1

A retail company is building its data warehouse solution using Amazon Redshift. As a part of that effort, the company is loading hundreds of files into the fact table created in its Amazon Redshift cluster. The company wants the solution to achieve the highest throughput and optimally use cluster resources when loading data into the company’s fact table. How should the company meet these requirements?

Use S3DistCp to load multiple files into the Hadoop Distributed File System (HDFS) and use an HDFS connector to ingest the data into the Amazon Redshift cluster

2

A company wants to improve the data load time of a sales data dashboard. Data has been collected as .csv files and stored within an Amazon S3 bucket that is partitioned by date. The data is then loaded to an Amazon Redshift data warehouse for frequent analysis. The data volume is up to 500 GB per day. Which solution will improve the data loading performance?

Use Amazon Kinesis Data Firehose to ingest data into Amazon Redshift

3

Company A purchases Company B and inherits three new AWS accounts. Company A would like to centralize billing and reserved instance benefits but wants to keep all other resources separate. How can this be accomplished?

Configure AWS Organizations Consolidated Billing and provide the finance team with IAM access to the billing console

4

A company has centralized all of its logs into one Amazon CloudWatch Logs log group. The SysOps Administrator is to alert different teams of any issues relevant to them. What is the most efficient approach to accomplish this?

Create an AWS Auto Scaling group of Amazon EC2 instances that will scale based on the amount of ingested log entries. This group will pull streams, look for patterns, and send notifications to relevant teams.

5

A development team recently deployed a new version of a web application to production. After the release, penetration testing revealed a cross-site scripting vulnerability that could expose user data. Which AWS service will mitigate this issue?

AWS WAF will mitigate the issue.

6

A SysOps Administrator is managing a web application that runs on Amazon EC2 instances behind an ELB Application Load Balancer (ALB). The instances run in an EC2 Auto Scaling group. The administrator wants to set an alarm for when all target instances associated with the ALB are unhealthy. Which condition should be used with the alarm?

AWS/ApplicationELB UnhealthyHostCount >= 1 The condition that should be used with the alarm is - AWS/ApplicationELB UnhealthyHostCount >= 1

7

A SysOps Administrator created an AWS CloudFormation template for the first time. The stack failed with a status of ROLLBACK\_COMPLETE. The Administrator identified and resolved the template issue causing the failure. How should the Administrator continue with the stack deployment?

Delete the failed stack and create a new stack

8

A mobile application running on eight Amazon EC2 instances is relying on a third-party API endpoint. The third-party service has a high failure rate because of limited capacity, which is expected to be resolved in a few weeks. In the meantime, the mobile application developers have added a retry mechanism and are logging failed API requests. A DevOps Engineer must automate the monitoring of application logs and count the specific error messages; if there are more than 10 errors within a 1-minute window, the system must issue an alert. How can the requirements be met with minimal management overhead?

Install the Amazon CloudWatch Logs agent on all instances to push the application logs to CloudWatchLogs. Use a metric filter to generate a custom CloudWatch metric that records the number of failures and triggers a CloudWatch alarm if the custom metric reaches 10 errors in a 1-minute period.

9

A DevOps engineer is writing an AWS CloudFormation template to stand up a web service that will run on Amazon EC2 instances in a private subnet behind an ELB Application Load Balancer. The Engineer must ensure that the service can accept requests from clients that have IPv6 addresses. Which configuration items should the engineer incorporate into the CloudFormation template to allow IPv6 clients to access the web service?

Associate an IPv6 CIDR block with the Amazon VPC and subnets where the EC2 instances will live. Create route table entries for the IPv6 network, use EC2 instance types that support IPv6, and assign IPv6 addresses to each EC2 instance.

10

A legacy web application stores access logs in a proprietary text format. One of the security requirements is to search application access events and correlate them with access data from many different systems. These searches should be near real time. Which solution offloads the processing load on the application server and provides a mechanism to search the data in near real time?

