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Topic break down

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Topic 1, Exam A**Question No : 1 - (Topic 1)**

An ERP application is deployed across multiple AZs in a single region. In the event of failure, the Recovery Time Objective (RTO) must be less than 3 hours, and the Recovery Point Objective (RPO) must be 15 minutes the customer realizes that data corruption occurred roughly 1.5 hours ago.

What DR strategy could be used to achieve this RTO and RPO in the event of this kind of failure?

- A.** Take hourly DB backups to S3, with transaction logs stored in S3 every 5 minutes.
- B.** Use synchronous database master-slave replication between two availability zones.
- C.** Take hourly DB backups to EC2 Instance store volumes with transaction logs stored in S3 every 5 minutes.
- D.** Take 15 minute DB backups stored in Glacier with transaction logs stored in S3 every 5 minutes.

Answer: C

Question No : 2 - (Topic 1)

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

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

Answer: B,D,F

Question No : 3 - (Topic 1)

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

- A. Route 53 Record Sets
- B. IM1 Roles
- C. Elastic IP Addresses (EIP)
- D. EC2 Key Pairs
- E. Launch configurations
- F. Security Groups

Answer: A,C

Reference: http://ltech.com/wp-content/themes/optimize/download/AWS_Disaster_Recovery.pdf (page 6)

Question No : 4 - (Topic 1)

You are responsible for a legacy web application whose server environment is approaching end of life. You would like to migrate this application to AWS as quickly as possible, since the application environment currently has the following limitations:

The VM's single 10GB VMDK is almost full
The virtual network interface still uses the 10Mbps driver, which leaves your 100Mbps WAN connection completely underutilized
It is currently running on a highly customized Windows VM within a VMware environment:
You do not have the installation media

This is a mission critical application with an RTO (Recovery Time Objective) of 8 hours. RPO (Recovery Point Objective) of 1 hour. How could you best migrate this application to AWS while meeting your business continuity requirements?

- A. Use the EC2 VM Import Connector for vCenter to import the VM into EC2.
- B. Use Import/Export to import the VM as an ESS snapshot and attach to EC2.
- C. Use S3 to create a backup of the VM and restore the data into EC2.
- D. Use the ec2-bundle-instance API to Import an Image of the VM into EC2

Answer: A

Question No : 5 - (Topic 1)

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

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

Answer: B

Question No : 6 - (Topic 1)

Your system recently experienced down time during the troubleshooting process. You found that a new administrator mistakenly terminated several production EC2 instances.

Which of the following strategies will help prevent a similar situation in the future?

The administrator still must be able to:

- launch, start stop, and terminate development resources.

- launch and start production instances.

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

Answer: D

Question No : 7 - (Topic 1)

You are designing Internet connectivity for your VPC. The Web servers must be available on the Internet. The application must have a highly available architecture.

Which alternatives should you consider? (Choose 2 answers)

- A.** Configure a NAT instance in your VPC Create a default route via the NAT instance and associate it with all subnets Configure a DNS A record that points to the NAT instance public IP address.
- B.** Configure a CloudFront distribution and configure the origin to point to the private IP addresses of your Web servers Configure a Route53 CNAME record to your CloudFront distribution.
- C.** Place all your web servers behind ELB Configure a Route53 CNAME to point to the ELB DNS name.
- D.** Assign BPs to all web servers. Configure a Route53 record set with all EIPs. With health checks and DNS failover.
- E.** Configure ELB with an EIP Place all your Web servers behind ELB Configure a Route53 A record that points to the EIP.

Answer: B,C

Question No : 8 - (Topic 1)

An administrator is using Amazon CloudFormation to deploy a three tier web application that consists of a web tier and application tier that will utilize Amazon DynamoDB for

storage when creating the CloudFormation template which of the following would allow the application instance access to the DynamoDB tables without exposing API credentials?

- A.** Create an Identity and Access Management Role that has the required permissions to read and write from the required DynamoDB table and associate the Role to the application instances by referencing an instance profile.
- B.** Use the Parameter section in the CloudFormation template to have the user input Access and Secret Keys from an already created IAM user that has the permissions required to read and write from the required DynamoDB table.
- C.** Create an Identity and Access Management Role that has the required permissions to read and write from the required DynamoDB table and reference the Role in the instance profile property of the application instance.
- D.** Create an identity and Access Management user in the CloudFormation template that has permissions to read and write from the required DynamoDB table, use the GetAtt function to retrieve the Access and secret keys and pass them to the application instance through user-data.

Answer: C

Question No : 9 - (Topic 1)

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

- A.** Use OAuth 2.0 to retrieve temporary AWS security credentials to enable your NOC members to sign in to the AWS Management Console.
- B.** Use web Identity Federation to retrieve AWS temporary security credentials to enable your NOC members to sign in to the AWS Management Console.
- C.** Use your on-premises SAML 2.0-compliant identity provider (IDP) to grant the NOC members federated access to the AWS Management Console via the AWS single sign-on (SSO) endpoint.
- D.** Use your on-premises SAML2.0-compliant identity provider (IDP) to retrieve temporary security credentials to enable NOC members to sign in to the AWS Management Console.

Answer: D

Question No : 10 - (Topic 1)

Your website is serving on-demand training videos to your workforce. Videos are uploaded monthly in high resolution MP4 format. Your workforce is distributed globally often on the move and using company-provided tablets that require the HTTP Live Streaming (HLS) protocol to watch a video. Your company has no video transcoding expertise and it required you may need to pay for a consultant.

How do you implement the most cost-efficient architecture without compromising high availability and quality of video delivery'?

- A.** Elastic Transcoder to transcode original high-resolution MP4 videos to HLS S3 to host videos with Utecycle Management to archive original flies to Glacier after a few days CloudFront to serve HLS transcoded videos from S3
- B.** A video transcoding pipeline running on EC2 using SQS to distribute tasks and Auto Scaling to adjust the number or nodes depending on the length of the queue S3 to host videos with Lifecycle Management to archive all files to Glacier after a few days CloudFront to serve HLS transcoding videos from Glacier
- C.** Elastic Transcoder to transcode original nigh-resolution MP4 videos to HLS EBS volumes to host videos and EBS snapshots to incrementally backup original rues after a few days CloudFront to serve HLS transcoded videos from EC2.
- D.** A video transcoding pipeline running on EC2 using SOS to distribute tasks and Auto Scaling to adjust the number of nodes depending on the length of the queue E8S volumes to host videos and EBS snapshots to incrementally backup original files after a few days CloudFront to serve HLS transcoded videos from EC2

Answer: A

Question No : 11 - (Topic 1)

You are implementing AWS Direct Connect. You intend to use AWS public service end points such as Amazon S3, across the AWS Direct Connect link. You want other Internet traffic to use your existing link to an Internet Service Provider.

What is the correct way to configure AWS Direct connect for access to services such as Amazon S3?

- A.** Configure a public Interface on your AWS Direct Connect link Configure a static route via your AWS Direct Connect link that points to Amazon S3 Advertise a default route to AWS using BGP.
- B.** Create a private interface on your AWS Direct Connect link. Configure a static route via your AWS Direct connect link that points to Amazon S3 Configure specific routes to your network in your VPC.

- C. Create a public interface on your AWS Direct Connect link Redistribute BGP routes into your existing routing infrastructure advertise specific routes for your network to AWS.
- D. Create a private interface on your AWS Direct connect link. Redistribute BGP routes into your existing routing infrastructure and advertise a default route to AWS.

Answer: C

Question No : 12 - (Topic 1)

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

- A. Log clicks in weblogs by URL store to Amazon S3, and then analyze with Elastic MapReduce
- B. Push web clicks by session to Amazon Kinesis and analyze behavior using Kinesis workers
- C. Write click events directly to Amazon Redshift and then analyze with SQL
- D. Publish web clicks by session to an Amazon SQS queue men periodically drain these events to Amazon RDS and analyze with sol

Answer: B

Reference: <http://www.slideshare.net/AmazonWebServices/aws-webcast-introduction-to-amazon-kinesis>

Question No : 13 - (Topic 1)

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

- A. Latency resource record sets cannot be used in combination with weighted resource record sets.
- B. You did not setup an http health check for one or more of the weighted resource record sets associated with the disabled web servers.
- C. The value of the weight associated with the latency alias resource record set in the region with the disabled servers is higher than the weight for the other region.
- D. One of the two working web servers in the other region did not pass its HTTP health check.
- E. You did not set "Evaluate Target Health" to "Yes" on the latency alias resource record set associated with example.com in the region where you disabled the servers.

Answer: B,D

Question No : 14 - (Topic 1)

A customer has established an AWS Direct Connect connection to AWS. The link is up and routes are being advertised from the customer's end, however the customer is unable to connect from EC2 instances inside its VPC to servers residing in its datacenter.

Which of the following options provide a viable solution to remedy this situation? (Choose 2 answers)

- A. Add a route to the route table with an iPSec VPN connection as the target.
- B. Enable route propagation to the virtual private gateway (VGW).
- C. Enable route propagation to the customer gateway (CGW).
- D. Modify the route table of all instances using the 'route' command.
- E. Modify the instances VPC subnet route table by adding a route back to the customer's on-premises environment.

Answer: A,C

Question No : 15 - (Topic 1)

Your company is in the process of developing a next generation pet collar that collects biometric information to assist families with promoting healthy lifestyles for their pets. Each collar will push 30kb of biometric data in JSON format every 2 seconds to a collection platform that will process and analyze the data providing health trending information back to the pet owners and veterinarians via a web portal. Management has tasked you to architect the collection platform ensuring the following requirements are met.

