

## AWS-Certified-DevOps-Engineer-Professional Dumps

### Amazon AWS Certified DevOps Engineer Professional

<https://www.certleader.com/AWS-Certified-DevOps-Engineer-Professional-dumps.html>



**NEW QUESTION 1**

What method should I use to author automation if I want to wait for a CloudFormation stack to finish completing in a script?

- A. Event subscription using SQS.
- B. Event subscription using SNS.
- C. Poll using `ListStacks` / `list-stacks`.
- D. Poll using `GetStackStatus` / `get-stack-status`.

**Answer:** C

**Explanation:** Event driven systems are good for IFTTT logic, but only polling will make a script wait to complete. ListStacks / list-stacks is a real method, GetStackStatus / get-stack-status is not.

Reference: <http://docs.aws.amazon.com/cli/latest/reference/cloudformation/list-stacks.html>

**NEW QUESTION 2**

You need to perform ad-hoc business analytics queries on well-structured data. Data comes in constantly at a high velocity. Your business intelligence team can understand SQL. What AWS service(s) should you look to first?

- A. Kinesis Firehose + RDS
- B. Kinesis Firehose + RedShift
- C. EMR using Hive
- D. EMR running Apache Spark

**Answer:** B

**Explanation:** Kinesis Firehose provides a managed service for aggregating streaming data and inserting it into RedShift. RedShift also supports ad-hoc queries over well-structured data using a SQL-compliant wire protocol, so the business team should be able to adopt this system easily.

Reference: <https://aws.amazon.com/kinesis/firehose/details/>

**NEW QUESTION 3**

You are building a game high score table in DynamoDB. You will store each user's highest score for each game, with many games, all of which have relatively similar usage levels and numbers of players. You need to be able to look up the highest score for any game. What's the best DynamoDB key structure?

- A. HighestScore as the hash / only key.
- B. GameID as the hash key, HighestScore as the range key.
- C. GameID as the hash / only key.
- D. GameID as the range / only ke

**Answer:** B

**Explanation:** Since access and storage for games is uniform, and you need to have ordering within each game for the scores (to access the highest value), your hash (partition) key should be the GameID, and there should be a range key for HighestScore.

Reference: <http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/GuidelinesForTables.html#GuidelinesForTables.Partitions>

**NEW QUESTION 4**

You run a clustered NoSQL database on AWS EC2 using AWS EBS. You need to reduce latency for database response times. Performance is the most important concern, not availability. You did not perform the initial setup, someone without much AWS knowledge did, so you are not sure if they configured everything optimally. Which of the following is NOT likely to be an issue contributing to increased latency?

- A. The EC2 instances are not EBS Optimized.
- B. The database and requesting system are both in the wrong Availability Zone.
- C. The EBS Volumes are not using PIOPS.
- D. The database is not running in a placement group

**Answer:** B

**Explanation:** For the highest possible performance, all instances in a clustered database like this one should be in a single Availability Zone in a placement group, using EBS optimized instances, and using PIOPS SSD EBS Volumes. The particular Availability Zone the system is running in should not be important, as long as it is the same as the requesting resources.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/placement-groups.html>

**NEW QUESTION 5**

Fill the blanks: helps us track AWS API calls and transitions, helps to understand what resources we have now, and allows auditing credentials and logins.

- A. AWS Config, CloudTrail, IAM Credential Reports
- B. CloudTrail, IAM Credential Reports, AWS Config
- C. CloudTrail, AWS Config, IAM Credential Reports
- D. AWS Config, IAM Credential Reports, CloudTrail

**Answer:** C

**Explanation:** You can use AWS CloudTrail to get a history of AWS API calls and related events for your account. This includes calls made by using the AWS

Management Console, AWS SDKs, command line tools, and higher-level AWS services.  
Reference: <http://docs.aws.amazon.com/awscloudtrail/latest/userguide/cloudtrail-user-guide.html>

#### NEW QUESTION 6

You are creating an application which stores extremely sensitive financial information. All information in the system must be encrypted at rest and in transit. Which of these is a violation of this policy?

- A. ELB SSL termination.
- B. ELB Using Proxy Protocol v1.
- C. CloudFront Viewer Protocol Policy set to HTTPS redirection.
- D. Telling S3 to use AES256 on the server-side

**Answer:** A

**Explanation:** Terminating SSL terminates the security of a connection over HTTP, removing the S for "Secure" in HTTPS. This violates the "encryption in transit" requirement in the scenario.

Reference:  
<http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/elb-listener-config.html>

#### NEW QUESTION 7

You are designing a service that aggregates clickstream data in batch and delivers reports to subscribers via email only once per week. Data is extremely spikey, geographically distributed, high-scale, and unpredictable. How should you design this system?

- A. Use a large RedShift cluster to perform the analysis, and a fleet of Lambdas to perform record inserts into the RedShift table
- B. Lambda will scale rapidly enough for the traffic spikes.
- C. Use a CloudFront distribution with access log delivery to S3. Clicks should be recorded as querystring GETs to the distributio
- D. Reports are built and sent by periodically running EMR jobs over the access logs in S3.
- E. Use API Gateway invoking Lambdas which PutRecords into Kinesis, and EMR running Spark performing GetRecords on Kinesis to scale with spike
- F. Spark on EMR outputs the analysis to S3, which are sent out via email.
- G. Use AWS Elasticsearch service and EC2 Auto Scaling group
- H. The Autoscaling groups scale based on click throughput and stream into the Elasticsearch domain, which is also scalabl
- I. Use Kibana to generate reports periodically.

