AWS INTERVIEW QUESTIONS

Explain what is AWS (Amazon Web Service)?

AWS stands for Amazon Web Service; it is a collection of remote computing services also known as cloud computing platform. This new realm of cloud computing is also known as IaaS or Infrastructure as a Service.

Explain what are the key components of AWS (Amazon Web Service)?

The key components of AWS are: - (AWS 2016 INTERVIEW QUESTIONS)

- **Route 53:** A DNS web service
- **Simple E-mail Service:** It allows sending e-mail using RESTFUL API call or via regular SMTP
- **Identity and Access Management:** It provides enhanced security and identity management for your AWS account
- **Simple Storage Device or (S3):** It is a storage device and the most widely used AWS service
- **Elastic Compute Cloud (EC2):** It provides on-demand computing resources for hosting applications. It is very useful in case of unpredictable workloads
- **Elastic Block Store (EBS):** It provides persistent storage volumes that attach to EC2 to allow you to persist data past the lifespan of a single EC2
- **CloudWatch:** To monitor AWS resources, It allows administrators to view and collect key Also, one can set a notification alarm in case of trouble.

Explain what is IAM service?

AWS Identity and Access Management (IAM) is a web service that helps you securely control access to AWS resources for your users. You use IAM to control who can use your AWS resources (authentication) and what resources they can use and in what ways (authorization).

What is AWS Certificate Manager?

AWS Certificate Manager (ACM) handles the complexity of provisioning, deploying, and managing certificates provided by ACM (ACM Certificates) for your AWS-based websites and applications. You use ACM to request and manage the certificate and then use other AWS services to provision the ACM Certificate for your website or application. As shown by the following illustration, ACM Certificates are currently available for use with only Elastic Load Balancing and Amazon CloudFront. You cannot use ACM Certificates outside of AWS.

Explain what is S3 in AWS?

S3 stands for Simple Storage Service. You can use S3 interface to store and retrieve any amount of data, at any time and from anywhere on the web. Also we can host a website in

Amazon S3. most of the companies storing the documents, images and other files to S3. For S3, the payment model is “pay as you go”.

Explain what is AMI (Amazon Machine Image)?

It’s a template that provides the information (an operating system, an application server and applications) required to launch an instance, which is a copy of the AMI running as a virtual server in the cloud. You can launch instances from as many different AMIs as you need.

Mention what is the relation between an instance and AMI?

From a single AMI, you can launch multiple types of instances. An instance type defines the hardware of the host computer used for your instance. Each instance type provides different compute and memory capabilities. Once you launch an instance, it looks like a traditional host, and we can interact with it as we would with any computer.

Explain what is Redshift?

Redshift is a fast, fully managed, petabyte-scale data warehouse service that makes it simple and cost-effective to efficiently analyze all your data using your existing business intelligence tools.

What Is Amazon EC2?

Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.

Explain what Is Amazon EC2 instance?

An EC2 instance is a virtual server in Amazon's Elastic Compute Cloud (EC2) for running applications on the Amazon Web Services (AWS) infrastructure.

Explain some features of Amazon EC2?

Amazon EC2 provides the following features:

- Virtual computing environments, known as instances
- Preconfigured templates for your instances, known as Amazon Machine Images (AMIs), that package the bits you need for your server (including the operating system and additional software)
- Various configurations of CPU, memory, storage, and networking capacity for your instances, known as instance types

- Secure login information for your instances using key pairs (AWS stores the public key, and you store the private key in a secure place)
- Storage volumes for temporary data that's deleted when you stop or terminate your instance, known as instance store volumes
- Persistent storage volumes for your data using Amazon Elastic Block Store (Amazon EBS), known as Amazon EBS volumes
- Multiple physical locations for your resources, such as instances and Amazon EBS volumes, known as regions and Availability Zones
- A firewall that enables you to specify the protocols, ports, and source IP ranges that can reach your instances using security groups
- Static IP addresses for dynamic cloud computing, known as Elastic IP addresses

Mention what are the differences between Amazon S3 and EC2 ?

S3: Amazon S3 is just a storage service, typically used to store large binary files. Amazon also has other storage and database services, like RDS for relational databases and DynamoDB for NoSQL.
EC2: An EC2 instance is like a remote computer running Windows or Linux and on which you can install whatever software you want, including a Web server running PHP code and a database server.

