends requests to Amazon EC2 to execute the backend application. The backend application will process and store the data in Amazon RDS.

B. Use Amazon S3 to serve the front-end application and write requests to an Amazon Simple Notification Service (Amazon SNS) topic. Subscribe Amazon EC2 instances to the HTTP/HTTPS endpoint of the topic, and process and store the data in Amazon RDS.

C. Use an EC2 instance to serve the front end and write requests to an Amazon SQS queue. Place the backend instance in an Auto Scaling group, and scale based on the queue depth to process and store the data in Amazon RDS.

D. Use Amazon S3 to serve the static front-end application and send requests to Amazon API Gateway, which writes the requests to an Amazon SQS queue. Place the backend instances in an Auto Scaling group, and scale based on the queue depth to process and store the data in Amazon RDS.

Answer: D

50.

A solutions architect is designing a new service behind Amazon API Gateway. The request patterns for the service will be unpredictable and can change suddenly from 0 requests to over 500 per second. The total size of the data that needs to be persisted in a backend database is currently less than 1 GB with unpredictable future growth. Data can be queried using simple key-value requests.

Which combination of AWS services would meet these requirements? (Select TWO.)

A. AWS Fargate
B. AWS Lambda
C. Amazon DynamoDB
D. Amazon EC2 Auto Scaling
E. MySQL-compatible Amazon Aurora

Answer: BC

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51.

A solutions architect needs to design a managed storage solution for a company's application that includes high-performance machine learning. This application runs on AWS Fargate, and the connected storage needs to have concurrent access to files and deliver high performance.

Which storage option should the solutions architect recommend?

A. Create an Amazon S3 bucket for the application and establish an IAM role for Fargate to communicate with Amazon S3.
B. Create an Amazon FSx for Lustre file share and establish an IAM role that allows Fargate to communicate with FSx for Lustre.
C. Create an Amazon Elastic File System (Amazon EFS) file share and establish an IAM role that allows Fargate to communicate with Amazon EFS.
D. Create an Amazon Elastic Block Store (Amazon EBS) volume for the application and establish an IAM role that allows Fargate to communicate with Amazon EBS.

Answer: B

52.

A company has a multi-tier application that runs six front-end web servers in an Amazon EC2 Auto Scaling group in a single Availability Zone behind an Application Load Balancer (ALB). A solutions architect needs to modify the infrastructure to be highly available without modifying the application.

Which architecture should the solutions architect choose that provides high availability?

A. Create an Auto Scaling group that uses three instances across each of two Regions.
B. Modify the Auto Scaling group to use three instances across each of two Availability Zones.
C. Create an Auto Scaling template that can be used to quickly create more instances in another Region.
D. Change the ALB in front of the Amazon EC2 instances in a round-robin configuration to balance traffic to the web tier.

Answer: B

53.

A company runs an internal browser-based application. The application runs on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Amazon EC2 Auto Scaling group across multiple Availability Zones. The Auto Scaling group scales up to 20 instances during work hours, but scales down to 2 instances overnight. Staff are complaining that the application is very slow when the day begins, although it runs well by mid-morning.

How should the scaling be changed to address the staff complaints and keep costs to a minimum?

A. Implement a scheduled action that sets the desired capacity to 20 shortly before the office opens.
B. Implement a step scaling action triggered at a lower CPU threshold and decrease the cooldown period.
C. Implement a target tracking action triggered at a lower CPU threshold and decrease the cooldown period.
D. Implement a scheduled action that sets the minimum and maximum capacity to 20 shortly before the office opens.

Answer: A

54.

A solutions architect is designing a solution to access a catalog of images and provide users with the ability to submit requests to customize images. Image customization parameters will be in any request sent to an AWS API Gateway API. The customized image will be generated on demand, and users will receive a link they can click to view or download their customized image. The solution must be highly available for viewing and customizing images.

What is the MOST cost-effective solution to meet these requirements?

A. Use Amazon EC2 instances to manipulate the original image into the requested customization. Store the original and manipulated images in Amazon S3. Configure an Elastic Load Balancer in front of the EC2 instances.

A. Use Amazon EC2 instances to manipulate the original image into the requested customization. Store the original and manipulated images in Amazon S3. Configure an Elastic Load Balancer in front of the EC2 instances.

B. Use AWS Lambda to manipulate the original image to the requested customization. Store the original and manipulated images in Amazon S3. Configure an Amazon CloudFront distribution with the S3 bucket as the origin.

C. Use AWS Lambda to manipulate the original image to the requested customization. Store the original images in Amazon S3 and the manipulated images in Amazon DynamoDB. Configure an Elastic Load Balancer in front of the Amazon EC2 instances

D. Use Amazon EC2 instances to manipulate the original image into the requested customization. Store the original images in Amazon S3 and the manipulated images in Amazon DynamoDB. Configure an Amazon CloudFront distribution with the S3 bucket as the origin.

Answer: B

55.

A bicycle sharing company is developing a multi-tier architecture to track the location of its bicycles during peak operating hours. The company wants to use these data points in its existing analytics platform. A solutions architect must determine the most viable multi-tier option to support this architecture. The data points must be accessible from the REST API.

Which action meets these requirements for storing and retrieving location data?

A. Use Amazon Athena with Amazon S3
B. Use Amazon API Gateway with AWS Lambda
C. Use Amazon QuickSight with Amazon Redshift.
D. Use Amazon API Gateway with Amazon Kinesis Data Analytics.

Answer: B

56.

A solutions architect is deploying a distributed database on multiple Amazon EC2 instances. The database stores all data on multiple instances so it can withstand the loss of an instance. The database requires block storage with latency and throughput to support several million transactions per second per server.

Which storage solution should the solutions architect use?

A. Amazon EBS
B. Amazon EC2 instance store
C. Amazon EFS
D. Amazon S3

Answer: C

Explanation:

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57.

A solutions architect needs to ensure that API calls to Amazon Dynamo DB from Amazon EC2 instances in a VPC do not traverse the internet.

What should the solutions architect do to accomplish this? (Select TWO.)

A. Create a route table entry for the endpoint.
B. Create a gateway endpoint for DynamoDB.
C. Create a new DynamoDB table that uses the endpoint.
D. Create an ENI for the endpoint in each of the subnets of the VPC.
E. Create a security group entry in the default security group to provide access.

Answer: AB

58.

A solutions architect is designing a web application that will run on Amazon EC2 instances behind an Application Load Balancer (ALB). The company strictly requires that the application be resilient against malicious internet activity and attacks, and protect against new common vulnerabilities and exposures.

What should the solutions architect recommend?

A. Leverage Amazon CloudFront with the ALB endpoint as the origin.
B. Deploy an appropriate managed rule for AWS WAF and associate it with the ALB.
C. Subscribe to AWS Shield Advanced and ensure common vulnerabilities and exposures are blocked.
D. Configure network ACLs and security groups to allow only ports 80 and 443 to access the EC2 instances.

Answer: B

Explanation:

My answer here was C not A as I can see above.
the right answer can be either shield advanced or WAF. Basically shield advanced have WAF included.
But it costs more cause it has also automatic remediation.
so right answer according to cost is B

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59.

A company has been storing analytics data in an Amazon RDS instance for the past few years. The company asked a solutions architect to find a solution that allows users to access this data using an API. The expectation is that the application will experience periods of inactivity but could receive bursts of traffic within seconds.

Which solution should the solutions architect suggest?

A. Set up an Amazon API Gateway and use Amazon ECS.
B. Set up an Amazon API Gateway and use AWS Elastic Beanstalk.
C. Set up an Amazon API Gateway and use AWS Lambda functions
D. Set up an Amazon API Gateway and use Amazon EC2 with Auto Scaling.

Answer: C

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60.

A company's web application is using multiple Linux Amazon EC2 instances and storing data on Amazon EBS volumes. The company is looking for a solution to increase the resiliency of the application in case of a failure and to provide storage that complies with atomicity, consistency, isolation, and durability (ACID).

What should a solutions architect do to meet these requirements?

A. Launch the application on EC2 instances in each Availability Zone. Attach EBS volumes to each EC2 instance.
B. Create an Application Load Balancer with Auto Scaling groups across multiple Availability Zones. Mount an instance store on each EC2 instance.
C. Create an Application Load Balancer with Auto Scaling groups across multiple Availability Zones. Store data on Amazon EFS and mount a target on each instance
D. Create an Application Load Balancer with Auto Scaling groups across multiple Availability Zones. Store data using Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA).

Answer: C

61.

A company has an application that calls AWS Lambda functions. A recent code review found database credentials stored in the source code. The database credentials need to be removed from the Lambda source code. The credentials must then be securely stored and rotated on an ongoing basis to meet security policy requirements.

What should a solutions architect recommend to meet these requirements?

A. Store the password in AWS CloudHSM. Associate the Lambda function with a role that can retrieve the password from CloudHSM given its key ID.

A. Store the password in AWS CloudHSM. Associate the Lambda function with a role that can retrieve the password from CloudHSM given its key ID.
B. Store the password in AWS Secrets Manager. Associate the Lambda function with a role that can retrieve the password from Secrets Manager given its secret ID.
C. Move the database password to an environment variable associated with the Lambda function. Retrieve the password from the environment variable upon execution.
D. Store the password in AWS Key Management Service (AWS KMS). Associate the Lambda function with a role that can retrieve the password from AWS KMS given its key ID.

Answer: B

62.

A company hosts a static website within an Amazon S3 bucket. A solutions architect needs to ensure that data can be recovered in case of accidental deletion.

Which action will accomplish this?

A. Enable Amazon S3 versioning.
B. Enable Amazon S3 Intelligent-Tiering
C. Enable an Amazon S3 lifecycle policy.
D. Enable Amazon S3 cross-Region replication.

Answer: A

63.

A company is managing health records on-premises. The company must keep these records indefinitely, disable any modifications to the records once they are stored, and granularly audit access at all levels. The chief technology officer (CTO) is concerned because there are already millions of records not being used by any application, and the current infrastructure is running out of space. The CTO has requested a solutions architect design a solution to move existing data and support future records.

Which services can the solutions architect recommend to meet these requirements?

A. Use AWS DataSync to move existing data to AWS. Use Amazon S3 to store existing and new data Enable Amazon S3 object lock and enable AWS Cloud Trail with data events
B. Use AWS Storage Gateway to move existing data to AWS. Use Amazon S3 to store existing and new data Enable Amazon S3 object lock and enable AWS Cloud Trail with management events.
C. Use AWS Data Sync to move existing data to AWS. Use Amazon S3 to store existing and new data Enable Amazon S3 object lock and enable AWS Cloud Trail with management events.
D. Use AWS Storage Gateway to move existing data to AWS. Use Amazon Elastic Block Store (Amazon EBS) to store existing and new data. Enable Amazon S3 object lock and enable Amazon S3 server access logging.

Answer: A

64.

A company currently operates a web application backed by an Amazon RDS MySQL database. It has automated backups that are run daily and are not encrypted. A security audit requires future backups to be encrypted and the unencrypted backups to be destroyed. The company will make at least one encrypted backup before destroying the old backups.

What should be done to enable encryption for future backups?

A. Enable default encryption for the Amazon S3 bucket where backups are stored.
B. Modify the backup section of the database configuration to toggle the Enable encryption check box.
C. Create a snapshot of the database. Copy it to an encrypted snapshot. Restore the database from the encrypted snapshot.
D. Enable an encrypted read replica on RDS for MySQL. Promote the encrypted read replica to primary. Remove the original database instance.

Answer: C

65.

A company has recently updated its internal security standards. The company must now ensure all Amazon S3 buckets and Amazon Elastic Block Store (Amazon EBS) volumes are encrypted with keys created and periodically rotated by internal security specialists. The company is looking for a native, software-based AWS service to accomplish this goal.

What should a solutions architect recommend as a solution?

A. Use AWS Secrets Manager with customer master keys (CMKs) to store master key material and apply a routine to create a new CMK periodically and replace it in AWS Secrets Manager.
B. Use AWS Key Management Service (AWS KMS) with customer master keys (CMKs) to store master key material and apply a routine to re-create a new key periodically and replace it in AWS KMS.
C. Use an AWS CloudHSM cluster with customer master keys (CMKs) to store master key material and apply a routine to re-create a new key periodically and replace it in the CloudHSM cluster nodes.
D. Use AWS Systems Manager Parameter Store with customer master keys (CMKs) to store master key material and apply a routine to re-create a new key periodically and replace it in the Parameter Store.

Answer: A

66.

A company uses Amazon S3 as its object storage solution. The company has thousands of S3 buckets it uses to store data. Some of the S3 buckets have data that is accessed less frequently than others. A solutions architect found that lifecycle policies are not consistently implemented or are implemented partially, resulting in data being stored in high-cost storage.

Which solution will lower costs without compromising the availability of objects?

