EXAMTOPICS

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Question #451   *Topic 1*

A company is designing an AWS environment for a manufacturing application. The application has been successful with customers, and the application's user base has increased. The company has connected the AWS environment to the company's on-premises data center through a 1 Gbps AWS Direct Connect connection. The company has configured BGP for the connection.

The company must update the existing network connectivity solution to ensure that the solution is highly available, fault tolerant, and secure.

Which solution will meet these requirements MOST cost-effectively?

A. Add a dynamic private IP AWS Site-to-Site VPN as a secondary path to secure data in transit and provide resilience for the Direct Connect connection. Configure MACsec to encrypt traffic inside the Direct Connect connection.

B. Provision another Direct Connect connection between the company's on-premises data center and AWS to increase the transfer speed and provide resilience. Configure MACsec to encrypt traffic inside the Direct Connect connection.

C. Configure multiple private VIFs. Load balance data across the VIFs between the on-premises data center and AWS to provide resilience.

D. Add a static AWS Site-to-Site VPN as a secondary path to secure data in transit and to provide resilience for the Direct Connect connection.
Most Voted

Correct Answer: *D*

Community vote distribution

            D (78%)   A (22%)

Question #452
Topic 1

A company needs to modernize an application and migrate the application to AWS. The application stores user profile data as text in a single table in an on-premises MySQL database.

After the modernization, users will use the application to upload video files that are up to 4 GB in size. Other users must be able to download the video files from the application. The company needs a video storage solution that provides rapid scaling. The solution must not affect application performance.

Which solution will meet these requirements?

A. Migrate the database to Amazon Aurora PostgreSQL by using AWS Database Migration Service (AWS DMS). Store the videos as base64-encoded strings in a TEXT column in the database.

B. Migrate the database to Amazon DynamoDB by using AWS Database Migration Service (AWS DMS) with the AWS Schema Conversion Tool (AWS SCT). Store the videos as objects in Amazon S3. Store the S3 key in the corresponding DynamoDB item. Most Voted

C. Migrate the database to Amazon Keyspaces (for Apache Cassandra) by using AWS Database Migration Service (AWS DMS) with the AWS Schema Conversion Tool (AWS SCT). Store the videos as objects in Amazon S3. Store the S3 object identifier in the corresponding Amazon Keyspaces entry.

D. Migrate the database to Amazon DynamoDB by using AWS Database Migration Service (AWS DMS) with the AWS Schema Conversion Tool (AWS SCT). Store the videos as base64-encoded strings in the corresponding DynamoDB item.

Correct Answer: *B*

Community vote distribution

B (100%)

Question #453
Topic 1

A company stores and manages documents in an Amazon Elastic File System (Amazon EFS) file system. The file system is encrypted with an AWS Key Management Service (AWS KMS) key. The file system is mounted to an Amazon EC2 instance that runs proprietary software.

The company has enabled automatic backups for the file system. The automatic backups use the AWS Backup default backup plan.

A solutions architect must ensure that deleted documents can be recovered within an RPO of 100 minutes.

Which solution will meet these requirements?

A. Create a new IAM role. Create a new backup plan. Use the new IAM role to create backups. Update the KMS key policy to allow the new IAM role to use the key. Implement an hourly backup schedule for the file system. Most Voted

B. Create a new backup plan. Update the KMS key policy to allow the AWSServiceRoleForBackup IAM role to use the key. Implement a custom cron expression to run a backup of the file system every 30 minutes.

C. Create a new IAM role. Use the existing backup plan. Update the KMS key policy to allow the new IAM role to use the key. Enable continuous backups for point-in-time recovery.

D. Use the existing backup plan. Update the KMS key policy to allow the AWSServiceRoleForBackup IAM role to use the key. Enable Cross-Region Replication for the file system.

Correct Answer: *A*

Community vote distribution

A (82%)   Other

Question #454   *Topic 1*

A solutions architect must provide a secure way for a team of cloud engineers to use the AWS CLI to upload objects into an Amazon S3 bucket. Each cloud engineer has an IAM user, IAM access keys, and a virtual multi-factor authentication (MFA) device. The IAM users for the cloud engineers are in a group that is named S3-access. The cloud engineers must use MFA to perform any actions in Amazon S3.

Which solution will meet these requirements?

A. Attach a policy to the S3 bucket to prompt the IAM user for an MFA code when the IAM user performs actions on the S3 bucket. Use IAM access keys with the AWS CLI to call Amazon S3.

B. Update the trust policy for the S3-access group to require principals to use MFA when principals assume the group. Use IAM access keys with the AWS CLI to call Amazon S3.

C. Attach a policy to the S3-access group to deny all S3 actions unless MFA is present. Use IAM access keys with the AWS CLI to call Amazon S3.

D. Attach a policy to the S3-access group to deny all S3 actions unless MFA is present. Request temporary credentials from AWS Security Token Service (AWS STS). Attach the temporary credentials in a profile that Amazon S3 will reference when the user performs actions in Amazon S3. `Most Voted`

Correct Answer: *D*

Community vote distribution

D (100%)

Question #455   *Topic 1*

A company needs to migrate 60 on-premises legacy applications to AWS. The applications are based on the NET Framework and run on Windows.

The company needs a solution that minimizes migration time and requires no application code changes. The company also does not want to manage the infrastructure.

Which solution will meet these requirements?

A. Refactor the applications and containerize them by using AWS Toolkit for NET Refactoring. Use Amazon Elastic Container Service (Amazon ECS) with the Fargate launch type to host the containerized applications.

B. Use the Windows Web Application Migration Assistant to migrate the applications to AWS Elastic Beanstalk. Use Elastic Beanstalk to deploy and manage the applications. `Most Voted`

C. Use the Windows Web Application Migration Assistant to migrate the applications to Amazon EC2 instances. Use the EC2 instances to deploy and manage the applications.

D. Refactor the applications and containerize them by using AWS Toolkit for NET Refactoring. Use Amazon Elastic Kubernetes Service (Amazon EKS) with the Fargate launch type to host the containerized applications.

Correct Answer: *B*

Community vote distribution

B (77%)   A (23%)

Question #456
Topic 1

A company needs to run large batch-processing jobs on data that is stored in an Amazon S3 bucket. The jobs perform simulations. The results of the jobs are not time sensitive, and the process can withstand interruptions.

Each job must process 15-20 GB of data when the data is stored in the S3 bucket. The company will store the output from the jobs in a different Amazon S3 bucket for further analysis.

Which solution will meet these requirements MOST cost-effectively?

A. Create a serverless data pipeline. Use AWS Step Functions for orchestration. Use AWS Lambda functions with provisioned capacity to process the data.

B. Create an AWS Batch compute environment that includes Amazon EC2 Spot Instances. Specify the SPOT_CAPACITY_OPTIMIZED allocation strategy. `Most Voted`

C. Create an AWS Batch compute environment that includes Amazon EC2 On-Demand Instances and Spot Instances. Specify the SPOT_CAPACITY_OPTIMIZED allocation strategy for the Spot Instances.

D. Use Amazon Elastic Kubernetes Service (Amazon EKS) to run the processing jobs. Use managed node groups that contain a combination of Amazon EC2 On-Demand Instances and Spot Instances.

Correct Answer: *B*

Community vote distribution

B (100%)

Question #457
Topic 1

A company has an application that analyzes and stores image data on premises. The application receives millions of new image files every day. Files are an average of 1 MB in size. The files are analyzed in batches of 1 GB. When the application analyzes a batch, the application zips the images together. The application then archives the images as a single file in an on-premises NFS server for long-term storage.

The company has a Microsoft Hyper-V environment on premises and has compute capacity available. The company does not have storage capacity and wants to archive the images on AWS. The company needs the ability to retrieve archived data within 1 week of a request.

The company has a 10 Gbps AWS Direct Connect connection between its on-premises data center and AWS. The company needs to set bandwidth limits and schedule archived images to be copied to AWS during non-business hours.

Which solution will meet these requirements MOST cost-effectively?

A. Deploy an AWS DataSync agent on a new GPU-based Amazon EC2 instance. Configure the DataSync agent to copy the batch of files from the NFS on-premises server to Amazon S3 Glacier Instant Retrieval. After the successful copy, delete the data from the on-premises storage.

