A WALK THROUGH OF
AWS (AMAZON WEB SERVICES)

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ABSTRACT - *Amazon provides a complete set of IT tools for organizations to create dedicated virtual clouds for retaining complete configuration control over their environment. Amazon Web Services[1] can service for both organizations and IT developments. The cost benefits and efficiency of moving to the cloud make it appealing to security professionals, but introduces several transition security risks and compliance concerns. By introducing a variety of functionality and services, including dedicated Elastic Compute Cloud (EC2) instances, which promises to make cloud computing safe for highly regulated companies, Amazon Web Services (AWS) has tried to alleviate enterprise security and compliance concerns[2] with cloud computing.*

*Key Words: **Amazon Web Service, Security, EC2 etc...***

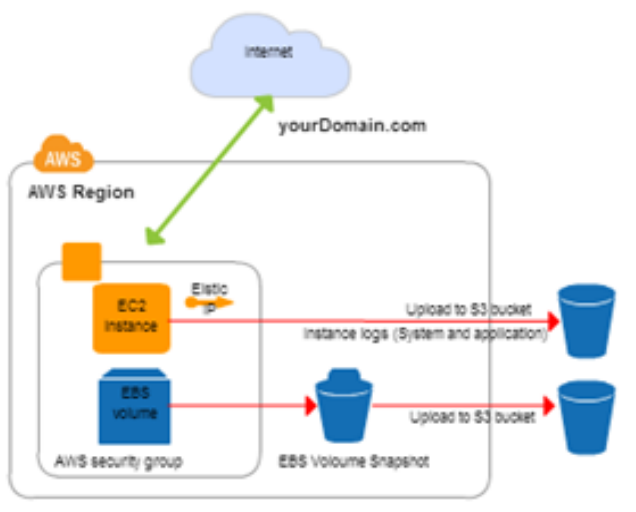## 1. AWS (AMAZON WEB SERVICES):

Fig - 1:- Basic Structure of a AWS EC2 instance.

"AWS is a collection of remote computing services (also called web services) that together make up a internet cloud computing[1] platform, offered over the Internet by Amazon.com **web site"**.

The well-known and most used of these services are Amazon S3 and Amazon EC2. The service is advertised as providing a large computing capacity (potentially many servers) cheaper and much faster than building a physical[3] server farm.
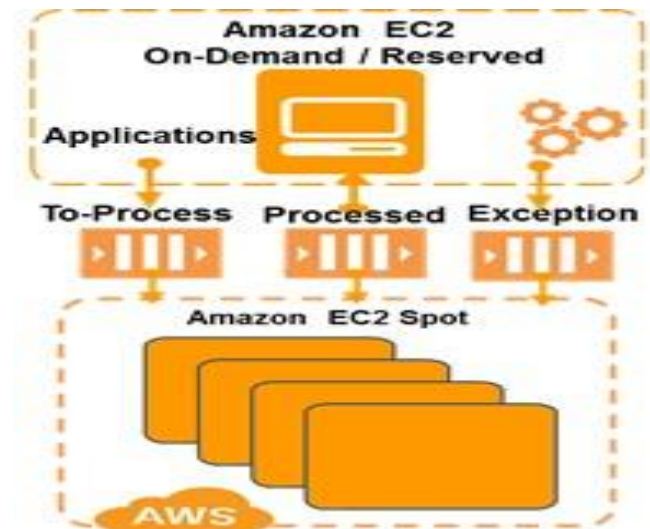

Fig - 2: Architecture of AWS.

In 8 geographical 'Regions', AWS is located: US West (Northern California), US East (Northern Virginia), US West (Oregon), Ireland, São Paulo (Brazil), Singapore, Sydney and Tokyo. For US Government customers, there is also a "GovCloud" in the USA provided. Each Region is wholly contained within a single country and all of its services and data stay within the designated Region.

Each Region has multiple **of 'Availability Zones' [**4] i.e. those are distinct centers for data, providing services of AWS. To prevent outages from spreading between Zones and availability Zones are isolated from each other. Across Availability Zones, several services operate (e.g. Dynamo DB, S3) while others can be configured to replicate across Zones to avoid from failures.
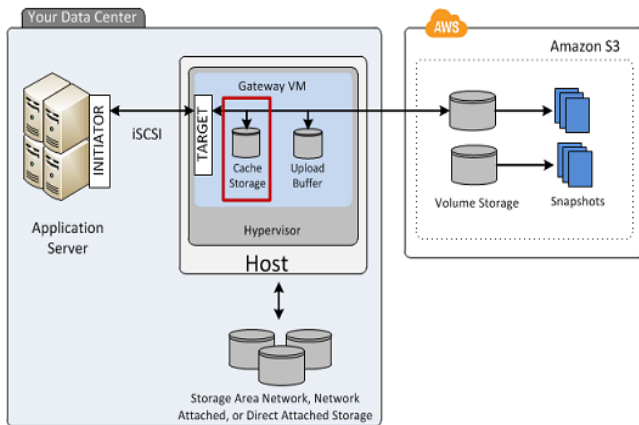
Fig - 3: Data Center for AWS.