A. Use S3 ACLs.
B. Use Amazon Elastic Block Store (Amazon EBS) automated snapshots.
C. Use S3 Intelligent-Tiering storage.
D. Use S3 One Zone-Infrequent Access (S3 One Zone-IA).

Answer: C

67.

A solutions architect is using Amazon S3 to design the storage architecture of a new digital media application. The media files must be resilient to the loss of an Availability Zone. Some files are accessed frequently while other files are rarely accessed in an unpredictable pattern. The solutions architect must minimize the costs of storing and retrieving the media files.

Which storage option meets these requirements?

A. S3 Standard
B. S3 Intelligent-Tiering
C. S3 Standard-Infrequent Access (S3 Standard-IA)
D. S3 One Zone-Infrequent Access (S3 One Zone-IA)

Answer: B

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68.

A company is hosting multiple websites for several lines of business under its registered parent domain. Users accessing these websites will be routed to appropriate backend Amazon EC2 instances based on the subdomain. The websites host static webpages, images, and server-side scripts like PHP and JavaScript.

Some of the websites experience peak access during the first two hours of business with constant usage throughout the rest of the day. A solutions architect needs to design a solution that will automatically adjust capacity to these traffic patterns while keeping costs low.

Which combination of AWS services or features will meet these requirements? (Select TWO.)

A. AWS Batch
B. Network Load Balancer
C. Application Load Balancer
D. Amazon EC2 Auto Scaling

E. Amazon S3 website hosting

Answer: DE

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69.

A development team needs to host a website that will be accessed by other teams. The website contents consist of HTML, CSS, client-side JavaScript, and images.

Which method is the MOST cost-effective for hosting the website?

A. Containerize the website and host it in AWS Fargate.
B. Create an Amazon S3 bucket and host the website there.
C. Deploy a web server on an Amazon EC2 instance to host the website.
D. Configure an Application Load Balancer with an AWS Lambda target that uses the Express.js framework.

Answer: B

70.

A company uses an Amazon S3 bucket to store static images for its website. The company configured permissions to allow access to Amazon S3 objects by privileged users only.

What should a solutions architect do to protect against data loss? (Select TWO.)

A. Enable versioning on the S3 bucket.
B. Enable access logging on the S3 bucket
C. Enable server-side encryption on the S3 bucket.
D. Configure an S3 lifecycle rule to transition objects to Amazon S3 Glacier.
E. Use MFA Delete to require multi-factor authentication to delete an object.

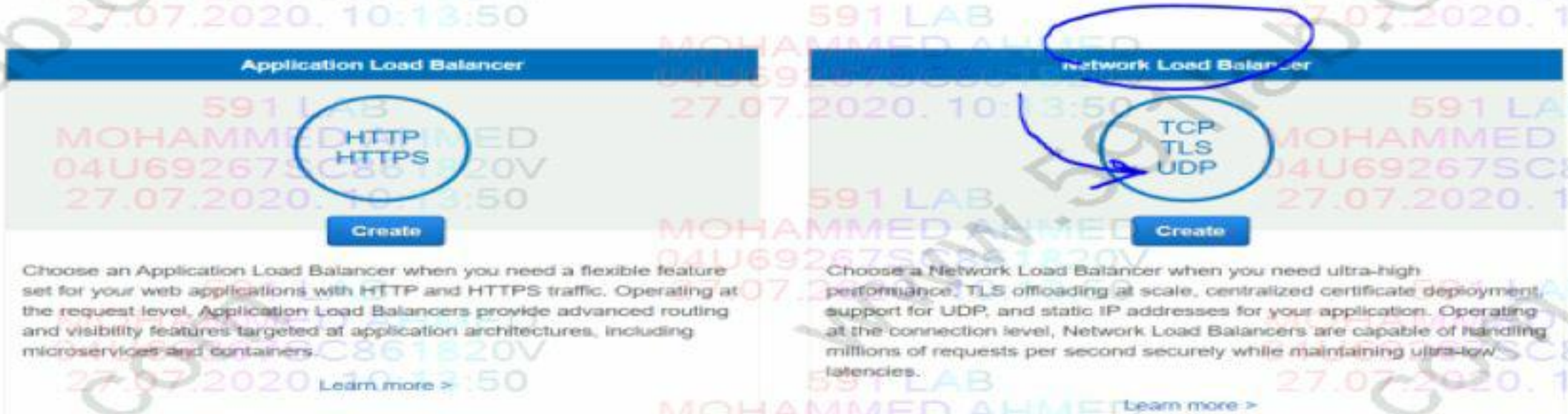
Answer: AE

for data storage.

Answer: B

Explanation:

My answer is just right as ALB only work with http/https protocol for listeners. But NLB works with layer four only so TCP/UDP.



71.

A company is developing a real-time multiplayer game that uses UDP for communications between the client and servers in an Auto Scaling group. Spikes in demand are anticipated during the day, so the game server platform must adapt accordingly. Developers want to store gamer scores and other non-relational data in a database solution that will scale without intervention.

Which solution should a solutions architect recommend?

A. Use Amazon Route 53 for traffic distribution and Amazon Aurora Serverless for data storage.
B. Use a Network Load Balancer for traffic distribution and Amazon DynamoDB on-demand for data storage.
C. Use a Network Load Balancer for traffic distribution and Amazon Aurora Global Database for data storage.

D. Use an Application Load Balancer for traffic distribution and Amazon DynamoDB global tables for data storage.

Answer: B

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72.

A solutions architect is designing the cloud architecture for a new application being deployed to AWS. The application allows users to interactively download and upload files. Files older than 2 years will be accessed less frequently. The solutions architect needs to ensure that the application can scale to any number of files while maintaining high availability and durability.

Which scalable solutions should the solutions architect recommend? (Select TWO.)

A. Store the files on Amazon S3 with a lifecycle policy that moves objects older than 2 years to S3 Glacier.
B. Store the files on Amazon S3 with a lifecycle policy that moves objects older than 2 years to S3 Standard-Infrequent Access (S3 Standard-IA).
C. Store the files on Amazon Elastic File System (Amazon EFS) with a lifecycle policy that moves objects older than 2 years to EFS Infrequent Access (EFS IA).
D. Store the files in Amazon Elastic Block Store (Amazon EBS) volumes. Schedule snapshots of the volumes. Use the snapshots to archive data older than 2 years.
E. Store the files in RAID-striped Amazon Elastic Block Store (Amazon EBS) volumes. Schedule snapshots of the volumes. Use the snapshots to archive data older than 2 years.

Answer: BC

73.

A company is creating an architecture for a mobile app that requires minimal latency for its users. The company's architecture consists of Amazon EC2 instances behind an Application Load Balancer running in an Auto Scaling group. The EC2 instances connect to Amazon RDS. Application beta testing showed there was a slowdown when reading the data. However, the metrics indicate that the EC2 instances do not cross any CPU utilization thresholds.

How can this issue be addressed?

A. Reduce the threshold for CPU utilization in the Auto Scaling group.
B. Replace the Application Load Balancer with a Network Load Balancer.
C. Add read replicas for the RDS instances and direct read traffic to the replica.
D. Add Multi-AZ support to the RDS instances and direct read traffic to the new EC2 instance.

Answer: C

74.

A database is on an Amazon RDS MySQL 5.6 Multi-AZ DB instance that experiences highly dynamic reads. Application developers notice a significant slowdown when testing read performance from a secondary AWS Region. The developers want a solution that provides less than 1 second of read replication latency.

What should the solutions architect recommend?

A. Install MySQL on Amazon EC2 in the secondary Region.
B. Migrate the database to Amazon Aurora with cross-Region replicas.
C. Create another RDS for MySQL read replica in the secondary Region.
D. Implement Amazon ElastiCache to improve database query performance.

Answer: D

75.

A company runs an application on Amazon EC2 instances. The application is deployed in private subnets in three Availability Zones of the us-east-1 Region. The instances must be able to connect to the internet to download files. The company wants a design that is highly available across the Region.

Which solution should be implemented to ensure that there are no disruptions to internet connectivity?

A. Deploy a NAT instance in a private subnet of each Availability Zone.

B. Deploy a NAT gateway in a public subnet of each Availability Zone.
C. Deploy a transit gateway in a private subnet of each Availability Zone.
D. Deploy an internet gateway in a public subnet of each Availability Zone.

Answer: B

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76.

A company has a web server running on an Amazon EC2 instance in a public subnet with an Elastic IP address. The default security group is assigned to the EC2 instance. The default network ACL has been modified to block all traffic. A solutions architect needs to make the web server accessible from everywhere on port 443.

Which combination of steps will accomplish this task? (Select TWO.)

A. Create a security group with a rule to allow TCP port 443 from source 0.0.0.0/0.
B. Create a security group with a rule to allow TCP port 443 to destination 0.0.0.0/0.
C. Update the network ACL to allow TCP port 443 from source 0.0.0.0/0.
D. Update the network ACL to allow inbound/outbound TCP port 443 from source 0.0.0.0/0 and to destination 0.0.0.0/0.
E. Update the network ACL to allow inbound TCP port 443 from source 0.0.0.0/0 and outbound TCP port 32768-65535 to destination 0.0.0.0/0.

Answer: AD

77.

A company's dynamic website is hosted using on-premises servers in the United States. The company is launching its product in Europe, and it wants to optimize site loading times for new European users. The site's backend must remain in the United States. The product is being launched in a few days, and an immediate solution is needed.

What should the solutions architect recommend?

A. Launch an Amazon EC2 instance in us-east-1 and migrate the site to it.
B. Move the website to Amazon S3. Use cross-Region replication between Regions.
C. Use Amazon CloudFront with a custom origin pointing to the on-premises servers.
D. Use an Amazon Route 53 geo-proximity routing policy pointing to on-premises servers.

Answer: C

78.

A company captures clickstream data from multiple websites and analyzes it using batch processing. The data is loaded nightly into Amazon Redshift and is consumed by business analysts. The company wants to move towards near-real-time data processing for timely insights. The solution should process the streaming data with minimal effort and operational overhead.

Which combination of AWS services are MOST cost-effective for this solution? (Select TWO.)

A. Amazon EC2
B. AWS Lambda
C. Amazon Kinesis Data Streams
D. Amazon Kinesis Data Firehose
E. Amazon Kinesis Data Analytics

Answer: DE

Explanation:

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79.

A solutions architect is performing a security review of a recently migrated workload. The workload is a web application that consists of Amazon EC2 instances in an Auto Scaling Load Balancer. The solutions architect must improve the security posture and minimize the impact of a DDoS attack on resources.

Which solution is MOST effective?

A. Configure an AWS WAF ACL with rate-based rules. Create an Amazon CloudFront distribution that points to the Application Load Balancer. Enable the WAF ACL on the
B. Create a custom AWS Lambda function that adds identified attacks into a common vulnerability pool to capture a potential DDoS attack. Use the identified information block access
C. Enable VPC Flow Logs and store them in Amazon S3. Create a custom AWS Lambda function that parses the logs looking for a DDoS attack. Modify a network ACL addresses
D. Enable Amazon Guard Duty and configure findings written to Amazon CloudWatch. Create an event with CloudWatch Events for DDoS alerts that triggers Amazon Sim (Amazon SNS). Have Amazon SNS invoke a custom AWS Lambda function that parses the logs, looking for a DDoS attack. Modify a network ACL to block identified s

Answer: A

80.

A company is migrating a NoSQL database cluster to Amazon EC2. The database automatically replicates data to maintain at least three copies of the data. I/O throughput of the

Which instance type should a solutions architect recommend for the migration?

A. Storage optimized instances with instance store
B. Burstable general purpose instances with an Amazon Elastic Block Store (Amazon EBS) volume
C. Memory optimized instances with Amazon Elastic Block Store (Amazon EBS) optimization enabled
D. Compute optimized instances with Amazon Elastic Block Store (Amazon EBS) optimization enabled

Answer: C

81.

A company has implemented one of its microservices on AWS Lambda that accesses an Amazon DynamoDB table named Books. A solutions architect is designing an IAM policy to be attached to giving it access to put update, and delete items in the Books table. The IAM policy must prevent the function from performing any other actions on the Books table or any other.

Which IAM policy would fulfill these needs and provide the LEAST privileged access?

