**Module 3**

**Global Infrastructure and Reliability**

**Four business factors to consider when determining the region for your service, data, and applications.**

1. **Compliance with data governance**

* Depending on your company and location, you might need to run your data out of specific areas
* E.g., if your company requires all of it data to reside within the boundaries of the UK, you will choose, the London region

1. **Proximity to your customers**

* Selecting a region that is close to your customers will help you get content to them faster.

1. **Available service within a region**

* Sometime the closest region might not have all features you want to offer to customer.

1. **Pricing**

* The cost of the service can vary from region to region

**Availability zone**

* Is a single data center or group of data centers within a region.
* Availability zones are located tens of miles apart from each other.
* If a disaster occurs in one part of the region, they are distant enough to reduce the chance that multiple availability zones are affected.

**Edges Locations**

Is a site that Amazon CloudFront uses to store cached copies of your content closer to your customer for fast delivery.

**How to provision resources**

**Ways to interact with AWS Services.**

1. **AWS Management console**

* Is a web-based interface for accessing and managing AWS Services
* You can quickly access recently used service and search for other service by name, keyword, or acronym
* You can also use AWS Console Mobile application to perform tasks such as monitoring resources, viewing alarms, and accessing billing information.

1. **AWS Command line interface**

* To save time when making API requests, you can use the AWS Command Line interface (AWS CLI).
* Enables you to control multiple AWS service directly from the command line within one tool

1. **Software Development kits**

* SDK’s make it easier for you to use AWS services through API designed for your programming language or platform
* Enables you to use AWS services with your existing applications or create entirely new applications that will run on AWS

**AWS Elastic Beanstalk**

You provide code and configuration settings, and Elastic Beanstalk deploys the resources necessary to perform the following tasks :

* Adjust capacity
* Load balancing
* Application scaling
* Application health monitoring

**AWS CloudFormation**

* You can treat your infrastructure as code
* This means you build an environment by writing lines of code instead of using the AWS Management console to individually provision resources
* AWS CloudFormation provisions your resources in a safe, repeatable manner, enabling you to frequently build your infrastructure and applications without having to perform manual actions.