B. Deploy an AWS DataSync agent as a Hyper-V VM on premises. Configure the DataSync agent to copy the batch of files from the NFS on-premises server to Amazon S3 Glacier Deep Archive. After the successful copy, delete the data from the on-premises storage. `Most Voted`

C. Deploy an AWS DataSync agent on a new general purpose Amazon EC2 instance. Configure the DataSync agent to copy the batch of files from the NFS on-premises server to Amazon S3 Standard. After the successful copy, delete the data from the on-premises storage. Create an S3 Lifecycle rule to transition objects from S3 Standard to S3 Glacier Deep Archive after 1 day.

D. Deploy an AWS Storage Gateway Tape Gateway on premises in the Hyper-V environment. Connect the Tape Gateway to AWS. Use automatic tape creation. Specify an Amazon S3 Glacier Deep Archive pool. Eject the tape after the batch of images is copied.

Correct Answer: *B*

Community vote distribution

B (100%)

Question #458   Topic 1

A company wants to record key performance indicators (KPIs) from its application as part of a strategy to convert to a user-based licensing schema. The application is a multi-tier application with a web-based UI. The company saves all log files to Amazon CloudWatch by using the CloudWatch agent. All logins to the application are saved in a log file.

As part of the new license schema, the company needs to find out how many unique users each client has on a daily basis, weekly basis, and monthly basis.

Which solution will provide this information with the LEAST change to the application?

A. Configure an Amazon CloudWatch Logs metric filter that saves each successful login as a metric. Configure the user name and client name as dimensions for the metric. Most Voted

B. Change the application logic to make each successful login generate a call to the AWS SDK to increment a custom metric that records user name and client name dimensions in CloudWatch.

C. Configure the CloudWatch agent to extract successful login metrics from the logs. Additionally, configure the CloudWatch agent to save the successful login metrics as a custom metric that uses the user name and client name as dimensions for the metric.

D. Configure an AWS Lambda function to consume an Amazon CloudWatch Logs stream of the application logs. Additionally, configure the Lambda function to increment a custom metric in CloudWatch that uses the user name and client name as dimensions for the metric.

Correct Answer: *A*

Community vote distribution

A (67%)   D (25%)   8%

Question #459   Topic 1

A company is using GitHub Actions to run a CI/CD pipeline that accesses resources on AWS. The company has an IAM user that uses a secret key in the pipeline to authenticate to AWS. An existing IAM role with an attached policy grants the required permissions to deploy resources.

The company's security team implements a new requirement that pipelines can no longer use long-lived secret keys. A solutions architect must replace the secret key with a short-lived solution.

Which solution will meet these requirements with the LEAST operational overhead?

A. Create an IAM SAML 2.0 identity provider (IdP) in AWS Identity and Access Management (IAM). Create a new IAM role with the appropriate trust policy that allows the sts:AssumeRole API call. Attach the existing IAM policy to the new IAM role. Update GitHub to use SAML authentication for the pipeline.

B. Create an IAM OpenID Connect (OIDC) identity provider (IdP) in AWS Identity and Access Management (IAM). Create a new IAM role with the appropriate trust policy that allows the sts:AssumeRoleWithWebIdentity API call from the GitHub OIDC IdP. Update GitHub to assume the role for the pipeline. Most Voted

C. Create an Amazon Cognito identity pool. Configure the authentication provider to use GitHub. Create a new IAM role with the appropriate trust policy that allows the sts:AssumeRoleWithWebIdentity API call from the GitHub authentication provider. Configure the pipeline to use Cognito as its authentication provider.

D. Create a trust anchor to AWS Private Certificate Authority. Generate a client certificate to use with AWS IAM Roles Anywhere. Create a new IAM role with the appropriate trust policy that allows the sts:AssumeRole API call. Attach the existing IAM policy to the new IAM role. Configure the pipeline to use the credential helper tool and to reference the client certificate public key to assume the new IAM role.

Correct Answer: *B*

Community vote distribution

B (100%)

Question #460
Topic 1

A company is running a web-crawling process on a list of target URLs to obtain training documents for machine learning training algorithms. A fleet of Amazon EC2 t2.micro instances pulls the target URLs from an Amazon Simple Queue Service (Amazon SQS) queue. The instances then write the result of the crawling algorithm as a .csv file to an Amazon Elastic File System (Amazon EFS) volume. The EFS volume is mounted on all instances of the fleet.

A separate system adds the URLs to the SQS queue at infrequent rates. The instances crawl each URL in 10 seconds or less.

Metrics indicate that some instances are idle when no URLs are in the SQS queue. A solutions architect needs to redesign the architecture to optimize costs.

Which combination of steps will meet these requirements MOST cost-effectively? (Choose two.)

A. Use m5.8xlarge instances instead of t2.micro instances for the web-crawling process. Reduce the number of instances in the fleet by 50%.

B. Convert the web-crawling process into an AWS Lambda function. Configure the Lambda function to pull URLs from the SQS queue.
Most Voted

C. Modify the web-crawling process to store results in Amazon Neptune.

D. Modify the web-crawling process to store results in an Amazon Aurora Serverless MySQL instance.

E. Modify the web-crawling process to store results in Amazon S3. Most Voted

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Correct Answer: *BE*

Community vote distribution

BE (100%)

Question #461
Topic 1

A company needs to migrate its website from an on-premises data center to AWS. The website consists of a load balancer, a content management system (CMS) that runs on a Linux operating system, and a MySQL database.

The CMS requires persistent NFS-compatible storage for a file system. The new solution on AWS must be able to scale from 2 Amazon EC2 instances to 30 EC2 instances in response to unpredictable traffic increases. The new solution also must require no changes to the website and must prevent data loss.

Which solution will meet these requirements?

A. Create an Amazon Elastic File System (Amazon EFS) file system. Deploy the CMS to AWS Elastic Beanstalk with an Application Load Balancer and an Auto Scaling group. Use .ebextensions to mount the EFS file system to the EC2 instances. Create an Amazon Aurora MySQL database that is separate from the Elastic Beanstalk environment. Most Voted

B. Create an Amazon Elastic Block Store (Amazon EBS) Multi-Attach volume. Deploy the CMS to AWS Elastic Beanstalk with a Network Load Balancer and an Auto Scaling group. Use .ebextensions to mount the EBS volume to the EC2 instances. Create an Amazon RDS for MySQL database in the Elastic Beanstalk environment.

C. Create an Amazon Elastic File System (Amazon EFS) file system. Create a launch template and an Auto Scaling group to launch EC2 instances to support the CMS. Create a Network Load Balancer to distribute traffic. Create an Amazon Aurora MySQL database. Use an EC2 Auto Scaling scale-in lifecycle hook to mount the EFS file system to the EC2 instances.

D. Create an Amazon Elastic Block Store (Amazon EBS) Multi-Attach volume. Create a launch template and an Auto Scaling group to launch EC2 instances to support the CMS. Create an Application Load Balancer to distribute traffic. Create an Amazon ElastiCache for Redis cluster to support the MySQL database. Use EC2 user data to attach the EBS volume to the EC2 instances.

Correct Answer: *A*

Community vote distribution

A (93%)   7%

Question #462   *Topic 1*

A company needs to implement disaster recovery for a critical application that runs in a single AWS Region. The application's users interact with a web frontend that is hosted on Amazon EC2 instances behind an Application Load Balancer (ALB). The application writes to an Amazon RDS for MySQL DB instance. The application also outputs processed documents that are stored in an Amazon S3 bucket.

The company's finance team directly queries the database to run reports. During busy periods, these queries consume resources and negatively affect application performance.

A solutions architect must design a solution that will provide resiliency during a disaster. The solution must minimize data loss and must resolve the performance problems that result from the finance team's queries.

Which solution will meet these requirements?

A. Migrate the database to Amazon DynamoDB and use DynamoDB global tables. Instruct the finance team to query a global table in a separate Region. Create an AWS Lambda function to periodically synchronize the contents of the original S3 bucket to a new S3 bucket in the separate Region. Launch EC2 instances and create an ALB in the separate Region. Configure the application to point to the new S3 bucket.

B. Launch additional EC2 instances that host the application in a separate Region. Add the additional instances to the existing ALIn the separate Region, create a read replica of the RDS DB instance. Instruct the finance team to run queries against the read replica. Use S3 Cross-Region Replication (CRR) from the original S3 bucket to a new S3 bucket in the separate Region. During a disaster, promote the read replica to a standalone DB instance. Configure the application to point to the new S3 bucket and to the newly promoted read replica.

