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|                       |        |                     |                                     |
|-----------------------|--------|---------------------|-------------------------------------|
| <b>Attempt</b>        | 1      | <b>Completed on</b> | Monday , 28 January 2019 , 06:17 PM |
| <b>Marks Obtained</b> | 3 / 60 | <b>Time Taken</b>   | 00 H 01 M 38 S                      |
| <b>Your score is</b>  | 5%     | <b>Result</b>       | Fail                                |

**Domains / Topics wise Quiz Performance Report**

| S.No. | Topic | Total Questions | Correct | Incorrect | Unattempted |
|-------|-------|-----------------|---------|-----------|-------------|
| 1     | Other | 60              | 3       | 3         | 54          |

|                        |                     |                       |                          |                     |            |   |
|------------------------|---------------------|-----------------------|--------------------------|---------------------|------------|---|
| <b>60</b><br>Questions | <b>3</b><br>Correct | <b>3</b><br>Incorrect | <b>54</b><br>Unattempted | <b>Show Answers</b> | <b>All</b> | ▼ |
|------------------------|---------------------|-----------------------|--------------------------|---------------------|------------|---|

**QUESTION 1      CORRECT**

Amazon EC2 provides a repository of public data sets that can be seamlessly integrated into AWS cloud-based applications. What is the monthly charge for using the public data sets?

- ☐ A. 1 time charge of 1\$ for all the datasets.
- ☐ B. 1\$ per dataset per month
- ☐ C. 10 \$ per month for all datasets
- ☒ D. There is no charge for using public data sets ✓

**Explanation :**

Answer – D

AWS hosts a variety of public datasets that anyone can access for free. Previously, large datasets such as the mapping of the Human Genome required hours or days to locate, download, customize, and analyze. Now, anyone can access these datasets via the AWS centralized data repository and analyze

those using Amazon EC2 instances or Amazon EMR (Hosted Hadoop) clusters. By hosting this important data where it can be quickly and easily processed with elastic computing resources, AWS hopes to enable more innovation, more quickly.

For more information on datasets please visit the below link  
<https://aws.amazon.com/public-datasets/> (<https://aws.amazon.com/public-datasets/>)

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## QUESTION 2 CORRECT

An instance can have many states that perform part of its lifecycle

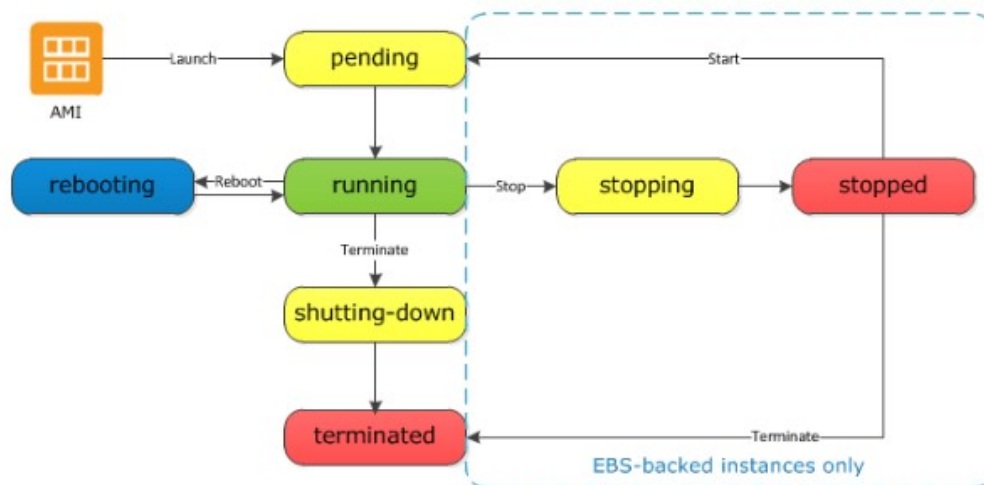
Choose 3 options which are correct states of an instance lifecycle

- ☒ A. rebooting ✓
- ☒ B. pending ✓
- ☒ C. running ✓
- ☐ D. Shutdown

### Explanation :

Answer – A, B and C

The below diagram shows the different Instance states.



For more information on Instance states, please visit the url  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-lifecycle.html>  
(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-instance-lifecycle.html>)

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## QUESTION 3

CORRECT

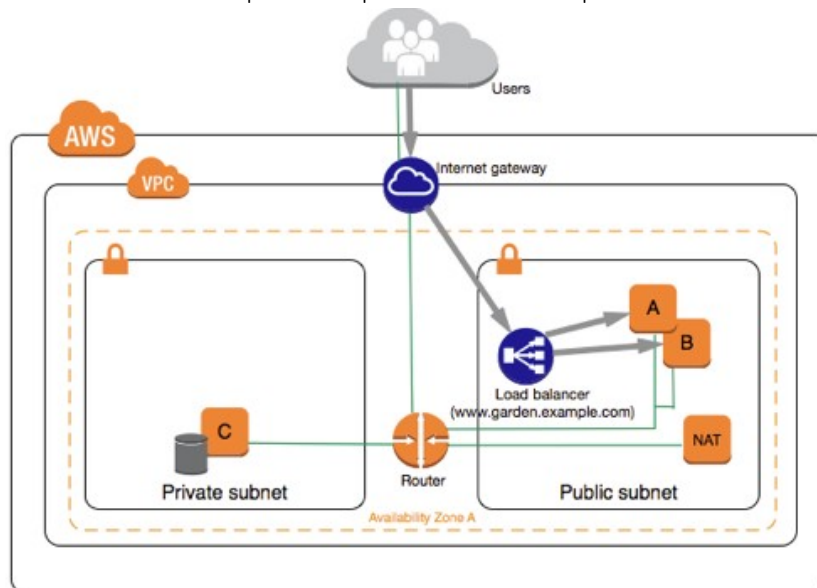
In VPCs with private and public subnets, database servers should ideally be launched into:

- ☐ A. The public subnet
- ☒ B. The private subnet ✓
- ☐ C. Either of them
- ☐ D. Not recommended, they should ideally be launched outside VPC

**Explanation :**

Answer – B

Normally database servers should not be exposed to the internet and should reside in private subnets. The web servers will be part of the public subnet and exposed to the end users.



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## QUESTION 4

INCORRECT

Which of the following can be used as an origin server in CloudFront?

Choose 3 answers from the options given below.

- ☒ A. A webserver running on EC2 ✓

- ☐ B. A webserver running in your own datacenter ✓
- ☒ C. A RDS instance ✗
- ☒ D. An Amazon S3 bucket ✓

**Explanation :**

Answer - A, B and D

Currently CloudFront supports the following types of distributions

- S3 buckets - When you use Amazon S3 as an origin for your distribution, you place any objects that you want CloudFront to deliver in an Amazon S3 bucket.
- Custom Origin - A custom origin is an HTTP server, for example, a web server. The HTTP server can be an Amazon EC2 instance or an HTTP server that you manage privately. When you use a custom origin, you specify the DNS name of the server, along with the HTTP and HTTPS ports and the protocol that you want CloudFront to use when fetching objects from your origin.

For more information on Cloudfront Distributions, please visit the url

<http://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/DownloadDistS3AndCustomOrigins.htm>  
(<http://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/DownloadDistS3AndCustomOrigins.htm>)

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**QUESTION 5      INCORRECT**

You have written a CloudFormation template that creates 1 elastic load balancer fronting 2 EC2 instances. Which section of the template should you edit so that the DNS of the load balancer is returned upon creation of the stack?

- ☒ A. Resources ✗
- ☐ B. Parameters
- ☐ C. Outputs ✓
- ☐ D. Mappings

**Explanation :**

Answer – C

The below example shows a simple CloudFormation template. It creates an EC2 instance based on the AMI - ami-d6f32ab5. When the instance is created, it will output the AZ in which it is created.

```
{
  "Resources": {
    "MyEC2Instance": {
      "Type": "AWS::EC2::Instance",
```

```
"Properties": {  
  "ImageId": "ami-d6f32ab5"  
}  
}  
},  
"Outputs": {  
  "Availability": {  
    "Description": "The Instance ID",  
    "Value":  
    { "Fn::GetAtt": [ "MyEC2Instance", "AvailabilityZone" ] }  
  }  
}  
}
```

To understand more on CloudFormation, please visit the url  
<https://aws.amazon.com/cloudformation/> (<https://aws.amazon.com/cloudformation/>)

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QUESTION 6 INCORRECT

Is it true that EBS can always tolerate an Availability Zone failure?

- ☐ A. No, all EBS volume is stored in a single Availability Zone ✓
- ☐ B. Yes, EBS volume has multiple copies so it should be fine
- ☒ C. Depends on how it is setup ✕
- ☐ D. Depends on the Region where EBS volume is initiated

**Explanation :**

EBS Volume replicated to physical hardware with in the same available zone, So if AZ fails then EBS volume will fail. That's why AWS recommend to always keep EBS volume snapshot in S3 bucket for high durability.

As per AWS user guide:

- <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSVolumes.html>  
(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSVolumes.html>)

"When you create an EBS volume in an Availability Zone, it is automatically replicated within that zone to prevent data loss due to the failure of any single hardware component."

Option B is wrong as EBS volume has multiple copies but with in same AZ , so volume will not persist in case of AZ failure.

Option C is wrong because there is no special setup available to persist EBS volume across region or AZ.

Answer D is wrong as EBS volume has same behavior regardless of region.

## Benefits of Using EBS Volumes

EBS volumes provide several benefits that are not supported by instance store volumes.

- **Data availability**

When you create an EBS volume in an Availability Zone, it is automatically replicated within that zone to prevent data loss due to failure of any single hardware component. After you create a volume, you can attach it to any EC2 instance in the same Availability Zone. After you attach a volume, it appears as a native block device similar to a hard drive or other physical device. At that point, the instance can interact with the volume just as it would with a local drive; the instance can format the EBS volume with a file system, such as ext3, and then install applications.

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QUESTION 7 UNATTEMPTED

A company has configured and peered two VPCs: VPC-1 and VPC-2. VPC-1 contains only private subnets, and VPC-2 contains only public subnets. The company uses a single AWS Direct Connect connection and private virtual interface to connect their on-premises network with VPC-1. Which two methods increases the fault tolerance of the connection to VPC-1? (Choose two.)

- ☐ A. Establish a hardware VPN over the internet between VPC-2 and the on-premises network.
- ☐ B. Establish a hardware VPN over the internet between VPC-1 and the on-premises network. ✓

- ☐ C. Establish a new AWS Direct Connect connection and private virtual interface in the same region as VPC-2.
- ☐ D. Establish a new AWS Direct Connect connection and private virtual interface in a different AWS region than VPC-1.
- ☐ E. Establish a new AWS Direct Connect connection and private virtual interface in the same AWS region as VPC-1 ✓

**Explanation :**

Answer – B and E

Having a VPN Connection is considered as a backup to a Direct Connect connection. Please find the below article on configuring a VPN connection as a backup

- <https://aws.amazon.com/premiumsupport/knowledge-center/configure-vpn-backup-dx/>  
(<https://aws.amazon.com/premiumsupport/knowledge-center/configure-vpn-backup-dx/>)

One can also have another Direct Connect connection , so that if one goes down, the other one would still be active. This needs to be in the same region as VPC-1.

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QUESTION 8 UNATTEMPTED

Which of the following benefits does adding Multi-AZ deployment in RDS provide?

Choose 2 answers from the options given below

- ☐ A. MultiAZ deployed database can tolerate an Availability Zone failure ✓
- ☐ B. Decrease latencies if app servers accessing database are in multiple Availability zones
- ☐ C. Make database access times faster for all app servers
- ☐ D. Make database more available during maintenance tasks ✓

**Explanation :**

Answer - A and D

Some of the advantages of Multi AZ rds deployments are given below

- If an Availability Zone failure or DB Instance failure occurs, your availability impact is limited to the time automatic failover takes to complete
- The availability benefits of Multi-AZ deployments also extend to planned maintenance and backups. In the case of system upgrades like OS patching or DB Instance scaling, these operations are applied first on





Option C is correct because this is the whole idea of snapshots to remain even if the volume or instance is deleted.