Install the Amazon Kinesis Agent on the application server, configure it to monitor the log files, and send it to a Kinesis stream. Configure Kinesis to transform the data by using an AWS Lambda function, and forward events to Amazon ES for analysis. Use the Elasticsearch API for querying the data.

11

A DevOps Engineer is implementing a mechanism for canary testing an application on AWS. The application was recently modified and went through security, unit, and functional testing. The application needs to be deployed on an AutoScaling group and must use a Classic Load Balancer. Which design meets the requirement for canary testing?

Create a different Classic Load Balancer and Auto Scaling group for blue/green environments. Use Amazon Route 53 and create weighted A records on Classic Load Balancer.

12

After conducting a disaster recovery exercise, an Enterprise Architect discovers that a large team of Database and Storage Administrators need more than seven hours of manual effort to make a flagship application's database functional in a different AWS Region. The Architect also discovers that the recovered database is often missing as much as two hours of data transactions. Which solution provides improved RTO and RPO in a cross-region failover scenario?

Use Amazon SNS topics to receive published messages from Amazon RDS availability and backup events. Use AWS Lambda for three separate functions with calls to Amazon RDS to snapshot a database instance, create a cross-region snapshot copy, and restore an instance from a snapshot. Use a scheduled Amazon CloudWatch Events rule at a frequency matching the RPO to trigger the Lambda function to snapshot a database instance. Trigger the Lambda function to create a cross-region snapshot copy when the SNS topic for backup events receives a new message. Configure the Lambda function to restore an instance from a snapshot to trigger sending new messages published to the availability SNS topic.

13

Which of the following inspects AWS environments to find opportunities that can save money for users and also improve system performance?

AWS Trusted Advisor inspect AWS environments to find opportunities that can save money for users to improve system performance.

14

Which of the following two design principles for cloud architecture are recommended when re-architecting a large monolithic application?

Implement loose coupling

Design for scalability

Implement loose coupling and design for scalability are the two design principles for cloud architecture.

15

What is the most cost-effective, durable storage option for retaining database backups for immediate retrieval?

Amazon S3 is the most cost effective, durable storage option for retaining database backups for immediate retrieval.

16

Which service allows a company with multiple AWS accounts to combine its usage to obtain volume discounts?

AWS Organizations allows a company with multiple AWS accounts to combine its usage to obtain volume discounts.

17

What is an example of agility in the AWS Cloud?

Decreased acquisition time for newcompute resources is an example of agility in the AWS Cloud

18

A company is running a finance application on an Amazon RDS for MySQL DB instance. The application is governed by multiple financial regulatory agencies. The RDS DB instance is set up with security groups to allow access to certain Amazon EC2 servers only. AWS KMS is used for encryption at rest.

Setting up RDS to use SSL for data in transit will provide additional security.

19

A gaming company has recently acquired a successful iOS game, which is particularly popular during the holiday season. The company has decided to add a leaderboard to the game that uses Amazon DynamoDB. The application load is expected to ramp up over the holiday season. Which solution will meet these requirements at the lowest cost?

DynamoDB with on-demand capacity mode will meet the requirements at the lowest cost.

20

An IT consulting company wants to reduce costs when operating its development environment databases. The company’s workflow creates multiple Amazon Aurora MySQL DB clusters for each development group. The Aurora DB clusters are only used for 8 hours a day. The DB clusters can then be deleted at the end of the development cycle, which lasts 2 weeks. Which of the following provides the most cost-effective solution?

Use Aurora Serverless. Restore current Aurora snapshot and deploy to a serverless cluster for each development group. Enable the option to pause the compute capacity on the cluster and set an appropriate timeout

21

A company is concerned about the cost of a large-scale, transactional application using Amazon DynamoDB that only needs to store data for 2 days before it is deleted. In looking at the tables, a Database Specialist notices that much of the data is months old and goes back to when the application was first deployed. What can the Database Specialist do to reduce the overall cost?