How many buckets can you create in AWS by default?

By default, you can create upto 100 buckets in each of your AWS accounts.

Explain what is T2 instances?

T2 instances are designed to provide moderate baseline performance and the capability to burst to significantly higher performance as required by your workload.

Explain what is C4 instances?

C4 instances are ideal for compute-bound applications that benefit from high performance processors.

Explain how the buffer is used in Amazon web services?

The buffer is used to make the system more robust to manage traffic or load by synchronizing different component. Usually, components receive and process the requests in an unbalanced way, With the help of buffer, the components will be balanced and will work at the same speed to provide faster services.

Explain what is DynamoDB in AWS?

Amazon DynamoDB is a fully managed NoSQL database service that provides fast and predictable performance with seamless scalability. You can use Amazon DynamoDB to create a database table that can store and retrieve any amount of data, and serve any level

of request traffic. Amazon DynamoDB automatically spreads the data and traffic for the table over a sufficient number of servers to handle the request capacity specified by the customer and the amount of data stored, while maintaining consistent and fast performance.

Explain what is ElastiCache?

ElastiCache is a web service that makes it easy to set up, manage, and scale distributed in-memory cache environments in the cloud.

What is the AWS Key Management Service?

The AWS Key Management Service (AWS KMS) is a managed service that makes it easy for you to create and control the encryption keys used to encrypt your data.

What is AWS WAF? What are the potential benefits of using WAF?

AWS WAF is a web application firewall that lets you monitor the HTTP and HTTPS requests that are forwarded to Amazon CloudFront and lets you control access to your content. Based on conditions that you specify, such as the IP addresses that requests originate from or the values of query strings, CloudFront responds to requests either with the requested content or with an HTTP 403 status code (Forbidden). You can also configure CloudFront to return a custom error page when a request is blocked.
Benefits of using WAF:

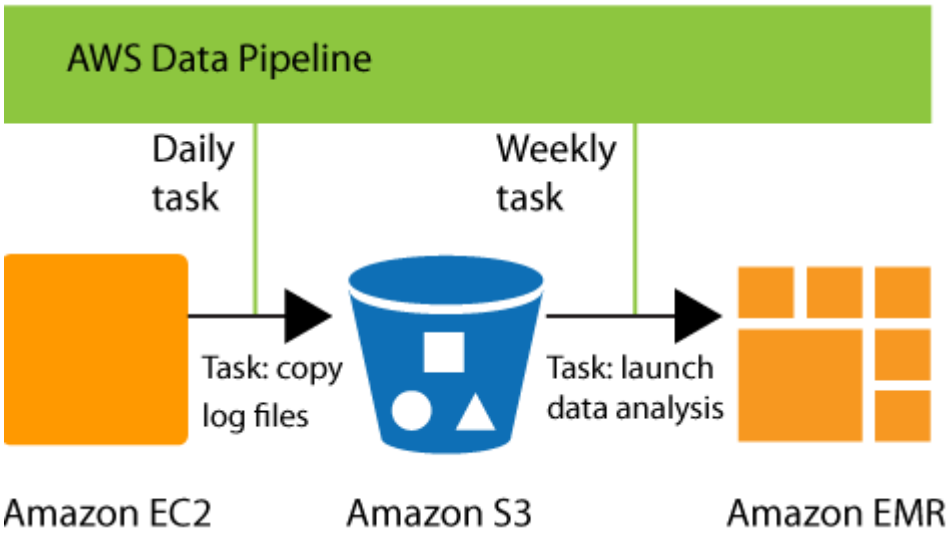
- Additional protection against web attacks using conditions that you specify. You can define conditions by using characteristics of web requests such as the IP address that the requests originate from, the values in headers, strings that appear in the requests, and the presence of malicious SQL code in the request, which is known as SQL injection.
- Rules that you can reuse for multiple web applications
- Real-time metrics and sampled web requests
- Automated administration using the AWS WAF API

What is Amazon EMR?