**Answer:** B

**Explanation:** Because you only need to batch analyze, anything using streaming is a waste of money. CloudFront is a Gigabit-Scale HTTP(S) global request distribution service, so it can handle scale, geo-spread, spikes, and unpredictability. The Access Logs will contain the GET data and work just fine for batch analysis and email using EMR.

Can I use Amazon CloudFront if I expect usage peaks higher than 10 Gbps or 15,000 RPS? Yes. Complete our request for higher limits here, and we will add more capacity to your account within two business days.

Reference: <https://aws.amazon.com/Cloudfront/faqs/>

#### NEW QUESTION 8

To monitor API calls against our AWS account by different users and entities, we can use to create a history of calls in bulk for later review, and use for reacting to AWS API calls in real-time.

- A. AWS Config; AWS Inspector
- B. AWS CloudTrail; AWS Config
- C. AWS CloudTrail; CloudWatch Events
- D. AWS Config; AWS Lambda

**Answer:** C

**Explanation:** CloudTrail is a batch API call collection service, CloudWatch Events enables real-time monitoring of calls through the Rules object interface.

Reference: <https://aws.amazon.com/whitepapers/security-at-scale-governance-in-aws/>

#### NEW QUESTION 9

How does Amazon RDS multi Availability Zone model work?

- A. A second, standby database is deployed and maintained in a different availability zone from master, using synchronous replication.
- B. A second, standby database is deployed and maintained in a different availability zone from master using asynchronous replication.
- C. A second, standby database is deployed and maintained in a different region from master using asynchronous replication.
- D. A second, standby database is deployed and maintained in a different region from master using synchronous replication.

**Answer:** A

**Explanation:** In a Multi-AZ deployment, Amazon RDS automatically provisions and maintains a synchronous standby replica in a different Availability Zone.

Reference: <http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.MultiAZ.html>

#### NEW QUESTION 10

You need to perform ad-hoc analysis on log data, including searching quickly for specific error codes and reference numbers. Which should you evaluate first?

- A. AWS Elasticsearch Service

- B. AWS RedShift
- C. AWS EMR
- D. AWS DynamoDB

**Answer:** A

**Explanation:** Amazon Elasticsearch Service (Amazon ES) is a managed service that makes it easy to deploy, operate, and scale Elasticsearch clusters in the AWS cloud. Elasticsearch is a popular open-source search and analytics engine for use cases such as log analytics, real-time application monitoring, and click stream analytics.

Reference:

<http://docs.aws.amazon.com/elasticsearch-service/latest/developerguide/what-is-amazon-elasticsearch-service.html>

#### NEW QUESTION 10

You are getting a lot of empty receive requests when using Amazon SQS. This is making a lot of unnecessary network load on your instances. What can you do to reduce this load?

- A. Subscribe your queue to an SNS topic instead.
- B. Use as long of a poll as possible, instead of short polls.
- C. Alter your visibility timeout to be shorter.
- D. Use `sqsd` on your EC2 instance

**Answer:** B

**Explanation:** One benefit of long polling with Amazon SQS is the reduction of the number of empty responses, when there are no messages available to return, in reply to a `ReceiveMessage` request sent to an Amazon SQS queue. Long polling allows the Amazon SQS service to wait until a message is available in the queue before sending a response.

Reference:

<http://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-long-polling.html>

#### NEW QUESTION 14

When thinking of DynamoDB, what are true of Local Secondary Key properties?

- A. Either the partition key or the sort key can be different from the table, but not both.
- B. Only the sort key can be different from the table.
- C. The partition key and sort key can be different from the table.
- D. Only the partition key can be different from the table

**Answer:** B

**Explanation:** Global secondary index — an index with a partition key and a sort key that can be different from those on the table. A global secondary index is considered "global" because queries on the index can span all of the data in a table, across all partitions.

Reference: <http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/SecondaryIndexes.html>

#### NEW QUESTION 18

Which deployment method, when using AWS Auto Scaling Groups and Auto Scaling Launch Configurations, enables the shortest time to live for individual servers?

- A. Pre-baking AMIs with all code and configuration on deploys.
- B. Using a Dockerfile bootstrap on instance launch.
- C. Using UserData bootstrapping scripts.
- D. Using AWS EC2 Run Commands to dynamically SSH into fleet

**Answer:** A

**Explanation:** Note that the bootstrapping process can be slower if you have a complex application or multiple applications to install. Managing a fleet of applications with several build tools and dependencies can be a challenging task during rollouts. Furthermore, your deployment service should be designed to do faster rollouts to take advantage of Auto Scaling. Prebaking is a process of embedding a significant portion of your application artifacts within your base AMI. During the deployment process you can customize application installations by using EC2 instance artifacts such as instance tags, instance metadata, and Auto Scaling groups.

Reference: <https://d0.awsstatic.com/whitepapers/overview-of-deployment-options-on-aws.pdf>

#### NEW QUESTION 19

Which of these techniques enables the fastest possible rollback times in the event of a failed deployment?

