

## Exam Questions DOP-C01

AWS Certified DevOps Engineer- Professional

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### NEW QUESTION 1

You have an application which consists of EC2 instances in an Auto Scaling group. Between a particular time frame every day, there is an increase in traffic to your website. Hence users are complaining of a poor response time on the application. You have configured your Auto Scaling group to deploy one new EC2 instance when CPU utilization is greater than 60% for 2 consecutive periods of 5 minutes. What is the least cost-effective way to resolve this problem?

- A. Decrease the consecutive number of collection periods
- B. Increase the minimum number of instances in the Auto Scaling group
- C. Decrease the collection period to ten minutes
- D. Decrease the threshold CPU utilization percentage at which to deploy a new instance

**Answer:** B

#### Explanation:

If you increase the minimum number of instances, then they will be running even though the load is not high on the website. Hence you are incurring cost even though there is no need.

All of the remaining options are possible options which can be used to increase the number of instances on a high load.

For more information on On-demand scaling, please refer to the below link: <http://docs.aws.amazon.com/autoscaling/latest/userguide/as-scale-based-on-demand.html>

Note: The tricky part where the question is asking for 'least cost effective way'. You got the design consideration correctly but need to be careful on how the question is phrased.

### NEW QUESTION 2

You have an application consisting of a stateless web server tier running on Amazon EC2 instances behind load balancer, and are using Amazon RDS with read replicas. Which of the following methods should you use to implement a self-healing and cost-effective architecture? Choose 2 answers from the options given below

- A. Set up a third-party monitoring solution on a cluster of Amazon EC2 instances in order to emit custom Cloud Watch metrics to trigger the termination of unhealthy Amazon EC2 instances.
- B. Set up scripts on each Amazon EC2 instance to frequently send ICMP pings to the load balancer in order to determine which instance is unhealthy and replace it.
- C. Set up an Auto Scaling group for the web server tier along with an Auto Scaling policy that uses the Amazon RDS DB CPU utilization Cloud Watch metric to scale the instances.
- D. Set up an Auto Scaling group for the web server tier along with an Auto Scaling policy that uses the Amazon EC2 CPU utilization CloudWatch metric to scale the instances.
- E. Use a larger Amazon EC2 instance type for the web server tier and a larger DB instance type for the data storage layer to ensure that they don't become unhealthy.
- F. Set up an Auto Scaling group for the database tier along with an Auto Scaling policy that uses the Amazon RDS read replica lag CloudWatch metric to scale out the Amazon RDS read replicas.
- G. Use an Amazon RDS Multi-AZ deployment.

**Answer:** DG

#### Explanation:

The scaling of EC2 Instances in the Autoscaling group is normally done with the metric of the CPU utilization of the current instances in the Autoscaling group

For more information on scaling in your Autoscaling Group, please refer to the below link:

- <http://docs.aws.amazon.com/autoscaling/latest/userguide/as-scaling-simple-step.html>

Amazon RDS Multi-AZ deployments provide enhanced availability and durability for Database (DB) Instances, making them a natural fit for production database workloads. When you provision a Multi-AZ DB Instance, Amazon RDS automatically creates a primary DB Instance and synchronously replicates the data to a standby instance in a different Availability Zone (AZ). Each AZ runs on its own physically distinct, independent infrastructure, and is engineered to be highly reliable. In case of an infrastructure failure, Amazon RDS performs an automatic failover to the standby (or to a read replica in the case of Amazon Aurora), so that you can resume database operations as soon as the failover is complete. For more information on RDS Multi-AZ please refer to the below link:

<https://aws.amazon.com/rds/details/multi-az/>

Option A is invalid because if you already have in-built metrics from Cloudwatch, why would you want to spend more in using a third-party monitoring solution.

Option B is invalid because health checks are already a feature of AWS CLB

Option C is invalid because the database CPU usage should not be used to scale the web tier.

Option D is invalid because increasing the instance size does not always guarantee that the solution will not become unhealthy.

Option F is invalid because increasing Read-Replica's will not suffice for write operations if the primary DB fails.

### NEW QUESTION 3

The operations team and the development team want a single place to view both operating system and application logs. How should you implement this using AWS services? Choose two from the options below

- A. Using AWS CloudFormation, create a Cloud Watch Logs LogGroup and send the operating system and application logs of interest using the Cloud Watch Logs Agent.
- B. Using AWS CloudFormation and configuration management, set up remote logging to send events via UDP packets to CloudTrail.
- C. Using configuration management, set up remote logging to send events to Amazon Kinesis and insert these into Amazon CloudSearch or Amazon Redshift, depending on available analytic tools.
- D. Using AWS CloudFormation, merge the application logs with the operating system logs, and use IAM Roles to allow both teams to have access to view console output from Amazon EC2.

**Answer:** AC

#### Explanation:

Option B is invalid because Cloudtrail is not designed specifically to take in UDP packets

Option D is invalid because there are already Cloudwatch logs available, so there is no need to have specific logs designed for this.

You can use Amazon CloudWatch Logs to monitor, store, and access your log files from Amazon Elastic Compute Cloud (Amazon EC2) instances, AWS CloudTrail,

and other sources. You can then retrieve the associated log data from CloudWatch Logs. For more information on Cloudwatch logs please refer to the below link:

<http://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/WhatIsCloudWatchLogs.html> You can then use Kinesis to process those logs

For more information on Amazon Kinesis please refer to the below link: <http://docs.aws.amazon.com/streams/latest/dev/introduction.html>

#### NEW QUESTION 4

You have a multi-docker environment that you want to deploy to AWS. Which of the following configuration files can be used to deploy a set of Docker containers as an Elastic Beanstalk application?

- A. Dockerrun.aws.json
- B. .ebextensions
- C. Dockerrun.json
- D. Dockerfile

**Answer:** A

#### Explanation:

A Dockerrun.aws.json file is an Elastic Beanstalk-specific JSON file that describes how to deploy a set of Docker containers as an Elastic Beanstalk application. You can use a Dockerrun.aws.json file for a multicontainer Docker environment.

Dockerrun.aws.json describes the containers to deploy to each container instance in the environment as well as the data volumes to create on the host instance for

the containers to mount. [http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create\\_deploy\\_docker\\_v2config.html](http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create_deploy_docker_v2config.html)

#### NEW QUESTION 5

After reviewing the last quarter's monthly bills, management has noticed an increase in the overall bill from Amazon. After researching this increase in cost, you discovered that one of your new services is doing a lot of GET Bucket API calls to Amazon S3 to build a metadata cache of all objects in the applications bucket. Your boss has asked you to come up with a new cost-effective way to help reduce the amount of these new GET Bucket API calls. What process should you use to help mitigate the cost?

- A. Update your Amazon S3 buckets' lifecycle policies to automatically push a list of objects to a new bucket, and use this list to view objects associated with the application's bucket.
- B. Create a new DynamoDB table
- C. Use the new DynamoDB table to store all metadata about all objects uploaded to Amazon S3. Any time a new object is uploaded, update the application's internal Amazon S3 object metadata cache from DynamoDB.
- C Using Amazon SNS, create a notification on any new Amazon S3 objects that automatically updates a new DynamoDB table to store all metadata about the new object
- D. Subscribe the application to the Amazon SNS topic to update its internal Amazon S3 object metadata cache from the DynamoDB table
- E. ^/
- F. Upload all files to an ElastiCache file cache server
- G. Update your application to now read all file metadata from the ElastiCache file cache server, and configure the ElastiCache policies to push all files to Amazon S3 for long-term storage.

**Answer:** C

#### Explanation:

Option A is an invalid option since Lifecycle policies are normally used for expiration of objects or archival of objects.

Option B is partially correct where you store the data in DynamoDB, but then the number of GET requests would still be high if the entire DynamoDB table had to be

traversed and each object compared and updated in S3.

Option D is invalid because uploading all files to Elastic Cache is not an ideal solution.

The best option is to have a notification which can then trigger an update to the application to update the DynamoDB table accordingly.

For more information on SNS triggers and DynamoDB please refer to the below link:

? <https://aws.amazon.com/blogs/compute/619/>

#### NEW QUESTION 6

As part of your continuous deployment process, your application undergoes an I/O load performance test before it is deployed to production using new AMIs. The application uses one Amazon Elastic Block Store (EBS) PIOPS volume per instance and requires consistent I/O performance. Which of the following must be carried out to ensure that I/O load performance tests yield the correct results in a repeatable manner?

- A. Ensure that the I/O block sizes for the test are randomly selected.
- B. Ensure that the Amazon EBS volumes have been pre-warmed by reading all the blocks before the test.
- C. Ensure that snapshots of the Amazon EBS volumes are created as a backup.
- D. Ensure that the Amazon EBS volume is encrypted.

**Answer:** B

#### Explanation:

During the AMI-creation process, Amazon EC2 creates snapshots of your instance's root volume and any other EBS volumes attached to your instance

New EBS volumes receive their maximum performance the moment that they are available and do not require initialization (formerly known as pre-warming).

However, storage blocks on volumes that were restored from snapshots must be initialized (pulled

down from Amazon S3 and written to the volume) before you can access the block. This preliminary action takes time and can cause a significant increase in the latency of an I/O operation the first time each block is accessed. For most applications, amortizing this cost over the lifetime of the volume is acceptable.

Option A is invalid because block sizes are predetermined and should not be randomly selected. Option C is invalid because this is part of continuous integration and hence volumes can be destroyed after the test and hence there should not be snapshots created unnecessarily

Option D is invalid because the encryption is a security feature and not part of load tests normally. For more information on EBS initialization please refer to the below link:

• <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-initialize.html>

#### NEW QUESTION 7

You use Amazon CloudWatch as your primary monitoring system for your web application. After a recent software deployment, your users are getting Intermittent 500 Internal Server Errors when using the web application. You want to create a CloudWatch alarm, and notify an on-call engineer when these occur. How can you accomplish this using AWS services? Choose three answers from the options given below

- A. Deploy your web application as an AWS Elastic Beanstalk applicatio
- B. Use the default Elastic Beanstalk Cloudwatch metrics to capture 500 Internal Server Error
- C. Set a CloudWatch alarm on that metric.
- D. Install a CloudWatch Logs Agent on your servers to stream web application logs to CloudWatch.
- E. Use Amazon Simple Email Service to notify an on-call engineer when a CloudWatch alarm is triggered.
- F. Create a CloudWatch Logs group and define metric filters that capture 500 Internal Server Error
- G. Set a CloudWatch alarm on that metric.
- H. Use Amazon Simple Notification Service to notify an on-call engineer when a CloudWatch alarm is triggered.

**Answer:** BDE

**Explanation:**

You can use Cloud Watch Logs to monitor applications and systems using log data

Cloud Watch Logs uses your log data for monitoring; so, no code changes are required. For example, you can monitor application logs for specific literal terms (such as "NullPointerException") or count the number of occurrences of a literal term at a particular position in log data (such as "404" status codes in an Apache access log). When the term you are searching for is found. Cloud Watch Logs reports the data to a CloudWatch metric that you specify. Log data is encrypted while in transit and while it is at rest

For more information on Cloudwatch logs please refer to the below link: <http://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/WhatIsCloudWatchLogs.html>

Amazon CloudWatch uses Amazon SNS to send email. First, create and subscribe to an SNS topic.

When you create a CloudWatch alarm, you can add this SNS topic to send an email notification when the alarm changes state.

For more information on SNS and Cloudwatch logs please refer to the below link:

[http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/US\\_SetupSNS.html](http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/US_SetupSNS.html)

**NEW QUESTION 8**

When an Auto Scaling group is running in Amazon Elastic Compute Cloud (EC2), your application rapidly scales up and down in response to load within a 10-minute window; however, after the load peaks, you begin to see problems in your configuration management system where previously terminated Amazon EC2 resources are still showing as active. What would be a reliable and efficient way to handle the cleanup of Amazon EC2 resources within your configuration management system? Choose two answers from the options given below

- A. Write a script that is run by a daily cron job on an Amazon EC2 instance and that executes API Describe calls of the EC2 Auto Scalinggroup and removes terminated instances from the configuration management system.
- B. Configure an Amazon Simple Queue Service (SQS) queue for Auto Scaling actions that has a script that listens for new messages and removes terminated instances from the configuration management system.
- C. Use your existing configuration management system to control the launchingand bootstrapping of instances to reduce the number of moving parts in the automation.
- D. Write a small script that is run during Amazon EC2 instance shutdown to de-register the resource from the configuration management system.

