QUESTION 34

**Which of the following AWS services controls Authentication and Authorization within an AWS account?**

* Access Control Lists
* Security Groups
* **IAM**
* AWS Shield

EXPLANATION:  
IAM controls Authentication and Authorization within an AWS account.

RESOURCES

* [**About IAM**](https://aws.amazon.com/iam/details/)

QUESTION 47

**Which of the following acts like built-in firewalls for your virtual servers?**

* Network Access Control List
* Route Tables
* Availability Zones
* **Security Groups**

EXPLANATION:  
Security Groups act like built-in firewalls for your virtual servers.

RESOURCES

* [**Amazon EC2 Security Groups**](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html)

QUESTION 58

**Which of the following AWS services can help you assess the fault-tolerance of your AWS environment?**

* AWS Inspector
* **AWS Trusted Advisor**
* AWS Shield
* AWS WAF

EXPLANATION:  
AWS Trusted Advisor can help you assess the fault-tolerance of your AWS environment.

RESOURCES

* [**About Trusted Advisor**](https://aws.amazon.com/premiumsupport/trustedadvisor/)

**A purchasing department staff member is setup as an AWS user in the company’s procurement AWS account. At each month-end, the staff member needs access to an application running on EC2 in the company’s accounts payable AWS account to reconcile reports. Which of the following provides the most secure and operationally efficient way to give the staff member access to the accounts payable application?**

* Create a user for the staff member in the accounts payable AWS account
* Configure Active Directory integration so that you can federate the staff member’s access to the accounts payable AWS account
* Invoke an AWS Lambda function to run the application in the accounts payable AWS account
* **Have the user request temporary security credentials for the application by assuming a role**

EXPLANATION:  
The staff member should be given the ability to assume a role programmatically with the permissions necessary to run the accounts payable application. Setting up another AWS user for the staff member in the accounts payable account will require the presentation of hard credentials programmatically. Both federation and Lambda will require the use of a role as well, but with the added overhead of maintaining Active Directory or the Lambda function.

RESOURCES

* [**Common Scenarios for Roles: Users, Applications, and Services**](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles_common-scenarios.html)

QUESTION 5

**True or False: It's safer to use Access Keys than it is to use IAM roles.**

* True
* **False**

EXPLANATION:  
It's safer to use IAM roles than it is to use Access Keys.

RESOURCES

* [**IAM Best Practices**](https://docs.aws.amazon.com/IAM/latest/UserGuide/best-practices.html)

QUESTION 12

**You are using your corporate directory to grant your users access to AWS services. What is this called?**

* User Group Access
* **Federated Access**
* Multifactor Authentication Access
* Role-based Access

EXPLANATION:  
Federated Access uses your corporate directory to grant your users access to AWS services.

RESOURCES

* [**Identity Federation**](https://aws.amazon.com/identity/federation/)

QUESTION 22

**Your company has updated its security policies to include cloud workloads as well as those running on-premises. Your manager would like a report of which technologies will require configuration changes. Which of the following will not be included in the report because they are the responsibility of AWS?**

* Security Group firewalls
* S3 Access Control Lists
* Amazon Aurora data encryption
* **Host operating systems**

EXPLANATION:  
In the AWS Shared Responsibility Model, AWS in responsible for managing host operating systems. Users are responsible for managing guest operating systems, as well as Security Group Firewalls, Amazon Aurora data encryption, and S3 access control lists.

RESOURCES

* [**Shared Responsibility Model**](https://aws.amazon.com/compliance/shared-responsibility-model/)

QUESTION 26

**True or False: Customer responsibility for the security of services in the cloud vary by service.**

* False
* **True**

EXPLANATION:  
AWS is responsible for the security of their Managed Services, and the customer is responsible for the security of applications running on services such as EC2.

RESOURCES

* [**The AWS Shared Responsibility Model**](https://aws.amazon.com/compliance/shared-responsibility-model/)

QUESTION 31

**True or False: It is best practice to store your Access Key and Secret Access Key in the .aws file in your application.**

* **False**
* True

EXPLANATION:  
You should never store your access keys in your application.

