Module 2: Compute in the Cloud Practice Questions

Amazon EC2 (Elastic Compute Cloud)

• Question 2: "Which of the following is an example of horizontal scaling in the AWS Cloud?"

• Question 3: "You have noticed that several critical Amazon EC2 instances have been terminated. Which of the following AWS services would help you determine who took this action?"

• Question 45: "You have deployed your application on multiple Amazon EC2 instances. Your customers complain that sometimes they can't reach your application. Which AWS service allows you to monitor the performance of your EC2 instances to assist in troubleshooting these issues?"

• Question 62: "According to the AWS Acceptable Use Policy, which of the following statements is true regarding penetration testing of EC2 instances?"

• Question 67: "Which of the following AWS services can be used as a compute resource? (Choose TWO)" (Lists Amazon EC2 and AWS Lambda as options)

• Question 88: "Which of the following services allows you to run containerized applications on a cluster of EC2 instances?"

• Question 100: "Jessica is managing an e-commerce web application in AWS. The application is hosted on six EC2 instances. One day, three of the instances crashed; but none of her customers were affected. What has Jessica done correctly in this scenario?"

• Question 111: "Using Amazon EC2 falls under which of the following cloud computing models?"

• Question 113: "A company has deployed applications on Amazon EC2 instances. The company needs to assess application vulnerabilities and must identify infrastructure deployments that do not meet best practices. Which AWS service can the company use to meet these requirements?"

• Question 116: "What is the AWS service that performs automated network assessments of Amazon EC2 instances to check for vulnerabilities?"

• Question 127: "Which of the following can help protect your EC2 instances from DDoS attacks? (Choose TWO)"

• Question 132: "A customer spent a lot of time configuring a newly deployed Amazon EC2 instance. After the workload increases, the customer decides to provision another EC2 instance with an identical configuration. How can the customer achieve this?"

• Question 153: "A company is planning to migrate an application from Amazon EC2 to AWS Lambda to use a serverless architecture. Which of the following will be the responsibility of AWS after migration? (Choose TWO)"

• Question 179: "Which of the below are responsibilities of the customer when using Amazon EC2? (Choose TWO)"

• Question 182: "Which of the following is NOT a characteristic of Amazon Elastic Compute Cloud (Amazon EC2)?"

• Question 184: "Both AWS and traditional IT distributors provide a wide range of virtual servers to meet their customers' requirements. What is the name of these virtual servers in AWS?" (Refers to Amazon EC2 Instances)

• Question 211: "A company has a web application that is hosted on a single EC2 instance and is approaching 100 percent CPU Utilization during peak loads. Rather than scaling the server vertically, the company has decided to deploy three Amazon EC2 instances in parallel and to distribute traffic across the three servers. What AWS Service should the company use to distribute the traffic evenly?"

• Question 217: "What are the advantages of using Auto Scaling Groups for EC2 instances?"

• Question 239: "When granting permissions to applications running on Amazon EC2 instances, which of the following is considered best practice?"

• Question 243: "According to best practices, which of the below options is best suited for processing

a large number of binary files?" (Mentions Running EC2 instances in parallel)

• Question 256: "A customer is planning to migrate their Microsoft SQL Server databases to AWS. Which AWS Services can the customer use to run their Microsoft SQL Server database on AWS? (Choose TWO)" (Lists Amazon Elastic Compute Cloud as an option)

• Question 322: "Which of the following services allows you to install and run custom relational database software?" (Refers to Amazon EC2)

• Question 351: "How can you increase your application's fault-tolerance while it is being hosted in AWS?" (Mentions deploying across multiple EC2 instances or Availability Zones)

• Question 358: "Amazon EC2 instances are conceptually very similar to traditional servers. However, using Amazon EC2 server instances in the same manner as traditional hardware server instances is only a starting point. What are the main benefits of using the AWS EC2 instances instead of traditional servers? (Choose TWO)"

• Question 361: "A company is running a large web application that needs to always be available. The application tends to slow down when CPU usage is greater than 60%. How can they track when CPU usage goes above 60% for any of the EC2 Instances in their account?"