**Answer:** AD

**Explanation:**

There is a rich brand of CLI commands available for Cc2 Instances. The CLI is located in the following link:

- <http://docs.aws.amazon.com/cli/latest/reference/ec2/>

You can then use the describe instances command to describe the EC2 instances.

If you specify one or more instance I Ds, Amazon CC2 returns information for those instances. If you do not specify instance IDs, Amazon EC2 returns information for all relevant instances. If you specify an instance ID that is not valid, an error is returned. If you specify an instance that you do not own, it is not included in the returned results.

- <http://docs.aws.amazon.com/cli/latest/reference/ec2/describe-instances.html>

You can use the CC2 instances to get those instances which need to be removed from the configuration management system.

**NEW QUESTION 9**

You have been tasked with deploying a scalable distributed system using AWS OpsWorks. Your distributed system is required to scale on demand. As it is distributed, each node must hold a configuration file that includes the hostnames of the other instances within the layer. How should you configure AWS OpsWorks to manage scaling this application dynamically?

- A. Create a Chef Recipe to update this configuration file, configure your AWS OpsWorks stack to use custom cookbooks, and assign this recipe to the Configure Lifecycle Event of the specific layer.
- B. Update this configuration file by writing a script to poll the AWS OpsWorks service API for new instance
- C. Configure your base AMI to execute this script on Operating System startup.
- D. Create a Chef Recipe to update this configuration file, configure your AWS OpsWorks stack to use custom cookbooks, and assign this recipe to execute when instances are launched.
- E. Configure your AWS OpsWorks layer to use the AWS-provided recipe for distributed host configuration, and configure the instance hostname and file path parameters in your recipes settings.

**Answer:** A

**Explanation:**

Please check the following AWS DOCs which provides details on the scenario. Check the example of "configure".

? <https://docs.aws.amazon.com/opsworks/latest/userguide/workingcookbook-events.html> You can use the Configure Lifecycle event

This event occurs on all of the stack's instances when one of the following occurs:

- An instance enters or leaves the online state.
- You associate an Elastic IP address with an instance or disassociate one from an instance.
- You attach an Elastic Load Balancing load balancer to a layer, or detach one from a layer. Ensure the Opswork layer uses a custom Cookbook

For more information on Opswork stacks, please refer to the below document link: from AWS

- [http://docs.aws.amazon.com/opsworks/latest/userguide/welcome\\_classic.html](http://docs.aws.amazon.com/opsworks/latest/userguide/welcome_classic.html)

**NEW QUESTION 10**

You have a web application that's developed in Node.js The code is hosted in Git repository. You want to now deploy this application to AWS. Which of the below 2 options can fulfil this requirement.



- A. Create an Elastic Beanstalk applicatio
- B. Create a Docker file to install Node.j
- C. Get the code from Gi
- D. Use the command "aws git.push" to deploy the application
- E. Create an AWS CloudFormation template which creates an instance with the AWS::EC2::Container resources typ
- F. With UserData, install Git to download the Node.js application and then set it up.
- G. Create a Docker file to install Node.j
- H. and gets the code from Gi
- I. Use the Dockerfile to perform the deployment on a new AWS Elastic Beanstalk applicatio
- J. S
- K. Create an AWS CloudFormation template which creates an instance with the AWS::EC2::Instance resource type and an AMI with Docker pre-installe
- L. With UserData, install Git to download the Node.js application and then set it up.

**Answer:** CD

**Explanation:**

Option A is invalid because there is no "awsgitpush" command

Option B is invalid because there is no AWS::CC2::Container resource type.

Elastic Beanstalk supports the deployment of web applications from Docker containers. With Docker containers, you can define your own runtime environment. You can choose your own platform, programming language, and any application dependencies (such as package managers or tools), that aren't supported by other platforms. Docker containers are self-contained and include all the configuration information and software your web application requires to run.

For more information on Docker and Elastic beanstalk please refer to the below link:

• [http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create\\_deploy\\_docker.html](http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create_deploy_docker.html)

When you launch an instance in Amazon EC2, you have the option of passing user data to the instance that can be used to perform common automated configuration tasks and even run scripts after the instance starts. You can pass two types of user data to Amazon EC2: shell scripts and cloud-init directives. You can also pass this data into the launch wizard as plain text, as a file (this is useful for launching instances using the command line tools), or as base64-encoded text (for API calls). For more information on EC2 User data please refer to the below link:

• <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/user-data.html>

Note: "git aws.push" with CB CLI 2.x - see a forum thread at <https://forums.aws.amazon.com/thread.jspa?threadID=583202&jive-message-582979>. Basically, this is a predecessor to the newer "eb deploy" command in CB CLI 3.1. This question kept in order to be consistent with exam.

**NEW QUESTION 10**

Your company develops a variety of web applications using many platforms and programming languages with different application dependencies. Each application must be developed and deployed quickly and be highly available to satisfy your business requirements. Which of the following methods should you use to deploy these applications rapidly?

- A. Develop the applications in Docker containers, and then deploy them to Elastic Beanstalk environments with Auto Scaling and Elastic Load Balancing.
- B. Use the AWS CloudFormation Docker import service to build and deploy the applications with high availability in multiple Availability Zones.
- C. Develop each application's code in DynamoDB, and then use hooks to deploy it to Elastic Beanstalk environments with Auto Scaling and Elastic Load Balancing.
- D. Store each application's code in a Git repository, develop custom package repository managers for each application's dependencies, and deploy to AWS OpsWorks in multiple Availability Zones.

**Answer:** A

**Explanation:**

Elastic Beanstalk supports the deployment of web applications from Docker containers. With Docker containers, you can define your own runtime environment. You can choose your own platform, programming language, and any application dependencies (such as package managers or tools), that aren't supported by other platforms. Docker containers are self-contained and include all the configuration information and software your web application requires to run.

By using Docker with Elastic Beanstalk, you have an infrastructure that automatically handles the details of capacity provisioning, load balancing, scaling, and application health monitoring.

For more information on Docker and Elastic beanstalk please refer to the below link:

• [http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create\\_deploy\\_docker.html](http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create_deploy_docker.html)

**NEW QUESTION 14**

Your application uses CloudFormation to orchestrate your application's resources. During your testing phase before the application went live, your Amazon RDS instance type was changed and caused the instance to be re-created, resulting in the loss of test data. How should you prevent this from occurring in the future?

- A. Within the AWS CloudFormation parameter with which users can select the Amazon RDS instance type, set AllowedValues to only contain the current instance type.
- B. Use an AWS CloudFormation stack policy to deny updates to the instance
- C. Only allow UpdateStack permission to IAM principals that are denied SetStackPolicy.
- D. In the AWS CloudFormation template, set the AWS::RDS::DBInstance's DBInstanceClass property to be read-only.
- E. Subscribe to the AWS CloudFormation notification "BeforeResourceUpdate," and call CancelStackUpdate if the resource identified is the Amazon RDS instance.
- F. Update the stack using ChangeSets

**Answer:** E

**Explanation:**

When you need to update a stack, understanding how your changes will affect running resources before you implement them can help you update stacks with confidence. Change sets allow you to preview how proposed changes to a stack might impact your running resources, for example, whether your changes will delete or replace any critical resources. AWS CloudFormation makes the changes to your stack only when you decide to execute the change set, allowing you to decide whether to proceed with your proposed changes or explore other changes by creating another change set

For example, you can use a change set to verify that AWS CloudFormation won't replace your stack's database instances during an update.

**NEW QUESTION 18**

You have an application running on Amazon EC2 in an Auto Scaling group. Instances are being bootstrapped dynamically, and the bootstrapping takes over 15 minutes to complete. You find that instances are reported by Auto Scaling as being In Service before bootstrapping has completed. You are receiving application alarms related to new instances before they have completed bootstrapping, which is causing confusion. You find the cause: your application monitoring tool is polling the Auto Scaling Service API for instances that are In Service, and creating alarms for new previously unknown instances. Which of the following will ensure

that new instances are not added to your application monitoring tool before bootstrapping is completed?

- A. Create an Auto Scaling group lifecycle hook to hold the instance in a pending: wait state until your bootstrapping is complete
- B. Once bootstrapping is complete, notify Auto Scaling to complete the lifecycle hook and move the instance into a pending:proceed state.
- C. Use the default Amazon Cloud Watch application metrics to monitor your application's health
- D. Configure an Amazon SNS topic to send these Cloud Watch alarms to the correct recipients.
- E. Tag all instances on launch to identify that they are in a pending state
- F. Change your application monitoring tool to look for this tag before adding new instances, and then use the Amazon API to set the instance state to 'pending' until bootstrapping is complete.
- G. Increase the desired number of instances in your Auto Scaling group configuration to reduce the time it takes to bootstrap future instances.

**Answer:** A

**Explanation:**

Auto Scaling lifecycle hooks enable you to perform custom actions as Auto Scaling launches or terminates instances. For example, you could install or configure software on newly launched instances, or download log files from an instance before it terminates. After you add lifecycle hooks to your Auto Scaling group, they work as follows:

1. Auto Scaling responds to scale out events by launching instances and scale in events by terminating instances.
2. Auto Scaling puts the instance into a wait state (Pending:Wait or Terminating:Wait). The instance remains in this state until either you tell Auto Scaling to continue or the timeout period ends.

For more information on rolling updates, please visit the below link:

- <http://docs.aws.amazon.com/autoscaling/latest/userguide/lifecycle-hooks.htm> |

**NEW QUESTION 22**

You work for an insurance company and are responsible for the day-to-day operations of your company's online quote system used to provide insurance quotes to members of the public. Your company wants to use the application logs generated by the system to better understand customer behavior. Industry, regulations also require that you retain all application logs for the system indefinitely in order to investigate fraudulent claims in the future. You have been tasked with designing a log management system with the following requirements:

- All log entries must be retained by the system, even during unplanned instance failure.
- The customer insight team requires immediate access to the logs from the past seven days.
- The fraud investigation team requires access to all historic logs, but will wait up to 24 hours before these logs are available.

How would you meet these requirements in a cost-effective manner? Choose three answers from the options below

- A. Configure your application to write logs to the instance's ephemeral disk, because this storage is free and has good write performance
- B. Create a script that moves the logs from the instance to Amazon S3 once an hour.
- C. Write a script that is configured to be executed when the instance is stopped or terminated and that will upload any remaining logs on the instance to Amazon S3.
- D. Create an Amazon S3 lifecycle configuration to move log files from Amazon S3 to Amazon Glacier after seven days.
- E. Configure your application to write logs to the instance's default Amazon EBS boot volume, because this storage already exists
- F. Create a script that moves the logs from the instance to Amazon S3 once an hour.
- G. Configure your application to write logs to a separate Amazon EBS volume with the "delete on termination" field set to false
- H. Create a script that moves the logs from the instance to Amazon S3 once an hour.
- I. Create a housekeeping script that runs on a T2 micro instance managed by an Auto Scaling group for high availability
- J. The script uses the AWS API to identify any unattached Amazon EBS volumes containing log files
- K. Your housekeeping script will mount the Amazon EBS volume, upload all logs to Amazon S3, and then delete the volume.