Provide the ability for real-time analytics of the inbound biometric data

Ensure processing of the biometric data is highly durable. Elastic and parallel

The results of the analytic processing should be persisted for data mining

Which architecture outlined below will meet the initial requirements for the collection platform?

- A.** Utilize S3 to collect the inbound sensor data analyze the data from S3 with a daily scheduled Data Pipeline and save the results to a Redshift Cluster.
- B.** Utilize Amazon Kinesis to collect the inbound sensor data, analyze the data with Kinesis clients and save the results to a Redshift cluster using EMR.
- C.** Utilize SQS to collect the inbound sensor data analyze the data from SQS with Amazon Kinesis and save the results to a Microsoft SQL Server RDS instance.
- D.** Utilize EMR to collect the inbound sensor data, analyze the data from EUR with Amazon Kinesis and save me results to DynamoDB.

Answer: B

Question No : 16 - (Topic 1)

Your company produces customer commissioned one-of-a-kind skiing helmets combining high fashion with custom technical enhancements Customers can show off their Individuality on the ski slopes and have access to head-up-displays. GPS rear-view cams and any other technical innovation they wish to embed in the helmet.

The current manufacturing process is data rich and complex including assessments to ensure that the custom electronics and materials used to assemble the helmets are to the highest standards Assessments are a mixture of human and automated assessments you need to add a new set of assessment to model the failure modes of the custom electronics using GPUs with CUDA. across a cluster of servers with low latency networking.

What architecture would allow you to automate the existing process using a hybrid approach and ensure that the architecture can support the evolution of processes over time?

- A.** Use AWS Data Pipeline to manage movement of data & meta-data and assessments Use an auto-scaling group of G2 instances in a placement group.
- B.** Use Amazon Simple Workflow (SWF) 10 manages assessments, movement of data & meta-data Use an auto-scaling group of G2 instances in a placement group.

- C.** Use Amazon Simple Workflow (SWF) to manage assessments movement of data & meta-data. Use an auto-scaling group of C3 instances with SR-IOV (Single Root I/O Virtualization).
- D.** Use AWS data Pipeline to manage movement of data & meta-data and assessments. Use an auto-scaling group of C3 with SR-IOV (Single Root I/O virtualization).

Answer: A

Question No : 17 - (Topic 1)

You are designing a data leak prevention solution for your VPC environment. You want your VPC Instances to be able to access software depots and distributions on the Internet for product updates. The depots and distributions are accessible via third party CONs by their URLs. You want to explicitly deny any other outbound connections from your VPC instances to hosts on the internet.

Which of the following options would you consider?

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

Answer: A

Question No : 18 - (Topic 1)

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

- A.** Create IAM users in the Master account with full Admin permissions. Create cross-

account roles in the Dev and Test accounts that grant the Master account access to the resources in the account by inheriting permissions from the Master account.

- B.** Create IAM users and a cross-account role in the Master account that grants full Admin permissions to the Dev and Test accounts.
- C.** Create IAM users in the Master account Create cross-account roles in the Dev and Test accounts that have full Admin permissions and grant the Master account access.
- D.** Link the accounts using Consolidated Billing. This will give IAM users in the Master account access to resources in the Dev and Test accounts

Answer: A

Question No : 19 - (Topic 1)

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

- A.** Create more smaller files on Amazon S3.
- B.** Add additional cc2 8x large instances by introducing a task group.
- C.** Use smaller instances that have higher aggregate I/O performance.
- D.** Create fewer, larger files on Amazon S3.

Answer: C

Question No : 20 - (Topic 1)

You are designing a photo sharing mobile app the application will store all pictures in a single Amazon S3 bucket.

Users will upload pictures from their mobile device directly to Amazon S3 and will be able to view and download their own pictures directly from Amazon S3.

You want to configure security to handle potentially millions of users in the most secure manner possible. What should your server-side application do when a new user registers on the photo-sharing mobile application?

- A.** Create a set of long-term credentials using AWS Security Token Service with appropriate permissions Store these credentials in the mobile app and use them to access Amazon S3.

- B.** Record the user's Information in Amazon RDS and create a role in IAM with appropriate permissions. When the user uses their mobile app create temporary credentials using the AWS Security Token Service 'AssumeRole' function Store these credentials in the mobile app's memory and use them to access Amazon S3 Generate new credentials the next time the user runs the mobile app.
- C.** Record the user's Information In Amazon DynamoDB. When the user uses their mobile app create temporary credentials using AWS Security Token Service with appropriate permissions Store these credentials in the mobile app's memory and use them to access Amazon S3 Generate new credentials the next time the user runs the mobile app.
- D.** Create IAM user. Assign appropriate permissions to the IAM user Generate an access key and secret key for the IAM user, store them in the mobile app and use these credentials to access Amazon S3.
- E.** Create an IAM user. Update the bucket policy with appropriate permissions for the IAM user Generate an access Key and secret Key for the IAM user, store them In the mobile app and use these credentials to access Amazon S3.

Answer: B

Question No : 21 - (Topic 1)

A corporate web application is deployed within an Amazon Virtual Private Cloud (VPC) and is connected to the corporate data center via an IPsec VPN. The application must authenticate against the on-premises LDAP server. After authentication, each logged-in user can only access an Amazon Simple Storage Space (S3) keyspace specific to that user.

Which two approaches can satisfy these objectives? (Choose 2 answers)

- A.** Develop an identity broker that authenticates against IAM security Token service to assume a IAM role in order to get temporary AWS security credentials The application calls the identity broker to get AWS temporary security credentials with access to the appropriate S3 bucket.
- B.** The application authenticates against LOAP and retrieves the name of an IAMrole associated with the user. The application then calls the IAM Security Token Service to assume that IAM role The application can use the temporary credentials to access the appropriate S3 bucket.
- C.** Develop an identity broker that authenticates against LDAP and then calls IAM Security Token Service to get IAM federated user credentials The application calls the identity broker to get IAM federated user credentials with access to the appropriate S3 bucket.
- D.** The application authenticates against LDAP the application then calls the AWS identity and Access Management (IAM) Security service to log in to IAM using the LDAP credentials the application can use the IAM temporary credentials to access the

appropriate S3 bucket.

E. The application authenticates against IAM Security Token Service using the LDAP credentials the application uses those temporary AWS security credentials to access the appropriate S3 bucket.

Answer: A,E

Question No : 22 - (Topic 1)

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

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

Answer: C

Question No : 23 - (Topic 1)

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

- A.** Use an Amazon Elastic Map Reduce (EMR) S3DistCp as a synchronization mechanism

between the on-premises database and a Hadoop cluster on AWS.

- B.** Modify the application to write to an Amazon SQS queue and develop a worker process to flush the queue to the on-premises database.
- C.** Modify the application to use DynamoDB to feed an EMR cluster which uses a map function to write to the on-premises database.
- D.** Provision an RDS read-replica database on AWS to handle the writes and synchronize the two databases using Data Pipeline.

Answer: A

Reference: <https://aws.amazon.com/blogs/aws/category/amazon-elastic-map-reduce/>

Question No : 24 - (Topic 1)

You have an application running on an EC2 Instance which will allow users to download files from a private S3 bucket using a pre-assigned URL. Before generating the URL the application should verify the existence of the file in S3.

How should the application use AWS credentials to access the S3 bucket securely?

- A.** Use the AWS account access Keys the application retrieves the credentials from the source code of the application.
- B.** Create a IAM user for the application with permissions that allow list access to the S3 bucket launch the instance as the IAM user and retrieve the IAM user's credentials from the EC2 instance user data.
- C.** Create an IAM role for EC2 that allows list access to objects in the S3 bucket. Launch the instance with the role, and retrieve the role's credentials from the EC2 Instance metadata
- D.** Create an IAM user for the application with permissions that allow list access to the S3 bucket. The application retrieves the IAM user credentials from a temporary directory with permissions that allow read access only to the application user.

Answer: B

Question No : 25 - (Topic 1)

You are the new IT architect in a company that operates a mobile sleep tracking application

When activated at night, the mobile app is sending collected data points of 1 kilobyte every

5 minutes to your backend

The backend takes care of authenticating the user and writing the data points into an Amazon DynamoDB table.

Every morning, you scan the table to extract and aggregate last night's data on a per user basis, and store the results in Amazon S3.

Users are notified via Amazon SMS mobile push notifications that new data is available, which is parsed and visualized by (The mobile app Currently you have around 100k users who are mostly based out of North America.

You have been tasked to optimize the architecture of the backend system to lower cost what would you recommend? (Choose 2 answers)

- A.** Create a new Amazon DynamoDB (able each day and drop the one for the previous day after its data is on Amazon S3.
- B.** Have the mobile app access Amazon DynamoDB directly instead of JSON files stored on Amazon S3.
- C.** Introduce an Amazon SQS queue to buffer writes to the Amazon DynamoDB table and reduce provisioned write throughput.
- D.** Introduce Amazon ElastiCache to cache reads from the Amazon DynamoDB table and reduce provisioned read throughput.
- E.** Write data directly into an Amazon Redshift cluster replacing both Amazon DynamoDB and Amazon S3.

Answer: B,D

Question No : 26 - (Topic 1)

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

- A.** Deploy ElastiCache in-memory cache running in each availability zone
- B.** Implement sharding to distribute load to multiple RDS MySQL instances
- C.** Increase the RDS MySQL Instance size and Implement provisioned IOPS
- D.** Add an RDS MySQL read replica in each availability zone

Answer: A,C

Question No : 27 - (Topic 1)

Your company has an on-premises multi-tier PHP web application, which recently experienced downtime due to a large burst in web traffic due to a company announcement. Over the coming days, you are expecting similar announcements to drive similar unpredictable bursts, and are looking to find ways to quickly improve your infrastructure's ability to handle unexpected increases in traffic.

