

QUESTION 1

You have a WordPress site hosted on EC2 with a MySQL database hosted on RDS. The majority of your traffic is read traffic. There is only write traffic when you create a new blog. One of your blogs has gone viral and your WordPress site is struggling to cope. You check your CloudWatch metrics and notice your RDS instance is at 100% CPU utilization. What two steps should you take to reduce the CPU utilization?

Choose 2



Create an ElastiCache cluster and use this to cache your most frequently read blog posts.



Migrate from an Elastic Load Balancer to a Network Load Balancer so you can sustain more connections.



Enable Multi-AZ on your RDS instances and point multiple EC2 instances to the new Multi-AZ instances, thereby spreading the load.



Create multiple RDS read replicas and point multiple EC2 instances to these read replicas, thereby spreading the load.

QUESTION 2

Which of the following are valid types of Elastic Load Balancers?

Choose 3



Classic Load Balancer.




Network Load Balancer.



Virtual Load Balancer.



Application Load Balancer.

 Good work!

QUESTION 3

You work for a government contractor who supply services that are critical to national security. Because of this your corporate IT policy states that no multi-tenant virtualization is authorized within the company. Despite this, they are interested in moving to AWS, but they cannot violate corporate IT policy. Which EC2 billing model would you recommend that they use to achieve this?

☐ Reserved Instances.

☒ Dedicated Instances.

☐ Spot Instances.

☐ On-demand.

QUESTION 4

You have an EC2 instance in a single availability zone connected to an RDS instance. The EC2 instance needs to communicate to S3 to download some important configuration files from it. You try the command `aws s3 cp s3://yourbucket /var/www/html` however you receive an error message. You log in to Identity Access Management (IAM) and discover there is no role created to allow EC2 to communicate to S3. You create the role and attach it to the existing EC2 instance. How fast will the changes take to propagate?

☐ The same duration as CloudWatch detailed monitoring – 1 minute.

☒ Immediately.

☐ It depends on the region and availability zone.

☐ The same duration as CloudWatch standard monitoring – 5 minutes.

QUESTION 5

Your company has a web application on AWS. The application computes thousands of algorithms per second and is very CPU and disk intensive. The application runs on a c4.8xlarge, the largest C class instance available. The application stores its data locally on a standard SSD disk. Your application starts to perform slow. You check the logs and notice that your disk IO is routinely going above 16,000 IOPS. What should you do to remediate the issue?

- ☐ Decrease the size of the EBS volume so as to increase its IOPS performance.
- ☒ Migrate the EBS volume from a standard EBS volume to a provisioned IOPS EBS volume.
- ☐ Migrate the EBS volume from a standard EBS volume to a magnetic volume.
- ☐ Change the instance family from a c4.8xlarge to an r4.8xlarge so that you have more memory available to cope with the increased IO.

QUESTION 6

A new CIO joins your company and implements a new company policy that all EC2 instances must have encryption at rest. What is the quickest and easiest way to apply this policy to your existing EC2 instances?



Create a snapshot of the EC2 volume. Then create a copy of the snapshot, checking the box to enable encryption. Create an AMI of the copied snapshot and then redeploy the EC2 instance using the encrypted AMI. Delete the old EC2 instance.



Create an encrypted snapshot of the EC2 volume using the encrypt-on-the-fly option. Create an AMI of the copied snapshot and then redeploy the EC2 instance using the encrypted AMI. Delete the old EC2 instance.



In the AWS console, click on the EC2 instances, click actions and click encrypt EBS volumes.



Create an encrypted AMI of the EC2 volume using Windows BitLocker.

Good work!


QUESTION 7

Individual instances are provisioned ____.

☐ In Regions

☒ In Availability Zones

☐ Globally

 Good work!

QUESTION 8

In order to enable encryption at rest using EC2 and Elastic Block Store, you must ____.

- ☐ Mount the EBS volume into S3 and then encrypt the bucket using a bucket policy.
- ☐ Configure encryption using the appropriate Operating Systems file system
- ☐ Configure encryption using X.509 certificates
- ☒ Configure encryption when creating the EBS volume

Good work!

QUESTION 9

You run the internal intranet for a corporate bank. The intranet consists of a number of web servers and single relational database running Microsoft SQL Server. Your peak demand occurs at 9am every week morning when users are first logging in to the intranet. They can only log in using the company's internal network and it is not possible to access the intranet from any location other than within the office building for security purposes. Management is considering a change and to move this environment to AWS where users will be able to access the intranet via a software VPN. You have been asked to evaluate a migration to AWS and to identify the best EC2 billing model for your company's intranet. You must keep costs low and to be able to scale at particular times of day. You must maintain availability of the intranet throughout office hours. Management do not want to be locked into any contracts in case for some reason they want to go back to hosting internally. What EC2 billing model should you recommend?