RESOURCES

* [**Best Practices for Managing AWS Access Keys**](https://docs.aws.amazon.com/general/latest/gr/aws-access-keys-best-practices.html)

QUESTION 60

**True or False: By default, the Root user of every AWS account has full access to all AWS services. As such, the Root user should never be used for normal daily operations.**

* **True**
* False

EXPLANATION:  
By default, the Root user of every AWS account has full access to all AWS services. As such, the Root user should never be used for normal daily operations.

RESOURCES

* [**The AWS Root User**](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_root-user.html)

QUESTION 6

**A telecommunications company has his hired you as a consultant to develop a business case for moving its IT applications and infrastructure to AWS. The company’s leadership understands the agility value of the cloud, but the finance group is not interested in shifting capital expense to operating expense due to the company’s tax structure. What will you include in the business case to attempt to satisfy everyone at the company?**

* Show the value of an elastic infrastructure for avoiding wasted capacity
* Suggest that the company wait to migrate to AWS until the current infrastructure is fully depreciated
* **Suggest that the company make reserved instance purchases and capitalize them**
* Show the company the TCO value of moving to an operating expense model

EXPLANATION:  
Many companies capitalize reserved instance purchases, especially those with 3-year terms. Waiting for current infrastructure to fully depreciate will cause the company to miss the other cloud benefits that are available. Moving the company to an operating expense model will prove too large a task, and will most likely result in a rejected business case. Elastic infrastructure is definitely a benefit, but doesn't address the capitalization issue.

RESOURCES

* [**How AWS Pricing Works**](https://d1.awsstatic.com/whitepapers/aws_pricing_overview.pdf)

QUESTION 9

**Which of the following best describes the ability to scale computing resources up or down easily, while only paying for the resources used?**

* High Availability
* **Elasticity**
* Fault-tolerance
* Scalability

EXPLANATION:  
Elasticity describes the ability to scale computing resources up or down easily, while only paying for the resources used.

RESOURCES

* [**Architecting for The Cloud: Best Practices**](https://d1.awsstatic.com/whitepapers/AWS_Cloud_Best_Practices.pdf)

QUESTION 21

**A mobile shopping list app needs to be able to add, delete, and update items on specific lists anytime a user desires. The backend for the app will run on Amazon EC2 instances with Auto Scaling to manage fluctuations in user demand. Many times, a user will perform maintenance on many list items in a single session. What design characteristic must be incorporated into the app for these requirements to be met?**

* Use bootstrapping on the EC2 instances
* Leverage load balancing to distribute transactions to multiple nodes
* **Make sure the app doesn’t need knowledge of previous transactions**
* Implement session affinity

EXPLANATION:  
In order for horizontal scaling to be effective, you'll want to make sure the app doesn't store previous transaction or session information on specific EC2 instances. That way, any EC2 instance provisioned by Auto Scaling can process the request. Leveraging load balancing is also a good practice, but doesn't address the need for a stateless app. Session affinity goes the other direction, directing a load balancer to route transactions to a specific instance each time. Bootstrapping runs scripts each time an EC2 instance is provisioned.

RESOURCES

* [**Architecting for the Cloud - AWS Best Practices**](https://d1.awsstatic.com/whitepapers/AWS_Cloud_Best_Practices.pdf)

QUESTION 42

**Which of the following best describes a system that is always available — without the need for human intervention?**

* Scalable
* **Highly Available**
* Elastic
* Fault tolerant

EXPLANATION:  
A highly available system is one that is always available — without the need for human intervention

RESOURCES

* [**Fault Tolerance and High Availability Infographic**](https://media.amazonwebservices.com/architecturecenter/AWS_ac_ra_ftha_04.pdf)

QUESTION 51

**Which of the following are a collection of data centers within a specific region?**

* AWS Origins
* **Availability Zones**
* Regions
* Edge Locations

EXPLANATION:  
Availability Zones are a collection of data centers within a specific region.

RESOURCES

* [**AWS Global Infrastructure**](https://aws.amazon.com/about-aws/global-infrastructure/)

QUESTION 16

**Which of the following is not part of the AWS Global infrastructure?**

* Regions
* **Security Groups**
* Availability Zones
* Edge Locations

EXPLANATION:  
Regions, AZs, and Edge Locations are part of the AWS Global Infrastructure.

