26. Question

A Solutions Architect is re-designing the current multi-tier application to solve scaling and performance issues, the application is running in Amazon VPC which consists of one public subnet and one private subnet , the private subnet hosts multiple EC2 instances and there is ELB classic load balancer as the front end of the public subnet, and reverse proxy to route the traffic between EC2 instances using that content-based routing.  
What the steps should you take to enhance this architecture? (Select Two)

* Replace ELB classic load balancer and reverse proxy with ELB Network Load Balancer.
* Replace only ELB classic load balancer with ELB Application Load Balancer.
* Replace EC2 instances with c4.large instances
* **Use auto scaling group with EC2 instances**
* **Replace ELB classic load balancer and reverse proxy with ELB Application Load Balancer.**

**Correct**

Exam Tip  
content-based routing = use ELB Application load balancer.

27. Question

A Solution Architect has a two-tier application with a single Amazon EC2 instance web server and Amazon RDS MySQL Multi-AZ DB instances. The Architect is re-architecting the application for high availability by adding instances in a second Availability Zone.  
Which additional services will improve the availability of the application? (Choose two.)

* Amazon ElastiCache
* **Auto Scaling group**
* **ELB Classic Load Balancer**
* AWS CloudTrail
* Amazon DynamoDB

**Correct**

Exam Tip  
For HA = Use ELB + Auto Scaling group

28. Question

A Solutions Architect is designing a solution for car tracking application, this application will receive data from more than 5000 cars every 2 minutes, it is expected that number of cars will be 7000 after 2 weeks from the product launching date.  
What is the most scalable solution to handle streaming data?

* Use ELB in front of EC2 instances to receive the data then store in Amazon S3
* Create lambda function to receive and process the data then store it in DynamoDB.
* **Store the data in Amazon S3 bucking using Amazon Kinesis Firehouse delivery stream.**
* **Store the data in Amazon S3 bucking using Amazon SQS.**

**Incorrect**

Exam Tip  
streaming data +scalable+ store in S3 = Kinesis Firehouse streams

29. Question

A solutions architect is designing multimedia application to publish live events. Videos of the performances will be streamed in real time and then will be available on demand. The event is expected to attract a global online audience.  
Which service will improve the performance of both the real-time and on-demand steaming?

* AWS Global Accelerator
* Amazon Route S3
* **Amazon S3 Transfer Acceleration**
* **Amazon CloudFront**

**Incorrect**

Exam Tip  
You can use CloudFront to deliver video on demand (VOD) or live streaming video using any HTTP origin. One way you can set up video workflows in the cloud is by using CloudFront together with AWS Media Services.  
Explanation  
On-Demand streaming

30. Question

You are working as a Solutions Architect for a multinational financial firm which has application running on Amazon EC2 instances in a  single region. the business continuity plan asked you to ensure that the resources can also be deployed to a second Region.  
Which combination of actions should the solutions architect take to accomplish this? (Choose two.)

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

**Incorrect**

Exam Tip  
To create a copy of your AMI in another AWS Region, follow these steps:  
1- Create an AMI of your EC2 instance:  
2- Copy the AMI of your EC2 instance to another AWS Region:  
3-After the copy operation completes, launch a new EC2 instance from your AMI in the new AWS Region.

31. Question

A Solutions Architect is designing multi-tier application consists of ELB application load balancer in the public subnet, multiple EC2 Instances with auto scaling group and Amazon DynamoDB.  
What is the best architecture to secure the application servers and DynamoDB ?

* **Create private subnet for EC2 Instances and private subnet for DynamoDB**
* Create private subnet for EC2 Instances and public subnet for DynamoDB
* Create public subnet for EC2 Instances and private subnet for DynamoDB
* Create public subnet for EC2 Instances and public subnet for DynamoDB

**Correct**

Exam Tip  
application servers and database must be secured so they must be added to the private subnet(s).

32. Question

A Solutions Architect is designing a new application which uses an Amazon S3 bucket to store files with sensitive data , the files must be encrypted and the encryption keys must be automatically rotated every month also the security team needs to track the usage of encryption key.  
What is the Simplest solution to handle this requirement?

* Use Server-Side Encryption with Customer-Provided Keys (SSE-C)
* Use AWS Trusted Advisor
* Use Server-Side Encryption with Amazon S3-Managed Keys (SSE-S3).
* **Use Server-Side Encryption with AWS KMS-Managed Keys (SSE-KMS).**

**Correct**

Exam Tip  
automated rotation of the encryption keys+  track the usage of encryption key = use SSE-KMS

33. Question

A Solutions Architect is designing multi-tier application, the database tier in the private subnet needs to access the internet for periodically OS updates, he must ensures that the database will not be accessed from the internet?  
What is the simplest approach to achieve this requirement?