- A. Rolling; Immutable
- B. Rolling; Mutable
- C. Canary or A/B
- D. Blue-Green

**Answer:** D

**Explanation:** AWS specifically recommends Blue-Green for super-fast, zero-downtime deploys - and thus rollbacks, which are redeploying old code. You use various strategies to migrate the traffic from your current application stack (blue) to a new version of the application (green). This is a popular technique for deploying applications with zero downtime. Reference: <https://d0.awsstatic.com/whitepapers/overview-of-deployment-options-on-aws.pdf>

**NEW QUESTION 21**

You are building a deployment system on AWS. You will deploy new code by bootstrapping instances in a private subnet in a VPC at runtime using UserData scripts pointing to an S3 zip file object, where your code is stored. An ELB in a public subnet has network interfaces and connectMty to the instances. Requests from users of the system are routed to the ELB via a Route53 A Record Alias. You do not use any VPC endpoints. Which is a risk of using this approach?

- A. Route53 Alias records do not always update dynamically with ELB network changes after deploys.
- B. If the NAT routing for the private subnet fails, deployments fail.
- C. Kernel changes to the base AMI may render the code inoperable.
- D. The instances cannot be in a private subnet if the ELB is in a public on

**Answer:** B

**Explanation:** Since you are not using VPC endpoints, outbound requests for the code sitting in S3 are routed though the NAT for the VPC's private subnets. If this networking fails, runtime bootstrapping through code download will fail due to network unavailability and lack of access to the Internet, and thus Amazon S3. Reference: [http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_NAT\\_Instance.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_NAT_Instance.html)

**NEW QUESTION 25**

Which major database needs a BYO license?

- A. PostgreSQL
- B. MariaDB
- C. MySQL
- D. Oracle

**Answer:** D

**Explanation:** Oracle is not open source, and requires a bring your own license model.  
Reference: [http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP\\_Oracle.html](http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP_Oracle.html)

**NEW QUESTION 26**

For AWS Auto Scaling, what is the first transition state a new instance enters after leaving steady state when scaling out due to increased load?

- A. EnteringStandby
- B. Pending
- C. Terminating:Wait
- D. Detaching

**Answer:** B

**Explanation:** When a scale out event occurs, the Auto Scaling group launches the required number of EC2 instances, using its assigned launch configuration. These instances start in the Pending state. If you add a lifecycle hook to your Auto Scaling group, you can perform a custom action here. For more information, see Lifecycle Hooks.  
Reference: <http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/AutoScalingGroupLifecycle.html>

**NEW QUESTION 30**

You need to grant a vendor access to your AWS account. They need to be able to read protected messages in a private S3 bucket at their leisure. They also use AWS. What is the best way to accomplish this?

- A. Create an IAM User with API Access Key
- B. Grant the User permissions to access the bucket
- C. Give the vendor the AWS Access Key ID and AWS Secret Access Key for the User.
- D. Create an EC2 Instance Profile on your account
- E. Grant the associated IAM role full access to the bucket
- F. Start an EC2 instance with this Profile and give SSH access to the instance to the vendor.
- G. Create a cross-account IAM Role with permission to access the bucket, and grant permission to use the Role to the vendor AWS account.
- H. Generate a signed S3 PUT URL and a signed S3 GET URL, both with wildcard values and 2 year duration
- I. Pass the URLs to the vendor.

**Answer:** C

**Explanation:** When third parties require access to your organization's AWS resources, you can use roles to delegate access to them. For example, a third party might provide a service for managing your AWS resources. With IAM roles, you can grant these third parties access to your AWS resources without sharing your AWS security credentials. Instead, the third party can access your AWS resources by assuming a role that you create in your AWS account.  
Reference: [http://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_roles\\_common-scenarios\\_third-party.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles_common-scenarios_third-party.html)

**NEW QUESTION 34**

Why are more frequent snapshots or EBS Volumes faster?

- A. Blocks in EBS Volumes are allocated lazily, since while logically separated from other EBS Volumes, Volumes often share the same physical hardware
- B. Snapshotting the first time forces full block range allocation, so the second snapshot doesn't need to perform the allocation phase and is faster.
- C. The snapshots are incremental so that only the blocks on the device that have changed after your last snapshot are saved in the new snapshot.
- D. AWS provisions more disk throughput for burst capacity during snapshots if the drive has been pre-warmed by snapshotting and reading all blocks.



E. The drive is pre-warmed, so block access is more rapid for volumes when every block on the device has already been read at least one time.

**Answer:** B

**Explanation:** After writing data to an EBS volume, you can periodically create a snapshot of the volume to use as a baseline for new volumes or for data backup. If you make periodic snapshots of a volume, the snapshots are incremental so that only the blocks on the device that have changed after your last snapshot are saved in the new snapshot. Even though snapshots are saved incrementally, the snapshot deletion process is designed so that you need to retain only the most recent snapshot in order to restore the volume.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-creating-snapshot.html>

#### NEW QUESTION 39

For AWS CloudFormation, which stack state refuses UpdateStack calls?

- A. `UPDATE_ROLLBACK_FAILED`
- B. `UPDATE_ROLLBACK_COMPLETE`
- C. `UPDATE_CONIplete`
- D. `CREATE_COMPLETE`

**Answer:** A

**Explanation:** When a stack is in the UPDATE\_ROLLBACK\_FAILED state, you can continue rolling it back to return it to a working state (to UPDATE\_ROLLBACK\_COMPLETE). You cannot update a stack that is in the UPDATE\_ROLLBACK\_FAILED state. However, if you can continue to roll it back, you can return the stack to its original settings and try to update it again.

Reference:

<http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/using-cfn-updating-stacks-continueupdaterollback.html>

#### NEW QUESTION 41

Your CTO thinks your AWS account was hacked. What is the only way to know for certain if there was unauthorized access and what they did, assuming your hackers are very sophisticated AWS engineers and doing everything they can to cover their tracks?

