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QUESTION 1
A user plans to use RDS as a managed DB platform. Which of the below mentioned features is not supported by RDS?

A. Automated backup
B. Automated scaling to manage a higher load
C. Automated failure detection and recovery
D. Automated software patching

Answer: B
Explanation:
AWS RDS provides a managed DB platform, which offers features, such as automated backup, patch management, automated failure detection and recovery.
The scaling is not automated and the user needs to plan it with a few clicks.
http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

QUESTION 2
A user has not enabled versioning on an S3 bucket. What will be the version ID of the object inside that bucket?

A. 0
B. There will be no version attached
C. Null
D. Blank

Answer: C
Explanation:
S3 objects stored in the bucket before the user has set the versioning state have a version ID of null. When the user enables versioning, the objects in the bucket do not change and their ID remains null.
http://docs.aws.amazon.com/AmazonS3/latest/dev/AddingObjectstoVersionSuspendedBuckets.html

QUESTION 3
A user has created a queue named "myqueue" with SQS. There are four messages published to queue which are not received by the consumer yet. If the user tries to delete the queue, what will happen?

A. A user can never delete a queue manually. AWS deletes it after 30 days of inactivity on queue
B. It will initiate the delete but wait for four days before deleting until all messages are deleted automatically.
C. It will ask user to delete the messages first
D. It will delete the queue

Answer: D
Explanation:
SQS allows the user to move data between distributed components of applications so they can perform different tasks without losing messages or requiring each component to be always available. The user can delete a queue at any time, whether it is empty or not. It is important to note that queues retain messages for a set period of time. By default, a queue retains messages for four days.
http://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/SQSConcept

s.html

QUESTION 4
What happens if your application performs more reads or writes than your provisioned capacity?

A. Nothing
B. requests above your provisioned capacity will be performed but you will receive 400 error codes.
C. requests above your provisioned capacity will be performed but you will receive 200 error codes.
D. requests above your provisioned capacity will be throttled and you will receive 400 error codes.

Answer: D
Explanation:
Speaking about DynamoDB, if your application performs more reads/second or writes/second than your table's provisioned throughput capacity allows, requests above your provisioned capacity will be throttled and you will receive 400 error codes.

QUESTION 5
In relation to Amazon SQS, how can you ensure that messages are delivered in order?

A. Increase the size of your queue
B. Send them with a timestamp
C. Give each message a unique id.
D. AWS cannot guarantee that you will receive messages in the exact order you sent them

Answer: D
Explanation:
Amazon SQS makes a best effort to preserve order in messages, but due to the distributed nature of the queue, AWS cannot guarantee that you will receive messages in the exact order you sent them. You typically place sequencing information or timestamps in your messages so that you can reorder them upon receipt.
https://aws.amazon.com/items/1343?externalID=1343

QUESTION 6
An organization has launched two applications: one for blogging and one for ECM on the same AWS Linux EC2 instance running in the AWS VPC. The organization has attached two private IPs (primary and secondary) to the above mentioned instance. The organization wants the instance OS to recognize the secondary IP address. How can the organization configure this?

A. Use the ec2-net-utility package which updates routing tables, uses DHCP to refresh the secondary IP and adds the network interface.
B. Use the ec2-net-utils package which will configure an additional network interface and update the routing table
C. Use the ec2-ip-update package which can configure the network interface as well as update the secondary IP with DHCP.
D. Use the ec2-ip-utility package which can update the routing tables as well as refresh the secondary IP using DHCP.

Answer: B
Explanation:

A Virtual Private Cloud (VPC) is a virtual network dedicated to the user's AWS account. It enables the user to launch AWS resources into a virtual network that the user has defined. With VPC the user can specify multiple private IP addresses for his instances. The number of network interfaces and private IP addresses that a user can specify for an instance depends on the instance type. This scenario helps when the user wants to host multiple websites on a single EC2 instance. After the user has assigned a secondary private IP address to his instance, he needs to configure the operating system on that instance to recognize the secondary private IP address. For AWS Linux, the ec2-net-utils package can take care of this step. It configures additional network interfaces that the user can attach while the instance is running, refreshes secondary IP addresses during DHCP lease renewal, and updates the related routing rules.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/MultipleIP.html

QUESTION 7
What kind of service is provided by AWS DynamoDB?

A. Relational Database
B. NoSQL Database
C. Dynamic Database
D. Document Database

Answer: B
Explanation:
DynamoDB is a fast, fully managed NoSQL database service.
http://aws.amazon.com/dynamodb/

QUESTION 8
In relation to Amazon SQS, how many queues and messages can you have per queue for each user?

A. Unlimited
B. 10
C. 256
D. 500

Answer: A
Explanation:
Amazon SQS supports an unlimited number of queues and unlimited number of messages per queue for each user. Please be aware that Amazon SQS automatically deletes messages that have been in the queue for more than 4 days.
https://aws.amazon.com/items/1343?externalID=1343

QUESTION 9
Doug has created a VPC with CIDR 10.201.0.0/16 in his AWS account. In this VPC he has created a public subnet with CIDR block 10.201.31.0/24. While launching a new EC2 from the console, he is not able to assign the private IP address 10.201.31.6 to this instance. Which is the most likely reason for this issue?

A. Private IP address 10.201.31.6 is not part of the associated subnet's IP address range.
B. Private IP address 10.201.31.6 is blocked via ACLs in Amazon infrastructure as a part of platform security.
C. Private address IP 10.201.31.6 is currently assigned to another interface.

D. Private IP address 10.201.31.6 is reserved by Amazon for IP networking purposes.

Answer: C
Explanation:
In Amazon VPC, you can assign any Private IP address to your instance as long as it is:
Part of the associated subnet's IP address range
Not reserved by Amazon for IP networking purposes
Not currently assigned to another interface
http://aws.amazon.com/vpc/faqs/

QUESTION 10
Regarding Amazon SQS, are there restrictions on the names of Amazon SQS queues?

A. No
B. Yes. Queue names must be unique within an AWS account and you cannot use hyphens (-) and underscores (_)
C. Yes. Queue names are limited to 80 characters and queue names must be unique within an AWS account
D. Yes. Queue names are limited to 80 characters but queue names do not need to be unique within an AWS account

Answer: C
Explanation:
Queue names are limited to 80 characters. Alphanumeric characters plus hyphens (-) and underscores (_) are allowed. Queue names must be unique within an AWS account.
After you delete a queue, you can reuse the queue name.
https://aws.amazon.com/sqs/faqs/

QUESTION 11
A user is planning to host a web server as well as an app server on a single EC2 instance which is a part of the public subnet of a VPC. How can the user setup to have two separate public IPs and separate security groups for both the application as well as the web server?

A. Launch a VPC instance with two network interfaces. Assign a separate security group to each and AWS will assign a separate public IP to them.
B. Launch VPC with two separate subnets and make the instance a part of both the subnets.
C. Launch a VPC instance with two network interfaces. Assign a separate security group and elastic IP to them.
D. Launch a VPC with ELB such that it redirects requests to separate VPC instances of the public subnet.

Answer: C
Explanation:
If you need to host multiple websites(with different IPs) on a single EC2 instance, the following is the suggested method from AWS.
Launch a VPC instance with two network interfaces
Assign elastic IPs from VPC EIP pool to those interfaces (Because, when the user has attached more than one network interface with an instance, AWS cannot assign public IPs to them.) Assign separate Security Groups if separate Security Groups are needed This scenario also helps for operating network appliances, such as firewalls or load balancers that have multiple private IP addresses for each network interface.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/MultipleIP.html

QUESTION 12
An online gaming site asked you if you can deploy a database that is a fast, highly scalable NoSQL database service in AWS for a new site that he wants to build. Which database should you recommend?

A. Amazon Redshift
B. Amazon SimpleDB
C. Amazon DynamoDB
D. Amazon RDS

Answer: C
Explanation:
Amazon DynamoDB is ideal for database applications that require very low latency and predictable performance at any scale but don't need complex querying capabilities like joins or transactions. Amazon DynamoDB is a fully-managed NoSQL database service that offers high performance, predictable throughput and low cost. It is easy to set up, operate, and scale. With Amazon DynamoDB, you can start small, specify the throughput and storage you need, and easily scale your capacity requirements on the fly. Amazon DynamoDB automatically partitions data over a number of servers to meet your request capacity. In addition, DynamoDB automatically replicates your data synchronously across multiple Availability Zones within an AWS Region to ensure high-availability and data durability.
https://aws.amazon.com/running_databases/#dynamodb_anchor

QUESTION 13
How long are the messages kept on an SQS queue by default?

A. If a message is not read, it is never deleted
B. 2 weeks
C. 1 day
D. 4 days

Answer: D
Explanation:
The SQS message retention period is configurable and can be set anywhere from 1 minute to 2 weeks. The default is 4 days and once the message retention limit is reached your messages will be automatically deleted. The option for longer message retention provides greater flexibility to allow for longer intervals between message production and consumption.
https://aws.amazon.com/sqs/faqs/

QUESTION 14
Regarding Amazon SWF, the coordination logic in a workflow is contained in a software program called a _____.

A. Handler
B. Decider
C. Cordinator
D. Worker

Answer: B
Explanation:

In Amazon SWF, the coordination logic in a workflow is contained in a software program called a decider. The decider schedules activity tasks, provides input data to the activity workers, processes events that arrive while the workflow is in progress, and ultimately ends (or closes) the workflow when the objective has been completed.
http://docs.aws.amazon.com/amazonswf/latest/developerguide/swf-dg-intro-to-swf.html

QUESTION 15
A user has attached one RDS security group with 5 RDS instances. The user has changed the ingress rule for the security group. What will be the initial status of the ingress rule?

A. Approving
B. Implementing
C. Authorizing
D. It is not possible to assign a single group to multiple DB instances

Answer: C
Explanation:
When the user makes any changes to the RDS security group the rule status will be authorizing for some time until the changes are applied to all instances that the group is connected with. Once the changes are propagated the rule status will change to authorized.

QUESTION 16
A user has attached an EBS volume to a running Linux instance as a "/dev/sdf" device. The user is unable to see the attached device when he runs the command "df -h". What is the possible reason for this?

A. The volume is not in the same AZ of the instance
B. The volume is not formatted
C. The volume is not attached as a root device
D. The volume is not mounted

Answer: D
Explanation:
When a user creates an EBS volume and attaches it as a device, it is required to mount the device. If the device/volume is not mounted it will not be available in the listing.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AmazonEBS.html

QUESTION 17
An account owner has created an IAM user with the name examkiller. The account owner wants to give EC2 access of only the US West region to that IAM user. How can the owner configure this?

A. While creating a policy provide the region as a part of the resources
B. Create an IAM user in the US West region and give access to EC2
C. Create an IAM policy and define the region in the condition
D. It is not possible to provide access based on the region

Answer: C
Explanation:
The IAM policy is never region specific. If the user wants to configure the region specific setting, he needs to provide conditions as part of the policy.

http://awspolicygen.s3.amazonaws.com/policygen.html

QUESTION 18
What is the maximum time messages can be stored in SQS?

A. 14 days
B. one month
C. 4 days
D. 7 days

Answer: A
Explanation:
A message can be stored in the Simple Queue Service (SQS) from 1 minute up to a maximum of 14 days.

QUESTION 19
In DynamoDB, the default table size is:

A. 5 GB
B. 1 GB
C. 10 GB
D. There is no table size

Answer: D
Explanation:
DynamoDB has seamless scalability with no table size limits and unlimited storage, so you shouldn't be worried about managing storage on the host or to provisioning more drive, as your data requirement changes.
http://aws.amazon.com/dynamodb/

QUESTION 20
A user is launching an AWS RDS instance with MySQL. The user wants to enable the Multi AZ feature. Which of the below mentioned parameters will not be allowed to configure by RDS?

A. Availability Zone
B. Region
C. DB subnet group
D. Database port

Answer: A
Explanation:
If the user is launching RDS with Multi AZ the user cannot provision the Availability Zone. RDS is launched automatically instead
https://console.aws.amazon.com/rds/

QUESTION 21
You want to have multiple versions of your application running at the same time, with all versions launched via AWS Elastic Beanstalk. Is this possible?

A. No. However if you have 2 AWS accounts this can be done

B. No. AWS Elastic Beanstalk is not designed to support multiple running environments
C. Yes. AWS Elastic Beanstalk is designed to support a number of multiple running environments
D. Yes. However AWS Elastic Beanstalk is designed to support only 2 multiple running environments

Answer: C
Explanation:
AWS Elastic Beanstalk is designed to support multiple running environments. As an example you could have one for integration testing, one for pre-production, and one for production, with each environment independently configured and running on its own separate AWS resources.
https://aws.amazon.com/elasticbeanstalk/faqs/

QUESTION 22
A user has launched an EBS backed Linux instance. How can a user detach the root device and attach it to another instance as a secondary volume?

A. Unmount the root volume first and then detach it
B. It is not possible to mount the root volume to some other instance
C. Stop the first instance and then attach instance's root volume as a new volume to the other instance
D. It is not possible to mount the root device as a secondary volume on the other instance

Answer: C
Explanation:
If an Amazon EBS volume is the root device of an instance, it cannot be detached unless the instance is in the stopped state.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-detaching-volume.html

QUESTION 23
When using Amazon SQS how much data can you store in a message?

A. 8 KB
B. 2 KB
C. 16 KB
D. 4 KB

Answer: A
Explanation:
With Amazon SQS version 2008-01-01, the maximum message size for both SOAP and Query requests is 8KB.
If you need to send messages to the queue that are larger than 8 KB, AWS recommends that you split the information into separate messages. Alternatively, you could use Amazon S3 or Amazon SimpleDB to hold the information and include the pointer to that information in the Amazon SQS message. If you send a message that is larger than 8KB to the queue, you will receive a MessageTooLong error with HTTP code 400.
https://aws.amazon.com/items/1343?externalID=1343

QUESTION 24
A user has launched one EC2 instance in the US West region. The user wants to access the RDS instance launched in the US East region from that EC2 instance. How can the user configure the access for that EC2 instance?

A. It is not possible to access RDS of the US East region from the US West region
B. Open the security group of the US West region in the RDS security group's ingress rule
C. Configure the IP range of the US West region instance as the ingress security rule of RDS
D. Create an IAM role which has access to RDS and launch an instance in the US West region with it

Answer: C
Explanation:
The user cannot authorize an Amazon EC2 security group if it is in a different AWS Region than the RDS DB instance. The user can authorize an IP range or specify an Amazon EC2 security group in the same region that refers to an IP address in another region.

QUESTION 25
In regard to AWS CloudFormation, what is a stack?

A. The set of AWS templates that are created and managed as a template
B. The set of AWS resources that are created and managed as a template
C. The set of AWS resources that are created and managed as a single unit
D. The set of AWS templates that are created and managed as a single unit

Answer: C
Explanation:
A stack is the set of AWS resources that are created and managed as a single unit when AWS CloudFormation initiates a template.
http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/concept-stack.html

QUESTION 26
In regard to DynamoDB, what is the Global secondary index?

A. An index with a hash and range key that can be different from those on the table.
B. An index that has the same range key as the table, but a different hash key
C. An index that has the same hash key and range key as the table
D. An index that has the same hash key as the table, but a different range key

Answer: A
Explanation:
Global secondary index -- an index with a hash and range key that can be different from those on the table.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DataModel.html

QUESTION 27
Which of the below mentioned options is not a best practice to securely manage the AWS access credentials?

A. Enable MFA for privileged users
B. Create individual IAM users
C. Keep rotating your secure access credentials at regular intervals
D. Create strong access key and secret access key and attach to the root account

Answer: D
Explanation:
It is a recommended approach to avoid using the access and secret access keys of the root account. Thus, do not download or delete it. Instead make the IAM user as powerful as the root account and use its credentials. The user cannot generate their own access and secret access keys as they are always generated by AWS.
http://docs.aws.amazon.com/IAM/latest/UserGuide/IAMBestPractices.html

QUESTION 28
You have been given a scope to deploy some AWS infrastructure for a large organisation. The requirements are that you will have a lot of EC2 instances but may need to add more when the average utilization of your Amazon EC2 fleet is high and conversely remove them when CPU utilization is low. Which AWS services would be best to use to accomplish this?

A. Amazon CloudFront, Amazon CloudWatch and Elastic Load Balancing.
B. Auto Scaling, Amazon CloudWatch and AWS CloudTrail.
C. Auto Scaling, Amazon CloudWatch and Elastic Load Balancing.
D. Auto Scaling, Amazon CloudWatch and AWS Elastic Beanstalk

Answer: C
Explanation:
Auto Scaling enables you to follow the demand curve for your applications closely, reducing the need to manually provision Amazon EC2 capacity in advance. For example, you can set a condition to add new Amazon EC2 instances in increments to the Auto Scaling group when the average utilization of your Amazon EC2 fleet is high; and similarly, you can set a condition to remove instances in the same increments when CPU utilization is low. If you have predictable load changes, you can set a schedule through Auto Scaling to plan your scaling activities. You can use Amazon CloudWatch to send alarms to trigger scaling activities and Elastic Load Balancing to help distribute traffic to your instances within Auto Scaling groups. Auto Scaling enables you to run your Amazon EC2 fleet at optimal utilization.
http://aws.amazon.com/autoscaling/

QUESTION 29
You are building an online store on AWS that uses SQS to process your customer orders. Your backend system needs those messages in the same sequence the customer orders have been put in. How can you achieve that?

A. You can do this with SQS but you also need to use SWF
B. Messages will arrive in the same order by default
C. You can use sequencing information on each message
D. It is not possible to do this with SQS

Answer: C
Explanation:
Amazon SQS is engineered to always be available and deliver messages. One of the resulting tradeoffs is that SQS does not guarantee first in, first out delivery of messages. For many distributed applications, each message can stand on its own, and as long as all messages are delivered, the order is not important. If your system requires that order be preserved, you can place sequencing information in each message, so that you can reorder the messages when the queue returns them.

QUESTION 30

A user has launched an EC2 instance and installed a website with the Apache webserver. The webserver is running but the user is not able to access the website from the internet. What can be the possible reason for this failure?

A. The security group of the instance is not configured properly.
B. The instance is not configured with the proper key-pairs.
C. The Apache website cannot be accessed from the internet.
D. Instance is not configured with an elastic IP.

Answer: A
Explanation:
In Amazon Web Services, when a user has configured an instance with Apache, the user needs to ensure that the ports in the security group are opened as configured in Apache config. E.g. If Apache is running on port 80, the user should open port 80 in the security group.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html

QUESTION 31
When you use the AWS Elastic Beanstalk console to deploy a new application you'll need to upload a source bundle and it should _____.

A. Consist of a single .zip file
B. Consist of a single .war file
C. Consist of a single .zip file or .war file
D. Consist of a folder with all files

Answer: C
Explanation:
When you use the AWS Elastic Beanstalk console to deploy a new application or an application version, you'll need to upload a source bundle. Your source bundle must meet the following requirements:
Consist of a single .zip file or .war file
Not exceed 512 MB
Not include a parent folder or top-level directory (subdirectories are fine)
http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.deployment.source.html

QUESTION 32
A user had defined an IAM policy similar to the one given below on a bucket:

```
{
"Version": "2012-10-17",
"Statement": [{
"Effect": "Allow",
"Principal": {
"AWS": "arn:aws:iam::12112112:user/test"
},
"Action": [
"s3:GetBucketLocation",
"s3:ListBucket",
"s3:GetObject"
],
"Resource": [
"arn:aws:s3:::examkiller"
]
```

```
}
]
}
```

What will this do?

A. It will result in an error saying invalid policy statement
B. It will create an IAM policy for the user test
C. Allows the user test of the AWS account ID 12112112 to perform GetBucketLocation, ListBucket and GetObject on the bucket examkiller
D. It will allow all the IAM users of the account ID 12112112 to perform GetBucketLocation, ListBucket and GetObject on bucket examkiller

Answer: C
Explanation:
The IAM policy allows to test a user in the account 12112112 to perform:
s3:GetBucketLocation
s3:ListBucket
s3:GetObject
Amazon S3 permissions on the examkiller bucket.
http://docs.aws.amazon.com/AmazonS3/latest/dev/access-policy-language-overview.html

QUESTION 33
A user has configured a bucket S3 to host a static website. What difference will there be when static website hosting is enabled?

A. It will help the user identify this bucket as the website root to map with the domain
B. It will create a new version of the bucket
C. It will not make any difference, but will help the user to configure the error page
D. It will provide the region specific website endpoint

Answer: D
Explanation:
To host a static website, the user needs to configure an Amazon S3 bucket for website hosting and then upload the website contents to the bucket. The website is then available at the region-specific website endpoint of the bucket.
http://docs.aws.amazon.com/AmazonS3/latest/dev/WebsiteHosting.html

QUESTION 34
How does Amazon SQS allow multiple readers to access the same message queue without losing messages or processing them many times?

A. By identifying a user by his unique id
B. By using unique cryptography
C. Amazon SQS queue has a configurable visibility timeout.
D. Multiple readers can't access the same message queue

Answer: C
Explanation:
Every Amazon SQS queue has a configurable visibility timeout. For the designated amount of time after a message is read from a queue, it will not be visible to any other reader. As long as the amount of time that it takes to process the message is less than the visibility timeout, every

message will be processed and deleted. In the event that the component processing the message fails or becomes unavailable, the message will again become visible to any component reading the queue once the visibility timeout ends. This allows you to have many components all reading messages from the same queue, with each working to process different messages.
https://aws.amazon.com/sqs/faqs/

QUESTION 35
In DynamoDB, a secondary index is a data structure that contains a subset of attributes from a table, along with an alternate key to support _____ operations.

A. None of the above
B. Both
C. Query
D. Scan

Answer: C
Explanation: In DynamoDB, a secondary index is a data structure that contains a subset of attributes from a table, along with an alternate key to support Query operations.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/SecondaryIndexes.html

QUESTION 36
A user is trying to understand AWS SNS. To which of the below mentioned end points is SNS unable to send a notification?

A. AWS SES
B. Email JSON
C. AWS SQS
D. HTTP

Answer: A
Explanation:
Amazon Simple Notification Service (Amazon SNS) is a fast, flexible, and fully managed push messaging service. Amazon SNS can deliver notifications by SMS text message or email to the Amazon Simple Queue Service (SQS) queues or to any HTTP endpoint. The user can select one the following transports as part of the subscription requests: "HTTP", "HTTPS","Email", "Email-JSON", "SQS", "and SMS".
http://aws.amazon.com/sns/faqs/

QUESTION 37
Which of the following device names is recommended for an EBS volume that can be attached to an Amazon EC2 Instance running Windows?

A. xvd[a-e]
B. /mnt/sd[b-e]
C. xvd[f-p]
D. /dev/sda1

Answer: C
Explanation:
The xvd[f-p] is the recommended device name for EBS volumes that can be attached to the Amazon EC2 Instances running on Windows.

http://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/device_naming.html

QUESTION 38
Can one instance be registered with two ELBs in the same region?

A. No
B. Yes, provided both ELBs have the same health check configuration
C. Yes, always
D. Yes, provided both ELBs are in the same AZ

Answer: C
Explanation:
Yes, it is possible to have one instance part of two separate ELBs, though both ELBs have different configurations. ELBs are never launched in specific zones.
http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/enable-disable-az.html

QUESTION 39
What does Amazon SQS provide?

A. An asynchronous message queue service.
B. A Simple Query Server, managed directly by Amazon Web Services.
C. None of these.
D. A synchronous message queue service.

Answer: A
Explanation:
Amazon SQS stands for Simple Queue Services, and provides a cost-effective way to decouple the components of your application through an asynchronous message queue service
http://aws.amazon.com/sqs/

QUESTION 40
A user is trying to create a list of IAM users with the AWS console. When the IAM users are created which of the below mentioned credentials will be enabled by default for the user?

A. IAM access key and secret access key
B. IAM X.509 certificates
C. Nothing. Everything is disabled by default
D. IAM passwords

Answer: C
Explanation:
Newly created IAM users have no password and no access key (access key ID and secret access key). If the user needs to administer your AWS resources using the AWS Management Console, you can create a password for the user. If the user needs to interact with AWS programmatically (using the command line interface (CLI), the AWS SDK, or service-specific APIs), you can create an access key for that user. The credentials you create for users are what they use to uniquely identify themselves to AWS.
http://docs.aws.amazon.com/IAM/latest/UserGuide/Using_WorkingWithGroupsAndUsers.html

QUESTION 41

Bob is an IAM user who has access to the EC2 services. Admin is an IAM user who has access to all the AWS services including IAM. Can Bob change his password?

A. No, the IAM user can never change the password
B. Yes, provided Admin has given Bob access to change his password
C. Yes, only from AWS CLI
D. Yes, only from the AWS console

Answer: B
Explanation:
The IAM users by default cannot change their password. The root owner or IAM administrator needs to set the policy in the password policy page, which should allow the user to change their password. Once it is enabled, the IAM user can always change their passwords from the AWS console or CLI.
http://docs.aws.amazon.com/IAM/latest/UserGuide/Using_ManagingUserPwdSelf.html

QUESTION 42
A user has created photo editing software and hosted it on EC2. The software accepts requests from the user about the photo format and resolution and sends a message to S3 to enhance the picture accordingly. Which of the below mentioned AWS services will help make a scalable software with the AWS infrastructure in this scenario?

A. AWS Elastic Transcoder
B. AWS Simple Notification Service
C. AWS Simple Queue Service
D. AWS Glacier

Answer: C
Explanation:
Amazon Simple Queue Service (SQS) is a fast, reliable, scalable, and fully managed message queuing service. SQS provides a simple and cost-effective way to decouple the components of an application. The user can configure SQS, which will decouple the call between the EC2 application and S3. Thus, the application does not keep waiting for S3 to provide the data.
http://aws.amazon.com/sqs/faqs/

QUESTION 43
A user has created a blank EBS volume in the US-East-1 region. The user is unable to attach the volume to a running instance in the same region. What could be the possible reason for this?

A. The instance must be in a running state. It is required to stop the instance to attach volume
B. The AZ for the instance and volume are different
C. The instance is from an instance store backed AMI
D. The instance has enabled the volume attach protection

Answer: B
Explanation:
An EBS volume provides persistent data storage. The user can attach a volume to any instance provided they are both in the same AZ. Even if they are in the same region but in a different AZ, it will not be able to attach the volume to that instance.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AmazonEBS.html

QUESTION 44
In DynamoDB, could you use IAM to grant access to Amazon DynamoDB resources and API actions?

A. Yes
B. Depended to the type of access
C. In DynamoDB there is no need to grant access
D. No

Answer: A
Explanation:
Amazon DynamoDB integrates with AWS Identity and Access Management (IAM).
You can use AWS IAM to grant access to Amazon DynamoDB resources and API actions.
To do this, you first write an AWS IAM policy, which is a document that explicitly lists the permissions you want to grant. You then attach that policy to an AWS IAM user or role.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/UsingIAMWithDDB.html

QUESTION 45
A user is planning to host a mobile game on EC2 which sends notifications to active users on either high score or the addition of new features. The user should get this notification when he is online on his mobile device. Which of the below mentioned AWS services can help achieve this functionality?

A. AWS Simple Notification Service.
B. AWS Simple Queue Service.
C. AWS Mobile Communication Service.
D. AWS Simple Email Service.

Answer: A
Explanation:
Amazon Simple Notification Service (Amazon SNS) is a fast, flexible, and fully managed push messaging service. Amazon SNS makes it simple and cost-effective to push to mobile devices, such as iPhone, iPad, Android, Kindle Fire, and internet connected smart devices, as well as pushing to other distributed services.
http://aws.amazon.com/sns

QUESTION 46
An organization is setting up their website on AWS. The organization is working on various security measures to be performed on the AWS EC2 instances. Which of the below mentioned security mechanisms will not help the organization to avoid future data leaks and identify security weaknesses?

A. Perform SQL injection for application testing.
B. Run penetration testing on AWS with prior approval from Amazon.
C. Perform a hardening test on the AWS instance.
D. Perform a Code Check for any memory leaks.

Answer: D
Explanation:
AWS security follows the shared security model where the user is as much responsible as Amazon. Since Amazon is a public cloud it is bound to be targeted by hackers. If an organization is planning to host their application on AWS EC2, they should perform the below mentioned

security checks as a measure to find any security weakness/data leaks:
Perform penetration testing as performed by attackers to find any vulnerability. The organization must take an approval from AWS before performing penetration testing Perform hardening testing to find if there are any unnecessary ports open Perform SQL injection to find any DB security issues
The code memory checks are generally useful when the organization wants to improve the application performance.
http://aws.amazon.com/security/penetration-testing/

QUESTION 47
A root account owner is trying to setup an additional level of security for all his IAM users. Which of the below mentioned options is a recommended solution for the account owner?

A. Enable access key and secret access key for all the IAM users
B. Enable MFA for all IAM users
C. Enable the password for all the IAM users
D. Enable MFA for the root account

Answer: B
Explanation:
Multi-Factor Authentication adds an extra level of security for all the users. The user can enable MFA for all IAM users which ensures that each user has to provide an extra six digit code for authentication.
http://docs.aws.amazon.com/IAM/latest/UserGuide/Using_ManagingMFA.html

QUESTION 48
Regarding Amazon SQS, what happens if there is no activity against a queue for more than 30 consecutive days?

A. Your account will be suspended
B. The queue may be deleted
C. Nothing
D. The queue will be deleted

Answer: B
Explanation:
AWS reserve the right to delete a queue if none of the following requests have been issued against the queue for more than 30 consecutive days:
SendMessage
ReceiveMessage
DeleteMessage
GetQueueAttributes
SetQueueAttributes
You should design your application with this in mind.
https://aws.amazon.com/sqs/faqs/

QUESTION 49
Which of the below mentioned options is a must to have an element as a part of the IAM policy?

A. Condition
B. ID

C. Statement
D. Version

Answer: C
Explanation:
The statement is the main element of the IAM policy and it is a must for a policy.
Elements such as condition, version and ID are not required.
http://docs.aws.amazon.com/IAM/latest/UserGuide/AccessPolicyLanguage_ElementDescriptions.html

QUESTION 50
Which of the below mentioned commands allows the user to share the AMI with his peers using the AWS EC2 CLI?

A. ec2-share-image-public
B. ec2-share-image-account
C. ec2-share-image
D. ec2-modify-image-attribute

Answer: D
Explanation:
A user can share an AMI with another user / peer using the command:
ec2-modify-image-attribute <AMI-ID> -l -a <AWS Account ID>
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/sharingamis-explicit.html

QUESTION 51
ExamKiller (with AWS account ID 111122223333) has created 50 IAM users for its organization's employees. ExamKiller wants to make the AWS console login URL for all IAM users like: https://examkiller.signin.aws.amazon.com/console/. How can this be configured?

A. The user needs to use Route 53 to map the examkiller domain and IAM URL
B. Create an IAM AWS account alias with the name examkiller
C. It is not possible to have a personalized IAM login URL
D. Create an IAM hosted zone Identity for the domain examkiller

Answer: B
Explanation:
If a user wants the URL of the AWS IAM sign-in page to have a company name instead of the AWS account ID, he can create an alias for his AWS account ID.
http://docs.aws.amazon.com/IAM/latest/UserGuide/AccountAlias.html

QUESTION 52
A user has created a new EBS volume from an existing snapshot.
The user mounts the volume on the instance to which it is attached.
Which of the below mentioned options is a required step before the user can mount the volume?

A. Run a cyclic check on the device for data consistency
B. Create the file system of the volume
C. Resize the volume as per the original snapshot size
D. No step is required. The user can directly mount the device

Answer: D
Explanation:
When a user is trying to mount a blank EBS volume, it is required that the user first creates a file system within the volume. If the volume is created from an existing snapshot then the user needs not to create a file system on the volume as it will wipe out the existing data.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-using-volumes.html

QUESTION 53
A user is creating multiple IAM users. What advice should be given to him to enhance the security?

A. Grant least privileges to the individual user
B. Grant all higher privileges to the group
C. Grant less privileges for user, but higher privileges for the group
D. Grant more privileges to the user, but least privileges to the group

Answer: A
Explanation:
It is a recommended rule that the root user should grant the least privileges to the IAM user or the group. The higher the privileges, the more problems it can create.
http://docs.aws.amazon.com/IAM/latest/UserGuide/IAMBestPractices.html

QUESTION 54
In regards to Amazon SQS how many times will you receive each message?

A. At least twice
B. Exactly once
C. As many times as you want
D. At least once

Answer: D
Explanation:
Amazon SQS is engineered to provide "at least once" delivery of all messages in its queues. Although most of the time, each message will be delivered to your application exactly once, you should design your system so that processing a message more than once does not create any errors or inconsistencies.
https://aws.amazon.com/sqs/faqs/

QUESTION 55
A user has set an IAM policy where it allows all requests if a request from IP 10.10.10.1/32. Another policy allows all the requests between 5 PM to 7 PM. What will happen when a user is requesting access from IP 10.10.10.1/32 at 6 PM?

A. IAM will throw an error for policy conflict
B. It is not possible to set a policy based on the time or IP
C. It will deny access
D. It will allow access

Answer: D
Explanation:
With regard to IAM, when a request is made, the AWS service decides whether a given request

should be allowed or denied. The evaluation logic follows these rules:
By default, all requests are denied. (In general, requests made using the account credentials for resources in the account are always allowed.)
An explicit allow policy overrides this default.
An explicit deny policy overrides any allows.
http://docs.aws.amazon.com/IAM/latest/UserGuide/AccessPolicyLanguage_EvaluationLogic.html

QUESTION 56
A user is enabling logging on a particular bucket. Which of the below mentioned options may be best suitable to allow access to the log bucket?

A. Create an IAM policy and allow log access
B. It is not possible to enable logging on the S3 bucket
C. Create an IAM Role which has access to the log bucket
D. Provide ACL for the logging group

Answer: D
Explanation:
The only recommended use case for the S3 bucket ACL is to grant the write permission to the Amazon S3 Log Delivery group to write access log objects to the user's bucket.
http://docs.aws.amazon.com/AmazonS3/latest/dev/access-policy-alternatives-guidelines.html

QUESTION 57
A user is running a webserver on EC2. The user wants to receive the SMS when the EC2 instance utilization is above the threshold limit. Which AWS services should the user configure in this case?

A. AWS CloudWatch + AWS SES.
B. AWS CloudWatch + AWS SNS.
C. AWS CloudWatch + AWS SQS.
D. AWS EC2 + AWS Cloudwatch.

Answer: B
Explanation:
Amazon SNS makes it simple and cost-effective to push to mobile devices, such as iPhone, iPad, Android, Kindle Fire, and internet connected smart devices, as well as pushing to other distributed services. In this case, the user can configure that Cloudwatch sends an alarm on when the threshold is crossed to SNS which will trigger an SMS.
http://aws.amazon.com/sns/

QUESTION 58
Can a user associate and use his own DNS with ELB instead of the DNS provided by AWS ELB?

A. Yes, by creating a CNAME with the existing domain name provider
B. Yes, by configuring DNS in the AWS Console
C. No
D. Yes, only through Route 53 by mapping ELB and DNS

Answer: A
Explanation:
The AWS ELB allows mapping a custom domain name with ELB. The user can map ELB with

DNS in two ways: 1) By creating CNAME with the existing domain name service provider or 2) By creating a record with Route 53.

QUESTION 59
_____ can be used to bootstrap both the Chef Server and Chef Client software on your EC2 instances.

A. AWS CloudFormation
B. AWS Elastic Beanstalk
C. AWS OpsWorks
D. Amazon Glacier

Answer: A
Explanation:
AWS CloudFormation can be used to bootstrap both the Chef Server and Chef Client software on your EC2 instances.
http://aws.amazon.com/cloudformation/faqs/

QUESTION 60
In relation to Amazon Simple Workflow Service (Amazon SWF),what is an "Activity Worker"?

A. An individual task undertaken by a workflow
B. The automation of a business process
C. A piece of software that implements tasks
D. All answers listed are correct

Answer: C
Explanation:
In relation to Amazon Simple Workflow Service (Amazon SWF), an activity worker is a program that receives activity tasks, performs them, and provides results back.
Which translates to a piece of software that implements tasks.
http://docs.aws.amazon.com/amazonswf/latest/developerguide/swf-dg-develop-activity.html

QUESTION 61
A user has launched a MySQL RDS. The user wants to plan for the DR and automate the snapshot. Which of the below mentioned functionality offers this option with RDS?

A. Copy snapshot
B. Automated synchronization
C. Snapshot
D. Automated backup

Answer: D
Explanation:
Amazon RDS provides two different methods for backing up and restoring the Amazon DB instances:
automated backups and DB snapshots. Automated backups automatically back up the DB instance during a specific, user-definable backup window, and keep the backups for a limited, user-specified period of time.

QUESTION 62
You cannot access your AWS console, so you revert to using the CLI that you are not familiar with. Which of the following commands is not a valid CLI command for EC2 instances?

A. ec2-allocate-address
B. ec2-attach-internet-gateway
C. ec2-associate-route-table
D. ec2-allocate-interface

Answer: D
Explanation:
You can use the CLI tools to manage your Amazon EC2 resources (such as instances, security groups, and volumes) and your Amazon VPC resources (such as VPCs, subnets, route tables, and Internet gateways). Before you can start using the tools, you must download and configure them.
The following are valid CLI commands for EC2 instances:
ec2-accept-vpc-peering-connection
ec2-allocate-address
ec2-assign-private-ip-addresses
ec2-associate-address
ec2-associate-dhcp-options
ec2-associate-route-table
ec2-attach-internet-gateway
ec2-attach-network-interface (not ec2-allocate-interface)

QUESTION 63
An organization has 20 employees. The organization wants to give all the users access to the organization AWS account. Which of the below mentioned options is the right solution?

A. Share the root credentials with all the users
B. Create an IAM user for each employee and provide access to them
C. It is not advisable to give AWS access to so many users
D. Use the IAM role to allow access based on STS

Answer: B
Explanation:
AWS Identity and Access Management is a web service that enables the AWS customers to manage users and user permissions in AWS. The IAM is targeted at organizations with multiple users or systems that use AWS products such as Amazon EC2, Amazon RDS, and the AWS Management Console. With IAM, the organizaiton can centrally manage users, security credentials such as access keys, and permissions that control which AWS resources users can access.
http://docs.aws.amazon.com/IAM/latest/UserGuide/IAM_Introduction.html

QUESTION 64
When AutoScaling is launching a new instance based on condition, which of the below mentioned policies will it follow?

A. Based on the criteria defined with cross zone Load balancing
B. Launch an instance which has the highest load distribution
C. Launch an instance in the AZ with the fewest instances
D. Launch an instance in the AZ which has the highest instances

Answer: C
Explanation:
AutoScaling attempts to distribute instances evenly between the Availability Zones that are enabled for the user's AutoScaling group. Auto Scaling does this by attempting to launch new instances in the Availability Zone with the fewest instances.
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/AS_Concepts.html

QUESTION 65
In regards to Amazon SQS how can you secure the messages in your queues?

A. You can't
B. Amazon SQS uses either your Access Key ID or an X.509 certificate to authenticate your identity
C. Through your IAM access keys
D. Don't use root access

Answer: B
Explanation:
Authentication mechanisms are provided to ensure that messages stored in Amazon SQS queues are secured against unauthorized access. Only the AWS account owners can access the queues they create. Amazon SQS uses proven cryptographic methods to authenticate your identity, either through the use of your Access Key ID and request signature, or through the use of an X.509 certificate.
https://aws.amazon.com/sqs/faqs/

QUESTION 66
Which Amazon service is not used by Elastic Beanstalk?

A. Amazon S3
B. Amazon ELB
C. Auto scaling
D. Amazon EMR

Answer: D
Explanation:
Elastic Beanstalk leverages AWS services such as Amazon Elastic Cloud Compute (Amazon EC2), Amazon Simple Storage Service (Amazon S3), Amazon Simple Notification Service (Amazon SNS), Elastic Load Balancing and Auto Scaling to deliver the same highly reliable, scalable, and cost-effective infrastructure that hundreds of thousands of businesses depend on today. http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/Welcome.html

QUESTION 67
In AWS Elastic Beanstalk, if the application returns any response other than 200 ,OK or there is no response within the configured InactivityTimeout period, _____.

A. SQS once again makes the message visible in the queue and available for another attempt at processing
B. SQS waits for another timeout
C. SQS run DeleteMessagecall and deletes the message from the queue
D. SQS sends a message to the application with the MessageID and pending status

Answer: A
Explanation:
In AWS Elastic Beanstalk, if the application returns any response other than 200, OK or there is no response within the configured InactivityTimeout period, SQS once again makes the message visible in the queue and available for another attempt at processing.

QUESTION 68
Which of the below mentioned options can be a good use case for storing content in AWS RRS?

A. Storing mission critical data Files
B. Storing infrequently used log files
C. Storing a video file which is not reproducible
D. Storing image thumbnails

Answer: D
Explanation:
AWS RRS provides the same functionality as AWS S3, but at a cheaper rate. It is ideally suited for non-mission, critical applications, such as files which can be reproduced.
http://docs.aws.amazon.com/AmazonS3/latest/dev/UsingRRS.html

QUESTION 69
Which header received at the EC2 instance identifies the port used by the client while requesting ELB?

A. X-Forwarded-Proto
B. X-Requested-Proto
C. X-Forwarded-Port
D. X-Requested-Port

Answer: C
Explanation:
The X-Forwarded-Port request header helps the user identify the port used by the client while sending a request to ELB.

QUESTION 70
When you register an activity in Amazon SWF, you provide the following information, except:

A. a name
B. timeout values
C. a domain
D. version

Answer: C
Explanation:
When designing an Amazon SWF workflow, you precisely define each of the required activities. You then register each activity with Amazon SWF as an activity type. When you register the activity, you provide information such as a name and version, and some timeout values based on how long you expect the activity to take.
http://docs.aws.amazon.com/amazonswf/latest/developerguide/swf-dg-intro-to-swf.html

QUESTION 71
A user is using an EBS backed instance. Which of the below mentioned statements is true?

A. The user will be charged for volume and instance only when the instance is running
B. The user will be charged for the volume even if the instance is stopped
C. The user will be charged only for the instance running cost
D. The user will not be charged for the volume if the instance is stopped

Answer: B
Explanation:
If a user has launched an EBS backed instance, the user will be charged for the EBS volume even though the instance is in a stopped state. The instance will be charged for the EC2 hourly cost only when it is running.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-detaching-volume.html

QUESTION 72
A user is trying to create a policy for an IAM user from the AWS console. Which of the below mentioned options is not available to the user while configuring policy?

A. Use policy generator to create policy
B. Use custom policy to create policy
C. Use policy simulator to create policy
D. Assign No permission

Answer: C
Explanation:
When a user is trying to create a policy from the AWS console, it will have options such as create policy from templates or use a policy generator. The user can also define a custom policy or chose the option to have no permission. The policy simulator is not available in the console.
http://docs.aws.amazon.com/IAM/latest/UserGuide/IAMBestPractices.html

QUESTION 73
A user has an S3 object in the US Standard region with the content "color=red". The user updates the object with the content as "color="white". If the user tries to read the value 1 minute after it was uploaded, what will S3 return?

A. It will return "color=white"
B. It will return "color=red"
C. It will return an error saying that the object was not found
D. It may return either "color=red" or "color=white" i.e. any of the value

Answer: D
Explanation:
AWS S3 follows the eventual consistent model in the US Standard Region. Once the object is updated it may return the new value or the old value based on whether all the content is replicated across multiple servers until it becomes consistent (eventual).
http://docs.aws.amazon.com/AmazonS3/latest/dev/Introduction.html

QUESTION 74
AWS Elastic Beanstalk will change the health status of a web server environment tier to gray

color when:

A. AWS Elastic Beanstalk detects other problems with the environment that are known to make the application unavailable
B. Your application hasn't responded to the application health check URL within the last one hour.
C. Your application hasn't responded to the application health check URL within the last five minutes.
D. Your application's health status is unknown because status is reported when the application is not in the ready state.

Answer: D
Explanation:
AWS Elastic Beanstalk will change the health status of a web server environment tier to gray color when your application's health status is unknown (because status is reported when the application is not in the ready state).
http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.healthstatus.html

QUESTION 75
A user wants to access RDS from an EC2 instance using IP addresses. Both RDS and EC2 are in the same region, but different AZs. Which of the below mentioned options help configure that the instance is accessed faster?

A. Configure the Private IP of the Instance in RDS security group
B. Security group of EC2 allowed in the RDS security group
C. Configuring the elastic IP of the instance in RDS security group
D. Configure the Public IP of the instance in RDS security group

Answer: A
Explanation:
If the user is going to specify an IP range in RDS security group, AWS recommends using the private IP address of the Amazon EC2 instance. This provides a more direct network route from the Amazon EC2 instance to the Amazon RDS DB instance, and does not incur network charges for the data sent outside of the Amazon network.

QUESTION 76
A user is creating a snapshot of an EBS volume. Which of the below statements is incorrect in relation to the creation of an EBS snapshot?

A. Its incremental
B. It can be used to launch a new instance
C. It is stored in the same AZ as the volume
D. It is a point in time backup of the EBS volume

Answer: C
Explanation:
The EBS snapshots are a point in time backup of the EBS volume. It is an incremental snapshot, but is always specific to the region and never specific to a single AZ. Hence the statement "It is stored in the same AZ as the volume" is incorrect.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSSnapshots.html

QUESTION 77

A user is planning to use EBS for his DB requirement. The user already has an EC2 instance running in the VPC private subnet. How can the user attach the EBS volume to a running instance?

A. The user must create EBS within the same VPC and then attach it to a running instance.
B. The user can create EBS in the same zone as the subnet of instance and attach that EBS to instance.
C. It is not possible to attach an EBS to an instance running in VPC until the instance is stopped.
D. The user can specify the same subnet while creating EBS and then attach it to a running instance.

Answer: B
Explanation:
A Virtual Private Cloud (VPC) is a virtual network dedicated to the user's AWS account. The user can create subnets as per the requirement within a VPC. The VPC is always specific to a region. The user can create a VPC which can span multiple Availability Zones by adding one or more subnets in each Availability Zone.
The instance launched will always be in the same availability zone of the respective subnet. When creating an EBS the user cannot specify the subnet or VPC. However, the user must create the EBS in the same zone as the instance so that it can attach the EBS volume to the running instance.
http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Subnets.html#VPCSubnet

QUESTION 78
Which of the following groups is AWS Elastic Beanstalk best suited for?

A. Those who want to deploy and manage their applications within minutes in the AWS cloud
B. Those who want to privately store and manage Git repositories in the AWS cloud.
C. Those who want to automate the deployment of applications to instances and to update the applications as required
D. Those who want to model, visualize, and automate the steps required to release software

Answer: A
Explanation:
AWS Elastic Beanstalk is best suited for those groups who want to deploy and manage their applications within minutes in the AWS cloud. As a bonus, you don't even need experience with cloud computing to get started.
https://aws.amazon.com/elasticbeanstalk/faqs/

QUESTION 79
You are using Amazon SQS and are getting a "Queue Deleted Recently" error. What is wrong?

A. The message is too big
B. You have incorrect permissions
C. Another user has deleted the queue
D. If you delete a queue, you need to wait for at least 60 seconds before creating a queue with the same name

Answer: D
Explanation:
If you delete a queue, you need to wait for at least 60 seconds before creating a queue with the same name. Please note that when you delete a queue, the deletion process takes up to 60

seconds. Requests you send to a recently deleted queue might succeed during the 60-second period. For example, a SendMessage request might succeed, but after 60 seconds the queue and that message you sent no longer exists.
https://aws.amazon.com/items/1343?externalID=1343

QUESTION 80
Your manager has requested you to tag EC2 instances to organize and manage a load balancer. Which of the following statements about tag restrictions is incorrect?

A. The maximum key length is 127 Unicode characters.
B. The maximum value length is 255 Unicode characters.
C. Tag keys and values are case sensitive.
D. The maximum number of tags per load balancer is 20.

Answer: D
Explanation:
Tags help you to categorize your load balancers in different ways, for example, by purpose, owner, or environment. The following basic restrictions apply to tags: The maximum number of tags per resource is
10. The maximum key length is 127 Unicode characters. The maximum value length that can be used is 255 Unicode characters. The tag keys and values are case sensitive. Allowed characters are letters, spaces, and numbers representable in UTF-8, plus the following special characters: + - =. _ : / @. Do not use leading or trailing spaces. Do not use the aws: prefix in your tag names or values because it is reserved for AWS use. You can't edit or delete tag names or values with this prefix. Tags with this prefix do not count against your tags per resource limit.

QUESTION 81
A user is trying to find the state of an S3 bucket with respect to versioning. Which of the below mentioned states AWS will not return when queried?

A. versioning-enabled
B. versioning-suspended
C. unversioned
D. versioned

Answer: D
Explanation:
S3 buckets can be in one of the three states: unversioned (the default), versioning-enabled or versioning-suspended. The bucket owner can configure the versioning state of a bucket. The versioning state applies to all (never some) of the objects in that bucket. The first time owner enables a bucket for versioning, objects in it are thereafter always versioned and given a unique version ID.
http://docs.aws.amazon.com/AmazonS3/latest/dev/Versioning.html

QUESTION 82
What is the maximum number of tags that a user can assign to an EC2 instance?

A. 50
B. 10
C. 5
D. 25

Answer: A
Explanation:
The maximum number of tags per resource is 50.
https://docs.aws.amazon.com/autoscaling/ec2/userguide/autoscaling-tagging.html

QUESTION 83
How do you configure SQS to support longer message retention?