* Add NAT Gateway in the private subnet and add rout to it from the public subnet
* Configure the database subnet network ACL to allow outbound traffic and deny the inbound traffic.
* Enable inbound rule in the Security Group for HTTP port only.
* **Add NAT Gateway in the public subnet and add route to it from the private subnet**

**Correct**

Exam Tip  
You can create a NAT gateway for EC2 instances in a private VPC subnet to connect securely over the Internet. Because the subnet is private, the IP addresses assigned to the instances cannot be used in public. Instead, it is necessary to use network address translation (NAT) to map the private IP addresses to a public address for requests, and then map the public IP address back to private addresses for the response.

34. Question

A client has unencrypted data in Amazon Redshift cluster and asked you about the best technique to encrypt data at rest.  
What is your recommendation ?

* Move the Redshift cluster from public subnet to private subnet.
* **Use the AWS KMS.**
* **Use SSL/TLS**
* Use Amazon EBS volumes.

**Incorrect**

Exam Tip  
AWS KMS is best option encrypt the data at rest in Amazon Redshift cluster

35. Question

You are working in Insurance company ,the company has an web application used by patients to upload they prescriptions into Amazon S3,the customer support team received a lot of complains from the patients that sometimes they see the old prescriptions especially in the peak times.  
Which option may be the root cause for this issue?

* Communication issue between the application and S3
* **Same keys are overwritten while executing updating queries by the application.**
* **S3 use randomized object naming**
* Duplication of same S3 buckets

**Incorrect**

Exam Tip  
due to S3 is eventually Consistent  , reading after writing may return old data.

36. Question

What is the best solution to recover static website within an Amazon S3 bucket case of accidental deletion ?

* Enable Amazon S3 cross-Region replication.
* **Enable Amazon S3 versioning.**
* Enable an Amazon S3 lifecycle policy.
* Enable Amazon S3 Intelligent-Tiering.

**Correct**

Exam Tip  
to recover deleted object from Amazon S3 bucket , you have to enable versioning

37. Question

A solutions architect in a Multimedia company is designing application which will use Amazon S3 to store images uploaded by its users. these images must be encrypted at rest in Amazon S3.  the security team does not want to spend time managing and rotating the keys, but it does want to control who can access those keys.  
What should a solutions architect use to accomplish this?

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

**Correct**

Exam Tip  
AWS Key Management Service (AWS KMS) is a service that combines secure, highly available hardware and software to provide a key management system scaled for the cloud. When you use server-side encryption with AWS KMS (SSE-KMS), you can specify a customer managed CMK that you have already created. SSE-KMS provides you with an audit trail that shows when your CMK was used and by whom. Therefore SSE-KMS is the correct solution for this use-case.  
Explanation

38. Question

A Chief Architect is designing a system to analyze the performance of financial markets while the markets are closed. The system will run a series of compute- intensive jobs for 5 hours every night. The time to complete the compute jobs is expected to remain constant, and jobs cannot be interrupted once started. Once completed, the system is expected to run for a minimum of 1 year.  
Which type of Amazon EC2 instances should be used to reduce the cost of the system?

* Spot instances
* On-Demand instances
* Standard Reserved Instances
* **Scheduled Reserved Instances**

**Correct**

Exam Tip  
The answer is between “Standard Reserved Instances” and “Scheduled Reserved Instances”. Schedule reserved instances have some limitations: The following are the only supported instance types: C3, C4, M4, and R3. The required term is 365 days (one year). The minimum required utilization is 1,200 hours per year. You can purchase a Scheduled Instance up to three months in advance. They are available in the following Regions: US East (N. Virginia), US West (Oregon), and Europe (Ireland). So if you go with “Scheduled Reserved Instances” our options are pretty narrow down by region, even if the question doesn’t specify this. It doesn’t say for what period it will run for 4 hours every day. Even if some limitations are met for scheduled reserved instances, make more sense to use on-demand instances.  
With Reserved Instances, you can now choose the type of capacity reservation that best fits your needs:

39. Question

A cat tracking application is running on multiple Amazon EC2 instances. The application processes messages from an Amazon SQS queue, writes for an Amazon RDS table, and deletes the message from the queue. Occasional duplicate records are found in the RDS table. The SQS queue does not contain any duplicate messages.  
What should a solutions architect do to ensure messages are being processed once only?