**Answer:** CEF

**Explanation:**

Since all logs need to be stored indefinitely, Glacier is the best option for this. One can use Lifecycle events to stream the data from S3 to Glacier

Lifecycle configuration enables you to specify the lifecycle management of objects in a bucket. The configuration is a set of one or more rules, where each rule defines an action for Amazon S3 to apply to a group of objects. These actions can be classified as follows:

- Transition actions - In which you define when objects transition to another storage class. For example, you may choose to transition objects to the STANDARD\_IA (infrequent access) storage class 30 days after creation, or archive objects to the GLACIER storage class one year after creation.
- Expiration actions - In which you specify when the objects expire. Then Amazon S3 deletes the expired objects on your behalf. For more information on Lifecycle events, please refer to the below link:

- <http://docs.aws.amazon.com/AmazonS3/latest/dev/object-lifecycle-mgmt.htm> | You can use scripts to put the logs onto a new volume and then transfer those logs to S3.

Note:

Moving the logs from EBS volume to S3 we have some custom scripts running in the background. In order to ensure the minimum memory requirements for the OS and the applications for the script to execute we can use a cost-effective EC2 instance.

Considering the computing resource requirements of the instance and the cost factor a t2.micro instance can be used in this case.

The following link provides more information on various t2 instances. <https://docs.aws.amazon.com/AWSEC2/latest/WindowsGuide/t2-instances.html>

Question is "How would you meet these requirements in a cost-effective manner? Choose three answers from the options below"

So here user has to choose the 3 options so that the requirement is fulfilled. So in the given 6 options, options C, E and F fulfill the requirement.

"The EC2s use EBS volumes and the logs are stored on EBS volumes those are marked for non-termination" - is one of the ways to fulfill requirement. So this shouldn't be an issue.

**NEW QUESTION 26**

You need to implement Blue/Green Deployment for several multi-tier web applications. Each of them has its individual infrastructure:

Amazon Elastic Compute Cloud (EC2) front-end servers, Amazon ElastiCache clusters, Amazon Simple Queue Service (SQS) queues, and Amazon Relational Database (RDS) Instances.

Which combination of services would give you the ability to control traffic between different deployed versions of your application?

- A. Create one AWS Elastic Beanstalk application and all AWS resources (using configuration files inside the application source bundle) for each web application
- B. New versions would be deployed using Elastic Beanstalk environments and using the Swap URLs feature.
- C. Using AWS CloudFormation templates, create one Elastic Beanstalk application and all AWS resources (in the same template) for each web application
- D. New versions would be deployed using AWS CloudFormation templates to create new Elastic Beanstalk environments, and traffic would be balanced between them using weighted Round Robin (WRR) records in Amazon Route 53. >/
- E. Using AWS CloudFormation templates, create one Elastic Beanstalk application and all AWS resources (in the same template) for each web application

- F. New versions would be deployed updating a parameter on the CloudFormation template and passing it to the cfn-hup helper daemon, and traffic would be balanced between them using Weighted Round Robin (WRR) records in Amazon Route 53.
- G. Create one Elastic Beanstalk application and all AWS resources (using configuration files inside the application source bundle) for each web application.
- H. New versions would be deployed updating the Elastic Beanstalk application version for the current Elastic Beanstalk environment.

**Answer:** B

**Explanation:**

This is an example of Blue green deployment.

With Amazon Route 53, you can define a percentage of traffic to go to the green environment and gradually update the weights until the green environment carries the full production traffic. A weighted distribution provides the ability to perform canary analysis where a small percentage of production traffic is introduced to a new environment. You can test the new code and monitor for errors, limiting the blast radius if any issues are encountered. It also allows the green environment to scale out to support the full production load if you're using Elastic Load Balancing.

When it's time to promote the green environment/stack into production, update DNS records to point to the green environment/stack's load balancer. You can also do this DNS flip gradually by using the Amazon Route 53 weighted routing policy. For more information on Blue green deployment, please refer to the link:

- [https://dOawsstatic.com/whitepapers/AWS\\_Blue\\_Green\\_Deployments.pdf](https://dOawsstatic.com/whitepapers/AWS_Blue_Green_Deployments.pdf)

**NEW QUESTION 27**

You've been tasked with improving the current deployment process by making it easier to deploy and reducing the time it takes. You have been tasked with creating a continuous integration (CI) pipeline that can build AMI's. Which of the below is the best manner to get this done. Assume that at max your development team will be deploying builds 5 times a week.

- A. Use a dedicated EC2 instance with an EBS Volume.
- B. Download and configure the code and then create an AMI out of that.
- C. Use OpsWorks to launch an EBS-backed instance, then use a recipe to bootstrap the instance, and then have the CI system use the CreateImage API call to make an AMI from it.
- D. Upload the code and dependencies to Amazon S3, launch an instance, download the package from Amazon S3, then create the AMI with the CreateSnapshot API call.
- E. Have the CI system launch a new instance, then bootstrap the code and dependencies on that instance, and create an AMI using the CreateImage API call.

**Answer:** D

**Explanation:**

Since the number of builds is just a few times a week, there are many open source systems such as Jenkins which can be used as CI based systems.

Jenkins can be used as an extensible automation server, Jenkins can be used as a simple CI server or turned into the continuous delivery hub for any project.

For more information on the Jenkins CI tool please refer to the below link:

- <https://jenkins.io/>

Option A and C are partially correct, but since you just have 5 deployments per week, having separate instances which consume costs is not required. Option B is partially correct, but again having a separate system such as Opswork for such a low number of deployments is not required.

**NEW QUESTION 30**

You need to monitor specific metrics from your application and send real-time alerts to your DevOps Engineer. Which of the below services will fulfil this requirement? Choose two answers.

- A. Amazon CloudWatch
- B. Amazon Simple Notification Service
- C. Amazon Simple Queue Service
- D. Amazon Simple Email Service



**Answer:** AB

**Explanation:**

Amazon Cloud Watch monitors your Amazon Web Services (AWS) resources and the applications you run on AWS in real time. You can use Cloud Watch to collect and track metrics, which are variables you can measure for your resources and applications. Cloud Watch alarms send notifications or automatically make changes to the resources you are monitoring based on rules that you define.

For more information on AWS Cloudwatch, please refer to the below document link: from AWS

• <http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/WhatIsCloudWatch.html> | Amazon Cloud Watch uses Amazon SNS to send email. First, create and subscribe to an SNS topic.

When you create a CloudWatch alarm, you can add this SNS topic to send an email notification when the alarm changes state

For more information on AWS Cloudwatch and SNS, please refer to the below document link: from AWS

[http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/US\\_SetupSNS.html](http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/US_SetupSNS.html)

**NEW QUESTION 32**

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. \*/
- D. Use AWS Config to force the Staging and Production stacks to have configuration parity
- E. Any differences will be detected for you so you are aware of risks.
- F. 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.
- G. Use AWS ECS and Docker cluster in
- H. This will make sure that the AMIs and machine sizes are the same across both environments.

**Answer:** A

**Explanation:**

After you have your stacks and resources set up, you can reuse your templates to replicate your infrastructure in multiple environments. For example, you can create environments for development, testing, and production so that you can test changes before implementing them into production. To make templates reusable, use the parameters, mappings, and conditions sections so that you can customize your stacks when you create them. For example, for your development environments, you can specify a lower-cost instance type compared to your production environment, but all other configurations and settings remain the same

For more information on CloudFormation best practices please refer to the below link: <http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/best-practices.html>

**NEW QUESTION 36**

You need to create a Route53 record automatically in CloudFormation when not running in production during all launches of a Template. How should you implement this?

- A. Use a Parameter for environment, and add a Condition on the Route53 Resource in the template to create the record only when environment is not production.
- B. Create two templates, one with the Route53 record value and one with a null value for the record
- C. Use the one without it when deploying to production.
- D. Use a Parameter for environment, and add a Condition on the Route53 Resource in the template to create the record with a null string when environment is production.
- E. Create two templates, one with the Route53 record and one without it
- F. Use the one without it when deploying to production.

**Answer:** A

**Explanation:**

The optional Conditions section includes statements that define when a resource is created or when a property is defined. For example, you can compare whether a value is equal to another value. Based on the result of that condition, you can conditionally create resources. If you have multiple conditions, separate them with commas.

You might use conditions when you want to reuse a template that can create resources in different contexts, such as a test environment versus a production environment. In your template, you can add an EnvironmentType input parameter, which accepts either prod or test as inputs. For the production environment, you might include Amazon EC2 instances with certain capabilities; however, for the test environment, you want to use reduced capabilities to save money. With conditions, you can define which resources are created and how they're configured for each environment type.

For more information on CloudFormation conditions please refer to the below link: <http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/conditions-section-structure.html> |

**NEW QUESTION 40**

You are designing a system which needs, at a 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 the 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 f, inclusive.

**Answer:** C

**Explanation:**

The best way is to distribute the instances across multiple AZ's to get the best and avoid a disaster scenario. With this scenario, you will always have a minimum of



more than 8 servers even if one AZ were to go down. Even though A and D are also valid options, the best option when it comes to distribution is Option C. For more information on High Availability and Fault tolerance, please refer to the below link:  
[https://media.amazonwebservices.com/architecturecenter/AWS\\_ac\\_ra\\_fttha\\_04.pdf](https://media.amazonwebservices.com/architecturecenter/AWS_ac_ra_fttha_04.pdf)

#### NEW QUESTION 42

You are hired as the new head of operations for a SaaS company. Your CTO has asked you to make debugging any part of your entire operation simpler and as fast as possible. She complains that she has no idea what is going on in the complex, service-oriented architecture, because the developers just log to disk, and it's very hard to find errors in logs on so many services. How can you best meet this requirement and satisfy your CTO?

- A. Copy all log files into AWS S3 using a cron job on each instance
- B. Use an S3 Notification Configuration on the PutBucket event and publish events to AWS Lambda
- C. Use the Lambda to analyze logs as soon as they come in and flag issues.
- D. Begin using CloudWatch Logs on every service
- E. Stream all Log Groups into S3 object
- F. Use AWS EMR clusterjobs to perform adhoc MapReduce analysis and write new queries when needed.
- G. Copy all log files into AWS S3 using a cron job on each instance
- H. Use an S3 Notification Configuration on the PutBucket event and publish events to AWS Kinesis
- I. Use Apache Spark on AWS EMR to perform at-scale stream processing queries on the log chunks and flag issues.
- J. Begin using CloudWatch Logs on every service
- K. Stream all Log Groups into an AWS Elastic search Service Domain running Kibana 4 and perform log analysis on a search cluster.

**Answer:** D

#### Explanation:

Amazon Dasticsearch Service makes it easy to deploy, operate, and scale dasticsearch for log analytics, full text search, application monitoring, and more. Amazon

Oasticsearch Service is a fully managed service that delivers Dasticsearch's easy-to-use APIs and real-time capabilities along with the availability, scalability, and security required by production workloads. The service offers built-in integrations with Kibana, Logstash, and AWS services including Amazon Kinesis Firehose, AWS Lambda, and Amazon Cloud Watch so that you can go from raw data to actionable insights quickly. For more information on Elastic Search, please refer to the below link:

- <https://aws.amazon.com/elasticsearch-service/>

#### NEW QUESTION 43

Your company releases new features with high frequency while demanding high application availability. As part of the application's A/B testing, logs from each updated Amazon EC2 instance of the application need to be analyzed in near real-time, to ensure that the application is working flawlessly after each deployment. If the logs show any anomalous behavior, then the application version of the instance is changed to a more stable one. Which of the following methods should you use for shipping and analyzing the logs in a highly available manner?

- A. Ship the logs to Amazon S3 for durability and use Amazon EMR to analyze the logs in a batch manner each hour.
- B. Ship the logs to Amazon CloudWatch Logs and use Amazon EMR to analyze the logs in a batch manner each hour.
- C. Ship the logs to an Amazon Kinesis stream and have the consumers analyze the logs in a live manner.
- D. Ship the logs to a large Amazon EC2 instance and analyze the logs in a live manner.

**Answer:** C

#### Explanation:

Answer - C

You can use Kinesis Streams for rapid and continuous data intake and aggregation. The type of data used includes IT infrastructure log data, application logs, social media, market data feeds, and web clickstream data. Because the response time for the data intake and processing is in real time, the processing is typically lightweight.