The application currently consists of 2 tiers: a web tier which consists of a load balancer and several Linux Apache web servers as well as a database tier which hosts a Linux server hosting a MySQL database.

Which scenario below will provide full site functionality, while helping to improve the ability of your application in the short timeframe required?

- A.** Offload traffic from on-premises environment. Setup a CloudFront distribution and configure CloudFront to cache objects from a custom origin. Choose to customize your object cache behavior, and select a TTL that objects should exist in cache.
- B.** Migrate to AWS. Use VM import 'Export to quickly convert an on-premises web server to an AMI, create an Auto Scaling group, which uses the imported AMI to scale the web tier based on incoming traffic. Create an RDS read replica and setup replication between the RDS instance and on-premises MySQL server to migrate the database.
- C.** Failover environment: Create an S3 bucket and configure it for website hosting. Migrate your DNS to Route53 using zone file import and leverage Route53 DNS failover to failover to the S3 hosted website.
- D.** Hybrid environment. Create an AMI which can be used to launch web servers in EC2. Create an Auto Scaling group which uses the * AMI to scale the web tier based on incoming traffic. Leverage Elastic Load Balancing to balance traffic between on-premises web servers and those hosted in AWS.

Answer: C

Question No : 28 - (Topic 1)

Your company policies require encryption of sensitive data at rest. You are considering the possible options for protecting data while storing it at rest on an EBS data volume, attached to an EC2 instance. Which of these options would allow you to encrypt your data at rest?

(Choose 3 answers)

- A. Implement third party volume encryption tools
- B. Do nothing as EBS volumes are encrypted by default
- C. Encrypt data inside your applications before storing it on EBS
- D. Encrypt data using native data encryption drivers at the file system level
- E. Implement SSL/TLS for all services running on the server

Answer: C,D,E

Question No : 29 - (Topic 1)

A benefits enrollment company is hosting a 3-tier web application running in a VPC on AWS which includes a NAT (Network Address Translation) instance in the public Web tier. There is enough provisioned capacity for the expected workload for the new fiscal year benefit enrollment period plus some extra overhead Enrollment proceeds nicely for two days and then the web tier becomes unresponsive, upon investigation using CloudWatch and other monitoring tools it is discovered that there is an extremely large and unanticipated amount of inbound traffic coming from a set of 15 specific IP addresses over port 80 from a country where the benefits company has no customers. The web tier instances are so overloaded that benefit enrollment administrators cannot even SSH into them. Which activity would be useful in defending against this attack?

- A. Create a custom route table associated with the web tier and block the attacking IP addresses from the IGW (internet Gateway)
- B. Change the EIP (Elastic IP Address) of the NAT instance in the web tier subnet and update the Main Route Table with the new EIP
- C. Create 15 Security Group rules to block the attacking IP addresses over port 80
- D. Create an inbound NACL (Network Access control list) associated with the web tier subnet with deny rules to block the attacking IP addresses

Answer: A

Question No : 30 - (Topic 1)

An enterprise wants to use a third-party SaaS application. The SaaS application needs to have access to issue several API commands to discover Amazon EC2 resources running within the enterprise's account The enterprise has internal security policies that require any outside access to their environment must conform to the principles of least privilege and there must be controls in place to ensure that the credentials used by the SaaS vendor

cannot be used by any other third party. Which of the following would meet all of these conditions?

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

Answer: D

Question No : 31 - (Topic 1)

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

- A.** Use Storage Gateway and configure it to use Gateway Cached volumes.
- B.** Configure your backup software to use S3 as the target for your data backups.
- C.** Configure your backup software to use Glacier as the target for your data backups.
- D.** Use Storage Gateway and configure it to use Gateway Stored volumes.

Answer: C

Question No : 32 - (Topic 1)

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

to use RDS Oracle as the database

Which backup architecture will meet these requirements?

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

Answer: C

Reference: <http://www.boyter.org/wp-content/uploads/2014/12/Backup-And-Recovery-Approaches-Using-Aws.pdf>

Question No : 33 - (Topic 1)

An International company has deployed a multi-tier web application that relies on DynamoDB in a single region For regulatory reasons they need disaster recovery capability In a separate region with a Recovery Time Objective of 2 hours and a Recovery Point Objective of 24 hours They should synchronize their data on a regular basis and be able to provision me web application rapidly using CloudFormation.

The objective is to minimize changes to the existing web application, control the throughput of DynamoDB used for the synchronization of data and synchronize only the modified elements.

Which design would you choose to meet these requirements?

- A.** Use AWS data Pipeline to schedule a DynamoDB cross region copy once a day. create a Lastupdated' attribute in your DynamoDB table that would represent the timestamp of the last update and use it as a filter.
- B.** Use EMR and write a custom script to retrieve data from DynamoDB in the current region using a SCAN operation and push it to QynamoDB in the second region.

- C.** Use AWS data Pipeline to schedule an export of the DynamoDB table to S3 in the current region once a day then schedule another task immediately after it that will import data from S3 to DynamoDB in the other region.
- D.** Send also each Ante into an SQS queue in me second region; use an auto-scaling group behind the SQS queue to replay the write in the second region.

Answer: C

Question No : 34 - (Topic 1)

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

- A.** An AWS Direct Connect link between the VPC and the network housing the internal services.
- B.** An Internet Gateway to allow a VPN connection.
- C.** An Elastic IP address on the VPC instance
- D.** An IP address space that does not conflict with the one on-premises
- E.** Entries in Amazon Route 53 that allow the Instance to resolve its dependencies' IP addresses
- F.** A VM Import of the current virtual machine

Answer: A,C,F

Question No : 35 - (Topic 1)

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

- A.** Stateless instances for the web and application tier synchronized using ElastiCache Memcached in an autoscaimg group monitored with CloudWatch. And RDSwith read replicas
- B.** Stateful instances for me web and application tier in an autoscaling group monitored with CloudWatch and RDS with read replicas

- C. Stateful instances for the web and application tier in an autoscaling group monitored with CloudWatch. And multi-AZ RDS
- D. Stateless instances for the web and application tier synchronized using ElastiCache Memcached in an autoscaling group monitored with CloudWatch and multi-AZ RDS

Answer: B

Question No : 36 - (Topic 1)

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

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

Answer: A

Question No : 37 - (Topic 1)

You have recently joined a startup company building sensors to measure street noise and air quality in urban areas. The company has been running a pilot deployment of around 100

sensors for 3 months each sensor uploads 1KB of sensor data every minute to a backend hosted on AWS.

During the pilot, you measured a peak of 10 IOPS on the database, and you stored an average of 3GB of sensor data per month in the database.

The current deployment consists of a load-balanced auto scaled Ingestion layer using EC2 instances and a PostgreSQL RDS database with 500GB standard storage.

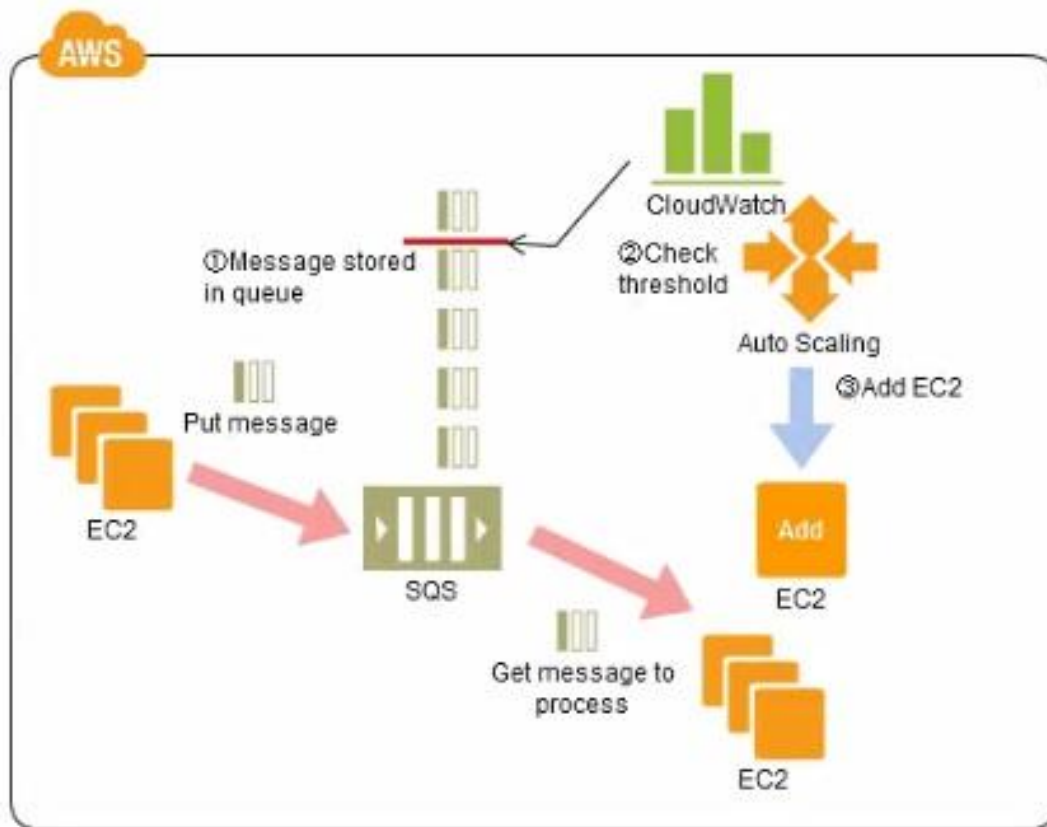
The pilot is considered a success and your CEO has managed to get the attention of some potential investors. The business plan requires a deployment of at least 100K sensors which needs to be supported by the backend. You also need to store sensor data for at least two years to be able to compare year over year improvements.