Amazon Elastic MapReduce (Amazon EMR) is a managed cluster platform that simplifies running big data frameworks, such as Apache Hadoop and Apache Spark, on AWS to process and analyze vast amounts of data. By using these frameworks and related open-source projects, such as Apache Hive and Apache Pig, you can process data for analytics purposes and business intelligence workloads. Additionally, you can use Amazon EMR to transform and move large amounts of data into and out of other AWS data stores and databases, such as Amazon Simple Storage Service (Amazon S3) and Amazon DynamoDB.

What is AWS Data Pipeline? and what are the components of AWS Data Pipeline?

AWS Data Pipeline is a web service that you can use to automate the movement and transformation of data. With AWS Data Pipeline, you can define data-driven workflows, so that tasks can be dependent on the successful completion of previous tasks.



The following components of AWS Data Pipeline work together to manage your data:

- A pipeline definition specifies the business logic of your data management. For more information, see Pipeline Definition File Syntax.
- A pipeline schedules and runs tasks. You upload your pipeline definition to the pipeline, and then activate the pipeline. You can edit the pipeline definition for a running pipeline and activate the pipeline again for it to take effect. You can deactivate the pipeline, modify a data source, and then activate the pipeline again. When you are finished with your pipeline, you can delete it.
- Task Runner polls for tasks and then performs those tasks. For example, Task Runner could copy log files to Amazon S3 and launch Amazon EMR clusters. Task Runner is uns automatically on resources created by your pipeline definitions. You can write a custom task runner application, or you can use the Task Runner application that is provided by AWS Data Pipeline. For more information, see Task Runners.

What is Amazon Kinesis Firehose?

Amazon Kinesis Firehose is a fully managed service for delivering real-time streaming data to destinations such as Amazon Simple Storage Service (Amazon S3) and Amazon Redshift.

What Is Amazon CloudSearch and its features?

Amazon CloudSearch is a fully managed service in the cloud that makes it easy to set up, manage, and scale a search solution for your website or application.
You can use Amazon CloudSearch to index and search both structured data and plain text.
Amazon CloudSearch features:

- Full text search with language-specific text processing
- Boolean search
- Prefix searches
- Range searches
- Term boosting
- Faceting
- Highlighting
- Autocomplete Suggestions

Explain what is Regions and Endpoints in AWS?

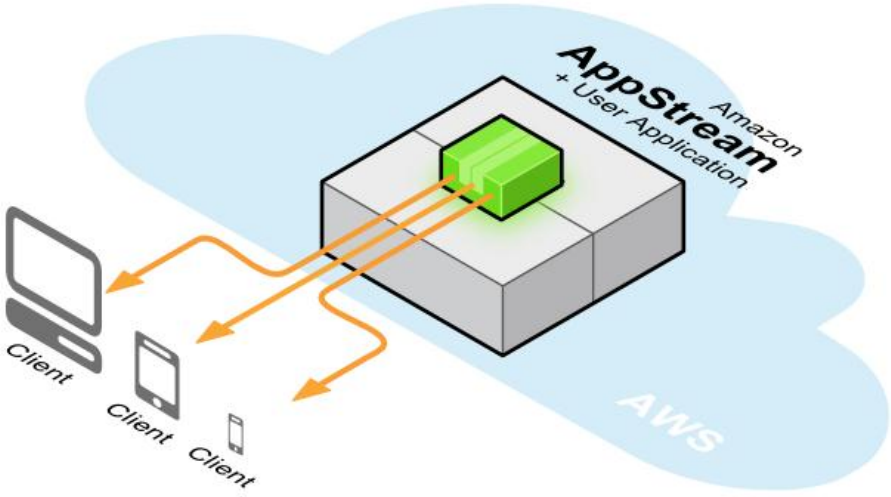
To reduce data latency in your applications, most Amazon Web Services products allow you to select a regional endpoint to make your requests. An endpoint is a URL that is the entry point for a web service. For example, https://dynamodb.us-west-2.amazonaws.com is an entry point for the Amazon DynamoDB service.
Some services, such as IAM, do not support regions; their endpoints therefore do not include a region. A few services, such as Amazon EC2, let you specify an endpoint that does not include a specific region, for example, https://ec2.amazonaws.com. In that case, AWS routes the endpoint to us-east-1.

How to find your regions and Availability Zones using the Amazon EC2 CLI?

