Exam Session - Cert Prep: Certified Cloud Practitioner for AWS

cloudacademy.com/quiz/exam/3761116/results

#1

Which of the following services should be used if you need low latency or frequent access to your data?

✗
Amazon Glacier

✗
AWS CLI

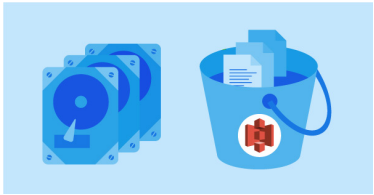
✓
Amazon S3

✗
AWS Snowball

Explanation

Amazon S3 is a durable, secure, simple, and fast storage service designed to make web-scale computing easier for developers. Use Amazon S3 if you need low latency or frequent access to your data.

http://aws.amazon.com/glacier/faqs/
Covered in this lecture
AWS Storage Gateway
Course:Storage Fundamentals for AWS



10m

#2

Which of the following costs associated with on-premises labor are significantly reduced when an organization migrates to AWS?

✗

Application development

✓

Server maintenance

✗

Software design

✗

Network encryption

Explanation

When an organization migrates from on-premises to AWS, the responsibility of server maintenance shifts to AWS. Costs associated with application development, software design, and network encryption remain the responsibility of the organization.

https://aws.amazon.com/blogs/enterprise-strategy/rightsizing-infrastructure-can-cut-costs-36/

#3

What is the meaning of pay-as-you-go, when related to Amazon Web Services?

✗

You pay the Cloud provider only when your product is profitable.

✗

You pay only when you leave the service.

✓

You have no upfront costs, but rather pay on a monthly basis, based on usage.

✗

You pay only when your instance is doing very intense computation

Explanation

The concept of pay-as-you-go means that you pay only for a specific amount of resources that you use in a specific amount of time used in a given month. For instance, you can use an Amazon EC2 Instance only for 30 minutes and you will be charged only for that time, without any upfront costs to launch or terminate the instance.

http://aws.amazon.com/ec2/pricing/

#4

Where can a new user find out which AWS compute resources are available within the free tier?

AWS Billing and Management Console

AWS Cost and Usage Report

AWS Cost Explorer

AWS Services product pages

Explanation

The AWS Services product pages provide information about which services are available within the free tier.

The AWS Billing and Management Console allows users to manage the billing for services they already own.

The AWS Cost and Usage Report provides information about cost and usage for services a user already owns.

The AWS Cost Explorer allows users to visualize the costs of their AWS services.

https://aws.amazon.com/products/?aws-products-all.sort-by=item.additionalFields.productNameLowercase&aws-products-all.sort-order=asc&awsf.re%3AInvent=*all&awsf.Free%20Tier=free-tier%23always-free&awsf.tech-category=*all

#5

Which of the following is true of CloudWatch alarms?

They automatically make changes to the rules based on monitored resource.

✓ They automatically make changes to the resources monitored based on rules defined.

✗ They only monitor the timeout metric for numerous AWS services

✗ They are only configured through CloudWatch APIs.

Explanation

CloudWatch alarms send notifications or automatically make changes to the resources you are monitoring based on rules that you define.

http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/WhatIsCloudWatch.html

#6

Are generators and cooling equipment shared across Availability Zones?

✗ Yes

✓ No

✗ Availability zones share the same data center and so the same equipments

✗ It depends on the region

Explanation

Each Availability Zone is engineered to be isolated from failures in other Availability Zones and to provide inexpensive, low-latency network connectivity to other zones in the same region. By launching instances in separate Availability Zones, you can protect your applications from the failure of a single location.

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

#7

In regards to disaster recovery, what is a recovery point objective (RPO)?

✗
The time it takes after a disruption to restore a system to its service level.

✓
It is the acceptable amount of data loss measured in time.

✗
The time it takes to scale a functioning resource horizontally to adapt to increased demand.

✗
The time it takes to scale a functioning resource vertically to adapt to increased demand.

Explanation

The recovery point objective (RPO) is the amount of acceptable data loss measured in time. For example, a transactional business cannot afford a great deal of data loss, so its RPO is likely less than one hour because an hour is a great expense in terms of data loss. However, for a more isolated website with minimal customer interaction, an RPO of a day may be acceptable because this represents a tolerable amount of data loss.

https://d1.awsstatic.com/whitepapers/Storage/Backup_and_Recovery_Approaches_Using_AWS.pdf
Covered in this lecture
Disaster Recovery
Course:Architecture Fundamentals of AWS for Cloud Practitioner

8m

#8

What does the concept of "redundancy" mean within AWS?

✓
Design multiple resources to perform the same task

✗
Design a single resource to perform multiple tasks

Design a single system to perform multiple tasks synchronously

Design a stateless resource to perform one task

Explanation

In regards to system design, redundancy is when multiple resources perform the same task so that in the event one of the resources fails, the other remaining resources can bear the workload in its absence until the resource can be replaced or repaired.

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/disaster-recovery-resiliency.html

#9

Which statement regarding AWS regions is incorrect?

EC2 instances aren't replicated across AWS regions unless you do so specifically.

Each AWS region includes an identical number of availability zones to host EC2 instances.

Some AWS services are available in a limited number of AWS regions.

Amazon EC2 provides you the ability to place resources, such as instances and data, in multiple locations.

Explanation

Amazon EC2 is hosted in multiple locations world-wide. These locations are composed of regions and Availability Zones. **Each region is a separate geographic area. Each region has multiple, isolated locations known as Availability Zones.** Amazon EC2 provides you the ability to place resources, such as instances, and data in multiple locations. Resources aren't replicated across regions unless you do so specifically.