C. Create a read replica of the RDS DB instance in a separate Region. Instruct the finance team to run queries against the read replica. Create AMIs of the EC2 instances that host the application frontend. Copy the AMIs to the separate Region. Use S3 Cross-Region Replication (CRR) from the original S3 bucket to a new S3 bucket in the separate Region. During a disaster, promote the read replica to a standalone DB instance. Launch EC2 instances from the AMIs and create an ALB to present the application to end users. Configure the application to point to the new S3 bucket. Most Voted

D. Create hourly snapshots of the RDS DB instance. Copy the snapshots to a separate Region. Add an Amazon ElastiCache cluster in front of the existing RDS database. Create AMIs of the EC2 instances that host the application frontend. Copy the AMIs to the separate Region. Use S3 Cross-Region Replication (CRR) from the original S3 bucket to a new S3 bucket in the separate Region. During a disaster, restore the database from the latest RDS snapshot. Launch EC2 instances from the AMIs and create an ALB to present the application to end users. Configure the application to point to the new S3 bucket.

Correct Answer: *C*

Community vote distribution

C (91%)   9%

Question #463   *Topic 1*

A company has many services running in its on-premises data center. The data center is connected to AWS using AWS Direct Connect (DX) and an IPSec VPN. The service data is sensitive and connectivity cannot traverse the internet. The company wants to expand into a new market segment and begin offering its services to other companies that are using AWS.

Which solution will meet these requirements?

A. Create a VPC Endpoint Service that accepts TCP traffic, host it behind a Network Load Balancer, and make the service available over DX.
Most Voted

B. Create a VPC Endpoint Service that accepts HTTP or HTTPS traffic, host it behind an Application Load Balancer, and make the service available over DX.

C. Attach an internet gateway to the VPC, and ensure that network access control and security group rules allow the relevant inbound and outbound traffic.

D. Attach a NAT gateway to the VPC, and ensure that network access control and security group rules allow the relevant inbound and outbound traffic.

Correct Answer: *A*

Community vote distribution

           A (88%)   13%

Question #464   *Topic 1*

A company uses AWS Organizations to manage its AWS accounts. A solutions architect must design a solution in which only administrator roles are allowed to use IAM actions. However, the solutions architect does not have access to all the AWS accounts throughout the company.

Which solution meets these requirements with the LEAST operational overhead?

A. Create an SCP that applies to all the AWS accounts to allow IAM actions only for administrator roles. Apply the SCP to the root OU.

B. Configure AWS CloudTrail to invoke an AWS Lambda function for each event that is related to IAM actions. Configure the function to deny the action if the user who invoked the action is not an administrator.

C. Create an SCP that applies to all the AWS accounts to deny IAM actions for all users except for those with administrator roles. Apply the SCP to the root OU. Most Voted

D. Set an IAM permissions boundary that allows IAM actions. Attach the permissions boundary to every administrator role across all the AWS accounts.

Correct Answer: *C*

Community vote distribution

           C (100%)

Question #465
Topic 1

A company uses an organization in AWS Organizations to manage multiple AWS accounts. The company hosts some applications in a VPC in the company's shared services account.

The company has attached a transit gateway to the VPC in the shared services account.

The company is developing a new capability and has created a development environment that requires access to the applications that are in the shared services account. The company intends to delete and recreate resources frequently in the development account. The company also wants to give a development team the ability to recreate the team's connection to the shared services account as required.

Which solution will meet these requirements?

A. Create a transit gateway in the development account. Create a transit gateway peering request to the shared services account. Configure the shared services transit gateway to automatically accept peering connections.

B. Turn on automatic acceptance for the transit gateway in the shared services account. Use AWS Resource Access Manager (AWS RAM) to share the transit gateway resource in the shared services account with the development account. Accept the resource in the development account. Create a transit gateway attachment in the development account. [Most Voted]

C. Turn on automatic acceptance for the transit gateway in the shared services account. Create a VPC endpoint. Use the endpoint policy to grant permissions on the VPC endpoint for the development account. Configure the endpoint service to automatically accept connection requests. Provide the endpoint details to the development team.

D. Create an Amazon EventBridge rule to invoke an AWS Lambda function that accepts the transit gateway attachment when the development account makes an attachment request. Use AWS Network Manager to share the transit gateway in the shared services account with the development account. Accept the transit gateway in the development account.

Correct Answer: *B*

Community vote distribution

B (93%)   7%

Question #466
Topic 1

A company wants to migrate virtual Microsoft workloads from an on-premises data center to AWS. The company has successfully tested a few sample workloads on AWS. The company also has created an AWS Site-to-Site VPN connection to a VPC. A solutions architect needs to generate a total cost of ownership (TCO) report for the migration of all the workloads from the data center.

Simple Network Management Protocol (SNMP) has been enabled on each VM in the data center. The company cannot add more VMs in the data center and cannot install additional software on the VMs. The discovery data must be automatically imported into AWS Migration Hub.

Which solution will meet these requirements?

A. Use the AWS Application Migration Service agentless service and the AWS Migration Hub Strategy Recommendations to generate the TCO report.

B. Launch a Windows Amazon EC2 instance. Install the Migration Evaluator agentless collector on the EC2 instance. Configure Migration Evaluator to generate the TCO report. [Most Voted]

C. Launch a Windows Amazon EC2 instance. Install the Migration Evaluator agentless collector on the EC2 instance. Configure Migration Hub to generate the TCO report.

D. Use the AWS Migration Readiness Assessment tool inside the VPC. Configure Migration Evaluator to generate the TCO report.

Correct Answer: *B*

Community vote distribution

B (100%)

Question #467   *Topic 1*

A company that is developing a mobile game is making game assets available in two AWS Regions. Game assets are served from a set of Amazon EC2 instances behind an Application Load Balancer (ALB) in each Region. The company requires game assets to be fetched from the closest Region. If game assets become unavailable in the closest Region, they should be fetched from the other Region.

What should a solutions architect do to meet these requirements?

A. Create an Amazon CloudFront distribution. Create an origin group with one origin for each ALB. Set one of the origins as primary.

B. Create an Amazon Route 53 health check for each ALCreate a Route 53 failover routing record pointing to the two ALBs. Set the Evaluate Target Health value to Yes.

C. Create two Amazon CloudFront distributions, each with one ALB as the origin. Create an Amazon Route 53 failover routing record pointing to the two CloudFront distributions. Set the Evaluate Target Health value to Yes.

D. Create an Amazon Route 53 health check for each ALB. Create a Route 53 latency alias record pointing to the two ALBs. Set the Evaluate Target Health value to Yes. `Most Voted`

Correct Answer: *D*

Community vote distribution

D (51%)   A (41%)   7%

Question #468   *Topic 1*

A company deploys workloads in multiple AWS accounts. Each account has a VPC with VPC flow logs published in text log format to a centralized Amazon S3 bucket. Each log file is compressed with gzip compression. The company must retain the log files indefinitely.

A security engineer occasionally analyzes the logs by using Amazon Athena to query the VPC flow logs. The query performance is degrading over time as the number of ingested logs is growing. A solutions architect must improve the performance of the log analysis and reduce the storage space that the VPC flow logs use.

Which solution will meet these requirements with the LARGEST performance improvement?

A. Create an AWS Lambda function to decompress the gzip files and to compress the files with bzip2 compression. Subscribe the Lambda function to an s3:ObjectCreated:Put S3 event notification for the S3 bucket.

B. Enable S3 Transfer Acceleration for the S3 bucket. Create an S3 Lifecycle configuration to move files to the S3 Intelligent-Tiering storage class as soon as the files are uploaded.

C. Update the VPC flow log configuration to store the files in Apache Parquet format. Specify hourly partitions for the log files. `Most Voted`

D. Create a new Athena workgroup without data usage control limits. Use Athena engine version 2.

Correct Answer: *C*

Community vote distribution

C (100%)

Question #469   *Topic 1*

A company wants to establish a dedicated connection between its on-premises infrastructure and AWS. The company is setting up a 1 Gbps AWS Direct Connect connection to its account VPC. The architecture includes a transit gateway and a Direct Connect gateway to connect multiple VPCs and the on-premises infrastructure.

The company must connect to VPC resources over a transit VIF by using the Direct Connect connection.

Which combination of steps will meet these requirements? (Choose two.)