A. Set the MessageRetentionPeriod attribute using the SetQueueAttributes method
B. Using a Lambda function
C. You can't. It is set to 14 days and cannot be changed
D. You need to request it from AWS

Answer: A
Explanation:
To configure the message retention period, set the MessageRetentionPeriod attribute using the SetQueueAttributes method. This attribute is used to specify the number of seconds a message will be retained by SQS. Currently the default value for the message retention period is 4 days. Using the MessageRetentionPeriod attribute, the message retention period can be set anywhere from 60 seconds (1 minute), up to 1209600 seconds (14 days).
https://aws.amazon.com/sqs/faqs/

QUESTION 84
The user has created multiple AutoScaling groups. The user is trying to create a new AS group but it fails. How can the user know that he has reached the AS group limit specified by AutoScaling in that region?

A. Run the command: as-describe-account-limits
B. Run the command: as-describe-group-limits
C. Run the command: as-max-account-limits
D. Run the command: as-list-account-limits

Answer: A
Explanation:
A user can see the number of AutoScaling resources currently allowed for the AWS account either by using the as-describe-account-limits command or by calling the DescribeAccountLimits action.
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/ts-as-capacity.html

QUESTION 85
An organization is hosting an application as part of the free usage tier. The organization wants to create IAM users for each of its 150 employees and they may access AWS as part of free usage tier. What will you advise the organization?

A. The IAM is not available as a part of the free usage tier
B. Create IAM roles and give access based on role since it will not cost the user
C. Do not create more than 100 users as it will cost the organization.
D. Create IAM users for each employee as it does not cost

Answer: D

Explanation:
IAM is a free service. You can create as many IAM users or groups as desired free of cost.
http://docs.aws.amazon.com/IAM/latest/UserGuide/IAM_Introduction.html

QUESTION 86
A user has enabled serverside encryption with S3. The user downloads the encrypted object from S3.
How can the user decrypt it?

A. S3 does not support server side encryption
B. S3 provides a server side key to decrypt the object
C. The user needs to decrypt the object using their own private key
D. S3 manages encryption and decryption automatically

Answer: D
Explanation:
If the user is using the server-side encryption feature, Amazon S3 encrypts the object data before saving it on disks in its data centres and decrypts it when the user downloads the objects. Thus, the user is free from the tasks of managing encryption, encryption keys, and related tools.
http://docs.aws.amazon.com/AmazonS3/latest/dev/UsingEncryption.html

QUESTION 87
A user has configured ELB with two instances running in separate AZs of the same region? Which of the below mentioned statements is true?

A. Multi AZ instances will provide HA with ELB
B. Multi AZ instances are not possible with a single ELB
C. Multi AZ instances will provide scalability with ELB
D. The user can achieve both HA and scalability with ELB

Answer: A
Explanation:
If a user is running two instances in separate AZs, it will provide HA with ELB since ELB will automatically stop routing the traffic to unhealthy instances and send it to healthy instances only.

QUESTION 88
Does Amazon DynamoDB support both increment and decrement atomic operations?

A. No, neither increment nor decrement operations.
B. Only increment, since decrement are inherently impossible with DynamoDB's data model.
C. Only decrement, since increment are inherently impossible with DynamoDB's data model.
D. Yes, both increment and decrement operations.

Answer: D
Explanation:
Amazon DynamoDB supports increment and decrement atomic operations.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/APISummary.html

QUESTION 89
What is the data model of DynamoDB?

A. "Items", with Keys and one or more Attribute; and "Attribute", with Name and Value.
B. "Database", which is a set of "Tables", which is a set of "Items", which is a set of "Attributes".
C. "Table", a collection of Items; "Items", with Keys and one or more Attribute; and "Attribute", with Name and Value.
D. "Database", a collection of Tables; "Tables", with Keys and one or more Attribute; and "Attribute", with Name and Value.

Answer: C
Explanation:
The data model of DynamoDB is:
"Table", a collection of Items;
"Items", with Keys and one or more Attribute;
"Attribute", with Name and Value.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DataModel.html

QUESTION 90
A user is trying to configure access with S3. Which of the following options is not possible to provide access to the S3 bucket / object?

A. Define the policy for the IAM user
B. Define the ACL for the object
C. Define the policy for the object
D. Define the policy for the bucket

Answer: C
Explanation:
Amazon S3 offers access policy options broadly categorized as resource-based policies and user policies. Access policies, such as ACL and resource policy can be attached to the bucket. With the object the user can only have ACL and not an object policy. The user can also attach access policies to the IAM users in the account. These are called user policies.
http://docs.aws.amazon.com/AmazonS3/latest/dev/s3-access-control.html

QUESTION 91
An organization has enabled a strict password policy for its IAM users. The organization is taking help from the IAM console to set the password policy. Which of the below mentioned rules cannot be specified by the user as a part of the policy?

A. Allow at least one lower case letter
B. Allow at least one number
C. Allow at least one non-alphanumeric character
D. Do not allow the user to use the password from the last three passwords

Answer: D
Explanation:
AWS IAM allows an organization to create multiple users and provide them access to various AWS services. By default when the user is created, he does not have password enabled and can not login to AWS console. If the organization wants to allow the users to login to AWS console, they can enable password for each user. It is required that IAM users follow certain guidelines to set their IAM login password. For this IAM provides root account owner to setup passwrod policy. The password policy also lets the specify whether all IAM users can change their own passwords. As part of policy, organization can specify that passwords for IAM users must be of a certain

minimum length, must include certain characters, and a few more criteria such as below.
One upper / lower or both letters
One alpha numeric
One number
http://docs.aws.amazon.com/IAM/latest/UserGuide/Using_ManagingPasswordPolicies.html

QUESTION 92
A user has developed an application which is required to send the data to a NoSQL database. The user wants to decouple the data sending such that the application keeps processing and sending data but does not wait for an acknowledgement of DB. Which of the below mentioned applications helps in this scenario?

A. AWS Simple Notification Service
B. AWS Simple Workflow
C. AWS Simple Query Service
D. AWS Simple Queue Service

Answer: D
Explanation:
Amazon Simple Queue Service (SQS) is a fast, reliable, scalable, and fully managed message queuing service. SQS provides a simple and cost-effective way to decouple the components of an application. In this case, the user can use AWS SQS to send messages which are received from an application and sent to DB. The application can continue processing data without waiting for any acknowledgement from DB. The user can use SQS to transmit any volume of data without losing messages or requiring other services to always be available.
http://aws.amazon.com/sqs/

QUESTION 93
In regard to DynamoDB, can I modify the index once it is created?

A. Yes, if it is a primary hash key index
B. Yes, if it is a Global secondary index
C. No
D. Yes, if it is a local secondary index

Answer: C
Explanation:
Currently, in DynamoDB, an index cannot be modified once it is created.
http://aws.amazon.com/dynamodb/faqs/#security_anchor

QUESTION 94
A user has created a new raw EBS volume. The user mounts the volume on the instance to which it is attached. Which of the below mentioned options is a required step before the user can mount the volume?

A. Run a cyclic check on the device for data consistency
B. Create a file system of the volume
C. No step is required. The user can directly mount the device
D. Resize the volume as per the original snapshot size

Answer: B

Explanation:
When a user is trying to mount a blank EBS volume, it is required that the user first creates a file system within the volume.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-using-volumes.html

QUESTION 95
A user is launching an AWS RDS with MySQL. Which of the below mentioned options allows the user to configure the INNODB engine parameters?

A. Options group
B. Engine parameters
C. Parameter groups
D. DB parameters

Answer: C
Explanation:
With regard to RDS, the user can manage the configuration of a DB engine by using a DB parameter group. A DB parameter group contains engine configuration values that can be applied to one or more DB instances of the same instance type.
http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

QUESTION 96
A user is configuring the HTTPS protocol on a front end ELB and the SSL protocol for the back-end listener in ELB. What will ELB do?

A. It will allow you to create the configuration, but the instance will not pass the health check
B. Receives requests on HTTPS and sends it to the back end instance on SSL
C. It will not allow you to create this configuration
D. It will allow you to create the configuration, but ELB will not work as expected

Answer: C
Explanation:
If a user is configuring HTTPS on the front end and TCP on the back end, ELB will not allow saving these listeners and will respond with the message.
"Load Balancer protocol is an application layer protocol, but instance protocol is not. Both the Load Balancer protocol and the instance protocol should be at the same layer. Please fix."

QUESTION 97
ExamKiller (with AWS account ID 111122223333) has created 50 IAM users for its organization's employees. What will be the AWS console URL for these associates?

A. https:// 111122223333.signin.aws.amazon.com/console/
B. https:// signin.aws.amazon.com/console/
C. https://signin.aws.amazon.com/111122223333/console/
D. https://signin.aws.amazon.com/console/111122223333/

Answer: A
Explanation:
When an organization is using AWS IAM for creating various users and manage their access rights, the IAM user cannot use the login URL http://aws.amazon.com/console to access AWS management console. The console login URL for the IAM user will have AWS account ID of that

organization to identify the IAM user belongs to particular account. The AWS console login URL for the IAM user will be https:// <AWS_Account_ID>.signin.aws.amazon.com/console/.
In this case it will be https:// 111122223333.signin.aws.amazon.com/console/
http://docs.aws.amazon.com/IAM/latest/UserGuide/AccountAlias.html

QUESTION 98
A user is planning to host MS SQL on an EBS volume. It was recommended to use the AWS RDS. What advantages will the user have if he uses RDS in comparison to an EBS based DB?

A. Better throughput with PIOPS
B. Automated backup
C. MS SQL is not supported with RDS
D. High availability with multi AZs

Answer: B
Explanation:
Comparing with on-premises or EC2 based MS SQL, RDS provides an automated backup feature. PIOPS is available with both RDS and EBS. However, HA is not available with MS SQL.
https://aws.amazon.com/rds/faqs/

QUESTION 99
A user is setting up an Elastic Load Balancer(ELB). Which of the below parameters should the user consider so as the instance gets registered with the ELB?

A. ELB DNS
B. IP address
C. Security group
D. ELB IP

Answer: B
Explanation:
The EC2 instances are registered with the load balancer using the IP addresses associated with the instances. When an instance is stopped and then started, the IP address associated with the instance changes. This prevents the load balancer from routing traffic to the restarted instance. When the user stops and then starts registered EC2 instances, it is recommended that to de-register the stopped instance from load balancer, and then register the restarted instance. Failure to do so may prevent the load balancer from performing health checks and routing the traffic to the restarted instance.

QUESTION 100
The user has configured AutoScaling based on the dynamic policy. Which of the following is not the right command to specify a change in capacity as a part of the policy?

A. "adjustment=-50" (type is PercentChangeInCapacity)
B. "adjustment=3" (type is ExactCapacity)
C. "adjustment=-1" (type is ChangeInCapacity)
D. "adjustment=-8" (type is ExactCapacity)

Answer: D
Explanation:
The user can configure the AutoScaling group to automatically scale up and then scale down

based on the various specified CloudWatch monitoring conditions. The user needs to provide the adjustment value and the adjustment type. A positive adjustment value increases the current capacity and a negative adjustment value decreases the current capacity. The user can express the change to the current size as an absolute number, an increment or as a percentage of the current group size. In this option specifying the exact capacity with the adjustment value = -8 will not work as when type is exact capacity the adjustment value cannot be negative.
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/as-scale-based-on-demand.html

QUESTION 101
When you use the AWS Elastic Beanstalk console to deploy a new application _____.

A. you'll need to upload each file separately
B. you'll need to create each file and path
C. you'll need to upload a source bundle
D. you'll need to create each file

Answer: C
Explanation:
When you use the AWS Elastic Beanstalk console to deploy a new application or an application version, you'll need to upload a source bundle.
http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.deployment.source.html

QUESTION 102
A user is planning to use the AWS RDS with MySQL. Which of the below mentioned services the user is not going to pay?

A. Data transfer
B. RDS Cloudwatch metrics
C. Data storage
D. I/O requests per month

Answer: B
Explanation:
RDS charges the user on a pay as you go basis. It charges the user based on the instance type, number of hours that the instance is running, data transfer, storage cost as well for the I/O requests. The monitoring is free of cost.
http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

QUESTION 103
A user has created a snapshot of an EBS volume. Which of the below mentioned usage cases is not possible with respect to a snapshot?

A. Mirroring the volume from one AZ to another AZ
B. Launch an instance
C. Decrease the volume size
D. Increase the size of the volume

Answer: C
Explanation:
The EBS snapshots are a point in time backup of the volume. It is helpful to move the volume

from one AZ to another or launch a new instance. The user can increase the size of the volume but cannot decrease it less than the original snapshot size.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSSnapshots.html

QUESTION 104
True or False: AWS CloudFormation allows you to create Microsoft Windows stacks.

A. False, AWS CloudFormation does not support Microsoft Windows.
B. False, Amazon doesn't support Microsoft Windows.
C. False, you cannot create Windows stacks.
D. True

Answer: D
Explanation:
AWS CloudFormation allows you to create Microsoft Windows stacks based on Amazon EC2 Windows Amazon Machine Images (AMIs) and provides you with the ability to install software, to use remote desktop to access your stack, and to update and configure your stack.
http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/cfn-windows-stacks.html

QUESTION 105
Which of the following solutions is not supported by DynamoDB:

A. Hash secondary index
B. Local secondary index
C. Hash Primary Key
D. Global secondary index

Answer: A
Explanation:
In DynamoDB, a secondary index is a data structure that contains a subset of attributes from a table, along with an alternate key to support Query operations. DynamoDB supports the following two types of secondary indexes:
Local secondary index is an index that has the same hash key as the table, but a different range key. A local secondary index is "local" in the sense that every partition of a local secondary index is scoped to a table partition that has the same hash key.
Global secondary index is an index with a hash and range key that can be different from those on the table. A global secondary index is considered "global" because queries on the index can span all of the data in a table, across all partitions.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DataModel.html

QUESTION 106
An ELB is diverting traffic across 5 instances. One of the instances was unhealthy only for 20 minutes. What will happen after 20 minutes when the instance becomes healthy?

A. ELB will never divert traffic back to the same instance
B. ELB will not automatically send traffic to the same instance. However, the user can configure to start sending traffic to the same instance
C. ELB starts sending traffic to the instance once it is healthy
D. ELB terminates the instance once it is unhealthy. Thus, the instance cannot be healthy after 10 minutes

Answer: C
Explanation:
AWS Elastic Load Balancing continuously checks the health of an instance. If one of the instances is unhealthy it stops sending traffic to it and automatically reroutes the traffic to the remaining running EC2 instances. If the failed EC2 instance is restored, Elastic Load Balancing will again start sending traffic to that instance.
http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/SvcIntro.html

QUESTION 107
An organization has created an application which is hosted on the AWS EC2 instance. The application stores images to S3 when the end user uploads to it. The organization does not want to store the AWS secure credentials required to access the S3 inside the instance. Which of the below mentioned options is a possible solution to avoid any security threat?

A. Use the IAM role and assign it to the instance.
B. Since the application is hosted on EC2, it does not need credentials to access S3.
C. Use the X.509 certificates instead of the access and the secret access keys.
D. Use the IAM based single sign between the AWS resources and the organization application.

Answer: A
Explanation:
The AWS IAM role uses temporary security credentials to access AWS services. Once the role is assigned to an instance, it will not need any security credentials to be stored on the instance.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/iam-roles-for-amazon-ec2.html

QUESTION 108
When a user is launching an instance with EC2, which of the below mentioned options is not available during the instance launch console for a key pair?

A. Proceed without the key pair
B. Upload a new key pair
C. Select an existing key pair
D. Create a new key pair

Answer: B
Explanation:
While launching an EC2 instance, the user can create a new key pair, select an existing key pair or proceed without a key pair. The user cannot upload a new key pair in the EC2 instance launch console.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/launching-instance.html

QUESTION 109
Which OS does the current version of AWS Elastic Beanstalk use?

A. Amazon Linux AMI, Windows Server 2003 R2 AMI or the Windows Server 2008 R2 AMI
B. Amazon Linux AMI only
C. Amazon Linux AMI or the Windows Server 2008 R2 AMI
D. Windows Server 2008 R2 AMI only

Answer: C
Explanation:

The current version of AWS Elastic Beanstalk uses the Amazon Linux AMI or the Windows Server 2008 R2 AMI.
https://aws.amazon.com/elasticbeanstalk/faqs/

QUESTION 110
A user is creating an EBS volume. He asks for your advice. Which advice mentioned below should you not give to the user for creating an EBS volume?

A. Take the snapshot of the volume when the instance is stopped
B. Stripe multiple volumes attached to the same instance
C. Create an AMI from the attached volume
D. Attach multiple volumes to the same instance

Answer: C
Explanation:
When a user creates an EBS volume, the user can attach it to a running instance. The user can attach multiple volumes to the same instance and stripe them together to increase the I/O. The user can take a snapshot from the existing volume but cannot create an AMI from the volume. However, the user can create an AMI from a snapshot.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSVolumes.html

QUESTION 111
AWS Elastic Beanstalk stores your application files and optionally server log files in_____.

A. Amazon Storage Gateway
B. Amazon Glacier
C. Amazon EC2
D. Amazon S3

Answer: D
Explanation:
AWS Elastic Beanstalk stores your application files and optionally server log files in Amazon S3. If you are using the AWS Management Console, Git, the AWS Toolkit for Visual Studio, or AWS Toolkit for Eclipse, an Amazon S3 bucket will be created in your account for you and the files you upload will be automatically copied from your local client to Amazon S3. Optionally, you may configure Elastic Beanstalk to copy your server log files every hour to Amazon S3. You do this by editing the environment configuration settings.
http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/AWSHowTo.html

QUESTION 112
The AWS console for DynamoDB enables you to do all the following operations, except:

A. Set up alarms to monitor your table's capacity usage.
B. Create, update, and delete tables.
C. Import Data from other databases or from files.
D. View your table's top monitoring metrics on real-time graphs from CloudWatch.

Answer: C
Explanation:
The AWS console for DynamoDB enables you to do all the above operation but not Importing Data from other databases or from files and it is not possible to do it.

http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/ConsoleDynamoDB.html

QUESTION 113
An organization has created multiple components of a single application for compartmentalization. Currently all the components are hosted on a single EC2 instance. Due to security reasons the organization wants to implement two separate SSLs for the separate modules although it is already using VPC. How can the organization achieve this with a single instance?

A. Create a VPC instance which will have both the ACL and the security group attached to it and have separate rules for each IP address.
B. Create a VPC instance which will have multiple network interfaces with multiple elastic IP addresses.
C. You have to launch two instances each in a separate subnet and allow VPC peering for a single IP.
D. Create a VPC instance which will have multiple subnets attached to it and each will have a separate IP address.

Answer: B
Explanation:
A Virtual Private Cloud (VPC) is a virtual network dedicated to the user's AWS account. It enables the user to launch AWS resources into a virtual network that the user has defined. With VPC the user can specify multiple private IP addresses for his instances. The number of network interfaces and private IP addresses that a user can specify for an instance depends on the instance type. With each network interface the organization can assign an EIP. This scenario helps when the user wants to host multiple websites on a single EC2 instance by using multiple SSL certificates on a single server and associating each certificate with a specific EIP address. It also helps in scenarios for operating network appliances, such as firewalls or load balancers that have multiple private IP addresses for each network interface.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/MultipleIP.html

QUESTION 114
In regards to VPC, select the correct statement:

A. You can associate multiple subnets with the same Route Table.
B. You can associate multiple subnets with the same Route Table, but you can't associate a subnet with only one Route Table.
C. You can't associate multiple subnets with the same Route Table.
D. None of these.

Answer: A
Explanation:
Every subnet in your VPC must be associated with exactly one Route Table.
However, multiple subnets can be associated with the same Route Table.
http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Route_Tables.html

QUESTION 115
Which of the following device names is reserved for the root device for Linux instances of Amazon EC2?

A. /dev/sda1

B. /dev/sd[b-e]
C. xvd[a-e]
D. /dev/sd[f-p][1-6]

Answer: A
Explanation:
/dev/sda1 is the name of the device reserved for the root device for Linux instances.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/device_naming.html

QUESTION 116
A user has hosted a website on AWS and uses ELB to load balance the multiple instances.
The user application does not have any cookie management.
How can the user bind the session of the requestor with a particular instance?

A. Bind the IP address with a sticky cookie
B. Create a cookie at the application level to set at ELB
C. Use session synchronization with ELB
D. Let ELB generate a cookie for a specified duration

Answer: D
Explanation:
The key to manage the sticky session is determining how long the load balancer should route the user's request to the same application instance. If the application has its own session cookie, then the user can set the Elastic Load Balancing to create the session cookie to follow the duration specified by the application's session cookie. If the user's application does not have its own session cookie, then he can set the Elastic Load Balancing to create a session cookie by specifying his own stickiness duration.

QUESTION 117
Your supervisor has asked you to build a simple file synchronization service for your department. He doesn't want to spend too much money and he wants to be notified of any changes to files by email. What do you think would be the best Amazon service to use for the email solution?

A. Amazon CloudSearch
B. Amazon Elastic Transcoder
C. Amazon SES
D. Amazon AppStream

Answer: C
Explanation:
File change notifications can be sent via email to users following the resource with Amazon Simple Email Service (Amazon SES), an easy-to-use, cost-effective email solution.
http://media.amazonwebservices.com/architecturecenter/AWS_ac_ra_filesync_08.pdf

QUESTION 118
ExamKiller has three AWS accounts. They have created separate IAM users within each account. ExamKiller wants a single IAM console URL such as https://examkiller.signin.aws.amazon.com/console/ for all account users. How can this be achieved?

A. Merge all the accounts with consolidated billing

B. Create the same account alias with each account ID
C. It is not possible to have the same IAM account login URL for separate AWS accounts
D. Create the S3 bucket with an alias name and use the redirect rule to forward requests to various accounts

Answer: C
Explanation:
If a user wants the URL of the AWS IAM sign-in page to have a company name instead of the AWS account ID, he can create an alias for his AWS account ID. The alias should be unique.
http://docs.aws.amazon.com/IAM/latest/UserGuide/AccountAlias.html

QUESTION 119
A user has enabled automated backup for an RDS instance. What is the longest duration for which the user can retain the automated backup?

A. 25 days
B. 15 days
C. 45 days
D. 35 days

Answer: D
Explanation:
Amazon RDS provides two different methods for backing up and restoring the Amazon DB instances:
automated backups and DB snapshots. Automated backups automatically back up the DB instance during a specific, user-definable backup window, and keep the backups for a limited, user-specified period of time. The maximum period can be 35 days.

QUESTION 120
A user is enabling a static website hosting on an S3 bucket. Which of the below mentioned parameters cannot be configured by the user?

A. Error document
B. Conditional error on object name
C. Index document
D. Conditional redirection on object name

Answer: B
Explanation:
To host a static website, the user needs to configure an Amazon S3 bucket for website hosting and then upload the website contents to the bucket. The user can configure the index, error document as well as configure the conditional routing of on object name.
http://docs.aws.amazon.com/AmazonS3/latest/dev/HowDoIWebsiteConfiguration.html

QUESTION 121
A user is uploading archives to Glacier. The user is trying to understand key Glacier resources. Which of the below mentioned options is not a Glacier resource?

A. Notification configuration
B. Archive ID
C. Job

D. Archive

Answer: B
Explanation:
AWS Glacier has four resources. Vault and Archives are core data model concepts. Job is required to initiate download of archive. The notification configuration is required to send user notification when archive is available for download.
http://docs.aws.amazon.com/amazonglacier/latest/dev/amazon-glacier-data-model.html

QUESTION 122
An organization has 10 departments. The organization wants to track the AWS usage of each department. Which of the below mentioned options meets the requirement?

A. Setup IAM groups for each department and track their usage
B. Create separate accounts for each department, but use consolidated billing for payment and tracking
C. Create separate accounts for each department and track them separately
D. Setup IAM users for each department and track their usage

Answer: B
Explanation:
The cost of an IAM user or groups can never be tracked separately for the purpose of billing. The best solution in this case is to create a separate account for each department and use consolidated billing.
http://docs.aws.amazon.com/IAM/latest/UserGuide/IAM_Introduction.html

QUESTION 123
Regarding Amazon SWF, at times you might want to record information in the workflow history of a workflow execution that is specific to your use case. _____ enable you to record information in the workflow execution history that you can use for any custom or scenario-specific purpose.

A. Markers
B. Tags
C. Hash keys
D. Events

Answer: A
Explanation:
In Amazon SWF, at times you might want to record information in the workflow history of a workflow execution that is specific to your use case. Markers enable you to record information in the workflow execution history that you can use for any custom or scenario-specific purpose.
http://docs.aws.amazon.com/amazonswf/latest/developerguide/swf-dg-adv.html

QUESTION 124
How can you peek at a message in Amazon SQS?

A. Log the message ID and the receipt handle for your messages and correlate them to confirm when a message has been received and deleted
B. Send the message to Amazon S3
C. You can't

D. Set up a CloudWatch alarm to auto send you the message

Answer: A
Explanation:
With version 2008-01-01, the PeekMessage action has been removed from Amazon SQS. This functionality was used mainly to debug small systems -- specifically to confirm a message was successfully sent to the queue or deleted from the queue.
To do this with version 2008-01-01, you can log the message ID and the receipt handle for your messages and correlate them to confirm when a message has been received and deleted.
https://aws.amazon.com/items/1343?externalID=1343

QUESTION 125
In regard to DynamoDB, for which one of the following parameters does Amazon not charge you?

A. Cost per provisioned write units
B. Cost per provisioned read units
C. Storage cost
D. I/O usage within the same Region

Answer: D
Explanation:
In DynamoDB, you will be charged for the storage and the throughput you use rather than for the I/O which has been used.
http://aws.amazon.com/dynamodb/pricing/

QUESTION 126
An organization has created 10 IAM users. The organization wants those users to work independently and access AWS. Which of the below mentioned options is not a possible solution?

A. Create the access key and secret access key for each user and provide access to AWS using the console
B. Create the X.509 certificate for each user and provide them access to AWS CLI
C. Enable MFA for each IAM user and assign them the virtual MFA device to access the console
D. Provide each user with the IAM login and password for the AWS console

Answer: A
Explanation:
If an organization has created the IAM users, the users can access AWS services either with an IAM specific login/password or console. The organization can generate the IAM X.509 certificates to access AWS with CLI. The organization can also enable MFA for each IAM user, which allows an added security for each IAM user. If the organization has created the access key and secret key than the user cannot access the console using those keys. Access key and secret access key are useful for CLI or Webservices.
http://docs.aws.amazon.com/IAM/latest/UserGuide/IAM_Introduction.html

QUESTION 127
What is the maximum size for messages stored in SQS?

A. 256KB
B. 128KB

C. 1024KB
D. 64KB

Answer: A
Explanation:
By default, SQS queues allow you to send the largest supported payload size, currently 256KB. You can choose to specify a limit on how many bytes can be sent per payload, using the MaximumMessageSize attribute of the SetQueueAttributes method.
http://aws.amazon.com/sqs/faqs/

QUESTION 128
A user is planning to host data with RDS. Which of the below mentioned databases is not supported by RDS?

A. PostgreSQL
B. SQLDB
C. Oracle
D. MS SQL

Answer: B
Explanation:
Amazon Relational Database Service (Amazon RDS) is a web service that makes it easier to set up, operate, and scale a relational database in the cloud. AWS RDS supports popular DBs, such as MySQL, PostgreSQL, MS SQL and Oracle. This means that the code, applications, and tools user is already using with existing databases can be used with Amazon RDS too. In short, it is a managed Relation Database offering from AWS which manages backups, software patching, automatic failure detection, and recovery of Database.
http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

QUESTION 129
An EC2 instance has one additional EBS volume attached to it. How can a user attach the same volume to another running instance in the same AZ?

A. Terminate the first instance and only then attach to the new instance
B. Attach the volume as read only to the second instance
C. Detach the volume first and attach to new instance
D. No need to detach. Just select the volume and attach it to the new instance, it will take care of mapping internally

Answer: C
Explanation:
If an EBS volume is attached to a running EC2 instance, the user needs to detach the volume from the original instance and then attach it to a new running instance. The user doesn't need to stop / terminate the original instance.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-detaching-volume.html

QUESTION 130
A user has configured an automated backup between 5 AM ?5:30 AM for the MySQL RDS DB. Will the performance of RDS get frozen momentarily during a backup?

A. No

B. Yes, only if the instance size is smaller than large size
C. Yes, provided it is a single zone implementation
D. Yes, always

Answer: C
Explanation:
Amazon RDS provides two different methods for backing up and restoring the Amazon DB instances. A brief I/O freeze, typically lasting a few seconds, occurs during both automated backups and DB snapshot operations on Single-AZ DB instances.

QUESTION 131
A root AWS account owner has created three IAM users: Bob, John and Michael. Michael is the IAM administrator. Bob and John are not the superpower users, but users with some pre-defined policies. John does not have access to modify his password. Thus, he asks Bob to change his password. How can Bob change John's password?

A. This statement is false. It should be Michael who changes the password for John
B. It is not possible that John cannot modify his password
C. Provided Bob is the manager of John
D. Provided Michael has added Bob to a group, which has permissions to modify the IAM passwords

Answer: D
Explanation:
Generally with IAM users, the password can be modified in two ways. The first option is to define the IAM level policy which allows each user to modify their own passwords. The other option is to create a group and create a policy for the group which can change the passwords of various IAM users.
http://docs.aws.amazon.com/IAM/latest/UserGuide/HowToPwdIAMUser.html

QUESTION 132
Regarding Amazon SNS, to send messages to a queue through a topic, you must subscribe the queue to the Amazon SNS topic. You specify the queue by its _____.

A. ARN
B. Token
C. Registration ID
D. URL

Answer: A
Explanation:
In Amazon SNS, to send messages to a queue through a topic, you must subscribe the queue to the Amazon SNS topic. You specify the queue by its ARN.
http://docs.aws.amazon.com/sns/latest/dg/SendMessageToSQS.html

QUESTION 133
To scale up the AWS resources using manual AutoScaling, which of the below mentioned parameters should the user change?

A. Maximum capacity
B. Desired capacity

C. Preferred capacity
D. Current capacity

Answer: B
Explanation:
The Manual Scaling as part of Auto Scaling allows the user to change the capacity of Auto Scaling group. The user can add / remove EC2 instances on the fly. To execute manual scaling, the user should modify the desired capacity. AutoScaling will adjust instances as per the requirements. If the user is trying to CLI, he can use command as-set-desired-capacity <Auto Scaling Group Name> --desired-capacity <New Capacity>
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/as-manual-scaling.html

QUESTION 134
A user has configured a website and launched it using the Apache web server on port 80. The user is using ELB with the EC2 instances for Load Balancing. What should the user do to ensure that the EC2 instances accept requests only from ELB?

A. Open the port for an ELB static IP in the EC2 security group
B. Configure the security group of EC2, which allows access to the ELB source security group
C. Configure the EC2 instance so that it only listens on the ELB port
D. Configure the security group of EC2, which allows access only to the ELB listener

Answer: B
Explanation:
When a user is configuring ELB and registering the EC2 instances with it, ELB will create a source security group. If the user wants to allow traffic only from ELB, he should remove all the rules set for the other requests and open the port only for the ELB source security group.

QUESTION 135
When working with AWS CloudFormation Templates what is the maximum number of stacks that you can create?

A. 500
B. 50
C. 200
D. 10

Answer: C
Explanation:
https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/cloudformation-limits.html

QUESTION 136
Does DynamoDB support in-place atomic updates?

A. It is not defined
B. Yes
C. It does support in-place non-atomic updates
D. No

Answer: B
Explanation:

DynamoDB supports in-place atomic updates.

QUESTION 137
A user is having access to objects of an S3 bucket which is not owned by him. If he is trying to set the objects of that bucket public, which of the below mentioned options may be a right fit for this action?

A. Make the bucket public with full access
B. Define the policy for the bucket
C. Provide ACL on the object
D. Create an IAM user with permission

Answer: C
Explanation:
An S3 object ACL is the only way to manage access to objects which are not owned by the bucket owner. An AWS account that owns the bucket can grant another AWS account permission to upload objects. The bucket owner does not own these objects. The AWS account that created the object must grant permissions using object ACLs.
http://docs.aws.amazon.com/AmazonS3/latest/dev/access-policy-alternatives-guidelines.html

QUESTION 138
A bucket owner has allowed another account's IAM users to upload or access objects in his bucket. The IAM user of Account A is trying to access an object created by the IAM user of account B. What will happen in this scenario?

A. The bucket policy may not be created as S3 will give error due to conflict of Access Rights
B. It is not possible to give permission to multiple IAM users
C. AWS S3 will verify proper rights given by the owner of Account A, the bucket owner as well as by the IAM user B to the object
D. It is not possible that the IAM user of one account accesses objects of the other IAM user

Answer: C
Explanation:
If a IAM user is trying to perform some action on an object belonging to another AWS user's bucket, S3 will verify whether the owner of the IAM user has given sufficient permission to him. It also verifies the policy for the bucket as well as the policy defined by the object owner.

QUESTION 139
A user wants to achieve High Availability with PostgreSQL DB. Which of the below mentioned functionalities helps achieve HA?

A. Read Replica
B. Multi AZ
C. Multi region
D. PostgreSQL does not support HA

Answer: B
Explanation:
The Multi AZ feature allows the user to achieve High Availability. For Multi AZ, Amazon RDS automatically provisions and maintains a synchronous "standby" replica in a different Availability Zone.

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

QUESTION 140
A user is launching an instance with EC2. Which of the below mentioned options does the user need to consider before launching an instance?

A. Select the region where the instance is being launched.
B. Select the instance type.
C. All the options listed should be considered..
D. Select the OS of the AMI.

Answer: C
Explanation:
Regarding Amazon EC2, when launching an instance, the user needs to select the region the instance would be launched from. While launching, the user needs to plan for the instance type and the OS of the instance.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-launch-instance_linux.html

QUESTION 141
A user has created an EBS volume with 1000 IOPS. What is the average IOPS that the user will get for most of the year as per EC2 SLA if the instance is attached to the EBS optimized instance?

A. 900
B. 990
C. 950
D. 1000

Answer: A
Explanation:
As per AWS SLA if the instance is attached to an EBS-Optimized instance, then the Provisioned IOPS volumes are designed to deliver within 10% of the provisioned IOPS performance 99.9% of the time in a given year. Thus, if the user has created a volume of 1000 IOPS, the user will get a minimum 900 IOPS 99.9% time of the year.
http://aws.amazon.com/ec2/faqs/

QUESTION 142
Which of the following programming languages have an officially supported AWS SDK? Choose 2 answers

A. Perl
B. PHP
C. Pascal
D. Java
E. SQL

Answer: BD

QUESTION 143
Which statements about DynamoDB are true? Choose 2 answers

A. DynamoDB uses a pessimistic locking model
B. DynamoDB uses optimistic concurrency control
C. DynamoDB uses conditional writes for consistency
D. DynamoDB restricts item access during reads
E. DynamoDB restricts item access during writes

Answer: BC

QUESTION 144
You have an environment that consists of a public subnet using Amazon VPC and 3 instances that are running in this subnet. These three instances can successfully communicate with other hosts on the Internet. You launch a fourth instance in the same subnet, using the same AMI and security group configuration you used for the others, but find that this instance cannot be accessed from the Internet.
What should you do to enable internet access?

A. Deploy a NAT instance into the public subnet.
B. Modify the routing table for the public subnet
C. Configure a publically routable IP Address In the host OS of the fourth instance.
D. Assign an Elastic IP address to the fourth instance.

Answer: D

QUESTION 145
How can you secure data at rest on an EBS volume?

A. Attach the volume to an instance using EC2's SSL interface.
B. Write the data randomly instead of sequentially.
C. Use an encrypted file system on top of the BBS volume.
D. Encrypt the volume using the S3 server-side encryption service.
E. Create an IAM policy that restricts read and write access to the volume.

Answer: C

QUESTION 146
Which of the following is an example of a good DynamoDB hash key schema for provisioned throughput efficiency?

A. User ID, where the application has many different users.
B. Status Code where most status codes are the same
C. Device ID, where one is by far more popular than all the others.
D. Game Type, where there are three possible game types

Answer: A

QUESTION 147
Which of the following statements about SWF are true? Choose 3 answers

A. SWF tasks are assigned once and never duplicated
B. SWF requires an S3 bucket for workflow storage
C. SWF workflow executions can last up to a year
D. SWF triggers SNS notifications on task assignment
E. SWF uses deciders and workers to complete tasks
F. SWF requires at least 1 EC2 instance per domain

Answer: ACE

QUESTION 148
Which of the following are correct statements with policy evaluation logic in AWS Identity and Access Management? Choose 2 answers

A. By default, all requests are denied
B. An explicit allow overrides an explicit deny
C. An explicit allow overrides default deny.
D. An explicit deny does not override an explicit allow
E. By default, all request are allowed

Answer: AC

QUESTION 149
Company C has recently launched an online commerce site for bicycles on AWS. They have a "Product" DynamoDB table that stores details for each bicycle, such as, manufacturer, color, price, quantity and size to display in the online store. Due to customer demand, they want to include an image for each bicycle along with the existing details.
Which approach below provides the least impact to provisioned throughput on the "Product" table?

A. Serialize the image and store it in multiple DynamoDB tables
B. Create an "Images" DynamoDB table to store the Image with a foreign key constraint to the "Product" table
C. Add an image data type to the "Product" table to store the images in binary format
D. Store the images in Amazon S3 and add an S3 URL pointer to the "Product" table item for each image

Answer: D

QUESTION 150
Company D is running their corporate website on Amazon S3 accessed from http//www.companyd.com. Their marketing team has published new web fonts to a separate S3 bucket accessed by the S3 endpoint https://s3-us-west1.amazonaws.com/cdfonts. While testing the new web fonts, Company D recognized the web fonts are being blocked by the browser. What should Company D do to prevent the web fonts from being blocked by the browser?

A. Enable versioning on the cdfonts bucket for each web font
B. Create a policy on the cdfonts bucket to enable access to everyone
C. Add the Content-MD5 header to the request for webfonts in the cdfonts bucket from the website
D. Configure the cdfonts bucket to allow cross-origin requests by creating a CORS configuration

Answer: D

QUESTION 151
What is one key difference between an Amazon EBS-backed and an instance-store backed instance?

A. Virtual Private Cloud requires EBS backed instances
B. Amazon EBS-backed instances can be stopped and restarted
C. Auto scaling requires using Amazon EBS-backed instances.
D. Instance-store backed instances can be stopped and restarted.

Answer: B

QUESTION 152
A meteorological system monitors 600 temperature gauges, obtaining temperature samples every minute and saving each sample to a DynamoDB table. Each sample involves writing 1K of data and the writes are evenly distributed over time.
How much write throughput is required for the target table?

A. 1 write capacity unit
B. 10 write capacity units
C. 60 write capacity units
D. 600 write capacity units
E. 3600 write capacity units

Answer: B

QUESTION 153
A startup s photo-sharing site is deployed in a VPC. An ELB distributes web traffic across two subnets. ELB session stickiness is configured to use the AWS-generated session cookie, with a session TTL of 5 minutes. The webserver Auto Scaling Group is configured as: min-size=4, max-size=4. The startups preparing for a public launch, by running load-testing software installed on a single EC2 instance running in us-west-2a. After 60 minutes of load-testing, the webserver logs show:

WEBSERVER LOGS	# of HTTP requests from load-tester	# of HTTP requests from private beta users
webserver #1 (subnet in us-west-2a):	19,210	434
webserver #2 (subnet in us-west-2a):	21,790	490
webserver #3 (subnet in us-west-2b):	0	410
webserver #4 (subnet in us-west-2b):	0	428

Which recommendations can help ensure load-testing HTTP requests are evenly distributed across the four webservers? Choose 2 answers

A. Launch and run the load-tester EC2 instance from us-east-1 instead.
B. Re-configure the load-testing software to re-resolve DNS for each web request.
C. Use a 3rd-party load-testing service which offers globally-distributed test clients.
D. Configure ELB and Auto Scaling to distribute across us-west-2a and us-west-2c.

E. Configure ELB session stickiness to use the app-specific session cookie.

Answer: BE

QUESTION 154
You have written an application that uses the Elastic Load Balancing service to spread traffic to several web servers Your users complain that they are sometimes forced to login again in the middle of using your application, after they have already togged in. This is not behavior you have designed. What is a possible solution to prevent this happening?

A. Use instance memory to save session state.
B. Use instance storage to save session state.
C. Use EBS to save session state
D. Use ElastiCache to save session state.
E. Use Glacier to save session slate.

Answer: D

QUESTION 155
If a message is retrieved from a queue in Amazon SQS, how long is the message inaccessible to other users by default?

A. 0 seconds
B. 1 hour
C. 1 day
D. forever
E. 30 seconds

Answer: E

QUESTION 156
Which of the following are valid SNS delivery transports? Choose 2 answers

A. HTTP
B. UDP
C. SMS
D. DynamoDB
E. Named Pipes

Answer: AC

QUESTION 157
When uploading an object, what request header can be explicitly specified in a request to Amazon S3 to encrypt object data when saved on the server side?

A. x-amz-storage-class
B. Content-MD5
C. x-amz-security-token
D. x-amz-server-side-encryption

Answer: D

QUESTION 158
Which DynamoDB limits can be raised by contacting AWS support? Choose 2 answers

A. The number of hash keys per account
B. The maximum storage used per account
C. The number of tables per account
D. The number of local secondary indexes per account
E. The number of provisioned throughput units per account

Answer: CE

QUESTION 159
In AWS, which security aspects are the customer's responsibility? Choose 4 answers

A. Life-cycle management of IAM credentials
B. Decommissioning storage devices
C. Security Group and ACL (Access Control List) settings
D. Encryption of EBS (Elastic Block Storage) volumes
E. Controlling physical access to compute resources
F. Patch management on the EC2 instance's operating system

Answer: ACDF

QUESTION 160
You are providing AWS consulting services for a company developing a new mobile application that will be leveraging Amazon SNS Mobile Push for push notifications. In order to send direct notification messages to individual devices each device registration identifier or token needs to be registered with SNS; however the developers are not sure of the best way to do this.
You advise them to:

A. Bulk upload the device tokens contained in a CSV file via the AWS Management Console.
B. Let the push notification service (e.g. Amazon Device Messaging) handle the registration.
C. Implement a token vending service to handle the registration.
D. Call the CreatePlatformEndPoint API function to register multiple device tokens.

Answer: D
Explanation:
http://docs.aws.amazon.com/sns/latest/dg/mobile-push-send-devicetoken.html

QUESTION 161
In DynamoDB, what type of HTTP response codes indicate that a problem was found with the client request sent to the service?

A. 5xx HTTP response code
B. 200 HTTP response code
C. 306 HTTP response code

D. 4xx HTTP response code

Answer: D

QUESTION 162
You are inserting 1000 new items every second in a DynamoDB table. Once an hour these items are analyzed and then are no longer needed. You need to minimize provisioned throughput, storage, and API calls.
Given these requirements, what is the most efficient way to manage these Items after the analysis?

A. Retain the items in a single table
B. Delete items individually over a 24 hour period
C. Delete the table and create a new table per hour
D. Create a new table per hour

Answer: C

QUESTION 163
Which features can be used to restrict access to data in S3? Choose 2 answers

A. Use S3 Virtual Hosting
B. Set an S3 Bucket policy.
C. Enable IAM Identity Federation.
D. Set an S3 ACL on the bucket or the object.
E. Create a CloudFront distribution for the bucket

Answer: BD

QUESTION 164
Company B provides an online image recognition service and utilizes SOS to decouple system components for scalability The SQS consumers poll the imaging queue as often as possible to keep end-to-end throughput as high as possible. However, Company B is realizing that polling in tight loops is burning CPU cycles and increasing costs with empty responses.
How can Company B reduce the number of empty responses?

A. Set the imaging queue visibility Timeout attribute to 20 seconds
B. Set the Imaging queue ReceiveMessageWaitTimeSeconds attribute to 20 seconds
C. Set the imaging queue MessageRetentionPeriod attribute to 20 seconds
D. Set the DelaySeconds parameter of a message to 20 seconds

Answer: B

QUESTION 165
What AWS products and features can be deployed by Elastic Beanstalk? Choose 3 answers

A. Auto scaling groups
B. Route 53 hosted zones
C. Elastic Load Balancers

D. RDS Instances
E. Elastic IP addresses
F. SQS Queues

Answer: ACD

QUESTION 166
What is the maximum number of S3 Buckets available per AWS account?

A. 100 per region
B. there is no limit
C. 100 per account
D. 500 per account
E. 100 per IAM user

Answer: C
Explanation:
https://docs.aws.amazon.com/en_pv/AmazonS3/latest/dev/BucketRestrictions.html

QUESTION 167
What is the format of structured notification messages sent by Amazon SNS?

A. An XML object containing MessageId, UnsubscribeURL, Subject, Message and other values
B. An JSON object containing MessageId, DuplicateFlag, Message and other values
C. An XML object containing MessageId, DuplicateFlag, Message and other values
D. An JSON object containing MessageId, unsubscribeURL, Subject, Message and other values

Answer: D

QUESTION 168
When using a large Scan operation in DynamoDB, what technique can be used to minimize the impact of a scan on a table's provisioned throughput?

A. Set a smaller page size for the scan
B. Use parallel scans
C. Define a range index on the table
D. Prewarm the table by updating all items

Answer: C

QUESTION 169
Which code snippet below returns the URL of a load balanced web site created in CloudFormation with an AWS::ElasticLoadBalancing::LoadBalancer resource name "ElasticLoad Balancer"?

A. "Fn::Join" : ["". ["http://", {"Fn::GetAtr" : ["ElasticLoadBalancer","DNSName"]}]]
B. "Fn::Join" : ["". ["http://", {"Fn::GetAtr" : ["ElasticLoadBalancer","Url"]}]]
C. "Fn::Join" : ["". ["http://", {"Ref" : "ElasticLoadBalancerUrl"}]]
D. "Fn::Join" : ["." ["http://", {"Ref" : "ElasticLoadBalancerDNSName"}]]

Answer: A

QUESTION 170
You are getting a lot of empty receive requests when using Amazon SQS.
This is making a lot of unnecessary network load on your instances.
What can you do to reduce this load?

A. Subscribe your queue to an SNS topic instead.
B. Use as long of a poll as possible, instead of short polls.
C. Alter your visibility timeout to be shorter.
D. Use <code>sqsd</code> on your EC2 instances.

Answer: B
Explanation:
One benefit of long polling with Amazon SQS is the reduction of the number of empty responses, when there are no messages available to return, in reply to a ReceiveMessage request sent to an Amazon SQS queue. Long polling allows the Amazon SQS service to wait until a message is available in the queue before sending a response.

QUESTION 171
You need to migrate 10 million records in one hour into DynamoDB. All records are 1.5KB in size. The data is evenly distributed across the partition key. How many write capacity units should you provision during this batch load?

A. 6667
B. 4166
C. 5556
D. 2778

Answer: C
Explanation:
You need 2 units to make a 1.5KB write, since you round up. You need 20 million total units to perform this load. You have 3600 seconds to do so. Divide and round up for 5556.

QUESTION 172
You attempt to store an object in the US-STANDARD region in Amazon S3, and receive a confirmation that it has been successfully stored. You then immediately make another API call and attempt to read this object. S3 tells you that the object does not exist
What could explain this behavior?

A. US-STANDARD uses eventual consistency and it can take time for an object to be readable in a bucket
B. Objects in Amazon S3 do not become visible until they are replicated to a second region.
C. US-STANDARD imposes a 1 second delay before new objects are readable.
D. You exceeded the bucket object limit, and once this limit is raised the object will be visible.

Answer: A

QUESTION 173

You are writing to a DynamoDB table and receive the following exception:" ProvisionedThroughputExceededException". though according to your Cloudwatch metrics for the table, you are not exceeding your provisioned throughput.
What could be an explanation for this?

A. You haven't provisioned enough DynamoDB storage instances
B. You're exceeding your capacity on a particular Range Key
C. You're exceeding your capacity on a particular Hash Key
D. You're exceeding your capacity on a particular Sort Key
E. You haven't configured DynamoDB Auto Scaling triggers

Answer: C

QUESTION 174
If an application is storing hourly log files from thousands of instances from a high traffic web site, which naming scheme would give optimal performance on S3?

A. Sequential
B. instanceID_log-HH-DD-MM-YYYY
C. instanceID_log-YYYY-MM-DD-HH
D. HH-DD-MM-YYYY-log_instanceID
E. YYYY-MM-DD-HH-log_instanceID

Answer: D

QUESTION 175
You run an ad-supported photo sharing website using S3 to serve photos to visitors of your site. At some point you find out that other sites have been linking to the photos on your site, causing loss to your business.
What is an effective method to mitigate this?

A. Store photos on an EBS volume of the web server
B. Remove public read access and use signed URLs with expiry dates.
C. Use CloudFront distributions for static content.
D. Block the IPs of the offending websites in Security Groups.

Answer: B

QUESTION 176
Company A has an S3 bucket containing premier content that they intend to make available to only paid subscribers of their website. The S3 bucket currently has default permissions of all objects being private to prevent inadvertent exposure of the premier content to non-paying website visitors. How can Company A provide only paid subscribers the ability to download a premier content file in the S3 bucket?

A. Apply a bucket policy that grants anonymous users to download the content from the S3 bucket
B. Generate a pre-signed object URL for the premier content file when a paid subscriberrequests a download
C. Add a bucket policy that requires Multi-Factor Authentication for requests to access the S3 bucket objects

D. Enable server side encryption on the S3 bucket for data protection against the non-paying website visitors

Answer: B

QUESTION 177
Which of the following is chosen as the default region when making an API call with an AWS SDK?

A. ap-northeast-1
B. us-west-2
C. us-east-1
D. eu-west-1
E. us-central-1

Answer: C

QUESTION 178
Games-R-Us is launching a new game app for mobile devices. Users will log into the game using their existing Facebook account and the game will record player data and scoring information directly to a DynamoDB table.
What is the most secure approach for signing requests to the DynamoDB API?