Option D is correct because ephemeral storage is temporary storage by default and gets deleted when the system is terminated.

| Characteristic               | Amazon EBS-Backed AMI  | Amazon Instance Store-Backed AMI   |
|------------------------------|--|--|
| Boot time for an instance    | Usually less than 1 minute   | Usually less than 5 minutes  |
| Size limit for a root device | 16 TiB   | 10 GiB   |
| Root device volume           | Amazon EBS volume  | Instance store volume  |
| Data persistence             | By default, the root volume is deleted when the instance terminates.* Data on any other Amazon EBS volumes persists after instance termination by default. Data on any instance store volumes persists only during the life of the instance. | Data on any instance store volumes persists only during the life of the instance. Data on any Amazon EBS volumes persists after instance termination by default. |
| Modifications                | The instance type, kernel, RAM disk, and user data can be changed while the instance is stopped.   | Instance attributes are fixed for the life of an instance.   |
| Charges                      | You're charged for instance usage, Amazon EBS volume usage, and storing your AMI as an Amazon EBS snapshot.  | You're charged for instance usage and storing your AMI in Amazon S3.   |
| AMI creation/bundling        | Uses a single command/call   | Requires installation and use of AMI tools   |
| Stopped state                | Can be placed in stopped state where instance is not running, but the root volume is persisted in Amazon EBS   | Cannot be in stopped state; instances are running or terminated  |

\* By default, Amazon EBS-backed instance root volumes have the `DeleteOnTermination` flag set to `true`. For information about how to change this flag so that the volume persists after termination, see [Changing the Root Device Volume to Persist](#).

For more information on EBS volumes, please visit the link -

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

(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSVolumes.html>)

**Note:**

If an AMI is backed by instance store, that means that the root device for an instance launched from that AMI is created from a template stored in Amazon S3.

To create a Linux AMI backed by instance store, you have to use Amazon EC2 AMI tools and run them on the instance itself. You can't use the AWS console. Creating EBS-backed AMIs is much simpler and can be done in the AWS console

Please check the below link to know more about it.

- <https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/creating-an-ami-instance-store.html> (<https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/creating-an-ami-instance-store.html>)

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A company has the following EC2 instance configuration. They are trying to connect to the instance from the internet. They have verified the existence of the Internet gateway and the route tables are in place. What could be the issue?

Instance: **i-023260ed8c205079d** Private IP: 172.31.2.139

|                       |                              |                   |   |
|-----------------------|------------------------------|-------------------|---|
| Description           | Status Checks                | Monitoring        | Tags  |
| Instance ID           | i-023260ed8c205079d          | Public DNS        | -   |
| Instance state        | running                      | Public IP         | -   |
| Instance type         | t2.micro                     | Elastic IPs       | -   |
| Private DNS           | ip-172-31-2-139.ec2.internal | Availability zone | us-east-1b  |
| Private IPs           | 172.31.2.139                 | Security groups   | launch-wizard-5. <a href="#">view inbound rules</a>       |
| Secondary private IPs | -                            | Scheduled events  | No scheduled events                                       |
| VPC ID                | vpc-6dccc550a                | AMI ID            | amzn-ami-hvm-2016.09.0.20161028-x86_64-gp2 (ami-b73b63a0) |
| Subnet ID             | subnet-95ed8ddc              | Platform          | -   |
| Network interfaces    | eth0                         | IAM role          | -   |

- ☐ A. It's launched in the wrong Availability Zone
- ☐ B. The AMI used to launch the instance cannot be accessed from the internet
- ☐ C. The private IP is wrongly assigned
- ☒ D. There is no Elastic IP Assigned ✓

#### Explanation :

Answer – D

An instance must either have a public or Elastic IP in order to be accessible from the internet.

A public IP address is reachable from the Internet. You can use public IP addresses for communication between your instances and the Internet.

An Elastic IP address is a static IP address designed for dynamic cloud computing. An Elastic IP address is associated with your AWS account. With an Elastic IP address, you can mask the failure of an instance or software by rapidly remapping the address to another instance in your account.

An Elastic IP address is a public IP address, which is reachable from the Internet. If your instance does not have a public IP address, you can associate an Elastic IP address with your instance to enable communication with the Internet; for example, to connect to your instance from your local computer.

For more information on Elastic IP's, please visit the link

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/elastic-ip-addresses-eip.html>

(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/elastic-ip-addresses-eip.html>)

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QUESTION 11 UNATTEMPTED

You have built an AMI. Another AWS account holder wants to use your AMI, but is not able to access it. What could be the issue? Below is the settings of the AMI in the AWS Console.

Launch

Actions ▾

Owned by me ▾

🔍

Filter by tags and attributes or search by keyword

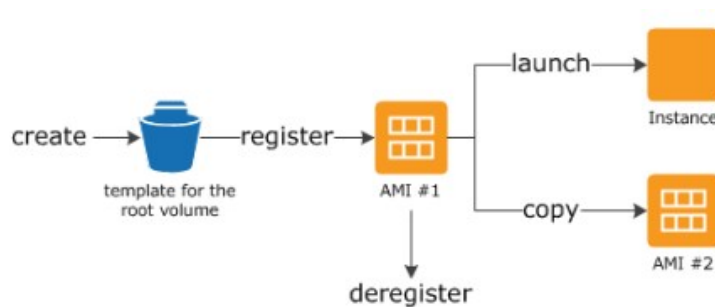
| <input type="checkbox"/> | Name ▾ | AMI Name ▲ | AMI ID ▾     | Source ▾        | Owner ▾      | Visibility ▾ | Status ▾  |
|--------------------------|--------|------------|--------------|-----------------|--------------|--------------|-----------|
| <input type="checkbox"/> |        | Demo       | ami-bd5660aa | 085363624145... | 085363624145 | Private      | available |

- ☐ A. It is not possible to share AMI's
- ☐ B. The AMI needs to be made Public ✓
- ☐ C. The Owner of AMI needs to be changed
- ☐ D. The AMI ID does not allow sharing

### Explanation :

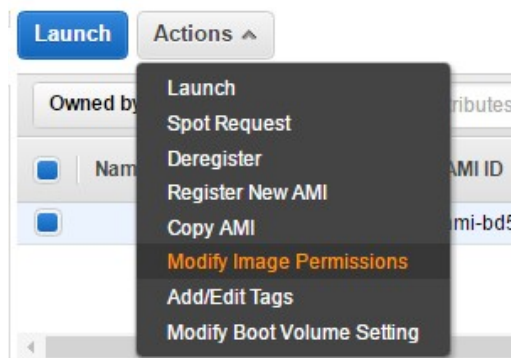
Answer - B

An Amazon Machine Image (AMI) provides the information required to launch an instance, which is a virtual server in the cloud.



After you create an AMI, you can keep it private so that only you can use it, or you can share it with a specified list of AWS accounts. You can also make your custom AMI public so that the community can use it. To make the AMI public, carry out the following steps

Step 1) Choose the AMI and then choose the menu option of Modify Image Permissions



Step 2) Make the Image as Public

### Modify Image Permissions ×

This image is currently: ☒ Public ☐ Private

Cancel

Save

For more information on sharing an AMI to public, please visit the below URL:

- <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/sharingamis-intro.html>  
(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/sharingamis-intro.html>)

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QUESTION 12 UNATTEMPTED

What is the basic requirement to login into an EC2 instance on the AWS cloud?

- ☐ A. Volumes
- ☐ B. AMI's
- ☒ C. Key Pairs ✓
- ☐ D. S3

#### Explanation :

Answer : C

Amazon EC2 uses public-key cryptography to encrypt and decrypt login information. Public-key cryptography uses a public key to encrypt a piece of data, such as a password, then the recipient uses the private key to decrypt the data. The public and private keys are known as a key pair.

To log in to your instance, you must create a key pair, specify the name of the key pair when you launch the instance, and provide the private key when you connect to the instance. Linux instances have no password, and you use a key pair to log in using SSH. With Windows instances, you use a key pair to obtain the administrator password and then log in using RDP.

When you launch an EC2 instance, you will either be asked to create a new key pair or an existing key pair. This is .pem file which can then use to log into your instance.

## Select an existing key pair or create a new key pair ×

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair ▼

Select a key pair

Demo ▼

☒ I acknowledge that I have access to the selected private key file (Demo.pem), and that without this file, I won't be able to log into my instance.

Cancel

Launch Instances

For more information on Key Pairs please visit the below link

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-key-pairs.html>

(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-key-pairs.html>)

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### QUESTION 13 UNATTEMPTED

Which of the below features allows you to take backups of your EBS volumes?

Choose one answer from the options given below.

- ☐ A. Volumes
- ☐ B. State Manager
- ☐ C. Placement Groups
- ☐ D. Snapshots ✓

#### Explanation :

Answer - D

You can easily create a snapshot from a volume while the instance is running and the volume is in use.

You can do this from the EC2 dashboard.

Create Volume Actions

Filter by tags

Name

Volume Type IOPS Snapshot Created Availability Zone State

Delete Volume  
Attach Volume  
Detach Volume  
Force Detach Volume  
Create Snapshot  
Change Auto-Enable IO Setting  
Add/Edit Tags

|     |            |               |                     |            |        |
|-----|------------|---------------|---------------------|------------|--------|
| gp2 | 100 / 3000 | snap-fe8a3c04 | November 23, 201... | us-east-1b | in-use |
| gp2 | 100 / 3000 | snap-fe8a3c04 | November 17, 201... | us-east-1b | in-use |

For more information on EBS snapshots, please visit the link -  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSSnapshots.html>  
(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSSnapshots.html>)

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#### QUESTION 14 UNATTEMPTED

A company wants to host a selection of MongoDB instances. They are expecting a high load and want to have as low latency as possible. Which class of instances from the below list should they choose from.

- ☐ A. T2
- ☒ B. I2 ✓
- ☐ C. T1
- ☐ D. G2

#### Explanation :

Answer -B

I2 instances are optimized to deliver tens of thousands of low-latency, random I/O operations per second (IOPS) to applications. They are well suited for the following scenarios:

- NoSQL databases (for example, Cassandra and MongoDB)
- Clustered databases
- Online transaction processing (OLTP) systems

For more information on I2 instances, please visit the link  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/i2-instances.html>  
(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/i2-instances.html>)



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QUESTION 15 UNATTEMPTED

Which of the below elements can you manage in the IAM dashboard?

Choose 3 answers from the options given below

- ☐ A. Users ✓
- ☐ B. Encryption Keys ✓
- ☐ C. Cost Allocation Reports
- ☐ D. Policies ✓

**Explanation :**

Answer – A, B and D

When you go to your IAM dashboard, below are the set of elements which can be configured.

**Dashboard**

Groups

Users

Roles

Policies

Identity providers

Account settings

Credential report

---

Encryption keys

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QUESTION 16 UNATTEMPTED

What are the languages currently supported by AWS Lambda?

Choose 3 answers from the options given below

- ☐ A. Node.js ✓

- ☐ B. Angular JS
- ☐ C. Java ✓
- ☐ D. Python ✓

**Explanation :**

Answer – A, C and D

AWS Lambda supports code written in Node.js (JavaScript), Python, Java (Java 8 compatible), and C# (using the .NET Core runtime).

For more information on Amazon Lambda, please visit

[https://aws.amazon.com/lambda/?nc2=h\\_m1](https://aws.amazon.com/lambda/?nc2=h_m1) ([https://aws.amazon.com/lambda/?nc2=h\\_m1](https://aws.amazon.com/lambda/?nc2=h_m1))

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**QUESTION 17      UNATTEMPTED**

A photo-sharing service stores pictures in Amazon Simple Storage Service (S3) and allows application sign-in using an OpenID Connect-compatible identity provider. Which AWS Security Token Service approach to temporary access should you use for the Amazon S3 operations?