* **Use the ChangeMessageVisibility API call to increase the visibility timeout.**
* Use the CreateQueue API call to create a new queue.
* Use the CreateQueue API call to create a new queue.
* Use the ReceiveMessage API call to set an appropriate wait time.

**Correct**

Exam Tip  
The visibility timeout begins when Amazon SQS returns a message. During this time, the consumer processes and deletes the message. However, if the consumer fails before deleting the message and your system doesn’t call the DeleteMessage action for that message before the visibility timeout expires, the message becomes visible to other consumers and the message is received again. If a message must be received only once, your consumer should delete it within the duration of the visibility timeout.  
Reference

You are working as solution architect in a research company which currently has legacy application used to download scientific PDFs from internet then store it in a local storage,the company wants to migrate its storage to AWS S3 buckets using the existing VPN connection between company network and AWS.  
What is the simplest solution to open the firewall to access S3 bucket from company network ?

* Create Lambda function with an IAM role with permissions to access S3 bucket and call the Lambda function from the application
* Use Amazon CloudFront with S3 buckets as the origin and configure the CloudFront IP in the company network
* **Create an IAM role with S3 bucket access permissions to allow accessing from company network.**
* **Configure IP whitelisting in Amazon API Gateway.**

**Incorrect**

Exam Tip  
Company Network + VPN + S3 Bucket = Create an IAM role with S3 bucket access permissions

41. Question

A Solutions Architect is designing a static website which will use the zone apex of a DNS domain (e.g. yourcompany.com).  
Which AWS service should you recommend to handle this requirement?

* **Store the static content in S3 Bucket and map a Route 53 alias record to website endpoint then create a Route 53 hosted zone.**
* Store the static content in Amazon CloudFront and map a Route 53 alias record to CloudFront IP
* Store the static content in docker container and map a Route 53 alias record to container IP.
* Store the static content in Amazon EC2 instance, and map a Route 53 alias record to the public IP address of the Amazon EC2 instance.

**Correct**

Exam Tip  
the best solution is to host the static website in S3 (no EC2 needed). Map a Route 53 endpoint to the website endpoint gives you everything you need in terms of cost

42. Question

A training provider has a web application which stores educational videos in Amazon S3 bucket in eu-east-1 to serve customer around the world, during the peak hours, some customers in Asia report receiving HTTP 500 errors,  
As AWS Solutions Architect, how to solve this issue?

* **Use Amazon CloudFront to cache the web content and use edge locations to deliver the content.**
* Replicate the bucket policy into another Region.
* Use Amazon S3 with failover routing policy in front of Amazon S3 Bucket
* Create Classic Load Balancer in front of Amazon S3 bucket

**Correct**

##### Exam Tip Keywor43. Question

As Solutions architect, you have a task to enhance the current architecture of dynamic web site which is deployed on multiple EC2 instances inside same subnet behind ELB Application Load balancer to support High availability.  
What is the SIMPLEST solution to provide HA to the current architecture?

* Replace the current architecture with Amazon API Gateway and Lambda function
* **Move some Amazon EC2 instances to another subnet in the same Availability Zone.**
* **Move some Amazon EC2 instances to another subnet in the different Availability Zone.**
* Replace the ELB Application load balancer with ELB Network load balancer

**Incorrect**

Exam Tip  
High Availability = Multi AZ

d deliver content around the world so CloudFront is the content delivery feature.

44. Question

What is the MOST secure way to allow public user for a limited time from accessing a file stored on Amazon S3 and is 10 GB in size?

* **Generate a presigned URL and have the vendor download the log file before it expires.**
* Enable public read on the S3 object and provide the link to the vendor.
* Upload the file to Amazon WorkDocs and share the public link with the vendor.
* Create an IAM user for the vendor to provide access to the S3 bucket and the application. Enforce multi-factor authentication.

**Correct**

Exam Tip  
The presigned URLs are valid only for the specified duration.

A training provider hosts a website which consists of dynamic and static content, this website runs on Amazon EC2 instances behind an Application Load Balancer (ALB) , some of users around the world are suffering from the slowness of the website.  
Which action can be done to improve website performance for users worldwide?

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

**Correct**

Exam Tip  
Amazon CloudFront is used to serve dynamic and/or static assets from Amazon EC2

46. Question

You are working in popular company as Solutions architect, your company has DynamoDB database running inside private subnet and it was requested from you to create lambda function in same VPC to insert some records in DynamoDB.  
What is the best solution to give Lambda an access to DynamoDB ?