A. Create an IAM user with access credentials that are distributed with the mobile app to sign the requests
B. Distribute the AWS root account access credentials with the mobile app to sign the requests
C. Request temporary security credentials using web identity federation to sign the requests
D. Establish cross account access between the mobile app and the DynamoDB table to sign the requests

Answer: C

QUESTION 179
After launching an instance that you intend to serve as a NAT (Network Address Translation) device in a public subnet you modify your route tables to have the NAT device be the target of internet bound traffic of your private subnet. When you try and make an outbound connection to the Internet from an instance in the private subnet, you are not successful.
Which of the following steps could resolve the issue?

A. Attaching a second Elastic Network interface (ENI) to the NAT instance, and placing it in the private subnet
B. Attaching a second Elastic Network Interface (ENI) to the instance in the private subnet, and placing it in the public subnet
C. Disabling the Source/Destination Check attribute on the NAT instance
D. Attaching an Elastic IP address to the instance in the private subnet

Answer: C

QUESTION 180
What happens, by default, when one of the resources in a CloudFormation stack cannot be

created?

A. Previously-created resources are kept but the stack creation terminates.
B. Previously-created resources are deleted and the stack creation terminates.
C. The stack creation continues, and the final results indicate which steps failed.
D. CloudFormation templates are parsed in advance so stack creation is guaranteed to succeed.

Answer: B

QUESTION 181
Which of the following statements about SQS is true?

A. Messages will be delivered exactly once and messages will be delivered in First in, First out order
B. Messages will be delivered exactly once and message delivery order is indeterminate
C. Messages will be delivered one or more times and messages will be delivered in First in, First out order
D. Messages will be delivered one or more times and message delivery order is indeterminate

Answer: D

QUESTION 182
A user is running a MySQL RDS instance. The user will not use the DB for the next 3 months. How can the user save costs?

A. Pause the RDS activities from CLI until it is required in the future
B. Stop the RDS instance
C. Create a snapshot of RDS to launch in the future and terminate the instance now
D. Change the instance size to micro

Answer: C
Explanation:
The RDS instances unlike the AWS EBS backed instances cannot be stopped or paused.
The user needs to take the final snapshot, terminate the instance and launch a new instance in the future from that snapshot.

QUESTION 183
In DynamoDB, if you create a table and request 10 units of write capacity and 200 units of read capacity of provisioned throughput, how much would you be charged in US East (Northern Virginia) Region?

A. $0.05 per hour
B. $0.10 per hour
C. $0.03 per hour
D. $0.15 per hour

Answer: A
Explanation:
To understand pricing in DynamoDB, consider the following example. If you create a table and request 10 units of write capacity and 200 units of read capacity of provisioned throughput, you

would be charged:
$0.01 + (4 x $0.01) = $0.05 per hour
http://aws.amazon.com/dynamodb/pricing/

QUESTION 184
You have been doing a lot of testing of your VPC Network by deliberately failing EC2 instances to test whether instances are failing over properly. Your customer who will be paying the AWS bill for all this asks you if he being charged for all these instances. You try to explain to him how the billing works on EC2 instances to the best of your knowledge. What would be an appropriate response to give to the customer in regards to this?

A. Billing commences when Amazon EC2 AMI instance is completely up and billing ends as soon as the instance starts to shutdown.
B. Billing commences when Amazon EC2 initiates the boot sequence of an AMI instance and billing ends when the instance shuts down.
C. Billing only commences only after 1 hour of uptime and billing ends when the instance terminates.
D. Billing commences when Amazon EC2 initiates the boot sequence of an AMI instance and billing ends as soon as the instance starts to shutdown.

Answer: B
Explanation:
Billing commences when Amazon EC2 initiates the boot sequence of an AMI instance. Billing ends when the instance shuts down, which could occur through a web services command, by running "shutdown -h", or through instance failure.
http://aws.amazon.com/ec2/faqs/#Billing

QUESTION 185
AWS Elastic Load Balancer supports SSL termination.

A. True. For specific availability zones only.
B. False
C. True. For specific regions only
D. True. For all regions

Answer: D
Explanation:
You can configure your load balancer in ELB (Elastic Load Balancing) to use a SSL certificate in order to improve your system security.The load balancer uses the certificate to terminate and then decrypt requests before sending them to the back-end instances. Elastic Load Balancing uses AWS Identity and Access Management (IAM) to upload your certificate to your load balancer.

QUESTION 186
A user has launched five instances with ELB. How can the user add the sixth EC2 instance to ELB?

A. The user can add the sixth instance on the fly.
B. The user must stop the ELB and add the sixth instance.
C. The user can add the instance and change the ELB config file.
D. The ELB can only have a maximum of five instances.

Answer: A
Explanation:
Elastic Load Balancing automatically distributes incoming traffic across multiple EC2 instances. You create a load balancer and register instances with the load balancer in one or more Availability Zones. The load balancer serves as a single point of contact for clients. This enables you to increase the availability of your application. You can add and remove EC2 instances from your load balancer as your needs change, without disrupting the overall flow of information.
http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/SvcIntro.html

QUESTION 187
An organization has 500 employees. The organization wants to set up AWS access for each department. Which of the below mentioned options is a possible solution?

A. Create IAM roles based on the permission and assign users to each role
B. Create IAM users and provide individual permission to each
C. Create IAM groups based on the permission and assign IAM users to the groups
D. It is not possible to manage more than 100 IAM users with AWS

Answer: C
Explanation:
An IAM group is a collection of IAM users. Groups let the user specify permissions for a collection of users, which can make it easier to manage the permissions for those users.
http://docs.aws.amazon.com/IAM/latest/UserGuide/Using_WorkingWithGroupsAndUsers.html

QUESTION 188
How long can you keep your Amazon SQS messages in Amazon SQS queues?

A. From 120 secs up to 4 weeks
B. From 10 secs up to 7 days
C. From 60 secs up to 2 weeks
D. From 30 secs up to 1 week

Answer: C
Explanation:
The SQS message retention period is configurable and can be set anywhere from 1 minute to 2 weeks. The default is 4 days and once the message retention limit is reached your messages will be automatically deleted. The option for longer message retention provides greater flexibility to allow for longer intervals between message production and consumption.
https://aws.amazon.com/sqs/faqs/

QUESTION 189
In regard to DynamoDB, which of the following statements is correct?

A. An Item should have at least two value sets, a primary key and another attribute.
B. An Item can have more than one attributes.
C. A primary key should be single-valued.
D. An attribute can have one or several other attributes.

Answer: B
Explanation:

In Amazon DynamoDB, a database is a collection of tables. A table is a collection of items and each item is a collection of attributes.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/DataModel.html

QUESTION 190
Which one of the following statements is NOT an advantage of DyanamoDB being built on Solid State Drives:

A. serve high-scale request workloads
B. low request pricing
C. high I/O performance of WebApp on EC2 instance
D. low-latency response times

Answer: C
Explanation:
In DynamoDB, SSDs help achieve design goals of predictable low-latency response times for storing and accessing data at any scale. The high I/O performance of SSDs also enables to serve high-scale request workloads cost efficiently, and to pass this efficiency along in low request pricing.
http://aws.amazon.com/dynamodb/faqs/

QUESTION 191
An organization has hosted an application on the EC2 instances. There will be multiple users connecting to the instance for setup and configuration of application. The organization is planning to implement certain security best practices. Which of the below mentioned pointers will not help the organization achieve better security arrangement?

A. Apply the latest patch of OS and always keep it updated.
B. Allow only IAM users to connect with the EC2 instances with their own secret access key.
C. Disable the password based login for all the users. All the users should use their own keys to connect with the instance securely.
D. Create a procedure to revoke the access rights of the individual user when they are not required to connect to EC2 instance anymore for the purpose of application configuration.

Answer: B
Explanation:
Since AWS is a public cloud any application hosted on EC2 is prone to hacker attacks. It becomes extremely important for a user to setup a proper security mechanism on the EC2 instances. A few of the security measures are listed below:
Always keep the OS updated with the latest patch
Always create separate users with in OS if they need to connect with the EC2 instances, create their keys and disable their password
Create a procedure using which the admin can revoke the access of the user when the business work on the EC2 instance is completed
Lock down unnecessary ports
Audit any proprietary applications that the user may be running on the EC2 instance Provide temporary escalated privileges, such as sudo for users who need to perform occasional privileged tasks
The IAM is useful when users are required to work with AWS resources and actions, such as launching an instance. It is not useful to connect (RDP / SSH) with an instance.
http://aws.amazon.com/articles/1233/

QUESTION 192
A user is planning to make a mobile game which can be played online or offline and will be hosted on EC2. The user wants to ensure that if someone breaks the highest score or they achieve some milestone they can inform all their colleagues through email. Which of the below mentioned AWS services helps achieve this goal?

A. AWS Simple Workflow Service.
B. AWS Simple Queue Service.
C. Amazon Cognito
D. AWS Simple Email Service.

Answer: D
Explanation:
Amazon Simple Email Service (Amazon SES) is a highly scalable and cost-effective email-sending service for businesses and developers. It integrates with other AWS services, making it easy to send emails from applications that are hosted on AWS.
http://aws.amazon.com/ses/faqs/

QUESTION 193
Which one of the following operations is NOT a DynamoDB operation?

A. BatchWriteItem
B. DescribeTable
C. BatchGetItem
D. BatchDeleteItem

Answer: D
Explanation:
In DynamoDB, DeleteItem deletes a single item in a table by primary key, but BatchDeleteItem doesn't exist.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/operationlist.html

QUESTION 194
Company C is currently hosting their corporate site in an Amazon S3 bucket with Static Website Hosting enabled. Currently, when visitors go to http://www.companyc.com the index.html page is returned. Company C now would like a new page welcome.html to be returned when a visitor enters http://www.companyc.com in the browser.
Which of the following steps will allow Company C to meet this requirement? Choose 2 answers

A. Upload an html page named welcome.html to their S3 bucket
B. Create a welcome subfolder in their S3 bucket
C. Set the Index Document property to welcome.html
D. Move the index.html page to a welcome subfolder
E. Set the Error Document property to welcome.html

Answer: AC

QUESTION 195
What item operation allows the retrieval of multiple items from a DynamoDB table in a single API call?

A. GetItem
B. BatchGetItem
C. GetMultipleItems
D. GetItemRange

Answer: B

QUESTION 196
Which of the following are valid arguments for an SNS Publish request? Choose 3 answers

A. TopicAm
B. Subject
C. Destination
D. Format
E. Message
F. Language

Answer: ABE

QUESTION 197
An application stores payroll information nightly in DynamoDB for a large number of employees across hundreds of offices. Item attributes consist of individual name, office identifier, and cumulative daily hours. Managers run reports for ranges of names working in their office. One query is. "Return all Items in this office for names starting with A through E". Which table configuration will result in the lowest impact on provisioned throughput for this query?

A. Configure the table to have a hash index on the name attribute, and a range index on the office identifier
B. Configure the table to have a range index on the name attribute, and a hash index on the office identifier
C. Configure a hash index on the name attribute and no range index
D. Configure a hash index on the office Identifier attribute and no range index

Answer: B

QUESTION 198
EC2 instances are launched from Amazon Machine images (AMIS).
A given public AMI can:

A. be used to launch EC2 Instances in any AWS region.
B. only be used to launch EC2 instances in the same country as the AMI is stored.
C. only be used to launch EC2 instances in the same AWS region as the AMI is stored.
D. only be used to launch EC2 instances in the same AWS availability zone as the AMI is stored

Answer: C

QUESTION 199
Which of the following platforms are supported by Elastic Beanstalk? Choose 2 answers

A. Apache Tomcat
B. .NET
C. IBM Websphere
D. Oracle JBoss
E. Jetty

Answer: AB

QUESTION 200
Which EC2 API call would you use to retrieve a list of Amazon Machine Images (AMIs)?

A. DescnbeInstances
B. DescribeAMIs
C. DescribeImages
D. GetAMIs
E. You cannot retrieve a list of AMIs as there are over 10,000 AMIs

Answer: C

QUESTION 201
When a Simple Queue Service message triggers a task that takes 5 minutes to complete, which process below will result in successful processing of the message and remove it from the queue while minimizing the chances of duplicate processing?

A. Retrieve the message with an increased visibility timeout, process the message, delete the message from the queue
B. Retrieve the message with an increased visibility timeout, delete the message from the queue, process the message
C. Retrieve the message with increased DelaySeconds, process the message, delete the message from the queue
D. Retrieve the message with increased DelaySeconds, delete the message from the queue, process the message

Answer: A

QUESTION 202
In Amazon EC2, which of the following is the type of monitoring data for Amazon EBS volumes that is available automatically in 5-minute periods at no charge?

A. Primary
B. Basic
C. Initial
D. Detailed

Answer: B
Explanation:
Basic is the type of monitoring data (for Amazon EBS volumes) which is available automatically in 5-minute periods at no charge called.
http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/monitoring-volume-status.html

QUESTION 203
In DynamoDB, to get a detailed listing of secondary indexes on a table, you can use the _____ action.

A. DescribeTable
B. BatchGetItem
C. GetItem
D. TableName

Answer: A
Explanation:
In DynamoDB, DescribeTable returns information about the table, including the current status of the table, when it was created, the primary key schema, and any indexes on the table.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/SecondaryIndexes.html

QUESTION 204
A user has launched an EC2 instance. However, due to some reason the instance was terminated. If the user wants to find out the reason for termination, where can he find the details?

A. The user can get information from the AWS console, by checking the Instance description under the State transition reason label
B. The user can get information from the AWS console, by checking the Instance description under the Instance Termination reason label
C. The user can get information from the AWS console, by checking the Instance description under the Instance Status Change reason label
D. It is not possible to find the details after the instance is terminated

Answer: A
Explanation:
An EC2 instance, once terminated, may be available in the AWS console for a while after termination. The user can find the details about the termination from the description tab under the label State transition reason. If the instance is still running, there will be no reason listed. If the user has explicitly stopped or terminated the instance, the reason will be "User initiated shutdown".

QUESTION 205
_____ is a task coordination and state management service for cloud applications.

A. Amazon SES
B. Amazon SWF
C. Amazon FPS
D. Amazon SNS

Answer: B
Explanation:
Amazon Simple Workflow (Amazon SWF) is a task coordination and state management service for cloud applications. With Amazon SWF, you can stop writing complex glue-code and state machinery and invest more in the business logic that makes your applications unique.
http://aws.amazon.com/swf/

QUESTION 206
When you create a table with a hash-and-range key, you must define one or more secondary indexes on that table.

A. False, hash-range key is another name for secondary index
B. False, it is optional
C. True
D. False, when you have Hash-Range key you cannot define Secondary index

Answer: B
Explanation:
When you create a table with a hash-and-range key in DynamoDB, you can also define one or more secondary indexes on that table.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/LSI.html

QUESTION 207
A user is planning to create a structured database in the cloud. Which of the below mentioned AWS offerings help the user achieve the goal?

A. AWS DynamoDB
B. AWS RDS
C. AWS SimpleDB
D. AWS RSD

Answer: B
Explanation:
AWS RDS is a managed database server offered by AWS, which makes it easy to set up, operate, and scale a relational database or structured data in cloud.
http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

QUESTION 208
A user has created a MySQL RDS instance with PIOPS. Which of the below mentioned statements will help user understand the advantage of PIOPS?

A. The user can achieve additional dedicated capacity for the EBS I/O with an enhanced RDS option
B. It uses optimized EBS volumes and optimized configuration stacks
C. It provides a dedicated network bandwidth between EBS and RDS
D. It uses a standard EBS volume with optimized configuration the stacks

Answer: B
Explanation:
RDS DB instance storage comes in two types: standard and provisioned IOPS. Standard storage is allocated on the Amazon EBS volumes and connected to the user's DB instance. Provisioned IOPS uses optimized EBS volumes and an optimized configuration stack. It provides additional, dedicated capacity for the EBS I/O.
http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

QUESTION 209
A user is accessing an EC2 instance on the SSH port for IP 10.20.30.40. Which one is a secure way to configure that the instance can be accessed only from this IP?

A. In the security group, open port 22 for IP 10.20.30.40/0
B. In the security group, open port 22 for IP 10.20.30.40/32
C. In the security group, open port 22 for IP 10.20.30.40/24
D. In the security group, open port 22 for IP 10.20.30.40

Answer: B
Explanation:
In AWS EC2, while configuring a security group, the user needs to specify the IP address in CIDR notation. The CIDR IP range 10.20.30.40/32 says it is for a single IP 10.20.30.40. If the user specifies the IP as 10.20.30.40 only, the security group will not accept and ask it in a CIRD format.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html

QUESTION 210
An Amazon S3 bucket, "myawsbucket" is configured with website hosting in Tokyo region, what is the region-specific website endpoint?

A. www.myawsbucket.ap-northeast-1.amazonaws.com
B. myawsbucket.s3-website-ap-northeast-l.amazonawscom
C. myawsbucket.amazonaws.com
D. myawsbucket.tokyo.amazonaws.com

Answer: B

QUESTION 211
Which of the following items are required to allow an application deployed on an EC2 instance to write data to a DynamoDB table?
Assume that no security Keys are allowed to be stored on the EC2 instance. Choose 2 answers

A. Create an IAM User that allows write access to the DynamoDB table.
B. Add an IAM Role to a running EC2 instance.
C. Add an IAM User to a running EC2 Instance.
D. Launch an EC2 Instance with the IAM Role included in the launch configuration.
E. Create an IAM Role that allows write access to the DynamoDB table.
F. Launch an EC2 Instance with the IAM User included in the launch configuration.

Answer: BE

QUESTION 212
Which of the following services are key/value stores? Choose 3 answers

A. Amazon ElastiCache
B. Simple Notification Service
C. DynamoDB
D. Simple Workflow Service
E. Simple Storage Service

Answer: ACE

QUESTION 213
How is provisioned throughput affected by the chosen consistency model when reading data from a DynamoDB table?

A. Strongly consistent reads use the same amount of throughput as eventually consistent reads
B. Strongly consistent reads use more throughput than eventually consistent reads.
C. Strongly consistent reads use less throughput than eventually consistent reads
D. Strongly consistent reads use variable throughput depending on read activity

Answer: B

QUESTION 214
Your application is trying to upload a 6 GB file to Simple Storage Service and receive a "Your proposed upload exceeds the maximum allowed object size." error message.
What is a possible solution for this?

A. None, Simple Storage Service objects are limited to 5 GB
B. Use the multi-part upload API for this object
C. Use the large object upload API for this object
D. Contact support to increase your object size limit
E. Upload to a different region

Answer: B

QUESTION 215
Which of the following services are included at no additional cost with the use of the AWS platform? Choose 2 answers

A. Simple Storage Service
B. Elastic Compute Cloud
C. Auto Scaling
D. Elastic Load Balancing
E. CloudFormation
F. Simple Workflow Service

Answer: CE

QUESTION 216
What type of block cipher does Amazon S3 offer for server side encryption?

A. Triple DES
B. Advanced Encryption Standard
C. Blowfish
D. RC5

Answer: B

QUESTION 217

A user has setup an application on EC2 which uses the IAM user access key and secret access key to make secure calls to S3. The user wants to temporarily stop the access to S3 for that IAM user. What should the root owner do?

A. Delete the IAM user
B. Change the access key and secret access key for the users
C. Disable the access keys for the IAM user
D. Stop the instance

Answer: C
Explanation:
If the user wants to temporarily stop the access to S3 the best solution is to disable the keys. Deleting the user will result in a loss of all the credentials and the app will not be useful in the future. If the user stops the instance IAM users can still access S3. The change of the key does not help either as they are still active. The best possible solution is to disable the keys.
http://docs.aws.amazon.com/IAM/latest/UserGuide/ManagingCredentials.html

QUESTION 218
When should a user try to Force Detach an EBS volume?

A. If the volume is stuck in a detaching state
B. If the volume is not accessible from the instance
C. If the volume is not unmounted and the user still wants to detach
D. If the volume is a root volume

Answer: A
Explanation:
If an EBS volume stays in the detaching state, the user can force the detachment by clicking Force Detach. Forcing the detachment can lead to either data loss or a corrupted file system. The user should use this option only as a last resort to detach a volume from a failed instance or if he is detaching a volume with the intention of deleting it.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-detaching-volume.html

QUESTION 219
How can a user configure three termination policies for the AutoScaling group?

A. Define multiple policies in random order
B. Define multiple policies in the ordered list
C. Keep updating the AutoScaling group with each policy
D. The user cannot specify more than two policies for AutoScaling

Answer: B
Explanation:
To configure the Auto Scaling termination policy, the user can either specify any one of the policies as a standalone policy or list multiple policies in an ordered list.
The policies are executed in the order that they are listed.
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/us-termination-policy.html

QUESTION 220
A user wants to configure AutoScaling which scales up when the CPU utilization is above 70% and scales down when the CPU utilization is below 30%. How can the user configure AutoScaling

for the above mentioned condition?

A. Use AutoScaling with a schedule
B. Configure ELB to notify AutoScaling on load increase or decrease
C. Use dynamic AutoScaling with a policy
D. Use AutoScaling by manually modifying the desired capacity during a condition

Answer: C
Explanation:
The user can configure the AutoScaling group to automatically scale up and then scale down based on the specified conditions. To configure this, the user must setup policies which will get triggered by the CloudWatch alarms.
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/as-scale-based-on-demand.html

QUESTION 221
A user has created an application which sends data to a log file. The server hosting the log files can be unavailable due to any reason. The user wants to make it so that whenever the log server is up it should be receiving the messages. Which of the below mentioned AWS services helps achieve this functionality?

A. AWS Simple Workflow
B. AWS Simple Task Service
C. AWS Simple Notification Service
D. AWS Simple Queue Service

Answer: D
Explanation:
Amazon Simple Queue Service (SQS) is a fast, reliable, scalable, and fully managed message queuing service. SQS provides a simple and cost-effective way to decouple the components of an application. The user can use SQS to transmit any volume of data without losing messages or requiring other services to always be available. Using SQS, the application has to just send the data to SQS and SQS transmits it to the log file whenever it is available.
http://aws.amazon.com/sqs/

QUESTION 222
Is there a limit to how much throughput you can get out of a single table in DynamoDB?

A. Yes, not more than 1,000 writes/second or 1,000 reads/second
B. No
C. Yes, not more than 10,000 writes/second or 10,000 reads/second
D. No, but If you wish to exceed throughput rates of 10,000 writes/second or 10,000 reads/second, you must first contact AWS.

Answer: D
Explanation:
In DynamoDB, you can increase the throughput you have provisioned for your table using UpdateTable API or in the AWS Management Console. If you wish to exceed throughput rates of 10,000 writes/second or 10,000 reads/second, you must first contact AWS.
http://aws.amazon.com/dynamodb/

QUESTION 223

In AWS Elastic Beanstalk, you can update your deployed application even while it is part of a running environment. For a Java application, you can also use _____ to update your deployed application.

A. the AWS Toolkit for Eclipse
B. the AWS Toolkit for Visual Studio
C. the AWS Toolkit for JVM
D. the AWS Toolkit for Netbeans

Answer: A
Explanation:
In AWS Elastic Beanstalk, you can update your deployed application, even while it is part of a running environment. For a Java application, you can also use the AWS Toolkit for Eclipse to update your deployed application.
http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/GettingStarted.Walkthrough.html

QUESTION 224
You have a number of image files to encode. In an Amazon SQS worker queue, you create an Amazon SQS message for each file specifying the command (jpeg-encode) and the location of the file in Amazon S3. Which of the following statements best describes the functionality of Amazon SQS?

A. Amazon SQS is for single-threaded sending or receiving speeds.
B. Amazon SQS is a non-distributed queuing system.
C. Amazon SQS is a distributed queuing system that is optimized for horizontal scalability, not for single-threaded sending or receiving speeds.
D. Amazon SQS is a distributed queuing system that is optimized for vertical scalability and for single-threaded sending or receiving speeds.

Answer: C
Explanation:
Amazon SQS is a distributed queuing system that is optimized for horizontal scalability, not for single-threaded sending or receiving speeds. A single client can send or receive Amazon SQS messages at a rate of about 5 to 50 messages per second. Higher receive performance can be achieved by requesting multiple messages (up to 10) in a single call. It may take several seconds before a message that has been to a queue is available to be received.
http://media.amazonwebservices.com/AWS_Storage_Options.pdf

QUESTION 225
Can you configure an RDS Read Replica using CloudFormation templates?

A. Yes, provided that you have root access.
B. Yes, when you create a new CloudFormation template
C. Yes, but not for all Regions.
D. No, you can add the ReadReplica only when the resource is made available by CloudFormation

Answer: B
Explanation:
AWS CloudFormation gives developers and systems administrators an easy way to create and manage collections of AWS resources. You can now set Read Replicas for your databases with RDS when you create a new CloudFormation template.
You can start using it with the sample template of CloudFormation.

QUESTION 226
A user is creating an ELB with VPC. Which of the following options is available as a part of the "Add EC2 instances" page?

A. Select Subnet
B. Select IAM
C. Select ENI
D. Select VPC

Answer: A
Explanation:
When a user is launching an ELB with VPC, he/she has to select the options, such as subnet and security group before selecting the instances part of that subnet.
http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/elb-getting-started.html

QUESTION 227
A user has setup Multi AZ with the MS SQL RDS instance.
Which of the below mentioned functionalities can be achieved by the user?

A. High availability
B. Scalability
C. MS SQL does not support Multi AZ
D. Disaster recovery

Answer: C
Explanation:
The Multi AZ feature allows the user to achieve High Availability.
MS SQL does not support Multi AZ.
https://aws.amazon.com/rds/faqs/#36

QUESTION 228
An organization is having an application which can start and stop an EC2 instance as per schedule. The organization needs the MAC address of the instance to be registered with its software. The instance is launched in EC2-CLASSIC.
How can the organization update the MAC registration every time an instance is booted?

A. The instance MAC address never changes.
Thus, it is not required to register the MAC address every time.
B. The organization should write a boot strapping script which will get the MAC address from the instance metadata and use that script to register with the application.
C. AWS never provides a MAC address to an instance; instead the instance ID is used for identifying the instance for any software registration.
D. The organization should provide a MAC address as a part of the user data. Thus, whenever the instance is booted the script assigns the fixed MAC address to that instance.

Answer: B
Explanation:
AWS provides an on demand, scalable infrastructure. AWS EC2 allows the user to launch On-Demand instances. AWS does not provide a fixed MAC address to the instances launched in EC2-CLASSIC. If the instance is launched as a part of EC2-VPC, it can have an ENI which can

have a fixed MAC. However, with EC2-CLASSIC, every time the instance is started or stopped it will have a new MAC address. To get this MAC, the organization can run a script on boot which can fetch the instance metadata and get the MAC address from that instance metadata.
Once the MAC is received, the organization can register that MAC with the software.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AESDG-chapter-instancedata.html

QUESTION 229
A user is trying to share a video file with all his friends. Which of the below mentioned AWS services will be cheapest and easy to use?

A. AWS S3
B. AWS EC2
C. AWS RRS
D. AWS Glacier

Answer: C
Explanation:
AWS RRS provides the same functionality as AWS S3, but at a cheaper rate. It is ideally suited for non mission critical applications. It provides less durability than S3, but is a cheaper option.
http://docs.aws.amazon.com/AmazonS3/latest/dev/UsingRRS.html

QUESTION 230
A user has configured ELB. Which of the below mentioned protocols the user can configure for ELB health checks while setting up ELB?

A. All of the options
B. TCP
C. HTTPS
D. SSL

Answer: A
Explanation:
An ELB performs a health check on its instances to ensure that it diverts traffic only to healthy instances. The ELB can perform a health check on HTTP, HTTPS, TCP and SSL protocols.
http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/Welcome.html

QUESTION 231
Is it possible to create an S3 bucket accessible only by a certain IAM user, using policies in a CloudFormation template?

A. No, you can only create the S3 bucket but not the IAM user.
B. S3 is not supported by CloudFormation.
C. Yes, all these resources can be created using a CloudFormation template
D. No, in the same template you can only create the S3 bucket and the realtive policy.

Answer: C
Explanation:
With AWS Identity and Access Management (IAM), you can create IAM users to control who has access to which resources in your AWS account.
You can use IAM with AWS CloudFormation to control what AWS CloudFormation actions users can perform, such as view stack templates, create stacks, or delete stacks.

In addition to AWS CloudFormation actions, you can manage what AWS services and resources are available to each user.

QUESTION 232
A user has created an EBS instance in the US-East-1a AZ. The user has a volume of 30 GB in the US-East-1b zone. How can the user attach the volume to an instance?

A. Since both the volume and the instance are in the same region, the user can attach the volume
B. Use the volume migrate function to move the volume from one AZ to another and attach to the instance
C. Take a snapshot of the volume. Create a new volume in the USEast-1a and attach that to the instance
D. Use the volume replicate function to create a new volume in the US-East-1a and attach that to the volume

Answer: C
Explanation:
If an EBS volume is not in the same AZ of an EC2 instance, it cannot be attached to the instance. The only option is to take a snapshot of the volume and create a new volume in the instance's AZ. http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSSnapshots.html

QUESTION 233
A user is part of a group which has a policy allowing him just read only access to EC2. The user is part of another group which has full access to EC2. What happens when the user tries to launch an instance?

A. It will allow the user to launch the instance
B. It will fail since the user has just read only access
C. It will allow or deny based on the group under which the user has logged into EC2
D. It will not allow the user to add to the conflicting groups

Answer: A
Explanation:
The IAM group policy is always aggregated. In this case, if the user does not have permission for one group, but has permission for another group, he will have full access to EC2.
Unless there is specific deny policy, the user will be able to access EC2.
http://docs.aws.amazon.com/IAM/latest/UserGuide/PoliciesOverview.html

QUESTION 234
A user has launched an RDS instance. The user has created 3 databases on the same server. What can the maximum size be for each database?

A. The size of each DB cannot be more than 3 TB
B. It is not possible to have more than one DB on a single instance
C. The total instance storage size cannot be more than 3 TB
D. The size of each DB cannot be more than 1 TB

Answer: C
Explanation:
The AWS RDS DB instance is an isolated DB environment provided by AWS in which the user can create more than 1 database. The maximum size of the instance should be between 5 GB

and 3 TB. The size of each DB can be anything in this range.
http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

QUESTION 235
A user has created an RDS instance with MySQL. The user is using the HeidiSQL client to connect with the RDS DB. The client is unable to connect to DB from his home machine. What is a possible reason for the failure?

A. The user has to open port 80 in the RDS security group to connect with RDS DNS
B. The security group is not configured to allow a request from the user's IP on port 3306
C. You can never connect to RDS from your desktop
D. The user has to open port 22 in the RDS security group to connect with RDS DNS

Answer: B
Explanation:
If the user needs to connect to RDS then he has to open port 3306 in the RDS security group for his IP address.
http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

QUESTION 236
A user is creating a new EBS volume from an existing snapshot. The snapshot size shows 10 GB. Can the user create a volume of 30 GB from that snapshot?

A. Provided the original volume has set the change size attribute to true
B. Yes
C. Provided the snapshot has the modify size attribute set as true
D. No

Answer: B
Explanation:
A user can always create a new EBS volume of a higher size than the original snapshot size. The user cannot create a volume of a lower size. When the new volume is created the size in the instance will be shown as the original size. The user needs to change the size of the device with resize2fs or other OS specific commands.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-expand-volume.html

QUESTION 237
An organization has 10000 employees. The organization wants to give restricted AWS access to each employee. How can the organization achieve this?

A. Create an IAM user for each employee and make them a part of the group
B. It is not recommended to support 10000 users with IAM
C. Use STS and create the users' run time
D. Use Identity federation with SSO

Answer: D
Explanation:
Identity federation enables users from an existing directory to access resources within your AWS account, making it easier to manage your users by maintaining their identities in a single place. In this case, the federated user is the only solution since AWS does not allow creating more than 5000 IAM users.

http://docs.aws.amazon.com/IAM/latest/UserGuide/LimitationsOnEntities.html

QUESTION 238
In Amazon SNS, to send push notifications to mobile devices using Amazon SNS and ADM, you need to obtain the following, except:

A. Client secret
B. Client ID
C. Device token
D. Registration ID

Answer: C
Explanation:
To send push notifications to mobile devices using Amazon SNS and ADM, you need to obtain the following: Registration ID and Client secret.
http://docs.aws.amazon.com/sns/latest/dg/SNSMobilePushPrereq.html

QUESTION 239
Regarding Amazon SNS, to begin using Amazon SNS mobile push notifications, you first need _____that uses one of the supported push notification services: APNS, GCM, or ADM.

A. an access policy for the mobile endpoints
B. to active push notification service of Amazon SNS
C. to know the type of mobile device operating system
D. an app for the mobile endpoints

Answer: D
Explanation:
In Amazon SNS, to begin using Amazon SNS mobile push notifications, you first need an app for the mobile endpoints that uses one of the supported push notification services: APNS, GCM, or ADM. After you've registered and configured the app to use one of these services, you configure Amazon SNS to send push notifications to the mobile endpoints.
http://docs.aws.amazon.com/sns/latest/dg/SNSMobilePush.html

QUESTION 240
How many types of block devices does Amazon EC2 support?

A. 5
B. 1
C. 2
D. 4

Answer: C
Explanation:
Amazon EC2 supports 2 types of block devices.

QUESTION 241
ExamKiller (with AWS account ID 111122223333) has created 50 IAM users for its organization's employees. ExamKiller wants to make the AWS console login URL for all IAM users as: https://examkiller.signin.aws.amazon.com/console/. How can this be configured?

A. Create a bucket with the name ExamKiller and map it with the IAM alias
B. It is not possible to have capital letters as a part of the alias name
C. The user needs to use Route 53 to map the ExamKiller domain and IAM URL
D. For the AWS account, create an alias ExamKiller for the IAM login

Answer: B
Explanation:
If a user wants the URL of the AWS IAM sign-in page to have the company name instead of the AWS account ID, he can create an alias for his AWS account ID. The alias must be unique across all Amazon Webservices products and contain only digits, lowercase letters, and hyphens.
http://docs.aws.amazon.com/IAM/latest/UserGuide/AccountAlias.html

QUESTION 242
Can a user get a notification of each instance start / terminate configured with Auto Scaling?

A. Yes, always
B. No
C. Yes, if configured with the Auto Scaling group
D. Yes, if configured with the Launch Config

Answer: C
Explanation:
The user can get notifications using SNS if he has configured the notifications while creating the Auto Scaling group.
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/GettingStartedTutorial.html

QUESTION 243
AutoScaling is configured with 3 AZs. Each zone has 5 instances running. If AutoScaling wants to terminate an instance based on the policy action, which instance will it terminate first?

A. Terminate the first launched instance
B. Randomly select the instance for termination
C. Terminate the instance from the AZ which does not have a high AWS load
D. Terminate the instance from the AZ which has instances running near to the billing hour

Answer: B
Explanation:
Before Auto Scaling selects an instance to terminate, it first identifies the Availability Zone that has more instances than the other Availability Zones used by the group. If all the Availability Zones have the same number of instances, it identifies a random Availability Zone.
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/us-termination-policy.html

QUESTION 244
In regard to DynamoDB, can I delete local secondary indexes?

A. Yes, if it is a primary hash key index
B. No
C. Yes, if it is a local secondary indexes
D. Yes, if it is a Global secondary indexes

Answer: B
Explanation:
In DynamoDB, an index cannot be modified once it is created.
http://aws.amazon.com/dynamodb/faqs/#security_anchor

QUESTION 245
You need to develop and run some new applications on AWS and you know that Elastic Beanstalk and CloudFormation can both help as a deployment mechanism for a broad range of AWS resources. Which of the following statements best describes the differences between Elastic Beanstalk and CloudFormation?

A. Elastic Beanstalk uses Elastic load balancing and CloudFormation doesn't.
B. CloudFormation is faster in deploying applications than Elastic Beanstalk.
C. CloudFormation is much more powerful than Elastic Beanstalk, because you can actually design and script custom resources
D. Elastic Beanstalk is faster in deploying applications than CloudFormation.

Answer: C
Explanation:
These services are designed to complement each other. AWS Elastic Beanstalk provides an environment to easily develop and run applications in the cloud. It is integrated with developer tools and provides a one-stop experience for you to manage the lifecycle of your applications. AWS CloudFormation is a convenient deployment mechanism for a broad range of AWS resources. It supports the infrastructure needs of many different types of applications such as existing enterprise applications, legacy applications, applications built using a variety of AWS resources and container-based solutions (including those built using AWS Elastic Beanstalk). AWS CloudFormation introduces two new concepts: The template, a JSON-format, text-based file that describes all the AWS resources you need to deploy to run your application and the stack, the set of AWS resources that are created and managed as a single unit when AWS CloudFormation instantiates a template.
http://aws.amazon.com/cloudformation/faqs/

QUESTION 246
Can you SSH to your private machines that reside in a VPC from outside without elastic IP?

A. Yes, but only if you have direct connect or vpn
B. Only if you are using a non-US region
C. Only if you are using a US region
D. No

Answer: A
Explanation:
The instances that reside in the private subnets of your VPC are not reachable from the Internet, meaning that is not possible to ssh into them. To interact with them you can use a bastion server, located in a public subnet, that will act as a proxy for them.
You can also connect if you have direct connect or vpn.
http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Scenario2.html

QUESTION 247
Does AWS CloudFormation support Amazon EC2 tagging?

A. It depends if the Amazon EC2 tagging has been defined in the template.
B. No, it doesn't support Amazon EC2 tagging.
C. No, CloudFormation doesn't support any tagging
D. Yes, AWS CloudFormation supports Amazon EC2 tagging

Answer: D
Explanation:
In AWS CloudFormation, Amazon EC2 resources that support the tagging feature can also be tagged in an AWS template. The tag values can refer to template parameters, other resource names, resource attribute values (e.g. addresses), or values computed by simple functions (e.g., a concatenated list of strings).
http://aws.amazon.com/cloudformation/faqs/

QUESTION 248
A user has created a MySQL RDS instance. Which of the below mentioned options is mandatory to configure while creating an instance?

A. Multi AZ deployment setup
B. Automated backup window
C. Availability Zone
D. Maintenance window

Answer: A
Explanation:
When creating an RDS instance, the user needs to specify whether it is Multi AZ or not. If the user does not provide the value for the zone, the maintenance window or automated backup window, RDS will automatically select the value.
http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.MultiAZ.html

QUESTION 249
A user has enabled the automated backup, but not specified the backup window. What will RDS do in this case?

A. Will throw an error on instance launch
B. RDS will take 3 AM ?3:30 AM as the default window
C. RDS assigns a random time period based on the region
D. Will not allow to launch a DB instance

Answer: C
Explanation:
If the user does not specify a preferred backup window while enabling an automated backup, Amazon RDS assigns a default 30-minute backup window which is selected at random from an 8-hour block of time per region.

QUESTION 250
True or False: In DynamoDB, Scan operations are always eventually consistent.

A. No, scan is like Query operation
B. Yes
C. No, scan is strongly consistent by default

D. No, you can optionally request strongly consistent scan.

Answer: B
Explanation:
In DynamoDB, Scan operations are always eventually consistent.
http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/APISummary.html

QUESTION 251
Regarding Amazon SNS, when you want to subscribe to a topic and receive notifications to your email, in the Protocol drop-down box, you should select _____.

A. Email
B. Message
C. SMTP
D. IMAP

Answer: A
Explanation:
In Amazon SNS, when you want to subscribe to a topic and receive notifications to your email, select Email in the Protocol drop-down box. Enter an email address you can use to receive the notification in the Endpoint field.
http://docs.aws.amazon.com/sns/latest/dg/SubscribeTopic.html

QUESTION 252
When a user is detaching an EBS volume from a running instance and attaching it to a new instance, which of the below mentioned options should be followed to avoid file system damage?

A. Unmount the volume first
B. Stop all the I/O of the volume before processing
C. Take a snapshot of the volume before detaching
D. Force Detach the volume to ensure that all the data stays intact

Answer: A
Explanation:
When a user is trying to detach an EBS volume, the user can either terminate the instance or explicitly remove the volume. It is a recommended practice to unmount the volume first to avoid any file system damage.
http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-detaching-volume.html

QUESTION 253
A user is planning to host a scalable dynamic web application on AWS. Which of the services may not be required by the user to achieve automated scalability?

A. CloudWatch
B. S3
C. AutoScaling
D. AWS EC2 instances

Answer: B
Explanation:
The user can achieve automated scaling by launching different EC2 instances and making them

a part of an ELB. Cloudwatch will be used to monitor the resources and based on the scaling need it will trigger policies. AutoScaling is then used to scale up or down the instances.
http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/WhatIsAutoScaling.html

QUESTION 254
Which one of the following data types does Amazon DynamoDB not support?

A. Arrays
B. String
C. Binary
D. Number Set

Answer: A
Explanation:
Amazon DynamoDB supports the following data types:
Scalar data types (like Number, String, and Binary)
Multi-valued types (like String Set, Number Set, and Binary Set).

QUESTION 255
Regarding Amazon SNS, you can send notification messages to mobile devices through any of the following supported push notification services, EXCEPT:

A. Google Cloud Messaging for Android (GCM)
B. Apple Push Notification Service (APNS)
C. Amazon Device Messaging (ADM)
D. Microsoft Windows Mobile Messaging (MWMM)

Answer: D
Explanation:
In Amazon SNS, you have the ability to send notification messages directly to apps on mobile devices. Notification messages sent to a mobile endpoint can appear in the mobile app as message alerts, badge updates, or even sound alerts. Microsoft Windows Mobile Messaging (MWMM) doesn't exist and is not supported by Amazon SNS.
http://docs.aws.amazon.com/sns/latest/dg/SNSMobilePush.html

QUESTION 256
How can software determine the public and private IP addresses of the Amazon EC2 instance that it is running on?

A. Query the appropriate Amazon CloudWatch metric.
B. Use ipconfig or ifconfig command.
C. Query the local instance userdata.
D. Query the local instance metadata.

Answer: D

QUESTION 257
A corporate web application is deployed within an Amazon VPC, and is connected to the corporate data center via IPSec VPN. The application must authenticate against the on-premise LDAP server. Once authenticated, logged-in users can only access an S3 keyspace specific to

the user. Which two approaches can satisfy the objectives? Choose 2 answers

A. The application authenticates against LDAP. The application then calls the IAM Security Service to login to IAM using the LDAP credentials. The application can use the IAM temporary credentials to access the appropriate S3 bucket.
B. The application authenticates against LDAP, and retrieves the name of an IAM role associated with the user. The application then calls the IAM Security Token Service to assume that IAM Role. The application can use the temporary credentials to access the appropriate S3 bucket.
C. The application authenticates against IAM Security Token Service using the LDAP credentials. The application uses those temporary AWS security credentials to access the appropriate S3 bucket.
D. Develop an identity broker which authenticates against LDAP, and then calls IAM Security Token Service to get IAM federated user credentials. The application calls the identity broker to get IAM federated user credentials with access to the appropriate S3 bucket.
E. Develop an identity broker which authenticates against IAM Security Token Service to assume an IAM Role to get temporary AWS security credentials. The application calls the identity broker to get AWS temporary security credentials with access to the appropriate S3 bucket.

Answer: BD

QUESTION 258
Which of these is not a Pseudo Parameter in AWS CloudFormation?

A. AWS::StackName
B. AWS::AccountId
C. AWS::StackArn
D. AWS::NotificationARNs

Answer: C
Explanation:
This is the complete list of Pseudo Parameters: AWS::AccountId, AWS::NotificationARNs, AWS::NoValue, AWS::Region, AWS::StackId, AWS::StackName
http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/pseudo-parameter-reference.html

QUESTION 259
What is the scope of an EBS volume?

A. VPC
B. Region
C. Placement Group
D. Availability Zone

Answer: D
Explanation:
An Amazon EBS volume is tied to its Availability Zone and can be attached only to instances in the same Availability Zone.

QUESTION 260
What is the scope of AWS IAM?

A. Global
B. Availability Zone
C. Region
D. Placement Group

Answer: A
Explanation:
IAM resources are all global; there is not regional constraint.

QUESTION 261
A Developer created a dashboard for an application using Amazon API Gateway, Amazon S3, AWS Lambda, and Amazon RDS. The Developer needs an authentication mechanism allowing a user to sign in and view the dashboard. It must be accessible from mobile applications, desktops, and tablets, and must remember user preferences across platforms.

Which AWS service should the Developer use to support this authentication scenario?

A. AWS KMS
B. Amazon Cognito
C. AWS Directory Service
D. Amazon IAM

Answer: B

QUESTION 262
A Developer has created an S3 bucket s3://mycoolapp and has enabled server across logging that points to the folder s3://mycoolapp/logs. The Developer moved 100 KB of Cascading Style Sheets (CSS) documents to the folder s3://mycoolapp/css, and then stopped work. When the developer came back a few days later, the bucket was 50 GB.

What is the MOST likely cause of this situation?

A. The CSS files were not compressed and S3 versioning was enabled.
B. S3 replication was enabled on the bucket.
C. Logging into the same bucket caused exponential log growth.
D. An S3 lifecycle policy has moved the entire CSS file to S3 Infrequent Access.

Answer: C

QUESTION 263
A Developer is creating an Auto Scaling group whose instances need to publish a custom metric to Amazon CloudWatch.

Which method would be the MOST secure way to authenticate a CloudWatch PUT request?

A. Create an IAM user with PutMetricData permission and put the user credentials in a private repository; have applications pull the credentials as needed.
B. Create an IAM user with PutMetricData permission, and modify the Auto Scaling launch configuration to inject the user credentials into the instance user data.

C. Modify the CloudWatch metric policies to allow the PutMetricData permission to instances from the Auto Scaling group.
D. Create an IAM role with PutMetricData permission and modify the Auto Scaling launching configuration to launch instances using that role.

Answer: D

QUESTION 264
A Developer is working on an application that tracks hundreds of millions of product reviews in an Amazon DynamoDB table. The records include the data elements shown in the table:

Name	Type	Description
reviewID	Number	16 digit UUID
starRating	Number	Integer 1-5 of user rating
comment	String	User comment string
productID	Number	Product ID being reviewed

Which field, when used as the partition key, would result in the MOST consistent performance using DynamoDB?

A. starRating
B. reviewID
C. comment
D. productID

Answer: B

QUESTION 265
A Developer has written a serverless application using multiple AWS services. The business logic is written as a Lambda function which has dependencies on third-party libraries. The Lambda function endpoints will be exposed using Amazon API Gateway. The Lambda function will write the information to Amazon DynamoDB. The Developer is ready to deploy the application but must have the ability to rollback. How can this deployment be automated, based on these requirements?

A. Deploy using Amazon Lambda API operations to create the Lambda function by providing a deployment package.
B. Use an AWS CloudFormation template and use CloudFormation syntax to define the Lambda function resource in the template.
C. Use syntax conforming to the Serverless Application Model in the AWS CloudFormation template to define the Lambda function resource.
D. Create a bash script which uses AWS CLI to package and deploy the application.

Answer: C
Explanation:
https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/automating-updates-to-serverless-apps.html

QUESTION 266
What are the steps to using the AWS CLI to launch a templatized serverless application?

A. Use AWS CloudFormation get-template then CloudFormation execute-change-set.
B. Use AWS CloudFormation validate-template then CloudFormation create-change-set.
C. Use AWS CloudFormation package then CloudFormation deploy.
D. Use AWS CloudFormation create-stack then CloudFormation update-stack.

Answer: C
Explanation:
https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/serverless-deploying.html

QUESTION 267
A Developer is creating a web application that requires authentication, but also needs to support guest access to provide users limited access without having to authenticate. What service can provide support for the application to allow guest access?

A. IAM temporary credentials using AWS STS.
B. Amazon Directory Service
C. Amazon Cognito with unauthenticated access enabled
D. IAM with SAML integration

Answer: C
Explanation:
https://aws.amazon.com/cognito/faqs/

QUESTION 268
An application takes 40 seconds to process instructions received in an Amazon SQS message.

Assuming the SQS queue is configured with the default VisibilityTimeout value, what is the BEST way, upon receiving a message, to ensure that no other instances can retrieve a message that has already been processed or is currently being processed?

A. Use the ChangeMessageVisibility API to increase the VisibilityTimeout, then use the DeleteMessage API to delete the message.
B. Use the DeleteMessage API call to delete the message from the queue, then call DeleteQueue API to remove the queue.
C. Use the ChangeMessageVisibility API to decrease the timeout value, then use the DeleteMessage API to delete the message.
D. Use the DeleteMessageVisibility API to cancel the VisibilityTimeout, then use the DeleteMessage API to delete the message.

Answer: A

QUESTION 269
A Developer has implemented a Lambda function that needs to add new customers to an RDS database that is expected to run hundreds of times per hour. The Lambda function is configured to use 512MB of RAM and is based on the following pseudo code:

```
def lambda_handler(event, context):


db = database.connect()

db.statement('INSERT INTO Customers (CustomerName) VALUES
(context.name)')

db.close()
```

After testing the Lambda function, the Developer notices that the Lambda execution time is much longer than expected. What should the Developer do to improve performance?

A. Increase the amount of RAM allocated to the Lambda function, which will increase the number of threads the Lambda can use.
B. Increase the size of the RDS database to allow for an increased number of database connections each hour.
C. Move the database connection and close statement out of the handler. Place the connection in the global space.
D. Replace RDS wit Amazon DynamoDB to implement control over the number of writes per second.

Answer: C
Explanation:
https://www.jeremydaly.com/reuse-database-connections-aws-lambda/

QUESTION 270
A current architecture uses many Lambda functions invoking one another as a large state machine. The coordination of this state machine is legacy custom code that breaks easily.

Which AWS Service can help refactor and manage the state machine?