- ☐ A. SAML-based Identity Federation
- ☐ B. Cross-Account Access
- ☐ C. AWS Identity and Access Management roles
- ☐ D. Web Identity Federation ✓

**Explanation :**

Answer – D

The AWS Documentation mentions the below

With web identity federation, you don't need to create custom sign-in code or manage your own user identities. Instead, users of your app can sign in using a well-known identity provider (IdP) –such as Login with Amazon, Facebook, Google, or any other OpenID Connect (OIDC)-compatible IdP, receive an authentication token, and then exchange that token for temporary security credentials in AWS that map to an IAM role with permissions to use the resources in your AWS account. Using an IdP helps you keep your AWS account secure, because you don't have to embed and distribute long-term security credentials with your application.

For more information on Web Identity Federation, please visit the below URL:

- [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)  
([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))



**Note:**

If we are managing user identities outside of AWS, we can use IAM *identity providers* instead of creating IAM users in our AWS account.

With an identity provider (IdP), you can manage your user identities outside of AWS and give these external user identities permissions to use AWS resources in your account. This is useful if your organization already has its own identity system, such as a corporate user directory. It is also useful if you are creating a mobile app or web application that requires access to AWS resources.

To use an IdP, you create an IAM identity provider entity to establish a trust relationship between your AWS account and the IdP. IAM supports IdPs that are compatible with OpenID Connect (OIDC) or SAML 2.0.

Our question refers to OpenID connect.

As per AWS, When you use an IdP, you don't have to create custom sign-in code or manage your own user identities; the IdP provides that for you. Your external users sign in through a well-known identity provider, such as Login with Amazon, Facebook, Google, and many others. They will receive an authentication token, and then exchange that token for temporary security credentials in AWS that map to an IAM role with permissions to use the resources in your AWS account. Using an IdP helps you keep your AWS account secure, because you don't have to embed and distribute long-term security credentials with your application.

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**QUESTION 18      UNATTEMPTED**

A customer needs corporate IT governance and cost oversight of all AWS resources consumed by its divisions. The divisions want to maintain administrative control of the discrete AWS resources they consume and keep those resources separate from the resources of other divisions. Which of the following options, when used together will support the autonomy/control of divisions while enabling corporate IT to maintain governance and cost oversight? Choose two answers from the options given below

- ☐ A. Use AWS Consolidated Billing and disable AWS root account access for the child accounts.
- ☐ B. Enable IAM cross-account access for all corporate IT administrators in each child account. ✓
- ☐ C. Create separate VPCs for each division within the corporate IT AWS account.

- ☐ D. Use AWS Consolidated Billing by creating AWS Organisations to link the divisions' accounts to a parent corporate account. ✓
- ☐ E. Write all child AWS CloudTrail and Amazon CloudWatch logs to each child account's Amazon S3 'Log' bucket.

**Explanation :**

Answer – B and D

Since the resources need to be separated and a separate governance model is required for each section of resources, then it's better to have a separate AWS account for each division. Each division's AWS account can sign up for consolidating billing to the main corporate account by creating AWS Organisations. The IT administrators can then be granted access via cross account role access. For more information on consolidating billing, please visit the below URL:

- <http://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/consolidated-billing.html>  
(<http://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/consolidated-billing.html>)

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**QUESTION 19      UNATTEMPTED**

In Cloudtrail, where does it store all of the logs that it creates? Choose one answer from the options given below.

- ☐ A. A separate EC2 instance with EBS storage
- ☐ B. A RDS instance
- ☐ C. A DynamoDB instance
- ☐ D. Amazon S3 ✓

**Explanation :**

Answer – D

When you enable Cloudtrail, you need to provide an S3 bucket where all the logs can be written to.

## Turn on CloudTrail

Trail name\* Demo

Apply trail to all regions ☒ Yes ☐ No ⓘ

Create a new S3 bucket ☒ Yes ☐ No

S3 bucket\* demologging ⓘ

[Advanced »](#)

\* Required field

Cancel

Turn On

For more information on AWS Cloudtrail, please visit  
<https://aws.amazon.com/cloudtrail/> (<https://aws.amazon.com/cloudtrail/>)

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### QUESTION 20 UNATTEMPTED

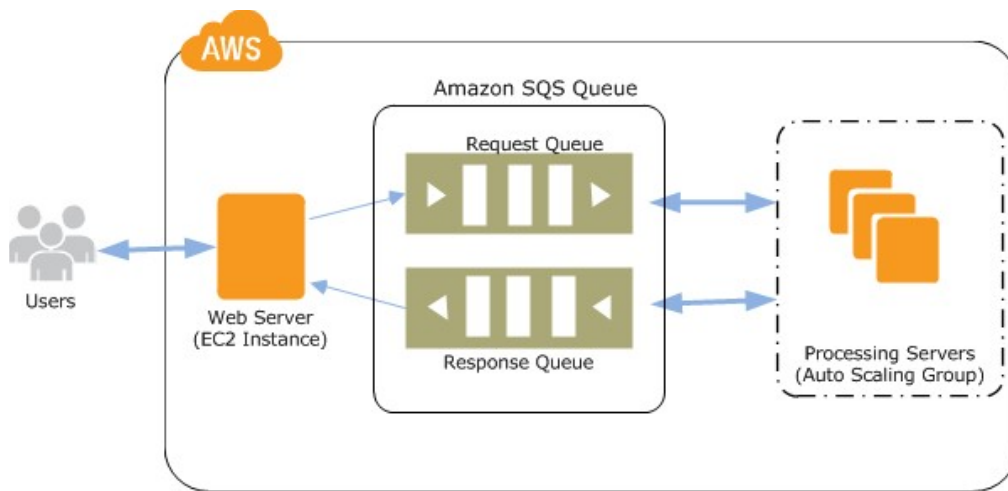
A company has a workflow that sends video files from their on-premise system to AWS for transcoding. They use EC2 worker instances that pull transcoding jobs from SQS. Why is SQS an appropriate service for this scenario?

- ☐ A. SQS standard queue guarantees the order of the messages.
- ☐ B. SQS synchronously provides transcoding output.
- ☐ C. SQS checks the health of the worker instances.
- ☐ D. SQS helps to facilitate horizontal scaling of encoding tasks. ✓

#### Explanation :

Answer – D

The below diagram from the AWS Documentation shows the basic structure of how an application is designed when using SQS. Based on the number of messages in the queue, the appropriate number of processing servers will be created to process the tasks accordingly.



For more information on SQS, please visit the below url

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

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#### QUESTION 21 UNATTEMPTED

In the event of an unplanned outage of your primary DB, AWS RDS automatically switches over to the secondary. In such a case which record in Route 53 is changed? Select one answer from the options given below

- ☐ A. DNAME
- ☒ B. CNAME ✓
- ☐ C. TXT
- ☐ D. MX

#### Explanation :

Answer – B

The AWS documentation clearly highlights what happens in the event of an automatic failover for an AWS RDS instance.

Failover is automatically handled by Amazon RDS so that you can resume database operations as quickly as possible without administrative intervention. When failing over, Amazon RDS simply flips the canonical name record (CNAME) for your DB Instance to point at the standby, which is in turn promoted to become the new primary. We encourage you to follow best practices and implement database connection retry at the application layer.

For more information on AWS RDS, please visit

<https://aws.amazon.com/rds/faqs/> (<https://aws.amazon.com/rds/faqs/>)

QUESTION 22

UNATTEMPTED

Which of the below resources cannot be tagged in AWS

- ☐ A. Images(AMI)
- ☐ B. EBS Volumes
- ☒ C. Placement Groups ✓
- ☐ D. VPC

**Explanation :**

Answer – C

Tags enable you to categorize your AWS resources in different ways, for example, by purpose, owner, or environment. This is useful when you have many resources of the same type – you can quickly identify a specific resource based on the tags you've assigned to it. Each tag consists of a key and an optional value, both of which you define.

#### Tagging Support for Amazon EC2 Resources

| Resource                     | Supports tags | Supports tagging on creation (Amazon EC2 API, AWS CLI, AWS SDK) |
|------------------------------|---------------|---|
| API                          | No            | No  |
| AMI                          | Yes           | No  |
| Bundle task                  | No            | No  |
| Customer gateway             | Yes           | No  |
| Dedicated Host               | No            | No  |
| DHCP option                  | Yes           | No  |
| EBS snapshot                 | Yes           | No  |
| EBS volume                   | Yes           | Yes   |
| Egress-only internet gateway | No            | No  |
| Elastic IP address           | Yes           | No  |
| Instance                     | Yes           | Yes   |
| Instance store volume        | N/A           | N/A   |
| Internet gateway             | Yes           | No  |
| Key pair                     | No            | No  |
| Launch template              | Yes           | No  |
| Launch template version      | No            | No  |
| NAT gateway                  | Yes           | No  |
| Network ACL                  | Yes           | No  |
| Network interface            | Yes           | No  |
| Placement group              | No            | No  |
| Reserved Instance            | Yes           | No  |
| Reserved Instance listing    | No            | No  |
| Route table                  | Yes           | No  |
| Spot Instance request        | Yes           | No  |
| Security group-EC2-Classic   | Yes           | No  |
| Security group-VPC           | Yes           | No  |
| Subnet                       | Yes           | No  |
| Virtual private gateway      | Yes           | No  |
| VPC                          | Yes           | No  |
| VPC endpoint                 | No            | No  |
| VPC endpoint service         | No            | No  |
| VPC flow log                 | No            | No  |
| VPC peering connection       | Yes           | No  |
| VPN connection               | Yes           | No  |

#### Tagging Support for Amazon EC2 Resources

| Resource                     | Supports tags | Supports tagging on creation (Amazon EC2 API, AWS CLI, AWS SDK) |
|------------------------------|---------------|---|
| API                          | Yes           | No  |
| AMI                          | Yes           | No  |
| Bundle task                  | No            | No  |
| Customer gateway             | Yes           | No  |
| Dedicated Host               | No            | No  |
| DHCP option                  | Yes           | No  |
| EBS snapshot                 | Yes           | Yes   |
| EBS volume                   | Yes           | Yes   |
| Egress-only internet gateway | No            | No  |
| Elastic IP address           | Yes           | No  |
| Instance                     | Yes           | Yes   |
| Instance store volume        | N/A           | N/A   |
| Internet gateway             | Yes           | No  |
| Key pair                     | No            | No  |
| Launch template              | Yes           | No  |
| Launch template version      | No            | No  |
| NAT gateway                  | Yes           | No  |
| Network ACL                  | Yes           | No  |
| Network interface            | Yes           | No  |
| Placement group              | No            | No  |
| Reserved Instance            | Yes           | No  |
| Reserved Instance listing    | No            | No  |
| Route table                  | Yes           | No  |

For more information on AWS Resourcing Tagging, please visit  
[http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Using\\_Tags.html](http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Using_Tags.html)  
([http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Using\\_Tags.html](http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Using_Tags.html))

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QUESTION 23 UNATTEMPTED

What is the key aspect for the below AMI image. Choose one answer from the options below



**amzn-ami-vpc-nat-hvm-2014.09.1.x86\_64-gp2** - ami-184dc970

Amazon Linux AMI 2014.09.1 x86\_64 VPC NAT HVM GP2

Root device type: ebs    Virtualization type: hvm

- ☐ A. Since it's a EBS volume AMI , it is special in nature
- ☐ B. Since it's a Linux based AMI , it is special in nature
- ☐ C. Since it's a HVM based AMI , it is special in nature
- ☒ D. Since it's a NAT based AMI , it is special in nature ✓

**Explanation :**

Answer – D

Amazon provides Amazon Linux AMIs that are configured to run as NAT instances. These AMIs include the string amzn-ami-vpc-nat in their names, so you can search for them in the Amazon EC2 console.