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "PutUpdateDeleteOnBooks",
            "Effect": "Allow",
            "Action": [
                "dynamodb:PutItem",
                "dynamodb:UpdateItem",
                "dynamodb:DeleteItem"
            ],
            "Resource": "arn:aws:dynamodb:us-west-2:123456789012:table/Books"
        }
    ]
}
```

A.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "PutUpdateDeleteOnBooks",
            "Effect": "Allow",
            "Action": [
                "dynamodb:PutItem",
                "dynamodb:UpdateItem",
                "dynamodb:DeleteItem"
            ],
            "Resource": "arn:aws:dynamodb:us-west-2:123456789012:table/*"
        }
    ]
}
```

B.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "PutUpdateDeleteOnBooks",
            "Effect": "Allow",
            "Action": "dynamodb:*",
            "Resource": "arn:aws:dynamodb:us-west-2:123456789012:table/Books"
        }
    ]
}
```

C.

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D.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Sid": "PutUpdateDeleteOnBooks",
            "Effect": "Allow",
            "Action": "dynamodb:*",
            "Resource": "arn:aws:dynamodb:us-west-2:123456789012:table/Books"
        },
        {
            "Sid": "PutUpdateDeleteOnBooks",
            "Effect": "Deny",
            "Action": "dynamodb:*:*",
            "Resource": "arn:aws:dynamodb:us-west-2:123456789012:table/Books"
        }
    ]
}
```

Answer: A

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82.

A company hosts its website on AWS. To address the highly variable demand, the company has implemented Amazon EC2 Auto Scaling. Management is concerned that the company is over-provisioning its infrastructure, especially at the front end of the three-tier application. A solutions architect needs to ensure costs are optimized without impacting performance.

What should the solutions architect do to accomplish this?

A. Use Auto Scaling with Reserved Instances.
B. Use Auto Scaling with a scheduled scaling policy.
C. Use Auto Scaling with the suspend-resume feature.
D. Use Auto Scaling with a target tracking scaling policy.

Answer: A

83.

A company is running a highly sensitive application on Amazon EC2 backed by an Amazon RDS database. Compliance regulations mandate that all personally identifiable information (PMI) be encrypted.

Which solution should a solutions architect recommend to meet this requirement with the LEAST amount of changes to the infrastructure?

A. Deploy AWS Certificate Manager to generate certificates. Use the certificates to encrypt the database volume.
B. Deploy AWS CloudHSM, generate encryption keys, and use the customer master key (CMK) to encrypt database volumes.
C. Configure SSL encryption using AWS Key Management Service customer master keys (AWS KMS CMKs) to encrypt database volumes.
D. Configure Amazon Elastic Block Store (Amazon EBS) encryption and Amazon RDS encryption with AWS Key Management Service (AWS KMS) keys to encrypt instance and database volumes.

Answer: D

84.

A company is building applications in containers. The company wants to migrate its on-premises development and operations services from its on-premises data center to AWS, Management states cloud agnostic and use the same configuration and administrative tools across all production systems. A solutions architect needs to design a managed solution that will align with open-source soft

Which solution meets these requirements?

A. Launch the containers on Amazon EC2 with EC2 instance worker nodes.
B. Launch the containers on Amazon Elastic Kubernetes Service (Amazon EKS) and EKS worker nodes.
C. Launch the containers on Amazon Elastic Container Service (Amazon ECS) with AWS Fargate instances.
D. Launch the containers on Amazon Elastic Container Service (Amazon ECS) with Amazon EC2 instance worker nodes.

Answer: D

85.

A company is planning to deploy an Amazon RDS DB instance running Amazon Aurora. The company has a backup retention policy requirement of 90 days.

Which solution should a solutions architect recommend?

A. Set the backup retention period to 90 days when creating the RDS DB instance.
B. Configure RDS to copy automated snapshots to a user-managed Amazon S3 bucket with a lifecycle policy set to delete after 90 days.
C. Create an AWS Backup plan to perform a daily snapshot of the RDS database with the retention set to 90 days. Create an AWS Backup job to schedule the execution of the backup pland
D. Use a daily scheduled event with Amazon CloudWatch Events to execute a custom AWS Lambda function that makes a copy of the RDS automated snapshot. Purge snapshots older than

Answer: C

86.

A company wants to deploy a shared file system for its .NET application servers and Microsoft SQL Server databases running on Amazon EC2 instances with Windows Server 2016. The solution m

corporate Active Directory domain, be highly durable, be managed by AWS, and provide high levels of throughput and IOPS.

Which solution meets these requirements?

A. Use Amazon FSx for Windows File Server.
B. Use Amazon Elastic File System (Amazon EFS).
C. Use AWS Storage Gateway in file gateway mode.
D. Deploy a Windows file server on two On Demand instances across two Availability Zones.

Answer: A

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87.

A company is hosting its static website in an Amazon S3 bucket, which is the origin for Amazon CloudFront. The company has users in the United States, Canada, and Europe and wants to reduce

What should a solutions architect recommend?

A. Adjust the CloudFront caching time to live (TTL) from the default to a longer timeframe.
B. Implement CloudFront events with Lambda@Edge to run the website's data processing.
C. Modify the CloudFront price class to include only the locations of the countries that are served.
D. Implement a CloudFront Secure Sockets Layer (SSL) certificate to push security closer to the locations of the countries that are served.

Answer: C

88.

A company is concerned that two NAT instances in use will no longer be able to support the traffic needed for the company's application. A solutions architect wants to implement a solution that is h

automatically scalable.

What should the solutions architect recommend?

A. Remove the two NAT instances and replace them with two NAT gateways in the same Availability Zone.
B. Use Auto Scaling groups with Network Load Balancers for the NAT instances in different Availability Zones.
C. Remove the two NAT instances and replace them with two NAT gateways in different Availability Zones.
D. Replace the two NAT instances with Spot Instances in different Availability Zones and deploy a Network Load Balancer.

Answer: C

89.

A solutions architect is designing the storage architecture for a new web application used for storing and viewing engineering drawings. All application components will be deployed on the AWS infra

The application design must support caching to minimize the amount of time that users wait for the engineering drawings to load. The application must be able to store petabytes of data.

Which combination of storage and caching should the solutions architect use?

A. Amazon S3 with Amazon CloudFront
B. Amazon S3 Glacier with Amazon ElastiCache
C. Amazon Elastic Block Store (Amazon EBS) volumes with Amazon CloudFront
D. AWS Storage Gateway with Amazon ElastiCache

Answer: A

90.

A media company is evaluating the possibility of moving its systems to the AWS Cloud. The company needs at least 10 TB of storage with the maximum possible I/O performance for video processing, 300 TB of very durable storage for storing media content, and 900 TB of storage to meet requirements for archival media that is not in use anymore.

Which set of services should a solutions architect recommend to meet these requirements?

A. Amazon EBS for maximum performance, Amazon S3 for durable data storage, and Amazon S3 Glacier for archival storage.
B. Amazon EBS for maximum performance, Amazon EFS for durable data storage, and Amazon S3 Glacier for archival storage.
C. Amazon EC2 instance store for maximum performance, Amazon EFS for durable data storage, and Amazon S3 for archival storage.
D. Amazon EC2 instance store for maximum performance, Amazon S3 for durable data storage, and Amazon S3 Glacier for archival storage.

Answer: D

91.

A company operates a website on Amazon EC2 Linux instances. Some of the instances are failing. Troubleshooting points to insufficient swap space on the failed instances. The operations team lead needs a solution to monitor this.

What should solutions architect recommend?

A. Configure an Amazon CloudWatch Swap Usage metric dimension. Monitor the Swap Usage dimension in the EC2 metrics in CloudWatch.
B. Use EC2 metadata to collect information, then publish it to Amazon CloudWatch custom metrics. Monitor Swap Usage metrics in CloudWatch.

C. Install an Amazon CloudWatch agent on the instances. Run an appropriate script on a set schedule. Monitor Swap Utilization metrics in CloudWatch.
D. Enable detailed monitoring in the EC2 console. Create an Amazon CloudWatch Swap Utilization custom metric. Monitor SwapUtilization metrics in CloudWatch.

Answer: C

92.

92.

An operations team has a standard that states IAM policies should not be applied directly to users. Some new team members have not been following this standard. The operations manager needs a way to easily identify the users with attached policies.

What should a solutions architect do to accomplish this?

A. Monitor using AWS Cloud Trail.
B. Create an AWS Config rule to run daily.
C. Publish IAM user changes to Amazon SNS.
D. Run AWS Lambda when a user is modified.

Answer: D

93.

A solutions architect observes that a nightly batch processing job is automatically scaled up for 1 hour before the desired Amazon EC2 capacity is reached. The peak capacity is the same every night and the batch jobs always start at 1 AM. The solutions architect needs to find a cost-effective solution that will allow for the desired EC2 capacity to be reached quickly and allow the Auto Scaling group to scale down after the batch jobs are complete.

What should the solutions architect do to meet these requirements?

A. Increase the minimum capacity for the Auto Scaling group.
B. Increase the maximum capacity for the Auto Scaling group.
C. Configure scheduled scaling to scale up to the desired compute level.
D. Change the scaling policy to add more EC2 instances during each scaling operation.

Answer: C

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94.

A company wants to use an AWS Region as a disaster recovery location for its on-premises infrastructure. The company has 10 TB of existing data, and the on-premise data center has a 1 Gbps internet connection. A solutions architect must find a solution so the company can have its existing data on AWS in 72 hours without transmitting it using an unencrypted channel.

Which solution should the solutions architect select?

A. Send the initial 10 TB of data to AWS using FTP.

B. Send the initial 10 TB of data to AWS using AWS Snowball.
C. Establish a VPN connection between Amazon VPC and the company's data center.
D. Establish an AWS Direct Connect connection between Amazon VPC and the company's data center.

Answer: C

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95.

A company has a mobile chat application with a data store based in Amazon DynamoDB. Users would like new messages to be read with as little latency as possible. A solutions architect needs to design an optimal solution that requires minimal application changes.

Which method should the solutions architect select?

A. Configure Amazon DynamoDB Accelerator (DAX) for the new messages table. Update the code to use the DAX endpoint.
B. Add DynamoDB read replicas to handle the increased read load. Update the application to point to the read endpoint for the read replicas.
C. Double the number of read capacity units for the new messages table in Dynamo DB. Continue to use the existing DynamoDB endpoint.
D. Add an Amazon ElastiCache for Redis cache to the application stack. Update the application to point to the Redis cache endpoint instead of DynamoDB.

Answer: A

96.

A solutions architect is moving the static content from a public website hosted on Amazon EC2 instances to an Amazon S3 bucket. An Amazon CloudFront distribution will be used to deliver the static assets.

The security group used by the EC2 instances restricts access to a limited set of IP ranges. Access to the static content should be similarly restricted.

Which combination of steps will meet these requirements? (Select TWO.)

A. Create an origin access identity (OAI) and associate it with the distribution. Change the permissions in the bucket policy so that only the OAI can read the objects.
B. Create an AWS WAF web ACL that includes the same IP restrictions that exist in the EC2 security group. Associate this new web ACL with the CloudFront distribution.
C. Create a new security group that includes the same IP restrictions that exist in the current EC2 security group. Associate this new security group with the CloudFront distribution.
D. Create a new security group that includes the same IP restrictions that exist in the current EC2 security group. Associate this new security group with the S3 bucket hosting the static content.

E. Create a new IAM role and associate the role with the distribution. Change the permissions either on the S3 bucket or on the files within the S3 bucket so that only the newly created IAM role has read and download permissions.

Answer: A,B

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97.

A company wants to host a web application on AWS that will communicate to a database within a VPC. The application should be highly available.

What should a solutions architect recommend?

A. Create two Amazon EC2 instances to host the web servers behind a load balancer, and then deploy the database on a large instance.
B. Deploy a load balancer in multiple Availability Zones with an Auto Scaling group for the web servers, and then deploy Amazon RDS in multiple Availability Zones.
C. Deploy a load balancer in the public subnet with an Auto Scaling group for the web servers, and then deploy the database on an Amazon EC2 instance in the private subnet.
D. Deploy two web servers with an Auto Scaling group, configure a domain that points to the two web servers, and then deploy a database architecture in multiple Availability Zones.

Answer: A

98.

A leasing company generates and emails PDF statements every month for all its customers. Each statement is about 400 KB in size. Customers can download their statements from the website for up to 30 days from when the statements were generated. At the end of their 3-year lease, the customers are emailed a ZIP file that contains all the statements.

What is the MOST cost-effective storage solution for this situation?

A. Store the statements using the Amazon S3 Standard storage class. Create a lifecycle policy to move the statements to Amazon S3 Glacier storage after 1 day.
B. Store the statements using the Amazon S3 Glacier storage class. Create a lifecycle policy to move the statements to Amazon S3 Glacier Deep Archive storage after 30 days.
C. Store the statements using the Amazon S3 Standard storage class. Create a lifecycle policy to move the statements to Amazon S3 One Zone-Infrequent Access (53 One Zone-IA) storage after 30 days.
D. Store the statements using the Amazon S3 Standard-Infrequent Access (S3 Standard-IA) storage class. Create a lifecycle policy to move the statements to Amazon S3 Glacier storage after 30 days.

Answer: D

99.

A company is using a VPC peering strategy to connect its VPCs in a single Region to allow for cross-communication. A recent increase in account creations and VPCs has made it difficult to maintain the VPC peering strategy, and the company expects to grow to hundreds of VPCs. There are also new requests to create site-to-site VPNs with some of the VPCs. A solutions architect has been tasked with creating a centrally managed networking setup for multiple accounts, VPCs, and VPNs.