A. AWS Data Pipeline
B. AWS SNS with AWS SQS
C. Amazon Elastic MapReduce
D. AWS Step Functions

Answer: D
Explanation:
https://docs.aws.amazon.com/step-functions/latest/dg/tutorial-creating-lambda-state-machine.html

QUESTION 271
A Developer is asked to implement a caching layer in front of Amazon RDS. Cached content is expensive to regenerate in case of service failure. Which implementation below would work while maintaining maximum uptime?

A. Implement Amazon ElastiCache Redis in Cluster Mode
B. Install Redis on an Amazon EC2 instance.
C. Implement Amazon ElastiCache Memcached.

D. Migrate the database to Amazon Redshift.

Answer: A
Explanation:
https://aws.amazon.com/blogs/database/automating-sql-caching-for-amazon-elasticache-and-amazon-rds/

QUESTION 272
A current architecture uses many Lambda functions invoking one another as large state machine. The coordination of this state machine is legacy custom code that breaks easily.

Which AWS Service can help refactor and manage the state machine?

A. AWS Data Pipeline
B. AWS SNS with AWS SQS
C. Amazon Elastic MapReduce
D. AWS Step Functions

Answer: D

QUESTION 273
A large e-commerce site is being designed to deliver static objects from Amazon S3. The Amazon S3 bucket will server more than 300 GET requests per second.
What should be done to optimize performance? (Select TWO.)

A. Integrate Amazon CloudFront with Amazon S3.
B. Enable Amazon S3 cross-region replication.
C. Delete expired Amazon S3 server log files.
D. Configure Amazon S3 lifecycle rules.
E. Randomize Amazon S3 key name prefixes.

Answer: AE

QUESTION 274
A company is building a stock trading application that requires sub-millisecond latency in processing trading requests. Amazon DynamoDB is used to store all the trading data that is used to process each request. After load testing the application, the development team found that due to data retrieval times, the latency requirement is not satisfied. Because of sudden high spikes in the number of requests, DynamoDB read capacity has to be significantly over-provisioned to avoid throttling.

What steps should be taken to meet latency requirements and reduce the cost of running the application?

A. Add Global Secondary Indexes for trading data.
B. Store trading data in Amazon S3 and use Transfer Acceleration.
C. Add retries with exponential back-off for DynamoDB queries
D. Use DynamoDB Accelerator to cache trading data.

Answer: D

QUESTION 275
A Developer needs temporary access to resources in a second account.
What is the MOST secure way to achieve this?

A. Use the Amazon Cognito user pools to get short-lived credentials for the second account.
B. Create a dedicated IAM access key for the second account, and send it by mail.
C. Create a cross-account access role, and use sts:AssumeRole API to get short-lived credentials.
D. Establish trust, and add an SSH key for the second account to the IAM user.

Answer: C
Explanation:
https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html

QUESTION 276
An application reads data from an Amazon DynamoDB table. Several times a day, for a period of 15 seconds, the application receives multiple ProvisionedThroughputExceeded errors.
How should this exception be handled?

A. Create a new global secondary index for the table to help with the additional requests.
B. Retry the failed read requests with exponential backoff.
C. Immediately retry the failed read requests.
D. Use the DynamoDB "UpdateItem" API to increase the provisioned throughput capacity of the table.

Answer: B
Explanation:
https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/bp-query-scan.html

QUESTION 277
A Developer has created a large Lambda function, and deployment is failing with the following error:

ClientError: An error occurred (InvalidParameterValueException) when calling the CreateFunction operation: Unzipped size must be smaller than XXXXXXXXX bytes', where XXXXXXXXX is the current Lambda limit

What can the Developer do to fix this problem?

A. Submit a limit increase request to AWS Support to increase the function to the size needed.
B. Use a compression algorithm that is more efficient than ZIP.
C. Break the function into multiple smaller Lambda functions.
D. ZIP the ZIP file twice to compress it further.

Answer: C

QUESTION 278
Given the source code for an AWS Lambda function in the local store.py containing a handler function called get_store and the following AWS CloudFormation template:

```
Transform: AWS::Serverless-2016-10-31
Resources:
      StoreFunc:
          Type: AWS::Serverless::Function
          Properties:
            Handler: store.get_store
            Runtime: python3.6
```

What should be done to prepare the template so that it can be deployed using the AWS CLI command aws ?
cloudformation deploy

A. Use aws cloudformation compile to base64 encode and embed the source file into a modified CloudFormation template.
B. Use aws cloudformation package to upload the source code to an Amazon S3 bucket and produce a modified CloudFormation template.
C. Use aws lambda zip to package the source file together with the CloudFormation template and deploy the resulting zip archive.
D. Use aws serverless create-package to embed the source file directly into the existing CloudFormation template.

Answer: B
Explanation:
https://docs.aws.amazon.com/cli/latest/reference/cloudformation/package.html
Following command exports a template named template.json by uploading local artifacts to S3 bucket bucket-name and writes the exported template to packaged-template.json:
aws cloudformation package --template-file /path_to_template/template.json --s3-bucket bucket-name --output-template-file packaged-template.json

QUESTION 279
An application stores images in an S3 bucket. Amazon S3 event notifications are used to trigger a Lambda function that resizes the images. Processing each image takes less than a second.

How will AWS Lambda handle the additional traffic?

A. Lambda will scale out to execute the requests concurrently.
B. Lambda will handle the requests sequentially in the order received.
C. Lambda will process multiple images in a single execution.
D. Lambda will add more compute to each execution to reduce processing time.

Answer: A
Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/scaling.html

QUESTION 280

A company wants to implement a continuous integration for its workloads on AWS. The company wants to trigger unit test in its pipeline for commits-on its code repository, and wants to be notified of failure events in the pipeline.

How can these requirements be met?

A. Store the source code in AWS CodeCommit. Create a CodePipeline to automate unit testing. Use Amazon SNS to trigger notifications of failure events.
B. Store the source code in GitHub. Create a CodePipeline to automate unit testing. Use Amazon SES to trigger notifications of failure events.
C. Store the source code on GitHub. Create a CodePipeline to automate unit testing. Use Amazon CloudWatch to trigger notifications of failure events.
D. Store the source code in AWS CodeCommit. Create a CodePipeline to automate unit testing. Use Amazon CloudWatch to trigger notification of failure events.

Answer: D
Explanation:
Cloudwatch will be used to trigger the event. SNS will be used to send the notification.

QUESTION 281
A serverless application uses an API Gateway and AWS Lambda. Where should the Lambda function store its session information across function calls?

A. In an Amazon DynamoDB table
B. In an Amazon SQS queue
C. In the local filesystem
D. In an SQLite session table using `-DSQLITE_ENABLE_SESSION`

Answer: A

QUESTION 282
A Developer has created a software package to be deployed on multiple EC2 instances using IAM roles. What actions could be performed to verify IAM access to get records from Amazon Kinesis Streams? (Select TWO.)

A. Use the AWS CLI to retrieve the IAM group.
B. Query Amazon EC2 metadata for in-line IAM policies.
C. Request a token from AWS STS, and perform a describe action.
D. Perform a get action using the ?dry-run argument.
E. Validate the IAM role policy with the IAM policy simulator.

Answer: DE
Explanation:
B is wrong : Query Amazon EC2 metadata will return " IAM role name" not the inline IAM Policies.

QUESTION 283
When writing a Lambda function, what is the benefit of instantiating AWS clients outside the scope of the handler?

A. Legibility and stylistic convention

B. Taking advantage of connection re-use
C. Better error handling
D. Creating a new instance per invocation

Answer: B
Explanation:
https://www.jeremydaly.com/reuse-database-connections-aws-lambda/

QUESTION 284
An application on AWS is using third-party APIs. The Developer needs to monitor API errors in the code, and wants to receive notifications if failures go above a set threshold value.

How can the Developer achieve these requirements?

A. Publish a custom metric on Amazon CloudWatch and use Amazon SES for notification.
B. Use an Amazon CloudWatch API-error metric and use Amazon SNS for notification.
C. Use an Amazon CloudWatch API-error metric and use Amazon SES for notification.
D. Publish a custom metric on Amazon CloudWatch and use Amazon SNS for notification.

Answer: D

QUESTION 285
A Developer has an application that can upload tens of thousands of objects per second to Amazon S3 in parallel within a single AWS account. As part of new requirements, data stored in S3 must use server side encryption with AWS KMS (SSE-KMS). After creating this change, performance of the application is slower.

Which of the following is MOST likely the cause of the application latency?

A. Amazon S3 throttles the rate at which uploaded objects can be encrypted using Customer Master Keys.
B. The AWS KMS API calls limit is less than needed to achieve the desired performance.
C. The client encryption of the objects is using a poor algorithm.
D. KMS requires that an alias be used to create an independent display name that can be mapped to a CMK.

Answer: B
Explanation:
https://aws.amazon.com/about-aws/whats-new/2018/08/aws-key-management-service-increases-api-requests-per-second-limits/
KMS API access limit is 10k/sec in us-east and some others and 5.5k/sec for the rest of the regions.
Client can request this limit to be changed.

QUESTION 286
A company wants to migrate its web application to AWS and leverage Auto Scaling to handle pear workloads. The Solutions Architect determined that the best metric for an Auto Scaling event is the number of concurrent users.
Based on this information, what should the Developer use to autoscale based on concurrent users?

A. An Amazon SNS topic to be triggered when a concurrent user threshold is met
B. An Amazon Cloudwatch Networkin metric
C. Amazon CloudFront to leverage AWS Edge Locations
D. A Custom Amazon CloudWatch metric for concurrent users.

Answer: D

QUESTION 287
A company is migrating its on-premises database to Amazon RDS for MySQL. The company has read- heavy workloads, and wants to make sure it re-factors its code to achieve optimum read performance for its queries.
How can this objective be met?

A. Add database retries to effectively use RDS with vertical scaling
B. Use RDS with multi-AZ deployment
C. Add a connection string to use an RDS read replica for read queries
D. Add a connection string to use a read replica on an EC2 instance.

Answer: C

QUESTION 288
A Developer is receiving HTTP 400: ThrottlingException errors intermittently when calling the Amazon CloudWatch API. When a call fails, no data is retrieved. What best practice should first be applied to address this issue?

A. Contact AWS Support for a limit increase.
B. Use the AWS CLI to get the metrics
C. Analyze the applications and remove the API call
D. Retry the call with exponential backoff

Answer: D

QUESTION 289
A Developer is testing a Docker-based application that uses the AWS SDK to interact with Amazon DynamoDB. In the local development environment, the application has used IAM access keys. The application is now ready for deployment onto an ECS cluster. How should the application authenticate with AWS services in production?

A. Configure an ECS task IAM role for the application to use
B. Refactor the application to call AWS STS AssumeRole based on an instance role
C. Configure AWS access key/secret access key environment variables with new credentials
D. Configure the credentials file with a new access key/secret access key

Answer: A

QUESTION 290
A Developer created a Lambda function for a web application backend. When testing the Lambda function from the AWS Lambda console, the Developer can see that the function is being executed, but there is no log data being generated in Amazon CloudWatch Logs, even after

several minutes.

What could cause this situation?

A. The Lambda function does not have any explicit log statements for the log data to send it to CloudWatch Logs.
B. The Lambda function is missing CloudWatch Logs as a source trigger to send log data.
C. The execution role for the Lambda function is missing permissions to write log data to the CloudWatch Logs.
D. The Lambda function is missing a target CloudWatch Log group.

Answer: C
Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/monitoring-functions.html (see note)

QUESTION 291
An application has hundreds of users. Each user may use multiple devices to access the application. The Developer wants to assign unique identifiers to these users regardless of the device they use. Which of the following methods should be used to obtain unique identifiers?

A. Create a user table in Amazon DynamoDB as key-value pairs of users and their devices. Use these keys as unique identifiers.
B. Use IAM-generated access key IDs for the users as the unique identifier, but do not store secret keys.
C. Implement developer-authenticated identities by using Amazon Cognito, and get credentials for these identities.
D. Assign IAM users and roles to the users. Use the unique IAM resource ID as the unique identifier.

Answer: C

QUESTION 292
An application is designed to use Amazon SQS to manage messages from many independent senders. Each sender's messages must be processed in the order they are received.

Which SQS feature should be implemented by the Developer?

A. Configure each sender with a unique MessageGroupId
B. Enable MessageDeduplicationIds on the SQS queue
C. Configure each message with unique MessageGroupIds.
D. Enable ContentBasedDeduplication on the SQS queue

Answer: C
Explanation:
https://aws.amazon.com/blogs/developer/how-the-amazon-sqs-fifo-api-works/

QUESTION 293
A deployment package uses the AWS CLI to copy files into any S3 bucket in the account, using access keys stored in environment variables. The package is running on EC2 instances, and the instances have been modified to run with an assumed IAM role and a more restrictive policy that allows access to only one bucket. After the change, the Developer logs into the host and still has the ability to write into all of the S3 buckets in that account.

What is the MOST likely cause of this situation?

A. An IAM inline policy is being used on the IAM role
B. An IAM managed policy is being used on the IAM role
C. The AWS CLI is corrupt and needs to be reinstalled
D. The AWS credential provider looks for instance profile credentials last

Answer: D
Explanation:
https://docs.aws.amazon.com/sdk-for-java/v1/developer-guide/credentials.html
The environment variables are checked first, last are instance (Role) credentials.

QUESTION 294
A Developer is writing transactions into a DynamoDB table called "SystemUpdates" that has 5 write capacity units.
Which option has the highest read throughput?

A. Eventually consistent reads of 5 read capacity units reading items that are 4 KB in size
B. Strongly consistent reads of 5 read capacity units reading items that are 4 KB in size
C. Eventually consistent reads of 15 read capacity units reading items that are 1 KB in size
D. Strongly consistent reads of 15 read capacity units reading items that are 1 KB in size

Answer: D

QUESTION 295
Where should an Elastic Beanstalk configuration file named healthcheckur1.config be placed in the application source bundle?

A. In the root of the application
B. In the bin folder
C. In healthcheckur1.config.ebextension under root
D. In the .ebextensions folder

Answer: D
Explanation:
https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/ebextensions.html

QUESTION 296
During non-peak hours, a Developer wants to minimize the execution time of a full Amazon DynamoDB table scan without affecting normal workloads. The workloads average half of the strongly consistent read capacity units during non-peak hours.
How would the Developer optimize this scan?

A. Use parallel scans while limiting the rate
B. Use sequential scans
C. Increase read capacity units during the scan operation
D. Change consistency to eventually consistent during the scan operation

Answer: A

Explanation:
https://aws.amazon.com/blogs/developer/rate-limited-scans-in-amazon-dynamodb/

QUESTION 297
A Developer is creating a Lambda function and will be using external libraries that are not included in the standard Lambda libraries.
What action would minimize the Lambda compute time consumed?

A. Install the dependencies and external libraries at the beginning of the Lambda function.
B. Create a Lambda deployment package that includes the external libraries.
C. Copy the external libraries to Amazon S3, and reference the external libraries to the S3 location.
D. Install the external libraries in Lambda to be available to all Lambda functions.

Answer: B
Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/deployment-package-v2.html

QUESTION 298
A Developer is writing a Linux-based application to run on AWS Elastic Beanstalk. Application requirements state that the application must maintain full capacity during updates while minimizing cost. Which type of Elastic Beanstalk deployment policy should the Developer specify for the environment?

A. Immutable
B. Rolling
C. All at Once
D. Rolling with additional batch

Answer: D
Explanation:
https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.rolling-version-deploy.html
To maintain full capacity during deployments, you can configure your environment to launch a new batch of instances before taking any instances out of service. This option is known as a rolling deployment with an additional batch. When the deployment completes, Elastic Beanstalk terminates the additional batch of instances.

QUESTION 299
An application under development is required to store hundreds of video files. The data must be encrypted within the application prior to storage, with a unique key for each video file.

How should the Developer code the application?

A. Use the KMS Encrypt API to encrypt the data. Store the encrypted data key and data.
B. Use a cryptography library to generate an encryption key for the application. Use the encryption key to encrypt the data. Store the encrypted data.
C. Use the KMS GenerateDataKey API to get a data key. Encrypt the data with the data key. Store the encrypted data key and data.
D. Upload the data to an S3 bucket using server side-encryption with an AWS KMS key.

Answer: C

Explanation:
https://docs.aws.amazon.com/kms/latest/APIReference/API_GenerateDataKey.html

QUESTION 300
A Developer is creating an application that needs to locate the public IPv4 address of the Amazon EC2 instance on which it runs. How can the application locate this information?

A. Get the instance metadata by retrieving http://169.254.169.254/latest/metadata/.
B. Get the instance user data by retrieving http://169.254.169.254/latest/userdata/.
C. Get the application to run IFCONFIG to get the public IP address.
D. Get the application to run IPCONFIG to get the public IP address.

Answer: A
Explanation:
https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-instance-addressing.html

QUESTION 301
The Lambda function below is being called through an API using Amazon API Gateway. The average execution time for the Lambda function is about 1 second. The pseudocode for the Lambda function is as shown in the exhibit.

```
include "3rd party encryption module"

include "match module"

lambda_ handler(event, context)

      rds_host = "rds-instance-endpoint"

      name = db_udername

      password = db_password

      db_name = db_name

# Connect to the RDS Database

Conn = RDSConnection(rds_host, user=name, passwd=password,
db=db_name, connect_timeout=5)

#Perform some Processing reading data from the RDS database

#Code Block

#Code Block

#Code Block
```

What two actions can be taken to improve the performance of this Lambda function without increasing the cost of the solution? (Select two.)

A. Package only the modules the Lambda function requires
B. Use Amazon DynamoDB instead of Amazon RDS
C. Move the initialization of the variable Amazon RDS connection outside of the handler function
D. Implement custom database connection pooling with the Lambda function
E. Implement local caching of Amazon RDS data so Lambda can re-use the cache

Answer: AC

QUESTION 302
An application will ingest data at a very high throughput from many sources and must store the data in an Amazon S3 bucket. Which service would BEST accomplish this task?

A. Amazon Kinesis Firehose
B. Amazon S3 Acceleration Transfer
C. Amazon SQS
D. Amazon SNS

Answer: A

QUESTION 303
A Developer has setup an Amazon Kinesis Stream with 4 shards to ingest a maximum of 2500 records per second. A Lambda function has been configured to process these records.
In which order will these records be processed?

A. Lambda will receive each record in the reverse order it was placed into the stream following a LIFO (last-in, first-out) method
B. Lambda will receive each record in the exact order it was placed into the stream following a FIFO (first- in, first-out) method.
C. Lambda will receive each record in the exact order it was placed into the shard following a FIFO (first- in, first-out) method. There is no guarantee of order across shards.
D. The Developer can select FIFO, (first-in, first-out), LIFO (last-in, last-out), random, or request specific record using the getRecords API.

Answer: C

QUESTION 304
A static website is hosted in an Amazon S3 bucket. Several HTML pages on the site use JavaScript to download images from another Amazon S3 bucket. These images are not displayed when users browse the site.

What is the possible cause for the issue?

A. The referenced Amazon S3 bucket is in another region.
B. The images must be stored in the same Amazon S3 bucket.
C. Port 80 must be opened on the security group in which the Amazon S3 bucket is located.
D. Cross Origin Resource Sharing must be enabled on the Amazon S3 bucket.

Answer: D
Explanation:
https://docs.aws.amazon.com/AmazonS3/latest/dev/cors.html

QUESTION 305
Amazon S3 has the following structure: S3://BUCKET/FOLDERNAME/FILENAME.zip Which S3 best practice would optimize performance with thousands of PUT request each second to a single bucket?

A. Prefix folder names with user id; for example, s3://BUCKET/2013-FOLDERNAME/FILENAME.zip
B. Prefix file names with timestamps; for example, s3://BUCKET/FOLDERNAME/2013-26-05-15-00-00-FILENAME.zip
C. Prefix file names with random hex hashes; for example, s3://BUCKET/FOLDERNAME/23a6-FILENAME.zip
D. Prefix folder names with random hex hashes; for example, s3://BUCKET/23a6-FOLDERNAME/FILENAME.zip

Answer: D
Explanation:
https://docs.aws.amazon.com/AmazonS3/latest/dev/optimizing-performance.html
You no longer have to randomize prefix naming for performance, and can use sequential date-based naming for your prefixes.

QUESTION 306
For a deployment using AWS CodeDeploy, what is the run order of the hooks for in-place deployments?

A. Before Install -> Application Stop -> Application Start -> After Install
B. Application Stop -> Before Install -> After Install -> Application Start
C. Before Install -> Application Stop -> Validate Service -> Application Start
D. Application Stop -> Before Install -> Validate Service -> Application Start

Answer: B
Explanation:
https://docs.aws.amazon.com/codedeploy/latest/userguide/reference-appspec-file-structure-hooks.html#reference-appspec-file-structure-hooks-run-order

QUESTION 307
A Developer is developing an application that manages financial transactions. To improve security, multi- factor authentication (MFA) will be required as part of the login protocol. What services can the Developer use to meet these requirements?

A. Amazon DynamoDB to store MFA session data, and Amazon SNS to send MFA codes
B. Amazon Cognito with MFA
C. AWS Directory Service
D. AWS IAM with MFA enabled

Answer: B
Explanation:
IAM will be used for accessing the AWS services. when it comes to have access to a custom application as the question mentioned where developer is building an Application then i will go with Cognito.

QUESTION 308
A game stores user game data in an Amazon DynamoDB table. Individual users should not have access to other users' game data. How can this be accomplished?

A. Encrypt the game data with individual user keys.
B. Restrict access to specific items based on certain primary key values.
C. Stage data in SQS queues to inject metadata before accessing DynamoDB.
D. Read records from DynamoDB and discard irrelevant data client-side.

Answer: B
Explanation:
https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/specifying-conditions.html

QUESTION 309
A company developed a set of APIs that are being served through the Amazon API Gateway. The API calls need to be authenticated based on OpenID identity providers such as Amazon or Facebook. The APIs should allow access based on a custom authorization model.

Which is the simplest and MOST secure design to use to build an authentication and authorization model for the APIs?

A. Use Amazon Cognito user pools and a custom authorizer to authenticate and authorize users based on JSON Web Tokens.
B. Build a OpenID token broker with Amazon and Facebook. Users will authenticate with these identify providers and pass the JSON Web Token to the API to authenticate each API call.
C. Store user credentials in Amazon DynamoDB and have the application retrieve temporary credentials from AWS STS. Make API calls by passing user credentials to the APIs for authentication and authorization.
D. Use Amazon RDS to store user credentials and pass them to the APIs for authentications and authorization.

Answer: A

QUESTION 310
A supplier is writing a new RESTful API for customers to query the status of orders.
The customers requested the following API endpoint.
http://www.supplierdomain.com/status/customerID
Which of the following application designs meet the requirements? (Select two.)

A. Amazon SQS; Amazon SNS
B. Elastic Load Balancing; Amazon EC2
C. Amazon ElastiCache; Amazon Elacticsearch Service
D. Amazon API Gateway; AWS Lambda
E. Amazon S3; Amazon CloudFront

Answer: DE

QUESTION 311
A development team consists of 10 team members. Similar to a home directory for each team member the manager wants to grant access to user-specific folders in an Amazon S3 bucket. For the team member with the username "TeamMemberX", the snippet of the IAM policy looks like

this:

```
{"Sid": "AllowS3ActionToFolders","Effect": "Allow", "Action":
["s3:*"], "Resource":
["arn:aws:s3:::companyname/home/TeamMemberX/*] }
```

Instead of creating distinct policies for each team member, what approach can be used to make this policy snippet generic for all team members?

A. Use IAM policy condition
B. Use IAM policy principal
C. Use IAM policy variables
D. Use IAM policy resource

Answer: C
Explanation:
https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_variables.html
Use AWS Identity and Access Management (IAM) policy variables as placeholders when you don't know the exact value of a resource or condition key when you write the policy.

QUESTION 312
A legacy service has an XML-based SOAP interface. The Developer wants to expose the functionality of the service to external clients with the Amazon API Gateway. Which technique will accomplish this?

A. Create a RESTful API with the API Gateway; transform the incoming JSON into a valid XML message for the SOAP interface using mapping templates.
B. Create a RESTful API with the API Gateway; pass the incoming JSON to the SOAP interface through an Application Load Balancer.
C. Create a RESTful API with the API Gateway; pass the incoming XML to the SOAP interface through an Application Load Balancer.
D. Create a RESTful API with the API Gateway; transform the incoming XML into a valid message for the SOAP interface using mapping templates.

Answer: B

QUESTION 313
A company is using AWS CodeBuild to compile a website from source code stored in AWS CodeCommit. A recent change to the source code has resulted in the CodeBuild project being unable to successfully compile the website.
How should the Developer identify the cause of the failures?

A. Modify the buildspec.yml file to include steps to send the output of build commands to Amazon CloudWatch.
B. Use a custom Docker image that includes the AWS X-Ray agent in the AWS CodeBuild project configuration.
C. Check the build logs of the failed phase in the last build attempt in the AWS CodeBuild project build history.
D. Manually re-run the build process on a local machine so that the output can be visualized.

Answer: A

Explanation:
https://blog.codecentric.de/en/2016/12/serverless-soap-legacy-api-integration-java-aws-lambda-aws-api-gateway/

QUESTION 314
A web application is using Amazon Kinesis Streams for clickstream data that may not be consumed for up to 12 hours.

How can the Developer implement encryption at rest for data within the Kinesis Streams?

A. Enable SSL connections to Kinesis
B. Use Amazon Kinesis Consumer Library
C. Encrypt the data once it is at rest with a Lambda function
D. Enable server-side encryption in Kinesis Streams

Answer: D
Explanation:
https://aws.amazon.com/about-aws/whats-new/2017/07/amazon-kinesis-streams-introduces-server-side-encryption/

QUESTION 315
A Developer wants to use AWS X-Ray to trace a user request end-to-end throughput the software stack. The Developer made the necessary changes in the application tested it, and found that the application is able to send the traces to AWS X-Ray. However, when the application is deployed to an EC2 instance, the traces are not available.

Which of the following could create this situation? (Select two.)

A. The traces are reaching X-Ray, but the Developer does not have access to view the records.
B. The X-Ray daemon is not installed on the EC2 instance.
C. The X-Ray endpoint specified in the application configuration is incorrect.
D. The instance role does not have "xray:BatchGetTraces" and "xray:GetTraceGraph" permissions.
E. The instance role does not have "xray:PutTraceSegments" and "xray:PutTelemetryRecords" permissions.

Answer: BE

QUESTION 316
A Developer executed a AWS CLI command and received the error shown below:

```
A client error (UnauthorizedOperation) occurred when calling the RunInstances operation:
You are not authorized to perform this operation. Encoded authorization failure message:
oGsbAaIV7wlfj8zUqebHUANHzFbmkzILlxyj__y9xwhIHk99U_cUq1FIeZnskWDjQ1wSHStVfdCEyZILGoccGpCiC
IhORceWF9rRwFTnEcRJ3N9iTrPAE1WHveC5Z54ALPaWlEjHlLg8CaB8d8lCKmxQuylCm0r1Bf2fHJRUjAYopMVmga
8olFmKAl9yn_Z5rI120Q9p5ZIMX28zYM4dTu1cJQUQjosgrEejfiIMYDda8l7Ooko9H6VmGJX62KfkRa5l7yE6hhh
2bIwA6tpyCJy2LWFRTe4bafqAyoqkarhPA4mGiZyWn4gSqbO8o-
uqSIvWYPweaKGkampa0arcFR4gBD7Ph097WYBkzX9hVjGppLMy4jpXRv
```

What action should the Developer perform to make this error human-readable?

A. Make a call to AWS KMS to decode the message.
B. Use the AWS STS decode-authorization-message API to decode the message.

C. Use an open source decoding library to decode the message.
D. Use the AWS IAM decode-authorization-message API to decode this message.

Answer: B
Explanation:
https://docs.aws.amazon.com/cli/latest/reference/sts/decode-authorization-message.html
The message is encoded because the details of the authorization status can constitute privileged information that the user who requested the operation should not see. To decode an authorization status message, a user must be granted permissions via an IAM policy to request the DecodeAuthorizationMessage (sts:DecodeAuthorizationMessage) action.

QUESTION 317
A company is using Amazon API Gateway to manage access to a set of microservices implemented as AWS Lambda functions. Following a bug report, the company makes a minor breaking change to one of the APIs.

In order to avoid impacting existing clients when the new API is deployed, the company wants to allow clients six months to migrate from v1 to v2.

Which approach should the Developer use to handle this change?

A. Update the underlying Lambda function and provide clients with the new Lambda invocation URL.
B. Use API Gateway to automatically propagate the change to clients, specifying 180 days in the phased deployment parameter.
C. Use API Gateway to deploy a new stage named v2 to the API and provide users with its URL.
D. Update the underlying Lambda function, create an Amazon CloudFront distribution with the updated Lambda function as its origin.

Answer: C

QUESTION 318
A company has written a Java AWS Lambda function to be triggered whenever a user uploads an image to an Amazon S3 bucket. The function converts the original image to several different formats and then copies the resulting images to another Amazon S3 bucket.

The Developers find that no images are being copied to the second Amazon S3 bucket. They have tested the code on an Amazon EC2 instance with 1GB of RAM, and it takes an average of 500 seconds to complete.
What is the MOST likely cause of the problem?

A. The Lambda function has insufficient memory and needs to be increased to 1 GB to match the Amazon EC2 instance
B. Files need to be copied to the same Amazon S3 bucket for processing, so the second bucket needs to be deleted.
C. Lambda functions have a maximum execution limit of 300 seconds, therefore the function is not completing.
D. There is a problem with the Java runtime for Lambda, and the function needs to be converted to node.js.

Answer: C

QUESTION 319
An application stops working with the following error: The specified bucket does not exist. Where is the BEST place to start the root cause analysis?

A. Check the Elastic Load Balancer logs for DeleteBucket requests.
B. Check the application logs in Amazon CloudWatch Logs for Amazon S3 DeleteBucket errors.
C. Check AWS X-Ray for Amazon S3 DeleteBucket alarms.
D. Check AWS CloudTrail for a DeleteBucket event.

Answer: D
Explanation:
https://github.com/serverless/serverless-graphql/issues/72

QUESTION 320
An organization must store thousands of sensitive audio and video files in an Amazon S3 bucket. Organizational security policies require that all data written to this bucket be encrypted.
How can compliance with this policy be ensured?

A. Use AWS Lambda to send notifications to the security team if unencrypted objects are pun in the bucket.
B. Configure an Amazon S3 bucket policy to prevent the upload of objects that do not contain the x-amz- server-side-encryption header.
C. Create an Amazon CloudWatch event rule to verify that all objects stored in the Amazon S3 bucket are encrypted.
D. Configure an Amazon S3 bucket policy to prevent the upload of objects that contain the x-amz-server- side-encryption header.

Answer: B

QUESTION 321
An application overwrites an object in Amazon S3, and then immediately reads the same object. Why would the application sometimes retrieve the old version of the object?

A. S3 overwrite PUTS are eventually consistent, so the application may read the old object.
B. The application needs to add extra metadata to label the latest version when uploading to Amazon S3.
C. All S3 PUTS are eventually consistent, so the application may read the old object.
D. The application needs to explicitly specify latest version when retrieving the object.

Answer: A

QUESTION 322
The release process workflow of an application requires a manual approval before the code is deployed into the production environment.

What is the BEST way to achieve this using AWS CodePipeline?

A. Use multiple pipelines to allow approval
B. Use an approval action in a stage
C. Disable the stage transition to allow manual approval

D. Disable a stage just prior the deployment stage

Answer: B
Explanation:
https://docs.aws.amazon.com/codepipeline/latest/userguide/approvals-action-add.html

QUESTION 323
When thinking of DynamoDB, what are true of Global Secondary Key properties?

A. The partition key and sort key can be different from the table.
B. Only the partition key can be different from the table.
C. Either the partition key or the sort key can be different from the table, but not both.
D. Only the sort key can be different from the table.

Answer: A

QUESTION 324
You are responsible for a legacy web application whose server environment is approaching end of life. You would like to migrate this application to AWS as quickly as possible, since the application environment currently has the following limitations: The VM's single 10GB VMDK is almost full. The virtual network interface still uses the 10Mbps driver, which leaves your 100Mbps WAN connection completely underutilized. It is currently running on a highly customized Windows VM within a VMware environment: You do not have the installation media. This is a mission critical application with an RTO (Recovery Time Objective) of 8 hours. RPO (Recovery Point Objective) of 1 hour. How could you best migrate this application to AWS while meeting your business continuity requirements?

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

Answer: A

QUESTION 325
You are tasked with moving a legacy application from a virtual machine running inside your datacenter to an Amazon VPC. Unfortunately this app requires access to a number of on-premises services and no one who configured the app still works for your company. Even worse there's no documentation for it. What will allow the application running inside the VPC to reach back and access its internal dependencies without being reconfigured? (Choose 3 answers)

A. An AWS Direct Connect link between the VPC and the network housing the internal services
B. An Internet Gateway to allow a VPN connection.
C. An Elastic IP address on the VPC instance
D. An IP address space that does not conflict with the one on-premises
E. A VM Import of the current virtual machine

Answer: ACD

QUESTION 326

You have multiple Amazon EC2 instances running in a cluster across multiple Availability Zones within the same region. What combination of the following should be used to ensure the highest network performance (packets per second), lowest latency, and lowest jitter? Choose 3 answers

A. Amazon EC2 placement groups
B. Enhanced networking
C. Amazon PV AMI
D. Amazon HVM AMI
E. Amazon Linux
F. Amazon VPC

Answer: BDF

QUESTION 327
A group of researchers is studying the migration pattern of a beetle that eats and destroys gram. The researchers must process massive amounts of data and run statistics. Which one of the following options provides the high performance computing for this purpose?

A. Configure an Autoscaling Scaling group to launch dozens of spot instances to run the statistical analysis simultaneously
B. Launch AMI instances that support SR-IOV in a single Availability Zone
C. Launch compute optimized (C4) instances in at least two Availability Zones
D. Launch enhanced network type instances in a placement group

Answer: D

QUESTION 328
In the basic monitoring package for EC2, Amazon CloudWatch provides the following metrics:

A. Web server visible metrics such as number failed transaction requests
B. Operating system visible metrics such as memory utilization
C. Database visible metrics such as number of connections
D. Hypervisor visible metrics such as CPU utilization

Answer: D

QUESTION 329
Which of the following requires a custom CloudWatch metric to monitor?

A. Memory Utilization of an EC2 instance
B. CPU Utilization of an EC2 instance
C. Disk usage activity of an EC2 instance
D. Data transfer of an EC2 instance

Answer: A

QUESTION 330
A user has configured CloudWatch monitoring on an EBS backed EC2 instance. If the user has not attached any additional device, which of the below mentioned metrics will always show a 0

value?

A. DiskReadBytes
B. NetworkIn
C. NetworkOut
D. CPUUtilization

Answer: A

QUESTION 331
A user is running a batch process on EBS backed EC2 instances. The batch process starts a few instances to process Hadoop Map reduce jobs, which can run between 50 ?600 minutes or sometimes for more time. The user wants to configure that the instance gets terminated only when the process is completed. How can the user configure this with CloudWatch?

A. Setup the CloudWatch action to terminate the instance when the CPU utilization is less than 5%
B. Setup the CloudWatch with Auto Scaling to terminate all the instances
C. Setup a job which terminates all instances after 600 minutes
D. It is not possible to terminate instances automatically

Answer: A

QUESTION 332
An AWS account owner has setup multiple IAM users. One IAM user only has CloudWatch access. He has setup the alarm action, which stops the EC2 instances when the CPU utilization is below the threshold limit. What will happen in this case?

A. It is not possible to stop the instance using the CloudWatch alarm
B. CloudWatch will stop the instance when the action is executed
C. The user cannot set an alarm on EC2 since he does not have the permission
D. The user can setup the action but it will not be executed if the user does not have EC2 rights

Answer: D

QUESTION 333
A user has launched 10 instances from the same AMI ID using Auto Scaling. The user is trying to see the average CPU utilization across all instances of the last 2 weeks under the CloudWatch console.
How can the user achieve this?

A. View the Auto Scaling CPU metrics
B. Aggregate the data over the instance AMI ID
C. The user has to use the CloudWatchanalyser to find the average data across instances
D. It is not possible to see the average CPU utilization of the same AMI ID since the instance ID is different

Answer: A

QUESTION 334

A photo-sharing service stores pictures in Amazon Simple Storage Service (S3) and allows application sign-in using an OpenID Connect-compatible identity provider. Which AWS Security Token Service approach to temporary access should you use for the Amazon S3 operations?

A. SAML-based Identity Federation
B. Cross-Account Access
C. AWS IAM users
D. Web Identity Federation

Answer: D

QUESTION 335
Which technique can be used to integrate AWS IAM (Identity and Access Management) with an on- premise LDAP (Lightweight Directory Access Protocol) directory service?

A. Use an IAM policy that references the LDAP account identifiers and the AWS credentials.
B. Use SAML (Security Assertion Markup Language) to enable single sign-on between AWS and LDAP
C. Use AWS Security Token Service from an identity broker to issue short-lived AWS credentials.
D. Use IAM roles to automatically rotate the IAM credentials when LDAP credentials are updated.
E. Use the LDAP credentials to restrict a group of users from launching specific EC2 instance types.

Answer: C

QUESTION 336
You are designing a photo sharing mobile app the application will store all pictures in a single Amazon S3 bucket. Users will upload pictures from their mobile device directly to Amazon S3 and will be able to view and download their own pictures directly from Amazon S3. You want to configure security to handle potentially millions of users in the most secure manner possible. What should your server-side application do when a new user registers on the photo-sharing mobile application?

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

Answer: B

QUESTION 337
Your company has recently extended its datacenter into a VPC on AWS to add burst computing capacity as needed Members of your Network Operations Center need to be able to go to the AWS Management Console and administer Amazon EC2 instances as necessary. You don't want to create new IAM users for each NOC member and make those users sign in again to the AWS Management Console. Which option below will meet the needs for your NOC members?

A. Use OAuth 2.0 to retrieve temporary AWS security credentials to enable your NOC members to sign in to the AWS Management Console.
B. Use Web Identity Federation to retrieve AWS temporary security credentials to enable your NOC members to sign in to the AWS Management Console.
C. Use your on-premises SAML 2.O-compliant identity provider (IDP) to grant the NOC members federated access to the AWS Management Console via the AWS single sign-on (SSO) endpoint.
D. Use your on-premises SAML 2.0-compliant identity provider (IDP) to retrieve temporary security credentials to enable NOC members to sign in to the AWS Management Console

Answer: C

QUESTION 338
Company B is launching a new game app for mobile devices. Users will log into the game using their existing social media account to streamline data capture. Company B would like to directly save player data and scoring information from the mobile app to a DynamoDB table named Score Data When a user saves their game the progress data will be stored to the Game state S3 bucket. what is the best approach for storing data to DynamoDB and S3?

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

Answer: B

QUESTION 339
A user has created a mobile application which makes calls to DynamoDB to fetch certain data. The application is using the DynamoDB SDK and root account access/secret access key to connect to DynamoDB from mobile. Which of the below mentioned statements is true with respect to the best practice for security in this scenario?

A. User should create a separate IAM user for each mobile application and provide DynamoDB access with it
B. User should create an IAM role with DynamoDB and EC2 access. Attach the role with EC2 and route all calls from the mobile through EC2
C. The application should use an IAM role with web identity federation which validates calls to DynamoDB with identity providers, such as Google, Amazon, and Facebook
D. Create an IAM Role with DynamoDB access and attach it with the mobile application

Answer: C

QUESTION 340
You are managing the AWS account of a big organization. The organization has more than 1000+ employees and they want to provide access to the various services to most of the employees. Which of the below mentioned options is the best possible solution in this case?

A. The user should create a separate IAM user for each employee and provide access to them as per the policy
B. The user should create an IAM role and attach STS with the role. The user should attach that role to the EC2 instance and setup AWS authentication on that server
C. The user should create IAM groups as per the organization's departments and add each user to the group for better access control
D. Attach an IAM role with the organization's authentication service to authorize each user for various AWS services

Answer: D

QUESTION 341
Your fortune 500 company has under taken a TCO analysis evaluating the use of Amazon S3 versus acquiring more hardware The outcome was that all employees would be granted access to use Amazon S3 for storage of their personal documents. Which of the following will you need to consider so you can set up a solution that incorporates single sign-on from your corporate AD or LDAP directory and restricts access for each user to a designated user folder in a bucket? (Choose 3 Answers)

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

Answer: ABD

QUESTION 342
An AWS customer is deploying a web application that is composed of a front-end running on Amazon EC2 and of confidential data that is stored on Amazon S3. The customer security policy that all access operations to this sensitive data must be authenticated and authorized by a centralized access management system that is operated by a separate security team. In addition, the web application team that owns and administers the EC2 web front-end instances is prohibited from having any ability to access the data that circumvents this centralized access management system. Which of the following configurations will support these requirements?

A. Encrypt the data on Amazon S3 using a CloudHSM that is operated by the separate security team.
Configure the web application to integrate with the CloudHSM for decrypting approved data access operations for trusted end-users.
B. Configure the web application to authenticate end-users against the centralized access management system. Have the web application provision trusted users STS tokens entitling the download of approved data directly from Amazon S3

C. Have the separate security team create and IAM role that is entitled to access the data on Amazon S3. Have the web application team provision their instances with this role while denying their IAM users access to the data on Amazon S3
D. Configure the web application to authenticate end-users against the centralized access management system using SAML. Have the end-users authenticate to IAM using their SAML token and download the approved data directly from S3.

Answer: B

QUESTION 343
What is web identity federation?

A. Use of an identity provider like Google or Facebook to become an AWS IAM User.
B. Use of an identity provider like Google or Facebook to exchange for temporary AWS security credentials.
C. Use of AWS IAM User tokens to log in as a Google or Facebook user.
D. Use of AWS STS Tokens to log in as a Google or Facebook user.

Answer: B

QUESTION 344
You are building a mobile app for consumers to post cat pictures online. You will be storing the images in AWS S3. You want to run the system very cheaply and simply. Which one of these options allows you to build a photo sharing application without needing to worry about scaling expensive uploads processes, authentication/authorization and so forth?

A. Build the application out using AWS Cognito and web identity federation to allow users to log in using Facebook or Google Accounts. Once they are logged in, the secret token passed to that user is used to directly access resources on AWS, like AWS S3. (Amazon Cognito is a superset of the functionality provided by web identity federation. Referlink)
B. Use JWT or SAML compliant systems to build authorization policies. Users log in with a username and password, and are given a token they can use indefinitely to make calls against the photo infrastructure.
C. Use AWS API Gateway with a constantly rotating API Key to allow access from the client-side. Construct a custom build of the SDK and include S3 access in it.
D. Create an AWS oAuth Service Domain ad grant public signup and access to the domain. During setup, add at least one major social media site as a trusted Identity Provider for users

Answer: A

QUESTION 345
The Marketing Director in your company asked you to create a mobile app that lets users post sightings of good deeds known as random acts of kindness in 80-character summaries. You decided to write the application in JavaScript so that it would run on the broadest range of phones, browsers, and tablets. Your application should provide access to Amazon DynamoDB to store the good deed summaries. Initial testing of a prototype shows that there aren't large spikes in usage. Which option provides the most cost-effective and scalable architecture for this application?

A. Provide the JavaScript client with temporary credentials from the Security Token Service using a Token Vending Machine

B. Register the application with a Web Identity Provider like Amazon, Google, or Facebook, create an IAM role for that provider, and set up permissions for the IAM role to allow S3 gets and DynamoDB puts. You serve your mobile application out of an S3 bucket enabled as a web site. Your client updates DynamoDB.
C. Provide the JavaScript client with temporary credentials from the Security Token Service using a Token Vending Machine (TVM) to provide signed credentials mapped to an IAM user allowing DynamoDB puts. You serve your mobile application out of Apache EC2 instances that are load-balanced and autoscaled. Your EC2 instances are configured with an IAM role that allows DynamoDB puts. Your server updates DynamoDB.
D. Register the JavaScript application with a Web Identity Provider like Amazon, Google, or Facebook, create an IAM role for that provider, and set up permissions for the IAM role to allow DynamoDB puts. You serve your mobile application out of Apache EC2 instances that are load-balanced and autoscaled. Your EC2 instances are configured with an IAM role that allows DynamoDB puts. Your server updates DynamoDB.

Answer: B

QUESTION 346
You run a web application with the following components Elastic Load Balancer (ELB), 3 Web/Application servers, 1 MySQL RDS database with read replicas, and Amazon Simple Storage Service (Amazon S3) for static content. Average response time for users is increasing slowly. What three CloudWatch RDS metrics will allow you to identify if the database is the bottleneck? Choose 3 answers

A. The number of outstanding IOs waiting to access the disk
B. The amount of write latency
C. The amount of disk space occupied by binary logs on the master.
D. The amount of time a Read Replica DB Instance lags behind the source DB Instance
E. The average number of disk I/O operations per second.

Answer: ABD

QUESTION 347
Typically, you want your application to check whether a request generated an error before you spend any time processing results. The easiest way to find out if an error occurred is to look for an _____ node in the response from the Amazon RDS API.

A. Incorrect
B. Error
C. FALSE

Answer: B

QUESTION 348
In the Amazon CloudWatch, which metric should I be checking to ensure that your DB Instance has enough free storage space?

A. FreeStorage
B. FreeStorageSpace
C. FreeStorageVolume

D. FreeDBStorageSpace

Answer: B

QUESTION 349
A user is receiving a notification from the RDS DB whenever there is a change in the DB security group. The user does not want to receive these notifications for only a month. Thus, he does not want to delete the notification. How can the user configure this?

A. Change the Disable button for notification to "Yes" in the RDS console
B. Set the send mail flag to false in the DB event notification console
C. The only option is to delete the notification from the console
D. Change the Enable button for notification to "No" in the RDS console

Answer: D

QUESTION 350
A sys admin is planning to subscribe to the RDS event notifications. For which of the below mentioned source categories the subscription cannot be configured?

A. DB security group
B. DB snapshot
C. DB options group
D. DB parameter group

Answer: C

QUESTION 351
A user is planning to setup notifications on the RDS DB for a snapshot. Which of the below mentioned event categories is not supported by RDS for this snapshot source type?

A. Backup
B. Creation
C. Deletion
D. Restoration

Answer: A

QUESTION 352
A system admin is planning to setup event notifications on RDS. Which of the below mentioned services will help the admin setup notifications?

A. AWS SES
B. AWS Cloudtrail
C. AWS CloudWatch
D. AWS SNS

Answer: D

QUESTION 353
A user has setup an RDS DB with Oracle. The user wants to get notifications when someone modifies the security group of that DB. How can the user configure that?

A. It is not possible to get the notifications on a change in the security group
B. Configure SNS to monitor security group changes
C. Configure event notification on the DB security group
D. Configure the CloudWatch alarm on the DB for a change in the security group

Answer: C

QUESTION 354
It is advised that you watch the Amazon CloudWatch "_____" metric (available via the AWS Management Console or Amazon Cloud Watch APIs) carefully and recreate the Read Replica should it fall behind due to replication errors.

A. Write Lag
B. Read Replica
C. Replica Lag
D. Single Replica

Answer: C

QUESTION 355
Can I encrypt connections between my application and my DB Instance using SSL?

A. No
B. Yes
C. Only in VPC
D. Only in certain regions

Answer: B

QUESTION 356
Which of these configuration or deployment practices is a security risk for RDS?

A. Storing SQL function code in plaintext
B. Non-Multi-AZ RDS instance
C. Having RDS and EC2 instances exist in the same subnet
D. RDS in a public subnet

Answer: D

QUESTION 357
What does Amazon RDS stand for?

A. Regional Data Server.
B. Relational Database Service

C. Regional Database Service.

Answer: B

QUESTION 358
How many relational database engines does RDS currently support?

A. MySQL, Postgres, MariaDB, Oracle and Microsoft SQL Server
B. Just two: MySQL and Oracle.
C. Five: MySQL, PostgreSQL, MongoDB, Cassandra and SQLite.
D. Just one: MySQL.

Answer: A

QUESTION 359
If I modify a DB Instance or the DB parameter group associated with the instance, should I reboot the instance for the changes to take effect?

A. No
B. Yes

Answer: B

QUESTION 360
What is the name of licensing model in which I can use your existing Oracle Database licenses to run Oracle deployments on Amazon RDS?

A. Bring Your Own License
B. Role Bases License
C. Enterprise License
D. License Included

Answer: A

QUESTION 361
Will I be charged if the DB instance is idle?

A. No
B. Yes
C. Only is running in GovCloud
D. Only if running in VPC

Answer: B

QUESTION 362
What is the minimum charge for the data transferred between Amazon RDS and Amazon EC2 Instances in the same Availability Zone?

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

Answer: B

QUESTION 363
Does Amazon RDS allow direct host access via Telnet, Secure Shell (SSH), or Windows Remote Desktop Connection?

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

Answer: B

QUESTION 364
What are the two types of licensing options available for using Amazon RDS for Oracle?

A. BYOL and Enterprise License
B. BYOL and License Included
C. Enterprise License and License Included
D. Role based License and License Included

Answer: B

QUESTION 365
Which of the following notification endpoints or clients does Amazon Simple Notification Service support? Choose 2 answers

A. Email
B. CloudFront distribution
C. File Transfer Protocol
D. Short Message Service
E. Simple Network Management Protocol

Answer: AD

QUESTION 366
What happens when you create a topic on Amazon SNS?

A. The topic is created, and it has the name you specified for it.
B. An ARN (Amazon Resource Name) is created
C. You can create a topic on Amazon SQS, not on Amazon SNS.
D. This question doesn't make sense.

Answer: B

QUESTION 367
A user has deployed an application on his private cloud. The user is using his own monitoring tool. He wants to configure that whenever there is an error, the monitoring tool should notify him via SMS. Which of the below mentioned AWS services will help in this scenario?