The following are typical scenarios for using Kinesis Streams:

- Accelerated log and data feed intake and processing - You can have producers push data directly into a stream. For example, push system and application logs and they'll be available for processing in seconds. This prevents the log data from being lost if the front end or application server fails. Kinesis Streams provides accelerated data feed intake because you don't batch the data on the servers before you submit it for intake.

- Real-time metrics and reporting - You can use data collected into Kinesis Streams for simple data analysis and reporting in real time. For example, your data-processing application can work on metrics and reporting for system and application logs as the data is streaming in, rather than wait to receive batches of data.

For more information on Amazon Kinesis and SNS please refer to the below link:

- <http://docs.aws.amazon.com/streams/latest/dev/introduction.html>

#### NEW QUESTION 48

You have been given a business requirement to retain log files for your application for 10 years. You need to regularly retrieve the most recent logs for troubleshooting. Your logging system must be cost-effective, given the large volume of logs. What technique should you use to meet these requirements?

- A. Store your log in Amazon CloudWatch Logs.
- B. Store your logs in Amazon Glacier.
- C. Store your logs in Amazon S3, and use lifecycle policies to archive to Amazon Glacier.
- D. Store your logs on Amazon EBS, and use Amazon EBS snapshots to archive them.

**Answer:** C

#### Explanation:

Option A is invalid, because cloud watch will not store the logs indefinitely and secondly it won't be the cost effective option.

Option B is invalid, because it won't server the purpose of regularly retrieve the most recent logs for troubleshooting. You will need to pay more to retrieve the logs faster from this storage.

Option D is invalid, because it is not an ideal or cost effective option.

You can define lifecycle configuration rules for objects that have a well-defined lifecycle. For example: if you are uploading periodic logs to your bucket, your application might need these logs for a week or a month after creation, and after that you might want to delete them.

Some documents are frequently accessed for a limited period of time. After that, these documents are less frequently accessed. Over time, you might not need real-time access to these objects, but your organization or regulations might require you to archive them for a longer period and then optionally delete them later.

You might also upload some types of data to Amazon S3 primarily for archival purposes, for example digital media archives, financial and healthcare records, raw

genomics sequence data, long-term database backups, and data that must be retained for regulatory compliance.

For more information on Lifecycle management please refer to the below link: <http://docs.aws.amazon.com/AmazonS3/latest/dev/object-lifecycle-mgmt.html>

Note:

Option C is the cheapest option, but Cloud watch can store logs indefinitely or between 10 years and one day.

"Log Retention—By default, logs are kept indefinitely and never expire. You can adjust the retention policy for each log group, keeping the indefinite retention, or choosing a retention periods between 10 years and one day." <https://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/WhatIsCloudWatchLogs.html>

#### NEW QUESTION 52

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:

If you use SSL termination, your servers will always get non-secure connections and will never know whether users used a more secure channel or not. If you are using Elastic beanstalk to configure the ELB, you can use the below article to ensure end to end encryption.

<http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/configuring-https-endtoend.html>

#### NEW QUESTION 57

Your application consists of 10% writes and 90% reads. You currently service all requests through a Route53 Alias Record directed towards an AWS ELB, which sits in front of an EC2 Auto Scaling Group. Your system is getting very expensive when there are large traffic spikes during certain news events, during which many more people request to read similar data all at the same time. What is the simplest and cheapest way to reduce costs and scale with spikes like this?

- A. Create an S3 bucket and asynchronously replicate common requests responses into S3 object
- B. When a request comes in for a precomputed response, redirect to AWS S3.
- C. Create another ELB and Auto Scaling Group layer mounted on top of the other system, adding a tier to the system
- D. Serve most read requests out of the top layer.
- E. Create a CloudFront Distribution and direct Route53 to the Distribution
- F. Use the ELB as an Origin and specify Cache Behaviours to proxy cache requests which can be served late.
- G. Create a Memcached cluster in AWS ElastiCache
- H. Create cache logic to serve requests which can be served late from the in-memory cache for increased performance.

**Answer:** C

#### Explanation:

Use CloudFront distribution for distributing the heavy reads for your application. You can create a zone apex record to point to the Cloudfront distribution.

You can control how long your objects stay in a CloudFront cache before CloudFront forwards another request to your origin. Reducing the duration allows you to serve dynamic content. Increasing the duration means your users get better performance because your objects are more likely to be served directly from the edge cache. A longer duration also reduces the load on your origin.

For more information on Cloudfront object expiration, please visit the below URL:

<http://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/CExpiration.html>

#### NEW QUESTION 59

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 do not have noisy neighbors.
- D. Turn off SYN/ACK on your TCP stack or begin using UDP for higher throughput.

**Answer:** A

#### Explanation:

Jumbo frames allow more than 1500 bytes of data by increasing the payload size per packet, and thus increasing the percentage of the packet that is not packet overhead. Fewer packets are needed to send the same amount of usable data. However, outside of a given AWS region (CC2-Classical), a single VPC, or a VPC peering

connection, you will experience a maximum path of 1500 MTU. VPN connections and traffic sent over an Internet gateway are limited to 1500 MTU. If packets are over

1500 bytes, they are fragmented, or they are dropped if the Don't Fragment flag is set in the IP header.

For more information on Jumbo Frames, please visit the below URL:

[http://docs.aws.amazon.com/AWSC2/latest/UserGuide/network\\_mtu.htm#jumbo\\_frame\\_instances](http://docs.aws.amazon.com/AWSC2/latest/UserGuide/network_mtu.htm#jumbo_frame_instances)

#### NEW QUESTION 64

You are planning on using encrypted snapshots in the design of your AWS Infrastructure. Which of the following statements are true with regards to EBS Encryption

- A. Snapshotting an encrypted volume makes an encrypted snapshot; restoring an encrypted snapshot creates an encrypted volume when specified / requested.
- B. Snapshotting an encrypted volume makes an encrypted snapshot when specified / requested; restoring an encrypted snapshot creates an encrypted volume when specified / requested.
- C. Snapshotting an encrypted volume makes an encrypted snapshot; restoring an encrypted snapshot always creates an encrypted volume.

D. Snapshotting an encrypted volume makes an encrypted snapshot when specified / requested; restoring an encrypted snapshot always creates an encrypted volume.

**Answer:** C

**Explanation:**

Amazon CBS encryption offers you a simple encryption solution for your CBS volumes without the need for you to build, maintain, and secure your own key management infrastructure. When you create an encrypted CBS volume and attach it to a supported instance type, the following types of data are encrypted:

- Data at rest inside the volume
- All data moving between the volume and the instance
- All snapshots created from the volume

Snapshots that are taken from encrypted volumes are automatically encrypted. Volumes that are created from encrypted snapshots are also automatically encrypted.

For more information on CBS encryption, please visit the below URL:

- <http://docs.aws.amazon.com/AWSCC2/latest/UserGuide/CBSCncryption.html>

**NEW QUESTION 66**

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

- A. AWSConfig
- B. Amazon CloudWatch Metrics
- C. AWSCloudTrail
- D. Amazon CloudWatch Logs

**Answer:** A

**Explanation:**

You can monitor your stacks in the following ways.

- AWS OpsWorks Stacks uses Amazon CloudWatch to provide thirteen custom metrics with detailed monitoring for each instance in the stack.
- AWS OpsWorks Stacks integrates with AWS CloudTrail to log every AWS OpsWorks Stacks 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.

For more information on Opswork monitoring, please visit the below URL:

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

**NEW QUESTION 70**

Your company wants to understand where cost is coming from in the company's production AWS account. There are a number of applications and services running at any given time. Without expending too much initial development time, how best can you give the business a good understanding of which applications cost the most per month to operate?

- A. Create an automation script which periodically creates AWS Support tickets requesting detailed intra-month information about your bill.
- B. Use custom CloudWatch Metrics in your system, and put a metric data point whenever cost is incurred.
- C. Use AWS Cost Allocation Tagging for all resources which support it
- D. Use the Cost Explorer to analyze costs throughout the month.
- E. Use the AWS Price API and constantly running resource inventory scripts to calculate total price based on multiplication of consumed resources over time.

**Answer:** C

**Explanation:**

A tag is a label that you or AWS assigns to an AWS resource. Each tag consists of a key and a value. A key can have more than one value. You can use tags to organize your resources, and cost allocation tags to track your AWS costs on a detailed level. After you activate cost allocation tags, AWS uses the cost allocation tags to organize your resource costs on your cost allocation report, to make it easier

for you to categorize and track your AWS costs. AWS provides two types of cost allocation tags, an AWS-generated tag and user-defined tags. AWS defines, creates, and applies the AWS-generated tag for you, and you define, create, and apply user-defined tags. You must activate both types of tags separately before they can appear in Cost Explorer or on a cost allocation report.

For more information on Cost Allocation tags, please visit the below URL: <http://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/cost-allocotags.html>

**NEW QUESTION 71**

You need to create an audit log of all changes to customer banking data. You use DynamoDB to store this customer banking data. It's important not to lose any information due to server failures. What is an elegant way to accomplish this?

- A. Use a DynamoDB StreamSpecification and stream all changes to AWS Lambda
- B. Log the changes to AWS CloudWatch Logs, removing sensitive information before logging.
- C. Before writing to DynamoDB, do a pre-write acknowledgment to disk on the application server, removing sensitive information before logging
- D. Periodically rotate these log files into S3.
- E. Use a DynamoDB StreamSpecification and periodically flush to an EC2 instance store, removing sensitive information before putting the object
- F. Periodically flush these batches to S3.
- G. Before writing to DynamoDB, do a pre-write acknowledgment to disk on the application server, removing sensitive information before logging
- H. Periodically pipe these files into CloudWatch Logs.

**Answer:** A

**Explanation:**

You can use Lambda functions as triggers for your Amazon DynamoDB table. Triggers are custom actions you take in response to updates made to the DynamoDB table. To create a trigger, first you enable Amazon DynamoDB Streams for your table. Then, you write a Lambda function to process the updates published to the stream.

For more information on DynamoDB with Lambda, please visit the below URL: <http://docs.aws.amazon.com/lambda/latest/dg/with-ddb.html>

**NEW QUESTION 74**

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 with the right authentication/authorization implementation.

- 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 SAML compliant systems to build authorization policies
- 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. C Use AWS API Gateway with a constantly rotating API Key to allow access from the client-side
- E. Construct a custom build of the SDK and include S3 access in it.
- F. Create an AWS OAuth Service Domain and grant public signup and access to the domain
- G. During setup, add at least one major social media site as a trusted Identity Provider for users.

**Answer:** A

**Explanation:**

Amazon Cognito lets you easily add user sign-up and sign-in and manage permissions for your mobile and web apps. You can create your own user directory within Amazon Cognito. You can also choose to authenticate users through social identity providers such as Facebook, Twitter, or Amazon; with SAML identity solutions; or by using your own identity system. In addition, Amazon Cognito enables you to save data locally on users' devices, allowing your applications to work even when the devices are offline. You can then synchronize data across users' devices so that their app experience remains consistent regardless of the device they use.

For more information on AWS Cognito, please visit the below URL:

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

**NEW QUESTION 75**

You are building a Ruby on Rails application for internal, non-production use which uses MySQL as a database. You want developers without very much AWS experience to be able to deploy new code with a single command line push. You also want to set this up as simply as possible. Which tool is ideal for this setup?

- A. AWS CloudFormation
- B. AWS OpsWorks
- C. AWS ELB+ EC2 with CLI Push
- D. AWS Elastic Beanstalk

**Answer:** D

**Explanation:**

With Elastic Beanstalk, you can quickly deploy and manage applications in the AWS Cloud without worrying about the infrastructure that runs those applications. AWS Elastic Beanstalk reduces management complexity without restricting choice or control. You simply upload your application, and Elastic Beanstalk automatically handles the details of capacity provisioning, load balancing, scaling, and application health monitoring.

Elastic Beanstalk supports applications developed in Java, PHP, .NET, Node.js, Python, and Ruby, as well as different container types for each language.