* Update the inbound security rules of Lambda to allow the DynamoDB Security Group
* Move the lambda outside DynamoDB VPC
* **Create VPC Endpoint for DynamoDb VPC**
* **Update the inbound security rules of DynamoDB to allow the Lambda Security Group**

**Incorrect**

Exam Tip  
First you will need to enable VPC access for the Lambda function, during which you will assign it a Security Group. Then, within the Security Group assigned to the DynamoDB instance you will enable access for the Security Group assigned to the Lambda function.  
Explanation

47. Question

A research company has been storing analytics data in an Amazon RDS instance for the past few years. the company decide to expose the data to be accessed to external users via  an API. The expectation is that the application will experience periods of inactivity but could receive bursts of traffic within seconds.  
Which solution should the solutions architect suggest?

* Set up an Amazon API Gateway and use AWS Elastic Beanstalk.
* Set up an Amazon API Gateway and use Amazon ECS.
* **Set up an Amazon API Gateway and use Amazon EC2 with Auto Scaling.**
* **Set up an Amazon API Gateway and use AWS Lambda functions.**

**Incorrect**

Exam Tip  
Quickest way to handle sudden increase in traffic = Use Amazon API Gateway and AWS Lambda functions.

48. Question

An e-commerce application consists of two-step order process to process orders exactly once and in the order in which they are received . The first step is synchronous and must return to the user with little latency. The second step takes longer  
How should the solutions architect integrate these components?

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

**Incorrect**

Exam Tip  
this is a trick question. the question never ask to select two or two components. pay attention to the part that says “The second step takes longer, so it will be implemented in a separate component.” its telling you to dont worry about the second part. The answer is A, address the first part of the questions.

49. Question

As Solution Architect, you have a requirement to design online stock trading system which will heavily use transactional and scalable database with high write consistency, each order  will be saved in multiple linked tables.  
Which AWS database should be used to handle this requirement?

* **Amazon DynamoDB**
* Amazon S3
* Amazon Redshift
* **Amazon Aurora**

**Incorrect**

Exam Tip  
transactional + scalable database + high write consistency + linked tables = Amazon Aurora

50. Question

A company needs to ensure that all files created in an Amazon S3 are not eligible for accidental deletion and ensure that all versions of the documents are available in addition to allowing users to download, modify, and upload documents.

Which action in addition to enable versioning is needed to meet these requirements?

* Encrypt the bucket using AWS KMS.
* **Enable MFA Delete on the bucket.**
* Enable a read-only bucket ACL.
* **Attach an IAM policy to the bucket.**
* Enable versioning on the bucket.

**Incorrect**

Exam Tip  
Enable MFA Delete is to require multi-factor authentication (MFA) when deleting an object version

51. Question

A company is evaluating Amazon S3 as a data storage solution to migrate a critical dataset. The current solution design uses a single S3 bucket in a single Region with versioning enabled to store the dataset. The business continuity team states that all data multiple AWS Regions.  
How should a solutions architect design the S3 solution?

* Create an additional S3 bucket in another Region and configure cross-origin resource sharing (CORS).
* **Create an additional S3 bucket with versioning in another Region and configure Cross-Region Replication (CRR)**
* **Create an additional S3 bucket in another Region and configure Cross-Region Replication (CRR).**
* Create an additional S3 bucket with versioning in another Region and configure cross-origin resource (CORS).

**Incorrect**

Exam Tip  
for Cross-Region Replication (CRR), we must create addition S3 bucket with version enabled.

52. Question

A Solutions Architect is designing three tiers web site which will be highly available. he needs to ensure that the database tier will accept requests only from the application servers.  
What is the best solution to handle this requirement?

* **Configure the inbound rule of the database security group to accept only requests from application server security Group.**
* Configure the network ACL for database subnet to accept requests only from application server subnet.
* Configure the inbound rule of the database security group to accept only requests from application server IP.
* Configure the inbound rule of the database security group to deny requests from all IPs other than application server IP.

**Correct**

Exam Tip  
The most secure way for this case is to configure the inbound rule of the target AWS resource to allow the security group of the source AWS resource.

53. Question

A multinational scientific company has a scientific web application which is hosted on a single Amazon EC2 instance and use Amazon EBS volume to stored used uploaded documents. the company decide to create same architecture on a second EC2 instance and EBS volume in another Availability Zone. both EC2 instances are behind application load balancer to provide highly available and scalable application. recently , the operation team  received a lot of complains from users that each time they refreshed the website, they could see one subset of their documents or the other, but never all of the documents at the same time.  
What should a solutions architect propose to ensure users see all of their documents at once?