Create a new attribute in each table to track the expiration time, and create an AWS Glue transformation to delete entries more than 2 days old

22

A Database Specialist is planning to create a read replica of an existing Amazon RDS for MySQL Multi-AZ DB instance. When using the AWS Management Console to conduct this task, the Database Specialist discovers that the source RDS DB instance does not appear in the read replica source selection box. Therefore, the read replica cannot be created. What is the most likely reason for this?

Automated backups are not enabled on the source DB instance

23

A company is hosting an election reporting website on AWS for users around the world. The website uses Amazon EC2 Instances for the web and application tiers in an Auto Scaling group with Application Load Balancers. The database tier uses an Amazon RDS for MySQL database. The website is updated with election results once an hour and has historically observed hundreds of users accessing the reports. The company Is expecting a significant increase In demand because of upcoming elections in different countries. A solutions architect must improve the website's ability to handle additional demand while minimizing the need for additional EC2 instances. Which solution will meet these requirements?

Launch an Amazon ElastiCache cluster to cache common database queries to meet these requirements.

24

A company has media and application files that need to be shared internally. Users currently are authenticated using Active Directory and access files from a Microsoft Windows platform. The chief executive officer wants to keep the same user permissions but wants the company to improve the process as the company is reaching its storage capacity limit. What should a solutions architect recommend?

Configure Amazon FSx for Windows File Server and move all the media and application files

25

A company recently migrated a message processing system to AWS. The system receives messages into an ActiveMQ queue running on an Amazon EC2 instance. Messages are processed by a consumer application running on Amazon EC2. The consumer application processes the messages and writes results to a MySQL database running on Amazon EC2. The company wants this application to be highly available with low operational complexity. Which architecture offers the highest availability?

Use Amazon MQ with active/standby brokers configured across two Availability Zones. Add an Auto Scaling group for the consumer EC2 instances across two Availability Zones. Use Amazon RDS for MySQL with Multi-AZ enabled.

26

A solution architect is designing a hybrid application using the AWS cloud. The network between the on-premises data center and AWS will use an AWS Direct Connect (DX) connection. The application connectivity between AWS and the on-premises data center must be highly resilient. Which DX configuration should be implemented to meet these requirements?

Configure a DX connection with a VPN on top of it to meet these requirements.

27

Amazon S3 offers developers which combination?

Amazon S3 offers Low latency data storage and High scalability infrastructure at low costs combination to developers.

28

If a single instance has failed to launch within 24 hours due to some issues during a set up of Auto-scaling. Then what will happen to the Auto-Scaling condition?

Autoscaling will remove the scaling process.

29

What can be the option to reduce the load on Amazon EC2 instance when the content management system running on Amazon EC2 instance which is reaching total CPU utilization.

 Register the Amazon EC2 instance by creating a load balancer.

30

Which of the following is an on-demand configurable pool of shared computing resources allocated within a public cloud environment, providing a certain level of isolation between the different organizations?

Virtual Private Cloud is an on-demand configurable pool of shared computing resources allocated within a public cloud environment, providing a certain level of isolation between the different organizations.

31

Identify the wrong statement for AWS.

AWS allows its user to visit physical data centers so that user can trust on it

Correct:

When a storage device has reached the end of its useful life, AWS procedures include a decommissioning process

UPS units provide back-up power in the event of an electrical failure for critical and essential loads in the facility

Automatic fire detection and suppression equipment has been installed to reduce risk

32

Which statement is wrong for Dark Web?

None

Correct:

The dark web is a general term for the seedier corners of the web, where people can interact online without worrying about the watchful eye of the authorities

Usually, these sites are guarded by encryption mechanisms such as Tor that allow users to visit them anonymously

People use the dark web for a variety of purposes: buying and selling drugs, discussing hacking techniques and selling hacking services and so forth

33

Amazon EMR provides which managed framework that makes it easy, fast, and cost-e?ective to process vast amounts of data across dynamically scalable Amazon EC2 instances?