For more information on Elastic beanstalk, please visit the below URL:

- <http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/Welcome.html>

**NEW QUESTION 76**

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 AWS Directory Service Simple AD.
- B. Use 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:**

AD Connector is a directory gateway with which you can redirect directory requests to your on-premises Microsoft Active Directory without caching any information in the cloud. AD Connector comes in two sizes, small and large. A small AD Connector is designed for smaller organizations of up to 500 users. A large AD Connector

can support larger organizations of up to 5,000 users. Once set up, AD Connector offers the following benefits:

- Your end users and IT administrators can use their existing corporate credentials to log on to AWS applications such as Amazon Workspaces, Amazon WorkDocs, or Amazon WorkMail.
- You can manage AWS resources like Amazon EC2 instances or Amazon S3 buckets through IAM role-based access to the AWS Management Console.
- You can consistently enforce existing security policies (such as password expiration, password history, and account lockouts) whether users or IT administrators are accessing resources in your on-premises infrastructure or in the AWS Cloud.
- You can use AD Connector to enable multi-factor authentication by integrating with your existing RADIUS-based MFA infrastructure to provide an additional layer of security when users access AWS applications.

For more information on the AD Connector, please visit the below URL:

- [http://docs.aws.amazon.com/directoryservice/latest/admin-guide/directory\\_ad\\_connector.html](http://docs.aws.amazon.com/directoryservice/latest/admin-guide/directory_ad_connector.html)

**NEW QUESTION 79**

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 challenge?

- 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 GitHub
- 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 enable you to write custom provisioning logic in templates that AWS Cloud Formation runs anytime you create, update (if you changed the custom resource), or delete stacks. For example, you might want to include resources that aren't available as AWS Cloud Formation resource types. You can include those resources by using custom resources. That way you can still manage all your related resources in a single stack.

Use the AWS:: Cloud Formation:: Custom Resource or Custom ::String resource type to define custom resources in your templates. Custom resources require one property: the service token, which specifies where AWS CloudFormation sends requests to, such as an Amazon SNS topic.

For more information on Custom Resources in Cloudformation, please visit the below U RL:

<http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/template-custom-resources.html>

**NEW QUESTION 84**

You meet once per month with your operations team to review the past month's data. During the meeting, you realize that 3 weeks ago, your monitoring system which pings over HTTP from outside AWS recorded a large spike in latency on your 3-tier web service API. You use DynamoDB for the database layer, ELB, EBS, and EC2 for the business logic tier, and SQS, ELB, and EC2 for the presentation layer. Which of the following techniques will NOT help you figure out what happened?

- A. Check your CloudTrail log history around the spike's time for any API calls that caused slowness.
- B. Review CloudWatch Metrics for one minute interval graphs to determine which components) slowed the system down.
- C. Review your ELB access logs in S3 to see if any ELBs in your system saw the latency.
- D. Analyze your logs to detect bursts in traffic at that time.

**Answer:** B

**Explanation:**

The Cloudwatch metric retention is as follows. If the data points are of a one minute interval, then the graphs will not be available in Cloudwatch

- Data points with a period of less than 60 seconds are available for 3 hours. These data points are high-resolution custom metrics.
- Data points with a period of 60 seconds (1 minute) are available for 15 days
- Data points with a period of 300 seconds (5 minute) are available for 63 days
- Data points with a period of 3600 seconds (1 hour) are available for 455 days (15 months) For more information on Cloudwatch metrics, please visit the below U RL:
- [http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/cloudwatch\\_concepts.html](http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/cloudwatch_concepts.html)

**NEW QUESTION 87**

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 forensics.

**Answer:** A

**Explanation:**

To determine whether a log file was modified, deleted, or unchanged after CloudTrail delivered it, you can use CloudTrail log file integrity validation. This feature is built using industry standard algorithms: SHA-256 for hashing and SHA-256 with RSA for digital signing. This makes it computationally infeasible to modify, delete or forge CloudTrail log files without detection. You can use the AWS CLI to validate the files in the location where CloudTrail delivered them

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.

For more information on Cloudtrail log file validation, please visit the below URL:

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

**NEW QUESTION 92**

Your serverless architecture using AWS API Gateway, AWS Lambda, and AWS DynamoDB experienced a large increase in traffic to a sustained 3000 requests per second, and dramatically increased in failure rates. Your requests, during normal operation, last 500 milliseconds on average. Your DynamoDB table did not exceed 50% of provisioned throughput, and Table primary keys are designed correctly. What is the most likely issue?

- A. Your API Gateway deployment is throttling your requests.
- B. Your AWS API Gateway Deployment is bottlenecking on request (deserialization).
- C. You did not request a limit increase on concurrent Lambda function executions.
- D. You used Consistent Read requests on DynamoDB and are experiencing semaphore lock.

**Answer:** C

**Explanation:**

Every Lambda function is allocated with a fixed amount of specific resources regardless of the memory allocation, and each function is allocated with a fixed amount of code storage per function and per account.

By default, AWS Lambda limits the total concurrent executions across all functions within a given region to 1000.

For more information on Concurrent executions, please visit the below URL: <http://docs.aws.amazon.com/lambda/latest/dg/concurrent-executions.html>

**NEW QUESTION 93**

Your development team is using access keys to develop an application that has access to S3 and DynamoDB. A new security policy has outlined that the credentials should not be older than 2 months, and should be rotated. How can you achieve this

- A. Use the application to rotate the keys in every 2 months via the SDK

- B. Use a script which will query the date the keys are create
- C. If older than 2 months, delete them and recreate new keys
- D. Delete the user associated with the keys after every 2 month
- E. Then recreate the user again.D- Delete the I AM Role associated with the keys after every 2 month
- F. Then recreate the I AM Roleagain.

**Answer:** B

**Explanation:**

One can use the CLI command list-access-keys to get the access keys. This command also returns the "CreateDate" of the keys. If the CreateDate is older than 2 months, then the keys can be deleted.

The Returns list-access-keys CLI command returns information about the access key IDs associated with the specified I AM user. If there are none, the action returns

an empty list.

For more information on the CLI command, please refer to the below link: <http://docs.aws.amazon.com/cli/latest/reference/iam/list-access-keys.html>

**NEW QUESTION 96**

You currently have an application deployed via Elastic Beanstalk. You are now deploying a new application and have ensured that Elastic beanstalk has detached the current instances and deployed and reattached new instances. But the new instances are still not receiving any sort of traffic. Why is this the case.

- A. The instances are of the wrong AMI, hence they are not being detected by the ELB.
- B. It takes time for the ELB to register the instances, hence there is a small timeframe before your instances can start receiving traffic
- C. You need to create a new Elastic Beanstalk application, because you cannot detach and then reattach instances to an ELB within an Elastic Beanstalk application
- D. The instances needed to be reattached before the new application version was deployed

**Answer:** B

**Explanation:**

Before the CC2 Instances can start receiving traffic, they will be checked via the health checks of the CLB. Once the health checks are successful, the CC2 Instance

will change its state to InService and then the EC2 Instances can start receiving traffic. For more information on ELB health checks, please refer to the below link:

<http://docs.aws.amazon.com/elasticloadbalancing/latest/classic/elb-healthchecks.html>

**NEW QUESTION 97**

When creating an Elastic Beanstalk environment using the Wizard, what are the 3 configuration options presented to you

- A. Choosingthetypeof Environment- Web or Worker environment
- B. Choosingtheplatformtype-Nodejs,IIS,etc
- C. Choosing the type of Notification - SNS or SQS
- D. Choosing whether you want a highly available environment or not

**Answer:** ABD

**Explanation:**

The below screens are what are presented to you when creating an Elastic Beanstalk environment

The high availability preset includes a load balancer; the low cost preset does not For more information on the configuration settings, please refer to the below link:

<http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/environments-create-wizard.html>

**NEW QUESTION 99**

An EC2 instance has failed a health check. What will the ELB do?

- A. The ELB will terminate the instance
- B. The ELB stops sending traffic to the instance that failed its health check
- C. The ELB does nothing
- D. The ELB will replace the instance

**Answer:** B

**Explanation:**

The AWS Documentation mentions

The load balancer routes requests only to the healthy instances. When the load balancer determines that an instance is unhealthy, it stops routing requests to that instance. The load balancer resumes routing requests to the instance when it has been restored to a healthy state.

For more information on ELB health checks, please refer to the below link: <http://docs.aws.amazon.com/elasticloadbalancing/latest/classic/elb-healthchecks.html>

**NEW QUESTION 103**

Which of the following services can be used in conjunction with Cloudwatch Logs. Choose the 3 most viable services from the options given below

- A. Amazon Kinesis
- B. Amazon S3
- C. Amazon SQS
- D. Amazon Lambda

**Answer:** ABD

**Explanation:**

The AWS Documentation the following products which can be integrated with Cloudwatch logs



- 1) Amazon Kinesis - Here data can be fed for real time analysis
- 2) Amazon S3 - You can use CloudWatch Logs to store your log data in highly durable storage such as S3.
- 3) Amazon Lambda - Lambda functions can be designed to work with Cloudwatch log For more information on Cloudwatch Logs, please refer to the below link:  
link:<http://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/WhatIsCloudWatchLogs.html>

#### NEW QUESTION 107

You currently have an application with an Auto Scaling group with an Elastic Load Balancer configured in AWS. After deployment users are complaining of slow response time for your application. Which of the following can be used as a start to diagnose the issue

- A. Use Cloudwatch to monitor the HealthyHostCount metric
- B. Use Cloudwatch to monitor the ELB latency
- C. Use Cloudwatch to monitor the CPU Utilization
- D. Use Cloudwatch to monitor the Memory Utilization

**Answer: B**

#### Explanation:

High latency on the ELB side can be caused by several factors, such as:

- Network connectivity
- ELB configuration
- Backend web application server issues

For more information on ELB latency, please refer to the below link:

- <https://aws.amazon.com/premiumsupport/knowledge-center/elb-latency-troubleshooting/>

#### NEW QUESTION 109

You need to investigate one of the instances which is part of your Autoscaling Group. How would you implement this.

- A. Suspend the AZRebalance process so that Autoscaling will not terminate the instance
- B. Put the instance in a standby state
- C. Put the instance in a InService state
- D. Suspend the AddToLoadBalancer process

**Answer: B**

#### Explanation:

The AWS Documentation mentions

Auto Scaling enables you to put an instance that is in the InService state into the Standby state, update or troubleshoot the instance, and then return the instance to service. Instances that are on standby are still part of the Auto Scaling group, but they do not actively handle application traffic.

For more information on the standby state please refer to the below link:

- <http://docs.aws.amazon.com/autoscaling/latest/userguide/as-enter-exit-standby.html>

#### NEW QUESTION 110

You need to deploy a multi-container Docker environment on to Elastic beanstalk. Which of the following files can be used to deploy a set of Docker containers to Elastic beanstalk

- A. Dockerfile
- B. DockerMultifile
- C. Dockerrun.aws.json
- D. Dockerrun

**Answer: C**

#### Explanation:

The AWS Documentation specifies

A Dockerrun.aws.json file is an Elastic Beanstalk-specific JSON file that describes how to deploy a set of Docker containers as an Elastic Beanstalk application.

You can use a Dockerrun.aws.json file for a multicontainer Docker environment.

Dockerrun.aws.json describes the containers to deploy to each container instance in the environment as well as the data volumes to create on the host instance for the containers to mount.

For more information on this, please visit the below URL:

[http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create\\_deploy\\_docker\\_v2config.html](http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create_deploy_docker_v2config.html)

#### NEW QUESTION 115

Which of the following environment types are available in the Elastic Beanstalk environment. Choose 2 answers from the options given below

- A. Single Instance
- B. Multi-Instance
- C. Load Balancing Autoscaling
- D. SQS, Autoscaling

**Answer: AC**

#### Explanation:

The AWS Documentation mentions

In Elastic Beanstalk, you can create a load-balancing, autoscaling environment or a single-instance environment. The type of environment that you require depends

on the application that you deploy.