RESOURCES

* [**AWS Global Infrastructure**](https://aws.amazon.com/about-aws/global-infrastructure/)

QUESTION 17

**The Chief Marketing Officer of the hotel chain you work for would like to implement voice recognition capabilities in rooms so customers can request services without picking up the phone. Competitors have already begun rolling out these technologies in an attempt to improve their customers’ experience. Which benefit of the AWS cloud would you most emphasize to the CMO in your business case for creating an AWS-based solution?**

* **Agility**
* Cost Savings
* Deploy Globally in Minutes
* Elasticity

EXPLANATION:  
The AWS cloud provides instant access to new technologies. Companies can move with agility to satisfy new business requirements and meet competitive demands. There is a very low barrier of entry for innovation. If a solution is not meeting expectations, services can be instantly de-provisioned. The other three options will also prove to be benefits of deploying in the AWS cloud, but the use case emphasizes the need to move quickly against competitive threats.

RESOURCES

* [**What is Cloud Computing?**](https://aws.amazon.com/what-is-cloud-computing/)

QUESTION 20

**Which of the following best describes a system that will remain operational even in the event of a component failure?**

* **Fault-tolerant**
* Scalable
* Highly Available
* Elastic

EXPLANATION:  
a fault-tolerant system will remain operational even in the event of a component failure.

RESOURCES

* [**Building Fault-Tolerant Applications in the AWS Cloud**](https://aws.amazon.com/whitepapers/designing-fault-tolerant-applications/)

QUESTION 28

**Which of the following is a Shared Control of the AWS Shared Responsibility Model?**

* Hardware Maintanence
* Security Group Configuration
* Firmware Upgrades
* **Patch Management**

EXPLANATION:  
Shared Controls are elements of the Shared Responsibility Model where both AWS and the customer have shared responsibilities within their own contexts. Patch Management is a Shared Control, since AWS is responsible for patching and fixing flaws within the infrastructure, including managed services like RDS, but customers are responsible for patching their guest OS and applications. Firmware Upgrades, and other Hardware maintenance processes are solely the responsibility of AWS. Configuration of Security Groups remain the responsibility of the customer

RESOURCES

* [**AWS Shared Responsibility Model**](https://aws.amazon.com/compliance/shared-responsibility-model/)

QUESTION 3

**An online education company has customers on four continents. They need to run software functions to customize offerings for students in various locations around the globe based on parameters that each student enters. Which AWS service will provide this capability with the highest performance efficiency?**

* Amazon Elastic Container Service
* Amazon CloudFront
* Amazon API Gateway
* **Lambda@Edge**

EXPLANATION:  
Lambda@Edge provides the capability to run Lambda functions at Edge Locations based on events generated by the CloudFront content delivery network, allowing customers to extend their web applications globally. Amazon Elastic Container Service and Amazon API Gateway would require implementations in each desired region.

RESOURCES

* [**Lambda@Edge**](https://aws.amazon.com/lambda/edge/)

QUESTION 11

**You want to run your application on a PaaS infrastructure, and you need to be able to select both your instance type and your database. Which of the following services should you choose?**

* Lambda
* **Elastic Beanstalk**
* Lightsail
* EC2

EXPLANATION:  
Elastic Beanstalk will allow you to select both your instance type and your database type.

RESOURCES

* [**About Elastic Beanstalk**](https://aws.amazon.com/elasticbeanstalk/)

QUESTION 19

**Amazon Lightsail is an example of which of the following?**

* **Platform as a Service**
* Functions as a Service
* Software as a Service
* Infrastructure as a Service

EXPLANATION:  
Lightsail is AWS' Platform-as-a-Service offering.

RESOURCES

* [**About Lightsail**](https://aws.amazon.com/lightsail/)

QUESTION 24

**In order to comply with regulatory mandates, some of your data needs to be retained in perpetuity. Which of the following AWS storage services offers low-cost, long-term data archival?**

* Redshift
* **Glacier**
* EFS
* S3

EXPLANATION:  
Glacier is your best choice for deeply-discounted, long-term object archival.