2. AMAZON SERVICE LIST:

Following are the Amazon Web Service list:

Cloud Formation - If user wants to instantiate with a single click by defining a service configurations and template of machine, user can include this type of templates form Amazon services like VPC, EC2, Elastic Beanstalk, and others. Clicking few, services can replicate a complicated application and IT infrastructure.

Cloud Front – User can use a content delivery platform like video and music, to meet large simultaneous demands, and it offers a great platform[5] for distributing widely consumed digital goods.

Cloud Watch - Enables to you collect, view, and analyze metrics related to cloud resources. It's very helpful as your virtual infrastructure grows more complicated.

Dynamo DB – For the past several years, referred to as NOSQL systems to the fact they not use SQL as their principal query language, a new class of database system had emerged. These very large data sets are very popular that have the ability to scale horizontally without any manual intervention.

Elastic Compute Cloud (EC2) - Amazon EC2 is the service for building of backbone of multiple virtual servers of the virtual network.

Elastic Cache - Does not need to commit it permanently to a database system, sometimes a developer needs to store a large amount of data in memory. This typically happens in high-transaction-volume applications. For this use, there is Amazon's Elastic cache service, which provides highly scalable in-memory[6] storage for large but transient data sets.

Elastic Beanstalk - To handle all the administration of your various needed services, use Elastic Beanstalk[9] is a programming framework.

Elastic Map Reduce - Amazon Elastic Map Reduce (EMR) is a service that helps you dice and slices the various data sets you have stored in any of the Amazon data storage services.

Identity and Access Management (IAM) - Amazon IAM is the framework under which you manage users who will have components access to your Amazon services. For example, suppose you want to give one user access to a server instance, you have to set up using EC2[6] and another user administrative access to some data you have stored in Dynamo DB.

Relational Database Service (RDS) - The Amazon RDS should make you feel right at home, if you're not quite ready to jump on board to NoSQL bandwagon. It's a scalable database system, using the SQL query language and tools with which any experienced database administrator should be familiar.

Route 53 - Route 53 is Amazon's scalable DNS system. Rather than setting up DNS names[8] for machines using the tools of your domain provider, the people with whom you registered your domain name, you have to maintain your DNS zones and subzones using Route 53.

Simple Email Service (SES) - This is the service, if you think you will need to send bulk email messages. Rather than setting up your own outbound email servers, you can use this service to do all the heavy lifting.

Simple Notification Service (SNS) - SNS allows administrators and developers to send out SMS alerts and email. This is a great way to integrate notifications without having to worry about the particulars of various SMS and email platforms and gateways, if you're a developer considering using the Amazon cloud[7] for your application.

Simple Queue Service (SQS) - To pass information among them, sometime developers want different applications (or application components). One of the best ways to do this is with a message queuing system.

Simple Storage Service (S3) - Think of this as your very own Drop Box or other Internet file storage system. This is a great way to securely store vital information in a way that conforms to your enterprise security policies.

Simple Workflow Service (SWF) - Highly distributed systems[8] divide large problems into smaller work units called tasks. SWF service application components schedule, manage and set up the tasks specific to your large distributed process.

Storage Gateway - The Amazon Storage Gateway service is a really handy tool that lets you set up storage managed by Amazon that connects via the PC and Internet to an appliance in your physical infrastructure. It's a fabulous way to do disaster recovery, backups archiving.

Virtual Private Cloud (VPC) - It allows you to collect server instances running on the Amazon EC2 service into a single (or segmented) virtual network.

3. CONCLUSION

Your virtual private cloud is set up and you now have a rock-solid secure VPN connection with which to reach it. For now, though, you should be content in the knowledge that you have accomplished what would normally have taken. Amazon's Elastic Compute[1] Cloud Services and IBM's Smart Cloud are quickly changing the way organizations are dealing with IT infrastructures[2] and online services are providing. Today, It is easy to obtain computing power. User can simply buy it online and use applications provided by cloud companies to launch and shut down virtual images. Cloud based popular services is to allow users to share and create virtual images with other users. Cloud providers provide virtual images that have been pre-configured with **popular software's such as open source web servers.**

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BIOGRAPHIES

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