When you go onto the Configuration for your environment, you will be able to see the Environment type from there

#### NEW QUESTION 119

You currently have an Autoscalinggroup that has the following settings Min capacity-2

Desired capacity - 2 Maximum capacity - 2

Your launch configuration has AMI'S which are based on the t2.micro instance type. The application running on these instances are now experiencing issues and you have identified that the solution is to change the instance type of the instances running in the Autoscaling Group.

Which of the below solutions will meet this demand.

- A. Change the Instance type in the current launch configuratio
- B. Change the Desired value of the Autoscaling Group to 4. Ensure the new instances are launched.
- C. Delete the current Launch configuratio
- D. Create a new launch configuration with the new instance type and add it to the Autoscaling Grou
- E. This will then launch the new instances.
- F. Make a copy the Launch configuratio
- G. Change the instance type in the new launch configuratio
- H. Attach that to the Autoscaling Group.Change the maximum and Desired size of the Autoscaling Group to 4. Once the new instances are launched, change the Desired and maximum size back to 2.
- I. Change the desired and maximum size of the Autoscaling Group to 4. Make a copy the Launch configuratio
- J. Change the instance type in the new launch configuratio
- K. Attach that to the Autoscaling Grou
- L. Change the maximum and Desired size of the Autoscaling Group to 2

**Answer:** C

#### Explanation:

You should make a copy of the launch configuration, add the new instance type. The change the Autoscaling Group to include the new instance type. Then change the Desired number of the Autoscaling Group to 4 so that instances of new instance type can be launched. Once launched, change the desired size back to 2, so that Autoscaling will delete the instances with the older configuration. Note that the assumption here is that the current instances are equally distributed across multiple AZ's because Autoscaling will first use the AZRebalance process to terminate instances.

Option A is invalid because you cannot make changes to an existing Launch configuration.

Option B is invalid because if you delete the existing launch configuration, then your application will not be available. You need to ensure a smooth deployment process.

Option D is invalid because you should change the desired size to 4 after attaching the new launch configuration.

For more information on Autoscaling Suspend and Resume, please visit the below URL: <http://docs.aws.amazon.com/autoscaling/latest/userguide/as-suspend-resume-processes.html>

#### NEW QUESTION 123

You currently have an Autoscalinggroup that has the following settings Min capacity-2

Desired capacity - 2 Maximum capacity - 4

The current number of instances running in the Autoscaling Group is 2. You have been notified that for a duration of an hour, you need to ensure that no new instances are launched by the Autoscaling Group Which of the below 2 actions can be carried out to fulfil this requirement

- A. Change the Maximum capacity to 2
- B. Change the Desired capacity to 4
- C. Suspend the Launch process of the Autoscaling Group
- D. Change the Minimum capacity to 2

**Answer:** AC

#### Explanation:

You can temporarily suspend the creation of new instances by either reducing the Maximum capacity to 2, so that the current instances running which is 2, matches the maximum limit.

Secondly you can suspend the launch process of the Autoscaling Group The AWS Documentation mentions Scaling Processes

Amazon EC2 Auto Scaling supports the following scaling processes:

Launch Adds a new EC2 instance to the group, increasing its capacity. Warning

If you suspend Launch, this disrupts other processes. For example, you can't return an instance in a standby state to service if the Launch process is suspended, because the group can't scale. For more information on Autoscaling Suspend and Resume, please visit the below URL:

? <http://docs.aws.amazon.com/autoscaling/latest/userguide/as-suspend-resume-processes.html>

#### NEW QUESTION 124

You are currently using Elastic Beanstalk to host your production environment. You need to rollout updates to your application hosted on this environment. This is a critical application which is why there is a requirement that the rollback, if required, should be carried out with the least amount of downtime. Which of the following deployment strategies would ideally help achieve this purpose

- A. Create a Cloudformation template with the same resources as those in the Elastic beanstalk environmen
- B. If the deployment fails, deploy the Cloudformation template.
- C. Use Rolling updates in Elastic Beanstalk so that if the deployment fails, the rolling updates feature would roll back to the last deployment.
- D. Create another parallel environment in elastic beanstal
- E. Use the Swap URL feature.
- F. Create another parallel environment in elastic beanstal
- G. Create a new Route53 Domain name for the new environment and release that url to the users.

**Answer:** C

#### Explanation:

Since the requirement is to have the least amount of downtime, the ideal way is to create a blue green deployment environment and then use the Swap URL feature

to swap environments for the new deployment and then do the swap back, incase the deployment fails.

The AWS Documentation mentions the following on the SWAP url feature of Elastic Beanstalk

Because Elastic Beanstalk performs an in-place update when you update your application versions, your application may become unavailable to users for a short period of time. It is possible to avoid this downtime by performing a blue/green deployment, where you deploy the new version to a separate environment, and then

swap CNAMCs of the two environments to redirect traffic to the new version instantly.

#### NEW QUESTION 128

A company has developed a Ruby on Rails content management platform. Currently, OpsWorks with several stacks for dev, staging, and production is being used to deploy and manage the application. Now the company wants to start using Python instead of Ruby. How should the company manage the new deployment? Choose the correct answer from the options below

- A. Update the existing stack with Python application code and deploy the application using the deploy life-cycle action to implement the application code.
- B. Create a new stack that contains a new layer with the Python code
- C. To cut over to the new stack the company should consider using Blue/Green deployment
- D. Create a new stack that contains the Python application code and manage separate deployments of the application via the secondary stack using the deploy lifecycle action to implement the application code.
- E. Create a new stack that contains the Python application code and manages separate deployments of the application via the secondary stack.

**Answer: B**

#### Explanation:

Blue/green deployment is a technique for releasing applications by shifting traffic between two identical environments running different versions of the application. Blue/green deployments can mitigate common risks associated with deploying software, such as downtime and rollback capability

Please find the below link on a white paper for blue green deployments

- [https://d03wsstatic.com/whitepapers/AWS\\_Blue\\_Green\\_Deployments.pdf](https://d03wsstatic.com/whitepapers/AWS_Blue_Green_Deployments.pdf)

#### NEW QUESTION 130

An enterprise wants to use a third-party SaaS application running on AWS.. The SaaS application needs to have access to issue several API commands to discover Amazon EC2 resources running within the enterprise's account. The enterprise has internal security policies that require any outside access to their environment must conform to the principles of least privilege and there must be controls in place to ensure that the credentials used by the SaaS vendor cannot be used by any other third party. Which of the following would meet all of these conditions?

- A. From the AWS Management Console, navigate to the Security Credentials page and retrieve the access and secret key for your account.
- B. Create an IAM user within the enterprise account assign a user policy to the IAM user that allows only the actions required by the SaaS application
- C. Create a new access and secret key for the user and provide these credentials to the SaaS provider.
- D. Create an IAM role for cross-account access allows the SaaS provider's account to assume the role and assign it a policy that allows only the actions required by the SaaS application.
- E. Create an IAM role for EC2 instances, assign it a policy that allows only the actions required for the SaaS application to work, provide the role ARN to the SaaS provider to use when launching their application instances.

**Answer: C**

#### Explanation:

Many SaaS platforms can access AWS resources via a Cross account access created in AWS. If you go to Roles in your identity management, you will see the ability to add a cross account role.

For more information on cross account role, please visit the below URL:

- [http://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\\_cross-account-with-roles.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html)

#### NEW QUESTION 132

Your company is getting ready to do a major public announcement of a social media site on AWS. The website is running on EC2 instances deployed across multiple Availability Zones with a Multi-AZ RDS MySQL Extra Large DB Instance. The site performs a high number of small reads and writes per second and relies on an eventual consistency model. After comprehensive tests you discover that there is read contention on RDS MySQL. Which are the best approaches to meet these requirements? Choose 2 answers from the options below

- A. Deploy ElastiCache in-memory cache running in each availability zone
- B. Implement sharding to distribute load to multiple RDS MySQL instances
- C. Increase the RDS MySQL Instance size and Implement provisioned IOPS
- D. Add an RDS MySQL read replica in each availability zone

**Answer: AD**



**Explanation:**

Implement Read Replicas and ElastiCache

Amazon RDS Read Replicas provide enhanced performance and durability for database (DB) instances. This replication feature makes it easy to elastically scale out beyond the capacity constraints of a single DB Instance for read-heavy database workloads. You can create one or more replicas of a given source DB Instance and serve high-volume application read traffic from multiple copies of your data, thereby increasing aggregate read throughput.

For more information on Read Replica's, please visit the below link:

- <https://aws.amazon.com/rds/details/read-replicas/>

Amazon ElastiCache is a web service that makes it easy to deploy, operate, and scale an in-memory data store or cache in the cloud. The service improves the performance of web applications by allowing you to retrieve information from fast, managed, in-memory data stores, instead of relying entirely on slower disk-based databases.

For more information on Amazon ElastiCache, please visit the below link:

- <https://aws.amazon.com/elasticache/>

**NEW QUESTION 137**

Your company is planning to develop an application in which the front end is in .Net and the backend is in DynamoDB. There is an expectation of a high load on the application. How could you ensure the scalability of the application to reduce the load on the DynamoDB database? Choose an answer from the options below.

- A. Add more DynamoDB databases to handle the load.
- B. Increase write capacity of Dynamo DB to meet the peak loads
- C. Use SQS to assist and let the application pull messages and then perform the relevant operation in DynamoDB.
- D. Launch DynamoDB in Multi-AZ configuration with a global index to balance writes

**Answer:** C

**Explanation:**

When the idea comes for scalability then SQS is the best option. Normally DynamoDB is scalable, but since one is looking for a cost effective solution, the messaging in SQS can assist in managing the situation mentioned in the question.

Amazon Simple Queue Service (SQS) is a fully-managed message queuing service for reliably communicating among distributed software components and microservices - at any scale. Building applications from individual components that each perform a discrete function improves scalability and reliability, and is best practice design for modern applications. SQS makes it simple and cost-effective to decouple and coordinate the components of a cloud application. Using SQS, you can send, store, and receive messages between software components at any volume, without losing messages or requiring other services to be always available

For more information on SQS, please refer to the below URL:

- <https://aws.amazon.com/sqs/>

**NEW QUESTION 138**

You are using lifecycle hooks in your AutoScaling Group. Because there is a lifecycle hook, the instance is put in the Pending:Wait state, which means that it is not available to handle traffic yet. When the instance enters the wait state, other scaling actions are suspended. After some time, the instance state is changed to Pending:Proceed, and finally InService where the instances that are part of the Autoscaling Group can start serving up traffic. But you notice that the bootstrapping process on the instances finish much earlier, long before the state is changed to Pending:Proceed.

What can you do to ensure the instances are placed in the right state after the bootstrapping process is complete?

- A. Use the complete-lifecycle-action call to complete the lifecycle action
- B. Run this command from another EC2 Instance.
- C. Use the complete-lifecycle-action call to complete the lifecycle action
- D. Run this command from the Command line interface
- E. ^C Use the complete-lifecycle-action call to complete the lifecycle action
- F. Run this command from the Simple Notification service.
- G. Use the complete-lifecycle-action call to complete the lifecycle action
- H. Run this command from a SQS queue

**Answer:** B

**Explanation:**

The AWS Documentation mentions the following

3. If you finish the custom action before the timeout period ends, use the complete-lifecycle-action command so that the Auto Scaling group can continue launching

or terminating the instance. You can specify the lifecycle action token, as shown in the following command:

3. If you finish the custom action before the timeout period ends, use the complete-lifecycle-action command so that Auto Scaling can continue launching or terminating the instance. You can specify the lifecycle action token, as shown in the following command:

For more information on lifecycle hooks, please refer to the below URL:

- <http://docs.aws.amazon.com/autoscaling/latest/userguide/lifecycle-hooks.htm>

**NEW QUESTION 140**

You are planning on using AWS Code Deploy in your AWS environment. Which of the below features of AWS Code Deploy can be used to Specify scripts to be run on each instance at various stages of the deployment process

- A. AppSpecfile
- B. CodeDeployfile
- C. Configfile
- D. Deploy file

**Answer:** A

**Explanation:**

The AWS Documentation mentions the following on AWS Code Deploy

An application specification file (AppSpec file), which is unique to AWS CodeDeploy, is a YAML-formatted file used to:

Map the source files in your application revision to their destinations on the instance. Specify custom permissions for deployed files.