Reserved Instances.



On-demand.



Spot Instances.



Dedicated Instances.

QUESTION 10


You work for an online gaming store which has a global worldwide leader board for players of the game. You need to implement a caching system for your leader board that has multiple availability zones in order to prevent an outage. Which ElastiCache solution should you use?

☐ Couchbase

☐ Memcached

☒ Redis

☐ ArangoDB

 Good work!

QUESTION 11

You are a developer for a genomics firm that is moving its infrastructure to AWS. Their environment consists of a three-tier web application, a web tier, an application tier and a relational database tier. They have a separate fleet of virtual machines that are used to access large HPC clusters on the fly. Their lab researches run multiple projects simultaneously and they will need to launch and decommission 1,000's of nodes on-demand while reducing the time required to complete genomic sequencing from weeks to days. In order to stay competitive they need to do this at as low cost as possible, with no long-term contracts. These HPC clusters can run any time day or night and their workloads store information in S3, so the instances can be terminated at any time without any effect on the data. What is the most COST EFFECTIVE EC2 pricing model for their requirements?

☐ On-demand Instances.

☐ Reserved Instances.

☒ Dedicated Instances.

☒ Spot Instances.

QUESTION 12

You have a very popular blog site, which has recently had a surge in traffic. You want to implement an ElastiCache solution to help take the load off the production database and you want to keep it as simple as possible. You will need to scale your cache horizontally and object caching will be your primary goal. Which ElastiCache solution will best suit your needs?



Memcached




ArangoDB



Couchbase



Redis

 Good work!

QUESTION 13

You have a three-tier web application with a webserver tier, application tier and database tier. The application is spread across multiple availability zones for redundancy and is in an autoscaling group with a minimum size of 2 and a maximum size of 10. The application relies on connecting to an RDS multi-AZ database. When new instances are launched they download a connection string file which is saved in an encrypted S3 bucket using a bootstrap script. During a routine scaling event you notice that your new web servers are failing their health checks and are not coming in to service. You investigate and discover that the EC2 - S3 read only role that the web servers rely on has no policies attached to it. What steps should you take together to remediate this problem while maintaining the principle of least privilege?

Choose 2



Create a new role giving Lambda permission to execute.



Attach the S3 – Read-only policy to the role.



Copy the role to a new AMI.



Attach the S3 – Administrator policy.



Create a snapshot of the EBS Volume and then restart the instance.




Terminate the existing instances and allow new instances to come into service.

QUESTION 14

You work for a media production company that streams popular TV shows to millions of users. They are migrating their web application from an in house solution to AWS. They will have a fleet of over 10,000 web servers to meet the demand and will need a reliable layer 4 load balancing solution capable of handling millions of requests per second. What AWS load balancing solution would best suit their needs?

- ☐ AWS Direct Connect.
- ☐ Application Load Balancer.
- ☒ Network Load Balancer.
- ☐ Elastic Load Balancer.

 Good work!

QUESTION 15


You are the IT manager at a furniture retailer and they are considering moving their web application to AWS. They currently colocate their servers in a co-location facility and the contract for this facility is now coming to an end. Management are comfortable signing a 3 year contract and want to get the cheapest web servers as possible while still maintaining availability. Their traffic is very steady and predictable. What EC2 pricing model would you recommend to maintain availability and to get the lowest cost price available?

☐ Spot Instances.

☐ On-demand.

☐ Dedicated Instances.

☒ Reserved Instances.

 Good work!

QUESTION 16

You work for a web analytics firm who have recently migrated their application to AWS. The application sits behind an Elastic Load Balancer and it monitors user traffic to their website. You have noticed that in the application logs you are no longer seeing your users public IP addresses, instead you are seeing the private IP address of the elastic load balancer. This data is critical for your business and you need to rectify the issue immediately. What should you do?



Update the application to log the x-forwarded-for header to get your users public IPv4 addresses.



Migrate the application to AWS Lambda instead of EC2 and put the Lambda function behind a Network Load Balancer.



Migrate the application in front of a Network Load Balancer and then reverse proxy traffic to your RDS instance.



Install a CloudWatch logs agent on the EC2 instances behind the Elastic Load Balancer to monitor the public IPv4 addresses and then stream this data to AWS Neptune.

Good work!

QUESTION 3

Individual instances are provisioned ____.



Globally



In Regions



In Availability Zones

Good work!

Next question



Rate this question

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Configure encryption using X.509 certificates



Configure encryption using the appropriate Operating Systems file system



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Elastic Load Balancer.

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