Which networking solution meets these requirements?

A. Configure shared VPCs and VPNs and share to each other.
B. Configure a hub-and-spoke VPC and route all traffic through VPC peering.
C. Configure an AWS Direct Connect connection between all VPCs and VPNs.
D. Configure a transit gateway with AWS Transit Gateway and connect all VPCs and VPNs.

Answer: D

100.

A healthcare company stores highly sensitive patient records. Compliance requires that multiple copies be stored in different locations. Each record must be stored for 7 years. The company has a service level agreement (SLA) to provide records to government agencies immediately for the first 30 days and then within 4 hours of a request thereafter.

What should a solutions architect recommend?

A. Use Amazon S3 with cross-Region replication enabled. After 30 days, transition the data to Amazon S3 Glacier using a lifecycle policy.
B. Use Amazon S3 with cross-origin resource sharing (CORS) enabled. After 30 days, transition the data to Amazon S3 Glacier using a lifecycle policy.
C. Use Amazon S3 with cross-Region replication enabled. After 30 days, transition the data to Amazon S3 Glacier Deep Archive using a lifecycle policy.
D. Use Amazon S3 with cross-origin resource sharing (CORS) enabled. After 30 days, transition the data to Amazon S3 Glacier Deep Archive using a lifecycle policy.

Answer: A

101.

A company is migrating to the AWS Cloud. A file server is the first workload to migrate. Users must be able to access the file share using the Server Message Block (SMB) protocol.

Which AWS managed service meets these requirements?

A. Amazon EBS
B. Amazon EC2
C. Amazon FSx
D. Amazon S3

Answer: C

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102.

A company runs multiple Amazon EC2 Linux instances in a VPC with applications that use a hierarchical directory structure. The applications need to rapidly and concurrently read and write to shared storage.

How can this be achieved?

A. Create an Amazon EFS file system and mount it from each EC2 instance,
B. Create an Amazon S3 bucket and permit access from all the EC2 instances in the VPC.
C. Create a file system on an Amazon EBS Provisioned IOPS SSD (101) volume. Attach the volume to all the EC2 instances.
D. Create file systems on Amazon EBS volumes attached to each EC2 instance. Synchronize the Amazon EBS volumes across the different EC2 instances.

Answer: A

103.

A company's website provides users with downloadable historical performance reports. The website needs a solution that will scale to meet the company's website demands globally. The solution should be cost-effective, limit the provisioning of infrastructure resources, and provide the fastest possible response time.

Which combination should a solutions architect recommend to meet these requirements?

A. Amazon CloudFront and Amazon S3
B. AWS Lambda and Amazon DynamoDB
C. Application Load Balancer with Amazon EC2 Auto Scaling
D. Amazon Route 53 with internal Application Load Balancers

Answer: A

104.

A web application runs on Amazon EC2 instances behind an Application Load Balancer. The application allows users to create custom reports of historical weather data. Generating a report can take up to 5 minutes. These long-running requests use many of the available incoming connections, making the system unresponsive to other users.

How can a solutions architect make the system more responsive?

A. Use Amazon SQS with AWS Lambda to generate reports.
B. Increase the idle timeout on the Application Load Balancer to 5 minutes.
C. Update the client-side application code to increase its request timeout to 5 minutes.
D. Publish the reports to Amazon S3 and use Amazon CloudFront for downloading to the user.

Answer: A

105.

A company's web application is running on Amazon EC2 instances behind an Application Load Balancer. The company recently changed its policy, which now requires the application to be accessed from one specific country only.

Which configuration will meet this requirement?

A. Configure the security group for the EC2 instances.
B. Configure the security group on the Application Load Balancer.
C. Configure AWS WAF on the Application Load Balancer in a VPC.
D. Configure the network ACL for the subnet that contains the EC2 instances.

Answer: C

106.

A media company stores video content in an Amazon Elastic Block Store (Amazon EBS) volume. A certain video file has become popular and a large number of users across the world are accessing this content. This has resulted in a cost increase.

Which action will DECREASE cost without compromising user accessibility?

A. Change the EBS volume to Provisioned IOPS (PIOPS).
B. Store the video in an Amazon S3 bucket and create an Amazon CloudFront distribution.
C. Split the video into multiple, smaller segments so users are routed to the requested video segments only.
D. Create an Amazon S3 bucket in each Region and upload the videos so users are routed to the nearest S3 bucket.

Answer: B

107.

A website runs a web application that receives a burst of traffic each day at noon. The users upload new pictures and content daily, but have been complaining of timeouts. The architecture uses Amazon EC2 Auto Scaling groups, and the custom application consistently takes 1 minute to initiate upon boot up before responding to user requests.

How should a solutions architect redesign the architecture to better respond to changing traffic?

A. Configure a Network Load Balancer with a slow start configuration.
B. Configure AWS ElastiCache for Redis to offload direct requests to the servers.
C. Configure an Auto Scaling step scaling policy with an instance warmup condition.
D. Configure Amazon CloudFront to use an Application Load Balancer as the origin.

Answer: C

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108.

A company has an application that posts messages to Amazon SQS. Another application polls the queue and processes the messages in an I/O-intensive operation. The company has a service level agreement (SLA) that specifies the maximum amount of time that can elapse between receiving the messages and responding to the users. Due to an increase in the number of messages, the company has difficulty meeting its SLA consistently.

What should a solutions architect do to help improve the application's processing time and ensure it can handle the load at any level?

A. Create an Amazon Machine Image (AMI) from the instance used for processing. Terminate the instance and replace it with a larger size.
B. Create an Amazon Machine Image (AMI) from the instance used for processing. Terminate the instance and replace it with an Amazon EC2 Dedicated Instance.
C. Create an Amazon Machine Image (AMI) from the instance used for processing. Create an Auto Scaling group using this image in its launch configuration. Configure the group with a target tracking policy to keep its aggregate CPU utilization below 70%.
D. Create an Amazon Machine Image (AMI) from the instance used for processing. Create an Auto Scaling group using this image in its launch configuration. Configure the group with a target tracking policy based on the age of the oldest message in the SQS queue.

Answer: D

109.

A solutions architect has configured the following IAM policy.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "lambda:*"
```

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```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": [
                "lambda:*"
            ],
            "Resource": "*"
        },
        {
            "Effect": "Deny",
            "Action": [
                "lambda:CreateFunction",
                "lambda:DeleteFunction"
            ],
            "Resource": "*",
            "Condition": {
                "IpAddress": {
                    "aws:SourceIp": "220.100.16.0/20"
                }
            }
        }
    ]
}
```

Which action will be allowed by the policy?

A. An AWS Lambda function can be deleted from any network.
B. An AWS Lambda function can be created from any network.
C. An AWS Lambda function can be deleted from the 100.220.0.0/20 network.
D. An AWS Lambda function can be deleted from the 220.100.16.0/20 network.

Answer: C

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110.

A company has a custom application running on an Amazon EC2 instance that:

- Reads a large amount of data from Amazon S3.
- Performs a multi-stage analysis.
- Writes the results to Amazon DynamoDB.

The application writes a significant number of large, temporary files during the multi-stage analysis. The process performance depends on the temporary storage performance.

What would be the fastest storage option for holding the temporary files?

A. Multiple Amazon S3 buckets with Transfer Acceleration for storage.
B. Multiple Amazon EBS drives with Provisioned IOPS and EBS optimization.
C. Multiple Amazon EFS volumes using the Network File System version 4.1 (NFSv4.1) protocol.

D. Multiple instance store volumes with software RAID 0.

Answer: D

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111.

A three-tier web application processes orders from customers. The web tier consists of Amazon EC2 instances behind an Application Load Balancer, a middle tier of three EC2 instances decoupled from the web tier using Amazon SQs, and an Amazon DynamoDB backend. At peak times, customers who submit orders using the site have to wait much longer than normal to receive confirmations due to lengthy processing times. A solutions architect needs to reduce these processing times.

Which action will be MOST effective in accomplishing this?

A. Replace the SQS queue with Amazon Kinesis Data Firehose.
B. Use Amazon ElastiCache for Redis in front of the DynamoDB backend tier.
C. Add an Amazon CloudFront distribution to cache the responses for the web tier.
D. Use Amazon EC2 Auto Scaling to scale out the middle tier instances based on the SQS queue depth.

Answer: D

112.

A company runs an application using Amazon ECS. The application creates resized versions of an original image and then makes Amazon S3 API calls to store the resized images in Amazon S3.

How can a solutions architect ensure that the application has permission to access Amazon S3?

A. Update the S3 role in AWS IAM to allow read/write access from Amazon ECS, and then relaunch the container.
B. Create an IAM role with S3 permissions, and then specify that role as the taskRoleArn in the task definition.
C. Create a security group that allows access from Amazon ECS to Amazon S3, and update the launch configuration used by the ECS cluster.
D. Create an IAM user with S3 permissions, and then relaunch the Amazon EC2 instances for the ECS cluster while logged in as this account.

Answer: B

113.

A company collects temperature, humidity, and atmospheric pressure data in cities across multiple continents. The average volume of data collected per site each day is 500 GB. Each site has a high-speed internet connection. The company's weather forecasting applications are based in a single Region and analyze the data daily.

What is the FASTEST way to aggregate data from all of these global sites?

A. Enable Amazon S3 Transfer Acceleration on the destination bucket. Use multipart uploads to directly upload site data to the destination bucket.
B. Upload site data to an Amazon S3 bucket in the closest AWS Region. Use S3 cross-Region replication to copy objects to the destination bucket.
C. Schedule AWS Snowball jobs daily to transfer data to the closest AWS Region. Use S3 cross-Region replication to copy objects to the destination bucket.
D. Upload the data to an Amazon EC2 instance in the closest Region. Store the data in an Amazon EBS volume. Once a day, take an EBS snapshot and copy it to the centralized Region. Restore the EBS volume in the centralized Region and run an analysis on the data daily

Answer :A

114.

A company's operations team has an existing Amazon S3 bucket configured to notify an Amazon SQS queue when new objects are created within the bucket. The development team also wants to receive events when new objects are created. The existing operations team workflow must remain intact.

Which solution would satisfy these requirements?

A. Create another SQS queue. Update the S3 events in the bucket to also update the new queue when a new object is created.
B. Create a new SQS queue that only allows Amazon S3 to access the queue. Update Amazon S3 to update this queue when a new object is created.
C. Create an Amazon SNS topic and SQS queue for the bucket updates. Update the bucket to send events to the new topic. Update both queues to poll Amazon SNS.
D. Create an Amazon SNS topic and SQS queue for the bucket updates. Update the bucket to send events to the new topic. Add subscriptions for both queues in the topic.

Answer: A

115.

A company recently released a new type of internet connected sensor. The company is expecting to sell thousands of sensors, which are designed to stream high volumes of data each second to a central location. A solutions architect must design a solution that ingests and stores data so that engineering teams can analyze it in near-real time with millisecond responsiveness.

Which solution should the solutions architect recommend?

A. Use an Amazon SQS queue to ingest the data. Consume the data with an AWS Lambda function, which then stores the data in Amazon Redshift.
B. Use an Amazon SQS queue to ingest the data. Consume the data with an AWS Lambda function, which then stores the data in Amazon DynamoDB.
C. Use Amazon Kinesis Data Streams to ingest the data. Consume the data with an AWS Lambda function, which then stores the data in Amazon Redshift.

D. Use Amazon Kinesis Data Streams to ingest the data. Consume the data with an AWS Lambda function, which then stores the data in Amazon DynamoDB.

Answer: C

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116.

A public-facing web application queries a database hosted on an Amazon EC2 instance in a private subnet. A large number of queries involve multiple table joins, and the application performance has been degrading due to an increase in complex queries. The application team will be performing updates to improve performance.

What should a solutions architect recommend to the application team? (Select TWO.)

A. Cache query data in Amazon SQS.
B. Create a read replica to offload queries.
C. Migrate the database to Amazon Athena.
D. Implement Amazon DynamoDB Accelerator to cache data.
E. Migrate the database to Amazon RDS.

Answer: B,E

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117.

A company has several business systems that require access to data stored in a file share. The business systems will access the file share using the Server Message Block (SMB) protocol. The file share solution should be accessible from both of the company's legacy on-premises environments and with AWS.

Which services meet the business requirements? (Select TWO.)

A. Amazon EBS
B. Amazon EFS
C. Amazon FSx for Windows
D. Amazon S3
E. AWS Storage Gateway file gateway

Answer: C,E

118.

A company has a website running on Amazon EC2 instances across two Availability Zones. The company is expecting spikes in traffic on specific holidays, and wants to provide a consistent user experience.

How can a solutions architect meet this requirement?

A. Use step scaling.
B. Use simple scaling
C. Use lifecycle hooks.
D. Use scheduled scaling.

Answer: D

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119.