Use the ec2-describe-regions command as follows to describe your regions.
PROMPT> ec2-describe-regions
REGION us-east-1 ec2.us-east-1.amazonaws.com
REGION ap-northeast-1 ec2.ap-northeast-1.amazonaws.com
REGION ap-southeast-1 ec2.ap-southeast-1.amazonaws.com

What is Amazon AppStream and advantage of using AppStreaming?

Amazon AppStream is an application streaming service that lets you stream your existing resource-intensive applications from the cloud without code modifications.



Advantages of Streaming Your Application
Interactively streaming your application from the cloud provides several benefits:

- Remove Device Constraints – You can leverage the compute power of AWS to deliver experiences that wouldn't normally be possible due to the GPU, CPU, memory or physical storage constraints of local devices.
- Support Multiple Platforms – You can write your application once and stream it to multiple device platforms. To support a new device, just write a small client to connect to your streaming application.
- Fast and Easy Updates – Because your streaming application is centrally managed by Amazon AppStream, updating your application is as simple as providing a new version of your streaming application to Amazon AppStream. You can immediately upgrade all of your customers without any action on their part.
- Instant On – application with Amazon AppStream lets your customers start using your application or game immediately, without the delays associated with large file downloads and time-consuming installations.
- Improve Security – Unlike traditional boxed software and digital downloads, where your application is available for theft or reverse engineering, Amazon AppStream stores your streaming application binary securely in AWS datacenters.
- Automatic Scaling – You can use Amazon AppStream to specify capacity needs, and then the service automatically scales your streamed application and connects customers' devices to it.

Which AWS responsible for managed email and calendaring?

WorkMail is a managed email and calendaring service with strong security controls and support for existing desktop and mobile email clients. You can access their email, contacts, and calendars wherever you use Microsoft Outlook, your browser, or your iOS and Android mobile devices. You can integrate Amazon WorkMail with your existing corporate directory and control both the keys that encrypt your data and the location where your data is stored.

What are the benefits of EBS vs. instance-store?

- EBS backed instances can be set so that they cannot be (accidentally) terminated through the API.
- EBS backed instances can be stopped when you're not using them and resumed when you need them again (like pausing a Virtual PC), at least with my usage patterns saving much more money than I spend on a few dozen GB of EBS storage.
- EBS backed instances don't lose their instance storage when they crash (not a requirement for all users, but makes recovery much faster)
- You can dynamically resize EBS instance storage.
- You can transfer the EBS instance storage to a brand new instance (useful if the hardware at Amazon you were running on gets flaky or dies, which does happen from time to time)
- It is faster to launch an EBS backed instance because the image does not have to be fetched from S3.

How you will find out the instance id from within an ec2 machine?

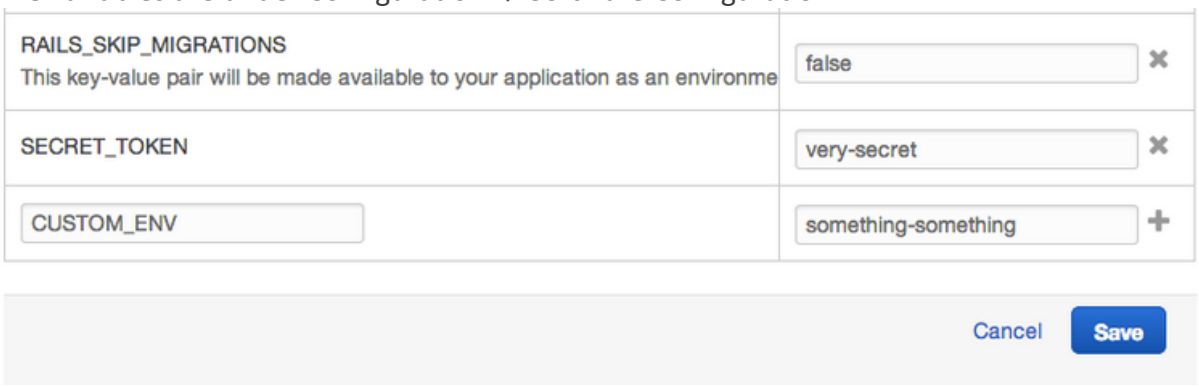
wget -q -O - http://instance-data/latest/meta-data/instance-id

If you need programatic access to the instance ID from within a script
die() { status=$1; shift; echo "FATAL: $*"; exit $status; }
EC2_INSTANCE_ID="`wget -q -O - http://instance-data/latest/meta-data/instance-id || die \"wget instance-id has failed: $?\"`"

How do you pass custom environment variable on Amazon Elastic Beanstalk (AWS EBS)?

