aws_cloud_practitioner_exam

What is Cloud Computing Quiz

1. In the Platform as a Service model, you only manage the data and the applications.

2. In Cloud Computing, you are only charged for what you use. pay as you go

3.Compute, Storage, and data transfer out of the AWS Cloud are the 3 pricing fundamentals of the AWS Cloud.

4. Capacity is unlimited in the cloud, you do not need to worry about it. The 4 points of considerations when choosing an AWS Region are: compliance with data governance and legal requirements, proximity to customers, available services and features within a Region, and pricing.

5. You must train your employees more so they can use the cloud effectively.

6. AWS Regions consist of multiple, isolated, and physically separate Availability Zones within a geographic area.

7. IAM is a global service (encompasses all regions).

8. The Shared Responsibility Model defines who is responsible for what in the AWS Cloud.

9. Using a Hybrid Cloud deployment model allows you to benefit from the flexibility, scalability and on-demand storage access while keeping security and performance of your own infrastructure.

10. You can run analytics on AWS, but you cannot run analytics on fraudulent content. Refer to the AWS Acceptable Use Policy to see what is not authorized to do on AWS.

Identity and Access Management Quiz

1. Some AWS service will need to perform actions on your behalf. To do so, you assign permissions to AWS services with IAM Roles.

2. IAM Credentials report lists all your account's users and the status of their various credentials. The other IAM Security Tool is IAM Access Advisor. It shows the service permissions granted to a user and when those services were last accessed.

3. IAM Users access AWS using a username and a password.

4. You only want to use the root account to create your first IAM user, and for a few account and service management tasks. For every day and administration tasks, use an IAM user with permissions.

5.An IAM policy is an entity that, when attached to an identity or resource, defines their permissions.

6.Customers are responsible for defining and using IAM policies.

7.You want to enable MFA in order to add a layer of security, so even if your password is stolen, lost or hacked your account is not compromised.

EC2 Quiz

1. Spot Instances are good for short workloads, but are less reliable.

2. Security Groups operate at instance level and can control traffic.

3.The customer is responsible for operating-system patches and updates on EC2 Instances, as well as data security on the instances, Security Groups rules, etc.

4. 1 year or 3 years terms are available for EC2 Reserved Instances.

5. Compute Optimized EC2 instances are great for compute-intensive workloads requiring high performance processors, such as batch processing, media transcoding, high performance web servers, high performance computing, scientific modeling & machine learning, and dedicated gaming servers.

6. Reserved Instances are good for long workloads. You can reserve instances for 1 or 3 years.

ELB & ASG Quiz

1. High Availability means applications running at least in two AZs to survive a data center loss.

2. A Network Load Balancer can handle millions of requests per second with low-latency. It operates at Layer 4, and is best-suited for load-balancing TCP, UDP, and TLS traffic with ultra high-performance.

3. Vertical scaling means increasing the size of the instance. Changing from a t3a.medium to a t3a.2xlarge is an example of size increase.

4. An Auto Scaling Group (ASG) can automatically and quickly scale-in and scale-out to match the changing load on your applications and websites.

5. Auto Scaling Groups can add or remove instances, but from the same type. They cannot change the EC2 Instances Types on the fly.

6. Application Load Balancers are used for HTTP and HTTPS load balancing. They are the best-suited for this kind of traffic.

7. Auto Scaling Strategies include: Manual Scaling, Dynamic Scaling (Simple/Step Scaling, Target Tracking Scaling, Scheduled Scaling), and Predictive Scaling.

8. Auto Scaling Groups (ASG) offers the capacity to scale-out and scale-in by adding or removing instances based on demand.

9. Load Balancers cannot help with back-end autoscaling. You should use Auto Scaling Groups.

10.

S3 Quiz

1. Amazon Glacier Deep Archive is the most cost-effective option if you want to archive data and do not have a retrieval time requirement. You can retrieve data in 12 or 48 hours.

2. AWS Storage Gateway is a hybrid cloud storage service that gives you on-premises access to virtually unlimited cloud storage.

3. Snowball Edge is best-suited to move petabytes of data and offers computing capabilities. Be careful, it's recommended to use a fleet of Snowballs to move less than 10PBs of data. Over this quantity, it's better-suited to use Snowmobile.

4. Snowmobile is used to move exabytes of data in or out of AWS (1 EB=1,000 PBs=1,000,000 TBs).

5. Access Keys are used to sign programmatic requests to the AWS CLI or AWS API.

6. Buckets store objects in Amazon S3.

7. AWS Snowcone is a small, portable, rugged, and secure edge computing and data transfer device. It provides up to 8 TB of usable storage.

8. Lifecycle Rules can be used to define when S3 objects should be transitioned to another storage class or when objects should be deleted after some time.