When you launch an instance from a NAT AMI, the following configuration occurs on the instance:

- IPv4 forwarding is enabled and ICMP redirects are disabled in /etc/sysctl.d/10-nat-settings.conf
- A script located at /usr/sbin/configure-pat.sh runs at startup and configures iptables IP masquerading

For more information on NAT instances please visit the below link

[http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_NAT\\_Instance.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_NAT_Instance.html)  
([http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_NAT\\_Instance.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_NAT_Instance.html))

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QUESTION 24 UNATTEMPTED

What type of monitoring for EBS volumes is available automatically in 5 minute periods at no charge?

- ☒ A. Basic ✓
- ☐ B. Primary
- ☐ C. Detailed
- ☐ D. Local

**Explanation :**

Answer – A

As per the AWS documentation, below is the types of monitoring data.

The following table describes the types of monitoring data available for your Amazon EBS volumes.

| Type     | Description  |
|----------|--|
| Basic    | Data is available automatically in 5-minute periods at no charge. This includes data for the root device volumes for EBS-backed instances. |
| Detailed | Provisioned IOPS SSD (io1) volumes automatically send one-minute metrics to CloudWatch.  |

For more information on Volume monitoring, please visit

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/monitoring-volume-status.html>

(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/monitoring-volume-status.html>)

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**QUESTION 25 UNATTEMPTED**

There is a company website that is going to be launched in the coming weeks. There is a probability that the traffic will be quite high in the first couple of weeks. In the event of a load failure, how can you set up DNS failover to a static website? Choose the correct answer from the options given below.

- ☐ A. Duplicate the exact application architecture in another region and configure DNS weight-based routing
- ☐ B. Enable failover to an on-premise data center to the application hosted there.
- ☐ C. Use Route 53 with the failover option to failover to a static S3 website bucket or CloudFront distribution. ✓
- ☐ D. Add more servers in case the application fails.

**Explanation :**

Answer – C



Amazon Route 53 health checks monitor the health and performance of your web applications, web servers, and other resources.

If you have multiple resources that perform the same function, you can configure DNS failover so that Amazon Route 53 will route your traffic from an unhealthy resource to a healthy resource. For example, if you have two web servers and one web server becomes unhealthy, Amazon Route 53 can route traffic to the other web server. So you can route traffic to a website hosted on S3 or to a cloudfront distribution.

For more information on DNS failover using Route53, please refer to the below link  
<http://docs.aws.amazon.com/Route53/latest/DeveloperGuide/dns-failover.html>  
(<http://docs.aws.amazon.com/Route53/latest/DeveloperGuide/dns-failover.html>)

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#### QUESTION 26 UNATTEMPTED

What is one of the major advantages of having a VPN in AWS?

- ☐ A. You don't have to worry about security, this is managed by AWS.
- ☐ B. You can connect your cloud resources to on-premise data centers using VPN connections ✓
- ☐ C. You can provision unlimited number of S3 resources.
- ☐ D. None of the above

#### Explanation :

Answer – B

One of the major advantages is that you can combine your on-premise data center to AWS via a VPN connection.

You can create an IPsec, hardware VPN connection between your VPC and your remote network. On the AWS side of the VPN connection, a *virtual private gateway* provides two VPN endpoints for automatic failover. You configure your *customer gateway*, which is the physical device or software application on the remote side of the VPN connection.

For more information on VPN connections, please refer to the below link  
<http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/vpn-connections.html>  
(<http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/vpn-connections.html>)

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#### QUESTION 27 UNATTEMPTED

One of your instances is reporting an unhealthy system status check. However, this is not something you should have to monitor and repair on your own. How might you automate the repair of the system status check failure in an AWS environment? Choose the correct answer from the options given below

- ☒ **A. Create CloudWatch alarms that stop and start the instance based off of status check alarms ✓**
- ☐ **B. Write a script that queries the EC2 API for each instance status check**
- ☐ **C. Write a script that periodically shuts down and starts instances based on certain stats.**
- ☐ **D. Implement a third party monitoring tool.**

**Explanation :**

Answer – A

Using Amazon CloudWatch alarm actions, you can create alarms that automatically stop, terminate, reboot, or recover your EC2 instances. You can use the stop or terminate actions to help you save money when you no longer need an instance to be running. You can use the reboot and recover actions to automatically reboot those instances or recover them onto new hardware if a system impairment occurs.

For more information on using alarm actions, please refer to the below link

<http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/UsingAlarmActions.html>  
(<http://docs.aws.amazon.com/AmazonCloudWatch/latest/monitoring/UsingAlarmActions.html>)

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**QUESTION 28      UNATTEMPTED**

A company is running three production web server reserved EC2 instances with EBS-backed root volumes. These instances have a consistent CPU load of 80%. Traffic is being distributed to these instances by an Elastic Load Balancer. They also have production and development Multi-AZ RDS MySQL databases. What recommendation would you make to reduce cost in this environment without affecting availability of mission-critical systems? Choose the correct answer from the options given below

- ☐ **A. Consider using on-demand instances instead of reserved EC2 instances**
- ☒ **B. Consider not using a Multi-AZ RDS deployment for the development database ✓**
- ☐ **C. Consider using spot instances instead of reserved EC2 instances**

☐ D. Consider removing the Elastic Load Balancer

**Explanation :**

Answer – B

Multi-AZ databases is better for production environments rather than for development environments, so you can reduce costs by not using this for development environments

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. Since the endpoint for your DB Instance remains the same after a failover, your application can resume database operation without the need for manual administrative intervention

For more information on Multi-AZ RDS, please refer to the below link

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

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**QUESTION 29**      **UNATTEMPTED**

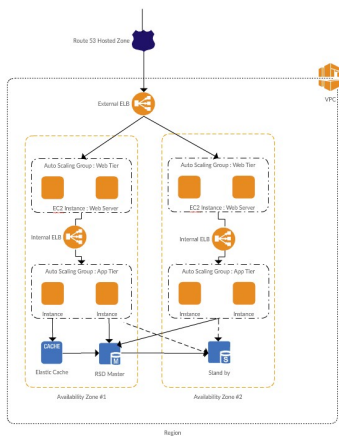
A company has assigned two web server instances in a VPC subnet to an Elastic Load Balancer (ELB). However, the instances and the ELB are not reachable via URL to the Elastic Load Balancer (ELB). How can you resolve the issue so that your web server instances can start serving the web app data to the public Internet? Choose the correct answer from the options given below

- ☐ A. Attach an Internet gateway to the VPC and route it to the subnet ✓
- ☐ B. Add an elastic IP address to the instance
- ☐ C. Use Amazon Elastic Load Balancer to serve requests to your instances located in the internal subnet
- ☐ D. None of the above

**Explanation :**

Answer – A

If the Internet gateway is not attached to the VPC, which is a pre-requisite for the instances to be accessed from the internet then the instances will not be reachable.



You can assign instance from private subnet to ELB, in that case, ELB will automatically become internal ELB and AWS will assign scheme as "Internal". If your subnet is public then ELB will automatically become external ELB and AWS will assign scheme as "Internet-facing". You can add Internet Gateway to VPC and add IGW route in the subnet to make it available over the internet, however, in that case, AWS will still show ELB scheme as internal but it will allow internet traffic to the instance.

See internal load balancer details here:

<http://docs.aws.amazon.com/elasticloadbalancing/latest/classic/elb-create-internal-load-balancer.html> (<http://docs.aws.amazon.com/elasticloadbalancing/latest/classic/elb-create-internal-load-balancer.html>)

For more information on Internet gateways, please refer to the below link:

[http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_Internet\\_Gateway.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Internet_Gateway.html) ([http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_Internet\\_Gateway.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Internet_Gateway.html))

## Enabling Internet Access

To enable access to or from the Internet for instances in a VPC subnet, you must do the following:

- Attach an Internet gateway to your VPC.
- Ensure that your subnet's route table points to the Internet gateway.
- Ensure that instances in your subnet have a globally unique IP address (public IPv4 address, Elastic IP address, or IPv6 address).
- Ensure that your network access control and security group rules allow the relevant traffic to flow to and from your instance.

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QUESTION 30

UNATTEMPTED

A company has EC2 instances running in AWS. The EC2 instances are running via an Autoscaling solution. There is a lot of application requests or work items being lost because of the load on the servers. The Autoscaling solution is launching new instances to take the load but there are still some application requests which are being lost. Which of the following is likely to provide the most cost-effective solution to avoid losing recently submitted requests? Choose the correct answer from the options given below

- ☐ A. Use an SQS queue to decouple the application components ✓
- ☐ B. Keep one extra EC2 instance always powered on in case a spike occurs
- ☐ C. Use larger instances for your application
- ☐ D. Pre-warm your Elastic Load Balancer

**Explanation :**

Answer - A

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

For more information on SQS, please refer to the below link

<https://aws.amazon.com/sqs/> (<https://aws.amazon.com/sqs/>)

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**QUESTION 31      UNATTEMPTED**

After migrating an application architecture from on-premise to AWS you will not be responsible for the ongoing maintenance of packages for which of the following AWS services that your application uses.

Choose the 2 correct answers from the options below.

- ☐ A. Elastic Beanstalk
- ☐ B. RDS ✓
- ☐ C. DynamoDB ✓
- ☐ D. EC2

**Explanation :**

Answer – B and C

Both RDS and DynamoDB are managed solutions provided by AWS.

Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale a relational database in the cloud. It provides cost-efficient and resizable capacity while managing time-consuming database administration tasks, freeing you up to focus on your applications and business.

For more information on RDS, please refer to the below link

<https://aws.amazon.com/rds/> (<https://aws.amazon.com/rds/>)

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.

For more information on DynamoDB, please refer to the below link

<https://aws.amazon.com/dynamodb/> (<https://aws.amazon.com/dynamodb/>)

**Note:**

Elastic Beanstalk is a great tool for programmer who wants to purely focus on the code and not the infrastructure. So when the code is deploy, it will automatically architect the infrastructure (for eg. launch EC2, configure load balancer etc) for you.

Ongoing maintenance are referring to updates. As for Elastic Beanstalk, you will need to manage the platform updates especially for Windows based platform server. Hence it is not entirely 'maintenance free'.

You may visit the link below for more info about platform updates in Elastic Beanstalk:

<https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.platform.upgrade.html>  
(<https://docs.aws.amazon.com/elasticbeanstalk/latest/dg/using-features.platform.upgrade.html>)

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**QUESTION 32 UNATTEMPTED**

What is the difference between an availability zone and an edge location? Choose the correct answer from the options below

- ☐ A. Edge locations are used as control stations for AWS resources
- ☐ B. An edge location is used as a link when building load balancing between regions
- ☐ C. An Availability Zone is an isolated location inside a region; an edge location will deliver cached content to the closest location to reduce latency ✓
- ☐ D. An availability zone is a grouping of AWS resources in a specific region; an edge location is a specific resource within the AWS region

**Explanation :**

Answer – C

Edge locations

Using a network of edge locations around the world, Amazon CloudFront caches copies of your static content close to viewers, lowering latency when they download your objects and giving you the high, sustained data transfer rates needed to deliver large popular objects to end users at scale.

For more information on Cloudfront and edge locations, please refer to the below link

<https://aws.amazon.com/cloudfront/> (<https://aws.amazon.com/cloudfront/>)

#### Availability Zones

Each region is completely independent. Each Availability Zone is isolated, but the Availability Zones in a region are connected through low-latency links. The following diagram illustrates the relationship between regions and Availability Zones.

For more information on AZ, please refer to the below link

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

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

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QUESTION 33

UNATTEMPTED

When storing sensitive data on the cloud which of the below options should be carried out on AWS?

Choose 3 answers from the options given below.

- ☐ A. With AWS you do not need to worry about encryption
- ☐ B. Enable EBS Encryption ✓
- ☐ C. Encrypt the file system on an EBS volume using Linux tools ✓
- ☐ D. Enable S3 Encryption ✓

#### Explanation :

Answer – B,C and D

Amazon EBS encryption offers you a simple encryption solution for your EBS volumes without the need for you to build, maintain, and secure your own key management infrastructure. When you create an encrypted EBS 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

For more information on EBS Encryption, please refer to the below link

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

(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSEncryption.html>)

Data protection refers to protecting data while in-transit (as it travels to and from Amazon S3) and at rest (while it is stored on disks in Amazon S3 data centers). You can protect data in transit by using SSL or by using client-side encryption.