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-regions-availability-zones.html

#10

What does Amazon ElastiCache provide?

✗
A virtual server with a huge amount of cache memory

✓
A managed in-memory cache service

✗
An automated in-memory service

✗
An Amazon EC2 instance with the Autocached software pre-installed

Explanation

Amazon ElastiCache allows you to improve the performance of your application by providing an in-memory cache service for the objects of your database, as it allows you to reduce the retrieval time of your data by avoiding the costly secondary-memory access needed by typical disk-based databases.

http://aws.amazon.com/elasticache/

Covered in this lecture
Serverless Design Patterns
Course:Designing Multi-Tier Architectures

7m

#11

What types of identities do Amazon Cognito identity pools support?

✗
They support only unauthenticated identities.

✓
They support both authenticated and unauthenticated identities.

✗
They support only authenticated identities.

They support neither authenticated nor unauthenticated identities.

Explanation

Amazon Cognito identity pools support both authenticated and unauthenticated identities.

Authenticated identities belong to users who are authenticated by a public login provider or your own backend authentication process. Unauthenticated identities typically belong to guest users.

https://docs.aws.amazon.com/cognito/latest/developerguide/identity-pools.html

#12

_____ is an extremely low-cost storage service that provides secure and durable storage for data archiving and backup.

Amazon S3

Amazon EC2

Amazon Glacier

Amazon EBS

Explanation

Amazon Glacier is an extremely low-cost storage service that provides secure and durable storage for data archiving and backup. In order to keep costs low, Amazon Glacier is optimized for data that is infrequently accessed and for which retrieval times of several hours are suitable.

http://aws.amazon.com/glacier/

#13

As it relates to Amazon EC2 instances, what is the function of key pairs?

To encrypt the login information for Linux and Windows EC2 instances and then decrypt the same information, allowing you to authenticate into the instance.

To encrypt data held on EBS volumes using AES-256 cryptography and then decrypt the data to be read again

To encrypt and decrypt passwords for AWS user accounts

To safely make programmatic API calls over an encrypted channel

Explanation

A key pair, as the name implies, is made up of two components: a public key and a private key. These keys are 2048-bit SSH-2 RSA keys.

The function of key pairs is to encrypt the login information for Linux and Windows EC2 instances, and then decrypt the same information allowing you to authenticate onto the instance.

The public key uses public-key cryptography to encrypt data such as the username and password. For Windows instances, the private key is used to decrypt this data, allowing you to gain access to the login credentials including the password. For Linux instances, the private key is used to SSH into the instance.

The public key is held and kept by AWS. The private key is your responsibility to keep and ensure that it is not lost.

 http://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/ec2-key-pairs.html

#14

What is a security benefit of the AWS cloud?

AWS maintains all networks

AWS monitors facilities and hardware

AWS monitors platform security

AWS encrypts all data in the cloud

Explanation

When using the AWS cloud, AWS is responsible for monitoring and maintaining the security of facilities and hardware, so that the customer can focus on security within the cloud. Network, platform, and data security within the cloud are all the responsibility of the customer.

https://docs.aws.amazon.com/whitepapers/latest/aws-overview/security-and-compliance.html

#15

If your AWS data must meet specific regulations such as the EU Data protection laws, what must you do?

Be aware that they exist and comply with them when and if you have time to do so

Move your data somewhere else so you don’t have to worry about extra security

Architect your environment to meet these security requirements

Keep that data on-premise and do not move it to the cloud under any circumstance

Explanation

Some laws require specific security controls, retention requirements, etc, dependent on the data being stored. Other legislations exist where certain data may have to remain within a specific region and can not be transferred out of those boundaries. You need to architect your environment to meet these security requirement and mitigate the risk of data being stored in a geographic location that’s restricted. Breaches to this legislation could have a legal impact and lead to additional risks against your organization, so it's fundamental that you are aware of your data privacy and storage location laws and regulations.

/cloud-computing/internal-business-effects-of-the-cloud-course/business-risks.html

#16

Which of the following is an IAM best practice?

Assign MFA to users with minimal authorization

Assign permissions to groups and add users to that group

Assign permissions to users where possible

Rotate your access keys once every two years

Explanation

IAM groups contain IAM users, and these groups will have IAM policies associated that will allow or explicitly deny access to AWS resources. These policies are either AWS Managed policies that can be selected from within IAM, or customer-managed policies that are created by you, the customer.

Groups are normally created that relate to a specific requirement or job role. Any users that are a member of that group inherit the permissions applied to the group. By applying permissions to a group instead of individual users, it makes it easy to modify permissions for multiple users at once. All you would need to do is modify the permissions of a group and all users associated with the group would inherit the new access.

 http://docs.aws.amazon.com/IAM/latest/UserGuide/best-practices.html#use-groups-for-permissions

#17

How does AWS define cloud computing?

The on-demand delivery of IT resources through a cloud services platform via the Internet with pay-as-you-go pricing.

A pool of servers offering compute resources that are designed to be issued exclusively to individual users and organizations.

✗
The term used by cloud architects to describe virtualized technology.

✗
A secure pool of compute, storage, and network resources that are accessible only on-premises.

Explanation

AWS cloud computing is described as the on-demand delivery of IT resources through a cloud services platform via the Internet with pay-as-you-go pricing.

https://aws.amazon.com/what-is-cloud-computing/

#18

You have recently purchased some reserved instances and are unsure if they are being used. Which of the following is a possible way to check this?

✗
Command Line Interface

✗
Personal Health Dashboard

✓
Reserved Instance utilization report

✗
Consolidated Billing console

Explanation

The following three tools are available to determine Reserved Instance utilization:

1. Detailed billing report.
2. Reserved Instance utilization report.
3. Billing and Cost Management console.

https://aws.amazon.com/premiumsupport/faqs/

#19

Which of the following is specifically an AWS security best practice?