A company has a Microsoft Windows-based application that must be migrated to AWS. This application requires the use of a shared Windows file system attached to multiple Amazon EC2 Windows instances.

What should a solutions architect do to accomplish this?

A. Configure a volume using Amazon EFS. Mount the EFS volume to each Windows instance.
B. Configure AWS Storage Gateway in Volume Gateway mode. Mount the volume to each Windows instance.
C. Configure Amazon FSx for Windows File Server. Mount the Amazon FSx volume to each Windows instance.
D. Configure an Amazon EBS volume with the required size, Attach each EC2 instance to the volume. Mount the file system within the volume to each Windows instance.

Answer: C

120.

A company has multiple AWS accounts for various departments. One of the departments wants to share an Amazon S3 bucket with all other departments.

Which solution will require the LEAST amount of effort?

A. Enable cross-account S3 replication for the bucket.
B. Create a pre-signed URL for the bucket and share it with other departments.
C. Set the S3 bucket policy to allow cross-account access to other departments.
D. Create IAM users for each of the departments and configure a read-only IAM policy.

Answer: C
B might be faster but this will be temporarily as presigned URL have short period.

121.

A company needs to share an Amazon S3 bucket with an external vendor. The bucket owner must be able to access all objects.

Which action should be taken to share the S3 bucket?

A. Update the bucket to be a Requester Pays bucket.
B. Update the bucket to enable cross-origin resource sharing (CORS).
C. Create a bucket policy to require users to grant bucket-owner-full-control when uploading objects.
D. Create an IAM policy to require users to grant bucket-owner-full-control when uploading objects.

Answer: C

122.

Application developers have noticed that a production application is very slow when business reporting users run large production reports against the Amazon RDS instance backing the application. The CPU and memory utilization metrics for the RDS instance do not exceed 60% while the reporting queries are running. The business reporting users must be able to generate reports without affecting the application's performance.

Which action will accomplish this?

A. Increase the size of the RDS instance.
B. Create a read replica and connect the application to it.
C. Enable multiple Availability Zones on the RDS instance.
D. Create a read replica and connect the business reports to it.

Answer: D

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123.

A company has 150 TB of archived image data stored on-premises that needs to be moved to the AWS Cloud within the next month. The company's current network connection allows up to 100 Mbps uploads for this purpose during the night only.

What is the MOST cost-effective mechanism to move this data and meet the migration deadline?

A. Use AWS Snowmobile to ship the data to AWS.
B. Order multiple AWS Snowball devices to ship the data to AWS.
C. Enable Amazon S3 Transfer Acceleration and securely upload the data.
D. Create an Amazon S3 VPC endpoint and establish a VPN to upload the data.

Answer: B

124.

A company must re-evaluate its need for the Amazon EC2 instances it currently has provisioned in an Auto Scaling group. At present, the Auto Scaling group is configured for a minimum of two instances and a maximum of four instances across two Availability Zones. A solutions architect reviewed Amazon CloudWatch metrics and found that CPU utilization is consistently low for all the EC2 instances.

What should the solutions architect recommend to maximize utilization while ensuring the application remains fault tolerant?

A. Remove some EC2 instances to increase the utilization of remaining instances.
B. Increase the Amazon Elastic Block Store (Amazon EBS) capacity of instances with less CPU utilization.
C. Modify the Auto Scaling group scaling policy to scale in and out based on a higher CPU utilization metric.
D. Create a new launch configuration that uses smaller instance types. Update the existing Auto Scaling group.

Answer: C

125.

A company has a web application with sporadic usage patterns. There is heavy usage at the beginning of each month, moderate usage at the start of each week, and unpredictable usage during the week.

The application consists of a web server and a MySQL database server running inside the data center. The company would like to move the application to the AWS Cloud, and needs to select a cost-effective database platform that will not require database modifications.

Which solution will meet these requirements?

A. Amazon Dynamo DB
B. Amazon RDS for MySQL
C. MySQL-compatible Amazon Aurora Serverless
D. MySQL deployed on Amazon EC2 in an Auto Scaling group

Answer: C

126.

A company's packaged application dynamically creates and returns single-use text files in response to user requests. The company is using Amazon CloudFront for distribution, but wants to further reduce data transfer costs. The company cannot modify the application's source code.

What should a solutions architect do to reduce costs?

A. Use Lambda@Edge to compress the files as they are sent to users.
B. Enable Amazon S3 Transfer Acceleration to reduce the response times.
C. Enable caching on the CloudFront distribution to store generated files at the edge.
D. Use Amazon S3 multipart uploads to move the files to Amazon S3 before returning them to users.

Answer: A

127.

A solutions architect has created two IAM policies: Policy1 and Policy2. Both policies are attached to an IAM group.

Policy1

```
{
"Version": "2012-10-17",   "Statement": [
    {
        "Effect": "Allow",
        "Action": [
            "iam:Get*",
            "iam:List*",
            "kms:List*",
            "ec2:*",
            "ds:*",
            "logs:Get*",
            "logs:Describe*"
        ],
        "Resource": "*"
    }
```