For more information on S3 Encryption, please refer to the below link



<http://docs.aws.amazon.com/AmazonS3/latest/dev/UsingEncryption.html>  
(<http://docs.aws.amazon.com/AmazonS3/latest/dev/UsingEncryption.html>)

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QUESTION 34 UNATTEMPTED

What is an AWS service which can help protect web applications from common security threats from the outside world? Choose one answer from the options below

- ☐ A. NAT
- ☒ B. WAF ✓
- ☐ C. SQS
- ☐ D. SES

**Explanation :**

Answer – B

Option A is wrong because this is used to relay information from private subnets to the internet.

Option C is wrong because this is used as a queuing service in aws.

Option D is wrong because this is used as an emailing service in aws.

AWS WAF is a web application firewall that helps protect your web applications from common web exploits that could affect application availability, compromise security, or consume excessive resources. AWS WAF gives you control over which traffic to allow or block to your web applications by defining customizable web security rules. You can use AWS WAF to create custom rules that block common attack patterns, such as SQL injection or cross-site scripting, and rules that are designed for your specific application. New rules can be deployed within minutes, letting you respond quickly to changing traffic patterns. Also, AWS WAF includes a full-featured API that you can use to automate the creation, deployment, and maintenance of web security rules.

In WAF, you can create a set of Conditions and Rules to protect your network against attacks from outside.

### Conditions

You use IP match, string match, and other conditions to specify the web requests that you want to allow or block.

#### IP match condition example

##### Suspicious IPs

192.0.2.0/24

192.51.100.0/24

2001:db8:a0b:12f0:ac34:1:1:1/128

2001:db8:a0b:12f0:0:0:0:0/64

#### String match condition example

### Rules contain conditions

If you add more than one condition to a rule, a request must match values in all conditions to be allowed or blocked.

#### Rules example

##### Bad User-Agents

IP match condition  
Suspicious IPs

and

String match condition  
Bad bots

##### Detect SQLi

### Web ACLs contain rules

You specify whether to allow or block requests based on the conditions in each rule.

#### Web ACL example if requests match

Rule 1, Bad User-Agents, then  
block

IP match condition  
Suspicious IPs

and

String match condition  
Bad bots

For more information on AWS WAF please visit the below link  
<https://aws.amazon.com/waf/> (<https://aws.amazon.com/waf/>)

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QUESTION 35

UNATTEMPTED

Your supervisor asks you to create a decoupled application whose process includes dependencies on EC2 instances and servers located in your company's on-premises data center. Which of these are you least likely to recommend as part of that process? Choose the correct answer from the options below:

- ☐ A. SQS polling from an EC2 instance deployed with an IAM role
- ☐ B. An SWF workflow
- ☐ C. SQS polling from an EC2 instance using IAM user credentials ✓
- ☐ D. SQS polling from an on-premises server using IAM user credentials

#### Explanation :

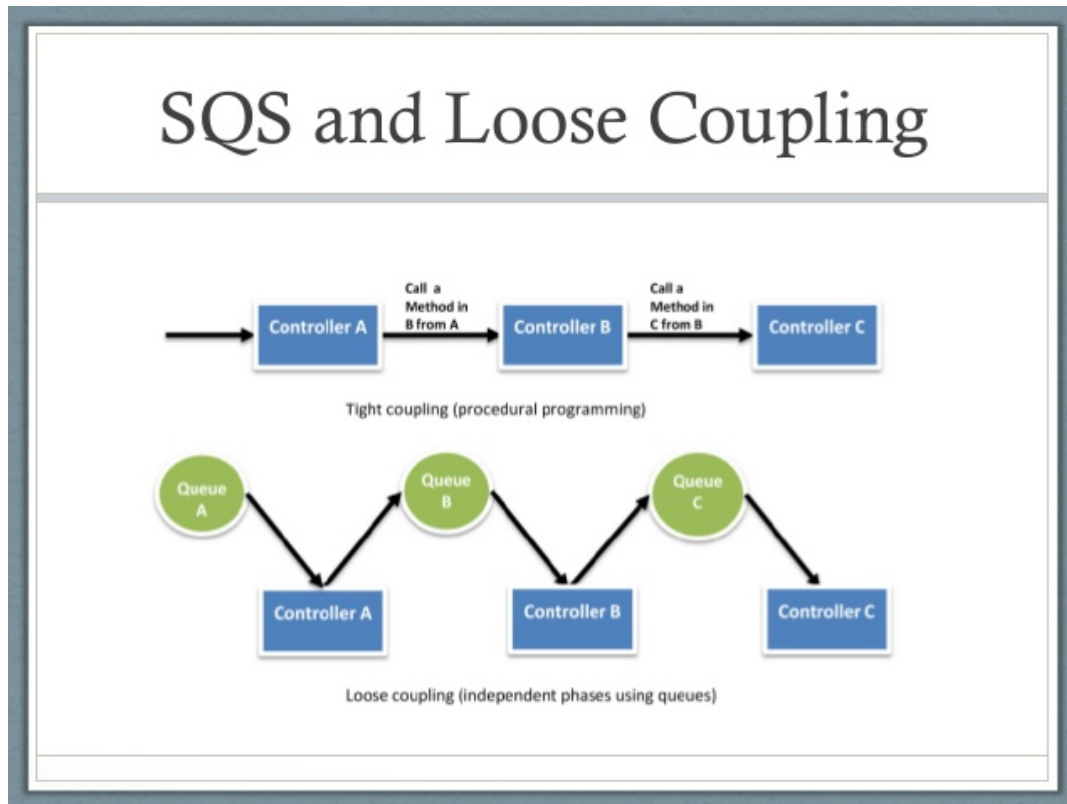
Answer – C

Note that the question asks you for the least likely recommended option.

The correct answer is C since it is least likely scenario. SQS polling from an EC2 instance using IAM user credentials. An EC2 role should be used when deploying EC2 instances to grant permissions rather than storing IAM user credentials in EC2 instances.

You should use IAM roles for secure communication between EC2 instances and resources on AWS.

Option A is incorrect because it will be your most likely scenario. SQS polling from an EC2 instance deployed with an IAM role is most likely because when your polling SQS from EC2 you should use IAM roles. What you should never do is use IAM user api keys for authentication to poll sqs messages. An IAM *role* is similar to a user, in that it is an AWS identity with permission policies that determine what the identity can and cannot do in AWS. However, instead of being uniquely associated with one person, a role is intended to be assumable by anyone who needs it. Also, a role does not have any credentials (password or access keys) associated with it. Instead, if a user is assigned to a role, access keys are created dynamically and provided to the user.



**Note:**

The difference between option C and D is that "SQS polling from On-premises vs Within AWS".

In order to connect an on-premises server to AWS, you need to create IAM user or IAM role and both recommended by AWS. To know more about it, please check the below link:

<https://docs.aws.amazon.com/codedeploy/latest/userguide/on-premises-instances-register.html>  
(<https://docs.aws.amazon.com/codedeploy/latest/userguide/on-premises-instances-register.html>)

For services within AWS, AWS recommends creating only IAM role. As we know, the question is about least likely recommended, option D can't be the answer. Hence, Option C is the least recommended.

An EC2 instance retrieves a message from an SQS queue, begins processing the message, then crashes. What happens to the message? Choose the correct answer from the options below:

- ☐ A. When the message visibility timeout expires, the message becomes available for processing by other EC2 instances ✓
- ☐ B. It will remain in the queue and still assigned to same EC2 instances when instances become online within visibility timeout.
- ☐ C. The message is deleted and becomes duplicated when the EC2 instance comes online.

#### Explanation :

Answer – A

When a consumer receives and processes a message from a queue, the message remains in the queue. Amazon SQS doesn't automatically delete the message: Because it's a distributed system, there is no guarantee that the component will actually receive the message (the connection can break or a component can fail to receive the message). Thus, the consumer must delete the message from the queue after receiving and processing it.

Furthermore, there is no special code required to deal with the message that was being processed when the server crashed. That's because even though the message was read from the Amazon SQS queue, the message remains in the queue until the server explicitly deletes it. So if the server fails while processing a message and therefore before deleting the message, it will find the message again when it comes back online.

**Q: How does Amazon SQS allow multiple readers to access the same message queue without losing messages or processing them multiple times?**

Every Amazon SQS queue has a configurable visibility timeout. A message is not visible to any other reader for a designated amount of time when it is read from a message queue. As long as the amount of time it takes to process the message is less than the visibility timeout, every message is processed and deleted.

If the component processing of the message fails or becomes unavailable, the message again becomes visible to any component reading the message queue once the visibility timeout ends. This allows multiple components to read messages from the same message queue, each one working to process different messages.

For more information on SQS Visibility timeout, please refer to the below link

- [http://sqs-public-images.s3.amazonaws.com/Building\\_Scalabale\\_EC2\\_applications\\_with\\_SQS2.pdf](http://sqs-public-images.s3.amazonaws.com/Building_Scalabale_EC2_applications_with_SQS2.pdf) ([http://sqs-public-images.s3.amazonaws.com/Building\\_Scalabale\\_EC2\\_applications\\_with\\_SQS2.pdf](http://sqs-public-images.s3.amazonaws.com/Building_Scalabale_EC2_applications_with_SQS2.pdf)) (this document explains in detail how EC2 and SQS works together in all scenarios. There is also explanation what happens if the EC2 instance crashes before it deletes a message from Queue)

- <http://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-visibility-timeout.html>  
(<http://docs.aws.amazon.com/AWSSimpleQueueService/latest/SQSDeveloperGuide/sqs-visibility-timeout.html>)

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QUESTION 37 UNATTEMPTED

You are running an instance store based instance. You shutdown and then start the instance. You then notice that the data which you have saved earlier is no longer available. What might be the cause of this? Choose the correct answer from the options below

- ☐ A. The volume was not big enough to handle all of the processing data
- ☐ B. The EC2 instance was using EBS backed root volumes, which are ephemeral and only live for the life of the instance
- ☐ C. The EC2 instance was using instance store volumes, which are ephemeral and only live for the life of the instance ✓
- ☐ D. The instance might have been compromised

**Explanation :**

Answer – C

The data in an instance store persists only during the lifetime of its associated instance. If an instance reboots (intentionally or unintentionally), data in the instance store persists. However, data in the instance store is lost under the following circumstances:

- The underlying disk drive fails
- The instance stops
- The instance terminates

For more information on Instance store , please refer to the below link

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/InstanceStorage.html>  
(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/InstanceStorage.html>)

Ask our Experts



QUESTION 38 UNATTEMPTED

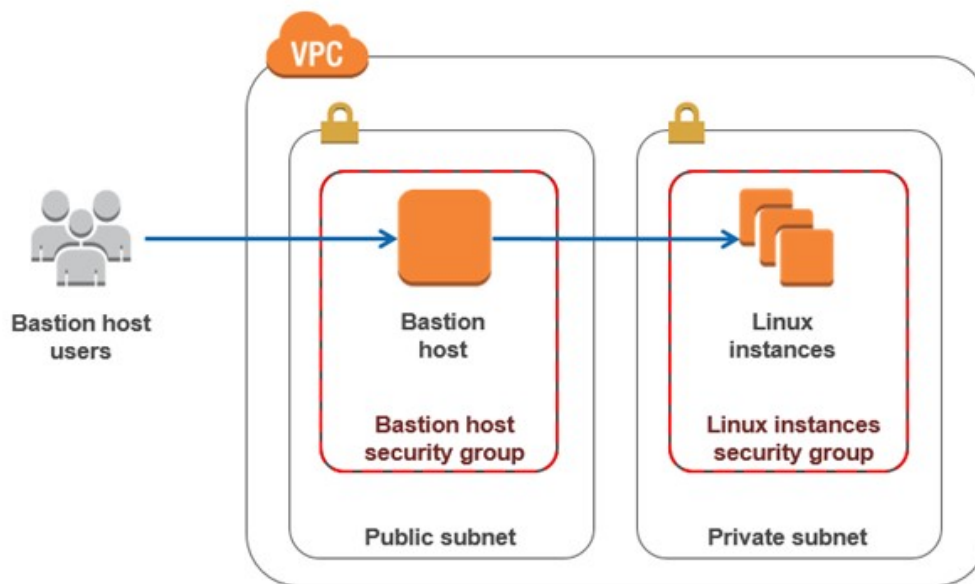
You have been told that you need to set up a bastion host by your manager in the cheapest, most secure way, and that you should be the only person that can access it via SSH. Which of the following setups would satisfy your manager's request? Choose the correct answer from the options below

- ☐ A. A small EC2 instance and a security group which only allows access on port 22 via your IP address ✓
- ☐ B. A large EC2 instance and a security group which only allows access on port 22 via your IP address
- ☐ C. A large EC2 instance and a security group which only allows access on port 22
- ☐ D. A small EC2 instance and a security group which only allows access on port 22

**Explanation :**

Answer – A

The bastion host should only have a security group from a particular IP address for maximum security. Since the request is to have a cheapest infrastructure, then you should use a small instance.