A. None because the user infrastructure is in the private cloud/
B. AWS SNS
C. AWS SES
D. AWS SMS

Answer: B

QUESTION 368
A user wants to make so that whenever the CPU utilization of the AWS EC2 instance is above 90%, the redlight of his bedroom turns on. Which of the below mentioned AWS services is helpful for this purpose?

A. AWS CloudWatch + AWS SES
B. AWS CloudWatch + AWS SNS
C. It is not possible to configure the light with the AWS infrastructure services
D. AWS CloudWatch and a dedicated software turning on the light

Answer: B

QUESTION 369
Where should the appspec.yml file be placed in order for AWS CodeDeploy to work?

A. In the root of the application source code directory structure
B. In the bin folder along with all the complied code
C. In an S3 bucket
D. In the same folder as the application configuration files

Answer: A
Explanation:
https://docs.aws.amazon.com/codedeploy/latest/userguide/reference-appspec-file.html

QUESTION 370
An existing serverless application processes uploaded image files. The process currently uses a single Lambda function that takes an image file, performs the processing, and stores the file in Amazon S3. Users of the application now require thumbnail generation of the images. Users want to avoid any impact to the time it takes to perform the image uploads.

How can thumbnail generation be added to the application, meeting user requirements while minimizing changes to existing code?

A. Change the existing Lambda function handling the uploads to create thumbnails at the time of upload.
Have the function store both the image and thumbnail in Amazon S3.
B. Create a second Lambda function that handles thumbnail generation and storage. Change the existing Lambda function to invoke it asynchronously.

C. Create an S3 event notification with a Lambda function destination. Create a new Lambda function to generate and store thumbnails.
D. Create an S3 event notification to an SQS Queue. Create a scheduled Lambda function that processes the queue, and generates and stores thumbnails.

Answer: C
Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/with-s3-example.html

QUESTION 371
A Developer must re-implement the business logic for an order fulfilment system. The business logic has to make requests to multiple vendors to decide where to purchase an item. The whole process can take up to a week to complete.

What is the MOST efficient and SIMPLEST way to implement a system that meets these requirements?

A. Use AWS Step Functions to execute parallel Lambda functions, and join the results.
B. Create an AWS SQS for each vendor, poll the queue from a worker instance, and joint the results.
C. Use AWS Lambda to asynchronously call a Lambda function for each vendor, and join the results.
D. Use Amazon CloudWatch Events to orchestrate the Lambda functions.

Answer: A
Explanation:
https://aws.amazon.com/step-functions/

QUESTION 372
A customer wants to deploy its source code on an AWS Elastic Beanstalk environment. The customer needs to perform deployment with minimal outage and should only use existing instances to retain application access log.

What deployment policy would satisfy these requirements?

A. Rolling
B. All at once
C. Rolling with an additional batch
D. Immutable

Answer: A

QUESTION 373
A Developer has been asked to build a real-time dashboard web application to visualize the key prefixes and storage size of objects in Amazon S3 buckets. Amazon DynamoDB will be used to store the Amazon S3 metadata.

What is the optimal and MOST cost-effective design to ensure that the real-time dashboard is kept up to date with the state of the objects in the Amazon S3 buckets?

A. Use an Amazon CloudWatch event backed by an AWS Lambda function. Issue an Amazon S3

API call to get a list of all Amazon S3 objects and persist the metadata within DynamoDB. Have the web application poll the DynamoDB table to reflect this change.

B. Use Amazon S3 Event Notification backed by a Lambda function to persist the metadata into DynamoDB. Have the web application poll the DynamoDB table to reflect this change.
C. Run a cron job within an Amazon EC2 instance to list all objects within Amazon S3 and persist the metadata into DynamoDB. Have the web application poll the DynamoDB table to reflect this change.
D. Create a new Amazon EMR cluster to get all the metadata about Amazon S3 objects; persist the metadata into DynamoDB. Have the web application poll the DynamoDB table to reflect this change.

Answer: B
Explanation:
Cloudwatch notifications are at best every minute at extra cost. Lambda off an S3 notification will provide real-time data and lambda is the most cost effective processing method.

QUESTION 374
A Developer must repeatedly and consistently deploy a serverless RESTful API on AWS.

Which techniques will work? (Choose two.)

A. Define a Swagger file. Use AWS Elastic Beanstalk to deploy the Swagger file.
B. Define a Swagger file. Use AWS CodeDeploy to deploy the Swagger file.
C. Deploy a SAM template with an inline Swagger definition.
D. Define a Swagger file. Deploy a SAM template that references the Swagger file.
E. Define an inline Swagger definition in a Lambda function. Invoke the Lambda function.

Answer: CD
Explanation:
https://scratchpad.blog/serverless/howto/configure-aws-api-gateway-with-swagger/
https://sookocheff.com/post/api/deploying-swagger-to-api-gateway/

QUESTION 375
A set of APIs are exposed to customers using the Amazon API Gateway. These APIs have caching enabled on the API Gateway. Customers have asked for an option to invalidate this cache for each of the APIs.

What action can be taken to allow API customers to invalidate the API Cache?

A. Ask customers to use AWS credentials to call the InvalidateCache API.
B. Ask customers to invoke an AWS API endpoint which invalidates the cache.
C. Ask customers to pass an HTTP header called Cache-Control:max-age=0.
D. Ask customers to add a query string parameter called "INVALIDATE_CACHE" when making an API call.

Answer: C
Explanation:
https://docs.aws.amazon.com/apigateway/latest/developerguide/api-gateway-caching.html
Invalidate an API Gateway Cache Entry
A client of your API can invalidate an existing cache entry and reload it from the integration endpoint for individual requests. The client must send a request that contains the Cache-Control: max-age=0 header. The client receives the response directly from the integration endpoint

instead of the cache, provided that the client is authorized to do so. This replaces the existing cache entry with the new response, which is fetched from the integration endpoint.
To grant permission for a client, attach a policy of the following format to an IAM execution role for the user.

QUESTION 376
A Developer uses AWS CodeDeploy to automate application deployment that connects to an external MySQL database. The Developer wants to securely access the encrypted secrets, such as API keys and database passwords.

Which of the following solutions would involve the LEAST administrative effort?

A. Save the secrets in Amazon S3 with AWS KMS server-side encryption, and use a signed URL to access them by using the IAM role from Amazon EC2 instances.
B. Use the instance metadata to store the secrets and to programmatically access the secrets from EC2 instances.
C. Use the Amazon DynamoDB client-side encryption library to save the secrets in DynamoDB and to programmatically access the secrets from EC2 instances.
D. Use AWS SSM Parameter Store to store the secrets and to programmatically access them by using the IAM role from EC2 instances.

Answer: D
Explanation:
https://docs.aws.amazon.com/systems-manager/latest/userguide/systems-manager-parameter-store.html

QUESTION 377
An application running on EC2 instances is storing data in an S3 bucket. Security policy mandates that all data must be encrypted in transit.

How can the Developer ensure that all traffic to the S3 bucket is encrypted?

A. Install certificates on the EC2 instances.
B. Create a bucket policy that allows traffic where SecureTransport is true.
C. Create an HTTPS redirect on the EC2 instances.
D. Create a bucket policy that denies traffic where SecureTransport is false.

Answer: D
Explanation:
https://aws.amazon.com/blogs/security/how-to-use-bucket-policies-and-apply-defense-in-depth-to-help-secure-your-amazon-s3-data/

QUESTION 378
A company is developing a new online game that will run on top of Amazon ECS. Four distinct Amazon ECS services will be part of the architecture, each requiring specific permissions to various AWS services. The company wants to optimize the use of the underlying Amazon EC2 instances by bin packing the containers based on memory reservation.

Which configuration would allow the Development team to meet these requirements MOST securely?

A. Create a new Identity and Access Management (IAM) instance profile containing the required permissions for the various ECS services, then associate that instance role with the underlying EC2 instances.
B. Create four distinct IAM roles, each containing the required permissions for the associated ECS service, then configure each ECS service to reference the associated IAM role.
C. Create four distinct IAM roles, each containing the required permissions for the associated ECS service, then, create an IAM group and configure the ECS cluster to reference that group.
D. Create four distinct IAM roles, each containing the required permissions for the associated ECS service, then configure each ECS task definition to referene the associated IAM role.

Answer: D
Explanation:
https://aws.amazon.com/blogs/compute/help-secure-container-enabled-applications-with-iam-roles-for-ecs-tasks/

QUESTION 379
A company needs to encrypt data at rest, but it wants to leverage an AWS managed service using its own master key.

Which of the following AWS service can be used to meet these requirements?

A. SSE with Amazon S3
B. SSE with AWS KMS
C. Client-side encryption
D. AWS IAM roles and policies

Answer: B
Explanation:
SSE-S3 requires that Amazon S3 manage the data and master encryption keys. For more information about SSE-S3, see Protecting Data Using Server-Side Encryption with Amazon S3-Managed Encryption Keys (SSE-S3).
SSE-C requires that you manage the encryption key. For more information about SSE-C, see Protecting Data Using Server-Side Encryption with Customer-Provided Encryption Keys (SSE-C).
SSE-KMS requires that AWS manage the data key but you manage the customer master key in AWS KMS.

QUESTION 380
When a Developer tries to run an AWS CodeBuild project, it raises an error because the length of all environment variables exceeds the limit for the combined maximum of characters.

What is the recommended solution?

A. Add the export LC_ALL="en_US.utf8" command to the pre_build section to ensure POSIX localization.
B. Use Amazon Cognito to store key-value pairs for large numbers of environment variables.
C. Update the settings for the build project to use an Amazon S3 bucket for large numbers of environment variables.
D. Use AWS Systems Manager Parameter Store to store large numbers of environment variables.

Answer: D

QUESTION 381
A Lambda function is packaged for deployment to multiple environments, including development, test, production, etc. Each environment has unique set of resources such as databases, etc.

How can the Lambda function use the resources for the current environment?

A. Apply tags to the Lambda functions.
B. Hardcore resources in the source code.
C. Use environment variables for the Lambda functions.
D. Use separate function for development and production.

Answer: C

QUESTION 382
The Developer for a retail company must integrate a fraud detection solution into the order processing solution. The fraud detection solution takes between ten and thirty minutes to verify an order. At peak, the web site can receive one hundred orders per minute.

What is the most scalable method to add the fraud detection solution to the order processing pipeline?

A. Add all new orders to an Amazon SQS queue. Configure a fleet of 10 EC2 instances spanning multiple AZs with the fraud detection solution installed on them to pull orders from this queue. Update the order with a pass or fails status.
B. Add all new orders to an SQS queue. Configure an Auto Scaling group that uses the queue depth metric as its unit of scale to launch a dynamically-sized fleet of EC2 instances spanning multiple AZs with the fraud detection solution installed on them to pull orders from this queue. Update the order with a pass or fails status.
C. Add all new orders to an Amazon Kinesis Stream. Subscribe a Lambda function to automatically read batches of records from the Kinesis Stream. The Lambda function includes the fraud detection software and will update the order with a pass or fail status.
D. Write all new orders to Amazon DynamoDB. Configure DynamoDB Streams to include all new orders.
Subscribe a Lambda function to automatically read batches of records from the Kinesis Stream. The Lambda function includes the fraud detection software and will update the order with a pass or fail status.

Answer: B

QUESTION 383
A Developer is creating a mobile application with a limited budget. The solution requires a scalable service that will enable customers to sign up and authenticate into the mobile application while using the organization's current SAML 2.0 identity provider.

Which AWS service should be used to meet these requirements?

A. AWS Lambda
B. Amazon Cognito
C. AWS IAM
D. Amazon EC2

Answer: B

QUESTION 384
An application is real-time processing millions of events that are received through an API.

What service could be used to allow multiple consumers to process the data concurrently and MOST cost- effectively?

A. Amazon SNS with fanout to an SQS queue for each application
B. Amazon SNS with fanout to an SQS FIFO (first-in, firtst-out) queue for each application
C. Amazon Kinesis Firehouse
D. Amazon Kinesis Streams

Answer: D

QUESTION 385
A Developer needs to use AWS X-Ray to monitor an application that is deployed on EC2 instances.

What steps have to be executed to perform the monitoring?

A. Deploy the X-Ray SDK with the application and use X-Ray annotation.
B. Install the X-Ray daemon and instrument the application code.
C. Install the X-Ray daemon and configure it to forward data to Amazon CloudWatch Events.
D. Deploy the X-Ray SDK with the application and instrument the application code.

Answer: B

QUESTION 386
A Developer will be using the AWS CLI on a local development server to manage AWS services.

What can be done to ensure that the CLI uses the Developer's IAM permissions when making commands?

A. Specify the Developer's IAM access key ID and secret access key as parameters for each CLI command.
B. Run the aws configure CLI command, and provide the Developer's IAM access key ID and secret access key.
C. Specify the Developer's IAM user name and password as parameters for each CLI command.
D. Use the Developer's IAM role when making the CLI command.

Answer: B
Explanation:
https://medium.com/faun/setting-up-a-production-environment-using-our-local-development-server-and-aws-f5eea3b5be60

QUESTION 387
After installing the AWS CLI, a Developer tries to run the command aws configure but receives the following error:

Error: aws: command not found

What is the most likely cause of this error?

A. The aws executable is not in the PATH environment variable.
B. Access to the aws executable has been denied to the installer.
C. Incorrect AWS credentials were provided.
D. The aws script does not have an executable file mode.

Answer: A
Explanation:
https://docs.aws.amazon.com/cli/latest/userguide/cli-chap-troubleshooting.html

QUESTION 388
An on-premises legacy application is caching data files locally and writing shared images to local disks.

What is necessary to allow for horizontal scaling when migrating the application to AWS?

A. Modify the application to have both shared images and caching data written to Amazon EBS.
B. Modify the application to read and write cache data on Amazon S3, and also store shared images on S3.
C. Modify the application to use Amazon S3 for serving shared images; cache data can then be written to local disks.
D. Modify the application to read and write cache data on Amazon S3, while continuing to write shared images to local disks.

Answer: C

QUESTION 389
A Developer must trigger an AWS Lambda function based on the item lifecycle activity in an Amazon DynamoDB table.

How can the Developer create the solution?

A. Enable a DynamoDB stream that publishes an Amazon SNS message. Trigger the Lambda function synchronously from the SNS message.
B. Enable a DynamoDB stream that publishes an SNS message. Trigger the Lambda function asynchronously from the SNS message.
C. Enable a DynamoDB stream, and trigger the Lambda function synchronously from the stream.
D. Enable a DynamoDB stream, and trigger the Lambda function asynchronously from the stream.

Answer: C
Explanation:
https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Streams.Lambda.html
https://docs.aws.amazon.com/lambda/latest/dg/with-ddb.html

QUESTION 390
A gaming company is developing a mobile game application for iOS?and Android?platforms. This mobile game securely stores user data locally on the device. The company wants to allow users to use multiple device for the game, which requires user data synchronization across device.

Which service should be used to synchronize user data across devices without the need to create a backend application?

A. AWS Lambda
B. Amazon S3
C. Amazon DynamoDB
D. Amazon Cognito

Answer: D

QUESTION 391
An on-premises application is implemented using a Linux, Apache, MySQL and PHP (LAMP) stack. The Developer wants to run this application in AWS.

Which of the following sets of AWS services can be used to run this stack?

A. Amazon API Gateway, Amazon S3
B. AWS Lambda, Amazon DynamoDB
C. Amazon EC2, Amazon Aurora
D. Amazon Cognito, Amazon RDS
E. Amazon ECS, Amazon EBS

Answer: C

QUESTION 392
An application displays a status dashboard. The status is updated by 1 KB messages from an SQS queue. Although the status changes infrequently, the Developer must minimize the time between the message arrival in the queue and the dashboard update.
What technique provides the shortest delay in updating the dashboard?

A. Retrieve the messages from the queue using long polling every 20 seconds.
B. Reduce the size of the messages by compressing them before sending.
C. Retrieve the messages from the queue using short polling every 10 seconds.
D. Reduce the size of each message payload by sending it in two parts.

Answer: A
Explanation:
https://docs.aws.amazon.com/ko_kr/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-short-and-long-polling.html#sqs-short-long-polling-differences

QUESTION 393
A company is using AWS CodePipeline to deliver one of its applications. The delivery pipeline is triggered by changes to the master branch of an AWS CodeCommit repository and uses AWS CodeBuild to implement the test and build stages of the process and AWS CodeDeploy to deploy the application.

The pipeline has been operating successfully for several months and there have been no modifications. Following a recent change to the application's source code, AWS CodeDeploy has not deployed the updates application as expected.

What are the possible causes? (Choose two.)

A. The change was not made in the master branch of the AWS CodeCommit repository.
B. One of the earlier stages in the pipeline failed and the pipeline has terminated.
C. One of the Amazon EC2 instances in the company's AWS CodePipeline cluster is inactive.
D. The AWS CodePipeline is incorrectly configured and is not executing AWS CodeDeploy.
E. AWS CodePipeline does not have permissions to access AWS CodeCommit.

Answer: AB

QUESTION 394
A social media company is using Amazon Cognito in order to synchronize profiles across different mobile devices, to enable end users to have a seamless experience.

Which of the following configurations can be used to silently notify users whenever an update is available on all other devices?

A. Modify the user pool to include all the devices which keep them in sync.
B. Use the SyncCallback interface to receive notifications on the application.
C. Use an Amazon Cognito stream to analyze the data and push the notifications.
D. Use the push synchronization feature with the appropriate IAM role.

Answer: D
Explanation:
https://docs.aws.amazon.com/cognito/latest/developerguide/push-sync.html

QUESTION 395
A website's page load times are gradually increasing as more users access the system at the same time. Analysis indicates that a user profile is being loaded from a database in all the web pages being visited by each user and this is increasing the database load and the page load latency. To address this issue the Developer decides to cache the user profile data.

Which caching strategy will address this situation MOST efficiently?

A. Create a new Amazon EC2 Instance and run a NoSQL database on it. Cache the profile data within this database using the write-through caching strategy.
B. Create an Amazon ElastiCache cluster to cache the user profile data. Use a cache-aside caching strategy.
C. Use a dedicated Amazon RDS instance for caching profile data. Use a write-through caching strategy.
D. Create an ElastiCache cluster to cache the user profile data. Use a write-through caching strategy.

Answer: B
Explanation:
https://docs.aws.amazon.com/AmazonElastiCache/latest/mem-ug/Strategies.html

QUESTION 396
An application needs to use the IP address of the client in its processing. The application has been moved into AWS and has been placed behind an Application Load Balancer (ALB). However, all the client IP addresses now appear to be the same. The application must maintain the ability to scale horizontally.

Based on this scenario, what is the MOST cost-effective solution to this problem?

A. Remove the application from the ALB. Delete the ALB and change Amazon Route 53 to direct traffic to the instance running the application.
B. Remove the application from the ALB. Create a Classic Load Balancer in its place. Direct traffic to the application using the HTTP protocol.
C. Alter the application code to inspect the X-Forwarded-For header. Ensure that the code can work properly if a list of IP addresses is passed in the header.
D. Alter the application code to inspect a custom header. Alter the client code to pass the IP address in the custom header.

Answer: C

QUESTION 397
A development team is using AWS Elastic Beanstalk to deploy a two-tier application that consists of a load-balanced web tier and an Amazon RDS database tier in production. The team would like to separate the RDS instance from the Elastic Beanstalk.

How can this be accomplished?

A. Use the Elastic Beanstalk CLI to disassociate the database.
B. Use the AWS CLI to disassociate the database.
C. Change the deployment policy to disassociate the database.
D. Recreate a new Elastic Beanstalk environment without Amazon RDS.

Answer: D
Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/decouple-rds-from-beanstalk/

QUESTION 398
According to best practice, how should access keys be managed in AWS? (Choose two.)

A. Use the same access key in all applications for consistency.
B. Delete all access keys for the account root user.
C. Leave unused access keys in the account for tracking purposes.
D. Embed and encrypt access keys in code for continuous deployment.
E. Use Amazon IAM roles instead of access keys where possible.

Answer: BE

QUESTION 399
The development team is working on an API that will be served from Amazon API gateway. The API will be served from three environments: development, test, and production. The API Gateway is configured to use 237 GB of cache in all three stages.

Which is the MOST cost-efficient deployment strategy?

A. Create a single API Gateway with all three stages.
B. Create three API Gateways, one for each stage in a single AWS account.

C. Create an API Gateway in three separate AWS accounts.
D. Enable the cache for development and test environments only when needed.

Answer: D

QUESTION 400
An application running on an Amazon Linux EC2 instance needs to manage the AWS infrastructure.

How can the EC2 instance be configured to make AWS API calls securely?

A. Sign the AWS CLI command using the signature version 4 process.
B. Run the aws configure AWS CLI command and specify the access key id and secret access key.
C. Specify a role for the EC2 instance with the necessary privileges.
D. Pass the access key id and secret access key as parameters for each AWS CLI command.

Answer: C

QUESTION 401
A company is migrating from a monolithic architecture to a microservices-based architecture. The Developers need to refactor the application so that the many microservices can asynchronously communicate with each other without impacting performance.

Use of which managed AWS services will enable asynchronous message passing? (Choose two.)

A. Amazon SQS
B. Amazon Cognito
C. Amazon Kinesis
D. Amazon SNS
E. Amazon ElastiCache

Answer: AD

QUESTION 402
An application runs on multiple EC2 instances behind an ELB.

Where is the session data best written so that it can be served reliably across multiple requests?

A. Write data to Amazon ElastiCache
B. Write data to Amazon Elastic Block Store.
C. Write data to Amazon EC2 Instance Store.
D. Write data to the root filesystem.

Answer: A

QUESTION 403
A Developer is creating a Lambda function that will generate and export a file. The function requires 100 MB of temporary storage for temporary files while executing. These files will not be

needed after the function is complete.

How can the Developer MOST efficiently handle the temporary files?

A. Store the files in EBS and delete the files at the end of the Lambda function.
B. Copy the files to EFS and delete the files at the end of the Lambda function.
C. Store the files in the /tmp directory and delete the files at the end of the Lambda function.
D. Copy the files to an S3 bucket with a lifecycle policy to delete the files.

Answer: C

QUESTION 404
A Developer has developed a web application and wants to deploy it quickly on a Tomcat server on AWS. The Developer wants to avoid having to manage the underlying infrastructure.

What is the easiest way to deploy the application, based on these requirements?

A. AWS CloudFormation
B. AWS Elastic Beanstalk
C. Amazon S3
D. AWS CodePipeline

Answer: B

QUESTION 405
An application uses Lambda functions to extract metadata from files uploaded to an S3 bucket; the metadata is stored in Amazon DynamoDB. The application starts behaving unexpectedly, and the Developer wants to examine the logs of the Lambda function code for errors.

Based on this system configuration, where would the Developer find the logs?

A. Amazon S3
B. AWS CloudTrail
C. Amazon CloudWatch
D. Amazon DynamoDB

Answer: C

QUESTION 406
An organization is using Amazon CloudFront to ensure that its users experience low-latency access to its web application. The organization has identified a need to encrypt all traffic between users and CloudFront, and all traffic between CloudFront and the web application.

How can these requirements be met? (Choose two.)

A. Use AWS KMS to encrypt traffic between CloudFront and the web application.
B. Set the Origin Protocol Policy to "HTTPS Only".
C. Set the Origin's HTTP Port to 443.
D. Set the Viewer Protocol Policy to "HTTPS Only" or "Redirect HTTP to HTTPS".
E. Enable the CloudFront option Restrict Viewer Access.

Answer: BD

QUESTION 407
An application is using Amazon DynamoDB as its data store, and should be able to read 100 items per second as strongly consistent reads. Each item is 5 KB in size.

To what value should the table's provisioned read throughput be set?

A. 50 read capacity units
B. 100 read capacity units
C. 200 read capacity units
D. 500 read capacity units

Answer: C

QUESTION 408
A web application is designed to allow new users to create accounts using their email addresses. The application will store attributes for each user, and is expecting millions of user to sign up.

What should the Developer implement to achieve the design goals?

A. Amazon Cognito user pools
B. AWS Mobile Hub user data storage
C. Amazon Cognito Sync
D. AWS Mobile Hub cloud logic

Answer: A

QUESTION 409
A company needs a new REST API that can return information about the contents of an Amazon S3 bucket, such as a count of the objects stored in it. The company has decided that the new API should be written as a microservice using AWS Lambda and Amazon API Gateway.

How should the Developer ensure that the microservice has the necessary access to the Amazon S3 bucket, while adhering to security best practices?

A. Create an IAM user that has permissions to access the Amazon S3 bucket, and store the IAM user credentials in the Lambda function source code.
B. Create an IAM role that has permissions to access the Amazon S3 bucket and assign it to the Lambda function as its execution role.
C. Create an Amazon S3 bucket policy that specifies the Lambda service as its principal and assign it to the Amazon S3 bucket.
D. Create an IAM role, attach the AmazonS3FullAccess managed policy to it, and assign the role to the Lambda function as its execution role.

Answer: C

QUESTION 410
An application is running on an EC2 instance. The Developer wants to store an application metric

in Amazon CloudWatch.

What is the best practice for implementing this requirement?

A. Use the PUT Object API call to send data to an S3 bucket. Use an event notification to invoke a Lambda function to publish data to CloudWatch.
B. Publish the metric data to an Amazon Kinesis Stream using a PutRecord API call. Subscribe a Lambda function that publishes data to CloudWatch.
C. Use the CloudWatch PutMetricData API call to submit a custom metric to CloudWatch. Provide the required credentials to enable the API call.
D. Use the CloudWatch PutMetricData API call to submit a custom metric to CloudWatch. Launch the EC2 instance with the required IAM role to enable the API call.

Answer: D

QUESTION 411
Queries to an Amazon DynamoDB table are consuming a large amount of read capacity. The table has a significant number of large attributes. The application does not need all of the attribute data.

How can DynamoDB costs be minimized while maximizing application performance?

A. Batch all the writes, and perform the write operations when no or few reads are being performed.
B. Create a global secondary index with a minimum set of projected attributes.
C. Implement exponential backoffs in the application.
D. Load balance the reads to the table using an Application Load Balancer.

Answer: C

QUESTION 412
AWS CodeBuild builds code for an application, creates the Docker image, pushes the image to Amazon Elastic Container Registry (Amazon ECR), and tags the image with a unique identifier.

If the Developers already have AWS CLI configured on their workstations, how can the Docker images be pulled to the workstations?

A. Run the following:
docker pull REPOSITORY URI : TAG
B. Run the output of the following:
aws ecr get-login
and then run:
docker pull REPOSITORY URI : TAG
C. Run the following:
aws ecr get-login
and then run:
docker pull REPOSITORY URI : TAG
D. Run the output of the following:
aws ecr get-download-url-for-layer
and then run:
docker pull REPOSITORY URI : TAG

Answer: B

QUESTION 413
A company caches session information for a web application in an Amazon DynamoDB table. The company wants an automated way to delete old items from the table.

What is the simplest way to do this?

A. Write a script that deletes old records; schedule the scripts as a cron job on an Amazon EC2 instance.
B. Add an attribute with the expiration time; enable the Time To Live feature based on that attribute.
C. Each day, create a new table to hold session data; delete the previous day's table.
D. Add an attribute with the expiration time; name the attribute ItemExpiration.

Answer: B

QUESTION 414
An application is expected to process many files. Each file takes four minutes to process each AWS Lambda invocation. The Lambda function does not return any important data.

What is the fastest way to process all the files?

A. First split the files to make them smaller, then process with synchronous RequestResponse Lambda invocations.
B. Make synchronous RequestResponse Lambda invocations and process the files one by one.
C. Make asynchronous Event Lambda invocations and process the files in parallel.
D. First join all the files, then process it all at once with an asynchronous Event Lambda invocation.

Answer: C

QUESTION 415
The upload of a 15 GB object to Amazon S3 fails. The error message reads: "Your proposed upload exceeds the maximum allowed object size."

What technique will allow the Developer to upload this object?

A. Upload the object using the multi-part upload API.
B. Upload the object over an AWS Direct Connect connection.
C. Contact AWS Support to increase the object size limit.
D. Upload the object to another AWS region.

Answer: A

QUESTION 416
A company has an AWS CloudFormation template that is stored as a single file. The template is able to launch and create a full infrastructure stack.
Which best practice would increase the maintainability of the template?

A. Use nested stacks for common template patterns.
B. Embed credentials to prevent typos.

C. Remove mappings to decrease the number of variables.
D. Use AWS::Include to reference publicly-hosted template files.

Answer: A

QUESTION 417
A Developer wants to encrypt new objects that are being uploaded to an Amazon S3 bucket by an application. There must be an audit trail of who has used the key during this process. There should be no change to the performance of the application.

Which type of encryption meets these requirements?

A. Server-side encryption using S3-managed keys
B. Server-side encryption with AWS KMS-managed keys
C. Client-side encryption with a client-side symmetric master key
D. Client-side encryption with AWS KMS-managed keys

Answer: B
Explanation:
https://docs.aws.amazon.com/AmazonS3/latest/dev/serv-side-encryption.html

QUESTION 418
An on-premises application makes repeated calls to store files to Amazon S3. As usage of the application has increased, "LimitExceeded" errors are being logged.

What should be changed to fix this error?

A. Implement exponential backoffs in the application.
B. Load balance the application to multiple servers.
C. Move the application to Amazon EC2.
D. Add a one second delay to each API call.

Answer: A
Explanation:
https://docs.aws.amazon.com/AWSEC2/latest/APIReference/query-api-troubleshooting.html

QUESTION 419
An organization is storing large files in Amazon S3, and is writing a web application to display meta-data about the files to end-users. Based on the metadata a user selects an object to download. The organization needs a mechanism to index the files and provide single-digit millisecond latency retrieval for the metadata.

What AWS service should be used to accomplish this?

A. Amazon DynamoDB
B. Amazon EC2
C. AWS Lambda
D. Amazon RDS

Answer: A

QUESTION 420
While developing an application that runs on Amazon EC2 in an Amazon VPC, a Developer identifies the need for centralized storage of application-level logs.

Which AWS service can be used to securely store these logs?

A. Amazon EC2 VPC Flow Logs
B. Amazon CloudWatch Logs
C. Amazon CloudSearch
D. AWS CloudTrail

Answer: B

QUESTION 421
A stock market monitoring application uses Amazon Kinesis for data ingestion. During simulated tests of peak data rates, the Kinesis stream cannot keep up with the incoming data.

What step will allow Kinesis to accommodate the traffic during peak hours?

A. Install the Kinesis Producer Library (KPL) for ingesting data into the stream.
B. Reduce the data retention period to allow for more data ingestion using . DecreaseStreamRetentionPeriod
C. Increase the shard count of the stream using UpdateShardCount.
D. Ingest multiple records into the stream in a single call using PutRecords.

Answer: C

QUESTION 422
Where can PortMapping be defined when launching containers in Amazon ECS?

A. Security groups
B. Amazon Elastic Container Registry (Amzon ECR)
C. Container agent
D. Task definition

Answer: D

QUESTION 423
An application uses Amazon Kinesis Data Streams to ingest and process large streams of data records in real time. Amazon EC2 instances consume and process the data from the shards of the Kinesis data stream by using Amazon Kinesis Client Library (KCL). The application handles the failure scenarios and does not require standby workers. The application reports that a specific shard is receiving more data than expected. To adapt to the chnages in the rate of data flow, the "hot" shard is resharded.

Assuming that the initial number of shards in the Kinesis data stream is 4, and after resharding the number of shards increased to 6, what is the maximum number of EC2 instances that can be deployed to process data from all the shards?

A. 12

B. 6
C. 4
D. 1

Answer: B
Explanation:
Typically, when you use the KCL, you should ensure that the number of instances does not exceed the number of shards (except for failure standby purposes). Each shard is processed by exactly one KCL worker and has exactly one corresponding record processor, so you never need multiple instances to process one shard. However, one worker can process any number of shards, so it's fine if the number of shards exceeds the number of instances.
https://docs.aws.amazon.com/streams/latest/dev/kinesis-record-processor-scaling.html

QUESTION 424
A Development team is working on a case management solution that allows medical claims to be processed and reviewed. Users log in to provide information related to their medical and financial situations.

As part of the application, sensitive documents such as medical records, medical imaging, bank statements, and receipts are uploaded to Amazon S3. All documents must be securely transmitted and stored. All access to the documents must be recorded for auditing.

What is the MOST secure approach?

A. Use S3 default encryption using Advanced Encryption Standard-256 (AES-256) on the destination bucket.
B. Use Amazon Cognito for authorization and authentication to ensure the security of the application and documents.
C. Use AWS Lambda to encrypt and decrypt objects as they are placed into the S3 bucket.
D. Use client-side encryption/decryption with Amazon S3 and AWS KMS.

Answer: D

QUESTION 425
A company has an internet-facing application that uses Web Identity Federation to obtain a temporary credential from AWS Security Token Service (AWS STS). The app then uses the token to access AWS services.

Review the following response:

```
<AssumeRoleWithWebIdentityResponse xmlns="https://sts.amazonaws.com/doc/2011-06-15/">
  <AssumeRoleWithWebIdentityResult>
    <SubjectFromWebIdentityToken>amzn1.account.AF6RHO7KZU5XRVQJGXK6HB56KR2A</SubjectFromWebIdentit
yToken>
    <Audience>client.5498841531868486423.1548@apps.example.com</Audience>
    <AssumedRoleUser>
      <Arn>arn:aws:sts::123456789012:assumed-role/FederatedWebIdentityRole/app1</Arn>
      <AssumedRoleId>AROACLKWSDQRAOEXAMPLE:app1</AssumedRoleId>
    </AssumedRoleUser>
    <Credentials>
      <SessionToken>AQoDYXdzEE0a8ANXXXXXXXXNO1ewxE5TijQyp+IEXAMPLE</SessionToken>
      <SecretAccessKey>wJalrXUtnFEMI/K7MDENG/bPxRfiCYzEXAMPLEKEY</SecretAccessKey>
      <Expiration>2014-10-24T23:00:23Z</Expiration>
      <AccessKeyId>ASgeIAIOSFODNN7EXAMPLE</AccessKeyId>
    </Credentials>
    <Provider>www.amazon.com</Provider>
  </AssumeRoleWithWebIdentityResult>
  <ResponseMetadata>
    <RequestId>ad4156e9-bce1-11e2-82e6-6b6efEXAMPLE</RequestId>
  </ResponseMetadata>
</AssumeRoleWithWebIdentityResponse>
```

Based on the response displayed what permissions are associated with the call from the application?

A. Permissions associated with the role AROACLKWSDQRAOEXAMPLE:app1
B. Permissions associated with the default role used when the AWS service was built
C. Permission associated with the IAM principal that owns the AccessKeyID ASgeIAIOSFODNN7EXAMPLE
D. Permissions associated with the account that owns the AWS service

Answer: A

QUESTION 426
A Developer is using AWS CLI, but when running list commands on a large number of resources, it is timing out.

What can be done to avoid this time-out?

A. Use pagination
B. Use shorthand syntax
C. Use parameter values
D. Use quoting strings

Answer: A

QUESTION 427
What does an Amazon SQS delay queue accomplish?

A. Messages are hidden for a configurable amount of time when they are first added to the queue.
B. Messages are hidden for a configurable amount of time after they are consumed from the queue.

C. The consumer can poll the queue for a configurable amount of time before retrieving a message.
D. Message cannot be deleted for a configurable amount of time after they are consumed from the queue.

Answer: A

QUESTION 428
A company has multiple Developers located across the globe who are updating code incrementally for a development project. When Developers upload code concurrently, internet connectivity is slow and it is taking a long time to upload code for deployment in AWS Elastic Beanstalk.

Which step will result in minimized upload and deployment time with the LEAST amount of administrative effort?

A. Allow the Developers to upload the code to an Amazon S3 bucket, and deploy it directly to Elastic Beanstalk.
B. Allow the Developers to upload the code to a central FTP server to deploy the application to Elastic Beanstalk.
C. Create an AWS CodeCommit repository, allow the Developers to commit code to it, and then directly deploy the code to Elastic Beanstalk.
D. Create a code repository on an Amazon EC2 instance so that all Developers can update the code, and deploy the application from the instance to Elastic Beanstalk.

Answer: C

QUESTION 429
A company recently migrated its web, application and NoSQL database tiers to AWS. The company is using Auto Scaling to scale the web and application tiers. More than 95 percent of the Amazon DynamoDB requests are repeated read-requests.

How can the DynamoDB NoSQL tier be scaled up to cache these repeated requests?

A. Amazon EMR
B. Amazon DynamoDB Accelerator
C. Amazon SQS
D. Amazon CloudFront

Answer: B

QUESTION 430
A company is building an application to track athlete performance using an Amazon DynamoDB table. Each item in the table is identified by a partition key (user_id) and a sort key (sport_name). The table design is shown below:

Partition Key: `user_id`
Sort Key: `sport_name`
Attributes: `score`
`score_datetime`

(Note: Not all table attributes are shown)

A Developer is asked to write a leaderboard application to display the top performers (user_id) based on the score for each sport_name.

What process will allow the Developer to extract results MOST efficiently from the DynamoDB table?

A. Use a DynamoDB query operation with the key attributes of user_id and sport_name and order the results based on the score attribute.
B. Create a global secondary index with a partition key of sport_name and a sort key of score, and get the results
C. Use a DynamoDB scan operation to retrieve scores and user_id based on sport_name, and order the results based on the score attribute.
D. Create a local secondary index with a primary key of sport_name and a sort key of score and get the results based on the score attribute.

Answer: B
Explanation:
https://docs.aws.amazon.com/zh_cn/amazondynamodb/latest/developerguide/GSI.html

QUESTION 431
A Developer is creating a mobile application that will not require users to log in.

What is the MOST efficient method to grant users access to AWS resources?

A. Use an identity provider to securely authenticate with the application.
B. Create an AWS Lambda function to create an IAM user when a user accesses the application.
C. Create credentials using AWS KMS and apply these credentials to users when using the application.
D. Use Amazon Cognito to associate unauthenticated users with an IAM role that has limited access to resources.

Answer: D
Explanation:
https://docs.aws.amazon.com/cognito/latest/developerguide/iam-roles.html

QUESTION 432
An application running on Amazon EC2 instances must access objects within an Amaon S3 busket that are encrypted using server-side encryption using AWS KMS encryption keys (SSE-KMS). The application must have access to the customer master key (CMK) to decrypt the objects.

Which combination of steps will grant the application access? (Select TWO.)

A. Write an S3 bucket policy that grants the bucket access to the key.
B. Grant access to the key in the IAM EC2 role attached to the application's EC2 instances.
C. Write a key policy that enables IAM policies to grant access to the key.
D. Grant access to the key in the S3 bucket's ACL
E. Create a Systems Manager parameter that exposes the KMS key to the EC2 instances.

Answer: BE
Explanation:
https://docs.aws.amazon.com/kms/latest/developerguide/control-access.html
https://docs.aws.amazon.com/kms/latest/developerguide/key-policies.html

QUESTION 433
A company needs a fully-managed source control service that will work in AWS. The service must ensure that revision control synchronizes multiple distributed repositories by exchanging sets of changes peer-to- peer. All users need to work productively even when not connected to a network.
Which source control service should be used?

A. Subversion
B. AWS CodeBuild
C. AWS CodeCommit
D. AWS CodeStar

Answer: C

QUESTION 434
A Developer is writing a serverless application that requires that an AWS Lambda function be invoked every 10 minutes.

What is an automated and serverless way to trigger the function?

A. Deploy an Amazon EC2 instance based on Linux, and edit its /etc/crontab file by adding a command to periodically invoke the Lambda function.
B. Configure an environment variable named PERIOD for the Lambda function. Set the value to 600.
C. Create an Amazon CloudWatch Events rule that triggers on a regular schedule to invoke the Lambda function.
D. Create an Amazon SNS topic that has a subscription to the Lambda function with a 600-second timer.

Answer: C

QUESTION 435
A Developer is writing an imaging micro service on AWS Lambda. The service is dependent on several libraries that are not available in the Lambda runtime environment.

Which strategy should the Developer follow to create the Lambda deployment package?

A. Create a ZIP file with the source code and all dependent libraries.
B. Create a ZIP file with the source code and a script that installs the dependent libraries at runtime.
C. Create a ZIP file with the source code. Stage the dependent libraries on an Amazon S3 bucket indicated by the Lambda environment variable LD_LIBRARY_PATH
D. Create a ZIP file with the source code and a buildspec.yaml file that installs the dependent libraries on AWS Lambda.

Answer: A
Explanation:

https://docs.aws.amazon.com/lambda/latest/dg/lambda-python-how-to-create-deployment-package.html

QUESTION 436
A Developer is designing a fault-tolerant environment where client sessions will be saved.

How can the Developer ensure that no sessions are lost if an Amazon EC2 instance fails?

A. Use sticky sessions with an Elastic Load Balancer target group.
B. Use Amazon SQS to save session data.
C. Use Amazon DynamoDB to perform scalable session hadling.
D. Use Elastic Load Balancer connection draining to stop sending requests to failing instances.

Answer: C
Explanation:
The key word is fault-tolerant. With sticky sessions the state is maintained on the EC2 instance if that fails state is lost. With DynamoDB the state is independent of EC2 therefore fault-tolerant.

QUESTION 437
In a move toward using microservices, a company's Management team has asked all Development teams to build their services so that API requests depend only on that service's data store. One team is building a Payments service which has its own database; the service needs data that originates in the Accounts database. Both are using Amazon DynamoDB.

What approach will result in the simplest, decoupled, and reliable method to get near-real time updates from the Accounts database?

A. Use Amazon Glue to perform frequent ETL updates from the Accounts database to the Payments database.
B. Use Amazon ElastiCache in Payments, with the cache updated by triggers in the Accounts database.
C. Use Amazon Kinesis Data Firehouse to deliver all changes from the Accounts database to the Payments database.
D. Use Amazon DynamoDB Streams to deliver all changes from the Accounts database to the Payments database.

Answer: D

QUESTION 438
How should custom libraries be utilized in AWS Lambda?

A. Host the library on Amazon S3 and reference to it from the Lambda function.
B. Install the library locally and upload a ZIP file of the Lambda function.
C. Import the necessary Lambda blueprint when creating the function.
D. Modify the function runtime to include the necessary library.

Answer: B
Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/lambda-python-how-to-create-deployment-package.html

QUESTION 439
A company needs to secure its existing website running behind an Elastic Load Balancer. The website's Amazon EC2 instances are CPU-constrained.

What should be done to secure the website while not increasing the CPU load on the EC2 web servers? (Select TWO.)

A. Configure an Elastic Load Balancer with SSL pass-through.
B. Configure SSL certificates on an Elastic Load Balancer.
C. Configure an Elastic Load Balancer with a Loadable Storage System.
D. Install SSL certificates on the EC2 instances.
E. Configure an Elastic Load Balancer with SSL termination.

Answer: BE

QUESTION 440
An AWS Lambda function generates a 3MB JSON file and then uploads it to an Amazon S3 bucket daily. The file contains sensitive information, so the Developer must ensure that it is encrypted before uploading to the bucket.

Which of the following modifications should the Developer make to ensure that the data is encrypted before uploading it to the bucket?

A. Use the default AWS KMS customer master key for S3 in the Lambda function code.
B. Use the S3 managed key and call the GenerateDataKey API to encrypt the file.
C. Use the GenerateDateKey API, then use that data key to encrypt the file in the Lambda function code.
D. Use a custom KMS customer master key created for S3 in the Lambda function code.

Answer: C

QUESTION 441
A Developer wants to find a list of items in a global secondary index from an Amazon DynamoDB table. Which DynamoDB API call can the Developer use in order to consume the LEAST number of read capacity units?

A. Scan operation using eventually-consistent reads
B. Query operation using strongly-consistent reads
C. Query operation using eventually-consistent reads
D. Scan operation using strongly-consistent reads

Answer: C
Explanation:
https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/bp-query-scan.html

QUESTION 442
A Developer has published an update to an application that is served to a global user base using Amazon CloudFront. After deploying the application, users are not able to see the updated changes.

How can the Developer resolve this issue?

A. Remove the origin from the CloudFront configuration and add it again.
B. Disable forwarding of query strings and request headers from the CloudFront distribution configuration.
C. Invalidate all the application objects from the edge caches.
D. Disable the CloudFront distribution and enable it again to update all the edge locations.

Answer: C
Explanation:
At a cost AWS can invalidate the CloudFront caches to clear the old data. Better solution would be to reduce the TTL to 0 on CloudFront.

QUESTION 443
A Developer must deploy a new AWS Lambda function using an AWS CloudFormation template.

Which procedures will deploy a Lambda function? (Select TWO.)

A. Upload the code to an AWS CodeCommit repository, then add a reference to it in an resource in the template.
AWS::Lambda::Function
B. Create an AWS::Lambda::Function resource in the template, then write the code directly inside the CloudFormation template.
C. Upload a .ZIP file containing the function code to Amazon S3, then add a reference to it in an resource in the template.
AWS::Lambda::Function
D. Upload a .ZIP file to AWS CloudFormation containing the function code, then add a reference to it in an AWS::Lambda::Function resource in the template.
E. Upload the function code to a private Git repository, then add a reference to it in an resource in the template.
AWS::Lambda::Function

Answer: BC
Explanation:
https://aws.amazon.com/blogs/infrastructure-and-automation/deploying-aws-lambda-functions-using-aws-cloudformation-the-portable-way/

QUESTION 444
A Developer wants to enable AWS X-Ray for a secure application that runs in an Amazon ECS environment.

What combination of steps will enable X-Ray? (Select THREE.)

A. Create a Docker image that runs the X-Ray daemon.
B. Add instrumentation to the application code for X-Ray.
C. Install the X-Ray daemon on the underlying EC2 instance.
D. Configure and use an IAM EC2 instance role.
E. Register the application with X-Ray.
F. Configure and use an IAM role for tasks.

Answer: ABF

Explanation:
https://docs.aws.amazon.com/xray/latest/devguide/xray-daemon-ecs.html
X-ray SDK needs to integrate with the application and X-Ray will need a role to write out data.

QUESTION 445
A Developer is designing a new application that uses Amazon S3. To satisfy compliance requirements, the Developer must encrypt the data at rest.

How can the Developer accomplish this?

A. Use s3:x-amz-acl as a condition in the S3 bucket policy.
B. Use Amazon RDS with default encryption.
C. Use aws:SecureTransport as a condition in the S3 bucket policy.
D. Turn on S3 default encryption for the S3 bucket.

Answer: D

QUESTION 446
An AWS Elastic Beanstalk application needs to be deployed in multiple regions and requires a different Amazon Machine Image (AMI) in each region.

Which AWS CloudFormation template key can be used to specify the correct AMI for each region?

A. Parameters
B. Outputs
C. Mappings
D. Resources

Answer: C

QUESTION 447
A Developer has been asked to make changes to the source code of an AWS Lambda function. The function is managed using an AWS CloudFormation template. The template is configured to load the source code from an Amazon S3 bucket. The Developer manually created a .ZIP file deployment package containing the changes and put the file into the correct location on Amazon S3. When the function is invoked, the code changes have not been applied.

What step is required to update the function with the changes?

A. Delete the .ZIP file on S3, and re-upload by using a different object key name.
B. Update the CloudFormation stack with the correct values for the function code properties S3Bucket, S3Key, or S3ObjectVersion.
C. Ensure that the function source code is base64-encoded before uploading the deployment package to S3.
D. Modify the execution role of the Lambda function to allow S3 access permission to the deployment package .ZIP file.

Answer: B
Explanation:

Changes to a deployment package in Amazon S3 are not detected automatically during stack updates. To update the function code, change the object key or version in the template.
https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-properties-lambda-function-code.html

QUESTION 448
A Developer needs to design an application running on AWS that will be used to consume Amazon SQS messages that range from 1 KB up to 1GB in size.

How should the Amazon SQS messages be managed?

A. Use Amazon S3 and the Amazon SQS CLI.
B. Use Amazon S3 and the Amazon SQS Extended Client Library for Java.
C. Use Amazon EBS and the Amazon SQS CLI.
D. Use Amazon EFS and the Amazon SQS CLI.

Answer: B
Explanation:
https://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-limits.html

QUESTION 449
A company is developing an application that will run on several Amazon EC2 instances in an Auto Scaling group and can access a database running on Amazon EC2. The application needs to store secrets required to connect to the database. The application must allow for periodic secret rotation, and there should be no changes to the application when a secret changes.

What is the SAFEST way to meet these requirements?

A. Associate an IAM role to the EC2 instance where the application is running with permission to access the database.
B. Use AWS Systems Manager Parameter Store with the SecureString data type to store secrets.
C. Configure the application to store secrets in Amazon S3 object metadata.
D. Hard code the database secrets in the application code itself.

Answer: A

QUESTION 450
A Developer writes an AWS Lambda function and uploads the code in a .ZIP file to Amazon S3. The Developer makes changes to the code and uploads a new .ZIP file to Amazon S3. However, Lambda executes the earlier code.

How can the Developer fix this in the LEAST disruptive way?

A. Create another Lambda function and specify the new .ZIP file.
B. Call the update-function-code API.
C. Remove the earlier .ZIP file first, then add the new .ZIP file.
D. Call the create-alias API.

Answer: B

QUESTION 451
An AWS Lambda function must read data from an Amazon RDS MySQL database in a VPC and also reach a public endpoint over the internet to get additional data.

Which steps must be taken to allow the function to access both the RDS resource and the public endpoint? (Select TWO.)

A. Modify the default configuration for the Lambda function to associate it with an Amazon VPC private subnet.
B. Modify the default network access control list to allow outbound traffic.
C. Add a NAT Gateway to the VPC.
D. Modify the default configuration of the Lambda function to associate it with a VPC public subnet.
E. Add an environmental variable to the Lambda function to allow outbound internet access.