To secure funding, you have to make sure that the platform meets these requirements and leaves room for further scaling. Which setup will meet the requirements?

- A. Add an SQS queue to the ingestion layer to buffer writes to the RDS instance
- B. Ingest data into a DynamoDB table and move old data to a Redshift cluster
- C. Replace the RDS instance with a 6 node Redshift cluster with 96TB of storage
- D. Keep the current architecture but upgrade RDS storage to 3TB and 10K provisioned IOPS

Answer: C

Question No : 38 - (Topic 1)



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

- A.** Reduce the overall time for executing jobs through parallel processing by allowing a busy EC2 instance that receives a message to pass it to the next instance in a daisy-chain setup.
- B.** Implement fault tolerance against EC2 instance failure since messages would remain in SQS and work can continue with recovery of EC2 instances. Implement fault tolerance against SQS failure by backing up messages to S3.
- C.** Implement message passing between EC2 instances within a batch by exchanging messages through SQS.
- D.** Coordinate number of EC2 instances with number of job requests automatically thus improving cost effectiveness.
- E.** Handle high priority jobs before lower priority jobs by assigning a priority metadata field to SQS messages.

Answer: B

Question No : 39 - (Topic 1)

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

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

Answer: D

Question No : 40 - (Topic 1)

You have a periodic image analysis application that gets some files. The input analyzes them and for each file writes some data in output to a text file. The number of files in input per day is high and concentrated in a few hours of the day.

Currently you have a server on EC2 with a large EBS volume that hosts the input data and the results. It takes almost 20 hours per day to complete the process.

What services could be used to reduce the elaboration time and improve the availability of

the solution?

- A.** S3 to store I/O files. SQS to distribute elaboration commands to a group of hosts working in parallel. Auto scaling to dynamically size the group of hosts depending on the length of the SQS queue
- B.** EBS with Provisioned IOPS (PIOPS) to store I/O files. SNS to distribute elaboration commands to a group of hosts working in parallel Auto Scaling to dynamically size the group of hosts depending on the number of SNS notifications
- C.** S3 to store I/O files, SNS to distribute evaporation commands to a group of hosts working in parallel. Auto scaling to dynamically size the group of hosts depending on the number of SNS notifications
- D.** EBS with Provisioned IOPS (PIOPS) to store I/O files SOS to distribute elaboration commands to a group of hosts working in parallel Auto Scaling to dynamically size the group ot hosts depending on the length of the SQS queue.

Answer: C

Question No : 41 - (Topic 1)

You've been brought in as solutions architect to assist an enterprise customer with their migration of an e-commerce platform to Amazon Virtual Private Cloud (VPC) The previous architect has already deployed a 3-tier VPC.

The configuration is as follows:

VPC vpc-2f8t>C447

IGVV ig-2d8bc445

NACL acl-2080c448

Subnets and Route Tables:

Web server's subnet-258Dc44d

Application server's suDnet-248bc44c

Database server's subnet-9189c6f9

Route Tables:

rrb-218DC449

rtb-238bc44b

Associations:

subnet-258bc44d: rtb-2i8bc449

Subnet-248DC44C rtb-238tX44b

subnet-9189c6f9 rtb-238Dc 44b

You are now ready to begin deploying EC2 instances into the VPC Web servers must have direct access to the internet Application and database servers cannot have direct access to the internet.

Which configuration below will allow you the ability to remotely administer your application and database servers, as well as allow these servers to retrieve updates from the Internet?

- A.** Create a bastion and NAT Instance in subnet-248bc44c and add a route from rtb-238bc44b to subnet-258bc44d.
- B.** Add a route from rtD-238bc44D to igw-2d8bc445 and add a bastion and NAT instance within suonet-248bc44c.
- C.** Create a bastion and MAT Instance In subnet-258bc44d. Add a route from rtb-238bc44b to igw-2d8bc445. And a new NACL that allows access between subnet-258bc44d and subnet-248bc44c.
- D.** Create a bastion and mat instance in suDnet-258Dc44d and add a route from rtD-238Dc44D to the mat instance.

Answer: A

Question No : 42 - (Topic 1)

You are designing an intrusion detection prevention (IDS/IPS) solution for a customer web application in a single VPC. You are considering the options for implementing IOS IPS protection for traffic coming from the Internet.

Which of the following options would you consider? (Choose 2 answers)

- A.** Implement IDS/IPS agents on each Instance running In VPC
- B.** Configure an instance in each subnet to switch its network interface card to promiscuous mode and analyze network traffic.
- C.** Implement Elastic Load Balancing with SSL listeners In front of the web applications

D. Implement a reverse proxy layer in front of web servers and configure IDS/IPS agents on each reverse proxy server.

Answer: C,D

Question No : 43 - (Topic 1)

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

- A. Delete your existing VPN connection to avoid routing loops configure your DirectConnect router with the appropriate settings and verify network traffic is leveraging DirectConnect.
- B. Configure your DirectConnect router with a higher BGP priority than your VPN router, verify network traffic is leveraging DirectConnect and then delete your existing VPN connection.
- C. Update your VPC route tables to point to the DirectConnect connection configure your DirectConnect router with the appropriate settings verify network traffic is leveraging DirectConnect and then delete the VPN connection.
- D. Configure your DirectConnect router, update your VPC route tables to point to the DirectConnect connection, configure your VPN connection with a higher BGP priority. And verify network traffic is leveraging the DirectConnect connection.

Answer: D

Question No : 44 - (Topic 1)

You are migrating a legacy client-server application to AWS. The application responds to a specific DNS domain (e.g. www.example.com) and has a 2-tier architecture, with multiple application servers and a database server. Remote clients use TCP to connect to the application servers. The application servers need to know the IP address of the clients in order to function properly and are currently taking that information from the TCP socket. A Multi-AZ RDS MySQL instance will be used for the database.

During the migration you can change the application code but you have to file a change request.

How would you implement the architecture on AWS In order to maximize scalability and high ability?

- A.** File a change request to implement Proxy Protocol support In the application Use an ELB with a TCP Listener and Proxy Protocol enabled to distribute load on two application servers in different AZs.
- B.** File a change request to Implement Cross-Zone support in the application Use an ELB with a TCP Listener and Cross-Zone Load Balancing enabled, two application servers in different AZs.
- C.** File a change request to implement Latency Based Routing support in the application Use Route 53 with Latency Based Routing enabled to distribute load on two application servers in different AZs.
- D.** File a change request to implement Alias Resource support in the application Use Route 53 Alias Resource Record to distribute load on two application servers in different AZs.

Answer: D

Question No : 45 - (Topic 1)

Your company has HQ in Tokyo and branch offices all over the world and is using a logistics software with a multi-regional deployment on AWS in Japan, Europe and USA. The logistic software has a 3-tier architecture and currently uses MySQL 5.6 for data persistence. Each region has deployed its own database

In the HQ region you run an hourly batch process reading data from every region to compute cross-regional reports that are sent by email to all offices this batch process must be completed as fast as possible to quickly optimize logistics how do you build the database architecture in order to meet the requirements'?

- A.** For each regional deployment, use RDS MySQL with a master in the region and a read replica in the HQ region
- B.** For each regional deployment, use MySQL on EC2 with a master in the region and send hourly EBS snapshots to the HQ region
- C.** For each regional deployment, use RDS MySQL with a master in the region and send hourly RDS snapshots to the HQ region
- D.** For each regional deployment, use MySQL on EC2 with a master in the region and use S3 to copy data files hourly to the HQ region
- E.** Use Direct Connect to connect all regional MySQL deployments to the HQ region and reduce network latency for the batch process

Answer: A

Question No : 46 - (Topic 1)

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

Which of the following could be the root cause? (Choose 2 answers)

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

Answer: D,E

Question No : 47 - (Topic 1)

An AWS customer is deploying an application that is composed of an AutoScaling group of EC2 instances.

The customer's security policy requires that every outbound connection from these instances to any other service within the customer's

Virtual Private Cloud must be authenticated using a unique x.509 certificate that contains the specific instance-id.

In addition, an x.509 certificate must be designed by the customer's Key Management Service in order to be trusted for authentication.

Which of the following configurations will support these requirements?

- A.** Configure an IAM Role that grants access to an Amazon S3 object containing a signed certificate and configure the Auto Scaling group to launch instances with this role. Have the instances bootstrap to get the certificate from Amazon S3 upon first boot.
- B.** Embed a certificate into the Amazon Machine Image that is used by the Auto Scaling group. Have the launched instances generate a certificate signature request with the instance's assigned instance-id to the Key management service for signature.
- C.** Configure the Auto Scaling group to send an SNS notification of the launch of a new instance to the trusted key management service. Have the Key management service generate a signed certificate and send it directly to the newly launched instance.
- D.** Configure the launched instances to generate a new certificate upon first boot. Have the Key management service poll the AutoScaling group for associated instances and send new instances a certificate signature (that contains the specific instance-id).

Answer: A

Question No : 48 - (Topic 1)

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

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

Answer: A

Question No : 49 - (Topic 1)

A web-startup runs its very successful social news application on Amazon EC2 with an

Elastic Load Balancer, an Auto-Scaling group of Java/Tomcat application-servers, and DynamoDB as data store. The main web-application best runs on m2 x large instances since it is highly memory- bound Each new deployment requires semi-automated creation and testing of a new AMI for the application servers which takes quite a while and is therefore only done once per week.