Ask our Experts



QUESTION 39

UNATTEMPTED

Which of the following are Invalid VPC peering configurations?

Choose 3 answers from the options below

- ☐ A. Overlapping CIDR blocks ✓
- ☐ B. Transitive Peering ✓
- ☐ C. Edge to Edge routing via a gateway ✓
- ☐ D. One to one relationship between 2 VPC's

**Explanation :**

Answer – A,B and C

This is given in the aws documentation

This section describes VPC peering connection configurations that are invalid.

For more information about VPC peering limitations, see [VPC Peering Limitations](#).

**Topics**

- [Overlapping CIDR blocks](#)
- [Transitive Peering](#)
- [Edge to Edge Routing Through a Gateway or Private Connection](#)

For more information on VPC Peering configurations, please refer to the below link

<http://docs.aws.amazon.com/AmazonVPC/latest/PeeringGuide/invalid-peering-configurations.html>

(<http://docs.aws.amazon.com/AmazonVPC/latest/PeeringGuide/invalid-peering-configurations.html>)

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**QUESTION 40**      **UNATTEMPTED**

You've been tasked with building out a duplicate environment in another region for disaster recovery purposes. Part of your environment relies on EC2 instances with preconfigured software. What steps would you take to configure the instances in another region? Choose the correct answer from the options below

- ☐ A. Create an AMI of the EC2 instance
- ☐ B. Create an AMI of the EC2 instance and copy the AMI to the desired region ✓
- ☐ C. Make the EC2 instance shareable among other regions through IAM permissions
- ☐ D. None of the above

**Explanation :**

Answer – B

You can copy an Amazon Machine Image (AMI) within or across an AWS region using the AWS Management Console, the AWS command line tools or SDKs, or the Amazon EC2 API, all of which support the CopyImage action. You can copy both Amazon EBS-backed AMIs and instance store-backed AMIs. You can copy AMIs with encrypted snapshots and encrypted AMIs.

For more information on copying AMI's, please refer to the below link

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

(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/CopyingAMIs.html>)

Ask our Experts



QUESTION 41 UNATTEMPTED

In order to establish a successful site-to-site VPN connection from your on-premise network to the VPC (Virtual Private Cloud), which of the following needs to be configured outside of the VPC? Choose the correct answer from the options below

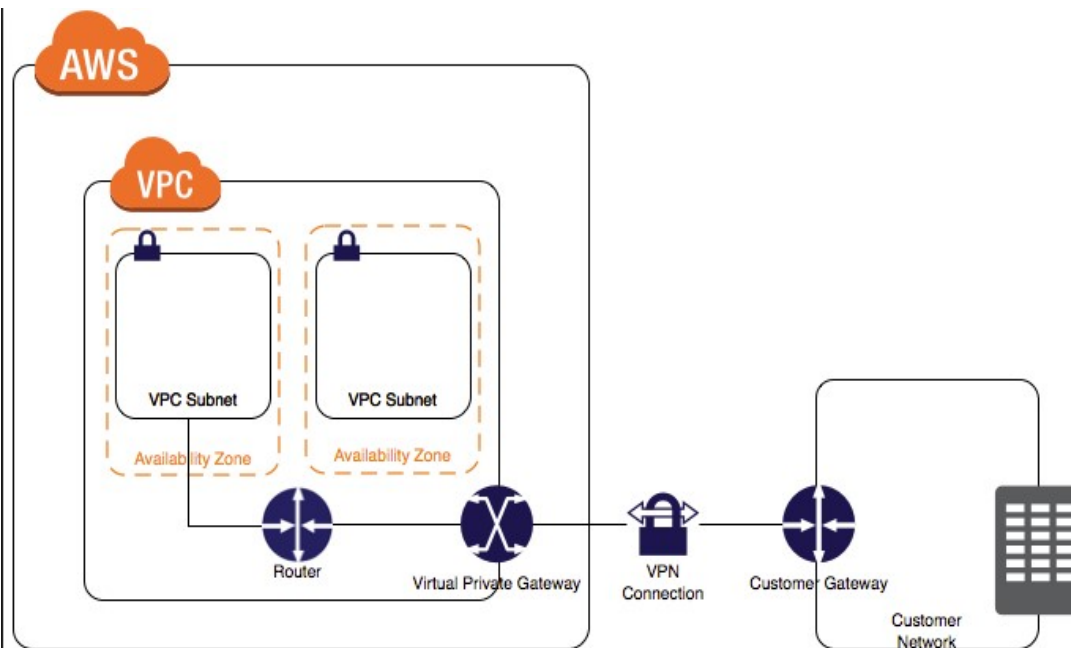
- ☐ A. The main route table to route traffic through a NAT instance
- ☒ B. A public IP address on the customer gateway for the on-premise network ✓
- ☐ C. A dedicated NAT instance in a public subnet
- ☐ D. An Elastic IP address to the Virtual Private Gateway

**Explanation :**

Answer – B

On the customer side gateway you need to have a public IP address which can be addressed by the VPN connection.





For more information on VPN connections, please refer to the below link:

- <http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/vpn-connections.html>  
(<http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/vpn-connections.html>)

Ask our Experts



#### QUESTION 42 UNATTEMPTED

You have 5 CloudFormation templates. Each template has been defined for a specific purpose. What determines the cost of using the CloudFormation templates? Choose the correct answer from the options below

- ☐ A. \$1.10 per template per month
- ☐ B. The length of time it takes to build the architecture with CloudFormation
- ☐ C. It depends on the region the template is created in
- ☐ D. CloudFormation does not have a cost but you are charged for the underlying resources it builds ✓

#### Explanation :

Answer – D

This is given in the aws documentation

# AWS CloudFormation Pricing

There is no additional charge for AWS CloudFormation. You pay for AWS resources (such as Amazon EC2 instances, Elastic Load Balancing load balancers, etc.) created using AWS CloudFormation in the same manner as if you created them manually. You only pay for what you use, as you use it; there are no minimum fees and no required upfront commitments.

For more information on Cloudformation pricing, please refer to the below link  
<https://aws.amazon.com/cloudformation/pricing/>  
(<https://aws.amazon.com/cloudformation/pricing/>)

Ask our Experts



## QUESTION 43 UNATTEMPTED

Does S3 provide read-after-write consistency for new objects? Choose the correct answer from the options below

- ☒ A. Yes, for all regions ✓
- ☐ B. No, not for any region
- ☐ C. Yes, but only for certain regions and for new objects
- ☐ D. Yes, but only for certain regions, not the us-standard region

### Explanation :

Answer – A

This is given in the aws documentation

#### Q: What data consistency model does Amazon S3 employ?

Amazon S3 buckets in all Regions provide read-after-write consistency for PUTS of new objects and eventual consistency for overwrite PUTS and DELETES.

For more information on S3, please refer to the below link

<https://aws.amazon.com/s3/faqs/> (<https://aws.amazon.com/s3/faqs/>)

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## QUESTION 44 UNATTEMPTED

Your organization has been using a HSM (Hardware Security Module) for secure key storage. It is only used for generating keys for your EC2 instances. Unfortunately, the HSM has been zeroized after someone attempted to log in as the administrator three times using an invalid password. This means that the encryption keys on it have been wiped. You did not have a copy of the keys stored anywhere else. How can you obtain a new copy of the keys that you had stored on HSM? Choose the correct answer from the options below

- ☒ A. You cannot; the keys are lost if you did not have a copy. ✓
- ☐ B. Contact AWS Support; your incident will be routed to the team that supports AWS CloudHSM and a copy of the keys will be sent to you after verification
- ☐ C. Restore a snapshot of the HSM
- ☐ D. You can still connect via CLI; use the command 'get-client-configuration' and you can get a copy of the keys

**Explanation :**

Answer – A

This is given in the aws documentation

**Q: Can Amazon recover my keys if I lose my credentials to the appliance?**

No. Amazon does not have access to your keys or credentials and therefore has no way to recover your keys if you lose your credentials.

For more information on CloudHSM, please refer to the below link

<https://aws.amazon.com/cloudhsm/faqs/> (<https://aws.amazon.com/cloudhsm/faqs/>)

Ask our Experts



QUESTION 45

UNATTEMPTED

What service from AWS can help manage the budgets for all resources in AWS?  
Choose one answer from the options below

- ☐ A. Cost Explorer
- ☐ B. Cost Allocation Tags
- ☒ C. AWS Budgets ✓
- ☐ D. Payment History

## Explanation :

Answer – C

A budget is a way to plan your usage and your costs (also known as spend data), and to track how close your usage and costs are to exceeding your budgeted amount. Budgets use data from Cost Explorer to provide you with a quick way to see your usage-to-date and current estimated charges from AWS, and to see how much your predicted usage accrues in charges by the end of the month. Budgets also compare the current estimated usage and charges to the amount that you indicated that you want to use or spend, and lets you see how much of your budget has been used. AWS updates your budget status several times a day. Budgets track your unblended costs, subscriptions, and refunds.

You can create budgets for different types of usage and different types of cost. For example, you can create a budget to see how many EC2 hours you have used, or how many GB you have stored in an S3 bucket. You can also create a budget to see how much you are spending on a particular service, or how often you call a particular API operation. Budgets use the same data filters as Cost Explorer.

To create your budget, you can perform the below steps

Step 1) Go to your billing section, go to Budgets and create a new Budget

## AWS Budgets



AWS Budgets lets you quickly create custom budgets that will automatically alert you when your AWS costs or usage exceed, or are forecasted to exceed, the thresholds you set.

Create budget

Step 2) In the next screen, you can then mention the budget amount and what services to link the budget to.

Name\*

Select cost or usage

Cost

Period

Monthly

Start date

11/01/16

End date

-

Budgeted Amount\*

2

Include costs related to

☐ Service

☐ Linked Account

☐ Tag

☐ Purchase Option

☐ Availability Zone

☐ API Operation

For more information on AWS Budgets please visit the below link

<http://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/budgets-managing-costs.html>

[\(http://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/budgets-managing-costs.html\)](http://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/budgets-managing-costs.html)

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QUESTION 46 UNATTEMPTED

A customer wants to leverage Amazon Simple Storage Service (S3) and Amazon Glacier as part of their backup and archive infrastructure. The customer plans to use third-party software to support this integration. Which approach will limit the access of the third party software to only the Amazon S3 bucket named “company-backup”?

- ☐ A. A custom bucket policy limited to the Amazon S3 API in the Amazon Glacier archive “company-backup”
- ☐ B. A custom bucket policy limited to the Amazon S3 API in “company-backup”
- ☐ C. A custom IAM user policy limited to the Amazon S3 API for the Amazon Glacier archive “company-backup”.

○ D. A custom IAM user policy limited to the Amazon S3 API in "company-backup". ✓

**Explanation :**

Answer – D

As part of the question we want to grant permission for a third party software to have only access to "company- backup" bucket.