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Policy2

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Deny",
      "Action": "ds:Delete*",
      "Resource": "*"
    }
  ]
}
```

A cloud engineer is added as an IAM user to the IAM group. Which action will the cloud engineer be able to perform?

A cloud engineer is added as an IAM user to the IAM group. Which action will the cloud engineer be able to perform?

A. Deleting IAM users
B. Deleting directories
C. Deleting Amazon EC2 instances
D. Deleting logs from Amazon CloudWatch Logs

Answer: C

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128.

A company currently has 250 TB of backup files stored in Amazon S3 in a vendor's proprietary format. Using a Linux-based software application provided by the vendor, the company wants to retrieve files from Amazon S3, transform the files to an industry-standard format, and re-upload them to Amazon S3. The company wants to minimize the data transfer charges associated with this conversion.

What should a solutions architect do to accomplish this?

A. Install the conversion software as an Amazon S3 batch operation so the data is transformed without leaving Amazon S3.
B. Install the conversion software onto an on-premises virtual machine. Perform the transformation and re-upload the files to Amazon S3 from the virtual machine.
C. Use AWS Snowball Edge devices to export the data and install the conversion software onto the devices. Perform the data transformation and re-upload the files to Amazon S3 from the Snowball Edge devices.
D. Launch an Amazon EC2 instance in the same Region as Amazon S3 and install the conversion software onto the instance. Perform the transformation and re-upload the files to Amazon S3 from the EC2 instance.

Answer: C

129.

A company hosts its website on Amazon S3. The website serves petabytes of outbound traffic monthly, which accounts for most of the company's AWS costs.

What should a solutions architect do to reduce costs?

A. Configure Amazon CloudFront with the existing website as the origin.
B. Move the website to Amazon EC2 with Amazon EBS volumes for storage.
C. Use AWS Global Accelerator and specify the existing website as the endpoint.
D. Rearchitect the website to run on a combination of Amazon API Gateway and AWS Lambda.

Answer: A

130.

A solutions architect needs to design a low-latency solution for a static single-page application accessed by users utilizing a custom domain name. The solution must be serverless, encrypted in transit, and cost-effective.

Which combination of AWS services and features should the solutions architect use? (Select TWO.)

A. Amazon S3

B. Amazon EC2
C. AWS Fargate
D. Amazon CloudFront
E. Elastic Load Balancer

Answer: A,D

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131.

A company has an Amazon EC2 instance running on a private subnet that needs to access a public website to download patches and updates. The company does not want external websites to see the EC2 instance IP address or initiate connections to it.

How can a solutions architect achieve this objective?

A. Create a site-to-site VPN connection between the private subnet and the network in which the public site is deployed.
B. Create a NAT gateway in a public subnet. Route outbound traffic from the private subnet through the NAT gateway.
C. Create a network ACL for the private subnet where the EC2 instance deployed only allows access from the IP address range of the public website.
D. Create a security group that only allows connections from the IP address range of the public website. Attach the security group to the EC2 instance.

Answer: B

132.

A company is designing a new web service that will run on Amazon EC2 instances behind an Elastic Load Balancer. However, many of the web service clients can only reach IP addresses whitelisted on their firewalls.

What should a solutions architect recommend to meet the clients' needs?

A. A Network Load Balancer with an associated Elastic IP address.
B. An Application Load Balancer with an associated Elastic IP address.
C. An A record in an Amazon Route 53 hosted zone pointing to an Elastic IP address.
D. An EC2 instance with a public IP address running as a proxy in front of the load balancer.

Answer: D

133.

A company has a large Microsoft SharePoint deployment running on-premises that requires Microsoft Windows shared file storage. The company wants to migrate this workload to the AWS Cloud and is considering various storage options. The storage solution must be highly available and integrated with Active Directory for access control.

Which solution will satisfy these requirements?

A. Configure Amazon EFS storage and set the Active Directory domain for authentication.
B. Create an SMB file share on an AWS Storage Gateway file gateway in two Availability Zones.
C. Create an Amazon S3 bucket and configure Microsoft Windows Server to mount it as a volume.
D. Create an Amazon FSx for Windows File Server file system on AWS and set the Active Directory domain for authentication.

Answer: D

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134.

A solutions architect is designing a mission-critical web application. It will consist of Amazon EC2 instances behind an Application Load Balancer and a relational database. The database should be highly available and fault tolerant.

Which database implementations will meet these requirements? (Select TWO.)

A. Amazon Redshift
B. Amazon DynamoDB
C. Amazon RDS for MySQL
D. MySQL-compatible Amazon Aurora Multi-AZ
E. Amazon RDS for SQL Server Standard Edition Multi-AZ

Answer: D,E

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135.

A company delivers files in Amazon S3 to certain users who do not have AWS credentials. These users must be given access for a limited time.

What should a solutions architect do to securely meet these requirements?

A. Enable public access on an Amazon S3 bucket.
B. Generate a presigned URL to share with the users.
C. Encrypt files using AWS KMS and provide keys to the users.
D. Create and assign IAM roles that will grant GetObject permissions to the users.

Answer: B

136.

A company's application hosted on Amazon EC2 instances needs to access an Amazon S3 bucket. Due to data sensitivity, traffic cannot traverse the internet.

How should a solutions architect configure access?

A. Create a private hosted zone using Amazon Route 53.
B. Configure a VPC gateway endpoint for Amazon S3 in the VPC.
C. Configure AWS PrivateLink between the EC2 instance and the S3 bucket.
D. Set up a site-to-site VPN connection between the VPC and the S3 bucket.

Answer: B

137.

A company has created a VPC with multiple private subnets in multiple Availability Zones (AZS) and one public subnet in one of the AZs. The public subnet is used to launch a NAT gateway. There are instances in the private subnets that use a NAT gateway to connect to the internet. In case of an AZ failure, the company wants to ensure that the instances are not all experiencing internet connectivity issues and that there is a backup plan ready.

Which solution should a solutions architect recommend that is MOST highly available?

A. Create a new public subnet with a NAT gateway in the same AZ. Distribute the traffic between the two NAT gateways.
B. Create an Amazon EC2 NAT instance in a new public subnet. Distribute the traffic between the NAT gateway and the NAT instance.
C. Create public subnets in each AZ and launch a NAT gateway in each subnet. Configure the traffic from the private subnets in each AZ to the respective NAT gateway.
D. Create an Amazon EC2 NAT instance in the same public subnet. Replace the NAT gateway with the NAT instance and associate the instance with an Auto Scaling group with an appropriate scaling policy.

Answer: C

138.

A company running an on-premises application is migrating the application to AWS to increase its elasticity and availability. The current architecture uses a Microsoft SQL Server database with heavy read activity. The company wants to explore alternate database options and migrate database engines. if needed. Every 4 hours, the development team does a full copy of the production database to populate a test database. During this period, users experience latency.

What should a solutions architect recommend as a replacement database?

A. Use Amazon Aurora with Multi-AZ Aurora Replicas and restore from mysqldump for the test database.
B. Use Amazon Aurora with Multi-AZ Aurora Replicas and restore snapshots from Amazon RDS for the test database.
C. Use Amazon RDS for MySQL with a Multi-AZ deployment and read replicas, and use the standby Instance for the test database.
D. Use Amazon RDS for SQL Server with a Multi-AZ deployment and read replicas, and restore snapshots from RDS for the test database.

Answer: D

139.

A company is looking for a solution that can store video archives in AWS from old news footage. The company needs to minimize costs and will rarely need to restore these files. When the files are needed, they must be available in a maximum of five minutes.

What is the MOST cost-effective solution?

A. Store the video archives in Amazon S3 Glacier and use Expedited retrievals.
B. Store the video archives in Amazon S3 Glacier and use Standard retrievals.
C. Store the video archives in Amazon S3 Standard-Infrequent Access (S3 Standard-IA).
D. Store the video archives in Amazon S3 One Zone-Infrequent Access (S3 One Zone-IA).

Answer: A

140.

A company recently launched its website to serve content to its global user base. The company wants to store and accelerate the delivery of static content to its users by leveraging Amazon CloudFront with an Amazon EC2 instance attached as its origin.

How should a solutions architect optimize high availability for the application?

A. Use Lambda@Edge for CloudFront.
B. Use Amazon S3 Transfer Acceleration for CloudFront.
C. Configure another EC2 instance in a different Availability Zone as part of the origin group.
D. Configure another EC2 instance as part of the origin server cluster in the same Availability Zone.

Answer: B

141.

A company is designing a web application using AWS that processes insurance quotes. Users will request quotes from the application. Quotes must be separated by quote type, must be responded to within 24 hours, and must not be lost. The solution should be simple to set up and maintain.

Which solution meets these requirements?

A. Create multiple Amazon Kinesis data streams based on the quote type. Configure the web application to send messages to the proper data stream. Configure each backend group of application servers to pool messages from its own data stream using the Kinesis Client Library (KCL).
B. Create multiple Amazon Simple Notification Service (Amazon SNS) topics and register Amazon SOS queues to their own SNS topic based on the quote type. Configure the web application to publish messages to the SNS topic queue Configure each backend application server to work its own SOS queue.
C. Create a single Amazon Simple Notification Service (Amazon SNS) topic and subscribe the Amazon SOS queues to the SNS topic. Configure SNS message filtering to publish messages to the proper SQS queue based on the quote type. Configure each backend application server to work its own SOS queue.
D. Create multiple Amazon Kinesis Data Firehose delivery streams based on the quote type to deliver data streams to an Amazon Elasticsearch Service (Amazon ES) cluster. Configure the web application to send messages to the proper delivery stream. Configure each backend group of application servers to search for the messages from Amazon ES and process them accordingly.

Answer: C

142.

A company is seeing access requests by some suspicious IP addresses. The security team discovers the requests are from different IP addresses under the same CIDR range.

What should a solutions architect recommend to the team?

A. Add a rule in the inbound table of the security group to deny the traffic from that CIDR range.
B. Add a rule in the outbound table of the security group to deny the traffic from that CIDR range.
C. Add a deny rule in the inbound table of the network ACL with a lower rule number than other rules.
D. Add a deny rule in the outbound table of the network ACL with a lower rule number than other rules.

Answer: C

143.

A company has global users accessing an application deployed in different AWS Regions, exposing public static IP addresses. The users are experiencing poor performance when accessing the application over the internet. What should a solutions architect recommend to reduce internet latency?

A. Set up AWS Global Accelerator and add endpoints.
B. Set up AWS Direct Connect locations in multiple Regions.
C. Set up an Amazon CloudFront distribution to access an application.
D. Set up an Amazon Route 53 geoproximity routing policy to route traffic.

Answer: A

Explanation:

A is the right optimal answer but this is not mentioned by any means in AWS SA course or material, this is an SAP based information and service. Also combination of AWS cloudfront and route53 routing policy should be a good solution.

144.

A company runs an application in a branch office within a small data closet with no virtualized compute resources. The application data is stored on an NFS volume. Compliance standards require a daily offsite backup of the NFS volume.

Which solution meets these requirements?

A. Install an AWS Storage Gateway file gateway on premises to replicate the data to Amazon S3.
B. Install an AWS Storage Gateway file gateway hardware appliance on premises to replicate the data to Amazon S3.

C. Install an AWS Storage Gateway volume gateway with stored volumes on premises to replicate the data to Amazon S3.
D. Install an AWS Storage Gateway volume gateway with cached volumes on premises to replicate the data to Amazon S3.

Answer: A

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145.

A company with facilities in North America, Europe, and Asia is designing new distributed application to optimize its global supply chain and manufacturing process. The orders booked on one continent should be visible to all Regions in a second or less. The database should be able to support failover with a short Recovery Time Objective (RTO). The uptime of the application is important to ensure that manufacturing is not impacted.

What should a solutions architect recommend?

A. Use Amazon DynamoDB global tables.
B. Use Amazon Aurora Global Database.
C. Use Amazon RDS for MySQL with a cross-Region read replica.
D. Use Amazon RDS for PostgreSQL with a cross-Region read replica.

Answer: A

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146.

An application requires a development environment (DEV) and production environment (PROD) for several years. The DEV instances will run for 10 hours each day during normal business hours, while the PROD instances will run 24 hours each day. A solutions architect needs to determine a compute instance purchase strategy to minimize costs. Which solution is the MOST cost-effective?

A. DEV with Spot Instances and PROD with On-Demand Instances.
B. DEV with On-Demand Instances and PROD with Spot Instances.
C. DEV with Scheduled Reserved Instances and PROD with Reserved Instances.
D. DEV with On-Demand Instances and PROD with Scheduled Reserved Instances.

Answer: C

147.

A company hosts its core network services, including directory services and DNS, in its on-premises data center. The data center is connected to the AWS Cloud using AWS Direct Connect (DX). Additional AWS accounts are planned that will require quick, cost-effective, and consistent access to these network services.

What should a solutions architect implement to meet these requirements with the LEAST amount of operational overhead?

A. Create a DX connection in each new account. Route the network traffic to the on-premises servers.
B. Configure VPC endpoints in the DX VPC for all required services. Route the network traffic to the on-premises servers.
C. Create a VPN connection between each new account and the DX VPC. Route the network traffic to the on-premises servers.
D. Configure AWS Transit Gateway between the accounts. Assign DX to the transit gateway and route network traffic to the on-premises servers.

Answer: D

148.

An ecommerce company is running a multi-tier application on AWS. The front-end and backend tiers both run on Amazon EC2, and the database runs on Amazon RDS for MySQL. The backend tier communicates with the RDS instance. There are frequent calls to return identical datasets from the database that are causing performance slowdowns.

Which action should be taken to improve the performance of the backend?

A. Implement Amazon SNS to store the database calls.
B. Implement Amazon ElastiCache to cache the large datasets.
C. Implement an RDS for MySQL read replica to cache database calls.
D. Implement Amazon Kinesis Data Firehose to stream the calls to the database.

Answer: B

149.

What should a solutions architect do to ensure that all objects uploaded to an Amazon S3 bucket are encrypted?

A. Update the bucket policy to deny if the PutObject does not have an s3 x-amz-acl header set.
B. Update the bucket policy to deny if the PutObject does not have an $3 x-amz-acl header set to private.
C. Update the bucket policy to deny if the PutObject does not have an aws: Secure Transport header set to true.
D. Update the bucket policy to deny if the PutObject does not have an x-amz-server-side-encryption header set.

Answer: A

150.

A company is using a tape backup solution to store its key application data offsite. The daily data volume is around 50 TB. The company needs to retain the backups for 7 years for regulatory purposes. The backups are rarely accessed and a week's notice is typically given if a backup needs to be restored. The company is now considering a cloud based option to reduce the storage costs and operational burden of managing tapes. The company also wants to make sure that the transition from tape backups to the cloud minimizes disruptions. Which storage solution is MOST cost effective?

A. Use Amazon Storage Gateway to back up to Amazon Glacier Deep Archive.
B. Use AWS Snowball Edge to directly integrate the backups with Amazon S3 Glacier.
C. Copy the backup data to Amazon S3 and create a lifecycle policy to move the data to Amazon S3 Glacier.
D. Use Amazon Storage Gateway to back up to Amazon S3 and create a lifecycle policy to move the backup to Amazon S3 Glacier.

Answer: A

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151.

A company built a new VPC with the intention of hosting Amazon EC2 based workloads on AWS. A solutions architect specified that an Amazon S3 gateway endpoint be created and attached to this new VPC. Once the first application server is built, developers report that servers time out when accessing data stored in the S3 bucket.

Which scenario could be causing this issue? (Select TWO)

A. The S3 bucket is in a Region other than the VPC.

B. The endpoint has a policy that blocks the CIDR of the VPC.
C. The route to the S3 endpoint is not configured in the route table.
D. The access is routed through an internet gateway rather than the endpoint.
E. The S3 bucket has a bucket policy that does not allow access to the CIDR of the VPC.

Answer: CE

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152.

A solutions architect must create a highly available bastion host architecture. The solution needs to be resilient within a single AWS Region and should require only minimal effort to maintain.

What should the solutions architect do to meet these requirements?

A. Create a Network Load Balancer backed by an Auto Scaling group with a UDP listener.
B. Create a Network Load Balancer backed by a Spot Fleet with instances in a partition placement group.
C. Create a Network Load Balancer backed by the existing servers in different Availability Zones as the target.
D. Create a Network Load Balancer backed by an Auto Scaling group with instances in multiple Availability Zones as the target.

Answer: D

153.

A solutions architect is designing a shared storage solution for an Auto Scaling web application. The company anticipates making frequent changes to the content, so the solution must have strong consistency.

Which solution requires the LEAST amount of effort?

A. Create an Amazon S3 bucket to store the web content and use Amazon CloudFront to deliver the content.
B. Create an Amazon Elastic File System (Amazon EFS) file system and mount it on the individual Amazon EC2 instances.