- A. Use CloudTrail Log File Integrity Validation.
- B. Use AWS Config SNS Subscriptions and process events in real time.
- C. Use CloudTrail backed up to AWS S3 and Glacier.
- D. Use AWS Config Timeline forensic

**Answer:** A

**Explanation:** You must use CloudTrail Log File Validation (default or custom implementation), as any other tracking method is subject to forgery in the event of a full account compromise by sophisticated enough hackers. Validated log files are invaluable in security and forensic investigations. For example, a validated log file enables you to assert positively that the log file itself has not changed, or that particular user credentials performed specific API activity. The CloudTrail log file integrity validation process also lets you know if a log file has been deleted or changed, or assert positively that no log files were delivered to your account during a given period of time.

Reference:

<http://docs.aws.amazon.com/awscloudtrail/latest/userguide/cloudtrail-log-file-validation-intro.html>

#### NEW QUESTION 44

Which of these is not a Pseudo Parameter in AWS CloudFormation?

- A. AWS::StackName
- B. AWS::AccountId
- C. AWS::StackArn
- D. AWS::NotificationARNs

**Answer:** C

**Explanation:** This is the complete list of Pseudo Parameters: AWS::AccountId, AWS::NotificationARNs, AWS::NoValue, AWS::Region, AWS::StackId, AWS::StackName

Reference:

<http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/pseudo-parameter-reference.html>

#### NEW QUESTION 48

What is the scope of an EBS volume?

- A. VPC
- B. Region
- C. Placement Group
- D. Availability Zone

**Answer:** D

**Explanation:** An Amazon EBS volume is tied to its Availability Zone and can be attached only to instances in the same Availability Zone.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/resources.html>

**NEW QUESTION 53**

You are experiencing performance issues writing to a DynamoDB table. Your system tracks high scores for video games on a marketplace. Your most popular game experiences all of the performance issues. What is the most likely problem?

- A. DynamoDB's vector clock is out of sync, because of the rapid growth in request for the most popular game.
- B. You selected the Game ID or equivalent identifier as the primary partition key for the table.
- C. Users of the most popular video game each perform more read and write requests than average.
- D. You did not provision enough read or write throughput to the tabl

**Answer:** B

**Explanation:** The primary key selection dramatically affects performance consistency when reading or writing to DynamoDB. By selecting a key that is tied to the identity of the game, you forced DynamoDB to create a hotspot in the table partitions, and over-request against the primary key partition for the popular game. When it stores data, DynamoDB dMdes a table's items into multiple partitions, and distributes the data primarily based upon the partition key value. The provisioned throughput associated with a table is also dMded evenly among the partitions, with no sharing of provisioned throughput across partitions. Reference: <http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/GuidelinesForTables.html#Guideli nesForTables.UniformWorkload>

**NEW QUESTION 57**

For AWS CloudFormation, which is true?

- A. Custom resources using SNS have a default timeout of 3 minutes.
- B. Custom resources using SNS do not need a `ServiceToken` property.
- C. Custom resources using Lambda and `Code.ZipFile` allow inline nodejs resource composition.
- D. Custom resources using Lambda do not need a `ServiceToken` property

**Answer:** C

**Explanation:** Code is a property of the AWS::Lambda::Function resource that enables to you specify the source code of an AWS Lambda (Lambda) function. You can point to a file in an Amazon Simple Storage Service (Amazon S3) bucket or specify your source code as inline text (for nodejs runtime environments only). Reference: <http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/template-custom-resources.html>

**NEW QUESTION 58**

You need to deploy an AWS stack in a repeatable manner across multiple environments. You have selected CloudFormation as the right tool to accomplish this, but have found that there is a resource type you need to create and model, but is unsupported by CloudFormation. How should you overcome this chaHenge?

- A. Use a CloudFormation Custom Resource Template by selecting an API call to proxy for create, update, and delete action
- B. CloudFormation will use the AWS SDK, CLI, or API method of your choosing as the state transition function for the resource type you are modeling.
- C. Submit a ticket to the AWS Forum
- D. AWS extends CloudFormation Resource Types by releasing tooling to the AWS Labs organization on GitHu
- E. Their response time is usually 1 day, and they complete requests within a week or two.
- F. Instead of depending on CloudFormation, use Chef, Puppet, or Ansible to author Heat templates, which are declarative stack resource definitions that operate over the OpenStack hypervisor and cloud environment.
- G. Create a CloudFormation Custom Resource Type by implementing create, update, and delete functionality, either by subscribing a Custom Resource Provider to an SNS topic, or by implementing the logic in AWS Lambda.

**Answer:** D

**Explanation:** Custom resources provide a way for you to write custom provisioning logic in AWS CloudFormation template and have AWS CloudFormation run it during a stack operation, such as when you create, update or delete a stack. For more information, see Custom Resources. Reference: <http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/template-custom-resources.html>

**NEW QUESTION 59**

You run a 2000-engineer organization. You are about to begin using AWS at a large scale for the first time. You want to integrate with your existing identity management system running on Microsoft Active Directory, because your organization is a power-user of Active Directory. How should you manage your AWS identities in the most simple manner?