✓ Applying the principle of least privilege

✗ Applying the principle of mechanical sympathy

✗ To democratize advanced technologies

✗ To design for failure

Explanation

Applying the 'principle of least privilege' is a security best practice that essentially focuses on only granting the level of access an identity requires to perform its role. This also looks at how to prevent and eliminate identities with long-term credentials.

https://d1.awsstatic.com/whitepapers/architecture/AWS_Well-Architected_Framework.pdf

#20

What is AWS Direct Connect?

✗ AWS Direct Connect is a highly available and scalable DNS service designed to give developers and businesses an extremely reliable and cost-effective way to route end users to Internet applications.

✓ AWS Direct Connect is a network service that provides an alternative to using the Internet to utilize AWS cloud services.

✗ AWS Direct Connect is a flexible, low-latency service that lets you stream resource intensive applications and games from the cloud.

✗

AWS Direct Connect is a flexible application management solution with automation tools that enable you to model and control your applications and their supporting infrastructure.

Explanation

AWS Direct Connect is a network service that provides an alternative to using the Internet to utilize AWS cloud services. AWS Direct Connect links your internal network to an AWS Direct Connect location over a standard 1 gigabit or 10 gigabit Ethernet fiber-optic cable. One end of the cable is connected to your router, the other to an AWS Direct Connect router. With this connection in place, you can create virtual interfaces directly to the AWS cloud (for example, to Amazon Elastic Compute Cloud (Amazon EC2) and Amazon Simple Storage Service (Amazon S3)) and to Amazon Virtual Private Cloud (Amazon VPC), bypassing Internet service providers in your network path.

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

Covered in this lecture
AWS Networking
Course:Introduction to Amazon Web Services (AWS)

4m

#21

Which of the following statements is true of an Auto Scaling group?

✓ An Auto Scaling group cannot span multiple regions.

✗ An Auto Scaling group delivers log files within 30 minutes of an API call.

✗ Auto Scaling publishes new log files about every 15 minutes.

✗ An Auto Scaling group cannot be configured to scale automatically.

Explanation

An Auto Scaling group can contain EC2 instances that come from one or more Availability Zones within the same region. However, an Auto Scaling group cannot span multiple regions.

http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/US_AddAvailabilityZone.html

#22

Which of the following have access to billing support?

✓ All AWS customer accounts

✗ Enterprise support plans

✗ Business support plans

✗ Basic support plans

Explanation

Account and billing case support is available to all AWS customers.

https://docs.aws.amazon.com/awssupport/latest/user/case-management.html

#23

Which AWS disaster recovery method has the lowest RTO and RPO, but the highest cost required to maintain resources?

✗ Backup and restore

✗ Pilot light

✗ Warm standby

✓ Multi-site

Explanation

Multi-site is the quickest disaster recovery method, with minimal time to recover and minimal data loss, but with the highest overall cost in comparison to backup and restore, pilot light or warm standby methods. This method is ideal for highly transactional online businesses, whose potential losses in terms of revenue and reputation far outweigh any costs required to maintain a duplicate production environment in a separate AWS region.

https://d1.awsstatic.com/whitepapers/Storage/Backup_and_Recovery_Approaches_Using_AWS.pdf
Covered in this lecture
Course Summary
Course:Architecture Fundamentals of AWS for Cloud Practitioner

7m

#24

To ensure secure services, AWS offers shared responsibility models for each of the different type of services that they offer which you need to be aware of. Which of the following services are the responsibility of AWS? (Choose 3 answers)

Operating systems

Virtualization infrastructure

Network infrastructure

Physical security of hardware

Explanation

AWS is responsible for what is known as Security **'of'** the Cloud. This covers their global infrastructure elements – Regions, Availability Zones, and Edge Locations, and also the foundations of their services covering Compute, Storage, Database, and Network

/blog/aws-shared-responsibility-model-security/

#25

A user is uploading a backup of data to S3 Glacier as part of a disaster recovery plan. The data stored in S3 Glacier is part of a larger data recovery plan that involves other AWS services.There is a relatively small set of data (100 MB) that needs to be restored immediately when a disaster recovery plan is executed, and the organization is planning a recovery time objective (RTO) of 1 hour. Assuming the data size meets the requirements for any of the given retrieval options below, which S3 Glacier data retrieval option would you plan in the event of a disaster?

Use Expedited retrievals without Provisioned Capacity

Use Expedited Retrievals with Provisioned Capacity

Use Bulk retrievals

Use Standard retrievals

Explanation

There are three retrieval options with Amazon S3 Glacier:

- Expedited — There are two types of Expedited retrievals: On-Demand and Provisioned. On-Demand requests are similar to EC2 On-Demand instances and are available most of the time. Provisioned requests are guaranteed to be available when you need them, which is recommended for a DR plan.
- Standard — Standard retrievals allow you to access any of your archives within several hours.
- Bulk — Bulk retrievals are Amazon S3 Glacier's lowest-cost retrieval option, which you can use to retrieve large amounts, even petabytes, of data inexpensively in a day. Bulk retrievals typically complete within 5–12 hours.

http://docs.aws.amazon.com/amazonglacier/latest/dev/introduction.html

#26

When you launch an instance using Amazon EC2, you must specify a geographic region in which to launch the instance, and a corresponding _____, which is an isolated location in that region where the physical hardware on which the instance will be launched is located.