EMR provides Hadoop framework.

34

Which of the following allows your HTTP backend to control and accept only requests originating from Amazon API Gateway, even if the backend is publicly accessible?

Client-Side SSL Certificates allows your HTTP backend to control and accept only requests originating from Amazon API Gateway, even if the backend is publicly accessible.

35

When you first create an Amazon Web Services (AWS) account, you begin with a single sign-in identity that has complete access to all AWS services and resources in the account. This identity is called:

This identity is called a root user.

36

Which of these statements is true about virtual private cloud?

You are operating a private cloud within a public cloud

There is a certain level of isolation between you and other users

This ensures a secure method of remotely accessing your cloud resources

37

Which of these is an AWS's highly available and scalable DNS service, to easily manage your internal domain names with the same simplicity, security, and cost-effectiveness?

Route53 is an AWS's highly available and scalable DNS service, to easily manage your internal domain names with the same simplicity, security, and cost-effectiveness.

38

Which consistency options provided by Amazon DDB scan API when reading DDB data?

Eventually consistent reads

Strongly consistent reads

39

Which web service that makes it easy to set up, manage, and scale a distributed in-memory data store or cache environment in the cloud?

ElastiCache is a web service that makes it easy to set up, manage, and scale a distributed in-memory data store or cache environment in the cloud.

40

Which service performs the function that when an instance is healthy it is terminated and replaced with a new one?

Fault Tolerance performs the function that when an instance is healthy it is terminated and replaced with a new one.

41

What will happen when an EC2 instance fails to pass health checks?

The instance gets deleted by the ELB for root cause analysis.

42

What does RRS stand for when referring to the storage option in Amazon S3 that offers a lower level of durability at a lower storage cost?

Reduced Redundancy Storage

43

Explain the necessity of bucket policy?

To allow or deny accounts to observe and upload files in the bucket.

44

Which storage browser can be used as an interface for Amazon CloudFront?

Amazon S3 can be used as an interface for CloudFront.

45

Amazon S3 offers encryption services for which types of data?

Data in Flight

Data in Motion

46

For use cases that require faster access with microsecond latency, what provides a fully managed in-memory cache?

DynamoDB Accelerator provides a fully managed in-memory cache

47

Redshift can provide fast query performance by leveraging what storage approaches and technology?

Redshift can provide fast query performance by leveraging columnar storage approaches and technology.

48

What are lifecycle hooks used for in AutoScaling?

They are used to put an additional wait time to a scale in or scale out event.

49

An online retail company with millions of users around the globe wants to improve its ecommerce analytics capabilities. Currently, clickstream data is uploaded directly to Amazon S3 as compressed files. Several times each day, an application running on Amazon EC2 processes the data and makes search options and reports available for visualization by editors and marketers. The company wants to make website clicks and aggregated data available to editors and marketers in minutes to enable them to connect with users more effectively. Which options will help meet these requirements in the most efficient way?

Use Amazon Kinesis Data Firehose to upload compressed and batched clickstream records to Amazon Elasticsearch Service.

Use Amazon Elasticsearch Service deployed on Amazon EC2 to aggregate, filter, and process the data. Refresh content performance dashboards in near-real time.

Upload clickstream records from Amazon S3 to Amazon Kinesis Data Streams and use a Kinesis Data Streams consumer to send records to Amazon Elasticsearch Service.

50

A company launched a service that produces millions of messages every day and uses Amazon Kinesis Data Streams as the streaming service. The company uses the Kinesis SDK to write data to Kinesis Data Streams. A few months after launch, a data analyst found that write performance is significantly reduced. The data analyst investigated the metrics and determined that Kinesis is throttling the write requests. The data analyst wants to address this issue without significant changes to the architecture. Which of the following two actions should the data analyst take to resolve this issue?

Increase the Kinesis Data Streams retention period to reduce throttling

Increase the number of shards in the stream using the UpdateShardCount AP