Recently, a new chat feature has been implemented in nodejs and wails to be integrated in the architecture. First tests show that the new component is CPU bound Because the company has some experience with using Chef, they decided to streamline the deployment process and use AWS Ops Works as an application life cycle tool to simplify management of the application and reduce the deployment cycles.

What configuration in AWS Ops Works is necessary to integrate the new chat module in the most cost-efficient and flexible way?

- A.** Create one AWS Ops Works stack, create one AWS Ops Works layer, create one custom recipe
- B.** Create one AWS Ops Works stack create two AWS Ops Works layers create one custom recipe
- C.** Create two AWS Ops Works stacks create two AWS Ops Works layers create one custom recipe
- D.** Create two AWS Ops Works stacks create two AWS Ops Works layers create two custom recipe

Answer: C

Question No : 50 - (Topic 1)

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

- A.** You are running the proxy on an undersized EC2 instance type so network throughput is

not sufficient for all instances to download their updates in time.

- B.** You have not allocated enough storage to the EC2 instance running the proxy so the network buffer is filling up, causing some requests to fail
- C.** You are running the proxy in a public subnet but have not allocated enough EIPs to support the needed network throughput through the Internet Gateway (IGW)
- D.** You are running the proxy on a t1.micro-sized EC2 instance in a private subnet and its network throughput is being throttled by a NAT running on an undersized EC2 instance
- E.** The route table for the subnets containing the affected EC2 instances is not configured to direct network traffic for the software update locations to the proxy.

Answer: B,C

Question No : 51 - (Topic 1)

Your fortune 500 company has undertaken a TCO analysis evaluating the use of Amazon S3 versus acquiring more hardware. The outcome was that all employees would be granted access to use Amazon S3 for storage of their personal documents.

Which of the following will you need to consider so you can set up a solution that incorporates single sign-on from your corporate AD or LDAP directory and restricts access for each user to a designated user folder in a bucket? (Choose 3 Answers)

- A.** Setting up a federation proxy or identity provider
- B.** Using AWS Security Token Service to generate temporary tokens
- C.** Tagging each folder in the bucket
- D.** Configuring IAM role
- E.** Setting up a matching IAM user for every user in your corporate directory that needs access to a folder in the bucket

Answer: A,B,C

Question No : 52 - (Topic 1)

To serve Web traffic for a popular product your chief financial officer and IT director have purchased 10 m1 large heavy utilization Reserved Instances (RIs) evenly spread across two availability zones. Route 53 is used to deliver the traffic to an Elastic Load Balancer (ELB). After several months, the product grows even more popular and you need additional capacity. As a result, your company purchases two C3.2xlarge medium utilization RIs. You register the two c3.2xlarge instances with your ELB and quickly find that the m1 large instances are at 100% of capacity and the c3.2xlarge instances have significant capacity

that's unused Which option is the most cost effective and uses EC2 capacity most effectively?

- A.** Use a separate ELB for each instance type and distribute load to ELBs with Route 53 weighted round robin
- B.** Configure Autoscaling group and Launch Configuration with ELB to add up to 10 more on-demand m1 large instances when triggered by Cloudwatch shut off c3 2xlarge instances
- C.** Route traffic to EC2 m1 large and c3 2xlarge instances directly using Route 53 latency based routing and health checks shut off ELB
- D.** Configure ELB with two c3 2xlarge Instances and use on-demand Autoscaling group for up to two additional c3.2xlarge instances Shut on m1 .large instances.

Answer: D

Question No : 53 - (Topic 1)

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

What AWS architecture would you recommend?

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

Answer: C

Question No : 54 - (Topic 1)

You are running a news website in the eu-west-1 region that updates every 15 minutes. The website has a world-wide audience it uses an Auto Scaling group behind an Elastic Load Balancer and an Amazon RDS database. Static content resides on Amazon S3, and is distributed through Amazon CloudFront. Your Auto Scaling group is set to trigger a scale up event at 60% CPU utilization, you use an Amazon RDS extra large DB instance with 10,000 Provisioned IOPS its CPU utilization is around 80%. While freeable memory is in the 2 GB range.

Web analytics reports show that the average load time of your web pages is around 1.5 to 2 seconds, but your SEO consultant wants to bring down the average load time to under 0.5 seconds.

How would you improve page load times for your users? (Choose 3 answers)

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

Answer: A,B,D

Question No : 55 - (Topic 1)

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

- A.** Instantiate an m2.xlarge instance in us-east-1a Create a RAID 0 volume using the four 800GB SSD ephemeral disks provided with the instance Provision 3x1 TB EBS volumes attach them to the instance and configure them as a second RAID 0 volume Configure synchronous, block-level replication from the ephemeral-backed volume to the EBS-backed volume.
- B.** Instantiate an m2.xlarge instance in us-east-1a create a raid 0 volume using the four 800GB SSD ephemeral disks provide with the Instance Configure synchronous block-level replication to an Identically configured Instance in us-east-1b.

- C.** Instantiate a c3 8xlarge Instance In us-east-1 Provision an AWS Storage Gateway and configure it for 3 TB of storage and 100 000 IOPS Attach the volume to the instance.
- D.** Instantiate a c3 8xlarge instance in us-east-i provision 4x1TB EBS volumes, attach them to the instance, and configure them as a single RAID 5 volume Ensure that EBS snapshots are performed every 15 minutes.
- E.** Instantiate a c3 8xlarge Instance in us-east-1 Provision 3x1TB EBS volumes attach them to the instance, and configure them as a single RAID 0 volume Ensure that EBS snapshots are performed every 15 minutes.

Answer: D

Question No : 56 - (Topic 1)

You are designing a connectivity solution between on-premises infrastructure and Amazon VPC Your server's on-premises will De communicating with your VPC instances You will De establishing IPsec tunnels over the internet You will be using VPN gateways and terminating the IPsec tunnels on AWS-supported customer gateways.

Which of the following objectives would you achieve by implementing an IPsec tunnel as outlined above? (Choose 4 answers)

- A.** End-to-end protection of data in transit
- B.** End-to-end Identity authentication
- C.** Data encryption across the Internet
- D.** Protection of data in transit over the Internet
- E.** Peer identity authentication between VPN gateway and customer gateway
- F.** Data integrity protection across the Internet

Answer: C,D,E,F

Question No : 57 - (Topic 1)

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

- A.** Amazon RDS with provisioned IOPS up to the anticipated peak write throughput.
- B.** Amazon Simple Queue Service (SOS) for capturing the writes and draining the queue to

write to the database.

- C.** Amazon ElastiCache to store the writes until the writes are committed to the database.
- D.** Amazon DynamoDB with provisioned write throughput up to the anticipated peak write throughput.

Answer: A

Reference:

http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP_Storage.html

Question No : 58 - (Topic 1)

Your team has a tomcat-based Java application you need to deploy into development, test and production environments. After some research, you opt to use Elastic Beanstalk due to its tight integration with your developer tools and RDS due to its ease of management. Your QA team lead points out that you need to roll a sanitized set of production data into your environment on a nightly basis. Similarly, other software teams in your org want access to that same restored data via their EC2 instances in your VPC. The optimal setup for persistence and security that meets the above requirements would be the following.

- A.** Create your RDS instance as part of your Elastic Beanstalk definition and alter its security group to allow access to it from hosts in your application subnets.
- B.** Create your RDS instance separately and add its IP address to your application's DB connection strings in your code. Alter its security group to allow access to it from hosts within your VPC's IP address block.
- C.** Create your RDS instance separately and pass its DNS name to your app's DB connection string as an environment variable. Create a security group for client machines and add it as a valid source for DB traffic to the security group of the RDS instance itself.
- D.** Create your RDS instance separately and pass its DNS name to your's DB connection string as an environment variable. Alter its security group to allow access to it from hosts in your application subnets.

Answer: A

Question No : 59 - (Topic 1)

Your firm has uploaded a large amount of aerial image data to S3. In the past, in your on-premises environment, you used a dedicated group of servers to often process this data and used Rabbit MQ - An open source messaging system to get job information to the

servers. Once processed the data would go to tape and be shipped offsite. Your manager told you to stay with the current design, and leverage AWS archival storage and messaging services to minimize cost. Which is correct?

- A.** Use SQS for passing job messages use Cloud Watch alarms to terminate EC2 worker instances when they become idle. Once data is processed, change the storage class of the S3 objects to Reduced Redundancy Storage.
- B.** Setup Auto-Scaled workers triggered by queue depth that use spot instances to process messages in SOS Once data is processed,
- C.** Change the storage class of the S3 objects to Reduced Redundancy Storage. Setup Auto-Scaled workers triggered by queue depth that use spot instances to process messages in SQS Once data is processed, change the storage class of the S3 objects to Glacier.
- D.** Use SNS to pass job messages use Cloud Watch alarms to terminate spot worker instances when they become idle. Once data is processed, change the storage class of the S3 object to Glacier.

Answer: D

Question No : 60 - (Topic 1)

You need a persistent and durable storage to trace call activity of an IVR (Interactive Voice Response) system. Call duration is mostly in the 2-3 minutes timeframe. Each traced call can be either active or terminated. An external application needs to know each minute the list of currently active calls, which are usually a few calls/second. Put once per month there is a periodic peak up to 1000 calls/second for a few hours. The system is open 24/7 and any downtime should be avoided. Historical data is periodically archived to files. Cost saving is a priority for this project.

What database implementation would better fit this scenario, keeping costs as low as possible?