✓ availability zone

✗ sub-region

✗ vicinity

✗ sector

Explanation

Amazon EC2 is hosted in multiple locations worldwide. These locations are composed of regions and Availability Zones. Each region is a separate geographic area. Each region has multiple, isolated locations known as Availability Zones. Each region is completely independent. Each Availability Zone is isolated, but the Availability Zones in a region are connected through low-latency links.

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-regions-availability-zones.html

#27

You want to copy an Amazon Machine Image (AMI) to a different region. What should you ensure prior to copying the AMI?

✗ You should ensure that the contents of the source AMI are EBS store-backed.

✗ You should ensure that the contents of the source AMI can only set credentials received from an identity provider.

✓ You should ensure that the contents of the source AMI are updated to support running in a different region.

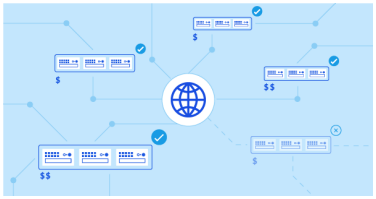
You should ensure that the contents of the source AMI are not public.

Explanation

You must confirm that the contents of the source Amazon Machine Image (AMI) are updated to support running in a different region prior to copying an AMI.

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/CopyingAMIs.html

Covered in this lecture
Designing for disaster recovery / business continuity
Course:Designing Highly Available, Cost Efficient, Fault Tolerant, Scalable Systems for Solutions Architect Associate on AWS



19m

#28

You have been asked to perform some penetration testing on your company's AWS infrastructure. However, you are not sure who is responsible for this. Which statement describing the AWS policy regarding penetration testing is correct?

Permission is required from AWS for all penetration testing.

You need to employ a third-party specialist to do the testing.

AWS needs to perform the penetration tests.

Penetration testing is possible without AWS approval depending on the services in use.

Explanation

There are several important things to note about penetration testing requests:

- Permission may be required for penetration testing, depending on which AWS services are in use.

- To request permission, you must be logged into the AWS portal using the root credentials associated with the instances you wish to test, otherwise the form will not pre-populate correctly.

http://aws.amazon.com/security/penetration-testing/

#29

What is NOT a feature of Amazon Inspector?

✗ built-in rules library

✓ expandable rules library allowing for custom policy rules

✗ ability to publish findings through SNS

✗ automate via API

Explanation

Amazon Inspector has a fixed built-in library of best practices and rules. Currently it doesn't support any custom rules beyond this default set.

https://docs.aws.amazon.com/inspector/latest/userguide/inspector_introduction.html

#30

VPC security groups operate at the instance level, whereas _____ are an optional layer of security that operate at the subnet level.

✓ network ACLs

✗ DB security groups

✗ proxy servers

IAM rules

Explanation

Network ACLs operate at the subnet level (second layer of defense), whereas security groups operate at the instance level (first layer of defense).

http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Security.html#VPC_Security_Comparison

#31

Which answer accurately describes reliability, one of the five pillars of the Well-Architected Framework?

How to maintain the stability of your environment, recover from failures, and automatically meet resource demands

How to manage and secure your infrastructure by protecting your data by focusing on confidentiality and data integrity

Ensuring you can efficiently meet compliance requirements by monitoring activity and setting effective policy

How to manage the security of what is in AWS environments in the cloud while AWS maintains the security of the AWS environments

Explanation

The pillar looks at how to maintain the stability of your environment and recover from outages and failures, in addition to automatically and dynamically meeting resourcing demands based put upon your infrastructure

The Reliability best practices are:

- Foundations
- Change Management
- Failure Management

https://d1.awsstatic.com/whitepapers/architecture/AWS_Well-Architected_Framework.pdf
#32

Your customers are concerned about the security of their sensitive data and their inquiry asks about what happens to old storage devices on AWS. What would be the best answer to this question?

✗
AWS uses a 3rd party security organization to destroy data as part of the decommissioning process.

✗
AWS uses its proprietary software to destroy data as part of the decommissioning process.

✓
AWS uses the techniques detailed in DoD 5220.22-M to destroy data as part of the decommissioning process.

✗
AWS reformats the disks and uses them again.

Explanation

When a storage device has reached the end of its useful life, AWS procedures include a decommissioning process that is designed to prevent customer data from being exposed to unauthorized individuals.

AWS uses the techniques detailed in DoD 5220.22-M ("National Industrial Security Program Operating Manual ") or NIST 800-88 ("Guidelines for Media Sanitization") to destroy data as part of the decommissioning process.

All decommissioned magnetic storage devices are degaussed and physically destroyed in accordance with industry-standard practices.

https://d0.awsstatic.com/whitepapers/aws-security-whitepaper.pdf
#33

Important functions of your application are unavailable. You cannot work around the problem, and your business is significantly impacted. You decide that you need support from AWS. Which of the following severity levels do you think would be an appropriate choice for this issue?

✗
Guidance

✗
System impaired

✓
Production system down

✗
Business-critical system down

Explanation

In the context of AWS support, if you have a problem that meets any of the following criteria, the severity level will be 'Production system down'.

- You can't work around the problem, and your business is significantly impacted.
- Important functions of your application are unavailable. (Business and Enterprise)

http://docs.aws.amazon.com/awssupport/latest/user/getting-started.html

#34

AWS Lambda monitors Lambda functions and reports metrics through which Amazon service?

✗
Amazon Kinesis

✓
Amazon CloudWatch

✗
Amazon Elastic Compute Cloud

✗
Amazon CloudTrail

Explanation

AWS Lambda automatically monitors Lambda functions on your behalf, reporting metrics through Amazon CloudWatch.

http://docs.aws.amazon.com/lambda/latest/dg/monitoring-functions.html

Covered in this lecture

Conclusion

Course:Advanced Use of Amazon API Gateway

1m

#35

Which description of a Recovery Time Objective (RTO) is correct?