- A. Use a large AWS Directory Service Simple AD.
- B. Use a large AWS Directory Service AD Connector.
- C. Use an Sync Domain running on AWS Directory Service.
- D. Use an AWS Directory Sync Domain running on AWS Lambda

**Answer:** B

**Explanation:** You must use AD Connector as a power-user of Microsoft Active Directory. Simple AD only works with a subset of AD functionality. Sync Domains do not exist; they are made up answers. AD Connector is a directory gateway that allows you to proxy directory requests to your on-premises Nlicrosoft Active Directory, without caching any information in the cloud. AD Connector comes in 2 sizes; small and large. A small AD Connector is designed for smaller organizations of up to 500 users. A large AD Connector is designed for larger organizations of up to 5,000 users. Reference: <https://aws.amazon.com/directoryservice/details/>

**NEW QUESTION 62**

When thinking of AWS OpsWorks, which of the following is not an instance type you can allocate in a stack layer?

- A. 24/7 instances
- B. Spot instances
- C. Time-based instances
- D. Load-based instances

**Answer:** B

**Explanation:** AWS OpsWorks supports the following instance types, which are characterized by how they are started and stopped. 24/7 instances are started manually and run until you stop them. Time-based instances are run by AWS OpsWorks on a specified daily and weekly schedule. They allow your stack to automatically adjust the number of instances to accommodate predictable usage patterns. Load-based instances are automatically started and stopped by AWS OpsWorks, based on specified load metrics, such as CPU utilization. They allow your stack to automatically adjust the number of instances to accommodate variations in incoming traffic. Load-based instances are available only for Linux-based stacks. Reference:  
<http://docs.aws.amazon.com/opsworks/latest/userguide/welcome.html>

#### NEW QUESTION 64

You need to replicate API calls across two systems in real time. What tool should you use as a buffer and transport mechanism for API call events?

- A. AWS SQS
- B. AWS Lambda
- C. AWS Kinesis
- D. AWS SNS

**Answer:** C

**Explanation:** AWS Kinesis is an event stream service. Streams can act as buffers and transport across systems for in-order programmatic events, making it ideal for replicating API calls across systems.

A typical Amazon Kinesis Streams application reads data from an Amazon Kinesis stream as data records. These applications can use the Amazon Kinesis Client Library, and they can run on Amazon EC2 instances. The processed records can be sent to dashboards, used to generate alerts, dynamically change pricing and advertising strategies, or send data to a variety of other AWS services. For information about Streams features and pricing, see Amazon Kinesis Streams.

Reference: <http://docs.aws.amazon.com/kinesis/latest/dev/introduction.html>

#### NEW QUESTION 69

You are building a mobile app for consumers to post cat pictures online. You will be storing the images in AWS S3. You want to run the system very cheaply and simply. Which one of these options allows you to build a photo sharing application without needing to worry about scaling expensive uploads processes, authentication/authorization and so forth?

- A. Build the application out using AWS Cognito and web identity federation to allow users to log in using Facebook or Google Account
- B. Once they are logged in, the secret token passed to that user is used to directly access resources on AWS, like AWS S3.
- C. Use JWT or SANIL compliant systems to build authorization policie
- D. Users log in with a username and password, and are given a token they can use indefinitely to make calls against the photo infrastructure.
- E. Use AWS API Gateway with a constantly rotating API Key to allow access from the client-sid
- F. Construct a custom build of the SDK and include S3 access in it.
- G. Create an AWS oAuth Service Domain ad grant public signup and access to the domai
- H. During setup, add at least one major social media site as a trusted Identity Provider for users.

**Answer:** A

**Explanation:** The short answer is that Amazon Cognito is a superset of the functionality provided by web identity federation. It supports the same providers, and you configure your app and authenticate with those providers in the same way. But Amazon Cognito includes a variety of additional features. For example, it enables your users to start using the app as a guest user and later sign in using one of the supported identity providers.

Reference:

<https://blogs.aws.amazon.com/security/post/Tx3SYCORF5EKRCO/How-Does-Amazon-Cognito-Relate-to-Existing-Web-Identity-Federatio>

#### NEW QUESTION 71

Which is not a restriction on AWS EBS Snapshots?

- A. Snapshots which are shared cannot be used as a basis for other snapshots.
- B. You cannot share a snapshot containing an AWS Access Key ID or AWS Secret Access Key.
- C. You cannot share unencrypted snapshots.
- D. Snapshot restorations are restricted to the region in which the snapshots are create

**Answer:** A

**Explanation:** Snapshots shared with other users are usable in full by the recipient, including but limited to the ability to base modified volumes and snapshots.

Reference:

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-modifying-snapshot-permissions.html>

#### NEW QUESTION 76

You need to deploy a new application version to production. Because the deployment is high-risk, you need to roll the new version out to users over a number of hours, to make sure everything is working correctly. You need to be able to control the proportion of users seeing the new version of the application down to the percentage point.

You use ELB and EC2 with Auto Scaling Groups and custom AMIs with your code pre-installed assigned to Launch Configurations. There are no database-level changes during your deployment. You have been told you cannot spend too much money, so you must not increase the number of EC2 instances much at all



during the deployment, but you also need to be able to switch back to the original version of code quickly if something goes wrong. What is the best way to meet these requirements?