• Question 398: "Which AWS service can be used to manually launch instances based on resource requirements?" (Refers to Amazon EC2)

• Question 404: "A user is planning to launch two additional Amazon EC2 instances to increase availability. Which action should the user take?"

• Question 416: "A company has deployed several relational databases on Amazon EC2 instances Every month the database software vendor releases new security patches that need to be applied to the databases. What is the MOST efficient way to apply the security patches?"

• Question 473: "A company wants to focus on business activities instead of managing compute and capacity. Which AWS service can be used to automatically add or remove Amazon EC2 instances based on demand?"

• Question 488: "What approach to transcoding a large number of individual video files adheres to AWS architecture principles?" (Mentions using many instances in parallel)

• Question 489: "Which AWS services can host a Microsoft SQL Server database? (Select TWO)" (Lists Amazon EC2 as an option)

• Question 528: "What is an advantage of deploying an application across multiple Availability Zones?" (Implies distribution of compute resources like EC2)

• Question 562: "Which of the following services falls under the responsibility of the customer to maintain operating system configuration, security patching, and networking?" (Refers to Amazon EC2)

• Question 572: "Which of the following AWS features enables a user to launch a pre-configured Amazon Elastic Compute Cloud (Amazon EC2) instance?"

• Question 578: "How do Amazon EC2 Auto Scaling groups help achieve high availability for a web application?"

• Question 592: "A company is considering using AWS for a self-hosted database that requires a nightly shutdown for maintenance and cost-saving purposes. Which service should the company use?" (Refers to Amazon EC2 with Amazon Elastic Block Store)

Pricing Models (EC2 related)

• Question 28: "You want to run a questionnaire application for only one day (without interruption), which Amazon EC2 purchase option should you use?" (Answer: On-demand instances)

• Question 29: "You are working on a project that involves creating thumbnails of millions of images. Consistent uptime is not an issue, and continuous processing is not required. Which EC2 buying option would be the most cost-effective?" (Answer: Spot Instances)

• Question 56: "Which of the following is NOT correct regarding Amazon EC2 On-demand

instances?"

• Question 103: "Which of the following describes the payment model that AWS makes available for customers that can commit to using Amazon EC2 over a one or 3-year term to reduce their total computing costs?" (Answer: Save when you reserve)

• Question 120: "Savings Plans are available for which of the following AWS compute services? (Choose TWO)" (Lists Amazon EC2 and AWS Lambda as options)

• Question 130: "How are AWS customers billed for Linux-based Amazon EC2 usage?"

• Question 131: "Which of the following will impact the price paid for an EC2 instance? (Choose TWO)"

• Question 139: "A company has developed a media transcoding application in AWS. The application is designed to recover quickly from hardware failures. Which one of the following types of instance would be the most cost-effective choice to use?" (Answer: Spot Instances)

• Question 146: "What is one benefit and one drawback of buying a reserved EC2 instance? (Select TWO)"

• Question 148: "What is the most cost-effective purchasing option for running a set of EC2 instances that must always be available for a period of two months?" (Answer: On-Demand Instances)

• Question 155: "A company needs to migrate their website from on-premises to AWS. Security is a major concern for them, so they need to host their website on hardware that is NOT shared with other AWS customers. Which of the following EC2 instance options meets this requirement?" (Answer: Dedicated instances)

• Question 197: "One of the major advantages of using AWS is cost savings. What does AWS provide to reduce the cost of running Amazon EC2 instances?"

• Question 204: "An AWS customer has used one Amazon Linux instance for 2 hours, 5 minutes and 9 seconds, and one CentOS instance for 4 hours, 23 minutes and 7 seconds. How much time will the customer be billed for?"