C. Create a shared Amazon Elastic Block Store (Amazon EBS) volume and mount it on the individual Amazon EC2 instances.
D. Use AWS DataSync to perform continuous synchronization of data between Amazon EC2 hosts in the Auto Scaling group.

Answer: B

154.

A solutions architect is designing a multi-Region disaster recovery solution for an application that will provide public API access. The application will use Amazon EC2 instances with a userdata script to load application code and an Amazon RDS for MySQL database. The Recovery Time Objective (RTO) is 3 hours and the Recovery Point Objective (RPO) is 24 hours.

Which architecture would meet these requirements at the LOWEST cost?

A. Use an Application Load Balancer for Region failover. Deploy new EC2 instances with the userdata script. Deploy separate RDS instances in each Region.
B. Use Amazon Route 53 for Region failover. Deploy new EC2 instances with the userdata script. Create a read replica of the RDS instance in a backup Region.
C. Use Amazon API Gateway for the public APIs and Region failover. Deploy new EC2 instances with the userdata script. Create a MySQL read replica of the RDS instance in a backup Region.
D. Use Amazon Route 53 for Region failover Deploy new EC2 instances with the userdata script for APIs, and create a snapshot of the RDS instance daily for a backup Replicate the snapshot to a backup Region.

Answer: D

155.

A company mandates that an Amazon S3 gateway endpoint must allow traffic to trusted buckets only. Which method should a solutions architect implement to meet this requirement?

A. Create a bucket policy for each of the company's trusted S3 buckets that allows traffic only from the company's trusted VPCs.
B. Create a bucket policy for each of the company's trusted S3 buckets that allows traffic only from the company's S3 gateway endpoint IDs.
C. Create an S3 endpoint policy for each of the company's S3 gateway endpoints that blocks access from any VPC other than the company's trusted VPCs.
D. Create an S3 endpoint policy for each of the company's S3 gateway endpoints that provides access to the Amazon Resource Name (ARN) of the trusted S3 buckets.

Answer: B

156.

A solutions architect is creating an application that will handle batch processing of large amounts of data. The input data will be held in Amazon S3 and the output data will be stored in a different S3 bucket. For processing, the application will transfer the data over the network between multiple Amazon EC2 instances.

What should the solutions architect do to reduce the overall data transfer costs?

A. Place all the EC2 instances in an Auto Scaling group.
B. Place all the EC2 instances in the same AWS Region.
C. Place all the EC2 instances in the same Availability Zone.
D. Place all the EC2 instances in private subnets in multiple Availability Zones.

Answer: B

157.

A company has an application with a REST-based interface that allows data to be received in near-real time from a third-party vendor. Once received, the application processes and stores the data for further analysis. The application is running on Amazon EC2 instances.

The third-party vendor has received many 503 Service Unavailable Errors when sending data to the application. When the data volume spikes, the compute capacity reaches its maximum limit and the application is unable to process all requests.

Which design should a solutions architect recommend to provide a more scalable solution?

A. Use Amazon Kinesis Data Streams to ingest the data. Process the data using AWS Lambda functions.
B. Use Amazon API Gateway on top of the existing application. Create a usage plan with a quota limit for the third-party vendor.
C. Use Amazon Simple Notification Service (Amazon SNS) to ingest the data, Put the EC2 instances in an Auto Scaling group behind an Application Load Balancer.
D. Repackage the application as a container. Deploy the application using Amazon Elastic Container Service (Amazon ECS) using the EC2 launch type with an Auto Scaling group.

Answer: D

158.

A company previously migrated its data warehouse solution to AWS. The company also has an AWS Direct Connect connection Corporate office users query the data warehouse using a visualization tool. The average size of a query returned by the data warehouse is 50 MB and each webpage sent by the visualization tool is approximately 500 KB. Result sets returned by the data warehouse are not cached.

Which solution provides the LOWEST data transfer egress cost for the company?

A. Host the visualization tool on premises and query the data warehouse directly over the internet.
B. Host the visualization tool in the same AWS Region as the data warehouse. Access it over the internet.

C. Host the visualization tool on premises and query the data warehouse directly over a Direct Connect connection at a location in the same AWS Region.
D. Host the visualization tool in the same AWS Region as the data warehouse and access it over a Direct Connect connection at a location in the same Region.

Answer: D

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159.

A company recently implemented hybrid cloud connectivity using AWS Direct Connect and is migrating data to Amazon S3. The company is looking for a fully managed solution that will automate and accelerate the replication of data between the on-premises storage systems and AWS storage services.

Which solution should a solutions architect recommend to keep the data private?

A. Deploy an AWS DataSync agent for the on-premises environment. Configure a sync job to replicate the data and connect it with an AWS service endpoint.
B. Deploy an AWS DataSync agent for the on-premises environment. Schedule a batch job to replicate point-in-time snapshots to AWS.
C. Deploy an AWS Storage Gateway volume gateway for the on-premises environment. Configure it to store data locally and asynchronously back up point-in-time snapshots to AWS.
D. Deploy an AWS Storage Gateway file gateway for the on-premises environment. Configure it to store data locally, and asynchronously back up point-in-time snapshots to AWS.

Answer: A

160.

A company provides an API to its users that automates Inquiries for tax computations based on item prices. The company experiences a larger number of inquiries during the holiday season only that cause slower response times. A solutions architect needs to design a solution that is scalable and elastic

What should the solutions architect do to accomplish this?

A. Provide an API hosted on an Amazon EC2 instance. The EC2 Instance performs the required computations when the API request is made.
B. Design a REST API using Amazon API Gateway that accepts the item names, API Gateway passes item names to AWS Lambda for tax computations
C. Create an Application Load Balancer that has two Amazon EC2 instances behind it. The EC2 Instances will compute the tax on the received item names.
D. Design a REST API using Amazon API Gateway that connects with an API hosted on an Amazon EC2 instance, API Gateway accepts and passes the item names to the EC2 instance for tax computations.

Answer: B

161.

A company runs a web service on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Amazon EC2 Auto Scaling group across two Availability Zones. The company needs a minimum of four instances at all times to meet the required service level agreement (SLA) while keeping costs low.

If an Availability Zone falls, how can the company remain compliant with the SLA?

A. Add a target tracking scaling policy with a short cooldown period,
B. Change the Auto Scaling group launch configuration to use a larger instance type.
C. Change the Auto Scaling group to use six servers across three Availability Zones
D. Change the Auto Scaling group to use eight servers across two Availability Zones.

Answer: C

162.

An online photo application lets users upload photos and perform Image editing operations. The application offers two classes of service: free and paid. Photos submitted by paid users are processed before those submitted by free users, Photos are uploaded to Amazon S3 and the job information is sent to Amazon SOS.

Which configuration should a solutions architect recommend?

A. Use one SOS FIFO queue. Assign a higher priority to the paid photos so they are processed first.
B. Use two SOS FIFO queues: one for paid and one for free. Set the free queue to use short polling and the paid queue to use long poling.
C. Use two SOS standard queues: one for paid and one for free. Configure Amazon EC2 instances to prioritize polling for the paid queue over the tree queue.
D. Use one SOS standard queue. Set the visibility timeout of the paid photos to zero. Configure Amazon EC2 instances to prioritize visibility settings so paid photos processed first.

Answer: C

163.

A company runs a website on Amazon EC2 instances behind an ELB Application Load Balancer. Amazon Route 53 is used for the DNS. The company wants to set up a backup website with a message including a phone number and email address that users can reach if the primary website is down.

How should the company deploy this solution?

A. Use Amazon S3 website hosting for the backup website and a Route 53 failover routing policy.
B. Use Amazon S3 website hosting for the backup website and a Route 53 latency routing policy.
C. Deploy the application in another AWS Region and use ELB health checks for failover routing.
D. Deploy the application in another AWS Region and use server-side redirection on the primary website.

Answer: A

164.

A company uses a legacy on-premises analytics application that operates on gigabytes of .csv files and represents months of data. The legacy application cannot handle the growing size of .csv files. New.csv files are added daily from various data sources to a central on-premises storage location.

The company wants to continue to support the legacy application while users learn AWS analytics services. To achieve this, a solutions architect wants to maintain two synchronized copies of all the .csv files on-premises and in Amazon S3.

Which solution should the solutions architect recommend?

A. Deploy AWS DataSync on-premises. Configure DataSync to continuously replicate the .csv files between the company's on premises Storage and the company's S3 bucket.
B. Deploy an on-premises file gateway. Configure data sources to write the .csv files to the file gateway, Point the legacy analytics application to the file gateway. The file gateway should replicate the .csv files to Amazon S3.
C. Deploy an on-premises volume gateway. Configure data sources to write the .csv files to the volume gateway. Point the legacy analytics application to the volume gateway. The volume gateway should replicate data to Amazon S3.
D. Deploy AWS DataSync on-premises. Configure DataSync to continuously replicate the .csv files between on-premises and Amazon Elastic File System (Amazon EFS). Enable replication from Amazon EFS to the company's S3 bucket.

Answer: A

165.

A monolithic application was recently migrated to AWS and is now running on a single Amazon EC2 instance Due to application limitations, it is not possible to use automatic scaling to scale out the application The chief technology officer (CTO) wants an automated solution to restore the EC2 instance in the unlikely event the underlying hardware fails.

What would allow for automatic recovery of the EC2 instance as quickly as possible?

A. Configure an Amazon CloudWatch alarm that triggers the recovery of the EC2 instance if it becomes impaired.
B. Configure an Amazon CloudWatch alarm to trigger an SNS message that alerts the CTO when the EC2 instance is impaired.
C. Configure AWS Cloud Trail to monitor the health of the EC2 instance, and if it becomes impaired, trigger instance recovery.
D. Configure an Amazon EventBridge event to trigger an AWS Lambda function once an hour that checks the health of the EC2 instance and triggers instance recovery if the EC2 instance is unhealthy.

Answer: D

166.

A company has two applications it wants to migrate to AWS. Both applications process a large set of files by accessing the same files at the same time. Both applications need to read the files with low latency.

Which architecture should a solutions architect recommend for this situation?

A. Configure two AWS Lambda functions to run the applications. Create an Amazon EC2 instance with an instance store volume to store the data.
B. Configure two AWS Lambda functions to run the applications. Create an Amazon EC2 instance with an Amazon Elastic Block Store (Amazon EBS) volume to store the data.
C. Configure one memory optimized Amazon EC2 Instance to run both applications simultaneously. Create an Amazon Elastic Block Store (Amazon EBS) volume with Provisioned Tops store the data.
D. Configure two Amazon EC2 instances to run both applications. Configure Amazon Elastic File System (Amazon EFS) with General Purpose performance mode and Bursting Throughput mode to store the data.

Answer: D

167.

A company decides to migrate its three tier web application from on-premises to the AWS Cloud. The new database must be capable of dynamically scaling storage capacity and performing table joins.

Which AWS service meets these requirements?

A. Amazon Aurora
B. Amazon RDS for SqlServer
C. Amazon DynamoDB Streams
D. Amazon DynamoDB on-demand

Answer: A

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168.

A company is planning to migrate its virtual server-based workloads to AWS. The company has internet-facing load balancers backed by application servers. The application servers rely on patches from an internet-hosted repository.

Which services should a solutions architect recommend be hosted on the public subnet? (Select TWO.)

A. NAT gateway
B. Amazon RDS DB instances
C. Application Load Balancers
D. Amazon EC2 application servers
E. Amazon Elastic File System (Amazon EFS) volumes

Answer: AC

169.

A company wants to host its web application on AWS using multiple Amazon EC2 instances across different Aws Regions. Since the application content will be specific to each geographic region, the client requests need to be routed to the server that hosts the content for that client's Region.

What should a solutions architect do to accomplish this?

A. Configure Amazon Route 53 with a latency routing policy.
B. Configure Amazon Route 53 with a weighted routing policy
C. Configure Amazon Route 53 with a geolocation routing policy.
D. Configure Amazon Route 53 with a multivalue answer routing policy.

Answer: C

170.

Management has decided to deploy all AWS VPCs with IPv6 enabled. After some time, a solutions architect tries to launch a new instance and receives an error stating that there is not enough IP address space available in the subnet.

What should the solutions architect do to fix this?

A. Check to make sure that only IPV6 was used during the VPC creation
B. Create a new IP 4 subnet with a larger range, and then launch the instance
C. Create a new IPV6-only subnet with a larger range, and then launch the instance
D. Disable the IPv4 subnet and migrate all instances to IPv6 only. Once that is complete, launch the instance

Answer: B

171.

A company is developing a new machine learning model solution in AWS. The models are developed as independent microservices that fetch about 1 GB of model data from Amazon S3 at startup and load the data into memory. Users access the models through an asynchronous API. Users can send a request or a batch of requests and specify where the results should be sent.

The company provides models to hundreds of users. The usage patterns for the models are Irregular. Some models could be unused for days or weeks. Other models could receive batches of thousands of requests at a time.

Which solution meets these requirements?

A. The requests from the API are sent to an Application Load Balancer (ALB). Models are deployed as AWS Lambda functions invoked by the ALB.
B. The requests from the API are sent to the models Amazon Simple Queue Service (Amazon SOS) queue. Models are deployed as AWS Lambda functions triggered by SOS events. Aws Auto Scaling is enabled on Lambda to increase the number of vCPUs based on the SQS queue size.
C. The requests from the API are sent to the model's Amazon Simple Queue Service (Amazon SQS) queue. Models are deployed as Amazon Elastic Container Service (Amazon ECS) services reading from the queue. AWS App Mesh scales the instances of the ECS cluster based on the SQS queue size.
D. The requests from the API are sent to the model's Amazon Simple Queue Service (Amazon SQS) queue. Models are deployed as Amazon Elastic Container Service (Amazon ECS) services reading from the queue. AWS Auto Scaling is enabled on Amazon ECS for both the cluster and copies of the service based on the queue size.

Answer: D

172.

A Company wants to host a scalable web application on AWS. The application will be accessed by users from different geographic regions of the world. Application users will be able to download and upload unique data up to gigabyte in size. The development team wants a cost-effective solution to minimize upload and download latency and maximize performance.

What should a solutions architect do to accomplish this?

A. Use Amazon S3 with Transfer acceleration to host the application.

B. Use Amazon S3 with CacheControl headers to host the application.

C. Use Amazon EC2 with Auto scaling and amazon CloudFront to host the application.

D. Use Amazon EC2 with Auto scaling and amazon ElastiCache to host the application.

Answer: B
Explanation:

A is better but costy staring at 0.04/gb

173.

An application runs on Amazon EC2 instances in private subnets. The application needs to access an Amazon DynamoDB table.

What is the MOST secure way to access the table while ensuring that the traffic does not leave the AWS network?

A. Use a VPC endpoint for DynamoDB
B. Use a NAT gateway in a public subnet
C. Use a NAT instance in a private subnet
D. Use the internet gateway attached to the VPC

Answer: A

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174.

A company has a mobile game that reads most of its metadata from an Amazon RDS DB Instance. As the game increased in popularity, developers noticed slowdowns related to the game's metadata load times. Performance metrics Indicate that simply scaling the database will not help. A solutions architect must explore all options that include capabilities for snapshots, replication, and sub-millisecond response times.

What should the solutions architect recommend to solve these issues?

A. Migrate the database to Amazon Aurora with Aurora Replicas.
B. Migrate the database to Amazon DynamoDB with global tables.
C. Add an Amazon ElastiCache for Redis layer in front of the database.
D. Add an Amazon ElastiCache for Memcached layer in front of the database.

Answer: C

175.

A company runs an application that uses multiple Amazon EC2 instances to gather data from its users. The data is then processed and transferred to Amazon S3 for long-term storage. A review of the application shows that there were long periods of time when the EC2 instances were not being used.

A solutions architect needs to design a solution that optimizes utilization and reduces costs.

Which solution meets these requirements?

A. Use Amazon EC2 in an Auto Scaling group with On-Demand Instances
B. Build the application to use Amazon Lightsail with On-Demand Instances.
C. Create an Amazon CloudWatch cron job to automatically stop the EC2 instances when there is no activity.
D. Redesign the application to use an event-driven design with Amazon Simple Queue Service (Amazon SQS) and AWS Lambda.

Answer: D

Explanation:

C is also good but D have best optimization

176.

A company has hired a new cloud engineer who should not have access to an Amazon S3 bucket named Company Confidential. The cloud engineer must be able to read from and write to an S3 bucket called Admin Tools.

Which IAM policy will meet these requirements?

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": "s3:ListBucket",
            "Resource": "arn:aws:s3:::AdminTools"
        },
        {
            "Effect": "Allow",
            "Action": [ "s3:GetObject", "s3:PutObject" ],
            "Resource": "arn:aws:s3:::AdminTools/*"
        },
        {
            "Effect": "Deny",
            "Action": "s3:*",
            "Resource": [
                "arn:aws:s3:::CompanyConfidential/*",
                "arn:aws:s3:::CompanyConfidential"
            ]
        }
    ]
}
```