As a heads up to anyone who uses the .ebextensions/*.config way: nowadays you can add, edit and remove environment variables in the Elastic Beanstalk web interface.

The variables are under Configuration → Software Configuration:



Is it possible to use AWS as a web host? What are the way of using AWS as a web host?

Yes it is completely possible to host websites on AWS in 2 ways:

1. Easy - S3 (Simple Storage Solution) is a bucket storage solution that lets you serve static content e.g. images but has recently been upgraded so you can use it to host flat .html files and your site will get served by a default Apache installation with very little configuration on your part (but also little control).
2. Trickier - You can use EC2 (Elastic Compute Cloud) and create a virtual Linux instance then install Apache/NGinx (or whatever) on that to give you complete control over serving whatever/however you want. You use Security Groups to enable/disable ports for individual machines or groups of them.

How step you follow to make 10,000 files as public in S3?

I will generate a bucket policy which gives access to all the files in the bucket. The bucket policy can be added to a bucket through AWS console.

```
{
  "Id": "...",
  "Statement": [ {
    "Sid": "...",
"Action": [
        "s3:GetObject"
```

```
      ],
      "Effect": "Allow",
      "Resource": "arn:aws:s3:::bucket/*",
      "Principal": {
        "AWS": [ "*" ]
      }
    } ]
}
```

How do you see how much disk space is using by S3 bucket?

s3cmd can show you this by running s3cmd du, optionally passing the bucket name as an argument.

Explain what happens when I reboot an EC2 instance?

Rebooting an instance is like rebooting a PC. The hard disk isn't affected. You don't return to the image's original state, but the contents of the hard disks are those before the reboot. Rebooting isn't associated with billing. Billing starts when you instantiate an image and stops when you terminate it. Rebooting in between hasn't any effect.

Write down the command you will use to copy all files from one S3 bucket to another with s3cmd?

s3cmd sync s3://from/this/bucket/ s3://to/this/bucket/

How you will change the root EBS device of my amazon EC2 instance?

- Stop the instance.
- Detach the root EBS volume.
- Attach the alternate EBS volume (as the root e.g. /dev/sda1)
- Start the instance.
- This presupposes that your alternate EBS volume is bootable, of course - it has to contain the bootable OS image.

What is the difference between Amazon SNS and Amazon SQS?

- **Amazon SNS** allows applications to send time-critical messages to multiple subscribers through a “push” mechanism, eliminating the need to periodically check or “poll” for updates.
- **Amazon SQS** is a message queue service used by distributed applications to exchange messages through a polling model, and can be used to decouple sending and receiving components—without requiring each component to be

How many objects you can put in a S3 bucket? is there a limit to the number of objects I can put in an S3 bucket?

Write, read, and delete objects containing from 1 byte to 5 terabytes of data each. The number of objects you can store is unlimited.

How to delete files recursively from an S3 bucket?

aws s3 rm --recursive s3://your_bucket_name/foo/

Or delete everything under the bucket:
aws s3 rm --recursive s3://your_bucket_name

If what you want is to actually delete the bucket, there is one-step shortcut:
aws s3 rb --force s3://your_bucket_name

How to access/ping a server located on AWS?

Using UI:
In your security group:

- Click the inbound tab
- Create a custom ICMP rule
- Select echo request
- Use range 0.0.0.0/0 for everyone or lock it down to specific IPs
- Apply the changes
- and you'll be able to ping.

Using cmd: To do this on the command line you can run:

- ec2-authorize <group> -P icmp -t -1:-1 -s 0.0.0.0/0

What is the maximum length of a file-name in S3?

Names are the object keys. The name for a key is a sequence of Unicode characters whose UTF-8 encoding is at most 1024 bytes long.

What is Amazon RDS?

RDS stand for Relational Database Service is a web service that makes it easier to set up, operate, and scale a relational database in the cloud. It provides cost-efficient, resize-able capacity for an industry-standard relational database and manages common database administration tasks.