✓

It is the maximum acceptable amount of time a system can be offline.

✗

It is the maximum acceptable amount of data loss measured in time.

✗

It is the maximum acceptable amount of income loss measured in transactions.

✗

It is the minimum amount of data loss before a system can fully recover measured in time.

Explanation

A recovery time objective (RTO) is the maximum acceptable time to restore system service after a disruption, while a recovery point objective (RPO) is the maximum acceptable amount of data loss measured in time. The two concepts are interrelated. The amount of data loss a business can tolerate usually determines the desired recovery time objective. The desired RTO then generally determines the disaster recovery method.

https://en.wikipedia.org/wiki/Recovery_point_objective

#36

_____ is a fast, reliable, scalable, fully managed message queuing service.

✓

Amazon SQS

✗

Amazon SNS

✗
Amazon SES

✗
AWS Data Pipeline

Explanation

Amazon Simple Queue Service (SQS) is a fast, reliable, scalable, fully managed message queuing service. SQS makes it simple and cost-effective to decouple the components of a cloud application.

1. Decoupling the components of an application – You have a queue of work items and want to track the successful completion of each item independently. Amazon SQS tracks the ACK/FAIL results, so the application does not have to maintain a persistent checkpoint or cursor. After a configured visibility timeout, Amazon SQS deletes acknowledged messages and redelivers failed messages.
2. Configuring individual message delay – You have a job queue and you need to schedule individual jobs with a delay. With standard queues, you can configure individual messages to have a delay of up to 15 minutes.
3. Dynamically increasing concurrency or throughput at read time – You have a work queue and want to add more consumers until the backlog is cleared. Amazon SQS requires no pre-provisioning.
4. Scaling transparently – You buffer requests and the load changes as a result of occasional load spikes or the natural growth of your business. Because Amazon SQS can process each buffered request independently, Amazon SQS can scale transparently to handle the load without any provisioning instructions from you.

🔗 http://aws.amazon.com/sqs/

#37

In AWS, who owns the controls for cloud-deployed infrastructure?

✗
AWS controls the physical components of the technology, connection points, and transmissions.

✗
A customer controls the physical components of the technology, connection points, and transmissions.

✓

AWS controls the physical components of the technology. A customer owns and controls everything else, including control over connection points and transmissions.

A customer controls the physical components of the technology. A bucket owner owns and controls everything else, including control over connection points and transmissions.

Explanation

For the portion deployed into AWS, AWS controls the physical components of that technology. The customer owns and controls everything else, including control over connection points and transmissions. To help customers better understand what controls are in place and how effectively they are operating, a SOC 1 Type II report is published with controls defined around EC2, S3 and VPC, as well as detailed physical security and environmental controls. These controls are defined at a high level of specificity that should meet most customer needs. AWS customers that have signed a non-disclosure agreement with AWS may request a copy of the SOC 1 Type II report.

http://do.awsstatic.com/whitepapers/compliance/AWS_Risk_and_Compliance_Whitepaper.pdf
Covered in this lecture
AWS Abstract and Container Services
Course:AWS Security Best Practices: Abstract and Container Services

8m

#38

What is a "rule" in the context of Amazon Inspector?

A set of conditions that when met in a specific target, this target will be considered for assessment

A potential security issue discovered during the Amazon Inspector assessment run

A security goal or objective that you might have for your environment

✓

A security check that the AWS agent performs during an assessment run

Explanation

In the context of Amazon Inspector, a security check that the agent performs during an assessment run.

https://docs.aws.amazon.com/inspector/latest/userguide/inspector_concepts.html

#39

Which of the following is true of Reserved-Instance billing within AWS Organizations?

✓

The pricing benefits of Reserved Instances are shared when the purchasing account is part of a set of accounts billed under one consolidated billing payer account.

✗

The pricing benefits of Reserved Instances can be applied to users within the same organization across Availability Zones.

✗

Reserved Instance discounts apply only to the account that purchased the Reserved Instance.

✗

Reserved Instance discounts from other accounts in the organization's consolidated billing family don't apply.

Explanation

Within AWS Organizations, the pricing benefits of Reserved Instances are shared when the purchasing account is part of a set of accounts billed under one consolidated billing payer account. Users must be within the same Availability Zone to take advantage of shared Reserved Instances for an organization, and AWS organizations make it possible to apply billing discounts to more than one user account.

https://aws.amazon.com/premiumsupport/knowledge-center/ec2-ri-consolidated-billing/

#40

How does installing the Amazon Inspector Agent on EC2 instances affect instance performance?

✓

Inspector agent has minimal effect on the performance of EC2 instances only during assessment run process.

✗

Inspector agent affects the performance of EC2 instances all the time as it keeps collecting behavioral and networking data as long as it is running.

✗

Inspector agent has a large impact on the performance of EC2 instance and should be started only at off-peak hours.

✗

Inspector agent's impact on performance is determined based on network activity on the EC2 instance; for that reason it is better to reduce utilization of instances while assessment process is running.

Explanation

Amazon Inspector and the Amazon Inspector agent have been designed for minimal performance impact during the assessment run process.

https://aws.amazon.com/inspector/faqs/

Covered in this lecture
Inspector
Course:Security Fundamentals of AWS for Cloud Practitioner

8m

#41

Amazon EC2 provides virtual computing environments known as _____.

✓

instances

✗

containers

✗

volumes

microsystems

Explanation

Amazon EC2 provides virtual computing environments known as instances.