Specify scripts to be run on each instance at various stages of the deployment process. For more information on AWS CodeDeploy, please refer to the URL:

<http://docs.aws.amazon.com/codedeploy/latest/userguide/application-specification-files.html>

#### NEW QUESTION 144

You were just hired as a DevOps Engineer for a startup. Your startup uses AWS for 100% of their infrastructure. They currently have no automation at all for deployment, and they have had many failures while trying to deploy to production. The company has told you deployment process risk mitigation is the most important thing now, and you have a lot of budget for tools and AWS resources. Their stack includes a 2-tier API with data stored in DynamoDB or S3, depending on type. The Compute layer is EC2 in Auto Scaling Groups. They use Route53 for DNS pointing to an ELB. An ELB balances load across the EC2 instances. The scaling group properly varies between 4 and 12 EC2 servers. Which of the following approaches, given this company's stack and their priorities, best meets the company's needs?

- A. Model the stack in AWS Elastic Beanstalk as a single Application with multiple Environment
- B. Use Elastic Beanstalk's Rolling Deploy option to progressively roll out application code changes when promoting across environments.
- C. Model the stack in three CloudFormation templates: Data layer, compute layer, and networking layer
- D. Write stack deployment and integration testing automation following Blue-Green methodology
- E. •>/
- F. Model the stack in AWS OpsWorks as a single Stack, with 1 compute layer and its associated EL
- G. Use Chef and App Deployments to automate Rolling Deployment.
- H. Model the stack in 1 CloudFormation template, to ensure consistency and dependency graph resolution
- I. Write deployment and integration testing automation following Rolling Deployment methodologies.

**Answer: B**

#### Explanation:

Here you are using 2 of the best practices for deployment, one is Blue Green Deployments and the other is using Nested CloudFormation stacks.

The AWS Documentation mentions the below on nested stacks

As your infrastructure grows, common patterns can emerge in which you declare the same components in each of your templates. You can separate out these common components and create dedicated templates for them. That way, you can mix and match different templates but use nested stacks to create a single, unified stack. Nested stacks are stacks that create other stacks. To create nested stacks, use the `AWS::CloudFormation::Stack` resource in your template to reference other templates.

For more information on CloudFormation best practices, please visit the link:

- <http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/best-practices.html> For more information on Blue Green Deployment, please visit the link:
- [https://d1awsstatic.com/whitepapers/AWS\\_Blue\\_Green\\_Deployments.pdf](https://d1awsstatic.com/whitepapers/AWS_Blue_Green_Deployments.pdf)

#### NEW QUESTION 146

A user is using CloudFormation to launch an EC2 instance and then configure an application after the instance is launched. The user wants the stack creation of ELB and AutoScaling to wait until the EC2 instance is launched and configured properly. How can the user configure this?

- A. It is not possible that the stack creation will wait until one service is created and launched
- B. The user can use the `HoldCondition` resource to wait for the creation of the other dependent resources
- C. The user can use the `DependentCondition` resource to hold the creation of the other dependent resources
- D. The user can use the `WaitCondition` resource to hold the creation of the other dependent resources

**Answer: D**

#### Explanation:

You can use a wait condition for situations like the following:

To coordinate stack resource creation with configuration actions that are external to the stack creation

To track the status of a configuration process

For more information on CloudFormation Wait condition please visit the link

<http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-properties-waitcondition.html>

#### NEW QUESTION 148

Your company owns multiple AWS accounts. There is currently one development and one production account. You need to grant access to the development team to an S3 bucket in the production account. How can you achieve this?

- A. Create an IAM user in the Production account that allows users from the Development account (the trusted account) to access the S3 bucket in the Production account.
- B. When creating the role, define the Development account as a trusted entity and specify a permissions policy that allows trusted users to update the S3 bucket.
- C. Use web identity federation with a third-party identity provider with AWS STS to grant temporary credentials and membership into the production IAM user.
- D. Create an IAM cross account role in the Production account that allows users from the Development account to access the S3 bucket in the Production account.

**Answer: D**

#### Explanation:

The AWS Documentation mentions the following on cross account roles

You can use AWS Identity and Access Management (IAM) roles and AWS Security Token Service (STS) to set up cross-account access between AWS accounts. When you assume an IAM role in another AWS account to obtain cross-account access to services and resources in that account, AWS CloudTrail logs the cross-account activity. For more information on Cross account roles, please visit the below URL

- [http://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\\_cross-account-with-roles.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html)

#### NEW QUESTION 153

A vendor needs access to your AWS account. They need to be able to read protected messages in a private S3 bucket. They have a separate AWS account. Which of the solutions below is the best way to do this?

- A. Allow the vendor to ssh into your EC2 instance and grant them an IAM role with full access to the bucket.
- B. Create a cross-account IAM role with permission to access the bucket, and grant permission to use the role to the vendor AWS account.
- C. Create an IAM User with API Access Key
- D. Give the vendor the AWS Access Key ID and AWS Secret Access Key for the user.
- E. Create an S3 bucket policy that allows the vendor to read from the bucket from their AWS account.

**Answer:** B

**Explanation:**

The AWS Documentation mentions the following on cross account roles

You can use AWS Identity and Access Management (IAM) roles and AWS Security Token Service (STS) to set up cross-account access between AWS accounts. When you assume an IAM role in another AWS account to obtain cross-account access to services and resources in that account, AWS CloudTrail logs the cross-account activity. For more information on Cross account roles, please visit the below URL

[http://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial\\_cross-account-with-roles.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html) | <https://docs.aws.amazon.com/AmazonS3/latest/dev/example-walkthroughs-managing-access-example2.html>

**NEW QUESTION 156**

Your company is using an Autoscaling Group to scale out and scale in instances. There is an expectation of a peak in traffic every Monday at 8am. The traffic is then expected to come down before the weekend on Friday 5pm. How should you configure Autoscaling in this?

- A. Create dynamic scaling policies to scale up on Monday and scale down on Friday
- B. Create a scheduled policy to scale up on Friday and scale down on Monday
- C. Create a scheduled policy to scale up on Monday and scale down on Friday
- D. Manually add instances to the Autoscaling Group on Monday and remove them on Friday

**Answer:** C

**Explanation:**

The AWS Documentation mentions the following for Scheduled scaling

Scaling based on a schedule allows you to scale your application in response to predictable load changes. For example, every week the traffic to your web application starts to increase on Wednesday, remains high on Thursday, and starts to decrease on Friday. You can plan your scaling activities based on the predictable traffic patterns of your web application.

For more information on scheduled scaling for Autoscaling, please visit the below URL

- [http://docs.aws.amazon.com/autoscaling/latest/userguide/schedule\\_time.html](http://docs.aws.amazon.com/autoscaling/latest/userguide/schedule_time.html)

**NEW QUESTION 159**

Your firm has uploaded a large amount of aerial image data to S3. In the past, in your on-premises environment, you used a dedicated group of servers to process this data and used RabbitMQ - An open source messaging system to get job information to the servers. Once processed the data would go to tape and be shipped offsite. Your manager told you to stay with the current design, and leverage AWS archival storage and messaging services to minimize cost. Which is correct?

- A. Use SQS for passing job message
- B. Use Cloud Watch alarms to terminate EC2 worker instances when they become idle
- C. Once data is processed, change the storage class of the S3 objects to Reduced Redundancy Storage.
- D. Setup Auto-Scaled workers triggered by queue depth that use spot instances to process messages in SQ
- E. Once data is processed, change the storage class of the S3 objects to Glacier
- F. Change the storage class of the S3 objects to Reduced Redundancy Storage
- G. Setup Auto-Scaled workers triggered by queue depth that use spot instances to process messages in SQ
- H. Once data is processed, change the storage class of the S3 objects to Glacier.
- I. Use SNS to pass job messages use Cloud Watch alarms to terminate spot worker instances when they become idle
- J. Once data is processed, change the storage class of the S3 object to Glacier.

**Answer:** B

**Explanation:**

The best option for reducing costs is Glacier, since anyway in the on-premise location everything was stored on tape. Hence option A is out.

Next SQS should be used, since RabbitMQ was used internally. Hence option D is out.

The first step is to leave the objects in S3 and not tamper with that. Hence option B is more suited. The following diagram shows how SQS is used in a worker span environment

For more information on SQS queues, please visit the below URL

<<http://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-how-it-works.html>>

**NEW QUESTION 163**

You have a number of CloudFormation stacks in your IT organization. Which of the following commands will help see all the CloudFormation stacks which have a completed status?

- A. describe-stacks
- B. list-stacks
- C. stacks-complete
- D. list-templates

**Answer:** B

**Explanation:**

The following is the description of the list-stacks command

Returns the summary information for stacks whose status matches the specified StackStatusFilter.

Summary information for stacks that have been deleted is kept for 90 days after the stack is deleted. If no stack-status-filter is specified, summary information for all stacks is returned (including existing stacks and stacks that have been deleted).

For more information on the list-stacks command please visit the below link <http://docs.aws.amazon.com/cli/latest/reference/cloudformation/list-stacks.html>

**NEW QUESTION 167**

How can you resolve a dependency Error when using CloudFormation?

- A. Use the mappings attribute



- B. Use the parameter attribute
- C. Use the DependsOn attribute
- D. Use the Error attribute

**Answer:** C

**Explanation:**

The AWS troubleshooting guide for CloudFormation states the following

To resolve a dependency error, add a DependsOn attribute to resources that depend on other resources in your template. In some cases, you must explicitly declare dependencies so that AWS CloudFormation can create or delete resources in the correct order. For example, if you create an Elastic IP and a VPC with an Internet gateway in the same stack, the Elastic IP must depend on the Internet gateway attachment.

For more information on CloudFormation troubleshooting, please refer to the below url

<http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/troubleshooting.html>

**NEW QUESTION 168**

Which of the following are true with regard to Opsworks stack Instances? Choose 3 answers from the options given below.

- A. A stack's instances can be a combination of both Linux and Windows based operating systems.
- B. You can use EC2 Instances that were created outside the boundary of Opswork.
- C. You can use instances running on your own hardware.
- D. You can start and stop instances manually.

**Answer:** BCD

**Explanation:**

The AWS Documentation mentions the following

1) You can start and stop instances manually or have AWS Ops Works Stacks automatically scale the number of instances. You can use time-based automatic scaling with any stack; Linux stacks also can use load-based scaling.

2) In addition to using AWS OpsWorks Stacks to create Amazon Linux instances, you can also register instances with a Linux stack that were created outside of AWS Ops Works Stacks. This includes Amazon EC2 instances and instances running on your own hardware. However, they must be running one of the supported Linux distributions. You cannot register Amazon EC2 or on-premises Windows instances.

3) A stack's instances can run either Linux or Windows. A stack can have different Linux versions or distributions on different instances, but you cannot mix Linux and Windows instances.

For more information on Opswork instances, please visit the below url <http://docs.aws.amazon.com/opsworks/latest/userguide/workinginstances-os.html>

**NEW QUESTION 169**

You are creating a CloudFormation template in which UserData is going to be passed to underlying EC2 Instance. Which of the below functions is normally used to pass data to the UserData section in the CloudFormation template?

- A. "UserData": { "Fn::Base64": {
- B. "UserData": { "Fn::Ref": {
- C. "UserData": { "Fn::GetAtt": {
- D. "UserData": { "Fn::FindInMap": {

**Answer:** A

**Explanation:**

The AWS Documentation mentions

The intrinsic function Fn::Base64 returns the Base64 representation of the input string. This function is typically used to pass encoded data to Amazon EC2 instances by way of the User Data property.