Note : This questions asked during TCS Interview

In RDS, what is the maximum value you can set for my backup retention period?

35 Days

In RDS, Automated backups are enabled by default for new DB Instance, true or false?

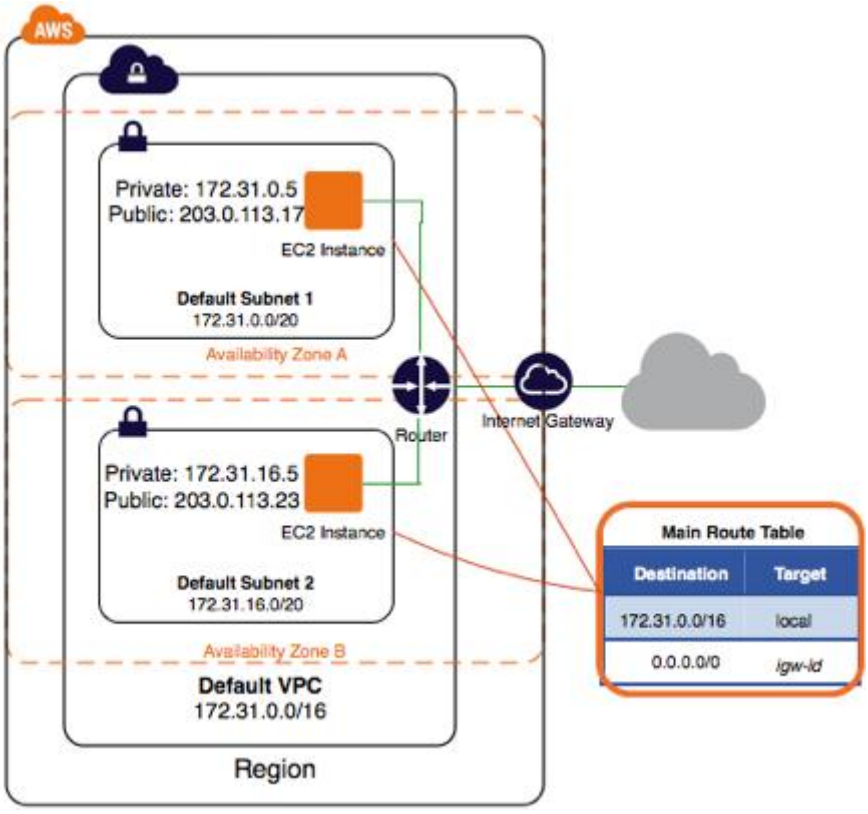
True

What is MFA in AWS? AWS Interview questions

AWS Multi-Factor Authentication (MFA) is a simple best practice that adds an extra layer of protection on top of your user name and password. With MFA enabled, when a user signs in to an AWS website, they will be prompted for their user name and password (the first factor—what they know), as well as for an authentication code from their AWS MFA device (the second factor—what they have). Taken together, these multiple factors provide increased security for your AWS account settings and resources.

What is Amazon VPC?

Amazon Virtual Private Cloud (Amazon VPC) enables you to launch Amazon Web Services (AWS) resources into a virtual network that you've defined. This virtual network closely resembles a traditional network that you'd operate in your own data center, with the benefits of using the scalable infrastructure of AWS.



If you want to run a database on an EC2 instance, which is the most recommended Amazon storage option, S3, RDS or EBS?

EBS

In S3, what does RRS stand for?

Reduced Redundancy Storage

What are the 4 level of AWS premium support?

Basic, Developer, Business, Enterprise

What is the underlying Hypervisor for EC2?

Xen

What is the difference between Elastic Beanstalk and CloudFormation?

Elastic Beanstalk automatically handles the deployment, from capacity provisioning, load balancing, auto-scaling to application health monitoring based on the code you upload to it. CloudFormation is an automated provisioning engine to deploy entire cloud environments via JSON.

What action is required to establish an Amazon Virtual Private Cloud (VPC) VPN?

We need to assign a static internet-routable IP address to an Amazon VPC customer gateway.