    A. Update the 1 Gbps Direct Connect connection to 10 Gbps.

    B. Advertise the on-premises network prefixes over the transit VIF. Most Voted

    C. Advertise the VPC prefixes from the Direct Connect gateway to the on-premises network over the transit VIF. Most Voted

    D. Update the Direct Connect connection's MACsec encryption mode attribute to must_encrypt.

    E. Associate a MACsec Connection Key Name/Connectivity Association Key (CKN/CAK) pair with the Direct Connect connection.

    Correct Answer: *BC*

    Community vote distribution
                                            BC (100%)

Question #470   *Topic 1*

A company wants to use Amazon WorkSpaces in combination with thin client devices to replace aging desktops. Employees use the desktops to access applications that work with Clinical trial data. Corporate security policy states that access to the applications must be restricted to only company branch office locations. The company is considering adding an additional branch office in the next 6 months.

Which solution meets these requirements with the MOST operational efficiency?

    A. Create an IP access control group rule with the list of public addresses from the branch offices. Associate the IP access control group with the WorkSpaces directory. Most Voted

    B. Use AWS Firewall Manager to create a web ACL rule with an IPSet with the list of public addresses from the branch office locations. Associate the web ACL with the WorkSpaces directory.

    C. Use AWS Certificate Manager (ACM) to issue trusted device certificates to the machines deployed in the branch office locations. Enable restricted access on the WorkSpaces directory.

    D. Create a custom WorkSpace image with Windows Firewall configured to restrict access to the public addresses of the branch offices. Use the image to deploy the WorkSpaces.

    Correct Answer: *A*

    Community vote distribution
                        A (86%)   14%

Question #471																		*Topic 1*

A company uses AWS Organizations. The company runs two firewall appliances in a centralized networking account. Each firewall appliance runs on a manually configured highly available Amazon EC2 instance. A transit gateway connects the VPC from the centralized networking account to VPCs of member accounts. Each firewall appliance uses a static private IP address that is then used to route traffic from the member accounts to the internet.

During a recent incident, a badly configured script initiated the termination of both firewall appliances. During the rebuild of the firewall appliances, the company wrote a new script to configure the firewall appliances at startup.

The company wants to modernize the deployment of the firewall appliances. The firewall appliances need the ability to scale horizontally to handle increased traffic when the network expands. The company must continue to use the firewall appliances to comply with company policy. The provider of the firewall appliances has confirmed that the latest version of the firewall code will work with all AWS services.

Which combination of steps should the solutions architect recommend to meet these requirements MOST cost-effectively? (Choose three.)

A. Deploy a Gateway Load Balancer in the centralized networking account. Set up an endpoint service that uses AWS PrivateLink. `Most Voted`

B. Deploy a Network Load Balancer in the centralized networking account. Set up an endpoint service that uses AWS PrivateLink.

C. Create an Auto Scaling group and a launch template that uses the new script as user data to configure the firewall appliances. Create a target group that uses the instance target type. `Most Voted`

D. Create an Auto Scaling group. Configure an AWS Launch Wizard deployment that uses the new script as user data to configure the firewall appliances. Create a target group that uses the IP target type.

E. Create VPC endpoints in each member account. Update the route tables to point to the VPC endpoints.

F. Create VPC endpoints in the centralized networking account. Update the route tables in each member account to point to the VPC endpoints. `Most Voted`

Correct Answer: *ACF*

Community vote distribution

ACF (53%)						ACE (42%)					5%

Question #472
Topic 1

A solutions architect must implement a multi-Region architecture for an Amazon RDS for PostgreSQL database that supports a web application. The database launches from an AWS CloudFormation template that includes AWS services and features that are present in both the primary and secondary Regions.

The database is configured for automated backups, and it has an RTO of 15 minutes and an RPO of 2 hours. The web application is configured to use an Amazon Route 53 record to route traffic to the database.

Which combination of steps will result in a highly available architecture that meets all the requirements? (Choose two.)

A. Create a cross-Region read replica of the database in the secondary Region. Configure an AWS Lambda function in the secondary Region to promote the read replica during a failover event. Most Voted

B. In the primary Region, create a health check on the database that will invoke an AWS Lambda function when a failure is detected. Program the Lambda function to recreate the database from the latest database snapshot in the secondary Region and update the Route 53 host records for the database.

C. Create an AWS Lambda function to copy the latest automated backup to the secondary Region every 2 hours.

D. Create a failover routing policy in Route 53 for the database DNS record. Set the primary and secondary endpoints to the endpoints in each Region. Most Voted

E. Create a hot standby database in the secondary Region. Use an AWS Lambda function to restore the secondary database to the latest RDS automatic backup in the event that the primary database fails.

Correct Answer: *AD*

Community vote distribution

AD (100%)

Question #473
Topic 1

An ecommerce company runs an application on AWS. The application has an Amazon API Gateway API that invokes an AWS Lambda function. The data is stored in an Amazon RDS for PostgreSQL DB instance.

During the company's most recent flash sale, a sudden increase in API calls negatively affected the application's performance. A solutions architect reviewed the Amazon CloudWatch metrics during that time and noticed a significant increase in Lambda invocations and database connections. The CPU utilization also was high on the DB instance.

What should the solutions architect recommend to optimize the application's performance?

A. Increase the memory of the Lambda function. Modify the Lambda function to close the database connections when the data is retrieved.

B. Add an Amazon ElastiCache for Redis cluster to store the frequently accessed data from the RDS database.

C. Create an RDS proxy by using the Lambda console. Modify the Lambda function to use the proxy endpoint. Most Voted

D. Modify the Lambda function to connect to the database outside of the function's handler. Check for an existing database connection before creating a new connection.

Correct Answer: *C*

Community vote distribution

C (82%)   D (18%)

Question #474
Topic 1

A retail company wants to improve its application architecture. The company's applications register new orders, handle returns of merchandise, and provide analytics. The applications store retail data in a MySQL database and an Oracle OLAP analytics database. All the applications and databases are hosted on Amazon EC2 instances.

Each application consists of several components that handle different parts of the order process. These components use incoming data from different sources. A separate ETL job runs every week and copies data from each application to the analytics database.

A solutions architect must redesign the architecture into an event-driven solution that uses serverless services. The solution must provide updated analytics in near real time.

Which solution will meet these requirements?

A. Migrate the individual applications as microservices to Amazon Elastic Container Service (Amazon ECS) containers that use AWS Fargate. Keep the retail MySQL database on Amazon EC2. Move the analytics database to Amazon Neptune. Use Amazon Simple Queue Service (Amazon SQS) to send all the incoming data to the microservices and the analytics database.

B. Create an Auto Scaling group for each application. Specify the necessary number of EC2 instances in each Auto Scaling group. Migrate the retail MySQL database and the analytics database to Amazon Aurora MySQL. Use Amazon Simple Notification Service (Amazon SNS) to send all the incoming data to the correct EC2 instances and the analytics database.

C. Migrate the individual applications as microservices to Amazon Elastic Kubernetes Service (Amazon EKS) containers that use AWS Fargate. Migrate the retail MySQL database to Amazon Aurora Serverless MySQL. Migrate the analytics database to Amazon Redshift Serverless. Use Amazon EventBridge to send all the incoming data to the microservices and the analytics database. Most Voted

D. Migrate the individual applications as microservices to Amazon AppStream 2.0. Migrate the retail MySQL database to Amazon Aurora MySQL. Migrate the analytics database to Amazon Redshift Serverless. Use AWS IoT Core to send all the incoming data to the microservices and the analytics database.

Correct Answer: *C*

Community vote distribution

C (100%)

Question #475
Topic 1

A company is planning a migration from an on-premises data center to the AWS Cloud. The company plans to use multiple AWS accounts that are managed in an organization in AWS Organizations. The company will create a small number of accounts initially and will add accounts as needed. A solutions architect must design a solution that turns on AWS CloudTrail in all AWS accounts.

What is the MOST operationally efficient solution that meets these requirements?

A. Create an AWS Lambda function that creates a new CloudTrail trail in all AWS accounts in the organization. Invoke the Lambda function daily by using a scheduled action in Amazon EventBridge.

B. Create a new CloudTrail trail in the organization's management account. Configure the trail to log all events for all AWS accounts in the organization. Most Voted

C. Create a new CloudTrail trail in all AWS accounts in the organization. Create new trails whenever a new account is created. Define an SCP that prevents deletion or modification of trails. Apply the SCP to the root OU.