Answer: AC

QUESTION 452
A Developer must build an application that uses Amazon DynamoDB. The requirements state that items being stored in the DynamoDB table will be 7KB in size and that reads must be strongly consistent. The maximum read rate is 3 items per second, and the maximum write rate is 10 items per second.

How should the Developer size the DynamoDB table to meet these requirements?

A. Read: 3 read capacity units
Write: 70 write capacity units
B. Read: 6 read capacity units
Write: 70 write capacity units
C. Read: 6 read capacity units
Write: 10 write capacity units
D. Read: 3 read capacity units
Write: 10 write capacity units

Answer: B

QUESTION 453
A Developer is creating an AWS Lambda function to process a stream of data from an Amazon Kinesis Data Stream. When the Lambda function parses the data and encounters a missing field, it exits the function with an error. The function is generating duplicate records from the Kinesis stream. When the Developer looks at the stream output without the Lambda function, there are no duplicate records.

What is the reason for the duplicates?

A. The Lambda function did not advance the Kinesis stream pointer to the next record after the error.
B. The Lambda event source used asynchronous invocation, resulting in duplicate records.
C. The Lambda function did not handle the error, and the Lambda service attempted to reprocess the data.
D. The Lambda function is not keeping up with the amount of data coming from the stream.

Answer: A

QUESTION 454
A company maintains an application responsible for processing several thousand external callbacks each day. The company's System administrators want to know how many callbacks are being received on a rolling basis, and they want this data available for 10 days.

The company also wants the ability to issue automated alerts if the number of callbacks exceeds the defined thresholds.

What is the MOST cost-effective way to address the need to track and alert on these statistics?

A. Push callback data to an Amazon RDS database that can be queried to show historical data and to alert on exceeded thresholds.
B. Push callback data to AWS X-Ray and use AWS Lambda to query, display, and alert on exceeded thresholds.
C. Push callback data to Amazon Kinesis Data Streams and invoke an AWS Lambda function that stores data in Amazon DynamoDB and sends the required alerts.
D. Push callback data to Amazon CloudWatch as a custom metric and use the CloudWatch alerting mechanisms to alert System Administrators.

Answer: D
Explanation:
https://docs.aws.amazon.com/AmazonCloudWatch/latest/events/LogAPICall.html

QUESTION 455
A company has a website that is developed in PHP and WordPress and is launched using AWS Elastic Beanstalk. There is a new version of the website that needs to be deployed in the Elastic Beanstalk environment. The company cannot tolerate having the website offline if an update fails. Deployments must have minimal impact and rollback as soon as possible.

What deployment method should be used?

A. All at once
B. Rolling
C. Snapshots
D. Immutable

Answer: D
Explanation:
https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/environmentmgmt-updates-immutable.html

QUESTION 456
A company has a multi-tiered web application on AWS. During a recent spike in traffic, one of the primary relational databases on Amazon RDS could not serve all the traffic. Some read queries for repeatedly accessed items failed, so users received error messages.

What can be done to minimize the impact on database read queries MOST efficiently during future traffic spikes?

A. Use Amazon S3 to cache database query results.

B. Use Amazon RDS as a custom origin for Amazon CloudFront.
C. Use local storage and memory on Amazon EC2 instances to cache data.
D. Use Amazon ElastiCache in front of the primary database to cache data.

Answer: D

QUESTION 457
A Development team currently supports an application that uses an in-memory store to save accumulated game results. Individual results are stored in a database. As part of migrating to AWS, the team needs to use automatic scaling. The team knows this will yield inconsistent results.

Where should the team store these accumulated game results to BEST allow for consistent results without impacting performance?

A. Amazon S3
B. Amazon RDS
C. Amazon ElastiCache
D. Amazon Kinesis

Answer: C

QUESTION 458
In a multi-container Docker environment in AWS Elastic Beanstalk, what is required to configure container instances in the environment?

A. An Amazon ECS task definition
B. An Amazon ECS cluster
C. A Docker in an application package
D. A CLI for Elastic Beanstalk

Answer: B

QUESTION 459
An application that runs on an Amazon EC2 instance needs to access and make API calls to multiple AWS services.

What is the MOST secure way to provide access to the AWS services with MINIMAL management overhead?

A. Use AWS KMS to store and retrieve credentials.
B. Use EC2 instance profiles.
C. Use AWS root user to make requests to the application.
D. Store and retrieve credentials from AWS CodeCommit.

Answer: B
Explanation:
https://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles_use_switch-role-ec2.html

QUESTION 460
A company is creating an application that will require users to access AWS services and allow them to reset their own passwords.

Which of the following would allow the company to manage users and authorization while allowing users to reset their own passwords?

A. Amazon Cognito identify pools and AWS STS
B. Amazon Cognito identity pools and AWS IAM
C. Amazon Cognito user pools and AWS KMS
D. Amazon Cognito user pools and identity pools

Answer: D
Explanation:
https://serverless-stack.com/chapters/cognito-user-pool-vs-identity-pool.html

QUESTION 461
A company has three different environments: Development, QA, and Production. The company wants to deploy its code first in the Development environment, then QA, and then Production.

Which AWS service can be used to meet this requirement?

A. Use AWS CodeCommit to create multiple repositories to deploy the application.
B. Use AWS CodeBuild to create, configure, and deploy multiple build application projects.
C. Use AWS Data Pipeline to create multiple data pipeline provisions to deploy the application.
D. Use AWS CodeDeploy to create multiple deployment groups.

Answer: C

QUESTION 462
A company uses Amazon DynamoDB for managing and tracking orders. The DynamoDB table is partitioned based on the order date. The company receives a huge increase in orders during a sales event, causing DynamoDB writes to throttle, and the consumed throughput is far below the provisioned throughput.

According to AWS best practices, how can this issue be resolved with MINIMAL costs?

A. Create a new DynamoDB table for every order date.
B. Increase the read and write capacity units of the DynamoDB table.
C. Add a random number suffix to the partition key values.
D. Add a global secondary index to the DynamoDB table.

Answer: C

QUESTION 463
A company is providing services to many downstream consumers. Each consumer may connect to one or more services. This has resulted in a complex architecture that is difficult to manage and does not scale well. The company needs a single interface to manage these services to consumers.

Which AWS service should be used to refactor this architecture?

A. AWS Lambda
B. AWS X-Ray
C. Amazon SQS
D. Amazon API Gateway

Answer: D

QUESTION 464
A Developer is creating a serverless website with content that includes HTML files, images, videos, and JavaScript (client-side scripts).

Which combination of services should the Developer use to create the website?

A. Amazon S3 and Amazon CloudFront
B. Amazon EC2 and Amazon ElastiCache
C. Amazon ECS and Redis
D. AWS Lambda and Amazon API Gateway

Answer: A

QUESTION 465
A Development team has pushed out 10 applications running on several Amazon EC2 instances. The Operations team is asking for a graphical representation of one key performance metric for each application. These metrics should be available on one screen for easy monitoring. Which steps should the Developer take to accomplish this using Amazon CloudWatch?

A. Create a custom namespace with a unique metric name for each application.
B. Create a custom dimension with a unique metric name for each application.
C. Create a custom event with a unique metric name for each application.
D. Create a custom alarm with a unique metric name for each application.

Answer: B

QUESTION 466
A Developer wants access to make the log data of an application running on an EC2 instance available to systems administrators.

Which of the following enables monitoring of this metric in Amazon CloudWatch?

A. Retrieve the log data from CloudWatch using the GetMetricData API call
B. Retrieve the log data from AWS CloudTrail using the LookupEvents API call.
C. Launch a new EC2 instance, configure Amazon CloudWatch Events, and then install the application.
D. Install the Amazon CloudWatch Logs agent on the EC2 instance that the application is running on.

Answer: D

QUESTION 467
A nightly batch job loads 1 million new records into a DynamoDB table. The records are only needed for one hour, and the table needs to be empty by the next night's batch job.

Which is the MOST efficient and cost-effective method to provide an empty table?

A. Use DeleteItem using a ConditionExpression.
B. Use BatchWriteItem to empty all of the rows.
C. With a recursive function that scans and calls out DeleteItem.
D. Create and then delete the table after the task has completed.

Answer: D

QUESTION 468
A company has an application that logs all information to Amazon S3. Whenever there is a new log file, an AWS Lambda function is invoked to process the log files. The code works, gathering all of the necessary information. However, when checking the Lambda function logs, duplicate entries with the same request ID are found.

What is causing the duplicate entries?

A. The S3 bucket name was specified incorrectly.
B. The Lambda function failed, and the Lambda service retired the invocation with a delay.
C. There was an S3 outage, which caused duplicate entries of the sale log file.
D. The application stopped intermittently and then resumed.

Answer: B

QUESTION 469
A company maintains a REST service using Amazon API Gateway and the API Gateway native API key validation. The company recently launched a new registration page, which allows users to sign up for the service. The registration page creates a new API key using CreateApiKey and sends the new key to the user. When the user attempts to call the API using this key, the user receives a 403 Forbidden error. Existing users are unaffected and can still call the API.

What code updates will grant these new users access to the API?

A. The createDeployment method must be called so the API can be redeployed to include the newly created API key.
B. The updateAuthorizer method must be called to update the API's authorizer to include the newly created API key.
C. The importApiKeys method must be called to import all newly created API keys into the current stage of the API.
D. The createUsagePlanKey method must be called to associate the newly created API key with the correct usage plan.

Answer: C

QUESTION 470
A Developer is writing a mobile application that allows users to view images from an S3 bucket. The users must be able to log in with their Amazon login, as well as Facebook?and/or

Google?accounts.

How can the Developer provide this authentication functionality?

A. Use Amazon Cognito with web identity federation.
B. Use Amazon Cognito with SAML-based identity federation.
C. Use AWS IAM Access/Secret keys in the application code to allow Get* on the S3 bucket.
D. Use AWS STS AssumeRole in the application code and assume a role with Get* permissions on the S3 bucket.

Answer: A

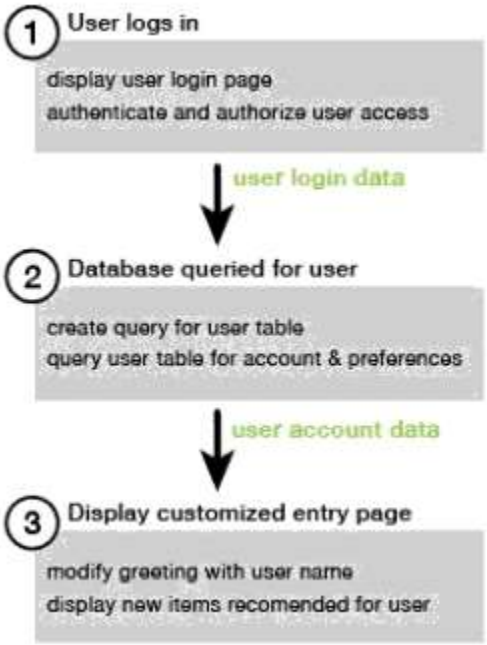
QUESTION 471
A Developer has created a Lambda function and is finding that the function is taking longer to complete than expected. After some debugging, the Developer has discovered that increasing compute capacity would improve performance.

How can the Developer increase the Lambda compute resources?

A. Run on a larger instance size with more compute capacity.
B. Increase the maximum execution time.
C. Specify a larger compute capacity when calling the Lambda function.
D. Increase the allocated memory for the Lambda function.

Answer: D

QUESTION 472
An e-commerce site allows returning users to log in to display customized web pages. The workflow is shown in the image below:



An application is running on EC2 instances. Amazon RDS is used for the database that stores user accounts and preferences. The website freezes or is slow to load while waiting for the login step to complete. The remaining components of the site are well-optimized.

Which of the following techniques will resolve this issue? (Select Two.)

A. Implement the user login page as an asynchronous Lambda function.
B. Use Amazon ElastiCache for MemCached to cache user data.
C. Use Amazon Application Load Balancer to load balance the traffic to the website.
D. Call the database asynchronously so the code can continue executing.
E. Batch login requests from hundreds of users together as a single read request to the database.

Answer: BD
Explanation:
https://docs.aws.amazon.com/sdk-for-javascript/v2/developer-guide/making-asynchronous-calls.html

QUESTION 473
A Developer is building a mobile application and needs any update to user profile data to be pushed to all devices accessing the specific identity. The Developer does not want to manage a back end to maintain the user profile data.

What is the MOST efficient way for the Developer to achieve these requirements using Amazon Cognito?

A. Use Cognito federated identities.
B. Use a Cognito user pool.
C. Use Cognito Sync.
D. Use Cognito events.

Answer: C

QUESTION 474
A company is migrating a single-server, on-premises web application to AWS. The company intends to use multiple servers behind an Elastic Load Balancer (ELB) to balance the load, and will also store session data in memory on the web server. The company does not want to lose that session data if a server fails or goes offline, and it wants to minimize user's downtime.

Where should the company move session data to MOST effectively reduce downtime and make users' session data more fault tolerant?

A. An Amazon ElastiCache for Redis cluster
B. A second Amazon EBS volume
C. The web server's primary disk
D. An Amazon EC2 instance dedicated to session data

Answer: A

QUESTION 475
A Developer created configuration specifications for an AWS Elastic Beanstalk application in a file

named healthcheckurl.yaml in the .ebextensions/directory of their application source bundle. The file contains the following:

```
option_settings:
  - namespace: aws:elasticbeanstalk:application
    option_name: Application Healthcheck URL
    value: /health_check
```

After the application launches, the health check is not being run on the correct path, event though it is valid.

What can be done to correct this configuration file?

A. Convert the file to JSON format.
B. Rename the file to a .config extension.
C. Change the configuration section from options_settings to resources.
D. Change the namespace of the option settings to a cusom namespace.

Answer: B
Explanation:
Configuration files are YAML- or JSON-formatted documents with a .config file extension that you place in a folder named .ebextensions and deploy in your application source bundle.

QUESTION 476
A Developer is making changes to a custom application that is currently using AWS Elastic Beanstalk.

After the Developer completes the changes, what solutions will update the Elastic Beanstalk environment with the new application version? (Choose two.)

A. Package the application code into a .zip file, and upload, then deploy the packaged application from the AWS Management Console
B. Package the application code into a .tar file, create a new application version from the AWS Management Console, then update the environment by using AWS CLI
C. Package the application code into a .tar file, and upload and deploy the packaged application from the AWS Management Console
D. Package the application code into a .zip file, create a new application version from the packaged application by using AWS CLI, then update the environment by using AWS CLI
E. Package the application code into a .zip file, create a new application version from the AWS Management Console, then rebuild the environment by using AWS CLI

Answer: AD

QUESTION 477
To include objects defined by the AWS Serverless Application Model (SAM) in an AWS CloudFormation template, in addition to Resources, what section MUST be included in the document root?

A. Conditions
B. Globals

C. Transform
D. Properties

Answer: C
Explanation:
https://github.com/awslabs/serverless-application-model/blob/master/versions/2016-10-31.md

QUESTION 478
A company is using Amazon RDS MySQL instances for its application database tier and Apache Tomcat servers for its web tier. Most of the database queries from web applications are repeated read requests.

Use of which AWS service would increase in performance by adding in-memory store for repeated read queries?

A. Amazon RDS Multi-AZ
B. Amazon SQS
C. Amazon ElastiCache
D. Amazon RDS read replica

Answer: C

QUESTION 479
A Developer is investigating an issue whereby certain requests are passing through an Amazon API Gateway endpoint /MyAPI, but the requests do not reach the AWS Lambda function backing /MyAPI. The Developer found that a second Lambda function sometimes runs at maximum concurrency allowed for the given AWS account.

How can the Developer address this issue?

A. Manually reduce the concurrent execution limit at the account level
B. Add another API Gateway stage for /MyAPI, and shard the requests
C. Configure the second Lambda function's concurrency execution limit
D. Reduce the throttling limits in the API Gateway /MyAPI endpoint

Answer: C

QUESTION 480
A Developer must analyze performance issues with production-distributed applications written as AWS Lambda functions. These distributed Lambda applications invoke other components that make up the applications.

How should the Developer identify and troubleshoot the root cause of the performance issues in production?

A. Add logging statements to the Lambda functions, then use Amazon CloudWatch to view the logs.
B. Use AWS Cloud Trail and then examine the logs
C. Use AWS X-Ray, then examine the segments and errors
D. Run Amazon Inspector agents and then analyze performance

Answer: C

QUESTION 481
A Developer wants to debug an application by searching and filtering log data. The application logs are stored in Amazon CloudWatch Logs. The Developer creates a new metric filter to count exceptions in the application logs. However, no results are returned from the logs.

What is the reason that no filtered results are being returned?

A. A setup of the Amazon CloudWatch interface VPC endpoint is required for filtering the CloudWatch Logs in the VPC
B. CloudWatch Logs only publishes metric data for events that happen after the filter is created
C. The log group for CloudWatch Logs should be first streamed to Amazon Elasticsearch Service before metric filtering returns the results
D. Metric data points for logs groups can be filtered only after they are exported to an Amazon S3 bucket

Answer: B

QUESTION 482
An e-commerce web application that shares session state on-premises is being migrated to AWS. The application must be fault tolerant, natively highly scalable, and any service interruption should not affect the user experience.

What is the best option to store the session state?

A. Store the session state in Amazon ElastiCache
B. Store the session state in Amazon CloudFront
C. Store the session state in Amazon S3
D. Enable session stickiness using elastic load balancers

Answer: A

QUESTION 483
A Developer is creating a template that uses AWS CloudFormation to deploy an application. This application is serverless and uses Amazon API Gateway, Amazon DynamoDB, and AWS Lambda.

Which tool should the Developer use to define simplified syntax for expressing serverless resources?

A. CloudFormation serverless intrinsic functions
B. AWS serverless express
C. An AWS serverless application model
D. A CloudFormation serverless plugin

Answer: C

QUESTION 484
A Developer has a stateful web server on-premises that is being migrated to AWS. The Developer must have greater elasticity in the new design.

How should the Developer re-factor the application to make it more elastic? (Choose two.)

A. Use pessimistic concurrency on Amazon DynamoDB
B. Use Amazon CloudFront with an Auto Scaling group
C. Use Amazon CloudFront with an AWS Web Application Firewall
D. Store session state data in an Amazon DynamoDB table
E. Use an ELB with an Auto Scaling group

Answer: DE

QUESTION 485
A company needs to distribute firmware updates to its customers around the world.

Which service will allow easy and secure control of the access to the downloads at the lowest cost?

A. Use Amazon CloudFront with signed URLs for Amazon S3
B. Create a dedicated Amazon CloudFront Distribution for each customer
C. Use Amazon CloudFront with AWS Lambda@Edge
D. Use Amazon API Gateway and AWS Lambda to control access to an S3 bucket

Answer: A

QUESTION 486
A company is running an application built on AWS Lambda functions. One Lambda function has performance issues when it has to download a 50MB file from the Internet in every execution. This function is called multiple times a second.

What solution would give the BEST performance increase?

A. Cache the file in the /tmp directory
B. Increase the Lambda maximum execution time
C. Put an Elastic Load Balancer in front of the Lambda function
D. Cache the file in Amazon S3

Answer: A

QUESTION 487
An application writes items to an Amazon DynamoDB table. As the application scales to thousands of instances, calls to the DynamoDB API generate occasional ThrottlingException errors. The application is coded in a language incompatible with the AWS SDK.

How should the error be handled?

A. Add exponential backoff to the application logic
B. Use Amazon SQS as an API message bus
C. Pass API calls through Amazon API Gateway
D. Send the items to DynamoDB through Amazon Kinesis Data Firehose

Answer: A

QUESTION 488
An application deployed on AWS Elastic Beanstalk experiences increased error rates during deployments of new application versions, resulting in service degradation for users. The Development team believes that this is because of the reduction in capacity during the deployment steps. The team would like to change the deployment policy configuration of the environment to an option that maintains full capacity during deployment while using the existing instances.

Which deployment policy will meet these requirements while using the existing instances?

A. All at once
B. Rolling
C. Rolling with additional batch
D. Immutable

Answer: D
Explanation:
Rolling with additional batch – Deploy the new version in batches, but first launch a new batch of instances to ensure full capacity during the deployment process.
So the old version is on new instances.
Immutable - Deploy the new version to a fresh group of instances by performing an immutable update.
New version is on new instances but the old version is on old instances so it uses existing ones.

QUESTION 489
A Developer is working on an application that handles 10MB documents that contain highly-sensitive data. The application will use AWS KMS to perform client-side encryption.

What steps must be followed?

A. Invoke the Encrypt API passing the plaintext data that must be encrypted, then reference the customer managed key ARN in the KeyId parameter
B. Invoke the GenerateRandom API to get a data encryption key, then use the data encryption key to encrypt the data
C. Invoke the GenerateDataKey API to retrieve the encrypted version of the data encryption key to encrypt the data
D. Invoke the GenerateDataKey API to retrieve the plaintext version of the data encryption key to encrypt the data

Answer: D

QUESTION 490
A Developer is building a web application that uses Amazon API Gateway to expose an AWS Lambda function to process requests from clients. During testing, the Developer notices that the API Gateway times out even though the Lambda function finishes under the set time limit.

Which of the following API Gateway metrics in Amazon CloudWatch can help the Developer troubleshoot the issue? (Choose two.)

A. CacheHitCount
B. IntegrationLatency
C. CacheMissCount
D. Latency
E. Count

Answer: BC

QUESTION 491
An AWS Lambda function must access an external site by using a regularly rotated user name and password. These items must be kept securely and cannot be stored in the function code.

What combination of AWS services can be used to accomplish this? (Choose two.)

A. AWS Certificate Manager (ACM)
B. AWS Systems Manager Parameter Store
C. AWS Trusted Advisor
D. AWS KMS
E. Amazon GuardDuty

Answer: BD

QUESTION 492
A Developer is trying to deploy a serverless application using AWS CodeDeploy. The application was updated and needs to be redeployed.

What file does the Developer need to update to push that change through CodeDeploy?

A. dockerrun.aws.json
B. buildspec.yml
C. appspec.yml
D. ebextensions.config

Answer: C

QUESTION 493
A Developer wants to upload data to Amazon S3 and must encrypt the data in transit.

Which of the following solutions will accomplish this task? (Choose two.)

A. Set up hardware VPN tunnels to a VPC and access S3 through a VPC endpoint
B. Set up Client-Side Encryption with an AWS KMS-Managed Customer Master Key
C. Set up Server-Side Encryption with AWS KMS-Managed Keys
D. Transfer the data over an SSL connection
E. Set up Server-Side Encryption with S3-Managed Keys

Answer: BD

QUESTION 494

A company is running a Docker application on Amazon ECS. The application must scale based on user load in the last 15 seconds.

How should a Developer instrument the code so that the requirement can be met?

A. Create a high-resolution custom Amazon CloudWatch metric for user activity data, then publish data every 30 seconds
B. Create a high-resolution custom Amazon CloudWatch metric for user activity data, then publish data every 5 seconds
C. Create a standard-resolution custom Amazon CloudWatch metric for user activity data, then publish data every 30 seconds
D. Create a standard-resolution custom Amazon CloudWatch metric for user activity data, then publish data every 5 seconds

Answer: B

QUESTION 495
A company needs to ingest terabytes of data each hour from thousands of sources that are delivered almost continually throughout the day. The volume of messages generated varies over the course of the day. Messages must be delivered in real time for fraud detection and live operational dashboards.

Which approach will meet these requirements?

A. Send the messages to an Amazon SQS queue, then process the messages by using a fleet of Amazon EC2 instances
B. Use the Amazon S3 API to write messages to an S3 bucket, then process the messages by using Amazon Redshift
C. Use AWS Data Pipeline to automate the movement and transformation of data
D. Use Amazon Kinesis Data Streams with Kinesis Client Library to ingest and deliver messages

Answer: D

QUESTION 496
A Developer accesses AWS CodeCommit over SSH. The SSH keys configured to access AWS CodeCommit are tied to a user with the following permissions:

```
{
"Version": "2012-10-17",
"Statement": [
  {
   "Effect": "Allow",
   "Action": [
     "codecommit:BatchGetRepositories",
     "codecommit:Get*",
     "codecommit:List*",
     "codecommit:GitPull"
   ],
   "Resource": "*"
  }
]
}
```

The Developer needs to create/delete branches.

Which specific IAM permissions need to be added, based on the principle of least privilege?

A. "codecommit:CreateBranch"
"codecommit:DeleteBranch"
B. "codecommit:Put*"
C. "codecommit:Update*"
D. "codecommit:*"

Answer: A
Explanation:
https://docs.aws.amazon.com/codecommit/latest/userguide/auth-and-access-control-permissions-reference.html#aa-branches

QUESTION 497
A Developer has been asked to create an AWS Lambda function that is triggered any time updates are made to items in an Amazon DynamoDB table. The function has been created, and appropriate permissions have been added to the Lambda execution role. Amazon DynamoDB streams have been enabled for the table, but the function is still not being triggered.

Which option would enable DynamoDB table updates to trigger the Lambda function?

A. Change the StreamViewType parameter value to NEW_AND_OLD_IMAGES for the DynamoDB table

B. Configure event source mapping for the Lambda function
C. Map an Amazon SNS topic to the DynamoDB streams
D. increase the maximum execution time (timeout) setting of the Lambda function

Answer: B

QUESTION 498
An application is being developed to audit several AWS accounts. The application will run in Account A and must access AWS services in Accounts B and C.

What is the MOST secure way to allow the application to call AWS services in each audited account?

A. Configure cross-account roles in each audited account. Write code in Account A that assumes those roles
B. Use S3 cross-region replication to communicate among accounts, with Amazon S3 event notifications to trigger Lambda functions
C. Deploy an application in each audited account with its own role. Have Account A authenticate with the application
D. Create an IAM user with an access key in each audited account. Write code in Account A that uses those access keys

Answer: A

QUESTION 499
A Developer is building a three-tier web application that should be able to handle a minimum of 5000 requests per minute. Requirements state that the web tier should be completely stateless while the application maintains session state for the users.

How can session data be externalized, keeping latency at the LOWEST possible value?

A. Create an Amazon RDS instance, then implement session handling at the application level to leverage a database inside the RDS database instance for session data storage
B. Implement a shared file system solution across the underlying Amazon EC2 instances, then implement session handling at the application level to leverage the shared file system for session data storage
C. Create an Amazon ElastiCache Memcached cluster, then implement session handling at the application level to leverage the cluster for session data storage
D. Create an Amazon DynamoDB table, then implement session handling at the application level to leverage the table for session data storage

Answer: C

QUESTION 500
An Amazon DynamoDB table uses a Global Secondary Index (GSI) to support read queries. The primary table is write-heavy, whereas the GSI is used for read operations. Looking at Amazon CloudWatch metrics, the Developer notices that write operations to the primary table are throttled frequently under heavy write activity. However, write capacity units to the primary table are available and not fully consumed.

Why is the table being throttled?

A. The GSI write capacity units are underprovisioned
B. There are not enough read capacity units on the primary table
C. Amazon DynamoDB Streams is not enabled on the table
D. A large write operation is being performed against another table

Answer: A
Explanation:
In DynamoDB, table and it's GSIs have separate provisioned throughput. When an update on table affects Global Secondary Indexes (GSIs), provisioned throughput will be consumed on both table and the affected GSIs. When one or more GSIs cannot keep up with the updates from table, all write requests to the table will be throttled. Because the throttle is due to back pressure from GSI, the throttle reason is GSI back pressure.
Note that all write requests will be throttled when there is GSI back pressure. That means even if the write request doesn't affect any GSI.

QUESTION 501
A company runs an e-commerce website that uses Amazon DynamoDB where pricing for items is dynamically updated in real time. At any given time, multiple updates may occur simultaneously for pricing information on a particular product. This is causing the original editor's changes to be overwritten without a proper review process.

Which DynamoDB write option should be selected to prevent this overwriting?

A. Concurrent writes
B. Conditional writes
C. Atomic writes
D. Batch writes

Answer: B

QUESTION 502
A company needs a version control system for collaborative software development. Features of the system must include the following:

```
- Support for batches of changes across multiple files
- Parallel branching
- Version tracking
```

Which AWS service will meet these requirements?

A. AWS CodePipeline
B. Amazon S3
C. AWS Code Build
D. AWS CodeCommit

Answer: D

QUESTION 503
A company is using continuous integration and continuous delivery systems. A Developer now needs to automate a software package deployment to both Amazon EC2 instances and virtual

servers running on- premises.

Which AWS service should be used to accomplish this?

A. AWS CodePipeline
B. AWS CodeBuild
C. AWS Elastic Beanstalk
D. AWS CodeDeploy

Answer: D

QUESTION 504
A Developer created a new AWS account and must create a scalable AWS Lambda function that meets the following requirements for concurrent execution:

```
- Average execution time of 100 seconds
- 50 requests per second
```

Which step must be taken prior to deployment to prevent errors?

A. Implement dead-letter queues to capture invocation errors
B. Add an event source from Amazon API Gateway to the Lambda function
C. Implement error handling within the application code
D. Contact AWS Support to increase the concurrent execution limits

Answer: D
Explanation:
Concurrent exectuion limit is 1000 but here we need 50x100=5000. We need 5k concurrent users and limite must be exceeded...

QUESTION 505
A Development team wants to instrument their code to provide more detailed information to AWS X-Ray than simple outgoing and incoming requests. This will generate large amounts of data, so the Development team wants to implement indexing so they can filter the data.

What should the Development team do to achieve this?

A. Add annotations to the segment document and the code
B. Add metadata to the segment document and the code
C. Configure the necessary X-Ray environment variables
D. Install required plugins for the appropriate AWS SDK

Answer: A

QUESTION 506
A team of Developers must migrate an application running inside an AWS Elastic Beanstalk environment from a Classic Load Balancer to an Application Load Balancer.

Which steps should be taken to accomplish the task using the AWS Management Console?

A. 1. Update the application code in the existing deployment.

2. Select a new load balancer type before running the deployment.
3. Deploy the new version of the application code to the environment.

B. 1. Create a new environment with the same configurations except for the load balancer type.
2. Deploy the same application version as used in the original environment.
3. Run the swap-environment-cnames action.

C. 1. Clone the existing environment, changing the associated load balancer type.
2. Deploy the same application version as used in the original environment.
3. Run the swap-environment-cnames action.

D. 1. Edit the environment definitions in the existing deployment.
2. Change the associated load balancer type according to the requirements.
3. Rebuild the environment with the new load balancer type.

Answer: B

QUESTION 507
A Developer must encrypt a 100-GB object using AWS KMS.

What is the BEST approach?

A. Make an Encrypt API call to encrypt the plaintext data as ciphertext using a customer master key (CMK)
B. Make an Encrypt API call to encrypt the plaintext data as ciphertext using a customer master key (CMK) with imported key material
C. Make a GenerateDataKey API call that returns a plaintext key and an encrypted copy of a data key.
Use a plaintext key to encrypt the data
D. Make a GenerateDataKeyWithoutPlaintext API call that returns an encrypted copy of a data key.
Use an encrypted key to encrypt the data

Answer: C
Explanation:
As you cannot encrypt data with an encrypted copy of data key, you need to decrypt it first and then use the plain text data key to encrypt the data.

QUESTION 508
A Development team would like to migrate their existing application code from a GitHub repository to AWS CodeCommit.

What needs to be created before they can migrate a cloned repository to CodeCommit over HTTPS?

A. A GitHub secure authentication token
B. A public and private SSH key file
C. A set of Git credentials generated from IAM
D. An Amazon EC2 IAM role with CodeCommit permissions

Answer: C

QUESTION 509
A Developer is writing a REST service that will add items to a shopping list. The service is built on Amazon API Gateway with AWS Lambda integrations. The shopping list items are send as query

string parameters in the method request.

How should the Developer convert the query string parameters to arguments for the Lambda function?

A. Enable request validation
B. Include the Amazon Resource Name (ARN) of the Lambda function
C. Change the integration type
D. Create a mapping template

Answer: C

QUESTION 510
When developing an AWS Lambda function that processes Amazon Kinesis Data Streams, Administrators within the company must receive a notice that includes the processed data.

How should the Developer write the function to send processed data to the Administrators?

A. Separate the Lambda handler from the core logic
B. Use Amazon CloudWatch Events to send the processed data
C. Publish the processed data to an Amazon SNS topic
D. Push the processed data to Amazon SQS

Answer: C

QUESTION 511
A Developer is storing sensitive documents in Amazon S3 that will require encryption at rest. The encryption keys must be rotated annually, at least.

What is the easiest way to achieve this?

A. Encrypt the data before sending it to Amazon S3
B. Import a custom key into AWS KMS with annual rotation enabled
C. Use AWS KMS with automatic key rotation
D. Export a key from AWS KMS to encrypt the data

Answer: C

QUESTION 512
A company is creating a REST service using an Amazon API Gateway with AWS Lambda integration. The service must run different versions for testing purposes.

What would be the BEST way to accomplish this?

A. Use an X-Version header to denote which version is being called and pass that header to the Lambda function(s)
B. Create an API Gateway Lambda authorizer to route API clients to the correct API version
C. Create an API Gateway resource policy to isolate versions and provide context to the Lambda function (s)
D. Deploy the API versions as unique stages with unique endpoints and use stage variables to

provide further context

Answer: D

QUESTION 513
A company wants to implement authentication for its new REST service using Amazon API Gateway. To authenticate the calls, each request must include HTTP headers with a client ID and user ID. These credentials must be compared to authentication data in an Amazon DynamoDB table.

What MUST the company do to implement this authentication in API Gateway?

A. Implement an AWS Lambda authorizer that references the DynamoDB authentication table
B. Create a model that requires the credentials, then grant API Gateway access to the authentication table
C. Modify the integration requests to require the credentials, then grant API Gateway access to the authentication table
D. Implement an Amazon Cognito authorizer that references the DynamoDB authentication table

Answer: A

QUESTION 514
An Amazon RDS database instance is used by many applications to look up historical data. The query rate is relatively constant. When the historical data is updated each day, the resulting write traffic slows the read query performance and affects all application users.

What can be done to eliminate the performance impact on application users?

A. Make sure Amazon RDS is Multi-AZ so it can better absorb increased traffic.
B. Create an RDS Read Replica and direct all read traffic to the replica.
C. Implement Amazon ElastiCache in front of Amazon RDS to buffer the write traffic.
D. Use Amazon DynamoDB instead of Amazon RDS to buffer the read traffic.

Answer: B

QUESTION 515
A Developer is trying to make API calls using SDK. The IAM user credentials used by the application require multi-factor authentication for all API calls.

Which method the Developer use to access the multi-factor authentication protected API?

A. GetFederationToken
B. GetCallerIdentity
C. GetSessionToken
D. DecodeAutherizationMessage

Answer: C

QUESTION 516
An application is running on a cluster of Amazon EC2 instances. While trying to read objects

stored within a single Amazon S3 bucket that are encrypted with server-side encryption with AWS KMS managed keys (SSE-KMS), the application receives the following error:

```
Service: AWSKMS; Status Code: 400; Error Code: ThrottlingException
```

Which combination of steps should be taken to prevent this failure? (Choose two.)

A. Contact AWS Support to request an AWS KMS rate limit increase.
B. Perform error retries with exponential backoff in the application code.
C. Contact AWS Support to request a S3 rate limit increase.
D. Import a customer master key (CMK) with a larger key size.
E. Use more than one customer master key (CMK) to encrypt S3 data.

Answer: CD

QUESTION 517
A Developer has an e-commerce API hosted on Amazon ECS. Variable and spiking demand on the application is causing order processing to take too long. The application processes Amazon SQS queues. The ApproximateNumberOfMessagesVisible metric spikes at very high values throughout the day, which cause Amazon CloudWatch alarm breaches. Other ECS metrics for the API containers are well within limits.

What can the Developer implement to improve performance while keeping costs low?

A. Target tracking scaling policy
B. Docker Swarm
C. Service scheduler
D. Step scaling policy

Answer: D
Explanation:
https://aws.amazon.com/blogs/compute/building-loosely-coupled-scalable-c-applications-with-amazon-sqs-and-amazon-sns/

QUESTION 518
A Developer wants to build an application that will allow new users to register and create new user accounts. The application must also allow users with social media accounts to log in using their social media credentials.

Which AWS service or feature can be used to meet these requirements?

A. AWS IAM
B. Amazon Cognito identity pools
C. Amazon Cognito user pools
D. AWS Directory Service

Answer: C
Explanation:
https://aws.amazon.com/blogs/apn/how-to-authenticate-users-into-your-apps-using-application-load-balancer-and-centrify/

QUESTION 519
A company is developing a web application that allows its employees to upload a profile picture to a private Amazon S3 bucket. There is no size limit for the profile pictures, which should be displayed every time an employee logs in. For security reasons, the pictures cannot be publicly accessible.

What is a viable long-term solution for this scenario?

A. Generate a presigned URL when a picture is uploaded.
Save the URL in an Amazon DynamoDB table.
Return the URL to the browser when the employee logs in.
B. Save the picture's S3 key in an Amazon DynamoDB table.
Create an Amazon S3 VPC endpoint to allow the employees to download pictures once they log in.
C. Encode a picture using base64. Save the base64 string in an Amazon DB table.
Allow the browser to retrieve the string and convert it to a picture.
D. Save the picture's S3 key in an Amazon DynamoDB table.
Use a function to generate a presigned URL every time an employee logs in.
Return the URL to the browser.

Answer: B
Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/s3-private-connection-no-authentication/

QUESTION 520
A Developer is going to deploy an AWS Lambda function that requires significant CPU utilization.

Which approach will MINIMIZE the average runtime of the function?

A. Deploy the function into multiple AWS Regions.
B. Deploy the function into multiple Availability Zones.
C. Deploy the function using Lambda layers.
D. Deploy the function with its memory allocation set to the maximum amount.

Answer: C
Explanation:
Layers let you keep your deployment package small, which makes development easier. You can avoid errors that can occur when you install and package dependencies with your function code.
Reference: https://docs.aws.amazon.com/lambda/latest/dg/lambda-dg.pdf (86)

QUESTION 521
A company has a legacy application that was migrated to a fleet of Amazon EC2 instances. The application stores data in a MySQL database that is currently installed on a single EC2 instance. The company has decided to migrate the database from the EC2 instance to MySQL on Amazon EDS.

What should the Developer do to update the application to support data storage in Amazon RDS?

A. Update the database connection parameters in the application to point to the new RDS instance.

B. Add a script to the EC2 instance that implements an AWS SDK for requesting database credentials.
C. Create a new EC2 instance with an IAM role that allows access to the new RDS database.
D. Create an AWS Lambda function that will route traffic, from the EC2 instance to the RDS database.

Answer: A

QUESTION 522
A Developer is working on an AWS Lambda function that accesses Amazon DynamoDB. The Lambda function must retrieve an item and update some of its attributes, or create the item if it does not exist. The Lambda function has access to the primary key.

Which IAM permissions should the Developer request for the Lambda function to achieve this functionality?

A. dynamodb:DeleteItem
dynamodb:GetItem
dynamodb:PutItem
B. dynamodb:UpdateItem
dynamodb:GetItem
dynamodb:DescribeTable
C. dynamodb:GetRecords
dynamodb:PutItem
dynamodb:UpdateTable
D. dynamodb:UpdateItem
dynamodb:GetItem
dynamodb:PutItem

Answer: C
Explanation:
https://docs.aws.amazon.com/AWSJavaScriptSDK/latest/AWS/DynamoDB.html

QUESTION 523
A Developer is storing sensitive data generated by an application in Amazon S3. The Developer wants to encrypt the data at rest. A company policy requires an audit trail of when the master key was used and by whom.

Which encryption option will meet these requirements?

A. Server-side encryption with Amazon S3 managed keys (SSE-S3)
B. Server-side encryption with AWS KMS managed keys (SSE-KMS)
C. Server-side encryption with customer-provided keys (SSE-C)
D. Server-side encryption with self-managed keys

Answer: B
Explanation:
Similar to SSE-S3, but with some additional benefits along with some additional charges for using this service. provides you with an audit trail of when your key was used and by whom. Additionally, you have the option to create and manage encryption keys yourself, or use a default key that is unique to you.

QUESTION 524
A company's website runs on an Amazon EC2 instance and uses Auto Scaling to scale the environment during peak times. Website users across the world are experiencing high latency due to static content on the EC2 instance, even during non-peak hours.

Which combination of steps will resolve the latency issue? (Choose two.)

A. Double the Auto Scaling group's maximum number of servers.
B. Host the application code on AWS Lambda.
C. Scale vertically by resizing the EC2 instances.
D. Create an Amazon CloudFront distribution to cache the static content.
E. Store the application's static content in Amazon S3.

Answer: CE
Explanation:
https://aws.amazon.com/getting-started/tutorials/deliver-content-faster/

QUESTION 525
A Developer is leveraging a Border Gateway Protocol (BGP)-based AWS VPN connection to connect from on-premises to Amazon EC2 instances in the Developer's account. The Developer is able to access an EC2 instance in subnet A, but is unable to access an EC2 instance in subnet B in the same VPC.

Which logs can the Developer use to verify whether the traffic is reaching subnet B?

A. VPN logs
B. BGP logs
C. VPC Flow Logs
D. AWS CloudTrail logs

Answer: C

QUESTION 526
A Developer has created a new AWS IAM user that has s3 putObject permission to write to a specific Amazon S3 bucket. This S3 bucket uses server-side encryption with AWS KMS managed (SSE-KMS) as the default encryption. Using the access key and secret key of the IAM user, the application received an access denied error when calling the PutObject API.

How can this issue be resolved?

A. Update the policy of the IAM user to allow the s3 Encrypt action.
B. Update the bucket policy of the S3 bucket to allow the IAM user to upload objects.
C. Update the policy of the IAM user to allow the kms:GenerateDataKey action.
D. Update the ACL of the S3 bucket to allow the IAM user to upload objects.

Answer: C
Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/s3-access-denied-error-kms/

QUESTION 527

A company has a web application that uses an Amazon Cognito user pool for authentication. The company wants to create a login page with the company logo.

What should a Developer do to meet these requirements?

A. Create a hosted user interface in Amazon Cognito and customize it with the company logo.
B. Create a login page with the company logo and upload it to Amazon Cognito.
C. Create a login page in Amazon API Gateway with the logo and save the link in Amazon Cognito.
D. Upload the logo to the Amazon Cognito app settings and point to the logo on a custom login page.

Answer: D
Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/cognito-hosted-web-ui/

QUESTION 528
A Developer wants the ability to roll back to a previous version of an AWS Lambda function in the event of errors caused by a new deployment.

How can the Developer achieve this with MINIMAL impact on users?

A. Change the application to use an alias that points to the current version. Deploy the new version of the code. Update the alias to use the newly deployed version. If too many errors are encountered, point the alias back to the previous version.
B. Change the application to use an alias that points to the current version. Deploy the new version of the code. Update the alias to direct 10% of users to the newly deployed version. If too many errors are encountered, send 100% of traffic to the previous version.
C. Do not make any changes to the application. Deploy the new version of the code. If too many errors are encountered, point the application back to the previous version using the version number in the Amazon Resource Name (ARN).
D. Create three aliases: new, existing, and router. Point the existing alias to the current version. Have the router alias direct 100% of users to the existing alias. Update the application to use the router alias.
Deploy the new version of the code. Point the new alias to this version. Update the router alias to direct 10% of users to the new alias. If too many errors are encountered, send 100% of traffic to the existing alias.

Answer: A

QUESTION 529
A company is developing an application that will be accessed through the Amazon API Gateway REST API. Registered users should be the only ones who can access certain resources of this API. The token being used should expire automatically and needs to be refreshed periodically.

How can a Developer meet these requirements?

A. Create an Amazon Cognito identity pool, configure the Amazon Cognito Authorizer in API Gateway, and use the temporary credentials generated by the identity pool.
B. Create and maintain a database record for each user with a corresponding token and use an AWS Lambda authorizer in API Gateway.
C. Create an Amazon Cognito user pool, configure the Cognito Authorizer in API Gateway, and

use the identity or access token.

D. Create an IAM user for each API user, attach an invoke permissions policy to the API, and use an IAM authorizer in API Gateway.

Answer: C
Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/cognito-custom-scopes-api-gateway/

QUESTION 530
A Developer is working on a serverless project based in Java. Initial testing shows a cold start takes about 8 seconds on average for AWS Lambda functions.

What should the Developer do to reduce the cold start time? (Choose two.)

A. Add the Spring Framework to the project and enable dependency injection.
B. Reduce the deployment package by including only needed modules from the AWS SDK for Java.
C. Increase the memory allocation setting for the Lambda function.
D. Increase the timeout setting for the Lambda function.
E. Change the Lambda invocation mode from synchronous to asynchronous.

Answer: AE
Explanation:
https://github.com/awslabs/aws-serverless-java-container/wiki/Quick-start---Spring-Boot

QUESTION 531
Which techniques will help mitigate this exception? (Choose two.)

```
{
  "FailedRecordCount": 1,
  "Records": [
     {
  "SequenceNumber": "21269319989900637946712965403778482371",
  "ShardId": "shardId-000000000001"

     },
     {
  "ErrorCode":"ProvisionedThroughputExceededException",
  "ErrorMessage": "Rate exceeded for shard shardId-000000000001 in

                stream exampleStreamName under account 123456789."
     },
     {
  "SequenceNumber": "21269319989999637946712965403778482985",
  "SharId": "shardId-000000000002"
     }
  ]
}
```

A. Implement retries with exponential backoff
B. Use a PutRecord API instead of PutRecords

C. Reduce the frequency and/or size of the requests
D. Use Amazon SNS instead of Kinesis
E. Reduce the number of KCL consumers

Answer: AC

QUESTION 532
A company wants to containerize an existing three-tier web application and deploy it to Amazon ECS Fargate. The application is using session data to keep track of user activities. Which approach would provide the BEST user experience?

A. Provision a Redic cluster in Amazon ElasticCache and save the session data in the cluster
B. Create a session table in Amazon Redshift and save the session data in the database table.
C. Enable session stickness in the existing Network Load Balancer and manage the session data in the container.
D. Use an Amazon S3 bucket as data store and save the session data in the bucket.

Answer: C

QUESTION 533
A developer is building an application integrating an Amazon API Gateway with an AWS Lambda function. When calling the API, the developer receives the following error:

Wed Nov 08 01:13:00 UTC 2017 : Method completed with status: 502

What should the developer do to resolve the error?

A. Change the HTTP endpoint of the API to an HTTPS endpoint
B. Change the format of the payload sent to the API Gateway
C. Change the format of the Lambda function response to the API call
D. Change the authorization header in the API call to access the Lambda function

Answer: C
Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/malformed-502-api-gateway/

QUESTION 534
A Developer needs to deploy an application running on AWS Fargate using Amazon ECS. The application has environment variables that must be passed to a container tor the application to initialize
How should the environment variables be passed to the container?

A. Define an array that includes the environment variables under the environment parameter within the service definition
B. Define an array that includes the environment variables under the environment parameter within the task definition
C. Define an array that includes the environment variables under the entrypoint parameter within the task definition
D. Define in array that includes the environment variables under the entryPoint parameter within the service definition

Answer: B

QUESTION 535
A Developer decides lo store highly secure data in Amazon S3 and wants to implement server-side encryption (SSF) with granular control of who can access the master key Company policy requires that the master key be created, rotated, and disabled easily when needed, all for security reasons. Which solution should be used to moot these requirements?

A. SSE with Amazon S3 managed keys (SSE-S3)
B. SSFE with AWS KMS managed keys (SSE KMS)
C. SSE with AWS Secrets Manager
D. SSE with customer provided encryption keys

Answer: B

QUESTION 536
A global company has an application running on Amazon EC2 instances that serves image files from Amazon S3. User requests from the browser are causing high traffic, which results in degraded performance.
Which optimization solution should a Developer implement to increase application performance?

A. Create multiple prefix in the S3 bucket to increase the request rate
B. Create an Amazon ElastiCache cluster to cache and serve frequently accessed items.
C. Use Amazon CloudFront to serve the content of images stored in Amazon S3.
D. Submit a ticket to AWS support to request a rate limit increase for the S3 bucket.

Answer: D

QUESTION 537
How does Envelope Encryption work in AWS KMS?

A. The Customer Master Key is used to encrypt/decrypt a data key.
The Plaintext Data Key is used to encrypt customer data.
B. Two encryption keys are used.
The Customer Master Key encrypts customer data.
The Data Key is used to re-encrypt the encrypted data.
C. Two encryption keys are used.
The Data Key encrypts customer data.
The ustomer Master Key is used to re-encrypt the encrypted data.
D. The Customer Master Key is used to encrypt/decrypt a data key.
The Encrypted Data Key is used to encrypt customer data.

Answer: C
Explanation:
https://docs.aws.amazon.com/kms/latest/developerguide/concepts.html

QUESTION 538
An advertising company has a dynamic website with heavy traffic. The company wants to migrate the website infrastructure to AWS to handle everything except website development.

Which solution BEST meets these requirements?

A. Use AWS VM Import to migrate a web server image to AWS Launch the image on a compute-optimized Amazon EC2 instanceLaunch.
B. Launch multiple Amazon Lighsall instance behind a load balancer. Set up the website on those instances.
C. Deploy the website code in an AWS Elastic Beanstalk environment. Use Auto Scaling to scale the numbers of instance
D. Use Amazon S3 to host the website. Use Amazon CloudFornt to deliver the content at scale.

Answer: C

QUESTION 539
A developer implemented a static website hosted in Amazon S3 that makes web service requests in Amazon API Gateway and AWS Lambda. The site is showing an error that reads.
''No 'Access Control-Allow-Origin'header' header is present on the requested resource. Origin 'null is therefore not allowed access ''
What should the Developer do to resolve this issue?