- A. Create a second ELB, Auto Scaling Launch Configuration, and Auto Scaling Group using the Launch Configuratio
- B. Create AMIs with all code pre-installe
- C. Assign the new AMI to the second Auto Scaling Launch Configuratio
- D. Use Route53 Weighted Round Robin Records to adjust the proportion of traffic hitting the two ELBs.
- E. Use the Blue-Green deployment method to enable the fastest possible rollback if neede
- F. Create a full second stack of instances and cut the DNS over to the new stack of instances, and change the DNS back if a rollback is needed.
- G. Create AMIs with all code pre-installe
- H. Assign the new AMI to the Auto Scaling Launch Configuration, to replace the old on
- I. Gradually terminate instances running the old code (launched with the old Launch Configuration) and allow the new AMIs to boot to adjust the traffic balance to the new cod
- J. On rollback, reverse the process by doing the same thing, but changing the AMI on the Launch Config back to the original code.
- K. Migrate to use AWS Elastic Beanstal
- L. Use the established and well-tested Rolling Deployment setting AWS provides on the new Application Environment, publishing a zip bundle of the new code and adjusting the wait period to spread the deployment over tim
- M. Re-deploy the old code bundle to rollback if needed.

**Answer:** A

**Explanation:** Only Weighted Round Robin DNS Records and reverse proxies allow such fine-grained tuning of traffic splits. The Blue-Green option does not meet the requirement that we mitigate costs and keep overall EC2 fileet size consistent, so we must select the 2 ELB and ASG option with WRR DNS tuning. This method is called A/B deployment and/or Canary deployment.

Reference: <https://d0.awsstatic.com/whitepapers/overview-of-deployment-options-on-aws.pdf>

#### NEW QUESTION 79

What does it mean if you have zero IOPS and a non-empty I/O queue for all EBS volumes attached to a running EC2 instance?

- A. The I/O queue is buffer flushing.
- B. Your EBS disk head(s) is/are seeking magnetic stripes.
- C. The EBS volume is unavailable.
- D. You need to re-mount the EBS volume in the O

**Answer:** C

**Explanation:** This is the definition of Unavailable from the EC2 and EBS SLA.

"Unavailable" and "Unavail|ability" mean... For Amazon EBS, when all of your attached volumes perform zero read write IO, with pending IO in the queue.

Reference: <https://aws.amazon.com/ec2/s|a/>

#### NEW QUESTION 84

From a compliance and security perspective, which of these statements is true?

- A. You do not ever need to rotate access keys for AWS IAM Users.
- B. You do not ever need to rotate access keys for AWS IAM Roles, nor AWS IAM Users.
- C. None of the other statements are true.
- D. You do not ever need to rotate access keys for AWS IAM Role

**Answer:** D

**Explanation:** IAM Role Access Keys are auto-rotated by AWS on your behalf; you do not need to rotate them.

The application is granted the permissions for the actions and resources that you've defined for the role through the security credentials associated with the role.

These security credentials are temporary and we

rotate them automatically. We make new credentials available at least five minutes prior to the expiration of the old credentials.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/iam-roles-for-amazon-ec2.html>

#### NEW QUESTION 89

Which of these configuration or deployment practices is a security risk for RDS?

- A. Storing SQL function code in plaintext
- B. Non-Multi-AZ RDS instance
- C. Having RDS and EC2 instances exist in the same subnet
- D. RDS in a public subnet

**Answer:** D

**Explanation:** Making RDS accessible to the public internet in a public subnet poses a security risk, by making your database directly addressable and spammable.

DB instances deployed within a VPC can be configured to be accessible from the Internet or from EC2 instances outside the VPC. If a VPC security group specifies a port access such as TCP port 22, you would not be able to access the DB instance because the firewall for the DB instance provides access only via the IP addresses specified by the DB security groups the instance is a member of and the port defined when the DB instance was created.

Reference: <http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Overview.RDSSecurityGroups.html>

#### NEW QUESTION 92

Which of these is not a reason a Mul|ti-AZ RDS instance will failover?

- A. An Availability Zone outage
- B. A manual failover of the DB instance was initiated using Reboot with failover
- C. To autoscale to a higher instance class
- D. The primary DB instance fails

**Answer:** C

**Explanation:** The primary DB instance switches over automatically to the standby replica if any of the > following conditions occur: An Availability Zone outage, the primary DB instance fails, the DB instance's server type is changed, the operating system of the DB instance is, undergoing software patching, a manual failover

of the DB instance was initiated using Reboot with failover

Reference: <http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.MultiAZ.html>

#### NEW QUESTION 95

You need your API backed by DynamoDB to stay online during a total regional AWS failure. You can tolerate a couple minutes of lag or slowness during a large failure event, but the system should recover with normal operation after those few minutes. What is a good approach?

- A. Set up DynamoDB cross-region replication in a master-standby configuration, with a single standby in another regio
- B. Create an Auto Scaling Group behind an ELB in each of the two regions DynamoDB is running i
- C. Add a Route53 Latency DNS Record with DNS Failover, using the ELBs in the two regions as the resource records.
- D. Set up a DynamoDB Multi-Region tabl
- E. Create an Auto Scaling Group behind an ELB in each of the two regions DynamoDB is running i
- F. Add a Route53 Latency DNS Record with DNS Failover, using the ELBs in the two regions as the resource records.
- G. Set up a DynamoDB Multi-Region tabl
- H. Create a cross-region ELB pointing to a cross-region Auto Scaling Group, and direct a Route53 Latency DNS Record with DNS Failover to the cross-region ELB.
- I. Set up DynamoDB cross-region replication in a master-standby configuration, with a single standby in another regio
- J. Create a cross-region ELB pointing to a cross-region Auto Scaling Group, and direct a Route53 Latency DNS Record with DNS Failover to the cross-region ELB.