D. Create an AWS Systems Manager Automation runbook that creates a CloudTrail trail in all AWS accounts in the organization. Invoke the automation by using Systems Manager State Manager.

Correct Answer: *B*

Community vote distribution

B (100%)

Question #476   *Topic 1*

A software development company has multiple engineers who are working remotely. The company is running Active Directory Domain Services (AD DS) on an Amazon EC2 instance. The company's security policy states that all internal, nonpublic services that are deployed in a VPC must be accessible through a VPN. Multi-factor authentication (MFA) must be used for access to a VPN.

What should a solutions architect do to meet these requirements?

A. Create an AWS Site-to-Site VPN connection. Configure integration between a VPN and AD DS. Use an Amazon WorkSpaces client with MFA support enabled to establish a VPN connection.

B. Create an AWS Client VPN endpoint. Create an AD Connector directory for integration with AD DS. Enable MFA for AD Connector. Use AWS Client VPN to establish a VPN connection. `Most Voted`

C. Create multiple AWS Site-to-Site VPN connections by using AWS VPN CloudHub. Configure integration between AWS VPN CloudHub and AD DS. Use AWS Copilot to establish a VPN connection.

D. Create an Amazon WorkLink endpoint. Configure integration between Amazon WorkLink and AD DS. Enable MFA in Amazon WorkLink. Use AWS Client VPN to establish a VPN connection.

Correct Answer: *B*

Community vote distribution

B (100%)

Question #477   *Topic 1*

A company is running a three-tier web application in an on-premises data center. The frontend is served by an Apache web server, the middle tier is a monolithic Java application, and the storage tier is a PostgreSQL database.

During a recent marketing promotion, customers could not place orders through the application because the application crashed. An analysis showed that all three tiers were overloaded. The application became unresponsive, and the database reached its capacity limit because of read operations. The company already has several similar promotions scheduled in the near future.

A solutions architect must develop a plan for migration to AWS to resolve these issues. The solution must maximize scalability and must minimize operational effort

Which combination of steps will meet these requirements? (Choose three.)

A. Refactor the frontend so that static assets can be hosted on Amazon S3. Use Amazon CloudFront to serve the frontend to customers. Connect the frontend to the Java application. `Most Voted`

B. Rehost the Apache web server of the frontend on Amazon EC2 instances that are in an Auto Scaling group. Use a load balancer in front of the Auto Scaling group. Use Amazon Elastic File System (Amazon EFS) to host the static assets that the Apache web server needs.

C. Rehost the Java application in an AWS Elastic Beanstalk environment that includes auto scaling. `Most Voted`

D. Refactor the Java application, Develop a Docker container to run the Java application. Use AWS Fargate to host the container.

E. Use AWS Database Migration Service (AWS DMS) to replatform the PostgreSQL database to an Amazon Aurora PostgreSQL database. Use Aurora Auto Scaling for read replicas. `Most Voted`

F. Rehost the PostgreSQL database on an Amazon EC2 instance that has twice as much memory as the on-premises server.

Correct Answer: *ACE*

Community vote distribution

ACE (85%)   Other

Question #478   *Topic 1*

A company is deploying a new application on AWS. The application consists of an Amazon Elastic Kubernetes Service (Amazon EKS) cluster and an Amazon Elastic Container Registry (Amazon ECR) repository. The EKS cluster has an AWS managed node group.

The company's security guidelines state that all resources on AWS must be continuously scanned for security vulnerabilities.

Which solution will meet this requirement with the LEAST operational overhead?

A. Activate AWS Security Hub. Configure Security Hub to scan the EKS nodes and the ECR repository.

B. Activate Amazon Inspector to scan the EKS nodes and the ECR repository. Most Voted

C. Launch a new Amazon EC2 instance and install a vulnerability scanning tool from AWS Marketplace. Configure the EC2 instance to scan the EKS nodes. Configure Amazon ECR to perform a basic scan on push.

D. Install the Amazon CloudWatch agent on the EKS nodes. Configure the CloudWatch agent to scan continuously. Configure Amazon ECR to perform a basic scan on push.

Correct Answer: *B*

Community vote distribution

B (90%)   10%

Question #479   *Topic 1*

A company needs to improve the reliability of its ticketing application. The application runs on an Amazon Elastic Container Service (Amazon ECS) cluster. The company uses Amazon CloudFront to serve the application. A single ECS service of the ECS cluster is the CloudFront distribution's origin.

The application allows only a specific number of active users to enter a ticket purchasing flow. These users are identified by an encrypted attribute in their JSON Web Token (JWT). All other users are redirected to a waiting room module until there is available capacity for purchasing.

The application is experiencing high loads. The waiting room module is working as designed, but load on the waiting room is disrupting the applications availability.
This disruption is negatively affecting the application's ticket sale transactions.

Which solution will provide the MOST reliability for ticket sale transactions during periods of high load?

A. Create a separate service in the ECS cluster for the waiting room. Use a separate scaling configuration. Ensure that the ticketing service uses the JWT information and appropriately forwards requests to the waiting room service.

B. Move the application to an Amazon Elastic Kubernetes Service (Amazon EKS) cluster. Split the waiting room module into a pod that is separate from the ticketing pod. Make the ticketing pod part of a StatefulSet. Ensure that the ticketing pod uses the JWT information and appropriately forwards requests to the waiting room pod.

C. Create a separate service in the ECS cluster for the waiting room. Use a separate scaling configuration. Create a CloudFront function that inspects the JWT information and appropriately forwards requests to the ticketing service or the waiting room service. Most Voted

D. Move the application to an Amazon Elastic Kubernetes Service (Amazon EKS) cluster. Split the waiting room module into a pod that is separate from the ticketing pod. Use AWS App Mesh by provisioning the App Mesh controller for Kubernetes. Enable mTLS authentication and service-to-service authentication for communication between the ticketing pod and the waiting room pod. Ensure that the ticketing pod uses the JWT information and appropriately forwards requests to the waiting room pod.

Correct Answer: *C*

Community vote distribution

C (100%)

Question #480   *Topic 1*

A solutions architect is creating an AWS CloudFormation template from an existing manually created non-production AWS environment. The CloudFormation template can be destroyed and recreated as needed. The environment contains an Amazon EC2 instance. The EC2 instance has an instance profile that the EC2 instance uses to assume a role in a parent account.

The solutions architect recreates the role in a CloudFormation template and uses the same role name. When the CloudFormation template is launched in the child account, the EC2 instance can no longer assume the role in the parent account because of insufficient permissions

What should the solutions architect do to resolve this issue?

A. In the parent account, edit the trust policy for the role that the EC2 instance needs to assume. Ensure that the target role ARN in the existing statement that allows the sts:AssumeRole action is correct. Save the trust policy. `Most Voted`

B. In the parent account, edit the trust policy for the role that the EC2 instance needs to assume. Add a statement that allows the sts:AssumeRole action for the root principal of the child account. Save the trust policy.

C. Update the CloudFormation stack again. Specify only the CAPABILITY_NAMED_IAM capability.

D. Update the CloudFormation stack again. Specify the CAPABILITY_IAM capability and the CAPABILITY_NAMED_IAM capability.

Correct Answer: *A*

Community vote distribution
      A (67%)   B (28%)   6%

Question #481   *Topic 1*

A company's web application has reliability issues. The application serves customers globally. The application runs on a single Amazon EC2 instance and performs read-intensive operations on an Amazon RDS for MySQL database.

During high load, the application becomes unresponsive and requires a manual restart of the EC2 instance. A solutions architect must improve the application's reliability.

Which solution will meet this requirement with the LEAST development effort?

A. Create an Amazon CloudFront distribution. Specify the EC2 instance as the distribution's origin. Configure a Multi-AZ deployment for the RDS for MySQL database. Use the standby DB instance for the read-intensive operations.

B. Run the application on EC2 instances that are in an Auto Scaling group. Place the EC2 instances behind an Elastic Load Balancing (ELB) load balancer. Replace the database service with Amazon Aurora. Use Aurora Replicas for the read-intensive operations. `Most Voted`

C. Deploy AWS Global Accelerator. Configure a Multi-AZ deployment for the RDS for MySQL database. Use the standby DB instance for the read-intensive operations.