A. Enable cross-origin resource sharing (CORS) on the S3 bucket
B. Enable cross-origin resource sharing (CORS) for the method in API Gateway
C. Add the Access Control-Request-Method header to the request
D. Add the Access-Control Inquest Headers header to the request

Answer: B

QUESTION 540
A developer is creating an application to process a large number of requests. Requests must be processed in order, and each request should be processed only once.

How should Amazon SQS be deployed to achieve this?

A. Configure First in First out (FIFO) delivery in a standard Amazon SQS queue to process requests.
B. Use an SQS FIFO queue to process requests.
C. Use the SetOrder attribute to ensure sequential request processing.
D. Convert the standard queue to a FIFO queue by renaming the queue to use the .fifo suffix.

Answer: B
Explanation:
https://medium.com/awesome-cloud/aws-difference-between-sqs-standard-and-fifo-first-in-first-out-queues-28d1ea5e153

QUESTION 541
An application is using a custom library to make HTTP calls directly to AWS service endpoints. The application is experiencing transient errors that are causing processes to stop when each error is first encountered. A request has been made to make the application more resilient by adding error retries and exponential backoff.

How should a developer implement the changes with MINIMAL custom code?

A. Add a Retry-After HTTP header to API requests

B. Use the AWS CLI to configure the retry settings in a named profile
C. Change the custom library to retry on 5xx errors only
D. Use an AWS SDK and set retry-specific configurations

Answer: B
Explanation:
https://docs.aws.amazon.com/cli/latest/topic/config-vars.html

QUESTION 542
A company stores all personally identifiable information (PII) in an Amazon DynamoDB table named PII in Account A. An application running on Amazon EC2 instances in Account B requires access to the PII table. An administrators in Account A created an IAM role named AccessPII with privileges to access the PII table, and made account B a trusted entity.
Which combination of actional steps should Developers take to access the table? (Select TWO)

A. Ask an Administrator in Account B to allow the EC2 1AM role permission to assume the AccessPII role
B. Ask an Administrator in Account B to allow the EC2 1AM role permission to assume the AccessPll role with predefined service control policies
C. Ask an Administrator in Account A to allow the EG2 1AM role permission to assume the AccessPII role with predefined service control policies.
D. Include the AssumeRole API in the application code logic to obtain credentials to access the PII table
E. Include the GetSession token API in the application code logic to obtain credentials to access the Pll table

Answer: AE

QUESTION 543
A developer is setting up Amazon API gateway for their company's products. The API will be registered developers to query and update their environments. The company wants to limit the amount of requests end users send for.bot cost and security reason management wants to offer registered the option of buying larger packages that allow for more requests.

A. Enable throttling for the API Gateway stage Set a value tor both the rate and burst capacity If a registered larger package, create a stage for them, adjust the values, and share the new URL with them.
B. Set up Amazon CloudWatch API logging in API Gateway Create a filter based on the user and requestTime fields and create an alarm on this filter Write an AWS Lambda function to analyze the values and requester information, and respond accordingly Set up the function as the target tor the alarm If a registered user chooses a larger package, update the Lambda code with the values
C. Enable Amazon CloudWatch metrics for the API Gateway stage Set up CloudWatch alarms based oft the Count metric and the ApiName, Method, Resource, and Stage dimensions to alerts when request rates pass the threshold Set the alarm action to Deny If a registered user chooses a larger package, create a user-specific alarm and adjust the values
D. Set up a default usage plan specify values for the rate and burst capacity, and associate it with a stage If a registered user chooses a larger package, create a custom plan with the appropriate values and associate the plan with the user

Answer: A

QUESTION 544
A company's ecommerce website is experiencing massive traffic spikes, which are causing performance problems in the company database. Users are reporting that accessing the website takes a long time.

A Developer wants to implement a caching layer using Amazon ElastiCache. The website is required to be responsive no matter which product a user views, and the updates to product information and prices must be strongly consistent.

Which cache writing policy will satisfy these requirements?

A. Write to the cache directly and sync the backend at a later time
B. Write to the backend first and wait for the cache to expire
C. Write to the cache and the backend at the same time
D. Write to the backend first and invalidate the cache

Answer: A
Explanation:
https://aws.amazon.com/elasticache/faqs/

QUESTION 545
An online retail company has deployed a serverless application with AWS Lambda, Amazon API Gateway, Amazon S3, and Amazon DynamoDB using AWS CloudFormation. The company rolled out a new release with major upgrades to the Lambda function and deployed the release to production. Subsequently, the application stopped working.

Which solution should bring the application back up as quickly as possible?

A. Redeploy the application on Amazon EC2 so the Lambda function can resolve dependencies
B. Migrate DynamoDB to Amazon RDS and redeploy the Lambda function
C. Roll back the Lambda function to the previous version
D. Deploy the latest Lambda function in a different Region

Answer: C
Explanation:
https://github.com/awslabs/aws-sam-cli/issues/1654

QUESTION 546
A Developer is writing an application that will run on Amazon EC2 instances in an Auto Scaling group. The Developer wants to externalize session state to support the application.

Which services will meet these needs? (Choose two.)

A. Amazon DynamoDB
B. Amazon Cognito
C. Amazon ElastiCache
D. Amazon EBS
E. Amazon SQS

Answer: BD
Explanation:

https://forums.aws.amazon.com/thread.jspa?threadID=238457

QUESTION 547
A Developer has a legacy application that is hosted on-premises. Other applications hosted on AWS depend on the on-premises application for proper functioning. In case of any application errors, the Developer wants to be able to use Amazon CloudWatch to monitor and troubleshoot all applications from one place.

How can the Developer accomplish this?

A. Install an AWS SDK on the on-premises server to automatically send logs to CloudWatch.
B. Download the CloudWatch agent to the on-premises server. Configure the agent to use IAM user credentials with permissions for CloudWatch.
C. Upload log files from the on-premises server to Amazon S3 and have CloudWatch read the files.
D. Upload log files from the on-premises server to an Amazon EC2 instance and have the instance forward the logs to CloudWatch.

Answer: B
Explanation:
https://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/install-CloudWatch-Agent-on-premise.html

QUESTION 548
An application ingests a large number of small messages and stores them in a database. The application uses AWS Lambda. A Development team is making change to the application's processing logic. In testing, it is taking more than 15 minutes to process each message. The team is concerned the current backend may time out.

Which changes should be made to the backend system to ensure each message is processed in the MOST scalable way?

A. Add the messages to an Amazon SQS queue. Set up and Amazon EC2 instance to poll the queue and process messages as they arrive.
B. Add the messages to an Amazon SQS queue. Set up Amazon EC2 instances in an Auto Scaling group to poll the queue and process the messages as they arrive.
C. Create a support ticket to increase the Lambda timeout to 60 minutes to allow for increased processing time.
D. Change the application to directly insert the body of the message into an Amazon RDS database.

Answer: B

QUESTION 549
An advertising company has a dynamic website with heavy traffic. The company wants to migrate the website infrastructure to AWS to handle everything except website development.

Which solution BEST meets these requirements?

A. Use AWS VM Import to migrate a web server image to AWS. Launch the image on a compute-optimized Amazon EC2 instance.
B. Launch multiple Amazon Lightsail instances behind a load balancer. Set up the website on those instances.

C. Deploy the website code in an AWS Elastic Beanstalk environment. Use Auto Scaling to scale the numbers of instances.
D. Use Amazon S3 to host the website. Use Amazon CloudFront to deliver the content at scale.

Answer: C
Explanation:
https://aws.amazon.com/elasticbeanstalk/

QUESTION 550
A Software Engineer developed an AWS Lambda function in Node.js to do some CPU-intensive data processing. With the default settings, the Lambda function takes about 5 minutes to complete.

Which approach should a Developer take to increase the speed of completion?

A. Instead of using Node.js, rewrite the Lambda function using Python.
B. Instead of packaging the libraries in the ZIP file with the function, move them to a Lambda layer and use the layer with the function.
C. Allocate the maximum available CPU units to the function.
D. Increase the available memory to the function.

Answer: D
Explanation:
https://serverless.zone/my-accidental-3-5x-speed-increase-of-aws-lambda-functions-6d95351197f3

QUESTION 551
A company has implemented AWS CodePipeline to automate its release pipelines. The Development team is writing an AWS Lambda function what will send notifications for state changes of each of the actions in the stages.

Which steps must be taken to associate the Lambda function with the event source?

A. Create a trigger that invokes the Lambda function from the Lambda console by selecting CodePipeline as the event source.
B. Create an event trigger and specify the Lambda function from the CodePipeline console.
C. Create an Amazon CloudWatch alarm that monitors status changes in Code Pipeline and triggers the Lambda function.
D. Create an Amazon CloudWatch Events rule that uses CodePipeline as an event source.

Answer: B
Explanation:
https://aws.amazon.com/blogs/devops/using-aws-step-functions-state-machines-to-handle-workflow-driven-aws-codepipeline-actions/

QUESTION 552
A Developer has built an application running on AWS Lambda using AWS Serverless Application Model (AWS SAM).

What is the correct order of execution to successfully deploy the application?

A. 1. Build the SAM template in Amazon EC2.
   2. Package the SAM template to Amazon EBS storage.
   3. Deploy the SAM template from Amazon EBS.
B. 1. Build the SAM template locally.
   2. Package the SAM template onto Amazon S3.
   3. Deploy the SAM template from Amazon S3.
C. 1. Build the SAM template locally.
   2. Deploy the SAM template from Amazon S3.
   3. Package the SAM template for use.
D. 1. Build the SAM template locally.
   2. Package the SAM template from AWS CodeCommit.
   3. Deploy the SAM template to CodeCommit.

Answer: B
Explanation:
https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/serverless-deploying.html

QUESTION 553
A company wants to migrate an imaging service to Amazon EC2 while following security best practices. The images are sourced and read from a non-public Amazon S3 bucket.

What should a Developer do to meet these requirements?

A. Create an IAM user with read-only permissions for the S3 bucket. Temporarily store the user credentials in the Amazon EBS volume of the EC2 instance.
B. Create an IAM user with read-only permissions for the S3 bucket. Temporarily store the user credentials in the user data of the EC2 instance.
C. Create an EC2 service role with read-only permissions for the S3 bucket. Attach the role to the EC2 instance.
D. Create an S3 service role with read-only permissions for the S3 bucket. Attach the role to the EC2 instance.

Answer: C
Explanation:
Create a service role for EC2, using least privilege's criteria (read-only) and attached the role to the EC2 instance.

QUESTION 554
A Development team wants to immediately build and deploy an application whenever there is a change to the source code.

Which approaches could be used to trigger the deployment? (Choose two.)

A. Store the source code in an Amazon S3 bucket. Configure AWS CodePipeline to start whenever a file in the bucket changes.
B. Store the source code in an encrypted Amazon EBS volume. Configure AWS CodePipeline to start whenever a file in the volume changes.
C. Store the source code in an AWS CodeCommit repository. Configure AWS CodePipeline to start whenever a change is committed to the repository.
D. Store the source code in an Amazon S3 bucket. Configure AWS CodePipeline to start every 15 minutes.

E. Store the source code in an Amazon EC2 instance's ephemeral storage. Configure the instance to start AWS CodePipeline whenever there are changes to the source code.

Answer: BC
Explanation:
https://docs.aws.amazon.com/codepipeline/latest/userguide/tutorials-ecs-ecr-codedeploy.html

QUESTION 555
A company has implemented AWS CodeDeploy as part of its cloud native CI/CD stack. The company enables automatic rollbacks while deploying a new version of a popular web application from in-place to Amazon EC2.

What occurs if the deployment of the new version fails due to code regression?

A. The last known good deployment is automatically restored using the snapshot stored in Amazon S3.
B. CodeDeploy switches the Amazon Route 53 alias records back to the known good green deployment and terminates the failed blue deployment.
C. A new deployment of the last known version of the application is deployed with a new deployment ID.
D. AWS CodePipeline promotes the most recent deployment with a SUCCEEDED status to production.

Answer: C
Explanation:
CodeDeploy rolls back deployments by redeploying a previously deployed revision of an application as a new deployment. These rolled-back deployments are technically new deployments, with new deployment IDs,
https://docs.aws.amazon.com/codedeploy/latest/userguide/deployments-rollback-and-redeploy.html#deployments-rollback-and-redeploy-automatic-rollbacks

QUESTION 556
A software company needs to make sure user-uploaded documents are securely stored in Amazon S3. The documents must be encrypted at rest in Amazon S3. The company does not want to manage the security infrastructure in-house, but the company still needs extra protection to ensure it has control over its encryption keys due to industry regulations.

Which encryption strategy should a Developer use to meet these requirements?

A. Server-side encryption with Amazon S3 managed keys (SSE-S3)
B. Server-side encryption with customer-provided encryption keys (SSE-C)
C. Server-side encryption with AWS KMS managed keys (SSE-KMS)
D. Client-side encryption

Answer: A
Explanation:
https://docs.aws.amazon.com/AmazonS3/latest/dev/UsingServerSideEncryption.html

QUESTION 557
A Developer uses Amazon S3 buckets for static website hosting. The Developer creates one S3 bucket for the code and another S3 bucket for the assets, such as image and video files. Access

is denied when a user attempts to access the assets bucket from the code bucket, with the website application showing a 403 error.

How should the Developer solve this issue?

A. Create an IAM role and apply it to the assets bucket for the code bucket to be granted access.
B. Edit the bucket policy of the assets bucket to open access to all principals.
C. Edit the cross-origin resource sharing (CORS) configuration of the assets bucket to allow any origin to access the assets.
D. Change the code bucket to use AWS Lambda functions instead of static website hosting.

Answer: B
Explanation:
https://docs.aws.amazon.com/AmazonS3/latest/user-guide/static-website-hosting.html

QUESTION 558
A Developer migrated a web application to AWS. As part of the migration, the Developer implemented an automated continuous integration/continuous improvement (CI/CD) process using a blue/green deployment. The deployment provisions new Amazon EC2 instances in an Auto Scaling group behind a new Application Load Balancer. After the migration was completed, the Developer began receiving complaints from users getting booted out of the system. The system also requires users to log in after every new deployment.
How can these issues be resolved?

A. Use rolling updates instead of a blue/green deployment
B. Externalize the user sessions to Amazon ElastiCache
C. Turn on sticky sessions in the Application Load Balancer
D. Use multicast to replicate session information

Answer: C

QUESTION 559
A Developer wants to insert a record into an Amazon DynamoDB table as soon as a new file is added to an Amazon S3 bucket.

Which set of steps would be necessary to achieve this?

A. Create an event with Amazon CloudWatch Events that will monitor the S3 bucket and then insert the records into DynamoDB.
B. Configure an S3 event to invoke a Lambda function that inserts records into DynamoDB.
C. Create a Lambda function that will poll the S3 bucket and then insert the records into DynamoDB.
D. Create a cron job that will run at a scheduled time and insert the records into DynamoDB.

Answer: B

QUESTION 560
A Developer is building an application that needs to store data in Amazon S3. Management requires that the data be encrypted before it is sent to Amazon S3 for storage. The encryption keys need to be managed by the Security team.

Which approach should the Developer take to meet these requirements?

A. Implement server-side encryption using customer-provided encryption keys (SSE-C).
B. Implement server-side encryption by using a client-side master key.
C. Implement client-side encryption using an AWS KMS managed customer master key (CMK).
D. Implement client-side encryption using Amazon S3 managed keys.

Answer: D
Explanation:
https://aws.amazon.com/s3/faqs/

QUESTION 561
A Developer has written an Amazon Kinesis Data Streams application. As usage grows and traffic increases over time, the application is regularly receiving ProvisionedThroughputExceededException error messages.

Which steps should the Developer take to resolve the error? (Choose two.)

A. Use Auto Scaling to scale the stream for better performance
B. Increase the delay between the GetRecords call and the PutRecords call
C. Increase the number of shards in the data stream
D. Specify a shard iterator using the ShardIterator parameter
E. Implement exponential backoff on the GetRecords call and the PutRecords call

Answer: CD
Explanation:
https://docs.aws.amazon.com/streams/latest/dev/troubleshooting-consumers.html

QUESTION 562
A Developer is publishing critical log data to a log group in Amazon CloudWatch Logs, which was created 2 months ago. The Developer must encrypt the log data using an AWS KMS customer master key (CMK) so future data can be encrypted to comply with the company's security policy.

How can the Developer meet this requirement?

A. Use the CloudWatch Logs console and enable the encrypt feature on the log group
B. Use the AWS CLI create-log-group command and specify the key Amazon Resource Name (ARN)
C. Use the KMS console and associate the CMK with the log group
D. Use the AWS CLI associate-kms-key command and specify the key Amazon Resource Name (ARN)

Answer: D
Explanation:
https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/encrypt-log-data-kms.html

QUESTION 563
A Developer has code running on Amazon EC2 instances that needs read-only access to an Amazon DynamoDB table.

What is the MOST secure approach the Developer should take to accomplish this task?

A. Create a user access key for each EC2 instance with read-only access to DynamoDB. Place the keys in the code. Redeploy the code as keys rotate.
B. Use an IAM role with an AmazonDynamoDBReadOnlyAccess policy applied to the EC2 instances.
C. Run all code with only AWS account root user access keys to ensure maximum access to services.
D. Use an IAM role with Administrator access applied to the EC2 instance.

Answer: B

QUESTION 564
A Developer decides to store highly secure data in Amazon S3 and wants to implement server-side encryption (SSE) with granular control of who can access the master key. Company policy requires that the master key be created, rotated, and disabled easily when needed, all for security reasons.

Which solution should be used to meet these requirements?

A. SSE with Amazon S3 managed keys (SSE-S3)
B. SSE with AWS KMS managed keys (SSE-KMS)
C. SSE with AWS Secrets Manager
D. SSE with customer-provided encryption keys

Answer: B
Explanation:
https://docs.aws.amazon.com/AmazonS3/latest/dev/UsingKMSEncryption.html

QUESTION 565
A Developer is migrating an on-premises application to AWS. The application currently takes user uploads and saves them to a local directory on the server. All uploads must be saved and made immediately available to all instances in an Auto Scaling group.

Which approach will meet these requirements?

A. Use Amazon EBS and configure the application AMI to use a snapshot of the same EBS instance on boot.
B. Use Amazon S3 and rearchitect the application so all uploads are placed in S3.
C. Use instance storage and share it between instances launched from the same Amazon Machine Image (AMI).
D. Use Amazon EBS and file synchronization software to achieve eventual consistency among the Auto Scaling group.

Answer: C

QUESTION 566
A Developer implemented a static website hosted in Amazon S3 that makes web service requests hosted in Amazon API Gateway and AWS Lambda. The site is showing an error that reads:

"No `Access-Control-Allow-Origin' header is present on the requested resource. Origin `null' is therefore not allowed access."

What should the Developer do to resolve this issue?

A. Enable cross-origin resource sharing (CORS) on the S3 bucket.
B. Enable cross-origin resource sharing (CORS) for the method in API Gateway
C. Add the Access-Control-Request-Method header to the request
D. Add the Access-Control-Request-Headers header to the request

Answer: B
Explanation:
https://forums.aws.amazon.com/thread.jspa?threadID=252972

QUESTION 567
A Developer is writing an application in AWS Lambda. To simplify testing and deployments, the Developer needs the database connections string to be easily changed without modifying the Lambda code.

How can this requirement be met?

A. Store the connection string as a secret in AWS Secrets Manager.
B. Store the connection string in an IAM user account.
C. Store the connection string in AWS KMS.
D. Store the connection string as a Lambda layer.

Answer: C
Explanation:
https://aws.amazon.com/blogs/developer/net-core-configuration-provider-for-aws-systems-manager/

QUESTION 568
A company is launching an ecommerce website and will host the static data in Amazon S3. The company expects approximately 1,000 transactions per second (TPS) for GET and PUT requests in total. Logging must be enabled to track all requests and must be retained for auditing purposes.

What is the MOST cost-effective solution?

A. Enable AWS CloudTrail logging for the S3 bucket-level action and create a lifecycle policy to move the data from the log bucket to Amazon S3 Glacier in 90 days.
B. Enable S3 server access logging and create a lifecycle policy to expire the data in 90 days.
C. Enable AWS CloudTrail logging for the S3 bucket-level action and create a lifecycle policy to expire the data in 90 days.
D. Enable S3 server access logging and create a lifecycle policy to move the data to Amazon S3 Glacier in 90 days.

Answer: C
Explanation:
https://docs.aws.amazon.com/AmazonS3/latest/dev/cloudtrail-request-identification.html

QUESTION 569
A company is building a compute-intensive application that will run on a fleet of Amazon EC2

instances. The application uses attached Amazon EBS disks for storing data. The application will process sensitive information and all the data must be encrypted.

What should a Developer do to ensure the data is encrypted on disk without impacting performance?

A. Configure the Amazon EC2 instance fleet to use encrypted EBS volumes for storing data.
B. Add logic to write all data to an encrypted Amazon S3 bucket.
C. Add a custom encryption algorithm to the application that will encrypt and decrypt all data.
D. Create a new Amazon Machine Image (AMI) with an encrypted root volume and store the data to ephemeral disks.

Answer: A
Explanation:
https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSEncryption.html

QUESTION 570
A Developer has written an application that runs on Amazon EC2 instances and generates a value every minute. The Developer wants to monitor and graph the values generated over time without logging in to the instance each time.

Which approach should the Developer use to achieve this goal?

A. Use the Amazon CloudWatch metrics reported by default for all EC2 instances. View each value from the CloudWatch console.
B. Develop the application to store each value in a file on Amazon S3 every minute with the timestamp as the name.
C. Publish each generated value as a custom metric to Amazon CloudWatch using available AWS SDKs.
D. Store each value as a variable and add the variable to the list of EC2 metrics that should be reported to the Amazon CloudWatch console.

Answer: C

QUESTION 571
A Development team decides to adopt a continuous integration/continuous delivery (CI/CD) process using AWS CodePipeline and AWS CodeCommit for a new application. However, management wants a person to review and approve the code before it is deployed to production.

How can the Development team add a manual approver to the CI/CD pipeline?

A. Use AWS SES to send an email to approvers when their action is required. Develop a simple application that allows approvers to accept or reject a build. Invoke an AWS Lambda function to advance the pipeline when a build is accepted.
B. If approved, add an approved tag when pushing changes to the CodeCommit repository. CodePipeline will proceed to build and deploy approved commits without interruption.
C. Add an approval step to CodeCommit. Commits will not be saved until approved.
D. Add an approval action to the pipeline. Configure the approval action to publish to an Amazon SNS topic when approval is required. The pipeline execution will stop and wait for an approval.

Answer: D
Explanation:

https://docs.aws.amazon.com/codepipeline/latest/userguide/approvals-action-add.html

QUESTION 572
A Developer is building a serverless application using AWS Lambda and must create a REST API using an HTTP GET method.

What needs to be defined to meet this requirement? (Choose two.)

A. A Lambda@Edge function
B. An Amazon API Gateway with a Lambda function
C. An exposed GET method in an Amazon API Gateway
D. An exposed GET method in the Lambda function
E. An exposed GET method in Amazon Route 53

Answer: BC
Explanation:
https://docs.aws.amazon.com/apigateway/latest/developerguide/apigateway-getting-started-with-rest-apis.html

QUESTION 573
A Developer needs to create an application that supports Security Assertion Markup Language (SAML) and Facebook authentication. It must also allow access to AWS services, such as Amazon DynamoDB.

Which AWS service or feature will meet these requirements with the LEAST amount of additional coding?

A. AWS AppSync
B. Amazon Cognito identity pools
C. Amazon Cognito user pools
D. Amazon Lambda@Edge

Answer: C
Explanation:
https://aws.amazon.com/blogs/mobile/amazon-cognito-user-pools-supports-federation-with-saml/

QUESTION 574
A Developer is trying to monitor an application's status by running a cron job that returns 1 if the service is up and 0 if the service is down. The Developer created code that uses an AWS CLI put-metric-alarm command to publish the custom metrics to Amazon CloudWatch and create an alarm. However, the Developer is unable to create an alarm as the custom metrics do not appear in the CloudWatch console.

What is causing this issue?

A. Sending custom metrics using the CLI is not supported.
B. The Developer needs to use the put-metric-data command.
C. The Developer must use a unified CloudWatch agent to publish custom metrics.
D. The code is not running on an Amazon EC2 instance.

Answer: B

QUESTION 575
A Developer registered an AWS Lambda function as a target for an Application Load Balancer (ALB) using a CLI command. However, the Lambda function is not being invoked when the client sends requests through the ALB.

Why is the Lambda function not being invoked?

A. A Lambda function cannot be registered as a target for an ALB.
B. A Lambda function can be registered with an ALB using AWS Management Console only.
C. The permissions to invoke the Lambda function are missing.
D. Cross-zone is not enabled on the ALB.

Answer: C
Explanation:
https://docs.aws.amazon.com/elasticloadbalancing/latest/application/lambda-functions.html

QUESTION 576
A company provides APIs as a service and commits to a service level agreement (SLA) with all its users.

To comply with each SLA, what should the company do?

A. Enable throttling limits for each method in Amazon API Gateway
B. Create a usage plan for each user and request API keys to access the APIs
C. Enable API rate limiting in Amazon Cognito for each user
D. Enable default throttling limits for each stage after deploying the APIs

Answer: D

QUESTION 577
A Developer is preparing a deployment package using AWS CloudFormation. The package consists of two separate templates: one for the infrastructure and one for the application. The application has to be inside the VPC that is created from the infrastructure template. How can the application stack refer to the VPC created from the infrastructure template?

A. Use the Ref function to import the VPC into the application stack from the infrastructure template.
B. Use the export flag in the infrastructure template, and then use the Fn::ImportValue function in the application template.
C. Use the DependsOn attribute to specify that the application instance depends on the VPC in the application template.
D. Use the Fn::GetAtt function to include the attribute of the VPC in the application template.

Answer: A

QUESTION 578
A Developer must allow guest users without logins to access an Amazon Cognito-enabled site to view files stored within an Amazon S3 bucket.

How should the Developer meet these requirements?

A. Create a blank user ID in a user pool, add to the user group, and grant access to AWS resources.
B. Create a new identity pool, enable access to authenticated identities, and grant access to AWS resources.
C. Create a new user pool, enable access to authenticated identifies, and grant access to AWS resources.
D. Create a new user pool, disable authentication access, and grant access to AWS resources.

Answer: D

QUESTION 579
A Developer has written code for an application and wants to share it with other Developers on the team to receive feedback. The shared application code needs to be stored long-term with multiple versions and batch change tracking.

Which AWS service should the Developer use?

A. AWS CodeBuild
B. Amazon S3
C. AWS CodeCommit
D. AWS Cloud9

Answer: C
Explanation:
https://docs.aws.amazon.com/codecommit/latest/userguide/codecommit-user.pdf

QUESTION 580
A Developer has discovered that an application responsible for processing messages in an Amazon SQS queue is routinely falling behind. The application is capable of processing multiple messages in one execution, but is only receiving one message at a time.

What should the Developer do to increase the number of messages the application receives?

A. Call the ChangeMessageVisibility API for the queue and set MaxNumberOfMessages to a value greater than the default of 1.
B. Call the AddPermission API to set MaxNumberOfMessages for the ReceiveMessage action to a value greater than the default of 1.
C. Call the ReceiveMessage API to set MaxNumberOfMessages to a value greater than the default of 1.
D. Call the SetQueueAttributes API for the queue and set MaxNumberOfMessages to a value greater than the default of 1.

Answer: C
Explanation:
https://docs.aws.amazon.com/AWSSimpleQueueService/latest/APIReference/API_ReceiveMessage.html

QUESTION 581
A Developer is investigating an application's performance issues. The application consists of hundreds of microservices, and a single API call can potentially have a deep call stack. The Developer must isolate the component that is causing the issue.

Which AWS service or feature should the Developer use to gather information about what is happening and isolate the fault?

A. AWS X-Ray
B. VPC Flow Logs
C. Amazon GuardDuty
D. Amazon Macie

Answer: A
Explanation:
https://docs.aws.amazon.com/xray/latest/devguide/xray-concepts.html

QUESTION 582
A Company runs continuous integration/continuous delivery (CI/CD) pipelines for its application on AWS CodePipeline. A Developer must write unit tests and run them as part of the pipelines before staging the artifacts for testing.

How should the Developer incorporate unit tests as part of CI/CD pipelines?

A. Create a separate CodePipeline pipeline to run unit tests
B. Update the AWS CodeBuild specification to include a phase for running unit tests
C. Install the AWS CodeDeploy agent on an Amazon EC2 instance to run unit tests
D. Create a testing branch in AWS CodeCommit to run unit tests

Answer: D

QUESTION 583
An application has the following requirements:

- Performance efficiency of seconds with up to a minute of latency.
- The data storage size may grow up to thousands of terabytes.
- Per-message sizes may vary between 100 KB and 100 MB.
- Data can be stored as key/value stores supporting eventual consistency.

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

A. Amazon DynamoDB
B. Amazon S3
C. Amazon RDS (with a MySQL engine)
D. Amazon ElastiCache

Answer: A
Explanation:
https://aws.amazon.com/nosql/key-value/

QUESTION 584
An application is experiencing performance issues based on increased demand. This increased demand is on read-only historical records pulled from an Amazon RDS-hosted database with custom views and queries. A Developer must improve performance without changing the

database structure.

Which approach will improve performance and MINIMIZE management overhead?

A. Deploy Amazon DynamoDB, move all the data, and point to DynamoDB.
B. Deploy Amazon ElastiCache for Redis and cache the data for the application.
C. Deploy Memcached on Amazon EC2 and cache the data for the application.
D. Deploy Amazon DynamoDB Accelerator (DAX) on Amazon RDS to improve cache performance.

Answer: B

QUESTION 585
A Developer has an Amazon DynamoDB table that must be in provisioned mode to comply with user requirements. The application needs to support the following:

- Average item size: 10 KB
- Item reads each second: 10 strongly consistent
- Item writes each second: 2 transactional

Which read and write capacity cost-effectively meets these requirements?

A. Read 10; write 2
B. Read 30; write 40
C. Use on-demand scaling
D. Read 300; write 400

Answer: A

QUESTION 586
A company wants to containerize an existing three-tier web application and deploy it to Amazon ECS Fargate. The application is using session data to keep track of user activities.

Which approach would provide the BEST user experience?

A. Provision a Redis cluster in Amazon ElastiCache and save the session data in the cluster.
B. Create a session table in Amazon Redshift and save the session data in the database table.
C. Enable session stickiness in the existing Network Load Balancer and manage the session data in the container.
D. Use an Amazon S3 bucket as data store and save the session data in the bucket.

Answer: C

QUESTION 587
An application is using a single-node Amazon ElastiCache for Redis instance to improve read performance. Over time, demand for the application has increased exponentially, which has increased the load on the ElastiCache instance. It is critical that this cache layer handles the load and is resilient in case of node failures.

What can the Developer do to address the load and resiliency requirements?

A. Add a read replica instance.
B. Migrate to a Memcached cluster.
C. Migrate to an Amazon Elasticsearch Service cluster.
D. Vertically scale the ElastiCache instance.

Answer: A
Explanation:
https://docs.aws.amazon.com/AmazonElastiCache/latest/red-ug/Replication.Redis.Groups.html

QUESTION 588
A Developer is designing an AWS Lambda function that create temporary files that are less than 10 MB during execution. The temporary files will be accessed and modified multiple times during execution. The Developer has no need to save or retrieve these files in the future.

Where should the temporary file be stored?

A. the /tmp directory
B. Amazon EFS
C. Amazon EBS
D. Amazon S3

Answer: A
Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/lambda-dg.pdf (23)

QUESTION 589
A Developer is writing an application that runs on Amazon EC2 instances in an Auto Scaling group. The application data is stored in an Amazon DynamoDB table and records are constantly updated by all instances. An instance sometimes retrieves old data. The Developer wants to correct this by making sure the reads are strongly consistent.

How can the Developer accomplish this?

A. Set ConsistentRead to true when calling GetItem.
B. Create a new DynamoDB Accelerator (DAX) table.
C. Set Consistency to strong when calling UpdateTable.
D. Use the GetShardIterator command.

Answer: A
Explanation:
https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadConsistency.html

QUESTION 590
A Developer has an application that must accept a large amount of incoming data streams and process the data before sending it to many downstream users.

Which serverless solution should the Developer use to meet these requirements?

A. Amazon RDS MySQL stored procedure with AWS Lambda
B. AWS Direct Connect with AWS Lambda

C. Amazon Kinesis Data Streams with AWS Lambda
D. Amazon EC2 bash script with AWS Lambda

Answer: C
Explanation:
https://aws.amazon.com/kinesis/data-analytics/faqs/

QUESTION 591
A company is using Amazon API Gateway to manage its public-facing API. The CISO requires that the APIs be used by test account users only.

What is the MOST secure way to restrict API access to users of this particular AWS account?

A. Client-side SSL certificates for authentication
B. API Gateway resource policies
C. Cross-origin resource sharing (CORS)
D. Usage plans

Answer: B
Explanation:
https://aws.amazon.com/blogs/compute/control-access-to-your-apis-using-amazon-api-gateway-resource-policies/

QUESTION 592
A Developer is migrating existing applications to AWS. These applications use MongoDB as their primary data store, and they will be deployed to Amazon EC2 instances. Management requires that the Developer minimize changes to applications while using AWS services.

Which solution should the Developer use to host MongoDB in AWS?

A. Install MongoDB on the same instance where the application is running.
B. Deploy Amazon DocumentDB in MongoDB compatibility mode.
C. Use Amazon API Gateway to translate API calls from MongoDB to Amazon DynamoDB.
D. Replicate the existing MongoDB workload to Amazon DynamoDB.

Answer: B
Explanation:
Amazon DocumentDB (with MongoDB compatibility) is a fast, scalable, highly available, and fully managed document database service that supports MongoDB workloads. As a document database, Amazon DocumentDB makes it easy to store, query, and index JSON data.
Amazon DocumentDB is a non-relational database service designed from the ground-up to give you the performance, scalability, and availability you need when operating mission-critical MongoDB workloads at scale.

QUESTION 593
A company requires that AWS Lambda functions written by Developers log errors so System Administrators can more effectively troubleshoot issues.
What should the Developers implement to meet this need?

A. Publish errors to a dedicated Amazon SQS queue.
B. Create an Amazon CloudWatch Events event trigger based on certain Lambda events.

C. Report errors through logging statements in Lambda function code.
D. Set up an Amazon SNS topic that sends logging statements upon failure.

Answer: B

QUESTION 594
A Developer needs to deploy an application running on AWS Fargate using Amazon ECS. The application has environment variables that must be passed to a container for the application to initialize.

How should the environment variables be passed to the container?

A. Define an array that includes the environment variables under the environment parameter within the service definition.
B. Define an array that includes the environment variables under the environment parameter within the task definition.
C. Define an array that includes the environment variables under the entryPoint parameter within the task definition.
D. Define an array that includes the environment variables under the entryPoint parameter within the service definition.

Answer: B

QUESTION 595
A company's fleet of Amazon EC2 instances receives data from millions of users through an API. The servers batch the data, add an object for each user, and upload the objects to an S3 bucket to ensure high access rates. The object attributes are Customer ID, Server ID, TS-Server (TimeStamp and Server ID), the size of the object, and a timestamp. A Developer wants to find all the objects for a given user collected during a specified time range.

After creating an S3 object created event, how can the Developer achieve this requirement?

A. Execute an AWS Lambda function in response to the S3 object creation events that creates an Amazon DynamoDB record for every object with the Customer ID as the partition key and the Server ID as the sort key. Retrieve all the records using the Customer ID and Server ID attributes.
B. Execute an AWS Lambda function in response to the S3 object creation events that creates an Amazon Redshift record for every object with the Customer ID as the partition key and TS-Server as the sort key. Retrieve all the records using the Customer ID and TS-Server attributes.
C. Execute an AWS Lambda function in response to the S3 object creation events that creates an Amazon DynamoDB record for every object with the Customer ID as the partition key and TS-Server as the sort key. Retrieve all the records using the Customer ID and TS-Server attributes.
D. Execute an AWS Lambda function in response to the S3 object creation events that creates an Amazon Redshift record for every object with the Customer ID as the partition key and the Server ID as the sort key. Retrieve all the records using the Customer ID and Server ID attributes.

Answer: C

QUESTION 596
A company is managing a NoSQL database on-premises to host a critical component of an application, which is starting to have scaling issues. The company wants to migrate the application to Amazon DynamoDB with the following considerations:

- Optimize frequent queries
- Reduce read latencies
- Plan for frequent queries on certain key attributes of the table

Which solution would help achieve these objectives?

A. Create global secondary indexes on keys that are frequently queried. Add the necessary attributes into the indexes.
B. Create local secondary indexes on keys that are frequently queried. DynamoDB will fetch needed attributes from the table.
C. Create DynamoDB global tables to speed up query responses. Use a scan to fetch data from the table.
D. Create an AWS Auto Scaling policy for the DynamoDB table.

Answer: A

QUESTION 597
A developer is writing an application that will process data delivered into an Amazon S3 bucket. The data is delivered approximately 10 times a day, and the developer expects the data will be processed in less than 1 minute, on average.

How can the developer deploy and invoke the application with the lowest cost and lowest latency?

A. Deploy the application as an AWS Lambda function and invoke it with an Amazon CloudWatch alarm triggered by an S3 object upload.
B. Deploy the application as an AWS Lambda function and invoke it with an S3 event notification.
C. Deploy the application as an AWS Lambda function and invoke it with an Amazon CloudWatch scheduled event.
D. Deploy the application onto an Amazon EC2 instance and have it poll the S3 bucket for new objects.

Answer: B
Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/with-s3.html

QUESTION 598
A developer converted an existing program to an AWS Lambda function in the console. The program runs properly on a local laptop, but shows an "Unable to import module" error when tested in the Lambda console.

Which of the following can fix the error?

A. Install the missing module and specify the current directory as the target. Create a ZIP file to include all files under the current directory, and upload the ZIP file.
B. Install the missing module in a lib directory. Create a ZIP file to include all files under the lib directory, and upload the ZIP file as dependency file.
C. In the Lambda code, invoke a Linux command to install the missing modules under the /usr/lib directory.
D. In the Lambda console, create a LB_LIBRARY_PATH environment and specify the value for the

system library plan.

Answer: D
Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/lambda-dg.pdf

QUESTION 599
A front-end web application is using Amazon Cognito user pools to handle the user authentication flow. A developer is integrating Amazon DynamoDB into the application using the AWS SDK for JavaScript.

How would the developer securely call the API without exposing the access or secret keys?

A. Configure Amazon Cognito identity pools and exchange the JSON Web Token (JWT) for temporary credentials.
B. Run the web application in an Amazon EC2 instance with the instance profile configured.
C. Hardcore the credentials, use Amazon S3 to host the web application, and enable server-side encryption.
D. Use Amazon Cognito user pool JSON Web Tokens (JWITs) to access the DynamoDB APIs.

Answer: A
Explanation:
https://docs.aws.amazon.com/cognito/latest/developerguide/amazon-cognito-user-pools-using-tokens-verifying-a-jwt.html

QUESTION 600
A developer needs to manage AWS infrastructure as code and must be able to deploy multiple identical copies of the infrastructure, stage changes, and revert to previous versions.

Which approach addresses these requirements?

A. Use cost allocation reports and AWS OpsWorks to deploy and manage the infrastructure.
B. Use Amazon CloudWatch metrics and alerts along with resource tagging to deploy and manage the infrastructure.
C. Use AWS Elastic Beanstalk and AWS CodeCommit to deploy and manage the infrastructure.
D. Use AWS CloudFormation and AWS CodeCommit to deploy and manage the infrastructure.

Answer: D

QUESTION 601
What is required to trace Lambda-based applications with AWS X-Ray?

A. Send logs from the Lambda application to an S3 bucket; trigger a Lambda function from the bucket to send data to AWS X-Ray.
B. Trigger a Lambda function from the application logs in Amazon CloudWatch to submit tracing data to AWS X-Ray.
C. Use an IAM execution role to give the Lambda function permissions and enable tracing.
D. Update and add AWS X-Ray daemon code to relevant parts of the Lambda function to set up the trace.

Answer: B

Explanation:
https://docs.aws.amazon.com/lambda/latest/dg/services-xray.html

QUESTION 602
A development team is building a new application that will run on Amazon EC2 and use Amazon DynamoDB as a storage layer. The developers all have assigned IAM user accounts in the same IAM group. The developers currently can launch EC2 instances, and they need to be able to launch EC2 instances with an instance role allowing access to Amazon DynamoDB.

Which AWS IAM changes are needed when creating an instance role to provide this functionality?

A. Create an IAM permission policy attached to the role that allows access to DynamoDB. Add a trust policy to the role that allows DynamoDB to assume the role. Attach a permissions policy to the development group in AWS IAM that allows developers to use the iam:GetRole and iam:PassRole permissions for the role.
B. Create an IAM permissions policy attached to the role that allows access to DynamoDB. Add a trust policy to the role that allows Amazon EC2 to assume the role. Attach a permissions policy to the development group in AWS IAM that allows developers to use the iam:PassRole permission for the role.
C. Create an IAM permission policy attached to the role that allows access to Amazon EC2. Add a trust policy to the role that allows DynamoDB to assume the role. Attach a permissions policy to the development group in AWS IAM that allows developers to use the iam:PassRole permission for the role.
D. Create an IAM permissions policy attached to the role that allows access to DynamoDB. Add a trust policy to the role that allows Amazon EC2 to assume the role. Attach a permissions policy to the development group in AWS IAM that allows developers to use the iam:GetRole permission for the role.

Answer: B
Explanation:
https://docs.aws.amazon.com/glue/latest/dg/attach-policy-iam-user.html

QUESTION 603
A developer is migrating code to an AWS Lambda function that will an Amazon Aurora MySQL database.

What is the MOST secure way to authenticate the function to the database?

A. Store the database credentials as encrypted parameters in AWS Systems Manager Parameters Store.
Obtain the credentials from Systems Manager when the Lambda function needs to connect to the database.
B. Store the database credentials in AWS Secrets Manager. Let Secrets Manager handle the rotation of the credentials, as required.
C. Store the database credentials in an Amazon S3 bucket that has a restrictive bucket policy for the Lambda role when accessing the credentials. Use AWS KMS to encrypt the data.
D. Create a policy with rds-db:connect access to the database and attach it to the role assigned to the Lambda function.

Answer: B
Explanation:
https://aws.amazon.com/blogs/security/rotate-amazon-rds-database-credentials-automatically-

with-aws-secrets-manager/

QUESTION 604
A development team uses AWS Elastic Beanstalk for application deployment. The team has configured the application version lifecycle policy to limit the number of application versions to 25. However, even with the lifecycle policy, the source bundle is deleted from the Amazon S3 source bucket.

What should a developer do in the Elastic Beanstalk application version lifecycle settings to retain the source code in the S3 bucket?

A. Change the Set the application versions limit by total count setting to zero.
B. Disable the Lifecycle policy setting.
C. Change the Set the application version limit by age setting to zero.
D. Set Retention to Retain source bundle in S3.

Answer: D
Explanation:
https://digitalcloud.training/certification-training/aws-developer-associate/aws-compute/elastic-beanstalk/

QUESTION 605
A developer has built a market application that stores pricing data in Amazon DynamoDB with Amazon ElastiCache in front. The prices of items in the market change frequently. Sellers have begun complaining that, after they update the price of an item, the price does not actually change in the product listing.

What could be causing this issue?

A. The cache is not being invalidated when the price of the item is changed
B. The price of the item is being retrieved using a write-through ElastiCache cluster
C. The DynamoDB table was provisioned with insufficient read capacity
D. The DynamoDB table was provisioned with insufficient write capacity

Answer: A

QUESTION 606
A developer is provided with an HTTPS clone URL for an AWS CodeCommit repository.

What needs to be configured before cloning this repository?

A. Use AWS KMS to set up public and private keys for use with AWS CodeCommit.
B. Set up the Git credential helper to use an AWS credential profile, and enable the helper to send the path to the repositories.
C. Use AWS Certificate Manager to provision public and private SSL/TLS certificates.
D. Generate encryption keys using AWS CloudHSM, then export the key for use with AWS CodeCommitl.

Answer: B
Explanation:
AWS credential profile, and enabling the Git credential helper to send the path to repositories:

https://docs.aws.amazon.com/codecommit/latest/userguide/setting-up-https-unixes.html

QUESTION 607
A developer is building an application using an Amazon API Gateway REST API backend by an AWS Lambda function that interacts with an Amazon DynamoDB table. During testing, the developer observes high latency when making requests to the API.

How can the developer evaluate the end-to-end latency and identify performance bottlenecks?

A. Enable AWS CloudTrail logging and use the logs to map each latency and bottleneck.
B. Enable and configure AWS X-Ray tracing on API Gateway and the Lambda function. Use X-Ray to trace and analyze user requests.
C. Enable Amazon CloudWatch Logs for the Lambda function. Enable execution logs for API Gateway to view and analyze user request logs.
D. Enable VPC Flow Logs to capture and analyze network traffic within the VPC.

Answer: B
Explanation:
https://docs.aws.amazon.com/apigateway/latest/developerguide/apigateway-xray.html

QUESTION 608
A developer is writing an AWS Lambda function. The developer wants to log key events that occur during the Lambda function and include a unique identifier to associate the events with a specific function invocation.

Which of the following will help the developer accomplish this objective?

A. Obtain the request identifier from the Lambda context object. Architect the application to write logs to the console.
B. Obtain the request identifier from the Lambda event object. Architect the application to write logs to a file.
C. Obtain the request identifier from the Lambda event object. Architect the application to write logs to the console.
D. Obtain the request identifier from the Lambda context object. Architect the application to write logs to a file.

Answer: A

QUESTION 609
An IAM role is attached to an Amazon EC2 instance that explicitly denies access to all Amazon S3 API actions. The EC2 instance credentials file specifies the IAM access key and secret access key, which allow full administrative access.

Given that multiple modes of IAM access are present for this EC2 instance, which of the following is correct?

A. The EC2 instance will only be able to list the S3 buckets.
B. The EC2 instance will only be able to list the contents of one S3 bucket at a time.
C. The EC2 instance will be able to perform all actions on any S3 bucket.
D. The EC2 instance will not be able to perform any S3 action on any S3 bucket.

Answer: A

QUESTION 610
Two containerized microservices are hosted on Amazon EC2 ECS. The first microservice reads an Amazon RDS Aurora database instance, and the second microservice reads an Amazon DynamoDB table.

How can each microservice be granted the minimum privileges?

A. Set ECS_ENABLE_TASK_IAM_ROLE to false on EC2 instance boot in ECS agent configuration file.
Run the first microservice with an IAM role for ECS tasks with read-only access for the Aurora database. Run the second microservice with an IAM role for ECS tasks with read-only access to DynamoDB.
B. Set ECS_ENABLE_TASK_IAM_ROLE to false on EC2 instance boot in the ECS agent configuration file. Grant the instance profile role read-only access to the Aurora database and DynamoDB.
C. Set ECS_ENABLE_TASK_IAM_ROLE to true on EC2 instance boot in the ECS agent configuration file.
Run the first microservice with an IAM role for ECS tasks with read-only access for the Aurora database. Run the second microservice with an IAM role for ECS tasks with read-only access to DynamoDB.
D. Set ECS_ENABLE_TASK_IAM_ROLE to true on EC2 instance boot in the ECS agent configuration file.
Grant the instance profile role read-only access to the Aurora database and DynamoDB.

Answer: C
Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/ecs-iam-task-roles-config-errors/

QUESTION 611
A developer has written an AWS Lambda function using Java as the runtime environment. The developer wants to isolate a performance bottleneck in the code. Which steps should be taken to reveal the bottleneck?

A. Use the Amazon CloudWatch API to write timestamps to a custom CloudWatch metric. Use the CloudWatch console to analyze the resulting data.
B. Use the AWS X-Ray API to write trace data into X-Ray from strategic places within the code. Use the Amazon CloudWatch console to analyze the resulting data.
C. Use the AWS X-Ray API to write trace data into X-Ray from strategic places within the code. Use the X-Ray console to analyze the resulting data.
D. Use the Amazon CloudWatch API to write timestamps to a custom CloudWatch metric. Use the AWS X-Ray console to analyze the resulting data.

Answer: B
Explanation:
https://docs.aws.amazon.com/xray/latest/devguide/xray-guide.pdf

QUESTION 612
A developer added a new feature to an application running on an Amazon EC2 instance that uses Amazon SQS. After deployment, the developer noticed a significant increase in Amazon SQS costs. When monitoring the Amazon SQS metrics on Amazon CloudWatch, the developer found

that on average one message per minute is posted on this queue.

What can be done to reduce Amazon SQS costs for this application?

A. Increase the Amazon SQS queue polling timeout.
B. Scale down the Amazon SQS queue to the appropriate size for low traffic demand.
C. Configure push delivery via Amazon SNS instead of polling the Amazon SQS queue.
D. Use an Amazon SQS first-in, first-out (FIFO) queue instead of a standard queue.

Answer: A

QUESTION 613
A developer is using Amazon DynamoDB to store application data. The developer wants to further improve application performance by reducing response times for read and write operations. Which DynamoDB feature should be used to meet these requirements?

A. Amazon DynamoDB Streams
B. Amazon DynamoDB Accelerator
C. Amazon DynamoDB global tables
D. Amazon DynamoDB transactions

Answer: D
Explanation:
https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadWriteCapacityMode.html

QUESTION 614
A developer is creating a script to automate the deployment process for a serverless application. The developer wants to use an existing AWS Serverless Application Model (AWS SAM) template for the application.

What should the developer use for the project? (Choose two.)