9. Snowball Edge Storage Optimized devices are well suited for large-scale data migrations and recurring transfer workflows, as well as local computing with higher capacity needs.

10. Amazon S3 Standard-Infrequent Access allow you to store infrequently accessed data, with rapid access when needed, has a high durability, and is stored in several Availability Zones to avoid data loss in case of a disaster. It can be used to store data for disaster recovery, backups, etc.

Account Management, Billing & Support Quiz

1. Service control policies (SCPs) are a type of organization policy that you can use to manage permissions in your organization. An SCP spans all IAM users, groups, and roles, including the AWS account root user.

2. AWS Control Tower offers the easiest way to set up and govern a new, secure, multi-account AWS environment. It establishes a landing zone that is based on best-practices blueprints, and enables governance using guardrails you can choose from a pre-packaged list.

3. AWS Trusted Advisor is an online tool that provides you real time guidance to help you provision your resources following AWS best practices, including performance, security, and fault tolerance, but also cost optimization and service limits.

4. AWS Organizations does not offer faster access to the AWS Support.

5. Business Support Plan is the most cost-effective option that offers 24x7 phone, email, and chat support.

6. The AWS Simple Monthly Calculator is an easy-to-use online tool that enables you to estimate their architecture solution monthly cost of AWS services for your use case based on your expected usage. It is being replaced by AWS Pricing Calculator.

7. The Enterprise Support Plan comes with a business-critical system down response under 15 minutes and offers access to a Technical Account Manager, as well as a Concierge Support Team. It is the only plan to have these features.

8. AWS Pricing Calculator is a web based service that you can use to create cost estimates to suit your AWS use cases. AWS Pricing Calculator is useful both for people who have never used AWS and for those who want to reorganize or expand their usage.

9. You can assign metadata to your AWS resources in the form of tags. Tags can help you manage, identify, organize, search for, and filter resources.

10. AWS Budgets gives you the ability to set custom budgets that alert you when your costs or usage exceed (or are forecasted to exceed) your budgeted amount. Difference with CloudWatch Billing Alarms: CloudWatch Billing Alarms only send alerts when your costs and usage are exceeding your budget, not when it is forecasted to exceed your budget, while AWS Budgets does both.

11. Cost Explorer can be used to forecast usage up to 12 months based on the previous usage. It can also be used to choose an optimal Savings Plan. Cost Explorer has an easy-to-use interface that lets you visualize, understand, and manage your AWS costs and usage over time.

12. AWS Compute Optimizer recommends optimal AWS resources for your workloads to reduce costs and improve performance by using machine learning to analyze historical utilization metrics.

Pricing Quiz

1. These services are free to use. Be careful, the resources created in Elastic Beanstalk (as well as in CloudFormation and Auto Scaling Groups) are not free.

2. CloudFront pricing is different across different geographic regions.

3. When the upfront payment is higher, the discount is bigger.

4. Inbound data transfer in the S3 region is free.

5. The added data storage by EBS Snapshots are added cost in GB per month to EBS pricing. Other EBS pricing factors are: Volume type, Provisioned storage volume, IOPS, etc

6. Compute Savings Plans provide the most flexibility and help to reduce your costs by up to 66% in exchange for a commitment to a consistent amount of usage for a 1 or 3 year term. These plans automatically apply to EC2 instance usage regardless of instance family, size, AZ, region, OS or tenancy, and also apply to Fargate or Lambda usage.

7. With Linux EC2 instances, you pay per second of compute capacity. There is also a minimum of 60s of use.

8. Reservations are available for EC2 Reserved Instances, DynamoDB Reserved Capacity, ElastiCache Reserved Nodes, RDS Reserved Instance, Redshift Reserved Nodes. Reservations allow you to minimize risks, predictably manage budgets and comply with long-term requirements.

9. Reserved Instances are good and more cost-effective (up to 69% discount compared to On-demand pricing, depending on the upfront) for long workloads. You can reserve instances for 1 or 3 years in RDS.

Advanced Identity Quiz

1. AWS Directory Service makes it easy for you to setup and run directories in the AWS cloud, or

connect your AWS resources with an existing on-premises Microsoft Active Directory.

2. AWS Security Token Service (AWS STS) is a web service that enables you to request temporary, limited-privilege credentials for AWS Identity and Access Management (IAM) users or for users that you authenticate (federated users).

3. Amazon Cognito lets you add user sign-up, sign-in, and access control to your web and mobile apps quickly and easily.

4. AWS IAM Identity Center is an AWS service that enables you to makes it easy to centrally manage access to multiple AWS accounts and business applications and provide users with single sign-on access to all their assigned accounts and applications from one place.

Other Services Quiz

1. Amazon Elastic Transcoder is media transcoding in the cloud. It is used to convert media files from their source format into versions that will play back on devices like smartphones, tablets, and PCs.