• Question 222: "Which of the following is NOT a factor when estimating the costs of Amazon EC2? (Choose TWO)"

• Question 237: "A company is migrating a web application to AWS. The application's compute capacity is continually utilized throughout the year. Which of the below options offers the company the most cost-effective solution?" (Answer: Reserved Instances)

• Question 260: "A company's AWS workflow requires that it periodically perform large-scale image and video processing jobs. The customer is seeking to minimize cost and has stated that the amount of time it takes to process these jobs is not critical, but that cost minimization is the most important factor in designing the solution. Which EC2 instance class is best suited for this processing?" (Answer: EC2 Spot Instances)

• Question 271: "You are using several on-demand EC2 Instances to run your development environment. What is the best way to reduce your charges when these instances are not in use?"

• Question 277: "Which of the following is an available option when purchasing Amazon EC2 instances?" (Mentions "The ability to pay upfront to get lower hourly costs", referring to Reserved Instances)

• Question 307: "Which of the following are valid Amazon EC2 Reserved Instance types? (Choose TWO)"

• Question 313: "For compliance and regulatory purposes, a government agency requires that their applications must run on hardware that is dedicated to them only. How can you meet this requirement?" (Answer: Use EC2 Dedicated Hosts)

• Question 317: "The owner of an E-Commerce application notices that the compute capacity requirements vary heavily from time to time. What makes AWS more economical than traditional data centers for this type of application?"

• Question 380: "You are planning to launch an advertising campaign over the coming weekend to promote a new digital product. It is expected that there will be heavy spikes in load during the campaign period, and you can't afford any downtime. You need additional compute resources to handle the additional load. What is the most cost-effective EC2 instance purchasing option for this job?" (Answer: On-Demand Instances, for flexibility and no downtime on short notice)

• Question 386: "What are some of the benefits of using On-Demand EC2 instances? (Choose TWO)"

• Question 452: "Which of the following Reserved Instance (RI) pricing models provides the highest average savings compared to On-Demand pricing?"

• Question 462: "Which Amazon EC2 pricing model offers the MOST significant discount when compared to OnDemand Instances?" (Answer: All Upfront Reserved Instances for a 3 year term)

• Question 468: "A user must meet compliance and software licensing requirements that state a workload must be hosted on a physical server. When Amazon EC2 instance pricing option will meet these requirements?" (Answer: Dedicated Hosts)

• Question 469: "Which of the Reserved Instance (RI) pricing models can change the attributes of the RI as long as the exchange results in the creation of RIs of equal or greater value?" (Answer: Convertible RIs)

• Question 471: "When should a company consider using Amazon EC2 Spot Instances? (Select TWO)"

• Question 525: "Which of the following Amazon EC2 pricing models allow customers to use existing server-bound software licenses?" (Answer: Dedicated Hosts)

• Question 533: "When performing a cost analysis that supports physical isolation of a customer workload, which compute hosting model should be accounted for in the Total Cost of Ownership (TCO)?" (Answer: Dedicated Hosts)

• Question 536: "Which Amazon EC2 instance pricing model can provide discounts of up to 90%?" (Answer: Spot Instances)

• Question 552: "One benefit of On-Demand Amazon Elastic Compute Cloud (Amazon EC2) pricing is:"

• Question 557: "A company is migrating an application that is running non-interruptible workloads for a three-year time frame. Which pricing construct would provide the MOST cost-effective solution?" (Answer: Amazon EC2 Reserved Instances)

• Question 567: "Which Amazon EC2 pricing model adjusts based on supply and demand of EC2 instances?" (Answer: Spot Instances)

Auto Scaling

• Question 13: "Adjusting compute capacity dynamically to reduce cost is an implementation of which AWS cloud best practice?" (Answer: Implement elasticity)

• Question 19: "One of the most important AWS best-practices to follow is the cloud architecture principle of elasticity. How does this principle improve your architecture's design?" (Answer: By automatically provisioning the required AWS resources based on changes in demand)

• Question 39: "In order to implement best practices when dealing with a 'Single Point of Failure,' you should attempt to build as much automation as possible in both detecting and reacting to failure. Which of the following AWS services would help? (Choose TWO)" (Lists Auto Scaling as an option)

• Question 53: "A company is concerned that they are spending money on underutilized compute resources in AWS. Which AWS feature will help ensure that their applications are automatically adding/removing EC2 compute capacity to closely match the required demand?" (Answer: AWS Auto Scaling)