RESOURCES

* [**About Glacier**](https://aws.amazon.com/glacier/)

QUESTION 32

**True or False: Objects stored in S3 are stored in a single, central location within AWS.**

* **False**
* True

EXPLANATION:  
Objects stored in S3 are stored in multiple servers in multiple facilities across AWS.

RESOURCES

* [**About S3**](https://aws.amazon.com/s3/?nc2=h_m1)

QUESTION 40

**In which of the following is CloudFront content cached?**

* Data Center
* **Edge Location**
* Availability Zone
* Region

EXPLANATION:  
CloudFront content is cached in Edge Locations.

RESOURCES

* [**About CloudFront**](https://aws.amazon.com/cloudfront/)

QUESTION 46

**Which of the below can be specified as an origin when creating a CloudFront distribution?**

* **An ELB**
* An RDS instance
* **A domain name**
* **An S3 Bucket**

EXPLANATION:  
A CloudFront Origin can be an S3 bucket, an Elastic Load Balancer, or a valid domain name.

RESOURCES

* [**CloudFront Origins**](https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/DownloadDistS3AndCustomOrigins.html)

QUESTION 50

**Which of the following are Migration services?**

* AWS Config
* **AWS Snowball**
* **AWS Application Discovery Service**
* AWS OpsWorks

EXPLANATION:  
AWS Config and AWS OpsWorks are Management Tools.

RESOURCES

* [**Migrating to AWS**](https://aws.amazon.com/cloud-migration/)

QUESTION 52

**Which of the following Load Balancers uses Listeners, Targets, and Target Groups?**

* Classic Load Balancer
* **Application Load Blancer**

EXPLANATION:  
The ALB uses Listeners, Targets, and Target Groups.

RESOURCES

* [**About the ALB**](https://aws.amazon.com/elasticloadbalancing/details/#details)

QUESTION 59

**For a subnet to be public and send non-local traffic to the Internet, we must update the Route Table of the public subnet and attach which of the following to the VPC that contains the subnet?**

* **Internet Gateway**
* NAT Gateway
* Network Access Control List
* Route 53

EXPLANATION:  
an Internet Gateway must be attached to the VPC.

RESOURCES

* [**About Internet Gateways**](https://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Internet_Gateway.html)

QUESTION 61

**Your application needs a MySQL database, but you need better performance than you could get running MySQL on EC2. Which of the following AWS services should you consider?**

* DynamoDB
* Redshift
* Neptune
* **Aurora**

EXPLANATION:  
Aurora is AWS' managed MySQL database. It delivers up to 5X the performance of a MySQL database running on EC2.

RESOURCES

* [**About Aurora**](https://aws.amazon.com/rds/aurora/)

QUESTION 65

**You have a variable and intermittent workload, so you want to use a compute service that allows you to pay only for the compute resources you use, without paying for compute time when your code isn’t running. Which of the following services should you use?**

* Lightsail
* ECS
* **Lambda**
* EC2

EXPLANATION:  
Lambda allows you to run a variable and intermittent workload without paying for compute time when your code isn’t running.

RESOURCES

* [**About Lambda**](https://aws.amazon.com/lambda/)

QUESTION 14

**True or False: To complete the process of creating a Multi-AZ RDS instance, you must copy the primary instance to a public subnet in a second Availability Zone.**

* **False**
* True

EXPLANATION:  
To complete the process of creating a Multi-AZ RDS instance, you must copy the primary instance to a private subnet. AWS generates a standby, and transactions are synchronously replicated.

RESOURCES

* [**Amazon RDS Multi-AZ Deployments**](https://aws.amazon.com/rds/details/multi-az/)

QUESTION 33

**Which of the following AWS services is a fast, fully managed data warehouse that makes it simple and cost-effective to analyze all your data using standard SQL and your existing Business Intelligence tools.**

* Elastic Map Reduce
* **Redshift**
* DynamoDB
* Kinesis

EXPLANATION:  
Redshift is AWS' fully-managed data warehouse solution.

