**RESUME**

**EBS SNAPSHOTS**

Snapshot are the backups of our data from Amazon EBS Volumes to Amazon S3. Snapshot is incremental, means that only the blocks on the device that have changed after the most recent snapshot are saved. When you delete a snapshot, only the data unique to that snapshot is removed. Each snapshot contains all the information is needed to restore your data (from the moment when the snapshot was taken) to the new EBS Volume. You can share a snapshot across region by modifying its access permission. You can also copy snapshot across region.

**AMAZON EC2 INSTANCE STORE**

An instance store provides temporary block level storage for you instance. Its located on the disk that you are physically attached to the host computer. The size of an instance store varies by instance type. You can specify instance store volumes for an instance only when you launch it you can’t detach an instance store volume from one instance and attach it to a different instance. The data of an instance store persist only the lifetime of its associated instance. instance store cannot store long-term data instead S3, EBS, EBS, EFS.

**AMAZON ELLASTIC FILE SYSTEM**

Amazon Elastic File system store data and metadata across multiple availability zone in an AWS Region. Multiple Amazon EC2 instances can access an Amazon EFL file system at the same time, providing a common data source for workloads and applications running on more than one instance or server. EFL support authentication, authorization and encryption.

U**SING AN IAM ROLE TO GRANT PERMISSION TO APPLICATIONS RUNNING ON AMAZON EC2 INSTANCES**

IAM role is uses to grand permissions to applications.

To assign an AWS role and its associated permission to an EC2 instance and make them available to its application, you must create an **instance profile** that is attached to the instance. The instance profile contains the role and can provide the role’s temporary credentials to an application that run on the instance. Only one role can be assigned to an EC2 instance at a time and all applications on the same instance share the same role and permission. If you use a single role for multiples instances, you can make a change to that role and the change will propagate automatically to all instances.

**APPLICATION LOAD BALANCER**

A load balancer serves as a single point of contact for clients. The load balancer distributes incoming application traffic across multiples targe such as EC2 instances in multiples availability zone. This increase the availability of your applications. You can add one or more **listeners** to your load balancer. **A listener** checks for connection request from clients, using the protocol and port that you configure. You must define a default rule for each listener, and you can optionally define additional rules. The **rule** determines how the load balancer routes request to its registered target. Each target group routes request to one or more registered target such as EC2 instances using the protocol and port number that you specify.

**Benefits of using an Application Load Balancer**

* Support for redirecting request from one URL to another
* Support for returning a custom HTTP response
* Support for registering target by IP address including target outside the VPC for load balancer.

Elastic Load Balancer works with the following services: **EC2, EC2 Auto Scaling, AWS Certificate Manager, Amazon CloudWatch, ECS (Elastic Container, Service)**