2. Amazon AppStream 2.0 is a fully managed non-persistent application and desktop streaming service that provides users instant access to their desktop applications from anywhere.

3. AWS Device Farm is an application testing service that lets you improve the quality of your web and mobile apps by testing them across an extensive range of desktop browsers and real mobile devices; without having to provision and manage any testing infrastructure.

4. AWS IoT Core lets you securely connect IoT devices to the AWS Cloud and other devices without the need to provision or manage servers.

5. AWS Backup is a centralized backup service that makes it easy and cost-effective for you to backup your application data across AWS services in the AWS Cloud. CloudEndure Disaster Recovery minimizes downtime and data loss by providing fast, reliable recovery into AWS of your physical, virtual, and cloud-based servers.

6. Amazon WorkSpaces is a fully managed, secure cloud desktop service. You can use Amazon WorkSpaces to provision either Windows or Linux desktops in just a few minutes and quickly scale to provide thousands of desktops to workers across the globe.

7.

AWS Architecting & Ecosystem Quiz

1. Auto Scaling in EC2 allows you to have the right number of instances to handle the application load. Auto Scaling in DynamoDB automatically adjusts read and write throughput capacity, in response to dynamically changing request volumes, with zero downtime. These are both examples of horizontal scaling.

2. The AWS Well-Architected Tool helps you review the state of your workloads and compares them to the latest AWS architectural best practices. It is based on the 6 pillars of the Well-Architected Framework (Operational Excellence, Security, Reliability, Performance Efficiency, Cost Optimization, and Sustainability). AWS Trusted Advisor is an online tool that provides you real time guidance to help you provision your resources following AWS best practices (Cost Optimization, Performance, Security, Fault Tolerance, and Service Limits).

3. Testing recovery procedures, stopping guessing capacity, and managing changes in automation are design principles of Reliability. Performance Efficiency design principles include: democratize advanced technologies, go global in minutes, use serverless architecture, experiment more often, mechanical sympathy.

4. CloudFormation is a key service to Operational Excellence as it prepares, operates, and evolves, but also performs operations as code.

5. AWS Cost Explorer and AWS Trusted Advisor are Cost Optimization services examples. It also includes AWS Budgets, Cost and Usage Reports, etc.

Amazon Macie

Amazon Macie: A security service that uses machine learning to automatically discover, classify, and protect sensitive data, such as personally identifiable information (PII), in Amazon S3.

Amazon S3

Amazon S3 (Simple Storage Service) is an object storage service and is not a database.

Amazon DynamoDB

• A fully managed NoSQL database service, but it is not MySQL-compatible.

•A key-value and document database that provides single-digit millisecond latency at any scale. It is a fully managed NoSQL database service designed for applications that require consistent, single-digit millisecond latency, regardless of the volume of requests.

Amazon Redshift

Amazon Redshift: A fully managed data warehouse service, not a MySQL-compatible database.

Amazon Aurora

Amazon Aurora: A fully managed relational database engine compatible with MySQL and PostgreSQL. It offers the performance and availability of commercial databases with the simplicity and cost-effectiveness of open-source databases.

AWS Outposts

AWS Outposts enables you to run AWS infrastructure and services on premises while seamlessly connecting to the AWS cloud. This service extends the AWS ecosystem to your on-premises locations, allowing you to take advantage of cloud benefits while addressing the requirements of data residency, low-latency applications, and specific regulatory needs in hybrid environments.

Amazon AppStream 2.0

Amazon AppStream 2.0 is a service that enables you to stream desktop applications to users through web browsers. You can deliver Windows applications securely to remote users without the need to provision and manage full virtual desktops.

Amazon WorkSpaces

Amazon WorkSpaces is a fully managed desktop-as-a-service (DaaS) solution that provides Windows desktops to users. You can configure and manage virtual desktops for remote employees using WorkSpaces

Amazon GuardDuty

Amazon GuardDuty is an AWS service that is designed to monitor and detect potential security threats in your AWS environment. It helps to identify unusual and unauthorized activities, including misconfigured security groups that may be allowing unrestricted access to specific ports. GuardDuty uses machine learning and threat intelligence to analyze data and generate alerts, making it an effective tool for enhancing the security of your AWS infrastructure.

AWS Trusted Advisor

AWS Trusted Advisor: A service that provides best practices and recommendations for your AWS environment. It includes security checks, such as identifying security groups with unrestricted access.

EC2 Amazon Machine Images

EC2 Amazon Machine Images (AMIs): AMIs are used to create backups of EC2 instances, and they can be used to launch replacement instances in the event of a disaster or data loss. AMIs are essential for creating recovery points for your EC2 instances.