In our scenario, we are using a third party software from a third party provider and need not have to be a federated account. Therefore to access other services that account will need to be given permissions to S3. With IAM user policy we can provide granular permissions to third party. The following documentation from AWS will give more information regarding the usage of Bucket policies and user policies on S3 buckets.

?

**When to Use a Bucket Policy**

If an AWS account that owns a bucket wants to grant permission to users in its account, it can use either a bucket policy or a user policy. But in the following scenarios, you will need to use a bucket policy.

- **You want to manage cross-account permissions for all Amazon S3 permissions** – You can use ACLs to grant cross-account permissions to other accounts, but ACLs support only a finite set of permission (What Permissions Can I Grant? (<https://docs.aws.amazon.com/AmazonS3/latest/dev/acl-overview.html#permissions>)), these don't include all Amazon S3 permissions. For example, you cannot grant permissions on bucket subresources (see Managing Access Permissions to Your Amazon S3 Resources (<https://docs.aws.amazon.com/AmazonS3/latest/dev/s3-access-control.html>)) using an ACL.

Although both bucket and user policies support granting permission for all Amazon S3 operations (see Specifying Permissions in a Policy (<https://docs.aws.amazon.com/AmazonS3/latest/dev/using-with-s3-actions.html>)), the user policies are for managing permissions for users in your account. For cross-account permissions to other AWS accounts or users in another account, you must use a bucket policy.

**When to Use a User Policy**

In general, you can use either a user policy or a bucket policy to manage permissions. You may choose to manage permissions by creating users and managing permissions individually by attaching policies to users (or user groups), or you may find that resource-based policies, such as a bucket policy, work better for your scenario.

Note that AWS Identity and Access Management (IAM) enables you to create multiple users within your AWS account and manage their permissions via user policies. An IAM user must have permissions from the parent account to which it belongs, and from the AWS account that owns the resource the user wants to access. The permissions can be granted as follows:

- **Permission from the parent account** – The parent account can grant permissions to its user by attaching a user policy.
- **Permission from the resource owner** – The resource owner can grant permission to either the IAM user (using a bucket policy) or the parent account (using a bucket policy, bucket ACL, or object ACL).

This is akin to a child who wants to play with a toy that belongs to someone else. In this case, the child must get permission from a parent to play with the toy and permission from the toy owner.

For more information please visit:

- <https://aws.amazon.com/blogs/security/iam-policies-and-bucket-policies-and-acls-oh-my-controlling-access-to-s3-resources/> (<https://aws.amazon.com/blogs/security/iam-policies-and-bucket-policies-and-acls-oh-my-controlling-access-to-s3-resources/>)
- <https://docs.aws.amazon.com/AmazonS3/latest/dev/access-policy-alternatives-guidelines.html> (<https://docs.aws.amazon.com/AmazonS3/latest/dev/access-policy-alternatives-guidelines.html>)

You can use IAM user policies and attach them to users/groups that need specific access to S3 buckets.

An example of creating such policies is given in the link below

- <https://aws.amazon.com/blogs/security/writing-iam-policies-how-to-grant-access-to-an-amazon-s3-bucket/> (<https://aws.amazon.com/blogs/security/writing-iam-policies-how-to-grant-access-to-an-amazon-s3-bucket/>)

Note: The bucket policy will be convenient if you are going to limit the access to AWS users or other AWS account. However, the question is about third-party software. So, it is recommended to have IAM user policy to limit the access from other AWS services.

To have the clear understanding of IAM policies and Bucket policies. Please check the below link:  
<https://aws.amazon.com/blogs/security/iam-policies-and-bucket-policies-and-acls-oh-my-controlling-access-to-s3-resources/> (<https://aws.amazon.com/blogs/security/iam-policies-and-bucket-policies-and-acls-oh-my-controlling-access-to-s3-resources/>)

To know more about granting access to Third Party, check this link:  
[https://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_roles\\_create\\_for-user\\_externalid.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles_create_for-user_externalid.html) ([https://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_roles\\_create\\_for-user\\_externalid.html](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_roles_create_for-user_externalid.html))

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#### QUESTION 47 UNATTEMPTED

Currently you're helping design and architect a highly available application. After building the initial environment, you've found that part of your application does not work correctly until port 443 is added to the security group. After adding port 443 to the appropriate security group, how much time will it take before the changes are applied and the application begins working correctly? Choose the correct answer from the options below

- ☐ A. Generally, it takes 2-5 minutes in order for the rules to propagate
- ☐ B. Immediately after a reboot of the EC2 instances belong to that security group
- ☐ C. Changes apply instantly to the security group, and the application should be able to respond to 443 requests ✓
- ☐ D. It will take 60 seconds for the rules to apply to all availability zones within the region

**Explanation :**

Answer – C

This is given in the aws documentation

Some systems for setting up firewalls let you filter on source ports. Security groups let you filter only on destination ports.

When you add or remove rules, they are automatically applied to all instances associated with the security group.

For more information on Security Groups, please refer to the below link

[http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_SecurityGroups.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_SecurityGroups.html)

([http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_SecurityGroups.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_SecurityGroups.html))

Ask our Experts



QUESTION 48

UNATTEMPTED

Which of the following services allow the administrator access to the underlying operating system?

Choose the 2 correct answers from the options below

- ☐ A. Amazon RDS
- ☐ B. Amazon EMR ✓
- ☐ C. Amazon EC2 ✓
- ☐ D. DynamoDB

**Explanation :**

Answer – B and C

Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud. It is designed to make web-scale cloud computing easier for developers.

For more information on EC2, please refer to the below link



<https://aws.amazon.com/ec2/> (<https://aws.amazon.com/ec2/>)

Your security credentials identify you to services in AWS and grant you unlimited use of your AWS resources, such as your Amazon EC2 resources.

- <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/UsingIAM.html>  
(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/UsingIAM.html>)

Amazon EMR provides a managed Hadoop framework that makes it easy, fast, and cost-effective to process vast amounts of data across dynamically scalable Amazon EC2 instances. You can also run other popular distributed frameworks such as Apache Spark, HBase, Presto, and Flink in Amazon EMR, and interact with data in other AWS data stores such as Amazon S3 and Amazon DynamoDB. For more information on EMR, please refer to the below link

- <https://aws.amazon.com/emr/> (<https://aws.amazon.com/emr/>)

Amazon EMR and applications such as Hadoop need permission to access other AWS resources when running jobs on behalf of users.

- <http://docs.aws.amazon.com/emr/latest/ManagementGuide/emr-iam-roles.html>  
(<http://docs.aws.amazon.com/emr/latest/ManagementGuide/emr-iam-roles.html>)

Ask our Experts



#### QUESTION 49 UNATTEMPTED

Besides regions and their included availability zones, which of the following is another "regional" data center location used for content distribution? Choose the correct answer from the options below

- ☒ A. Edge Location ✓
- ☐ B. Front Location
- ☐ C. Backend Location
- ☐ D. Cloud Location

#### Explanation :

Answer – A

Using a network of edge locations around the world, Amazon CloudFront caches copies of your static content close to viewers, lowering latency when they download your objects and giving you the high, sustained data transfer rates needed to deliver large popular objects to end users at scale.

For more information on Cloudfront and edge locations, please refer to the below link

<https://aws.amazon.com/cloudfront/> (<https://aws.amazon.com/cloudfront/>)

Ask our Experts



## QUESTION 50

UNATTEMPTED

What are the main benefits of IAM groups?

Choose 2 answers from the options below

- ☐ A. Ability to create custom permission policies.
- ☐ B. Allow for EC2 instances to gain access to S3.
- ☐ C. Easier user/policy management. ✓
- ☐ D. Assign IAM permission policies to more than one user at a time. ✓

**Explanation :**

Answer – C and D

An IAM *group* is a collection of IAM users. Groups let you specify permissions for multiple users, which can make it easier to manage the permissions for those users. For example, you could have a group called *Admins* and give that group the types of permissions that administrators typically need. Any user in that group automatically has the permissions that are assigned to the group. If a new user joins your organization and needs administrator privileges, you can assign the appropriate permissions by adding the user to that group. Similarly, if a person changes jobs in your organization, instead of editing that user's permissions, you can remove him or her from the old groups and add him or her to the appropriate new groups.

For more information on IAM Groups, please refer to the below link

[http://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_groups.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/id_groups.html)

([http://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_groups.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/id_groups.html))

Ask our Experts



## QUESTION 51

UNATTEMPTED

API Access Keys are required to make programmatic call to AWS from which of the following?

Choose the 3 correct answers from the options below

- ☐ A. AWS Tools for Windows PowerShell ✓
- ☐ B. Managing AWS resources through the AWS console
- ☐ C. Direct HTTP call using the API ✓
- ☐ D. AWS CLI ✓

### Explanation :

Answer – A, C and D

By default, when you create an access key, its status is Active, which means the user can use the access key for AWS CLI, Tools for Windows PowerShell, and API calls. Each user can have two active access keys, which is useful when you must rotate the user's access keys. You can disable a user's access key, which means it can't be used for API calls. You might do this while you're rotating keys or to revoke API access for a user

For more information on API Access keys, please refer to the below link

[http://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_credentials\\_access-keys.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_access-keys.html)

([http://docs.aws.amazon.com/IAM/latest/UserGuide/id\\_credentials\\_access-keys.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/id_credentials_access-keys.html))

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QUESTION 52

UNATTEMPTED

A customer is leveraging Amazon Simple Storage Service in eu-west-1 to store static content for a web-based property. The customer is storing objects using the Standard Storage class. Where are the customer's objects replicated?

- ☐ A. A single facility in eu-west-1 and a single facility in eu-central-1
- ☐ B. A single facility in eu-west-1 and a single facility in us-east-1
- ☒ C. Multiple facilities in eu-west-1 ✓
- ☐ D. A single facility in eu-west-1

### Explanation :

Answer – C

It is clearly mentioned in the AWS documentation that data in an S3 bucket is replicated to multiple facilities in the same region.

#### **Data Durability & Reliability**

Amazon S3 provides durable infrastructure to store important data and is designed for durability of 99.999999999% of objects. Your data is redundantly stored across multiple facilities and multiple devices in each facility.

For more information on S3 product details, please refer to the below link

- <https://aws.amazon.com/s3/details/> (<https://aws.amazon.com/s3/details/>)

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How are Network access rules evaluated? Choose the correct answer from the options below

- ☐ A. Rules are evaluated by rule number, from highest to lowest, and executed immediately when a matching allow/deny rule is found.
- ☐ B. All rules are evaluated before any traffic is allowed or denied.
- ☐ C. Rules are evaluated by rule number, from lowest to highest, and executed immediately when a matching allow/deny rule is found. ✓
- ☐ D. Rules are evaluated by rule number, from lowest to highest, and executed after all rules are checked for conflicting allow/deny rules.

**Explanation :**

Answer – C

This is given in the aws documentation

The following are the parts of a network ACL rule:

- Rule number. Rules are evaluated starting with the lowest numbered rule. As soon as a rule matches traffic, it's applied regardless of any higher-numbered rule that may contradict it.
- Protocol. You can specify any protocol that has a standard protocol number. For more information, see [Protocol Numbers](#). If you specify ICMP as the protocol, you can specify any or all of the ICMP types and codes.
- [Inbound rules only] The source of the traffic (CIDR range) and the destination (listening) port or port range.
- [Outbound rules only] The destination for the traffic (CIDR range) and the destination port or port range.
- Choice of ALLOW or DENY for the specified traffic.

For more information on NACL, please refer to the below link

[http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_ACLs.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_ACLs.html)

([http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_ACLs.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_ACLs.html))

Ask our Experts



A company is building a two-tier web application to serve dynamic transaction-based content. The data tier is leveraging an Online Transactional Processing (OLTP) database. What services should you leverage to enable an elastic and scalable web tier?