When you launch an instance, the *instance type* that you specify determines the hardware of the host computer used for your instance. Each instance type offers different compute, memory, and storage capabilities and are grouped in instance families based on these capabilities. Select an instance type based on the requirements of the application or software that you plan to run on your instance.

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/concepts.html

#42

Which of these is a centralized way to programmatically query AWS for pricing information regarding specific products and services?

Price List Service API

Cost Allocation Tags

Monthly cost allocation reports

AWS CloudTrail

Explanation

The Price List Service API provides a centralized and convenient way to programmatically query AWS for services, products, and pricing information. The Price List Service API uses standardized product attributes such as Location, Storage Class, and Operating System, and provides prices at the SKU level. You can use Price List Service to build cost control and scenario planning tools, reconcile billing data, forecast future spend for budgeting purposes, and provide cost-benefit analyses that compare your internal workloads with AWS.

Cost Allocation Tags, Monthly cost allocation reports, and AWS CloudTrail are ways to tag and track billing and use-related cost information for already established services.

https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/using-pelong.html
#43

What choice below accurately describes the 'pilot light' disaster recovery method?

✗
A scaled-down version of your entire system in another region that can be scaled with minimal recovery time.

✗
Backing up data to tape and to be sent offsite regularly, from which all data can be restored in the event of a disaster.

✓
A very small replica of only your business-critical systems that is always running in another region, in case you need to divert your workloads there in the event of a disaster.

✗
A complete duplicate of your entire system in another region, to which all traffic can be directed in the event of a disaster.

Explanation

The idea of the pilot light is an analogy that comes from gas heating. In that scenario, a small flame that's always on can quickly ignite the entire furnace to heat up a house. In this DR approach, you simply replicate part of your IT structure for a limited set of core services so that the AWS cloud environment seamlessly takes over in the event of a disaster. A small part of your infrastructure is always running simultaneously syncing mutable data (as databases or documents), while other parts of your infrastructure are switched off and used only during testing. Unlike a backup and recovery approach, you must ensure that your most critical core elements are already configured and running in AWS (the pilot light). When the time comes for recovery, you can rapidly provision a full-scale production environment around the critical core.

https://aws.amazon.com/blogs/publicsector/rapidly-recover-mission-critical-systems-in-a-disaster/
#44

Which of the following describes operational excellence, one of the five pillars of the AWS's Well-Architected Framework?

✓

Prepare, operate, and evolve

✕

Infrastructure and data protection

✕

Change management and failure management

✕

Review, monitoring, and trade-offs

Explanation

Prepare, operate and evolve are interwoven in the following 6 design principles that make up this pillar

1. Perform operations as code: This explains how to deploy, respond to events and perform automated operational procedures using code to help prevent human error
2. Annotate documentation: This defines how it's possible to automatically create and annotate documentation when provisioning AWS resources
3. Make frequent, small, reversible changes: The focus of this principle is to implement your changes at small scale, and frequently to allow you to easily roll-back the change without affecting a wide customer base if there are issues
4. Refine operations procedures frequently: This focuses on the importance of consistently refining your operational procedures, evolving them as your business evolves
5. Anticipate failure: The focus here is to understand and define your potential points of failure and how these can be mitigated
6. Learn from all operational failures: This principle explains how knowledge sharing is key and how to learn from issues and failures that have occurred.

https://d1.awsstatic.com/whitepapers/architecture/AWS_Well-Architected_Framework.pdf

Covered in this lecture

Summary

Course:Summary: Cloud Practitioner Certification Preparation for AWS

7m

#45

Which of the following choices correctly describes how EC2 instances can be launched from an AMI?

✓ Multiple EC2 instances can be launched from a single AMI.

✗ Only a single EC2 instance can be launched from an AMI.

✗ EC2 instances cannot be launched from a single AMI.

✗ EC2 instances can be launched from a combination of several AMIs.

Explanation

Multiple instances can be launched from a single AMI. After launch, an instance acts as a copy of the AMI that runs as a virtual server in the cloud.

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instances-and-amis.html
Covered in this lecture
Amazon EC2
Course:Amazon Elastic Compute Cloud (EC2)

28m

#46

How often does Amazon CloudWatch report metrics for AWS WAF?

✓ 1 minute

✗ 3 minutes

✗ 5 minutes

✗
10 minutes

Explanation

WAF integrates well with Amazon CloudWatch allowing you to monitor set metrics for the service. WAF CloudWatch metrics are reported in one minute intervals by default.

http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/waf-metricscollected.html
#47

Which statements below regarding AWS pricing are true? (Choose 2 answers)

✓
You can pay less for a service when you reserve it in advance.

✓
Discounted rates are available for high volume service usage.

✗
Reserved payment options are available for all AWS services

✗
In general, payments are a set rate per month regardless of usage

Explanation

Discounts are available for service reservations, and you can pay less per unit by using a higher 'volume' of the service. However, reserved services are only available for certain services, and payments are not a set rate. They are generally based on usage, or 'on demand.'

https://d0.awsstatic.com/whitepapers/aws_pricing_overview.pdf
#48

_____ gives developers and systems administrators an easy way to create and manage a collection of related AWS resources, provisioning and updating them in an orderly and predictable fashion.

✗
Amazon AppStream

✓ AWS CloudFormation

✗ Amazon Cognito

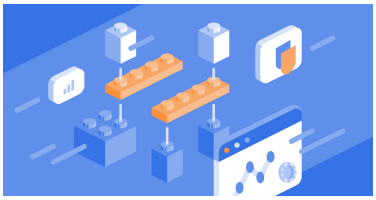
✗ AWS Lambda

Explanation

AWS CloudFormation gives developers and systems administrators an easy way to create and manage a collection of related AWS resources, provisioning and updating them in an orderly and predictable fashion.

http://aws.amazon.com/cloudformation/

Covered in this lecture
Summary
Course:AWS CloudFormation: Introduction to Infrastructure as Code



3m

#49

Amazon Glacier is a secure, _____, and extremely low-cost cloud storage service for data archiving and long-term backup.