Amazon Elastic Block Store

Amazon Elastic Block Store (Amazon EBS) snapshots: EBS snapshots allow you to create point-in-time backups of your EBS volumes. These snapshots can be used to restore data or create new EBS volumes, making them a key component of disaster recovery for EC2 instances.

AWS CloudShell

AWS CloudShell: A browser-based shell provided by AWS that enables command-line access to AWS resources directly from the AWS Management Console. Users can use AWS CloudShell to run AWS CLI commands and use various AWS tools without installing any additional software. It provides a convenient and secure way to interact with AWS resources in the cloud.

AWS Transit Gateway

AWS Transit Gateway connects your Amazon Virtual Private Clouds (VPCs) and on-premises networks through a central hub. This connection simplifies your network and puts an end to complex peering relationships. Transit Gateway acts as a highly scalable cloud router—each new connection is made only once.

VPC endpoints

VPC endpoints: Enable private connectivity between your VPC and supported AWS services. While useful for accessing AWS services without going over the internet, it doesn't directly address the need for connecting multiple VPCs and on-premises networks.

AWS Secrets Manager

AWS Secrets Manager helps you manage, retrieve, and rotate database credentials, API keys, and other secrets throughout their lifecycles.

AWS Key Management Service

AWS Key Management Service (AWS KMS): A fully managed service that makes it easy for you to create, control, and manage encryption keys used to encrypt your data. It integrates seamlessly with other AWS services, including Amazon EBS, for encryption purposes.

AWS Certificate Manager

AWS Certificate Manager (ACM): Primarily used for managing SSL/TLS certificates used in conjunction with AWS services like Elastic Load Balancer (ELB) or Amazon CloudFront to enable secure communication over HTTPS. It is not directly related to encrypting Amazon EBS volumes.

AWS Management Console

AWS Management Console: A web-based interface that allows users to access and manage their AWS resources using a graphical user interface (GUI). This console provides an easy-to-use platform for various AWS services.

AWS Shield

AWS Shield: AWS Shield is a managed Distributed Denial of Service (DDoS) protection service. It is focused on protecting applications from DDoS attacks.

AWS CloudFormation

AWS CloudFormation: A service that allows you to define and provision AWS infrastructure as code in a safe, predictable, and repeatable manner. It enables the developer to create and manage a collection of AWS resources by describing the infrastructure in a template. This helps in maintaining both development and production environments consistently.

AWS Global Accelerator

• AWS Global Accelerator: A service that uses static IP addresses to route traffic over the AWS global network to optimal AWS endpoints based on health, geography, and routing policies. It provides highly available and performant applications with features like fast failover for multi-Region and Multi-AZ (Availability Zone) architectures.

• AWS Global Accelerator: A service that uses the AWS global network to optimize the routing of traffic to applications. It improves the availability and performance of applications by utilizing anycast IP addresses. It specifically improves network performance globally.

Amazon SQS

Amazon Simple Queue Service (SQS): SQS is a fully managed message queuing service that enables you to decouple and scale microservices, distributed systems, and serverless applications. It allows one application to send messages to a queue, and another application to retrieve those messages from the queue. This can be helpful in scenarios where the sender and receiver are not required to interact with each other in real-time.

AWS Artifact

AWS Artifact: A portal that provides on-demand access to AWS compliance reports, certifications, and attestations. It is a centralized location for various compliance-related documents.

AWS Storage Gateway

AWS Storage Gateway: A hybrid cloud storage service that enables on-premises applications to use

cloud storage seamlessly. It provides file, volume, and tape gateway interfaces to integrate on-premises environments with AWS Cloud storage. This service allows on-premises users to access virtually unlimited cloud storage while maintaining a hybrid storage infrastructure.

AWS Software Development Kit

AWS Software Development Kit (SDK): A set of libraries and tools that allows developers to interact with AWS services directly from their applications. It provides APIs in various programming languages, enabling developers to integrate AWS services seamlessly into their applications. It abstracts the complexity of making direct API calls and provides a convenient way to interact with AWS resources.

AWS Budgets

AWS Budgets is the tool that gives users the ability to plan their service usage, service costs, and instance reservations. It allows users to set custom alerts when their costs or usage exceed established thresholds, providing proactive cost management and control.

Cost Explorer

Cost Explorer is a visualization tool within the AWS Management Console that provides insights into your AWS costs and usage.

Cloud Trail

CloudTrail enables auditing, security monitoring, and operational troubleshooting by tracking user activity and API usage. CloudTrail logs, continuously monitors, and retains account activity related to actions across your AWS infrastructure, giving you control over storage, analysis, and remediation actions.

AWS WAF

AWS WAF is a web application firewall that helps protect web applications from attacks by allowing you to configure rules that allow, block, or monitor (count) web requests based on conditions that you define. These conditions include IP addresses, HTTP headers, HTTP body, URI strings, SQL injection and cross-site scripting."

EC2 Image Builder