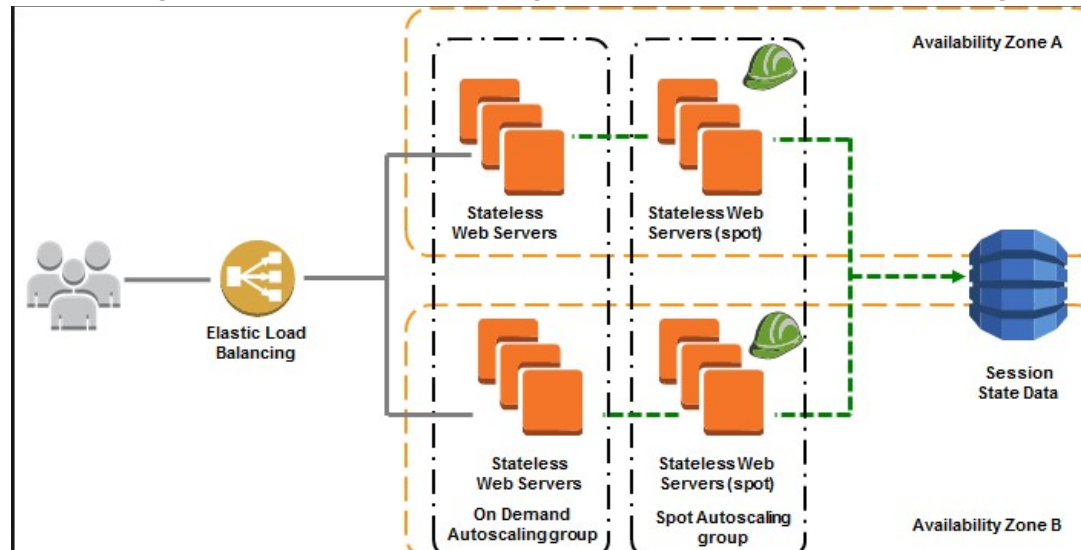
- ☐ A. Elastic Load Balancing, Amazon EC2, and Auto Scaling ✓

- ☐ B. Elastic Load Balancing, Amazon RDS with Multi-AZ, and Amazon S3
- ☐ C. Amazon RDS with Multi-AZ and Auto Scaling
- ☐ D. Amazon EC2, Amazon DynamoDB, and Amazon S3

**Explanation :**

Answer – A

The below diagram is an architecture sample using Elastic Load Balancer , EC2 and Autoscaling



Here the web servers are scaled on demand using Autoscaling. They are then placed behind an ELB which is used to distribute the traffic amongst the instances.

For more information on best practices for web hosting, please refer to the below URL:

- <https://d0.awsstatic.com/whitepapers/aws-web-hosting-best-practices.pdf>  
(<https://d0.awsstatic.com/whitepapers/aws-web-hosting-best-practices.pdf>)

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**QUESTION 55 UNATTEMPTED**

What are three attributes of DynamoDB?

Choose the 3 correct answers from the options below

- ☐ A. Used for data warehousing
- ☐ B. A NoSQL database platform ✓
- ☐ C. Uses key-value store ✓
- ☐ D. Fully-managed ✓

### Explanation :

Answer – B,C and D

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 and reliable performance make it a great fit for mobile, web, gaming, ad tech, IoT, and many other applications.

AWS Redshift can be used for data warehousing

For more information on DynamoDB, please refer to the below link

<https://aws.amazon.com/dynamodb/> (<https://aws.amazon.com/dynamodb/>)

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### QUESTION 56 UNATTEMPTED

If you cannot connect to your Ec2 instance via Microsoft Remote Desktop, and you have already verified the instance has a public IP and the Internet gateway and route tables are in place, what should you check next? Choose one answer from the options given below

- ☐ A. Adjust the security group to allow traffic from port 22
- ☐ B. Adjust the security group to allow traffic from port 3389 ✓
- ☐ C. Restart the instance since there might be some issue with the instance
- ☐ D. Create a new instance since there might be some issue with the instance

### Explanation :

Answer – B

The reason why you cannot connect to the instance is because by default RDP protocol will not be enabled on the Security Group.

Option A is wrong because this is for the SSH protocol and here we want to RDP into the instance.

Option C and D are wrong because there is no mention of anything wrong with the instance.

Step 1) Go to your EC2 Security groups, click on the required security groups to make the changes. Go to the Inbound Tab.

| <input type="checkbox"/> | Name | Group ID    | Group Name      | VPC ID       |
|--------------------------|------|-------------|-----------------|--------------|
| <input type="checkbox"/> |      | sg-042ebf79 | launch-wizard-5 | vpc-6dcc550a |

Security Group: sg-042ebf79

Description

Inbound

Outbound

Tags

Edit

| Type | Protocol | Port Range |
|------|----------|------------|
| SSH  | TCP      | 22         |

Step 2) Make sure to add a rule for the RDP protocol for the instance and then click the Save button.

Edit inbound rules
X

| Type | Protocol | Port Range | Source           |
|------|----------|------------|------------------|
| RDP  | TCP      | 3389       | Custom 0.0.0.0/0 |

Add Rule
Cancel
Save

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QUESTION 57 UNATTEMPTED

What database service should you choose if you need petabyte-scale data warehousing? Choose the correct answer from the options below

- ☐ A. DynamoDB
- ☐ B. ElastiCache
- ☐ C. RDS
- ☐ D. Redshift ✓

Explanation :

Answer – D

Amazon Redshift is a fast, fully managed data warehouse that makes it simple and cost-effective to analyze all your data using standard SQL and your existing Business Intelligence (BI) tools. It allows you to run complex analytic queries against petabytes of structured data, using sophisticated query optimization, columnar storage on high-performance local disks, and massively parallel query execution

For more information on Redshift, please refer to the below link

<http://docs.aws.amazon.com/redshift/latest/mgmt/welcome.html>

(<http://docs.aws.amazon.com/redshift/latest/mgmt/welcome.html>)

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QUESTION 58

UNATTEMPTED

Which feature in AWS allows 2 VPC's to talk to each other? Choose one answer from the options given below

- ☐ A. VPC Connection
- ☐ B. VPN Connection
- ☐ C. Direct Connect
- ☒ D. VPC Peering ✓

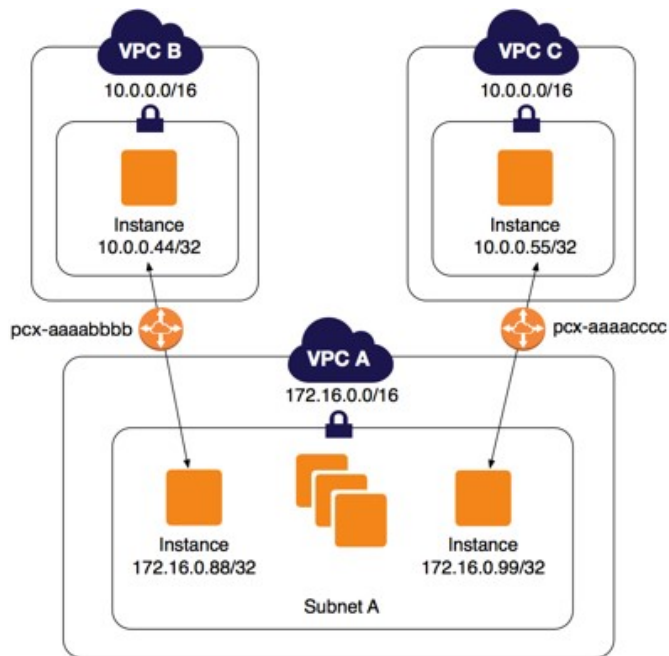
**Explanation :**

Answer - D

A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them using private IP addresses. Instances in either VPC can communicate with each other as if they are within the same network. You can create a VPC peering connection between your own VPCs, or with a VPC in another AWS account within a single region

The below diagram shows an example of VPC peering. Now please note that VPC B cannot communicate to VPC C because there is no peering between them.





For more information on VPC peering, please visit the url  
<http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/vpc-peering.html>  
 (http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/vpc-peering.html)

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#### QUESTION 59 UNATTEMPTED

In AWS Security Groups what are the 2 types of rules you can define?

Select 2 options.

- ☒ A. Inbound ✓
- ☐ B. Transitional
- ☐ C. Bi-Directional
- ☒ D. Outbound ✓

#### Explanation :

Answer – A and D

A security group acts as a virtual firewall that controls the traffic for one or more instances. When you launch an instance, you associate one or more security groups with the instance. You add rules to each security group that allow traffic to or from its associated instances. You can modify the rules for a security group at any time; the new rules are automatically applied to all instances that are associated with the security group.

The below diagram's show that rules can be defined for Inbound and Outbound

Security Group: sg-042ebf79

Description

Inbound

Outbound

Tags

Edit

Type ⓘ

Protocol ⓘ

All traffic

All

Security Group: sg-042ebf79

Description

Inbound

Outbound

Tags

Edit

Type ⓘ

Protocol ⓘ

SSH

TCP

For more information on Security Groups, please visit the url

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html>

(<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html>)

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QUESTION 60

UNATTEMPTED

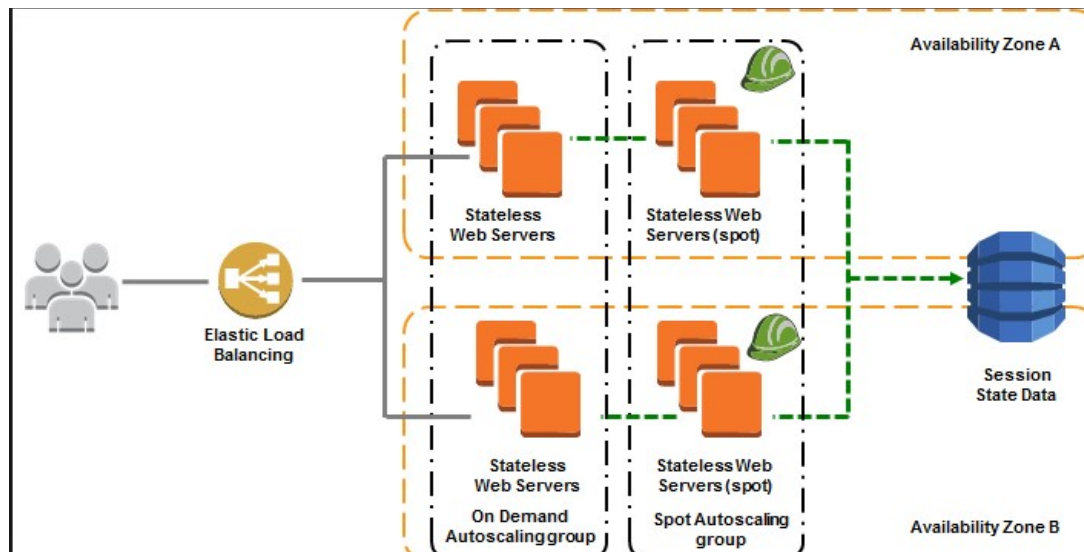
When using the following AWS services, which should be implemented in multiple Availability Zones for high availability solutions? Choose 2 answers

- ☐ A. Amazon DynamoDB
- ☐ B. Amazon Elastic Compute Cloud (EC2) ✓
- ☐ C. Amazon Elastic Load Balancing ✓
- ☐ D. Amazon Simple Notification Service (SNS)
- ☐ E. Amazon Simple Storage Service (S3)

Explanation :

Answer – B and C

The below diagram is an architecture sample using Elastic Load Balancer , EC2 and Autoscaling



Here the web servers are scaled on demand using Autoscaling. They are then placed behind an ELB which is used to distribute the traffic amongst the instances. Also the Web servers are placed between multiple availability zones for fault tolerance.

For more information on best practices for web hosting, please refer to the below URL:

- <https://d0.awsstatic.com/whitepapers/aws-web-hosting-best-practices.pdf>  
(<https://d0.awsstatic.com/whitepapers/aws-web-hosting-best-practices.pdf>)

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Finish Review (<https://www.whizlabs.com/learn/course/aws-csaa-practice-tests/quiz/13956>)

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