✗ fast

✓ durable

✗ scalable

✗ modular

Explanation

Amazon Glacier is an extremely low-cost cloud storage service that provides secure, durable, and flexible storage for data backup and archival.

http://aws.amazon.com/glacier/

Covered in this lecture

Summary

Course:Understanding and Optimizing Costs with AWS Storage Services

2m

#50

What does the phrase 'stop guessing capacity' mean?

✓ To determine quantity of resources used on performance metrics

✗ To implement self-healing processes

✗ To set correct data storage lifecycles

✗ To use elastic IP addresses to increase high availability

Explanation

One of the best practices of the reliability pillar of the Well-Architected Framework is to 'stop guessing capacity.' This looks at the use of Auto Scaling to prevent the need to predict and guess your capacity and demand requirement which aids in a better end-user experience.

https://d1.awsstatic.com/whitepapers/architecture/AWS_Well-Architected_Framework.pdf

#51

Which of the following statements is true of automation in RDS?

✗ Amazon RDS automatically manages the database settings that are specific to your application.

✓

Amazon RDS automatically performs backups and patches the database software that powers your DB Instance.

✗

Amazon RDS automatically builds the relational schema that best fits your use case.

✗

Amazon RDS automatically performs system construction activities such as performance tuning to optimize your database for your application's workflow.

Explanation

Amazon RDS manages the work involved in setting up a relational database: from provisioning the infrastructure capacity you request to installing the database software. Once your database is running on its own DB Instance, Amazon RDS automates common administrative tasks, such as performing backups and patching the database software that powers your DB Instance. For optional Multi-AZ deployments (currently supported for MySQL and Oracle database engines), Amazon RDS also manages synchronous data replication across Availability Zones and automatic failover.

Since Amazon RDS provides native database access, you interact with the relational database software as you normally would. This means you're still responsible for managing the database settings that are specific to your application. You'll need to build the relational schema that best fits your use case and are responsible for any performance tuning to optimize your database for your application's workflow.

http://aws.amazon.com/rds/faqs/#3

#52

What is the Personal Health Dashboard?

✗

A CloudWatch dashboard that shows the status of all CloudWatch alerts you have configured.

✗

An AWS webpage that shows the status of all services in all regions and availability zones.

✓

An AWS account dashboard that shows how AWS service issues may affect systems connected with your AWS account.

✗
A Trusted Advisor dashboard that shows all issues on your account related to best practice checks.

Explanation

AWS Personal Health Dashboard provides alerts and remediation guidance when AWS is experiencing events that may impact you. While the Service Health Dashboard displays the general status of AWS services, Personal Health Dashboard gives you a personalized view into the performance and availability of the AWS services underlying your AWS resources.

https://aws.amazon.com/premiumsupport/phd/

#53

An organization has launched a large EC2 instance from an EBS-backed AMI. The organization wants to ensure that even when this instance is terminated, all the critical data will be saved. How can they ensure the EBS volume persists after the instance is terminated?

✗
Migrate all log files from the ephemeral drive to the EBS volume

✓
Set the volume's DeleteOnTermination flag to 'False'

✗
Take a frequent snapshots of the EBS volume

✗
Migrate important data to S3 for higher durability

Explanation

AWS provides an on demand, scalable infrastructure. Amazon EC2 allows the user to launch On-Demand instances and the organization should create an AMI of the running instance. If the organization has launched an instance with the EBS root device and an additional ephemeral drive, it is advised that the organization should keep taking a backup of all critical ephemeral data to EBS. The organization should also keep moving important data to S3 for higher durability. In this way even if the application fails the data can be restored. For the EBS backup, the organization should always take a snapshot at regular intervals.

Since the organization is launching an instance with an EBS based root device, by default the DeleteOnTermination flag is set to True. In the present scenario if the instance gets terminated the EBS will also be deleted.
It is recommended to have the flag as False so that when the instance is terminated it will not delete the volume.

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/terminating-instances.html#preserving-volumes-on-termination
#54

An enterprise using AWS has ten departments and wants to track the costs of each department. Which option meets this requirement?

✗
Setup IAM groups for each department and track their usage

✗
Setup IAM users for each department and track their usage

✗
Create separate accounts for each department and track them separately

✓
Create separate accounts for each department and use consolidated billing for payment and tracking

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
#55

Which of the following statements best describes a key difference between Elastic Beanstalk and CloudFormation?

✓
CloudFormation offers more potential for customization than Elastic Beanstalk, because you can actually design and script yourself.

✗
Elastic Beanstalk uses Elastic load balancing and CloudFormation doesn't.

✗
CloudFormation is faster in deploying applications than Elastic Beanstalk.

✗
Elastic Beanstalk is faster in deploying applications than CloudFormation.

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/
Covered in this lecture
AWS Elastic Beanstalk
Course:Compute Fundamentals of AWS for Cloud Practitioner

4m
#56

Complete the three definitions:_____ is the process of defining an identity and the verification of that identity_____ determines what resources an identity can access within a system once it has been authenticated._____ is the method and process of how access is granted to a secure resource.