For more information on the Fn::Base64 function, please visit the below URL: <http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/intrinsic-function-reference-base64.html>

**NEW QUESTION 171**

Your application is having a very high traffic, so you have enabled autoscaling in multi availability zone to suffice the needs of your application but you observe that one of the availability zone is not receiving any traffic. What can be wrong here?

- A. Autoscaling only works for single availability zone
- B. Autoscaling can be enabled for multi AZ only in north Virginia region
- C. Availability zone is not added to Elastic load balancer
- D. Instances need to be manually added to availability zone

**Answer:** C

**Explanation:**

When you add an Availability Zone to your load balancer, Elastic Load Balancing creates a load balancer node in the Availability Zone. Load balancer nodes accept traffic from clients and forward requests to the healthy registered instances in one or more Availability Zones.

For more information on adding AZ's to CLB, please refer to the below URL:

<http://docs.aws.amazon.com/elasticloadbalancing/latest/classic/enable-disable-az.html>

**NEW QUESTION 175**

You have just developed a new mobile application that handles analytics workloads on large scale datasets that are stored on Amazon Redshift. Consequently, the application needs to access Amazon Redshift tables. Which of the below methods would be the best, both practically and security-wise, to access the tables?

Choose the correct answer from the options below

- A. Create an IAM user and generate encryption keys for that use
- B. Create a policy for Redshift read-only access
- C. Embed the keys in the application.
- D. Create a HSM client certificate in Redshift and authenticate using this certificate.

- E. Create a RedShift read-only access policy in 1AM and embed those credentials in the application.
- F. User roles that allow a web identity federated user to assume a role that allows access to the RedShift table by providing temporary credentials.

**Answer:** D

**Explanation:**

For access to any AWS service, the ideal approach for any application is to use Roles. This is the first preference. Hence option A and C are wrong.

For more information on 1AM policies please refer to the below link: [http://docs.aws.amazon.com/IAM/latest/UserGuide/access\\_policies.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/access_policies.html)

Next for any web application, you need to use web identity federation. Hence option D is the right option. This along with the usage of roles is highly stressed in the AWS documentation.

"When you write such an app, you'll make requests to AWS services that must be signed with an AWS access key. However, we strongly recommend that you do not embed or distribute long-term AWS credentials with apps that a user downloads to a device, even in an encrypted store. Instead, build your app so that it requests temporary AWS security credentials dynamically when needed using web identity federation. The supplied temporary credentials map to an AWS role that has only

the permissions needed to perform the tasks required by the mobile app".

For more information on web identity federation please refer to the below link: [http://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_roles\\_providers\\_oidc.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles_providers_oidc.html)

**NEW QUESTION 180**

Your social media marketing application has a component written in Ruby running on AWS Elastic Beanstalk. This application component posts messages to social media sites in support of various marketing campaigns. Your management now requires you to record replies to these social media messages to analyze the effectiveness of the marketing campaign in comparison to past and future efforts. You've already developed a new application component to interface with the social media site APIs in order to read the replies. Which process should you use to record the social media replies in a durable data store that can be accessed at any time for analytics of historical data?

- A. Deploy the new application component in an Auto Scaling group of Amazon EC2 instances, read the data from the social media sites, store it with Amazon Elastic BlockStore, and use AWS Data Pipeline to publish it to Amazon Kinesis for analytics.
- B. Deploy the new application component as an Elastic Beanstalk application, read the data from the social media sites, store it in DynamoDB, and use Apache Hive with Amazon Elastic MapReduce for analytics.
- C. Deploy the new application component in an Auto Scaling group of Amazon EC2 instances, read the data from the social media sites, store it in Amazon Glacier, and use AWS Data Pipeline to publish it to Amazon RedShift for analytics.
- D. Deploy the new application component as an Amazon Elastic Beanstalk application, read the data from the social media site, store it with Amazon Elastic Block store, and use Amazon Kinesis to stream the data to Amazon Cloud Watch for analytics

**Answer:** B

**Explanation:**

The AWS Documentation mentions the below

Amazon DynamoDB is a fast and flexible NoSQL database service for all applications that need consistent, single-digit millisecond latency at any scale. It is a fully managed cloud database and supports both document and key-value store models. Its flexible data model, reliable performance, and automatic scaling of throughput capacity, makes it a great fit for mobile, web, gaming, ad tech, IoT, and many other applications.

For more information on AWS DynamoDB please see the below link:

- <https://aws.amazon.com/dynamodb/>

**NEW QUESTION 181**

You are managing an application that contains Go as the front end, MongoDB for document management and is hosted on a relevant Web server. You pre-bake AMI's with the latest version of the Web server, then use the User Data section to setup the application. You now have a change to the underlying Operating system version and need to deploy that accordingly. How can this be done in the easiest way possible.

- A. Create a new EBS Volume with the relevant OS patches and attach it to the EC2 Instance.
- B. Create a CloudFormation stack with the new AMI and then deploy the application accordingly.
- C. Create a new pre-baked AMI with the new OS and use the User Data section to deploy the application.
- D. Create an Opsworks stack with the new AMI and then deploy the application accordingly.

**Answer:** C

**Explanation:**

The best way in this scenario is to continue the same deployment process which was being used and create a new AMI and then use the User Data section to deploy the application.

For more information on AWS AMI's please see the below link:

- <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.html>

**NEW QUESTION 185**

When deploying applications to Elastic Beanstalk, which of the following statements is false with regards to application deployment

- A. The application can be bundled in a zip file
- B. Can include parent directories
- C. Should not exceed 512 MB in size
- D. Can be a war file which can be deployed to the application server

**Answer:** B

**Explanation:**

The AWS Documentation mentions

When you use the AWS Elastic Beanstalk console to deploy a new application or an application version, you'll need to upload a source bundle. Your source bundle must meet the following requirements:

Consist of a single ZIP file or WAR file (you can include multiple WAR files inside your ZIP file) Not exceed 512 MB

Not include a parent folder or top-level directory (subdirectories are fine)

For more information on deploying applications to Elastic Beanstalk please see the below link: <http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/applications-sourcebundle.html>

#### NEW QUESTION 187

Which of the following tools is available to send log data from EC2 Instances.

- A. CloudWatch LogsAgent
- B. CloudWatchAgent
- C. Logsconsole.
- D. LogsStream

**Answer:** A

#### Explanation:

The AWS Documentation mentions the following

The CloudWatch Logs agent provides an automated way to send log data to Cloud Watch Logs from Amazon EC2 instances. The agent is comprised of the following components:

A plug-in to the AWS CLI that pushes log data to CloudWatch Logs.

A script (daemon) that initiates the process to push data to CloudWatch Logs.

Acron job that ensures that the daemon is always running. For more information on Cloudwatch logs Agent, please see the below link:

<http://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/AgentReference.html>

#### NEW QUESTION 188

You run a multi-tier architecture on AWS with webserver instances running Nginx. Your users are getting errors when they use the web application. How can you diagnose the errors quickly and efficiently

- A. Install the Cloud Watch Logs agent and send Nginx access log data to CloudWatch Logs.
- B. From there, pipe the log data through to a third party logging and graphing tool.
- C. Install the CloudWatch Logs agent and send Nginx access log data to CloudWatch Logs.
- D. Then filter the log streams for searching the relevant errors.
- E. Send all the errors to AWS Lambda for processing.
- F. Send all the errors to AWS Config for processing

**Answer:** B

#### Explanation:

The AWS Documentation mentions the following

You use metric filters to search for and match terms, phrases, or values in your log events. When a metric filter finds one of the terms, phrases, or values in your log events, you can increment the value of a CloudWatch metric. For example, you can create a metric filter to search for and count the occurrence of the word ERROR in your log events.

For more information on Cloudwatch logs Analysis, please see the below link:

- <http://docs.aws.amazon.com/AmazonCloudWatch/latest/logs/FilterAndPatternSyntax.html>

#### NEW QUESTION 191

Which of the following is not a supported platform for the Elastic beanstalk service

- A. Java
- B. AngularJS
- C. PHP
- D. .Net

**Answer:** B

#### Explanation:

For more information on Elastic beanstalk, please visit the below URL:

<http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/concepts.platforms.html>

#### NEW QUESTION 196

You are a Devops engineer for your company. There is a requirement to host a custom application which has custom dependencies for a development team. This needs to be done using AWS service. Which of the following is the ideal way to fulfil this requirement.

- A. Package the application and dependencies with Docker, and deploy the Docker container with CloudFormation.
- B. Package the application and dependencies with Docker, and deploy the Docker container with Elastic Beanstalk.
- C. Package the application and dependencies in an S3 file, and deploy the Docker container with Elastic Beanstalk.
- D. Package the application and dependencies with in Elastic Beanstalk, and deploy with Elastic Beanstalk

**Answer:** B

#### Explanation:

The AWS Documentation mentions

Elastic Beanstalk supports the deployment of web applications from Docker containers. With Docker containers, you can define your own runtime environment.

You can choose your own platform, programming language, and any application dependencies (such as package managers or tools), that aren't supported by other platforms. Docker containers are self-contained and include all the configuration information and software your web application requires to run.

For more information on Elastic beanstalk and Docker, please visit the below URL:

[http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create\\_deploy\\_docker.html](http://docs.aws.amazon.com/elasticbeanstalk/latest/dg/create_deploy_docker.html)

#### NEW QUESTION 199

A company wants to create standard templates for deployment of their Infrastructure. Which AWS service can be used in this regard? Please choose one option.

- A. Amazon Simple Workflow Service

- B. AWSElastic Beanstalk
- C. AWSCloudFormation
- D. AWSOpsWorks

**Answer:** C

**Explanation:**

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

You can use AWS Cloud Formation's sample templates or create your own templates to describe the AWS resources, and any associated dependencies or runtime parameters, required to run your application. You don't need to figure out the order for provisioning AWS services or the subtleties of making those dependencies work. Cloud Formation takes care of this for you. After the AWS resources are deployed, you can modify and update them in a controlled and predictable way, in effect applying version control to your AWS infrastructure the same way you do with your software. You can also visualize your templates as diagrams and edit them using a drag-and-drop interface with the AWS CloudFormation Designer.

For more information on Cloudformation, please visit the link:

- <https://aws.amazon.com/cloudformation/>

**NEW QUESTION 204**

You recently encountered a major bug in your web application during a deployment cycle. During this failed deployment, it took the team four hours to roll back to a previously working state, which left customers with a poor user experience. During the post-mortem, you team discussed the need to provide a quicker, more robust way to roll back failed deployments. You currently run your web application on Amazon EC2 and use Elastic Load Balancing for your load balancing needs. Which technique should you use to solve this problem?

- A. Create deployable versioned bundles of your application
- B. Store the bundle on Amazon S3. Re-deploy your web application on Elastic Beanstalk and enable the Elastic Beanstalk auto-rollback feature tied to CloudWatch metrics that define failure.
- C. Use an AWS OpsWorks stack to re-deploy your web application and use AWS OpsWorks Deployment Command to initiate a rollback during failures.
- D. Create deployable versioned bundles of your application
- E. Store the bundle on Amazon S3. Use an AWS OpsWorks stack to redeploy your web application and use AWS OpsWorks application versioning to initiate a rollback during failures.
- F. Using Elastic Beanstalk redeploy your web application and use the Elastic Beanstalk API to trigger a FailedDeployment API call to initiate a rollback to the previous version.

**Answer:** B

**Explanation:**

The AWS Documentation mentions the following

AWS Deployment Command has a rollback option in it. Following commands are available for apps to use:

deploy: Deploy App.

Ruby on Rails apps have an optional args parameter named migrate. Set Args to {"migrate":["true"]} to migrate the database.

The default setting is {"migrate": ["false"]}.

The "rollback" feature Rolls the app back to the previous version.

When we are updating an app, AWS OpsWorks stores the previous versions, maximum of up to five versions.

We can use this command to roll an app back as many as four versions. Reference Link:

- [http://docs.aws.amazon.com/opsworks/latest/APIReference/API\\_DeploymentCommand.html](http://docs.aws.amazon.com/opsworks/latest/APIReference/API_DeploymentCommand.html)

**NEW QUESTION 208**

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