A. Call aws cloudformation package to create the deployment package. Call aws cloudformation deploy to deploy the package afterward.
B. Call sam package to create the deployment package. Call sam deploy to deploy the package afterward.
C. Call aws s3 cp to upload the AWS SAM template to Amazon S3. Call aws lambda update-function-code to create the application.
D. Create a ZIP package locally and call aws serverlessrepo create-application to create the application.
E. Create a ZIP package and upload it to Amazon S3. Call aws cloudformation create-stack to create the application.

Answer: CE
Explanation:
https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/serverless-getting-started-hello-world.html
https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/using-cfn-cli-package.html

QUESTION 615

A development team is designing a mobile app that requires multi-factor authentication.

Which steps should be taken to achieve this? (Choose two.)

A. Use Amazon Cognito to create a user pool and create users in the user pool.
B. Send multi-factor authentication text codes to users with the Amazon SNS Publish API call in the app code.
C. Enable multi-factor authentication for the Amazon Cognito user pool.
D. Use AWS IAM to create IAM users.
E. Enable multi-factor authentication for the users created in AWS IAM.

Answer: CE
Explanation:
https://docs.aws.amazon.com/cognito/latest/developerguide/user-pool-settings-mfa.html#:~:text=To%20configure%20MFA%20in%20the,the%20risk%2Dbased%20adaptive%20authentication.
https://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_mfa_enable_virtual.html

QUESTION 616
A gaming application stores scores for players in an Amazon DynamoDB table that has four attributes:
user_id, user_name, user_score, and user_rank. The users are allowed to update their names only. A user is authenticated by web identity federation.

Which set of conditions should be added in the policy attached to the role for the dynamodb: PutItem API call?

A.
```
"Condition": {
 "ForAllValues:StringEquals": {
  "dynamodb:LeadingKeys": [
   "${www.amazon.com:user_id}"
  ],
  "dynamodb:Attributes": [
   "user_name"
  ]
 }
```

B.
```
"Condition": {
 "ForAllValues:StringEquals": {
  "dynamodb:LeadingKeys": [
   "${www.amazon.com:user_name}"
  ],
  "dynamodb:Attributes": [
   "user_id"
  ]
 }
```

C.
```
"Condition": {
 "ForAllValues:StringEquals": {
  "dynamodb:LeadingKeys": [
   "${www.amazon.com:user_id}"
  ],
  "dynamodb:Attributes": [
   "user_name", "user_id"
  ]
 }
```

D.
```
"Condition": {
 "ForAllValues:StringEquals": {
  "dynamodb:LeadingKeys": [
   "${www.amazon.com:user_name}"
  ],
  "dynamodb:Attributes": [
   "user_name", "user_id"
  ]
 }
```

Answer: C

QUESTION 617
A developer is using AWS CodeDeploy to deploy an application running on Amazon EC2. The developer wants to change the file permissions for a specific deployment file.

Which lifecycle event should a developer use to meet this requirement?

A. AfterInstall
B. DownloadBundle
C. BeforeInstall
D. ValidateService

Answer: A
Explanation:
You can use the AfterInstall deployment lifecycle event for tasks such as configuring your application or changing file permissions.
https://aws.amazon.com/codedeploy/faqs/

QUESTION 618
Given the following AWS CloudFormation template:

```
Description: Creates a new Amazon S3 bucket for shared content. Uses a
random bucket name to avoid conflicts.

Resources:

      ContentBucket:
            Type: AWS::S3::Bucket
      Outputs:

            ContentBucketName:
                  Value: !Ref ContentBucket
```

What is the MOST efficient way to reference the new Amazon S3 bucket from another AWS CloudFormation template?

A. Add an Export declaration to the Outputs section of the original template and use ImportValue in other templates.
B. Add Exported: true to the Contentbucket in the original template and use ImportResource in other templates.
C. Create a custom AWS CloudFormation resource that gets the bucket name from the ContentBucket resource of the first stack.
D. Use Fn::Include to include the existing template in other templates and use the ContentBucket resource directly.

Answer: C

QUESTION 619
A company is developing a report executed by AWS Step Functions, Amazon CloudWatch shows errors in the Step Functions task state machine. To troubleshoot each task, the state input needs to be included along with the error message in the state output.
Which coding practice can preserve both the original input and the error for the state?

A. Use ResultPath in a Catch statement to include the error with the original input.
B. Use InputPath in a Catch statement and set the value to null.
C. Use Error Equals in a Retry statement to include the error with the original input.
D. Use OutputPath in a Retry statement and set the value to $.

Answer: A
Explanation:
Use ResultPath in a Catch to include the error with the original input.
https://docs.aws.amazon.com/step-functions/latest/dg/input-output-resultpath.html

QUESTION 620
A developer receives the following error message when trying to launch or terminate an Amazon EC2 instance using a boto3 script.

```
boto.exception.BotoServerError: BotoServerError: 503 Service Unavailable
<?xml version="1.0" encoding="UTF-8"?>
<Response><Errors><Error><Code>RequestLimitExceeded</Code>
<Message>Request limit exceeded.</Message></Error></Errors><RequestID>bfddec84-53b3-4701-b728-dceefb696ced</RequestID>
</Response>
```

What should the developer do to correct this error message?

A. Assign an IAM role to the EC2 instance to allow necessary API calls on behalf of the client.
B. Implement an exponential backoff algorithm for optimizing the number of API requests made to Amazon EC2.
C. Increase the overall network bandwidth to handle higher API request rates.
D. Upgrade to the latest AWS CLI version so that boto3 can handle higher request rates.

Answer: B
Explanation:
https://docs.aws.amazon.com/general/latest/gr/api-retries.html

QUESTION 621
A developer is updating an application deployed on AWS Elastic Beanstalk. The new version is incompatible with the old version. To successfully deploy the update, a full cutover to the new, updated version must be performed on all instances at one time, with the ability to roll back changes in case of a deployment failure in the new version.

How can this be performed with the LEAST amount of downtime?

A. Use the Elastic Beanstalk All at once deployment policy to update all instances simultaneously.
B. Perform an Elastic Beanstalk Rolling with additional batch deployment.
C. Deploy the new version in a new Elastic Beanstalk environment and swap environment URLs.
D. Perform an Elastic Beanstalk Rolling deployment.

Answer: D
Explanation:
Elastic Beanstalk has rolled out a couple of features over the last year that make zero-downtime deployment.
https://rollout.io/blog/batch-deployment-in-aws-elastic-beanstalk/

QUESTION 622
A developer is writing a web application that must share secure documents with end users. The documents are stored in a private Amazon S3 bucket. The application must allow only authenticated users to download specific documents when requested, and only for a duration of 15 minutes.

How can the developer meet these requirements?

A. Copy the documents to a separate S3 bucket that has a lifecycle policy for deletion after 15 minutes.
B. Create a presigned S3 URL using the AWS SDK with an expiration time of 15 minutes.
C. Use server-side encryption with AWS KMS managed keys (SSE-KMS) and download the documents using HTTPS.
D. Modify the S3 bucket policy to only allow specific users to download the documents. Revert the change after 15 minutes.

Answer: B

QUESTION 623
A developer wants to send multi-value headers to an AWS Lambda function that is registered as

a target with an Application Load Balancer (ALB).

What should the developer do to achieve this?

A. Place the Lambda function and target group in the same account.
B. Send the request body to the Lambda function with a size less than 1 MB.
C. Include the Base64 encoding status, status code, status description, and headers in the Lambda function.
D. Enable the multi-value headers on the ALB.

Answer: D

QUESTION 624
An ecommerce startup is preparing for an annual sales event. As the traffic to the company's application increases, the development team wants to be notified when the Amazon EC2 instance's CPU utilization exceeds 80%.

Which solution will meet this requirement?

A. Create a custom Amazon CloudWatch alarm that sends a notification to an Amazon SNS topic when the CPU utilization exceeds 80%.
B. Create a custom AWS Cloud Trail alarm that sends a notification to an Amazon SNS topic when the CPU utilization exceeds 80%.
C. Create a cron job on the EC2 instance that executes the --describe-instance-information command on the host instance every 15 minutes and sends the results to an Amazon SNS topic.
D. Create an AWS Lambda function that queries the AWS CloudTrail logs for the CPUUtilization metric every 15 minutes and sends a notification to an Amazon SNS topic when the CPU utilization exceeds 80%.

Answer: A

QUESTION 625
An application running on Amazon EC2 opens connections to an Amazon RDS SQL Server database. The developer does not want to store the user name and password for the database in the code. The developer would also like to automatically rotate the credentials.

What is the MOST secure way to store and access the database credentials?

A. Create an IAM role that has permissions to access the database.
Attach the role to the EC2 instance.
B. Use AWS Secrets Manager to store the credentials.
Retrieve the credentials from Secrets Manager as needed.
C. Store the credentials in an encrypted text file in an Amazon S3 bucket.
Configure the EC2 instance's user data to download the credentials from Amazon S3 as the instance boots.
D. Store the user name and password credentials directly in the source code.
No further action is needed because the source code is stored in a private repository.

Answer: B

QUESTION 626

A global company has an application running on Amazon EC2 instances that serves image files from Amazon S3. User requests from the browser are causing high traffic, which results in degraded performance.

Which optimization solution should a developer implement to increase application performance?

A. Create multiple prefixes in the S3 bucket to increase the request rate.
B. Create an Amazon ElastiCache cluster to cache and serve frequently accessed items.
C. Use Amazon CloudFront to serve the content of images stored in Amazon S3.
D. Submit a ticket to AWS Support to request a rate limit increase for the S3 bucket.

Answer: C

QUESTION 627
An application needs to encrypt data that is written to Amazon S3 where the keys are managed in an on- premises data center, and the encryption is handled by S3.

Which type of encryption should be used?

A. Use server-side encryption with Amazon S3-managed keys
B. Use server-side encryption with AWS KMS-managed keys
C. Use client-side encryption with customer master key
D. Use server-side encryption with customer-provided keys

Answer: C

QUESTION 628
A development team is working on a mobile app that allows users to upload pictures to Amazon S3. The team expects the app will be used by hundreds of thousands of users during a single event simultaneously. Once the pictures are uploaded, the backend service will scan and parse the pictures for inappropriate content.

Which approach is the MOST resilient way to achieve this goal, which also smooths out temporary volume spikes for the backend service?

A. Develop an AWS Lambda function to check the upload folder in the S3 bucket.
If new uploaded pictures are detected, the Lambda function will scan and parse them.
B. Once a picture is uploaded to Amazon S3, publish the event to an Amazon SQS queue.
Use the queue as an event source to trigger an AWS Lambda function. In the Lambda function, scan and parse the picture.
C. When the user uploads a picture, invoke an API hosted in Amazon API Gateway.
The API will invoke an AWS Lambda function to scan and parse the picture.
D. Create a state machine in AWS Step Functions to check the upload folder in the S3 bucket.
If a new picture is detected, invoke an AWS Lambda function to scan and parse.

Answer: B

QUESTION 629
A development team wants to run their container workloads on Amazon ECS. Each application container needs to share data with another container to collect logs and metrics.

What should the developer team do to meet these requirements?

A. Create two pod specifications. Make one to include the application container and the other to include the other container. Link the two pods together.
B. Create two task definitions. Make one to include the application container and the other to include the other container. Mount a shared volume between the two tasks.
C. Create one task definition. Specify both containers in the definition. Mount a shared volume between those two containers.
D. Create a single pod specification. Include both containers in the specification. Mount a persistent volume to both containers.

Answer: A

QUESTION 630
A company has 25,000 employees and is growing. The company is creating an application that will be accessible to its employees only. A developer is using Amazon S3 to store images and Amazon RDS to store application data. The company requires that all employee information remain in the legacy Security Assertion Markup Language (SAML) employee directory only and is not interested in mirroring any employee information on AWS.

How can the developer provide authorized access for the employees who will be using this application so each employee can access their own application data only?

A. Use Amazon VPC and keep all resources inside the VPC, and use a VPC link for the S3 bucket with the bucket policy.
B. Use Amazon Cognito user pools, federate with the SAML provider, and use user pool groups with an IAM policy.
C. Use an Amazon Cognito identity pool, federate with the SAML provider, and use an IAM condition key with a value for the cognito-identity.amazonaws.com:sub variable to grant access to the employees.
D. Create a unique IAM role for each employee and have each employee assume the role to access the application so they can access their personal data only.

Answer: C

QUESTION 631
A company has developed a new serverless application using AWS Lambda functions that will be deployed using the AWS Serverless Application Model (AWS SAM) CLI.

Which step should the developer complete prior to deploying the application?

A. Compress the application to a .zip file and upload it into AWS Lambda
B. Test the new AWS Lambda function by first tracing it in AWS X-Ray
C. Bundle the serverless application using a SAM package
D. Create the application environment using the eb create my-env command

Answer: A

QUESTION 632
A company stores all personally identifiable information (PII) in an Amazon DynamoDB table

named PII in Account A. An application running on Amazon EC2 instances in Account B requires access to the PII table. An administrator in Account A created an IAM role named AccessPII with privileges to access the PII table, and made Account B a trusted entity.

Which combination of additional steps should developers take to access the table? (Choose two.)

A. Ask an administrator in Account B to allow the EC2 IAM role permission to assume the AccessPII role.
B. Ask an administrator in Account B to allow the EC2 IAM role permission to assume the AccessPII role with predefined service control policies.
C. Ask an administrator in Account A to allow the EC2 IAM role permission to assume the AccessPII role with predefined service control policies.
D. Include the AssumeRole API in the application code logic to obtain credentials to access the PII table.
E. Include the GetSessionToken API in the application code logic to obtain credentials to access the PII table.

Answer: CE

QUESTION 633
A developer is creating an AWS Lambda function that generates a new file each time it runs. Each new file must be checked into an AWS CodeCommit repository hosted in the same AWS account.

How should the developer accomplish this?

A. When the Lambda function starts, use the Git CLI to clone the repository.
Check the new file into the cloned repository and push the change.
B. After the new file is created in Lambda, use cURL to invoke the CodeCommit API.
Send the file to the repository.
C. Use an AWS SDK to instantiate a CodeCommit client. Invoke the put_file method to add the file to the repository.
D. Upload the new to an Amazon S3 bucket.
Create an AWS Step Function to accept S3 events.
In the Step Function, add the new file to the repository.

Answer: A

QUESTION 634
A developer must ensure that the IAM credentials used by an application in Amazon EC2 are not misused or compromised.
What should the developer use to keep user credentials secure?

A. Environment variables
B. AWS credentials file
C. Instance profile credentials
D. Command line options

Answer: D

QUESTION 635

A company has an application where reading objects from Amazon S3 is based on the type of user. The user types are registered user and guest user. The company has 25,000 users and is growing. Information is pulled from an S3 bucket depending on the user type.

Which approaches are recommended to provide access to both user types? (Choose two.)

A. Provide a different access key and secret access key in the application code for registered users and guest users to provide read access to the objects.
B. Use S3 bucket policies to restrict read access to specific IAM users.
C. Use Amazon Cognito to provide access using authenticated and unauthenticated roles.
D. Create a new IAM user for each user and grant read access.
E. Use the AWS IAM service and let the application assume the different roles using the AWS Security Token Service (AWS STS) AssumeRole action depending on the type of user and provide read access to Amazon S3 using the assumed role.

Answer: AB

QUESTION 636
A developer is testing an application that invokes an AWS Lambda function asynchronously. During the testing phase, the Lambda function fails to process after two retries.

How can the developer troubleshoot the failure?

A. Configure AWS CloudTrail logging to investigate the invocation failures
B. Configure Dead Letter Queues by sending events to Amazon SQS for investigation
C. Configure Amazon Simple Workflow Service to process any direct unprocessed events
D. Configure AWS Config to process any direct unprocessed events

Answer: B

QUESTION 637
A developer is setting up Amazon API Gateway for their company's products. The API will be used by registered developers to query and update their environments. The company wants to limit the amount of requests end users can send for both cost and security reasons. Management wants to offer registered developers the option of buying larger packages that allow for more requests.

How can the developer accomplish this with the LEAST amount of overhead management?

A. Enable throttling for the API Gateway stage.
Set a value for both the rate and burst capacity.
If a registered user chooses a larger package, create a stage for them, adjust the values, and share the new URL with them.
B. Set up Amazon CloudWatch API logging in API Gateway.
Create a filter based on the user and requestTime fields and create an alarm on this filter.
Write an AWS Lambda function to analyze the values and requester information, and respond accordingly.
Set up the function as the target for the alarm. If a registered user chooses a larger package, update the Lambda code with the values.
C. Enable Amazon CloudWatch metrics for the API Gateway stage.
Set up CloudWatch alarms based off the Count metric and the ApiName, Method, Resource, and Stage dimensions to alerts when request rates pass the threshold.

Set the alarm action to Deny. If a registered user chooses a larger package, create a user-specific alarm and adjust the values.

D. Set up a default usage plan, specify values for the rate and burst capacity, and associate it with a stage.
If a registered user chooses a larger package, create a custom plan with the appropriate values and associate the plan with the user.

Answer: D

QUESTION 638
A developer is refactoring a monolithic application. The application takes a POST request and performs several operations. Some of the operations are in parallel while others run sequentially. These operations have been refactored into individual AWS Lambda functions. The POST request will be processed by Amazon API Gateway.

How should the developer invoke the Lambda functions in the same sequence using API Gateway?

A. Use Amazon SQS to invoke the Lambda functions
B. Use an AWS Step Functions activity to run the Lambda functions
C. Use Amazon SNS to trigger the Lambda functions
D. Use an AWS Step Functions state machine to orchestrate the Lambda functions

Answer: D

QUESTION 639
A company is adding stored value (or gift card) capability to its highly popular casual gaming website. Users need to be able to trade this value for other users' items on the platform. This would require both users' records be updated as a single transaction, or both users' records to be completely rolled back.

Which AWS database options can provide the transactional capability required for this new feature? (Choose two.)

A. Amazon DynamoDB with operations made with the ConsistentRead parameter set to true
B. Amazon ElastiCache for Memcached with operations made within a transaction block
C. Amazon Aurora MySQL with operations made within a transaction block
D. Amazon DynamoDB with reads and writes made using Transact* operations
E. Amazon Redshift with operations made within a transaction block.

Answer: BD

QUESTION 640
A developer has created a REST API using Amazon API Gateway. The developer wants to log who and how each caller accesses the API. The developer also wants to control how long the logs are kept.

What should the developer do to meet these requirements?

A. Enable API Gateway execution logging. Delete old logs using API Gateway retention settings.
B. Enable API Gateway access logs. Use Amazon CloudWatch retention settings to delete old logs.

C. Enable detailed Amazon CloudWatch metrics. Delete old logs with a recurring AWS Lambda function.
D. Create and use API Gateway usage plans. Delete old logs with a recurring AWS Lambda function.

Answer: C

QUESTION 641
A company is developing a new web application in Python. A developer must deploy the application using AWS Elastic Beanstalk from the AWS Management Console. The developer creates an Elastic Beanstalk source bundle to upload using the console.

Which of the following are requirements when creating the source bundle? (Choose two.)

A. The source bundle must include the ebextensions.yaml file
B. The source bundle must not include a top-level directory
C. The source bundle must be compressed with any required dependencies in a top-level parent folder
D. The source bundle must be created as a single .zip or .war file
E. The source bundle must be uploaded into Amazon EFS

Answer: CD

QUESTION 642
A developer is creating a role to access Amazon S3 buckets. To create the role, the developer uses the AWS CLI create-role command.

Which policy should be added to allow the Amazon EC2 service to assume the role?

A. Managed policy
B. Trust policy
C. Inline policy
D. Service control policy (SCP)

Answer: B

QUESTION 643
A company is running a custom application on a set of on-premises Linux servers that are accessed using Amazon API Gateway AWS X-Ray tracing has been enabled on the API test stage.

How can a developer enable X-Ray tracing on the on-premises servers with the LEAST amount of configuration?

A. Install and run the X-Ray SDK on the on-premises servers to capture and relay the data to the X-Ray service.
B. Install and run the X-Ray daemon on the on-premises servers to capture and relay the data to the X- Ray service.
C. Capture incoming requests on-premises and configure an AWS Lambda function to pull, process, and relay relevant data to X-Ray using the PutTraceSegments API call.

D. Capture incoming requests on-premises and configure an AWS Lambda function to pull, process, and relay relevant data to X-Ray using the PutTelemetryRecords API call.

Answer: A

QUESTION 644
A developer works in an environment with multiple AWS accounts that have AWS Lambda functions processing the same 100 KB payloads. The developer wants to centralize the point of origin of the payloads to one account and have all the Lambda functions be invoked whenever the initiating event occurs in the parent account.

How can the developer design the workflow in the MOST efficient way, so all the multi-account Lambda functions get invoked when the event occurs?

A. Create a Lambda function in the parent account and use cross-account IAM roles with the AWS Security Token Service (AWS STS) AssumeRole API call to make AWS Lambda invoke the API call to invoke all the cross-account Lambda functions.
B. Subscribe all the multi-account Lambda functions to an Amazon SNS topic and make a SNS Publish API call with the payload to the SNS topic.
C. Set up an Amazon SQS queue with the queue policy permitting the ReceiveMessage action for multi- account Lambda functions. Then send the payload to the SQS queue using the sqs:SendMessage permission and poll the queue using multi-account Lambda functions.
D. Use a worker on an Amazon EC2 instance to poll for the payload event. Invoke all Lambda functions using the Lambda Invoke API after using cross-account IAM roles with the AWS Security Token Service (AWS STS) AssumeRole API call.

Answer: D

QUESTION 645
A large company has its application components distributed across multiple AWS accounts. The company needs to collect and visualize trace data across these accounts.

What should be used to meet these requirements?

A. AWS X-Ray
B. Amazon CloudWatch
C. Amazon VPC flow logs
D. Amazon Elasticsearch Service

Answer: A

QUESTION 646
A development team uses AWS Elastic Beanstalk to deploy a Java-based web application. The team wants to ensure that the changes to the source code and the configuration are always deployed on new instances. The team configures the Elastic Beanstalk environment to use immutable updates. However, an error occurs the first time a change is deployed with the new update policy.

What is the MOST likely cause of this issue?

A. Immutable updates are not supported for Java-based applications.

B. The account has reached its on-demand instance limit.
C. Immutable updates are only supported for m4.large and larger instance types.
D. The developer must also modify the .ebextensions/immutable-updates.config file to enable immutable updates.

Answer: D
Explanation:
https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/environmentmgmt-updates-immutable.html

QUESTION 647
A developer tested an application locally and then deployed it to AWS Lambda. While testing the application remotely, the Lambda function fails with an access denied message.

How can this issue be addressed?

A. Update the Lambda function's execution role to include the missing permissions.
B. Update the Lambda function's resource policy to include the missing permissions.
C. Include an IAM policy document at the root of the deployment package and redeploy the Lambda function.
D. Redeploy the Lambda function using an account with access to the AdministratorAccess policy.

Answer: A
Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/access-denied-lambda-s3-bucket/

QUESTION 648
An application contains two components: one component to handle HTTP requests, and another component to handle background processing tasks. Each component must scale independently. The developer wants to deploy this application using AWS Elastic Beanstalk.

How should this application be deployed, based on these requirements?

A. Deploy the application in a single Elastic Beanstalk environment.
B. Deploy each component in a separate Elastic Beanstalk environment.
C. Use multiple Elastic Beanstalk environments for the HTTP component, but one environment for the background task component.
D. Use multiple Elastic Beanstalk environments for the background task component, but one environment for the HTTP component.

Answer: D

QUESTION 649
A company experienced partial downtime during the last deployment of a new application. AWS Elastic Beanstalk split the environment's Amazon EC2 instances into batches and deployed a new version one batch at a time after taking them out of service. Therefore, full capacity was not maintained during deployment.

The developer plans to release a new version of the application, and is looking for a policy that will maintain full capacity and minimize the impact of the failed deployment.

Which deployment policy should the developer use?

A. Immutable
B. All at Once
C. Rolling
D. Rolling with an Additional Batch

Answer: D
Explanation:
https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.rolling-version-deploy.html

QUESTION 650
An application running on multiple Amazon EC2 instances pulls messages from a standard Amazon SQS queue. A requirement for the application is that all messages must be encrypted at rest.

Developers are instructed to use methods that allow for centralized key management and minimize possible support requirements whenever possible.

Which of the following solutions supports these requirements?

A. Encrypt individual messages by using client-side encryption with customer managed keys, then write to the SQS queue.
B. Encrypt individual messages by using SQS Extended Client and the Amazon S3 encryption client.
C. Create an SQS queue, and encrypt the queue by using sewer-side encryption with AWS KMS.
D. Create an SQS queue, and encrypt the queue by using client-side encryption.

Answer: B

QUESTION 651
A company is developing a serverless ecommerce web application. The application needs to make coordinated, all-or-nothing changes to multiple items in the company's inventory table in Amazon DynamoDB.

Which solution will meet these requirements?

A. Enable transactions for the DynamoDB table.
Use the BatchWriteItem operation to update the items.
B. Use the TransactWriteItems operation to group the changes.
Update the items in the table.
C. Set up a FIFO queue using Amazon SQS. Group the changes in the queue.
Update the table based on the grouped changes.
D. Create a transaction table in an Amazon Aurora DB cluster to manage the transactions.
Write a backend process to sync the Aurora DB table and the DynamoDB table.

Answer: B
Explanation:
https://aws.amazon.com/blogs/mobile/appsync-caching-transactions/

QUESTION 652
How can a developer use a debugger for AWS Lambda code that is deployed with AWS Serverless Application Model (AWS SAM)?

A. Download the Lambda code locally and use the AWS CLI to execute it
B. Use the Lambda console to connect the debugger
C. Use AWS SAM to invoke a function locally in debug mode
D. Connect a third-party-compatible integrated development environment (IDE) to the Lambda debugger endpoint

Answer: C
Explanation:
https://docs.aws.amazon.com/serverless-application-model/latest/developerguide/serverless-sam-cli-using-debugging.html

QUESTION 653
An application takes longer than expected to process an Amazon SQS message.

What should the developer do to the application so that other instances do not pick up the same message?

A. Make a ReceiveMessage call to get the same message again from the queue
B. Issue a DeleteMessage call to delete the message from the queue
C. Use SendMessage to pass the message to the dead letter queue
D. Send a ChangeMessageVisibility call to extend VisibilityTimeout

Answer: A

QUESTION 654
A developer is building a WebSocket API using Amazon API Gateway. The payload sent to this API is JSON that includes an action key. This key can have three different values: create, update, and remove. The developer must integrate with different routes based on the value of the action key of the incoming JSON payload.

How can the developer accomplish this task with the LEAST amount of configuration?

A. Deploy the WebSocket API to three stages for the respective routes: create, update, and remove
B. Create a new route key and set the name as action
C. Set the value of the route selection expression to action
D. Set the value of the route selection expression to $request.body.action

Answer: B

QUESTION 655
A development team is creating a new application designed to run on AWS. While the test and production environments will run on Amazon EC2 instances, developers will each run their own environment on their laptops.

Which of the following is the simplest and MOST secure way to access AWS services from the local development machines?

A. Use an IAM role to assume a role and execute API calls using the role.
B. Create an IAM user to be shared with the entire development team; provide the development team with the access key.

C. Create an IAM user for each developer on the team; provide each developer with a unique access key.
D. Set up a federation through an Amazon Cognito user pool.

Answer: D

QUESTION 656
A developer wants to ensure the Amazon EC2 instances in AWS Elastic Beanstalk execute a certain set of commands before the application is ready to use.

Which Elastic Beanstalk feature will allow the developer to accomplish this?

A. Rolling update
B. Immutable update
C. User data
D. .ebextensions

Answer: D
Explanation:
https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/customize-containers-ec2.html

QUESTION 657
A developer is planning to use an Amazon API Gateway and AWS Lambda to provide a REST API. The developer will have three distinct environments to manage: development, test, and production.

How should the application be deployed while minimizing the number of resources to manage?

A. Create a separate API Gateway and separate Lambda function for each environment in the same Region.
B. Assign a Region for each environment and deploy API Gateway and Lambda to each Region.
C. Create one API Gateway with multiple stages with one Lambda function with multiple aliases.
D. Create one API Gateway and one Lambda function, and use a REST parameter to identify the environment.

Answer: C
Explanation:
https://aws.amazon.com/blogs/compute/using-api-gateway-stage-variables-to-manage-lambda-functions/

QUESTION 658
A developer is building an application that runs behind an application Load Balancer (ALB).
The application is configured as the origin for an Amazon CloudFront distribution.
Users will log in to the application using their social media accounts.
How can the developer authenticate and authorize users?

A. Validate the user by inspecting the tokens using AWS Lambda authorizers on the ALB
B. Configure the ALB to use Amazon Cognito as one of the authentication providers
C. Configure Cloudfron to use Amazon Cognito as one of the authentication providers
D. Authorize the users by calling the Amazon Cognito API in the AWS Lambda authorizer on the ALB

Answer: C

QUESTION 659
An application development team decides to use AWS X Ray to monitor application code to analyze performance and performer cause analysis.
What does the team need to do to begin using X Ray? (Select TWO)

A. Log instrumentation output into an Amazon SQS queue
B. Use a visualization tool to view application traces
C. Instrument application code using the AWS SDK
D. Install the X-Ray agent on the application servers
E. Create an Amazon DynamoDB table to store the trace logs

Answer: BD
Explanation:
https://aws.amazon.com/blogs/mt/analyze-debug-applications-aws-x-trace-data-grafana/

QUESTION 660
A developer must increase read performance from an unencrypted Amazon S3 bucket. The application requires 100.000 read requests each second Cost-effectiveness is a priority. What would be the SIMPLEST approach to implement these requirements?

A. Create 20 or more prefixes in Amazon S3
Place files by prefixes
Read in parallel by prefixes
B. Create 20 of more AWS accounts
Create a bucket in each account
Read in parallel by bucket
C. Deploy Memcached on Amazon EC2
Cache the files in memory
Retrieve from the Memcached cache
D. Copy all files to Amazon DynamoDB
Index the files with S3 metadata
Retrieve from DynamoDB

Answer: B

QUESTION 661
A company runs its APIs using Amazon API Gateway in front of AWS Lambda functions.
The company wants to add logging at the API level Each API must have production and development environments.
The developer wants to enable different logging levels in both environments.
How can these requirements be met?

A. Set up a stage for each environment In each stage, point to different Lambda functions that implement the logging logic m the code Access the logs in Amazon CloudWatch Logs
B. Set up a stage for each environment In each stage, define a different logging level according to the logging requirements Access the logs in Amazon CloudWatch Logs
C. Set up a stage and use the same Lambda functions In Amazon CloudWatch Logs set up a filter based on the log level according to the logging requirements
D. Set up a stage for each environment In each stage, define a variable for the log level Set the value according to the logging requirements.

Answer: A

QUESTION 662
A developer is building a highly secure healthcare application using .. application requires writing temporary data to /tmp storage on an AWS Lambda function.
How should the developer encrypt this data?

A. Enable Amazon EBS volume encryption with an AWS KMS .. configuration so that all storage attached to the Lambda function is encrypted.
B. Set up the Lambda function with a role and key policy to access an AWS KMS CMK
Use the CMK to generate a data key used to encrypt all data prior to writing to /tmp sto age
C. Use OpenSSL to generate a symmetric encryption key on Lambda startup
Use this key to encrypt the data prior to writing to /tmp
D. Use an on-premises hardware security module (HSM) to generate keys where the Lambda function requests a data key from the HSM and use that to encrypt data on all requests to the function

Answer: D

QUESTION 663
A developer needs to modify an application architecture to meet new functional requirements.
Application data is stored in Amazon DynamoDB and processed for analysis in a rightly batch.
The system analysts do not want to wait unit the next day to view the processed data and have asked to have it available in near-real time.
Which application architect pattern would enables the data to be processed as it is received?

A. Evert driven
B. Client served driven
C. Fan-out driven
D. Schedule driven

Answer: A

QUESTION 664
A three-tier application hosted on AWS uses Amazon RDS for MYSQL as its database.
A developer must ensure the database credentials are stored and accessed securely.
What is the MOST secure way for the developer to achieve this?

A. Store he credentials in a configuration file and commit it to the GIT repository.
B. Store the credentials in AWS Secrets Manager and enable automatic secret rotation.
C. Store the credentials using Amazon RDS and enable automatic rotation
D. Store the credentials in code and handle credentials rotation within the application.

Answer: A

QUESTION 665
A company is launching a poling application. The application will store the results of each pool an Amazon DynamoDB table.
Management wants to remove pool data after a few data and store an archive of those records in

Amazon S3.
Which approach would allow the application to archive each poll's data while keeping complexity to a MINIMUM?

A. Enable Time to Live (TTL) on the DynamoDB table.
Enable DynamoDB Streams on the table and store the records removed from the stream in Amazon S3.
B. Schedule an AWS Lambda function to periodically scan the DynamoDB table.
Use the BatchWritten operation to delete the results of a scan
Enable DynamoDB Stream on the table and store the records removed from the stream in Amazon S3.
C. Enable DynamoDB Streams on the table.
Configure the steam as trigger for AWS Lambda.
Save records to Amazon S3 when records on the stream are modified.
D. Enable cross-Region replication on the S3 bucket to achieve the poll data.

Answer: C

QUESTION 666
A developer is designing a distributed application built using a microservices architect spanning multiple AWS accounts.
The company's operations team wants to analyze and debug application issues from a centralized account.
How can the developer meet these requirements?

A. Use an Amazon X-Ray agent with role assumption on to publish data into the centralized account.
B. Use Amazon X-Ray and create a new IAM user to publish the access keys into the centralized account.
C. Use VPC Flow Logs to collect application logs across different accounts.
D. Enable AWS CloudTrail to publish the trails in an Amazon S3 bucket in the centralized account.

Answer: A

QUESTION 667
A developer must modify an Alexa skill backed by an AWS Lambda function to access an Amazon DynamoDB table in a second account.
A role in the second account has been created with permissions to access the table.
How should the table be accessed?

A. Modify the Lambda function execution role's permits ions to include the new role
B. Change the Lambda function execution role to be the new role
C. Assume the new role in the Lambda function when accessing the table
D. Store the access key and the secret key for the new role and use them when accessing the table

Answer: C

QUESTION 668
A video-hosting website has two types of members: those who pay a fee, and those who do not
Each video upload places a message in Amazon SQS.
A fleet of Amazon EC2 instances polls Amazon SQS and processes each video.
The developer needs to ensure that the videos uploaded by the paying members are processed

first.
How can the developer meet this requirement?

A. Create two SQS queues: one for paying members, and one for non-paying members
Poll the paying member queue first and then poll the non-paying member queue
B. Use SQS to set priorities on individual items within a single queue: give the paying members' videos the highest priority.
C. Use SQS to set priorities on individual items within a single queue and use Amazon SNS to encode the videos
D. Create two Amazon SNS topics: one for paying members and one for non-paying members
Use SNS topic subscription priorities to differentiate between the two types of members.

Answer: B

QUESTION 669
A company has a web application In an Amazon Elastic Container Service (Amazon ECS) cluster running hundreds of secure services in AWS Fargate containers.
The services are in target groups routed by an Application Load Balancer (ALB) Application users log in to the website anonymously, but they must be authenticated using any OpenID Connect protocol-compatible identity provider (IdP) to access the secure services
Which authentication approach would meet hese requirements with the LEAST amount of effort?

A. Configure the services to use Amazon Cognito.
B. Configure the ALB to use Amazon Cognito
C. Configure the services to use AWS Security Token Service (AWS STS) with the OpenID Connect IdP.
D. Configure the Amazon ECS cluster to use AWS Security Token Service (AWS STS) with the OpenID Connect IdP

Answer: A

QUESTION 670
A developer from AnyCompany's AWS account needs access to the Example Corp AWS account AnyCompany uses an identity provider that is compatible with OpenID Connect.
What is the MOST secure way for Example Corp to allow developer access?

A. Create a cross-account role and call the AssumeRole API operation
B. Create a user in the Example Corp account and provide the access keys
C. Create a user in the Example Corp account and provide the credentials
D. Create a cross-account role and call the AssumeRoleWithWebIdentity API operation

Answer: B

QUESTION 671
A developer is building an application on Amazon EC2. The developer encountered an "Access Denied" error on some of the API calls to AWS services while testing. The developer needs to modify permissions that have been already given to the instance.
How can these requirements be met with minimal changes and minimum downtime?

A. Make a new IAM role with the needed permissions
Stop the instance. Attach the new IAM role to the instance

Start the instance

B. Delete the existing IAM role Attach a new IAM role with the needed permissions

C. Stop the instance
Update the attached IAM role adding the needed permissions
Start the instance

D. Update the attached IAM role adding the needed permissions

Answer: D

QUESTION 672
A developer is building an AWS Lambda function that will dynamically generate and send a weekly newsletter to 100.000 users.
This newsletter contains both static text and images.
The developer needs a fast and highly scalable place to store the images that will be hyperlinked in the newsletter.
Where should the developer store these images?

A. Use an Amazon DynamoDB table with DynamoDB Streams and read capacity auto scaling enabled
B. Use an Amazon S3 bucket and S3 Transfer Acceleration to speed up the image download
C. Use an Amazon Aurora database with a public DNS endpoint and auto scaling enabled
D. Use an Amazon S3 backed Amazon CloudFront distribution with a high Time-to-Live (TTL) to maximize caching

Answer: A

QUESTION 673
A developer Is working with a Docker application that needs to be quickly deployed using AWS without changing the infrastructure or configuring health checks. The application should be configured so that changes and updates can be made automatically without any downtime.
Which solution will meet these requirements?

A. Use AWS Elastic Beanstalk for application deployment and select an all-at-once update policy.
B. Use AWS Elastic Beanstalk for application deployment and select a rolling deployment policy.
C. Deploy the Docker container on an Amazon EC2 instance in an Auto Scaling group and configure a health check on the EC2 instance
D. Deploy the Docker container using AWS Lambda and enable Amazon CloudWatch monitoring

Answer: A

QUESTION 674
A developer must build a mobile application that allows users to read and write data from an Amazon DynamoDB table to store user state for each unique user.
The solution needs to limit data access to allow users access only to heir own data.
Which solution below is the most secure?

A. Embed AWS access credentials into the application and create DynamoDB queries that limit user access.
B. Use Amazon Cognito identity pools to assign unique identifiers and provide user access
C. Modify the DynamoDB table to allow public read and writes, then add client-side filtering

D. Create a web portal for users to create an account on AWS Directory Service

Answer: C

QUESTION 675
A developer is trying to get data from an Amazon DynamoDB table called demoman-table The developer configured the AWS CLI to use a specific IAM user's credentials and executed the following command:

```
aws dynamodb get-item --table-name demoman-table --key ' {"id": { "N": "1993"}}'
```

The command returned errors and no rows were returned What is the MOST likely cause of these issues?

A. The command is incorrect; it should be rewritten to use : ut-i team with a string argument.
B. The developer needs to log a ticket with AWS Support to enable access to the demoman-table.
C. Amazon DynamoDB cannot be accessed from the AWS CLI and needs to be called via the REST API
D. The IAM user needs an associated policy with read access to demoman-table.

Answer: D

QUESTION 676
A photo sharing website gets millions of new images every week. The images are stored in Amazon S3 under a formatted date prefix.
A developer wants to move images to a few S3 buckets for analysis and further processing Images are not required to be moved in real time. What is the MOST efficient method for performing this task?

A. Use S3 PutObject events to Invoke AWS Lambda
Then Lambda will copy the files to the other objects
B. Create an AWS Lambda function that will pull a day of Images from the origin bucket and copy them to the other buckets.
C. Use S3 Batch Operations to create jobs for images to be copied to each Individual bucket.
D. Use Amazon EC2 to batch pull images from multiple days and copy them to the other buckets

Answer: D

QUESTION 677
Which of the following are good use cases for how Amazon ElastiCache can help an application? (Select TWO.)

A. Improve the performance of S3 PUT operations
B. Improve the latency of deployments performed by AWS CodeDeploy
C. Improve latency and throughput for read-heavy application workloads.
D. Reduce the time required to merge AWS CodeCommit branches
E. Improve performance of compute-intensive applications.

Answer: CE

QUESTION 678
A developer has code stored in an Amazon S3 bucket. The code must be deployed as an AWS Lambda function across multiple accounts in the same Region as the S3 bucket. The Lambda function will be deployed using a AWS CloudFormation template that is run for each account.
What is the MOST secure approach to allow access to the Lambda code in the S3 bucket?

A. Grant the CloudFormation execution role S3 list and get permissions
Add a bucket policy to Amazon S3 with the Principal of "AWS": [account numbers].
B. Grant the CloudFormation execution role S3 get permissions
Add a bucket policy to Amazon S3 with the Principal of "".
C. Use a service-based link to grant the Lambda function S3 list and get permissions by explicitly adding the S3 bucket's account number in the resource
D. Use a service-based link to grant the Lambda function S3 get permissions and add a Resource of "*" to allow access to the S3 bucket.

Answer: D

QUESTION 679
A developer is building an application that reads 90 Items of data each second from an Amazon DynamoDB table.
Each item Is 3 KB m size.
The table is configured to use eventually consistent reads.
How many read capacity units should the developer provision for the table?

A. 25
B. 35
C. 45
D. 85

Answer: C

QUESTION 680
A developer is building an application that will run on Amazon EC2 instances.
The application needs to connect to an Amazon DynamoDB table to read and write records.
The security team must periodically rotate access keys.

Which approach will satisfy these requirements?

A. Create an IAM role with read and write access to the DynamoDB table.
Generate access keys for the user and store the access keys in the application as environment variables.
B. Create an IAM user with read and write access to the DynamoDB table.
Store the user name and password in the application and generate access keys using an AWS SDK.
C. Create an IAM role, configure read and write access for the DynamoDB table, and attach to the EC2 instances.
D. Create an IAM user with read and write access to the DynamoDB table.
Generate access keys for the user and store the access keys in the application as a credentials file.

Answer: D

QUESTION 681
A developer is monitoring an application running on an Amazon EC2 instance.
The application accesses an Amazon DynamoDB table and the developer has configured a custom Amazon CloudWatch metric with data granularity of 1 second.
If there are any issues, the developer wants to be notified within 30 seconds using Amazon SNS.

Which CloudWatch mechanism will satisfy this requirement?

A. Configure a high-resolution CloudWatch alarm.
B. Set up a custom AWS Lambda CloudWatch log.
C. Use a Cloud Watch stream.
D. Change to a default CloudWatch metric.

Answer: A

QUESTION 682
A developer is implementing authentication and authorization for an application. The developer needs to ensure that the user credentials are never exposed.

Which approach should the developer take to meet this requirement?

A. Store the user credentials in Amazon DynamoDB.
Build an AWS Lambda function to validate the credentials and authorize users.
B. Deploy a custom authentication and authorization API on an Amazon EC2 instance.
Store the user credentials in Amazon S3 and encrypt the credentials using Amazon S3 server-side encryption.
C. Use Amazon Cognito to configure a user pool, and user the Cognito API to authenticate and authorize the user.
D. Store the user credentials in Amazon RDS.
Enable the encryption option for the Amazon RDS DB instances.
Build an API using AWS Lambda to validate the credentials and authorize users.

Answer: C

QUESTION 683
A developer is building a new complex application on AWS. The application consists of multiple microservices hosted on Amazon EC2. The developer wants to determine which microservice adds the most latency while handling a request.

Which method should the developer use to make this determination?

A. Instrument each microservice request using the AWS X-Ray SDK.
Examine the annotations associated with the requests.
B. Instrument each microservice request using the AWS X-Ray SDK.
Examine the subsegments associated with the requests.
C. Instrument each microservice request using the AWS X-Ray SDK.
Examine the Amazon CloudWatch EC2 instance metrics associated with the requests.
D. Instrument each microservice request using the Amazon CloudWatch SDK.
Examine the CloudWatch EC2 instance metrics associated with the requests.

Answer: C

QUESTION 684
A company has a two-tier application running on an Amazon EC2 server that handles all of its AWS based e-commerce activity. During peak times, the backend servers that process orders are overloaded with requests. This results in some orders failing to process. A developer needs to create a solution that will re- factor the application.

Which steps will allow for more flexibility during peak times, while still remaining cost-effective? (Choose two.)

A. Increase the backend T2 EC2 instance sizes to x1 to handle the largest possible load throughout the year.
B. Implement an Amazon SQS queue to decouple the front-end and backend servers.
C. Use an Amazon SNS queue to decouple the front-end and backend servers.
D. Migrate the backend servers to on-premises and pull from an Amazon SNS queue.
E. Modify the backend servers to pull from an Amazon SQS queue.

Answer: BE

QUESTION 685
A developer is asked to integrate Amazon CloudWatch into an on-premises application.

How should the application access CloudWatch, according to AWS security best practices?

A. Configure AWS credentials in the application server with an AWS SDK
B. Implement and proxy API-calls through an EC2 instance
C. Store IAM credentials in the source code to enable access
D. Add the application server SSH-key to AWS

Answer: A

QUESTION 686
A company's new mobile app uses Amazon API Gateway. As the development team completes a new release of its APIs, a developer must safely and transparently roll out the API change.

What is the SIMPLEST solution for the developer to use for rolling out the new API version to a limited number of users through API Gateway?

A. Create a new API in API Gateway.
Direct a portion of the traffic to the new API using an Amazon Route 53 weighted routing policy.
B. Validate the new API version and promote it to production during the window of lowest expected utilization.
C. Implement an Amazon CloudWatch alarm to trigger a rollback if the observed HTTP 500 status code rate exceeds a predetermined threshold.
D. Use the canary release deployment option in API Gateway.
Direct a percentage of the API traffic using the canarySettings setting.

Answer: D

QUESTION 687
A developer must modify an Alexa skill backed by an AWS Lambda function to access an Amazon DynamoDB table in a second account. A role in the second account has been created with permissions to access the table.

How should the table be accessed?

A. Modify the Lambda function execution role's permissions to include the new role.
B. Change the Lambda function execution role to be the new role.
C. Assume the new role in the Lambda function when accessing the table.
D. Store the access key and the secret key for the new role and use then when accessing the table.

Answer: A

QUESTION 688
A developer is creating a new application that will be accessed by users through an API created using Amazon API Gateway. The users need to be authenticated by a third-party Security Assertion Markup Language (SAML) identity provider. Once authenticated, users will need access to other AWS services, such as Amazon S3 and Amazon DynamoDB.

How can these requirements be met?

A. Use an Amazon Cognito user pool with SAML as the resource server.
B. Use Amazon Cognito identity pools with a SAML identity provider as one of the authentication providers.
C. Use the AWS IAM service to provide the sign-up and sign-in functionality.
D. Use Amazon CloudFront signed URLs to connect with the SAML identity provider.

Answer: A

QUESTION 689
A company processes incoming documents from an Amazon S3 bucket. Users upload documents to an S3 bucket using a web user interface. Upon receiving files in S3, an AWS Lambda function is invoked to process the files, but the Lambda function times out intermittently.

If the Lambda function is configured with the default settings, what will happen to the S3 event when there is a timeout exception?

A. Notification of a failed S3 event is send as an email through Amazon SNS.
B. The S3 event is sent to the default Dead Letter Queue.
C. The S3 event is processed until it is successful.
D. The S3 event is discarded after the event is retried twice.

Answer: A

QUESTION 690
A developer has designed a customer-facing application that is running on an Amazon EC2 instance. The application logs every request made to it. The application usually runs seamlessly, but a spike in traffic generates several logs that cause the disk to fill up and eventually run out of memory. Company policy requires old logs to be centralized for analysis.

Which long-term solution should the developer employ to prevent the issue from reoccurring?

A. Set up log rotation to rotate the file every day.
Also set up log rotation to rotate after every 100 MB and compress the file.
B. Install the Amazon CloudWatch agent on the instance to send the logs to CloudWatch.
Delete the logs from the instance once they are sent to CloudWatch.
C. Enable AWS Auto Scaling on Amazon Elastic Block Store (Amazon EBS) to automatically add volumes to the instance when it reaches a specified threshold.
D. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to pull the logs from the instance.
Configure the rule to delete the logs after they have been pulled.

Answer: C

QUESTION 691
A developer is creating a serverless web application and maintains different branches of code. The developer wants to avoid updating the Amazon API Gateway target endpoint each time a new code push is performed.

What solution would allow the developer to perform a code push efficiently, without the need to update the API Gateway?

A. Associate different AWS Lambda functions to an API Gateway target endpoint.
B. Create different stages in API Gateway, then associate API Gateway with AWS Lambda.
C. Create aliases and versions in AWS Lambda.
D. Tag the AWS Lambda functions with different names.

Answer: C

QUESTION 692
A developer wants to secure sensitive configuration data such as passwords, database strings, and application license codes. Access to this sensitive information must be tracked for future audit purposes.

Where should the sensitive information be stored, adhering to security best practices and operational requirements?

A. In an encrypted file on the source code bundle; grant the application access with Amazon IAM
B. In the Amazon EC2 Systems Manager Parameter Store; grant the application access with IAM
C. On an Amazon EBS encrypted volume; attach the volume to an Amazon EC2 instance to access the data
D. As an object in an Amazon S3 bucket; grant an Amazon EC2 instance access with an IAM role

Answer: B

QUESTION 693
A developer has built an application using Amazon Cognito for authentication and authorization. After a user is successfully logged in to the application, the application creates a user record in an Amazon DynamoDB table.

What is the correct flow to authenticate the user and create a record in the DynamoDB table?

A. Authenticate and get a token from an Amazon Cognito user pool.
Use the token to access DynamoDB.
B. Authenticate and get a token from an Amazon Cognito identity pool.
Use the token to access DynamoDB.
C. Authenticate and get a token from an Amazon Cognito user pool.
Exchange the token for AWS credentials with an Amazon Cognito identity pool.
Use the credentials to access DynamoDB.
D. Authenticate and get a token from an Amazon Cognito identity pool.
Exchange the token for AWS credentials with an Amazon Cognito user pool.
Use the credentials to access DynamoDB.

Answer: D

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