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

**Incorrect**

Exam Tip  
shared storage between multiple EC2 instances = Use Amazon EFS

54. Question

A Solution Architect is working in events Agency which currently has a ticketing system, the application currently require more than 16,000 IOPS on a particular volume to handle tickets booking. after ending of the event ,no needs for IOPS. your manager asked you to re-architect this application to enhance its performance without any downtime.  
What is the best Solution to achieve this requirement?

* **Replace the EBS volume type with Provisioned IOPS.**
* Use Amazon SQS .
* Use multiple c4.2xlarge Amazon EC2 instances behind ELB
* Use EFS instead of EBS.

**Correct**

Exam Tip  
update EBS + no downtime = Replace the EBS volume type with Provisioned IOPS.

55. Question

A Solutions Architect is designing a static pages. The pages are expected to generate millions of views from users around the world. these pages are stored in an Amazon S3 bucket.  
What is the efficient solution to handle this requirement?

* Use Amazon EFS to store and server static files
* Enable Amazon ElastiCache in the web server subnet.
* Generate presigned URLs for the files.
* **Use Amazon CloudFront with the S3 bucket as its origin.**

**Correct**

Exam Tip  
Static content on S3 = Use Cloudfront

56. Question

A multi-national bank uses an Amazon RDS PostgreSQL DB instance to store its application data. at End of each Month EOM , the financial team needs to generate some reports.  
What should a solutions architect do to reduce the impact on the database with the LEAST amount of effort?

* Create a cross-Region read replica and direct reporting traffic to the replica.
* **Create a Multi-AZ database and direct reporting traffic to the standby.**
* Create an Amazon Redshift database and direct reporting traffic to the Amazon Redshift database.
* **Create a read replica and direct reporting traffic to the replica.**

**Incorrect**

Exam Tip  
to generate reports without affecting the database performance = Use Read Replicas.

57. Question

A Solutions Architect is designing a multi-tier web application architecture using multiple Linux Amazon EC2 instances and storing data on Amazon EBS volumes.  
What is the best solution to increase the resiliency of the application in case of a failure and to provide storage that complies with atomicity, consistency, isolation, and durability ?

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

**Unattempted**

Exam Tip  
Application Load balancer+ Auto scaling group are used for resiliency, EFS for storage.

58. Question

A Solutions Architect is designing a highly-scalable application to upload and download scientific researches, these files will be accessed from millions of users from around the world, the size of the files can reach to gigabytes in size.  
What is the best solution to minimize upload and download latency and maximize performance ?

* Use Amazon EC2 with Auto Scaling and Amazon ElastiCache to host the application.
* **Use Amazon EC2 with Auto Scaling and Amazon CloudFront to host the application.**
* Use Amazon S3 with CacheControl headers to host the application.
* **Use Amazon S3 with Transfer Acceleration to host the application.**

**Incorrect**

Exam Tip  
Amazon S3 Transfer Acceleration enables fast, easy, and secure transfers of files over long distances between your client and an S3 bucket.

59. Question

A company provides electronic data info via a web application which hosted on a multiple Amazon C2 instances behind an Application Load Balancer in an Auto Scaling group. The website also uses a custom DNS name and communicates with HTTPS only using a dedicated SSL certificate. The company is planning a new product launch and wants to be sure that users from around the world have the best possible experience on the new website.  
What should a solutions architect do to meet these requirements?

* **Redesign the application to use AWS Elastic Beanstalk.**
* Redesign the application to use Amazon S3 static website hosting.
* **Redesign the application to use Amazon CloudFront.**
* Redesign the application to use a Network Load Balancer.

**Incorrect**

Exam Tip  
the best solution is to use CloudFront to cache contents, Application load balancer as Origin + Can expose external HTTPS and can talk to internal HTTPS backends

You are working as a Solutions Architect for an investment bank and your Chief Technical Officer intends to migrate all of your applications to AWS. One of the company’s applications stores files on a Windows file server farm that uses Distributed File System Replication (DFSR) to keep data in sync. A solutions architect needs to replace the file server farm.  
Which service should the solutions architect use?