A.

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Action": "s3:ListBucket",
            "Resource": [
                "arn:aws:s3:::AdminTools",
                "arn:aws:s3:::CorporateMaterial/*"
                ]
        },
        {
            "Effect": "Allow",
            "Action": "s3:GetObject", "s3:PutObject", "s3:DeleteObject",
            "Resource": "arn:aws:s3:::AdminTools/*"
        },
        {
            "Effect": "Deny",
            "Action": "s3:*",
            "Resource": "arn:aws:s3:::Supplies/*"
```

B.

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```
"Version": "2012-10-17",
"Statement": [
    {
        "Effect": "Allow",
        "Action": [ "s3:GetObject", "s3:PutObject" ],
        "Resource": [ "arn:aws:s3:::AdminTools/**"
        ]
    },
    {
        "Effect": "Deny",
        "Action": "s3:**",
        "Resource": [
            "arn:aws:s3:::CompanyConfidential/**",
            "arn:aws:s3:::CompanyConfidential"
        ]
    }
```

c.

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```
"Version": "2012-10-17",
"Statement": [
    {
        "Effect": "Allow",
        "Action": "s3:ListBucket",
        "Resource": "arn:aws:s3:::AmistBucket/**"
    },
    {
        "Effect": "Allow",
        "Action": [ "s3:GetObject", "s3:PutObject", "s3:DeleteObject" ],
        "Resource": "arn:aws:s3:::AmistBucket/*"
    },
    {
        "Effect": "Deny",
        "Action": "s3:*",
        "Resource": [ "arn:aws:s3:::CompanyConfidential",
                      "arn:aws:s3:::CompanyConfidential/**",
                      "arn:aws:s3:::AmistBucket/**" ]
    }
]
}
```

D.

Answer: A

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177.

A company needs a secure connection between its on-premises environment and AWS. This connection does not need high bandwidth and will handle a small amount of traffic. The connection should be set up quickly.

What is the MOST cost-effective method to establish this type of connection?

A. Implement a client VPN.
B. Implement AWS Direct Connect.
C. Implement a bastion host on Amazon EC2.
D. Implement an AWS Site-to-Site VPN connection.

Answer: A

178.

A company's web application uses an Amazon RDS PostgreSQL DB instance to store its application data. During the financial closing period at the start of every month, Accountants run large queries that impact the database's performance due to high usage. The company wants to minimize the impact that the reporting activity has on the web application.

What should a solutions architect do to reduce the impact on the database with the LEAST amount of effort?

A. Create a read replica and direct reporting traffic to the replica
B. Create a Multi-AZ database and direct reporting traffic to the standby.
C. Create a cross-Region read replica and direct reporting traffic to the replica.

D. Create an Amazon Redshift database and direct reporting traffic to the Amazon Redshift database.

Answer: A

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179.

A solutions architect is designing a VPC with public and private subnets. The VPC and subnets use IP 4 CIDR blocks. There is one public subnet and one private subnet in each of three Availability Zones (AZS) for high availability. An internet gateway is used to provide internet access for the public subnets. The private subnets require access to the internet to allow Amazon EC2 instances to download software updates.

What should the solutions architect do to enable Internet access for the private subnets?

A. Create three NAT gateways, one for each public subnet in each AZ. Create a private route table for each AZ that forwards non-VPC traffic to the NAT gateway in its AZ.
B. Create three NAT instances, one for each private subnet in each AZ. Create a private route table for each AZ that forwards non-VPC traffic to the NAT instance in its AZ.
C. Create a second internet gateway on one of the private subnets. Update the route table for the private subnets that forward non-VPC traffic to the private internet gateway.
D. Create an egress-only internet gateway on one of the public subnets. Update the route table for the private subnets that forward non-VPC traffic to the egress-only internet gateway.

Answer: A

180.

A company recently deployed a new auditing system to centralize information about operating system versions, patching, and installed software for Amazon EC2 instances. A solutions architect must ensure all instances provisioned through EC2 Auto Scaling groups successfully send reports to the auditing system as soon as they are launched and terminated.

Which solution achieves these goals MOST efficiently?

A. Use a scheduled AWS Lambda function and execute a script remotely on all EC2 instances to send data to the audit system.
B. Use EC2 Auto Scaling lifecycle hooks to execute a custom script to send data to the audit system when instances are launched and terminated.
C. Use an EC2 Auto Scaling launch configuration to execute a custom script through user data to send data to the audit system when instances are launched and terminated.
D. Execute a custom script on the instance operating system to send data to the audit system. Configure the script to be executed by the EC2 Auto Scaling group when the instance starts and is terminated.

Answer: C

181.

A company has migrated an on-premises Oracle database to an Amazon RDS for Oracle Multi-AZ DB instance in the us-east-1 Region. A solutions architect is designing a disaster recovery strategy to have the database provisioned in the us-west-2 Region in case the database becomes unavailable the us-east-1 Region. The design must ensure the database is provisioned in the us-west-2 Region in a maximum of 2 hours, with a data loss window of no more than 3 hours.

How can these requirements be met?

A. Edit the DB instance and create a read replica in us-west-2. Promote the read replica to master in us-west-2 in case the disaster recovery environment needs to be activated.
B. Select the multi-Region option to provision a standby instance in us-west-2. The standby instance will be automatically promoted to master in us-west-2 in case the disaster recovery environment needs to be created.
C. Take automated snapshots of the database instance and copy them to us-west-2 every 3 hours Restore the latest snapshot to provision another database instance in us-west-2 in case the disaster recovery environment needs to be activated.
D. Create a multimaster read/write instances across multiple AWS Regions Select VPCs in useast-1 and us-west-2 to make that deployment Keep the master read/write instance in us-west-2 available to avoid having to activate a disaster recovery environment.

Answer: C

182.

A start-up company has a web application based in the us east-1 Region with multiple Amazon EC2 instances running behind an Application Load Balancer across multiple Availability Zones. As the company's user base grows in the us-west-1 Region, it needs a solution with low latency and high availability.

What should a solutions architect do to accomplish this?

A. Provision EC2 instances in us-west-1 Switch the Application Load Balancer to a Network Load Balancer to achieve cross-Region load balancing.
B. Provision EC2 instances and an Application Load Balancer in us-west-1. Make the load balancer distribute the traffic based on the location of the request
C. Provision EC2 instances and configure an Application Load Balancer in us-west-1 Create an accelerator in AWS Global Accelerator that uses an endpoint group that includes the load balancer endpoints in both Regions.
D. Provision EC2 instances and configure an Application Load Balancer in us west-1 Configure Amazon Route 53 with a weighted routing policy Create alias records in Route 53 that point to the Application Load Balancer

Answer: C

183.

A company has an on-premises data center that is running out of storage capacity. The company wants to migrate its storage infrastructure to AWS while minimizing bandwidth costs. The solution must allow for immediate retrieval of data at no additional cost.

How can these requirements be met?

A. Deploy Amazon S3 Glacier Vault and enable expedited retrieval. Enable provisioned retrieval capacity for the workload.
B. Deploy AWS Storage Gateway using cached volumes. Use Storage Gateway to store data in Amazon S3 while retaining copies of frequently accessed data subsets locally.
C. Deploy AWS Storage Gateway using stored volumes to store data locally. Use Storage Gateway to asynchronously back up point-in-time snapshots of the data to Amazon S3.
D. Deploy AWS Direct Connect to connect with the on-premises data center. Configure AWS Storage Gateway to store data locally. Use Storage Gateway to asynchronously back up point-in-time snapshots of the data to Amazon S3.

Answer: D
Explanation:

B is also right but not in terms of cost for bandwidth. Having a dedicated connection and pay per year can save a lot if the data is a lot on aws. Also glacier can't support immediate restore even with expedit.

184.

A company needs to implement a relational database with a multi-Region disaster recovery. Recovery Point Objective (RPO) of 1 second and an Recovery Time Objective (RTO) of 1 minute.

Which AWS solution can achieve this?

A. Amazon Aurora Global Database
B. Amazon DynamoDB global tables
C. Amazon RDS for MySQL with Multi-AZ enabled
D. Amazon RDS for MySQL with a cross-Region snapshot copy

Answer: A

185.

A solutions architect must design a solution that uses Amazon CloudFront with an Amazon S3 origin to store a static website. The company's security policy requires that all website traffic be inspected by AWS WAF.

How should the solutions architect comply with these requirements?

A. Configure an S3 bucket policy to accept requests coming from the AWS WAF Amazon Resource Name (ARN) only.
B. Configure Amazon CloudFront to forward all incoming requests to AWS WAF before requesting content from the S3 origin.
C. Configure a security group that allows Amazon CloudFront IP addresses to access Amazon S3 only. Associate AWS WAF to CloudFront.
D. Configure Amazon CloudFront and Amazon S3 to use an origin access identity (OAI) to restrict access to the S3 bucket. Enable AWS WAF on the distribution.

Answer: D

186.

An application running on an Amazon EC2 instance needs to access an Amazon DynamoDB table. Both the EC2 instance and the DynamoDB table are in the same AWS account. A solutions architect must configure the necessary permissions.

Which solution will allow least privilege access to the DynamoDB table from the EC2 instance?

A. Create an IAM role with the appropriate policy to allow access to the DynamoDB table. Create an instance profile to assign this IAM role to the EC2 instance.
B. Create an IAM role with the appropriate policy to allow access to the DynamoDB table. Add the EC2 instance to the trust relationship policy document to allow it to assume the role.
C. Create an IAM user with the appropriate policy to allow access to the DynamoDB table. Store the credentials in an Amazon S3 bucket and read them from within the application code directly.
D. Create an IAM user with the appropriate policy to allow access to the DynamoDB table. Ensure that the application stores the IAM credentials securely on local storage and uses them to make the DynamoDB calls.

Answer: A
Explanation:

b is right but this happen automatically when you create iam service role and choose the service. That is why A is more accurate.

187.

A company wants to use Amazon S3 for the secondary copy of its on-premises dataset. The company would rarely need to access this copy. The storage solution's cost should be minimal.

Which storage solution meets these requirements?

A. S3 Standard
B. S3 Intelligent-Tiering
C. S3 Standard-Infrequent Access (S3 Standard-IA)
D. S3 One Zone-Infrequent Access (S3 One Zone-A)

Answer: D

Explanation:

D is the cheapest.
but it has no high availability. And no mention of high availability so that we can choose C.

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188.

A company hosts an application on an Amazon EC2 instance that requires a maximum of 200 GB storage space. The application is used infrequently, with peaks during mornings and evenings. Disk I/O varies, but peaks at 3,000 IOPS. The chief financial officer of the company is concerned about costs and has asked a solutions architect to recommend the most cost-effective storage option that does not sacrifice performance.

Which solution should the solutions architect recommend?

A. Amazon EBS Cold HDD (sc1)
B. Amazon EBS General Purpose SSD (gp2)
C. Amazon EBS provisioned IOPS SSD (io1)
D. Amazon EBS Throughput Optimized HDD (st1)

Answer: D

Reference:

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-volume-types.html

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189.

A solutions architect needs to design a network that will allow multiple Amazon EC2 instances to access a common data source used for mission-critical data that can be accessed by all the EC2 instances simultaneously. The solution must be highly scalable, easy to implement, and support the NFS protocol.

Which solution meets these requirements?

A. Create an Amazon EFS file system. Configure a mount target in each Availability Zone. Attach each instance to the appropriate mount target.
B. Create an additional EC2 instance and configure it as a file server. Create a security group that allows communication between the instances and apply that to the additional instance.
C. Create an Amazon S3 bucket with the appropriate permissions. Create a role in AWS IAM that grants the correct permissions to the S3 bucket. Attach the role to the EC2 instances that need access to the data.
D. Create an Amazon EBS volume with the appropriate permissions. Create a role in AWS IAM that grants the correct permissions to the EBS volume. Attach the role to the EC2 instances that need access to the data.

Answer: A

190.

A company runs a high performance computing (HPC) workload on AWS. The workload required low-latency network performance and high network throughput with tightly coupled node-to-node communication. The Amazon EC2 instances are properly sized for compute and storage capacity, and are launched using default options.

What should a solutions architect propose to improve the performance of the workload?

A. Choose a cluster placement group while launching Amazon EC2 instances.
B. Choose dedicated instance tenancy while launching Amazon EC2 instances.
C. Choose an Elastic Inference accelerator while launching Amazon EC2 instances.
D. Choose the required capacity reservation while launching Amazon EC2 instances.

Answer: A

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