**Answer:** A

**Explanation:** There is no such thing as a cross-region ELB, nor such thing as a cross-region Auto Scaling Group, nor such thing as a DynamoDB Multi-Region Table. The only option that makes sense is the cross-regional replication version with two ELBs and ASGs with Route53 Failover and Latency DNS.

Reference: <http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Streams.CrossRegionRepl.html>

#### NEW QUESTION 99

Which of the following tools does not directly support AWS OpsWorks, for monitoring your stacks?

- A. AWS Config
- B. Amazon CloudWatch Metrics
- C. AWS CloudTrail
- D. Amazon CloudWatch Logs

**Answer:** A

**Explanation:** You can monitor your stacks in the following ways: AWS OpsWorks uses Amazon CloudWatch to provide thirteen custom metrics with detailed monitoring for each instance in the stack; AWS OpsWorks integrates with AWS CloudTrail to log every AWS OpsWorks API call and store the data in an Amazon S3 bucket; You can use Amazon CloudWatch Logs to monitor your stack's system, application, and custom logs. Reference:

<http://docs.aws.amazon.com/opsworks/latest/userguide/monitoring.html>

#### NEW QUESTION 104

You need to run a very large batch data processing job one time per day. The source data exists entirely in S3, and the output of the processing job should also be written to S3 when finished. If you need to version control this processing job and all setup and teardown logic for the system, what approach should you use?

- A. Model an AWS EMR job in AWS Elastic Beanstalk.
- B. Model an AWS EMR job in AWS CloudFormation.
- C. Model an AWS EMR job in AWS OpsWorks.
- D. Model an AWS EMR job in AWS CLI Compose

**Answer:** B

**Explanation:** To declaratively model build and destroy of a cluster, you need to use AWS CloudFormation. OpsWorks and Elastic Beanstalk cannot directly model EMR Clusters. The CLI is not declarative, and CLI Composer does not exist.

Reference:

<http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-resource-emr-cluster.html>

#### NEW QUESTION 108

When thinking of AWS OpsWorks, which of the following is true?

- A. Stacks have many layers, layers have many instances.
- B. Instances have many stacks, stacks have many layers.
- C. Layers have many stacks, stacks have many instances.
- D. Layers have many instances, instances have many stack

**Answer:** A

**Explanation:** The stack is the core AWS OpsWorks component. It is basically a container for AWS resources—Amazon EC2 instances, Amazon RDS database instances, and so on—that have a common purpose and should be logically managed together. You define the stack's constituents by adding one or more layers. A layer represents a set of Amazon EC2 instances that serve a particular purpose, such as serving applications or hosting a database server. An instance represents a single computing resource, such as an Amazon EC2 instance.

Reference: <http://docs.aws.amazon.com/opsworks/latest/userguide/welcome.html>

#### NEW QUESTION 110

You work for a company that automatically tags photographs using artificial neural networks (ANNs), which run on GPUs using C++. You receive millions of images at a time, but only 3 times per day on average. These images are loaded into an AWS S3 bucket you control for you in a batch, and then the customer publishes a JSON-formatted manifest into another S3 bucket you control as well. Each image takes 10 milliseconds to process using a full GPU. Your neural network software requires 5 minutes to bootstrap. Image tags are JSON objects, and you must publish them to an S3 bucket.

Which of these is the best system architectures for this system?

- A. Create an OpsWorks Stack with two Layer
- B. The first contains lifecycle scripts for launching and bootstrapping an HTTP API on G2 instances for ANN image processing, and the second has an always-on instance which monitors the S3 manifest bucket for new file
- C. When a new file is detected, request instances to boot on the ANN layer
- D. When the instances are booted and the HTTP APIs are up, submit processing requests to individual instances.
- E. Make an S3 notification configuration which publishes to AWS Lambda on the manifest bucket
- F. Make the Lambda create a CloudFormation Stack which contains the logic to construct an autoscaling worker tier of EC2 G2 instances with the ANN code on each instance
- G. Create an SQS queue of the images in the manifest
- H. Tear the stack down when the queue is empty.
- I. Deploy your ANN code to AWS Lambda as a bundled binary for the C++ extension
- J. Make an S3 notification configuration on the manifest, which publishes to another AWS Lambda running controller code
- K. This controller code publishes all the images in the manifest to AWS Kinesis
- L. Your ANN code Lambda Function uses the Kinesis as an Event Source
- M. The system automatically scales when the stream contains image events.
- N. Create an Auto Scaling, Load Balanced Elastic Beanstalk worker tier Application and Environment
- O. Deploy the ANN code to G2 instances in this tier
- P. Set the desired capacity to 1. Make the code periodically check S3 for new manifest
- Q. When a new manifest is detected, push all of the images in the manifest into the SQS queue associated with the Elastic Beanstalk worker tier.

**Answer:** B

**Explanation:** The Elastic Beanstalk option is incorrect because it requires a constantly-polling instance, which may break and costs money.

The Lambda fleet option is incorrect because AWS Lambda does not support GPU usage.

The OpsWorks stack option both requires a constantly-polling instance, and also requires complex timing and capacity planning logic.

The CloudFormation option requires no polling, has no always-on instances, and allows arbitrarily fast processing by simply setting the instance count as high as needed.

Reference: <http://docs.aws.amazon.com/lambda/latest/dg/current-supported-versions.html>

#### NEW QUESTION 115

You are designing a system which needs, at minimum, 8 m4.large instances operating to service traffic. When designing a system for high availability in the us-east-1 region, which has 6 Availability Zones, your company needs to be able to handle death of a full availability zone. How should you distribute the servers, to save as much cost as possible, assuming all of the EC2 nodes are properly linked to an ELB? Your VPC account can utilize us-east-1's AZ's a through f, inclusive.