- A.** Use RDS Multi-AZ with two tables, one for -Active calls" and one for -Terminated calls". In this way the "Active calls_ table is always small and effective to access.
- B.** Use DynamoDB with a "Calls" table and a Global Secondary Index on a "IsActive" attribute that is present for active calls only In this way the Global Secondary index is sparse and more effective.
- C.** Use DynamoDB with a 'Calls" table and a Global secondary index on a 'State" attribute that can equal to "active" or "terminated" in this way the Global Secondary index can be used for all Items in the table.
- D.** Use RDS Multi-AZ with a "CALLS" table and an Indexed "STATE*" field that can be equal to 'ACTIVE" or -TERMINATED" In this way the SOL query Is optimized by the use of the

Index.

Answer: A

Question No : 61 - (Topic 1)

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

How should they architect their solution?

- A.** Route payment requests through two NAT instances setup for High Availability and whitelist the Elastic IP addresses attached to the NAT instances.
- B.** Whitelist the VPC Internet Gateway Public IP and route payment requests through the Internet Gateway.
- C.** Whitelist the ELB IP addresses and route payment requests from the Application servers through the ELB.
- D.** Automatically assign public IP addresses to the application instances in the Auto Scaling group and run a script on boot that adds each instance's public IP address to the payment validation whitelist API.

Answer: B

Question No : 62 - (Topic 1)

You deployed your company website using Elastic Beanstalk and you enabled log file rotation to S3. An Elastic Map Reduce job is periodically analyzing the logs on S3 to build a usage dashboard that you share with your CIO. You recently improved overall performance of the website using CloudFront for dynamic content delivery and your website as the origin.

After this architectural change, the usage dashboard shows that the traffic on your website dropped by an order of magnitude. How do you fix your usage dashboard?

- A.** Enable Cloud Front to deliver access logs to S3 and use them as input of the Elastic Map Reduce job.
- B.** Turn on Cloud Trail and use trail log tiles on S3 as input of the Elastic Map Reduce job
- C.** Change your log collection process to use Cloud Watch ELB metrics as input of the Elastic Map Reduce job
- D.** Use Elastic Beanstalk "Rebuild Environment" option to update log delivery to the Elastic Map Reduce job.
- E.** Use Elastic Beanstalk "Restart App server(s)" option to update log delivery to the Elastic Map Reduce job.

Answer: D

Question No : 63 - (Topic 1)

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

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

Answer: A

Question No : 64 - (Topic 1)

Your department creates regular analytics reports from your company's log files All log data is collected in Amazon S3 and processed by daily Amazon Elastic MapReduce (EMR) jobs

that generate daily PDF reports and aggregated tables in CSV format for an Amazon Redshift data warehouse.

Your CFO requests that you optimize the cost structure for this system.

Which of the following alternatives will lower costs without compromising average performance of the system or data integrity for the raw data?

- A.** Use reduced redundancy storage (RRS) for PDF and csv data in Amazon S3. Add Spot instances to Amazon EMR jobs Use Reserved Instances for Amazon Redshift.
- B.** Use reduced redundancy storage (RRS) for all data in S3. Use a combination of Spot instances and Reserved Instances for Amazon EMR jobs use Reserved instances for Amazon Redshift.
- C.** Use reduced redundancy storage (RRS) for all data in Amazon S3 Add Spot Instances to Amazon EMR jobs Use Reserved Instances for Amazon Redshift.
- D.** Use reduced redundancy storage (RRS) for PDF and csv data in S3 Add Spot Instances to EMR jobs Use Spot Instances for Amazon Redshift.

Answer: B

Question No : 65 - (Topic 1)

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

- A.** The mobile application will submit its location to a web service endpoint utilizing Elastic Load Balancing and EC2 instances. DynamoDB will be used to store and retrieve relevant offers. EC2 instances will communicate with mobile carriers/device providers to push alerts back to the mobile application.
- B.** Use AWS DirectConnect or VPN to establish connectivity with mobile carriers. EC2 instances will receive the mobile applications' location through carrier connection. ROS will be used to store and relevant relevant offers. EC2 instances will communicate with mobile carriers to push alerts back to the mobile application.
- C.** The mobile application will send device location using SQS. EC2 instances will retrieve the relevant offers from DynamoDB. AWS Mobile Push will be used to send offers to the mobile application.

D. The mobile application will send device location using AWS Mobile Push EC2 instances will retrieve the relevant offers from DynamoDB EC2 instances will communicate with mobile carriers/device providers to push alerts back to the mobile application.

Answer: A

Question No : 66 - (Topic 1)

Your customer is willing to consolidate their log streams (access logs application logs security logs etc.) in one single system. Once consolidated, the customer wants to analyze these logs in real time based on heuristics. From time to time, the customer needs to validate heuristics, which requires going back to data samples extracted from the last 12 hours?

What is the best approach to meet your customer's requirements?

- A. Send all the log events to Amazon SQS. Setup an Auto Scaling group of EC2 servers to consume the logs and apply the heuristics.
- B. Send all the log events to Amazon Kinesis develop a client process to apply heuristics on the logs
- C. Configure Amazon Cloud Trail to receive custom logs, use EMR to apply heuristics the logs
- D. Setup an Auto Scaling group of EC2 syslogd servers, store the logs on S3 use EMR to apply heuristics on the logs

Answer: C

Question No : 67 - (Topic 1)

Your startup wants to implement an order fulfillment process for selling a personalized gadget that needs an average of 3-4 days to produce with some orders taking up to 6 months you expect 10 orders per day on your first day. 1000 orders per day after 6 months and 10,000 orders after 12 months.

Orders coming in are checked for consistency men dispatched to your manufacturing plant for production quality control packaging shipment and payment processing If the product does not meet the quality standards at any stage of the process employees may force the process to repeat a step Customers are notified via email about order status and any critical issues with their orders such as payment failure.

Your case architecture includes AWS Elastic Beanstalk for your website with an RDS MySQL instance for customer data and orders.

How can you implement the order fulfillment process while making sure that the emails are delivered reliably?

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

Answer: C

Question No : 68 - (Topic 1)

You are designing the network infrastructure for an application server in Amazon VPC Users will access all the application instances from the Internet as well as from an on-premises network The on-premises network is connected to your VPC over an AWS Direct Connect link.

How would you design routing to meet the above requirements?

- A.** Configure a single routing Table with a default route via the Internet gateway Propagate a default route via BGP on the AWS Direct Connect customer router Associate the routing table with all VPC subnets.
- B.** Configure a single routing table with a default route via the internet gateway Propagate specific routes for the on-premises networks via BGP on the AWS Direct Connect customer router Associate the routing table with all VPC subnets.
- C.** Configure a single routing table with two default routes: one to the internet via an Internet gateway the other to the on-premises network via the VPN gateway use this routing table across all subnets in your VPC.
- D.** Configure two routing tables one that has a default route via the Internet gateway and another that has a default route via the VPN gateway Associate both routing tables with each VPC subnet.

Answer: A

Question No : 69 - (Topic 1)

A company is running a batch analysis every hour on their main transactional DB. running on an RDS MySQL instance to populate their central Data Warehouse running on Redshift. During the execution of the batch their transactional applications are very slow. When the batch completes they need to update the top management dashboard with the new data. The dashboard is produced by another system running on-premises that is currently started when a manually-sent email notifies that an update is required. The on-premises system cannot be modified because it is managed by another team.

How would you optimize this scenario to solve performance issues and automate the process as much as possible?

- A.** Replace RDS with Redshift for the batch analysis and SNS to notify the on-premises system to update the dashboard
- B.** Replace RDS with Redshift for the batch analysis and SQS to send a message to the on-premises system to update the dashboard
- C.** Create an RDS Read Replica for the batch analysis and SNS to notify the on-premises system to update the dashboard
- D.** Create an RDS Read Replica for the batch analysis and SQS to send a message to the on-premises system to update the dashboard.

Answer: D

Question No : 70 - (Topic 1)

Your application is using an ELB in front of an Auto Scaling group of web/application servers deployed across two AZs and a Multi-AZ RDS Instance for data persistence.

The database CPU is often above 80% usage and 90% of I/O operations on the database are reads. To improve performance you recently added a single-node Memcached ElastiCache Cluster to cache frequent DB query results. In the next weeks the overall workload is expected to grow by 30%.

Do you need to change anything in the architecture to maintain the high availability of the application with the anticipated additional load? Why?

- A.** Yes. you should deploy two Memcached ElastiCache Clusters in different AZs because the RDS Instance will not Be able to handle the load It me cache node fails.
- B.** No. if the cache node fails the automated ElastiCache node recovery feature will prevent any availability impact.
- C.** Yes you should deploy the Memcached ElastiCache Cluster with two nodes in the same AZ as the RDS DB master instance to handle the load if one cache node fails.
- D.** No if the cache node fails you can always get the same data from the DB without having any availability impact.

Answer: B

Question No : 71 - (Topic 1)

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

Which AWS storage and database architecture meets the requirements of the application?

- A.** Web servers, store read-only data in S3, and copy from S3 to root volume at boot time App servers snare state using a combination or DynamoDB and IP unicast Database use RDS with multi-AZ deployment and one or more Read Replicas Backup web and app servers backed up weekly via Mils database backed up via DB snapshots.
- B.** Web servers store -read-only data in S3, and copy from S3 to root volume at boot time App servers share state using a combination of DynamoDB and IP unicast Database, use RDS with multi-AZ deployment and one or more read replicas Backup web servers app servers, and database backed up weekly to Glacier using snapshots.
- C.** Web servers store read-only data In S3 and copy from S3 to root volume at boot time App servers share state using a combination of DynamoDB and IP unicast Database use RDS with multi-AZ deployment Backup web and app servers backed up weekly via AM is. Database backed up via DB snapshots
- D.** Web servers, store read-only data in an EC2 NFS server, mount to each web server at boot time App servers share state using a combination of DynamoDB and IP multicast Database use RDS with multi-AZ deployment and one or more Read Replicas Backup web and app servers backed up weekly via Mils database backed up via DB snapshots

Answer: B

Question No : 72 - (Topic 1)

Your company hosts a social media site supporting users in multiple countries. You have been asked to provide a highly available design for the application that leverages multiple regions for the most recently accessed content and latency sensitive portions of the website. The most latency sensitive component of the application involves reading user preferences to support website personalization and ad selection.