D. Migrate the application to AWS Lambda functions. Create read replicas for the RDS for MySQL database. Use the read replicas for the read-intensive operations.

Correct Answer: *B*

Community vote distribution
      B (77%)   8%   Other

Question #482   *Topic 1*

A company needs to use an AWS Transfer Family SFTP-enabled server with an Amazon S3 bucket to receive updates from a third-party data supplier. The data is encrypted with Pretty Good Privacy (PGP) encryption. The company needs a solution that will automatically decrypt the data after the company receives the data.

A solutions architect will use a Transfer Family managed workflow. The company has created an IAM service role by using an IAM policy that allows access to AWS Secrets Manager and the S3 bucket. The role's trust relationship allows the transfer amazonaws.com service to assume the role.

What should the solutions architect do next to complete the solution for automatic decryption?

A. Store the PGP public key in Secrets Manager. Add a nominal step in the Transfer Family managed workflow to decrypt files. Configure PGP encryption parameters in the nominal step. Associate the workflow with the Transfer Family server.

B. Store the PGP private key in Secrets Manager. Add an exception-handling step in the Transfer Family managed workflow to decrypt files. Configure PGP encryption parameters in the exception handler. Associate the workflow with the SFTP user.

C. Store the PGP private key in Secrets Manager. Add a nominal step in the Transfer Family managed workflow to decrypt files. Configure PGP decryption parameters in the nominal step. Associate the workflow with the Transfer Family server. [Most Voted]

D. Store the PGP public key in Secrets Manager. Add an exception-handling step in the Transfer Family managed workflow to decrypt files. Configure PGP decryption parameters in the exception handler. Associate the workflow with the SFTP user.

Correct Answer: *C*

Community vote distribution

C (100%)

Question #483   *Topic 1*

A company is migrating infrastructure for its massive multiplayer game to AWS. The game's application features a leaderboard where players can see rankings in real time. The leaderboard requires microsecond reads and single-digit-millisecond write latencies. The datasets are single-digit terabytes in size and must be available to accept writes in less than a minute if a primary node failure occurs.

The company needs a solution in which data can persist for further analytical processing through a data pipeline.

Which solution will meet these requirements with the LEAST operational overhead?

B. Create an Amazon ROS database with a read replica. Configure the application to point writes to the writer endpoint. Configure the application to point reads to the reader endpoint.

C. Create an Amazon MemoryDB for Redis cluster in Muit-AZ mode Configure the application to interact with the primary node. [Most Voted]

D. Create multiple Redis nodes on Amazon EC2 instances that are spread across multiple Availability Zones. Configure backups to Amazon S3.

Correct Answer: *C*

Community vote distribution

C (100%)

Question #484   Topic 1

A company is running several applications in the AWS Cloud. The applications are specific to separate business units in the company. The company is running the components of the applications in several AWS accounts that are in an organization in AWS Organizations.

Every cloud resource in the company's organization has a tag that is named BusinessUnit. Every tag already has the appropriate value of the business unit name.

The company needs to allocate its cloud costs to different business units. The company also needs to visualize the cloud costs for each business unit.

Which solution will meet these requirements?

A. In the organization's management account, create a cost allocation tag that is named BusinessUnit. Also in the management account, create an Amazon S3 bucket and an AWS Cost and Usage Report (AWS CUR). Configure the S3 bucket as the destination for the AWS CUR. From the management account, query the AWS CUR data by using Amazon Athena. Use Amazon QuickSight for visualization. Most Voted

B. In each member account, create a cost allocation tag that is named BusinessUnit. In the organization's management account, create an Amazon S3 bucket and an AWS Cost and Usage Report (AWS CUR). Configure the S3 bucket as the destination for the AWS CUR. Create an Amazon CloudWatch dashboard for visualization.

C. In the organization's management account, create a cost allocation tag that is named BusinessUnit. In each member account, create an Amazon S3 bucket and an AWS Cost and Usage Report (AWS CUR). Configure each S3 bucket as the destination for its respective AWS CUR. In the management account, create an Amazon CloudWatch dashboard for visualization.

D. In each member account, create a cost allocation tag that is named BusinessUnit. Also in each member account, create an Amazon S3 bucket and an AWS Cost and Usage Report (AWS CUR). Configure each S3 bucket as the destination for its respective AWS CUR. From the management account, query the AWS CUR data by using Amazon Athena. Use Amazon QuickSight for visualization.

Correct Answer: *A*

Community vote distribution

A (100%)

Question #485   Topic 1

A utility company wants to collect usage data every 5 minutes from its smart meters to facilitate time-of-use metering. When a meter sends data to AWS, the data is sent to Amazon API Gateway, processed by an AWS Lambda function. and stored in an Amazon DynamoDB table. During the pilot phase, the Lambda functions took from 3 to 5 seconds to complete.

As more smart meters are deployed, the engineers notice the Lambda functions are taking from 1 to 2 minutes to complete. The functions are also increasing in duration as new types of metrics are collected from the devices. There are many ProvisionedThroughputExceededException errors while performing PUT operations on DynamoDB, and there are also many TooManyRequestsException errors from Lambda.

Which combination of changes will resolve these issues? (Choose two.)

A. Increase the write capacity units to the DynamoDB table. Most Voted

B. Increase the memory available to the Lambda functions.

C. Increase the payload size from the smart meters to send more data.

D. Stream the data into an Amazon Kinesis data stream from API Gateway and process the data in batches. Most Voted

E. Collect data in an Amazon SQS FIFO queue, which triggers a Lambda function to process each message

Correct Answer: *AD*

Community vote distribution

AD (100%)

Question #486
Topic 1

A company recently completed a successful proof of concept of Amazon WorkSpaces. A solutions architect needs to make the solution highly available across two AWS Regions. Amazon WorkSpaces is deployed in a failover Region, and a hosted zone is deployed in Amazon Route 53.

What should the solutions architect do to configure high availability for the solution?

A. Create a connection alias in the primary Region and in the failover Region. Associate the connection aliases with a directory in each Region. Create a Route 53 failover routing policy. Set Evaluate Target Health to Yes. `Most Voted`

B. Create a connection alias in the primary Region and in the failover Region. Associate the connection aliases with a directory in the primary Region. Create a Route 53 multivalue answer routing policy.

C. Create a connection alias in the primary Region. Associate the connection alias with a directory in the primary Region. Create a Route 53 weighted routing policy.

D. Create a connection alias in the primary Region Associate the connection alias with a directory in the failover Region. Create a Route 53 failover routing policy. Set Evaluate Target Health to Yes.

Correct Answer: *A*

Community vote distribution
A (71%)   D (29%)

Question #487
Topic 1

A company plans to migrate many VMs from an on-premises environment to AWS. The company requires an initial assessment of the on-premises environment before the migration, a visualization of the dependencies between applications that run on the VMs, and a report that provides an assessment of the on-premises environment.

To get this information, the company has initiated a Migration Evaluator assessment request. The company has the ability to install collector software in its on-premises environment without any constraints

Which solution will provide the company with the required information with the LEAST operational overhead?

A. Install the AWS Application Discovery Agent on each on-premises VM. After the data collection period ends, use AWS Migration Hub to view the application dependencies. Download the Quick insights assessment report from Migration Hub. `Most Voted`

B. Install the Migration Evaluator Collector on each on-premises VM. After the data collection period ends, use Migration Evaluator to view the application dependencies. Download and export the discovered server list from Migration Evaluator. Upload the list to Amazon QuickSight When the QuickSight report is generated, download the Quick Insights assessment report.

C. Setup the AWS Application Discovery Service Agentless Collector in the on-premises environment. After the data collection period ends, use AWS Migration Hub to view the application dependencies. Export the discovered server list from Application Discovery Service. Upload the list to Migration Evaluator. When the Migration Evaluator report is generated, download the Quick Insights assessment.

D. Set up the Migration Evaluator Collector in the on-premises environment. Install the AWS Application Discovery Agent on each VM. After the data collection period ends, use AWS Migration Hub to view the application dependencies. Download the Quick Insights assessment report from Migration Evaluator.

Correct Answer: *A*

Community vote distribution
A (65%)   C (35%)

Question #488
Topic 1

A company hosts its primary API on AWS by using an Amazon API Gateway API and AWS Lambda functions that contain the logic for the API methods. The company's internal applications use the API for core functionality and business logic. The company's customers use the API to access data from their accounts. Several customers also have access to a legacy API that is running on a single standalone Amazon EC2 instance.