* Amazon EFS
* **Amazon FSx**
* **AWS Storage Gateway**
* Amazon EBS

**Incorrect**

Exam Tip  
Amazon FSx for windows  
Explanation  
Amazon FSx makes it easy and cost effective to launch and run popular file systems. With Amazon FSx, you can leverage the rich feature sets and fast performance of widely-used open source and commercially-licensed file systems, while avoiding time-consuming administrative tasks like hardware provisioning, software configuration, patching, and backups. It provides cost-efficient capacity and high levels of reliability, and it integrates with other AWS services so that you can manage and use the file systems in cloud-native ways.  
Amazon FSx provides you with two file systems to choose from: Amazon FSx for Windows File Server for business applications and Amazon FSx for Lustre for high-performance workloads.

A Retail company wants to implement predictive maintenance on its machinery equipment. The company will install thousands of IoT sensors that will send data to AWS in real time.  
As Solutions Architect, what is the best solution to receive events in an ordered manner for each machinery asset and ensure that data is saved for further processing at a later time

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

**Incorrect**

Exam Tip  
IOT data +  streams+ Partition by equipment + s3 =Use Amazon Kinesis Data Streams for real-time events with a partition for each equipment asset. Use Amazon Kinesis Data Firehose to save data to Amazon S3.

62. Question

A solutions architect at a corporate bank and wants to back up application log data to Amazon S3.  
the logs access pattern are unpredictable. The bank wants to keep costs as low as possible by using the appropriate S3 storage class.  
Which S3 storage class should be implemented to meet these requirements?

* S3 Standard-Infrequent Access (S3 Standard-IA)
* S3 One Zone-Infrequent Access (S3 One Zone-IA)
* **S3 Glacier**
* **S3 Intelligent-Tiering**

**Incorrect**

Exam Tip  
Intelligent Tiering is designed for three use cases:  
  a – Unpredictable workloads  
  b – Changing access patterns  
  c – Lack of experience with storage optimization

63. Question

An online retailer application runs on Amazon EC2 instances behind an Application Load Balancer with Auto Scaling group across multiple Availability Zones. at day 25 of each month, the application becomes much slower when the month-end financial calculation batch executes. This causes the CPU utilization of the EC2 instances to immediately peak to 100%, which disrupts the application.  
What is the best solution to handle this issue without downtime?

* Configure an Amazon CloudFront distribution in front of the ALB.
* Configure an EC2 Auto Scaling simple scaling policy based on CPU utilization.
* Configure Amazon ElastiGache to remove some of the workload from the EC2 instances.
* **Configure an EC2 Auto Scaling scheduled scaling policy.**

**Correct**

Exam Tip  
Scheduled workloads  = use schedule scaling.

64. Question

A shipping company has online web application which uses Amazon Redshift as main data warehouse ,business continuity plan team recommended to have a disaster recovery for this storage to another recovery site with taking into consideration that the distance between both sites to be more than 2000 kilometres .  
What is the SIMPLEST solution to meet this requirement?

* Manually move the data using AWS Snowball storage then enable replication.
* Enable cross-region snapshot to a different Availability Zone.
* **Enable cross-region snapshot to a different region.**
* Use AWS Elastic Beanstalk to deploy the cluster in a second region.

**Correct**

Tip & Trick  
Simple solution for DR+ distance 2000 kilometres  = Enable cross-region snapshot to a different region.

65. Question

A Solutions Architect is working in migrating High Performance Computing (HPC) application with its data to AWS. The application uses tiered storage on premises which consists of high-performance parallel storage to hold data during periodic runs , and economical cold storage to hold the data when the application is not actively running.  
Which services can handle these requirements? (Choose two.)

* **Amazon S3 for high-performance parallel storage**
* **Amazon FSx for Lustre for high-performance parallel storage**
* Amazon FSx for Windows for high-performance parallel storage
* Amazon EFS for cold data storage
* **Amazon S3 for cold data storage**

**Incorrect**

Exam Tip  
Cold data storage refers to the storage of inactive data that is rarely used or accessed  = Use Amazon S3  
Amazon FSx for Lustre for high-performance parallel storage  
Explanation  
Amazon FSx for Lustre makes it easy and cost effective to launch and run the world’s most popular high-performance file system. Use it for workloads where speed matters, such as machine learning, high performance computing (HPC), video processing, and financial modeling.  
The open source Lustre file system is designed for applications that require fast storage – where you want your storage to keep up with your compute. Lustre was built to quickly and cost effectively process the fastest-growing data sets in the world, and it’s the most widely used file system for the 500 fastest computers in the world. It provides sub-millisecond latencies, up to hundreds of gigabytes per second of throughput, and millions of IOPS.