In addition to running your application in multiple regions, which option will support this application's requirements?

- A.** Serve user content from S3. CloudFront and use Route53 latency-based routing between ELBs in each region. Retrieve user preferences from a local DynamoDB table in each region and leverage SQS to capture changes to user preferences with SOS workers for propagating updates to each table.
- B.** Use the S3 Copy API to copy recently accessed content to multiple regions and serve user content from S3. CloudFront with dynamic content and an ELB in each region. Retrieve user preferences from an ElastiCache cluster in each region and leverage SNS notifications to propagate user preference changes to a worker node in each region.
- C.** Use the S3 Copy API to copy recently accessed content to multiple regions and serve user content from S3. CloudFront and Route53 latency-based routing between ELBs. In each region, retrieve user preferences from a DynamoDB table and leverage SQS to capture changes to user preferences with SOS workers for propagating DynamoDB updates.
- D.** Serve user content from S3. CloudFront with dynamic content, and an ELB in each region. Retrieve user preferences from an ElastiCache cluster in each region and leverage Simple Workflow (SWF) to manage the propagation of user preferences from a centralized OB to each ElastiCache cluster.

Answer: A

Question No : 73 - (Topic 1)

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

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

Answer: A

Question No : 74 - (Topic 1)

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

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

Answer: B

Question No : 75 - (Topic 1)

A web company is looking to implement an intrusion detection and prevention system into

their deployed VPC. This platform should have the ability to scale to thousands of instances running inside of the VPC.

How should they architect their solution to achieve these goals?

- A.** Configure an instance with monitoring software and the elastic network interface (ENI) set to promiscuous mode packet sniffing to see an traffic across the VPC.
- B.** Create a second VPC and route all traffic from the primary application VPC through the second VPC where the scalable virtualized IDS/IPS platform resides.
- C.** Configure servers running in the VPC using the host-based 'route' commands to send all traffic through the platform to a scalable virtualized IDS/IPS.
- D.** Configure each host with an agent that collects all network traffic and sends that traffic to the IDS/IPS platform for inspection.

Answer: C

Question No : 76 - (Topic 1)

You are designing an SSUTLS solution that requires HTTPS clients to be authenticated by the Web server using client certificate authentication. The solution must be resilient.

Which of the following options would you consider for configuring the web server infrastructure? (Choose 2 answers)

- A.** Configure ELB with TCP listeners on TCP/4d3. And place the Web servers behind it.
- B.** Configure your Web servers with EIPS Place the Web servers in a Route53 Record Set and configure health checks against all Web servers.
- C.** Configure ELB with HTTPS listeners, and place the Web servers behind it.
- D.** Configure your web servers as the origins for a CloudFront distribution. Use custom SSL certificates on your CloudFront distribution.

Answer: A,B

Question No : 77 - (Topic 1)

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

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

Answer: D

Question No : 78 - (Topic 1)

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

What is the problem and a valid solution?

- A.** Larger storage volumes support higher Provisioned IOPS rates: increase the provisioned volume storage of each of the 6 EBS volumes to 1TB.
- B.** The EBS-Optimized throughput limits the total IOPS that can be utilized use an EBS-Optimized instance that provides larger throughput.
- C.** Small block sizes cause performance degradation, limiting the I/O throughput, configure the instance device driver and file system to use 64KB blocks to increase throughput.
- D.** RAID 0 only scales linearly to about 4 devices, use RAID 0 with 4 EBS Provisioned IOPS volumes but increase each Provisioned IOPS EBS volume to 6,000 IOPS.
- E.** The standard EBS instance root volume limits the total IOPS rate, change the instant root volume to also be a 500GB 4,000 Provisioned IOPS volume.

Answer: E

Question No : 79 - (Topic 1)

You've been hired to enhance the overall security posture for a very large e-commerce site. They have a well architected multi-tier application running in a VPC that uses ELBs in front of both the web and the app tier with static assets served directly from S3. They are using a combination of RDS and DynamoDB for their dynamic data and then archiving nightly into S3 for further processing with EMR. They are concerned because they found questionable log entries and suspect someone is attempting to gain unauthorized access.

Which approach provides a cost effective scalable mitigation to this kind of attack?

- A.** Recommend that they lease space at a DirectConnect partner location and establish a 1G DirectConnect connection to their VPC. They would then establish Internet connectivity into their space, filter the traffic in hardware Web Application Firewall (WAF). And then pass the traffic through the DirectConnect connection into their application running in their VPC.
- B.** Add previously identified hostile source IPs as an explicit INBOUND DENY NACL to the web tier subnet.
- C.** Add a WAF tier by creating a new ELB and an AutoScaling group of EC2 Instances running a host-based WAF. They would redirect Route 53 to resolve to the new WAF tier ELB. The WAF tier would then pass the traffic to the current web tier. The web tier Security Groups would be updated to only allow traffic from the WAF tier Security Group.
- D.** Remove all but TLS 1.2 from the web tier ELB and enable Advanced Protocol Filtering. This will enable the ELB itself to perform WAF functionality.

Answer: C

Question No : 80 - (Topic 1)

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

- A.** A web tier deployed across 2 AZs with 3 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer), and an application

tier deployed across 2 AZs with 3 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB. and one RDS (Relational Database Service) instance deployed with read replicas in the other AZ.

B. A web tier deployed across 3 AZs with 2 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer) and an application tier deployed across 3 AZs with 2 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB and one RDS (Relational Database Service) Instance deployed with read replicas in the two other AZs.

C. A web tier deployed across 2 AZs with 3 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer) and an application tier deployed across 2 AZs with 3 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB and a Multi-AZ RDS (Relational Database Service) deployment.

D. A web tier deployed across 3 AZs with 2 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer). And an application tier deployed across 3 AZs with 2 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB. And a Multi-AZ RDS (Relational Database services) deployment.

Answer: D

Topic 2, Exam B

Question No : 81 - (Topic 2)

True or False: When using IAM to control access to your RDS resources, the key names that can be used are case sensitive. For example,

aws:CurrentTime is NOT equivalent to AWS:currenttime.

A. TRUE

B. FALSE

Answer: A

Question No : 82 - (Topic 2)

Groups can't _____.

A. be nested more than 3 levels

- B. be nested at all
- C. be nested more than 4 levels
- D. be nested more than 2 levels

Answer: B

Question No : 83 - (Topic 2)

What is the Reduced Redundancy option in Amazon S3?

- A. Less redundancy for a lower cost.
- B. It doesn't exist in Amazon S3, but in Amazon EBS.
- C. It allows you to destroy any copy of your files outside a specific jurisdiction.
- D. It doesn't exist at all

Answer: A

Question No : 84 - (Topic 2)

Can Amazon S3 uploads resume on failure or do they need to restart?

- A. Restart from beginning
- B. You can resume them, if you flag the "resume on failure" option before uploading.
- C. Resume on failure
- D. Depends on the file size

Answer: C

Question No : 85 - (Topic 2)

Out of the stripping options available for the EBS volumes, which one has the following disadvantage : 'Doubles the amount of I/O required from the instance to EBS compared to RAID 0, because you're mirroring all writes to a pair of volumes, limiting how much you can stripe.' ?

- A. Raid 0
- B. RAID 1+0 (RAID 10)

- C. Raid 1
- D. Raid

Answer: B

Question No : 86 - (Topic 2)

Can we attach an EBS volume to more than one EC2 instance at the same time?

- A. No
- B. Yes.
- C. Only EC2-optimized EBS volumes.
- D. Only in read mode.

Answer: A

Question No : 87 - (Topic 2)

Which Amazon Storage behaves like raw, unformatted, external block devices that you can attach to your instances?

- A. None of these.
- B. Amazon Instance Storage
- C. Amazon EBS
- D. All of these

Answer: C

Question No : 88 - (Topic 2)

All Amazon EC2 instances are assigned two IP addresses at launch, out of which one can only be reached from within the Amazon EC2 network?

- A. Multiple IP address
- B. Public IP address
- C. Private IP address
- D. Elastic IP Address

Answer: C

Question No : 89 - (Topic 2)

You must increase storage size in increments of at least _____ %

- A. 40
- B. 20
- C. 50
- D. 10

Answer: D

Question No : 90 - (Topic 2)

Amazon SWF is designed to help users...

- A. Design graphical user interface interactions
- B. Manage user identification and authorization
- C. Store Web content
- D. Coordinate synchronous and asynchronous tasks which are distributed and fault tolerant.

Answer: D

Question No : 91 - (Topic 2)

EBS Snapshots occur _____

- A. Asynchronously
- B. Synchronously
- C. Weekly

Answer: A

Question No : 92 - (Topic 2)

Read Replicas require a transactional storage engine and are only supported for the _____ storage engine

- A. OracleISAM
- B. MSSQLDB
- C. InnoDB
- D. MyISAM

Answer: C

Question No : 93 - (Topic 2)

If I want an instance to have a public IP address, which IP address should I use?

- A. Elastic IP Address
- B. Class B IP Address
- C. Class A IP Address
- D. Dynamic IP Address

Answer: A

Question No : 94 - (Topic 2)

What is the minimum charge for the data transferred between Amazon RDS and Amazon EC2 Instances in the same Availability Zone?