The company wants to increase the security for these APIs to better prevent denial of service (DoS) attacks, check for vulnerabilities, and guard against common exploits.

What should a solutions architect do to meet these requirements?

A. Use AWS WAF to protect both APIs. Configure Amazon Inspector to analyze the legacy API. Configure Amazon GuardDuty to monitor for malicious attempts to access the APIs.

B. Use AWS WAF to protect the API Gateway API. Configure Amazon Inspector to analyze both APIs. Configure Amazon GuardDuty to block malicious attempts to access the APIs.

C. Use AWS WAF to protect the API Gateway API. Configure Amazon Inspector to analyze the legacy API. Configure Amazon GuardDuty to monitor for malicious attempts to access the APIs. Most Voted

D. Use AWS WAF to protect the API Gateway AP! Configure Amazon Inspector to protect the legacy API. Configure Amazon GuardDuty to block malicious attempts to access the APIs.

Correct Answer: *C*

Community vote distribution

C (87%)   13%

Question #489
Topic 1

A company is running a serverless ecommerce application on AWS. The application uses Amazon API Gateway to invoke AWS Lambda Java functions. The Lambda functions connect to an Amazon RDS for MySQL database to store data.

During a recent sale event, a sudden increase in web traffic resulted in poor API performance and database connection failures. The company needs to implement a solution to minimize the latency for the Lambda functions and to support bursts in traffic.

Which solution will meet these requirements with the LEAST amount of change to the application?

A. Update the code of the Lambda functions so that the Lambda functions open the database connection outside of the function handler. Increase the provisioned concurrency for the Lambda functions.

B. Create an RDS Proxy endpoint for the database. Store database secrets in AWS Secrets Manager. Set up the required IAM permissions. Update the Lambda functions to connect to the RDS Proxy endpoint. Increase the provisioned concurrency for the Lambda functions. Most Voted

C. Create a custom parameter group. Increase the value of the max_connections parameter. Associate the custom parameter group with the RDS DB instance and schedule a reboot. Increase the reserved concurrency for the Lambda functions.

D. Create an RDS Proxy endpoint for the database. Store database secrets in AWS Secrets Manager. Set up the required IAM permissions. Update the Lambda functions to connect to the RDS Proxy endpoint. Increase the reserved concurrency for the Lambda functions.

Correct Answer: *B*

Community vote distribution

B (67%)   D (22%)   11%

Question #490   *Topic 1*

A company requires that all internal application connectivity use private IP addresses. To facilitate this policy, a solutions architect has created interface endpoints to connect to AWS Public services. Upon testing, the solutions architect notices that the service names are resolving to public IP addresses, and that internal services cannot connect to the interface endpoints.

Which step should the solutions architect take to resolve this issue?

    A. Update the subnet route table with a route to the interface endpoint.

    B. Enable the private DNS option on the VPC attributes. `Most Voted`

    C. Configure the security group on the interface endpoint to allow connectivity to the AWS services.

    D. Configure an Amazon Route 53 private hosted zone with a conditional forwarder for the internal application.

Correct Answer: *B*

Community vote distribution

                          B (89%)   11%

Question #491   *Topic 1*

A company is developing a latency-sensitive application. Part of the application includes several AWS Lambda functions that need to initialize as quickly as possible. The Lambda functions are written in Java and contain initialization code outside the handlers to load libraries, initialize classes, and generate unique IDs.

Which solution will meet the startup performance requirement MOST cost-effectively?

    A. Move all the initialization code to the handlers for each Lambda function. Activate Lambda SnapStart for each Lambda function. Configure SnapStart to reference the $LATEST version of each Lambda function.

    B. Publish a version of each Lambda function. Create an alias for each Lambda function. Configure each alias to point to its corresponding version. Set up a provisioned concurrency configuration for each Lambda function to point to the corresponding alias.

    C. Publish a version of each Lambda function. Set up a provisioned concurrency configuration for each Lambda function to point to the corresponding version. Activate Lambda SnapStar for the published versions of the Lambda functions.

    D. Update the Lambda functions to add a pre-snapshot hook. Move the code that generates unique IDs into the handlers. Publish a version of each Lambda function. Activate Lambda SnapStart for the published versions of the Lambda functions. `Most Voted`

Correct Answer: *D*

Community vote distribution

                          D (74%)   C (26%)

Question #492
Topic 1

A solutions architect is importing a VM from an on-premises environment by using the Amazon EC2 VM Import feature of AWS Import/Export. The solutions architect has created an AMI and has provisioned an Amazon EC2 instance that is based on that AMI. The EC2 instance runs inside a public subnet in a VPC and has a public IP address assigned.

The EC2 instance does not appear as a managed instance in the AWS Systems Manager console.

Which combination of steps should the solutions architect take to troubleshoot this issue? (Choose two.)

A. Verify that Systems Manager Agent is installed on the instance and is running. Most Voted

B. Verify that the instance is assigned an appropriate IAM role for Systems Manager. Most Voted

C. Verify the existence of a VPC endpoint on the VPC.

D. Verity that the AWS Application Discovery Agent is configured.

E. Verify the correct configuration of service-linked roles for Systems Manager.

Correct Answer: *AB*

Community vote distribution
AB (100%)

Question #493
Topic 1

A company is using AWS CloudFormation as its deployment tool for all applications. It stages all application binaries and templates within Amazon S3 buckets with versioning enabled. Developers have access to an Amazon EC2 instance that hosts the integrated development environment (IDE). The developers download the application binaries from Amazon S3 to the EC2 instance, make changes, and upload the binaries to an S3 bucket after running the unit tests locally. The developers want to improve the existing deployment mechanism and implement CI/CD using AWS CodePipeline.

The developers have the following requirements:
• Use AWS CodeCommit for source control.
• Automate unit testing and security scanning.
• Alert the developers when unit tests fail.
• Turn application features on and off, and customize deployment dynamically as part of CI/CD.
• Have the lead developer provide approval before deploying an application.

Which solution will meet these requirements?

A. Use AWS CodeBuild to run unit tests and security scans. Use an Amazon EventBridge rule to send Amazon SNS alerts to the developers when unit tests fail. Write AWS Cloud Development Kit (AWS CDK) constructs for different solution features, and use a manifest file to turn features on and off in the AWS CDK application. Use a manual approval stage in the pipeline to allow the lead developer to approve applications. Most Voted

B. Use AWS Lambda to run unit tests and security scans. Use Lambda in a subsequent stage in the pipeline to send Amazon SNS alerts to the developers when unit tests fail. Write AWS Amplify plugins for different solution features and utilize user prompts to turn features on and off. Use Amazon SES in the pipeline to allow the lead developer to approve applications.

C. Use Jenkins to run unit tests and security scans. Use an Amazon EventBridge rule in the pipeline to send Amazon SES alerts to the developers when unit tests fail Use AWS CloudFormation nested stacks for different solution features and parameters to turn features on and off. Use AWS Lambda in the pipeline to allow the lead developer to approve applications.

D. Use AWS CodeDeploy to run unit tests and security scans. Use an Amazon CloudWatch alarm in the pipeline to send Amazon SNS alerts to the developers when unit tests fail. Use Docker images for different solution features and the AWS CLI to turn features on and off. Use a manual approval stage in the pipeline to allow the lead developer to approve applications.

Correct Answer: A

Community vote distribution

A (100%)

Question #494   Topic 1

A global ecommerce company has many data centers around the world. With the growth of its stored data, the company needs to set up a solution to provide scalable storage for legacy on-premises file applications. The company must be able to take point-in-time copies of volumes by using AWS Backup and must retain low-latency access to frequently accessed data. The company also needs to have storage volumes that can be mounted as Internet Small Computer System Interface (iSCSI) devices from the company's on-premises application servers.

Which solution will meet these requirements?

A. Provision an AWS Storage Gateway tape gateway. Configure the tape gateway to store data in an Amazon S3 bucket. Deploy AWS Backup to take point-in-time copies of the volumes.

B. Provision an Amazon FSx File Gateway and an Amazon S3 File Gateway. Deploy AWS Backup to take point-in-time copies of the data.

C. Provision an AWS Storage Gateway volume gateway in cache mode. Back up the on-premises Storage Gateway volumes with AWS Backup.
Most Voted

D. Provision an AWS Storage Gateway file gateway in cache mode. Deploy AWS Backup to take point-in-time copies of the volumes.