- A. 3 servers in each of AZ's a through d, inclusive.
- B. 8 servers in each of AZ's a and b.
- C. 2 servers in each of AZ's a through e, inclusive.
- D. 4 servers in each of AZ's a through c, inclusive

**Answer:** C

**Explanation:** You need to design for N+1 redundancy on Availability Zones.  $ZONE\_COUNT = (REQUIRED\_INSTANCES / INSTANCE\_COUNT\_PER\_ZONE) + 1$ . To minimize cost, spread the instances across as many possible zones as you can. By using a through e, you are allocating 5 zones. Using 2 instances, you have 10 total instances. If a single zone fails, you have 4 zones left, with 2 instances each, for a total of 8 instances. By spreading out as much as possible, you have increased cost by only 25% and significantly de-risked an availability zone failure.

Reference:

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

#### NEW QUESTION 118

You have been asked to de-risk deployments at your company. Specifically, the CEO is concerned about outages that occur because of accidental inconsistencies between Staging and Production, which sometimes cause unexpected behaviors in Production even when Staging tests pass.

You already use Docker to get high consistency between Staging and Production for the application environment on your EC2 instances. How do you further de-risk the rest of the execution environment, since in AWS, there are many service components you may use beyond EC2 virtual machines?

- A. Develop models of your entire cloud system in CloudFormation
- B. Use this model in Staging and Production to achieve greater parity.
- C. Use AWS Config to force the Staging and Production stacks to have configuration parity
- D. Any differences will be detected for you so you are aware of risks.
- E. Use AMIs to ensure the whole machine, including the kernel of the virtual machines, is consistent, since Docker uses Linux Container (LXC) technology, and we need to make sure the container environment is consistent.

- F. Use AWS ECS and Docker clusterin
- G. This will make sure that the AMLs and machine sizes are the same across both environments.

**Answer:** A

**Explanation:** Only CloudFormation's JSON Templates allow declarative version control of repeatably deployable models of entire AWS clouds.  
Reference: <https://blogs.aws.amazon.com/application-management/blog/category/Best+practices>

#### NEW QUESTION 119

Your system uses a multi-master, multi-region DynamoDB configuration spanning two regions to achieve high availability. For the first time since launching your system, one of the AWS Regions in which you operate over went down for 3 hours, and the failover worked correctly. However, after recovery, your users are experiencing strange bugs, in which users on different sides of the globe see different data. What is a likely design issue that was not accounted for when launching?

- A. The system does not have Lambda Functor Repair Automations, to perform table scans and chack for corrupted partition blocks inside the Table in the recovered Region.
- B. The system did not implement DynamoDB Table Defragmentation for restoring partition performance in the Region that experienced an outage, so data is served stale.
- C. The system did not include repair logic and request replay buffering logic for post-failure, to re-synchronize data to the Region that was unavailable for a number of hours.
- D. The system did not use DynamoDB Consistent Read requests, so the requests in different areas are not utilizing consensus across Regions at runtime.

**Answer:** C

**Explanation:** When using multi-region DynamoDB systems, it is of paramount importance to make sure that all requests made to one Region are replicated to the other. Under normal operation, the system in question would correctly perform write replays into the other Region. If a whole Region went down, the system would be unable to perform these writes for the period of downtime. Without buffering write requests somehow, there would be no way for the system to replay dropped cross-region writes, and the requests would be serviced differently depending on the Region from which they were served after recovery. Reference: <http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Streams.CrossRegionRepl.html>

#### NEW QUESTION 120

You need the absolute highest possible network performance for a cluster computing application. You already selected homogeneous instance types supporting 10 gigabit enhanced networking, made sure that your workload was network bound, and put the instances in a placement group. What is the last optimization you can make?

- A. Use 9001 MTU instead of 1500 for Jumbo Frames, to raise packet body to packet overhead ratios.
- B. Segregate the instances into different peered VPCs while keeping them all in a placement group, so each one has its own Internet Gateway.
- C. Bake an AMI for the instances and relaunch, so the instances are fresh in the placement group and donot have noisy neighbors.
- D. Turn off SYN/ACK on your TCP stack or begin using UDP for higher throughpu

**Answer:** A

**Explanation:** For instances that are colocated inside a placement group, jumbo frames help to achieve the maximum network throughput possible, and they are recommended in this case. For more information, see Placement Groups.  
Reference: [http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/network\\_mtu.html#jumbo\\_frame\\_instances](http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/network_mtu.html#jumbo_frame_instances)

#### NEW QUESTION 125

Your CTO is very worried about the security of your AWS account. How best can you prevent hackers from completely hijacking your account?

- A. Use short but complex password on the root account and any administrators.
- B. Use AWS IAM Geo-Lock and disallow anyone from logging in except for in your city.
- C. Use MFA on all users and accounts, especially on the root account.
- D. Don't write down or remember the root account password after creating the AWS accoun

**Answer:** C

**Explanation:** For increased security, we recommend that you configure multi-factor authentication (MFA) to help protect your AWS resources. MFA adds extra security because it requires users to enter a unique authentication code from an approved authentication device or SMS text message when they access AWS websites or services.  
Reference: [http://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_credentials\\_mfa.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_mfa.html)

#### NEW QUESTION 127

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