RESOURCES

* [**About Redshift**](https://aws.amazon.com/redshift/)

QUESTION 37

**You need to allow resources in a private subnet to access the internet. Which of the following must be present to enable this access?**

* **NAT Gateway**
* Route Tables
* Network Access Control Lists
* Security Groups

EXPLANATION:  
A NAT Gateway is required to allow resources in a private subnet to access the internet.

RESOURCES

* [**About NAT Gateways**](https://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/vpc-nat-gateway.html)

QUESTION 39

**True or False: S3 is object storage suitable for the storage of 'flat' files like Word documents, photos, etc.**

* False
* **True**

EXPLANATION:  
S3 is object storage suitable for the storage of 'flat' files like Word documents, photos, etc.

RESOURCES

* [**About S3**](https://aws.amazon.com/s3/?nc2=h_m1)

QUESTION 41

**Which of the following AWS services can assist you with cost optimization?**

* AWS WAF
* AWS Shield
* AWS Inspector
* **AWS Trusted Advisor**

EXPLANATION:  
Trusted Advisor can assist you with the cost optimization of your AWS environment.

RESOURCES

* [**About Trusted Advisor**](https://aws.amazon.com/premiumsupport/trustedadvisor/)

QUESTION 44

**The Solutions Architect leading your project tells you the application your team is working on requires a managed NoSQL database. Which of the following AWS services best fits that description?**

* Redshift
* **DynamoDB**
* RDS
* ElastiCache

EXPLANATION:  
DynamoDB is AWS' managed NoSQL database.

RESOURCES

* [**About DynamoDB**](https://aws.amazon.com/dynamodb/)

QUESTION 48

**True or False: Data stored in Glacier is encrypted by default.**

* **True**
* False

EXPLANATION:  
Data stored in Glacier is encrypted by default.

RESOURCES

* [**Glacier Security**](https://aws.amazon.com/glacier/faqs/#security)

QUESTION 54

**True or False: By default, all subnets within a VPC can communicate with each other.**

* False
* **True**

EXPLANATION:  
By default, all subnets within a VPC can communicate with each other.

RESOURCES

* [**VPCs and Subnets**](https://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Subnets.html)

QUESTION 57

**An EC2 instance in your VPC needs which of the following for the Internet Gateway to route its traffic to the Internet?**

* C-Name
* A-Name
* **Public IP address**
* Private IP address

EXPLANATION:  
An EC2 instance in your VPC needs a Public IP address for the Internet Gateway to route its traffic to the Internet

RESOURCES

* [**Amazon EC2 Instance IP Addressing**](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-instance-addressing.html)

QUESTION 64

**Regarding Amazon Glacier, what is a Vault?**

* The rules that determine who may (or may not) access archives.
* **A container for storing Archives**
* An object — like photos, videos, files, or documents

EXPLANATION:  
A Vault is a container for storing Archives.

RESOURCES

* [**Glacier Vaults and Archives**](https://aws.amazon.com/glacier/faqs/#vaultsandarchives)

QUESTION 18

**Which of the following EC2 instance types will realize a savings over time in exchange for a contracted term-of-service?**

* On-demand instances
* **Reserved instances**
* Spot instances
* Discount instances

EXPLANATION:  
EC2 Reserved Instances offer significant discounts for a contracted term-of-service.

RESOURCES

* [**Amazon EC2 Pricing**](https://aws.amazon.com/ec2/pricing/)

QUESTION 36

**Which of the following AWS Support levels offers the assistance of a Technical Account Manager?**

* Developer
* Premium
* Business
* **Enterprise**

EXPLANATION:  
Only Enterprise support offers the services of a Technical Account Manager.

RESOURCES

* [**Compare AWS Support Plans**](https://aws.amazon.com/premiumsupport/compare-plans/)

QUESTION 35

**For a fixed monthly rate, you can choose detailed, once-a-minute monitoring of your EC2 instances.**

* **True**
* False

RESOURCES

* [**Enable or Disable Detailed Monitoring for Your Instances**](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-cloudwatch-new.html)

STATS

QUESTION 53

**Which of the following is not a fundamental AWS charge?**

* Compute
* Data-out
* Storage
* **Data-in**

EXPLANATION:  
In AWS, data-in is always free-of-charge.

RESOURCES

* [**AWS Pricing**](https://aws.amazon.com/pricing/)