Correct Answer: *C*

Community vote distribution

C (100%)

Question #495   Topic 1

A company has an application that uses AWS Key Management Service (AWS KMS) to encrypt and decrypt data. The application stores data in an Amazon S3 bucket in an AWS Region. Company security policies require the data to be encrypted before the data is placed into the S3 bucket. The application must decrypt the data when the application reads files from the S3 bucket.

The company replicates the S3 bucket to other Regions. A solutions architect must design a solution so that the application can encrypt and decrypt data across Regions. The application must use the same key to decrypt the data in each Region.

Which solution will meet these requirements?

A. Create a KMS multi-Region primary key. Use the KMS multi-Region primary key to create a KMS multi-Region replica key in each additional Region where the application is running. Update the application code to use the specific replica key in each Region. Most Voted

B. Create a new customer managed KMS key in each additional Region where the application is running. Update the application code to use the specific KMS key in each Region.

C. Use AWS Private Certificate Authority to create a new certificate authority (CA) in the primary Region. Issue a new private certificate from the CA for the application's website URL. Share the CA with the additional Regions by using AWS Resource Access Manager (AWS RAM). Update the application code to use the shared CA certificates in each Region.

D. Use AWS Systems Manager Parameter Store to create a parameter in each additional Region where the application is running. Export the key material from the KMS key in the primary Region. Store the key material in the parameter in each Region. Update the application code to use the key data from the parameter in each Region.

Correct Answer: *A*

Community vote distribution

A (100%)

Question #496

Topic 1

A company hosts an application that uses several Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer (ALB). During the initial startup of the EC2 instances, the EC2 instances run user data scripts to download critical content for the application from an Amazon S3 bucket.

The EC2 instances are launching correctly. However, after a period of time, the EC2 instances are terminated with the following error message: "An instance was taken out of service in response to an ELB system health check failure." EC2 instances continue to launch and be terminated because of Auto Scaling events in an endless loop.

The only recent change to the deployment is that the company added a large amount of critical content to the S3 bucket. The company does not want to alter the user data scripts in production.

What should a solutions architect do so that the production environment can deploy successfully?

    A. Increase the size of the EC2 instances.

    B. Increase the health check timeout for the ALB.

    C. Change the health check path for the ALB.

    D. Increase the health check grace period for the Auto Scaling group. `Most Voted`

Correct Answer: *D*

Community vote distribution

          D (88%)   12%

Question #497   Topic 1

A company needs to move some on-premises Oracle databases to AWS. The company has chosen to keep some of the databases on premises for business compliance reasons.

The on-premises databases contain spatial data and run cron jobs for maintenance. The company needs to connect to the on-premises systems directly from AWS to query data as a foreign table.

Which solution will meet these requirements?

A. Create Amazon DynamoDB global tables with auto scaling enabled. Use the AWS Schema Conversion Tool (AWS SCT) and AWS Database Migration Service (AWS DMS) to move the data from on premises to DynamoDB. Create an AWS Lambda function to move the spatial data to Amazon S3. Query the data by using Amazon Athena. Use Amazon EventBridge to schedule jobs in DynamoDB for maintenance. Use Amazon API Gateway for foreign table support.

B. Create an Amazon RDS for Microsoft SQL Server DB instance. Use native replication to move the data from on premises to the DB instance. Use the AWS Schema Conversion Tool (AWS SCT) to modify the SQL Server schema as needed after replication. Move the spatial data to Amazon Redshift. Use stored procedures for system maintenance. Create AWS Glue crawlers to connect to the on-premises Oracle databases for foreign table support.

C. Launch Amazon EC2 instances to host the Oracle databases. Place the EC2 instances in an Auto Scaling group. Use AWS Application Migration Service to move the data from on premises to the EC2 instances and for real-time bidirectional change data capture (CDC) synchronization. Use Oracle native spatial data support. Create an AWS Lambda function to run maintenance jobs as part of an AWS Step Functions workflow. Create an internet gateway for foreign table support.

D. Create an Amazon RDS for PostgreSQL DB instance. Use the AWS Schema Conversion Tool (AWS SCT) and AWS Database Migration Service (AWS DMS) to move the data from on premises to the DB instance. Use PostgreSQL native spatial data support. Run cron jobs on the DB instance for maintenance. Use AWS Direct Connect to connect the DB instance to the on-premises environment for foreign table support.
Most Voted

Correct Answer: D

Community vote distribution

D (100%)

Question #498

Topic 1

Accompany runs an application on Amazon EC2 and AWS Lambda. The application stores temporary data in Amazon S3. The S3 objects are deleted after 24 hours.

The company deploys new versions of the application by launching AWS CloudFormation stacks. The stacks create the required resources. After validating a new version, the company deletes the old stack. The deletion of an old development stack recently failed. A solutions architect needs to resolve this issue without major architecture changes.

Which solution will meet these requirements?

A. Create a Lambda function to delete objects from an S3 bucket. Add the Lambda function as a custom resource in the CloudFormation stack with a DependsOn attribute that points to the S3 bucket resource. `Most Voted`

B. Modify the CloudFormation stack to attach a DeletionPolicy attribute with a value of Delete to the S3 bucket.

C. Update the CloudFormation stack to add a DeletionPolicy attribute with a value of Snapshot for the S3 bucket resource

D. Update the CloudFormation template to create an Amazon Elastic File System (Amazon EFS) file system to store temporary files instead of Amazon S3. Configure the Lambda functions to run in the same VPC as the EFS file system.

Correct Answer: *A*

Community vote distribution

A (85%)   Other

Question #499

Topic 1

A company has an application that stores user-uploaded videos in an Amazon S3 bucket that uses S3 Standard storage. Users access the videos frequently in the first 180 days after the videos are uploaded. Access after 180 days is rare. Named users and anonymous users access the videos.

Most of the videos are more than 100 MB in size. Users often have poor internet connectivity when they upload videos, resulting in failed uploads. The company uses multipart uploads for the videos.

A solutions architect needs to optimize the S3 costs of the application.

Which combination of actions will meet these requirements? (Choose two.)

A. Configure the S3 bucket to be a Requester Pays bucket.

B. Use S3 Transfer Acceleration to upload the videos to the S3 bucket.

C. Create an S3 Lifecycle configuration o expire incomplete multipart uploads 7 days after initiation. `Most Voted`

D. Create an S3 Lifecycle configuration to transition objects to S3 Glacier Instant Retrieval after 1 day.

E. Create an S3 Lifecycle configuration to transition objects to S3 Standard-infrequent Access (S3 Standard- IA) after 180 days. `Most Voted`

Correct Answer: *CE*

Community vote distribution

CE (85%)   BE (15%)

Question #500	Topic 1

A company runs an ecommerce web application on AWS. The web application is hosted as a static website on Amazon S3 with Amazon CloudFront for content delivery. An Amazon API
Gateway API invokes AWS Lambda functions to handle user requests and order processing for the web application The Lambda functions store data in an Amazon ROS for MySQL DB cluster that uses On-Demand instances. The DB cluster usage has been consistent in the past 12 months.

Recently, the website has experienced SQL injection and web exploit attempts. Customers also report that order processing time has increased during periods of peak usage. During these periods, the Lambda functions often have cold starts. As the company grows, the company needs to ensure scalability and low-latency access during traffic peaks. The company also must optimize the database costs and add protection against the SQL injection and web exploit attempts.

Which solution will meet these requirements?

A. Configure the Lambda functions to have an increased timeout value during peak periods. Use RDS Reserved Instances for the database. Use CloudFront and subscribe to AWS Shield Advanced to protect against the SQL injection and web exploit attempts.

B. Increase the memory of the Lambda functions, Transition to Amazon Redshift for the database. Integrate Amazon Inspector with CloudFront to protect against the SQL injection and web exploit attempts.

C. Use Lambda functions with provisioned concurrency for compute during peak periods, Transition to Amazon Aurora Serverless for the database. Use CloudFront and subscribe to AWS Shield Advanced to protect against the SQL injection and web exploit attempts.

D. Use Lambda functions with provisioned concurrency for compute during peak periods. Use RDS Reserved Instances for the database. Integrate AWS WAF with CloudFront to protect against the SQL injection and web exploit attempts. [Most Voted]

Correct Answer: *D*

Community vote distribution

D (71%)   C (29%)

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