Note : This questions asked during Prospecta Soft Pvt. Interview

Suppose that you are working with a customer who has 10 TB of archival data that they want to migrate to Glacier. The customer has a 1-Mbps connection to the internet. Which service or feature provides the fastest method of getting data into Amazon Glacier?

AWS Import/Export

Why we use VPC in AWS?

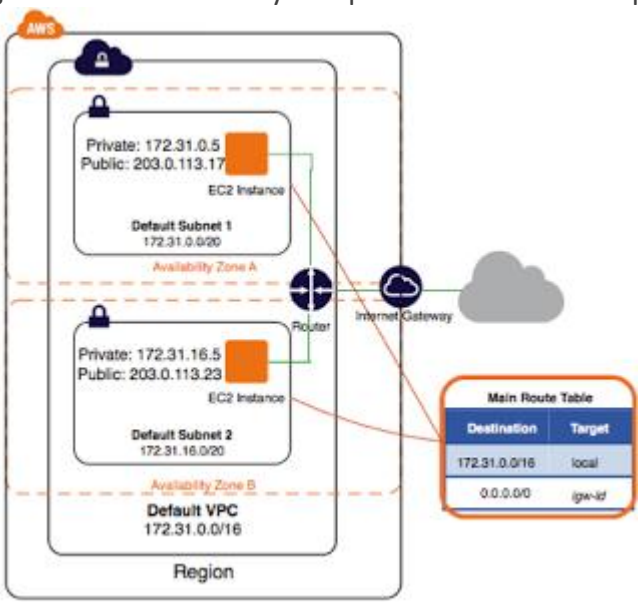
Normally, each EC2 instance you launch is randomly assigned a public IP address in the amazon EC2 address space. VPC allows you to create an isolated portion of the AWS cloud and launch EC2 instances that have private address in the range of your choice (10.0.0.0, for instance)

Can you descrive the steps of create default VPC in AWS?

When we create a default VPC, we do the following to set it up for you:

1. Create a default subnet in each Availability Zone.
2. Create an Internet gateway and connect it to your default VPC.

3. Create a main route table for your default VPC with a rule that sends all traffic destined for the Internet to the Internet gateway.
4. Create a default security group and associate it with your default VPC.
5. Create a default network access control list (ACL) and associate it with your default VPC.
6. Associate the default DHCP options set for your AWS account with your default VPC.
7. The following figure illustrates the key components that we set up for a default VPC.



What are the three features provided by Amazon that you can use to increase and monitor the security?

Amazon VPC provides three features that you can use to increase and monitor the security for your VPC:

- Security groups — Act as a firewall for associated Amazon EC2 instances, controlling both inbound and outbound traffic at the instance level
- Network access control lists (ACLs) — Act as a firewall for associated subnets, controlling both inbound and outbound traffic at the subnet level
- Flow logs — Capture information about the IP traffic going to and from network interfaces in your VPC

What is the difference between Network ACLs and Security Groups in AWS?

- **Network ACLs:** A network access control list (ACL) is an optional layer of security for your VPC that acts as a firewall for controlling traffic in and out of one or more subnets. You might set up network ACLs with rules similar to your security groups in order to add an additional layer of security to your VPC. For more information about the differences between security groups and network ACLs, see Comparison of Security Groups and Network ACLs.
- **Security Groups:** A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. When you launch an instance in a VPC, you can assign the instance to up to five security groups. Security groups act at the instance level, not the subnet level. Therefore, each instance in a subnet in your VPC

could be assigned to a different set of security groups. If you don't specify a particular group at launch time, the instance is automatically assigned to the default security group for the VPC.

- The following table summarizes the basic differences between network ACLs and security groups.

Security Group Operates at the subnet level (second layer of defense) Operates at the instance level (first layer of defense) Supports allow rules and deny rules Supports allow rules only Is stateless: Return traffic must be explicitly allowed by rules Is stateful: Return traffic is automatically allowed, regardless of any rules We process rules in number order when deciding whether to allow traffic We evaluate all rules before deciding whether to allow traffic Automatically applies to all instances in the subnets it's associated with (backup layer of defense, so you don't have to rely on someone specifying the security group) Applies to an instance only if someone specifies the security group when launching the instance, or associates the security group with the instance later on

What benefits to VPC security groups give you that EC2 security groups do not?