✓
Authentication; Authorization; Access Control

✗
Authorization; Authentication; Access Control

✗
Access Control; Authentication; Authorization

✗
Authentication; Access Control; Authorization

Explanation

- Authentication: Process of defining an identity and the verification of that identity

    Example - username and password

- Authorisation: Determines what an identity can access within a system *once* it's been authenticated to it

    Example - An identities permissions to access specific AWS services

- Access Control: The method and process of how access is granted to a secure resource

    Example: Multi-Factor Authentication

🔗 /amazon-web-services/understanding-aws-authentication-authorization-accounting-course/authentication-authorization-and-access-control.html
#57

Can ELB load balancers span across multiple regions?

✓
No, but load balancers can span across Availability Zones in the same region.

✗
No, load balancers can only be within a single Availability Zone.

✗
Yes, load balancers can span across regions globally.

✗
Yes, load balancers can span across regions globally but not across multiple Availability Zones.

Explanation

The Load Balancer is the destination to which all requests intended for your load-balanced application should be directed. Each Load Balancer can distribute requests to multiple EC2 instances. A Load Balancer is represented by a DNS name and a set of ports. Load Balancers can span multiple Availability Zones within an EC2 Region, but they cannot span multiple regions.

https://docs.aws.amazon.com/elasticloadbalancing/latest/application/introduction.html

#58

You have a time-sensitive development question involving system issues and you decide that you need some support from AWS. Which is the most appropriate of the following severity levels to assist you in resolving the issue?

✓ System impaired

✗ Production system impaired

✗ Production system down

✗ Business-critical system down

Explanation

In regards to AWS support, if you have a problem which meets any of the following, it is considered a system impaired priority.

- You can work around the problem
- Non-critical functions of your application are behaving abnormally.
- You have a time-sensitive development question. (Developer, Business, and Enterprise)

http://docs.aws.amazon.com/awssupport/latest/user/getting-started.html

#59

Network Access Control Lists (NACLs) are _____.

✓
stateless

✗
stateful

✗
synchronous

✗
asynchronous

Explanation

Network ACLs are stateless; responses to allowed inbound traffic are subject to the rules for outbound traffic (and vice versa).

http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_ACLs.html
#60

Why does AWS recommend using stateless cloud applications, when possible?

✗
Stateless applications are more secure than stateful applications.

✗
Stateless applications are always more cost-effective than stateful applications.

✓
Stateless applications enable more scalability and resilience in each application layer.

✗
Stateless applications offer a higher degree of encryption for data in transit.

Explanation

A stateless application needs no knowledge of previous application actions, and stores no session data, and thus can be scaled horizontally with minimal friction.

https://aws.amazon.com/blogs/gametech/stateful-or-stateless/
#61

What AWS cloud characteristic makes a resource almost immediately available to allocate when and where you need it?

✗ high availability

✗ elasticity

✓ on-demand resourcing

✗ economy of scale

Explanation

On-demand resourcing provides you with the ability to provision resources within seconds and minutes, instead of days or weeks that it may take within an on-premise environment, especially if you had to order the additional hardware first. For example, if you had a server in AWS and its CPU utilization was steadily increasing with demand, you would be able to deploy a second server, which would be ready within minutes to take some of the load off of the first.

https://d0.awsstatic.com/whitepapers/aws-overview.pdf

#62

Which Amazon EC2 pricing model offers a savings of up to 90%?

✗ Reserved Instances

✗ On-Demand Instances

✓ Spot Instances

✗ Dedicated Instances

Explanation

Spot Instances provide up to 90% savings over On-Demand instances, and they offer significant savings opportunities over Reserved Instances, which require a commitment of 1-3 years, and they are significantly cheaper than Dedicated instances, which would not be appropriate in this use case.

https://aws.amazon.com/ec2/pricing/

#63

When processing workloads on specific Amazon EC2 instances that require a higher level of durability, and the ability for an instance to quickly retrieve the data, the recommended option is to use _____.

Amazon Glacier storage

Amazon EC2 instance store volumes

Amazon S3 object storage

Amazon EBS volumes

Explanation

The recommended option for temporary data is to use the local instance store. For data requiring a higher level of durability, you can use Amazon EBS volumes, or back up the data to Amazon S3. If you want an EC2 instance to be able to quickly access the data, as well as provide durable storage, then Amazon EBS volumes are the best choice.

https://aws.amazon.com/ec2/faqs/

#64

What service is used to store the log files generated by CloudTrail?

Amazon EFS

Amazon S3

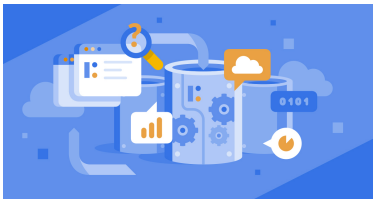
✗
Amazon RDS

✗
Amazon EBS

Explanation

The AWS CloudTrail uses Amazon's Simple Storage Service (S3) to store log files. It also supports the use of S3 life cycle configuration rules to reduce storage costs.

https://aws.amazon.com/cloudtrail/
Covered in this lecture
S3 Access Logs
Course:How to Implement & Enable Logging Across AWS Services (Part 1 of 2)



4m

#65

What changes in overall expenditures can a business expect when it migrates from an on-premises IT environment to a public cloud environment?

✗
A change from unpredictable on-premises costs to fixed capital expenditures in the cloud.

✗
A change from Immediate Return on Investment (ROI) with on-premises operations to delayed ROI in the cloud.

✓
Capital expenses for daily on-premises are replaced with variable operational expenses in the cloud

✗
Variable capital expenditures for on-premises are replaced with fixed capital expenditures in the cloud.

Explanation

When migrating operations from on-premises to AWS, an organization will reduce upfront, capital expenditures on computers, servers, and other hardware related to business operations and experience variable costs depending on which AWS services are used within the cloud.

https://pages.awscloud.com/rs/112-TZM-766/images/Cloud%20Economics%20Ebook_October%202018.pdf