- A. USD 0.10 per GB
- B. No charge. It is free.
- C. USD 0.02 per GB
- D. USD 0.01 per GB

Answer: B

Question No : 95 - (Topic 2)

What will be the status of the snapshot until the snapshot is complete.

- A. running
- B. working
- C. progressing
- D. pending

Answer: D

Question No : 96 - (Topic 2)

In the Launch Db Instance Wizard, where can I select the backup and maintenance options?

- A. Under DB INSTANCE DETAILS
- B. Under REVIEW
- C. Under MANAGEMENT OPTIONS
- D. Under ENGINE SELECTION

Answer: C

Question No : 97 - (Topic 2)

What does the following command do with respect to the Amazon EC2 security groups?

`ec2-create-group CreateSecurityGroup`

- A. Groups the user created security groups in to a new group for easy access.
- B. Creates a new security group for use with your account.
- C. Creates a new group inside the security group.
- D. Creates a new rule inside the security group.

Answer: B

Question No : 98 - (Topic 2)

Provisioned IOPS Costs: you are charged for the IOPS and storage whether or not you use

them in a given month.

- A. FALSE
- B. TRUE

Answer: B

Question No : 99 - (Topic 2)

Will my standby RDS instance be in the same Availability Zone as my primary?

- A. Only for Oracle RDS types
- B. Yes
- C. Only if configured at launch
- D. No

Answer: D

Question No : 100 - (Topic 2)

Which service enables AWS customers to manage users and permissions in AWS?

- A. AWS Access Control Service (ACS)
- B. AWS Identity and Access Management (IAM)
- C. AWS Identity Manager (AIM)

Answer: B

Question No : 101 - (Topic 2)

A/An _____ acts as a firewall that controls the traffic allowed to reach one or more instances.

- A. security group
- B. ACL
- C. IAM
- D. Private IP Addresses

Answer: A

Question No : 102 - (Topic 2)

To view information about an Amazon EBS volume, open the Amazon EC2 console at <https://console.aws.amazon.com/ec2/>, click _____ in the Navigation pane.

- A. EBS
- B. Describe
- C. Details
- D. Volumes

Answer: D

Question No : 103 - (Topic 2)

What are the initial settings of an user created security group?

- A. Allow all inbound traffic and Allow no outbound traffic
- B. Allow no inbound traffic and Allow no outbound traffic
- C. Allow no inbound traffic and Allow all outbound traffic
- D. Allow all inbound traffic and Allow all outbound traffic

Answer: C

Question No : 104 - (Topic 2)

While creating an Amazon RDS DB, your first task is to set up a DB _____ that controls what IP addresses or EC2 instances have access to your DB Instance.

- A. Security Pool
- B. Secure Zone
- C. Security Token Pool
- D. Security Group

Answer: D

Question No : 105 - (Topic 2)

Fill in the blanks: Resources that are created in AWS are identified by a unique identifier called an _____

- A. Amazon Resource Number
- B. Amazon Resource Nametag
- C. Amazon Resource Name
- D. Amazon Reesource Namespace

Answer: C

Question No : 106 - (Topic 2)

Amazon RDS automated backups and DB Snapshots are currently supported for only the _____ storage engine

- A. InnoDB
- B. MyISAM

Answer: A

Question No : 107 - (Topic 2)

What is Amazon Glacier?

- A. You mean Amazon "Iceberg": it's a low-cost storage service.
- B. A security tool that allows to "freeze" an EBS volume and perform computer forensics on it.
- C. A low-cost storage service that provides secure and durable storage for data archiving and backup.
- D. It's a security tool that allows to "freeze" an EC2 instance and perform computer forensics on it.

Answer: C

Question No : 108 - (Topic 2)

Fill in the blanks: The base URI for all requests for instance metadata is _____

- A. <http://254.169.169.254/latest/>
- B. <http://169.169.254.254/latest/>
- C. <http://127.0.0.1/latest/>
- D. <http://169.254.169.254/latest/>

Answer: D

Question No : 109 - (Topic 2)

What does a "Domain" refer to in Amazon SWF?

- A. A security group in which only tasks inside can communicate with each other
- B. A special type of worker
- C. A collection of related Workflows
- D. The DNS record for the Amazon SWF service

Answer: C

Question No : 110 - (Topic 2)

Before I delete an EBS volume, what can I do if I want to recreate the volume later?

- A. Create a copy of the EBS volume (not a snapshot)
- B. Store a snapshot of the volume
- C. Download the content to an EC2 instance
- D. Back up the data in to a physical disk

Answer: B

Question No : 111 - (Topic 2)

Using Amazon CloudWatch's Free Tier, what is the frequency of metric updates which you receive?

- A. 5 minutes

- B. 500 milliseconds.
- C. 30 seconds
- D. 1 minute

Answer: A

Question No : 112 - (Topic 2)

Typically, you want your application to check whether a request generated an error before you spend any time processing results. The easiest way to find out if an error occurred is to look for an _____ node in the response from the Amazon RDS API.

- A. Incorrect
- B. Error
- C. FALSE

Answer: B

Question No : 113 - (Topic 2)

What does the AWS Storage Gateway provide?

- A. It allows to integrate on-premises IT environments with Cloud Storage.
- B. A direct encrypted connection to Amazon S3.
- C. It's a backup solution that provides an on-premises Cloud storage.
- D. It provides an encrypted SSL endpoint for backups in the Cloud.

Answer: A

Question No : 114 - (Topic 2)

While launching an RDS DB instance, on which page I can select the Availability Zone?

- A. REVIEW
- B. DB INSTANCE DETAILS
- C. MANAGEMENT OPTIONS
- D. ADDITIONAL CONFIGURATION

Answer: D

Question No : 115 - (Topic 2)

What does specifying the mapping /dev/sdc=none when launching an instance do?

- A. Prevents /dev/sdc from creating the instance.
- B. Prevents /dev/sdc from deleting the instance.
- C. Set the value of /dev/sdc to 'zero'.
- D. Prevents /dev/sdc from attaching to the instance.

Answer: D

Question No : 116 - (Topic 2)

What is the durability of S3 RRS?

- A. 99.99%
- B. 99.95%
- C. 99.995%
- D. 99.999999999%

Answer: A

Question No : 117 - (Topic 2)

What does Amazon SWF stand for?

- A. Simple Web Flow
- B. Simple Work Flow
- C. Simple Wireless Forms
- D. Simple Web Form

Answer: B

Question No : 118 - (Topic 2)

What is the maximum key length of a tag?

- A. 512 Unicode characters
- B. 64 Unicode characters
- C. 256 Unicode characters
- D. 128 Unicode characters

Answer: D

Question No : 119 - (Topic 2)

While performing the volume status checks, if the status is insufficient-data, what does it mean?

- A. the checks may still be in progress on the volume
- B. the check has passed
- C. the check has failed

Answer: A

Question No : 120 - (Topic 2)

What is Oracle SQL Developer?

- A. An AWS developer who is an expert in Amazon RDS using both the Oracle and SQL Server DB engines
- B. A graphical Java tool distributed without cost by Oracle.
- C. It is a variant of the SQL Server Management Studio designed by Microsoft to support Oracle DBMS functionalities
- D. A different DBMS released by Microsoft free of cost

Answer: B

Question No : 121 - (Topic 2)

True or False: When you perform a restore operation to a point in time or from a DB Snapshot, a new DB Instance is created with a new endpoint.

- A. FALSE
- B. TRUE

Answer: B

Question No : 122 - (Topic 2)

Fill in the blanks: _____ let you categorize your EC2 resources in different ways, for example, by purpose, owner, or environment.

- A. wildcards
- B. pointers
- C. Tags
- D. special filters

Answer: C

Question No : 123 - (Topic 2)

Is creating a Read Replica of another Read Replica supported?

- A. Only in certain regions
- B. Only with MSSQL based RDS
- C. Only for Oracle RDS types
- D. No

Answer: D

Question No : 124 - (Topic 2)

What happens to the data on an instance if the instance reboots (intentionally or unintentionally)?

- A. Data will be lost

- B. Data persists
- C. Data may persist however cannot be sure

Answer: B

Question No : 125 - (Topic 2)

Does Amazon RDS allow direct host access via Telnet, Secure Shell (SSH), or Windows Remote Desktop Connection?

- A. Yes
- B. No
- C. Depends on if it is in VPC or not

Answer: B

Question No : 126 - (Topic 2)

SQL Server _____ store logins and passwords in the master database.

- A. can be configured to but by default does not
- B. doesn't
- C. does

Answer: C

Question No : 127 - (Topic 2)

Is there a limit to how many groups a user can be in?

- A. Yes for all users
- B. Yes for all users except root
- C. No
- D. Yes unless special permission granted

Answer: A

Question No : 128 - (Topic 2)

IAM provides several policy templates you can use to automatically assign permissions to the groups you create. The _____ policy template gives the Admins group permission to access all account resources, except your AWS account information

- A. Read Only Access
- B. Power User Access
- C. AWS Cloud Formation Read Only Access
- D. Administrator Access

Answer: D

Question No : 129 - (Topic 2)

Disabling automated backups _____ disable the point-in-time recovery.

- A. if configured to can
- B. will never
- C. will

Answer: C

Question No : 130 - (Topic 2)

When should I choose Provisioned IOPS over Standard RDS storage?

- A. If you have batch-oriented workloads
- B. If you use production online transaction processing (OLTP) workloads.
- C. If you have workloads that are not sensitive to consistent performance

Answer: B

Question No : 131 - (Topic 2)

What does RRS stand for when talking about S3?