1. Being able to change the security group after the instance is launched
2. Being able to specify any protocol with a standard number, rather than just TCP, UDP, or ICMP

Compare AWS and OpenStack ?

Criteria	**AWS**	**OpenStack**
License	Amazon proprietary	Open Source
Operating System	Whatever cloud administrator provides	Whatever AMIs provided by AWS
Performing repeatable operations	Through templates	Through text files

What is AWS?

AWS (Amazon Web Services) is a platform to provide secure cloud services, database storage, offerings to compute power, content delivery, and other services to help business level and develop.

What is the importance of buffer in Amazon Web Services?

A buffer will synchronize different components and makes the arrangement additional elastic to a burst of load or traffic. The components are prone to work in an unstable way of receiving and processing the requests. The buffer creates the equilibrium linking various apparatus and crafts them effort at the identical rate to supply more rapid services.

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What is the way to secure data for carrying in the cloud?

One thing must be ensured that no one should seize the information in the cloud while data is moving from point one to another and also there should not be any leakage with the security key from several storerooms in the cloud. Segregation of information from additional companies' information and then encrypting it by means of approved methods is one of the options.

Name the several layers of Cloud Computing.

Here is the list of layers of the cloud computing

- **PaaS** – Platform as a Service
- **IaaS** – Infrastructure as a Service
- **SaaS** – Software as a Service

What are the components involved in Amazon Web Services?

There are 4 components involved and are as below.
Amazon S3: with this, one can retrieve the key information which are occupied in creating cloud structural design and amount of produced information also can be stored in this component that is the consequence of the key specified.
Amazon EC2: helpful to run a large distributed system on the Hadoop cluster. Automatic parallelization and job scheduling can be achieved by this component.
Amazon SQS: this component acts as a mediator between different controllers. Also worn for cushioning requirements those are obtained by the manager of Amazon.
Amazon SimpleDB: helps in storing the transitional position log and the errands executed by the consumers.

Distinguish between scalability and flexibility

The aptitude of any scheme to enhance the tasks on hand on its present hardware resources to grip inconsistency in command is known as scalability. The capability of a scheme to augment the tasks on hand on its present and supplementary hardware property is recognized as flexibility, hence enabling the industry to convene command devoid of putting in the infrastructure at all.

Name the various layers of the cloud architecture
There are 5 layers and are listed below

- CC- Cluster Controller
- SC- Storage Controller

- CLC- Cloud Controller
- Walrus
- NC- Node Controller

Define auto-scaling.

Auto- scaling is one of the remarkable features of AWS where it permits you to arrange and robotically stipulation and spin up fresh examples without the requirement for your involvement. This can be achieved by setting brinks and metrics to watch. If those entrances are overcome, a fresh example of your selection will be configured, spun up and copied into the weight planner collection.

Which automation gears can help with spinup services?

The API tools can be used for spinup services and also for the written scripts. Those scripts could be coded in Perl, bash or other languages of your preference. There is one more option that is patterned administration and stipulating tools such as a dummy or improved descendant. A tool called Scalr can also be used and finally we can go with a controlled explanation like a Rightscale.

Is it possible to scale an Amazon instance vertically? How?

Yes. This is an incredible characteristic of cloud virtualization and AWS. Spinup is a huge case when compared to the one which you are running with. Let up the instance and separate the root EBS volume from this server and remove. Next, stop your live instance, remove its root volume. Note down the distinctive device ID and attach root volume to your new server and start it again. This is the way to scaling vertically in place.

How the processes start, stop and terminate works? How?

Starting and stopping of an instance: If an instance gets stopped or ended, the instance functions a usual power cut and then change over to a clogged position. You can establish the case afterward since all the EBS volumes of Amazon remain attached. If an instance is in stopping state, then you will not get charged for additional instance.
Finishing the instance: If an instance gets terminated it tends to perform a typical blackout, so the EBS volumes which are attached will get removed except the volume's deleteOnTermination characteristic is set to zero. In such cases, the instance will get removed and cannot set it up afterward.

What is the relation between an instance and AMI?

AMI can be elaborated as Amazon Machine Image, basically, a template consisting software configuration part. For example an OS, applications, application server. If you start an instance, a duplicate of the AMI in a row as an unspoken attendant in the cloud.