**AWS GLOBAL INFRASTRUCTURE**

**Selecting a Region**

When determining the right Region for your services, data, and applications, consider the following four business factors.

**Compliance with data governance and legal requirements**

**Proximity to your customers**

**Available services within a Region**

**Pricing**

An **Availability Zone** is a single data center or a group of data centers within a Region. Availability Zones are located tens of miles apart from each other. This is close enough to have low latency (the time between when content requested and received) between Availability Zones. However, if a disaster occurs in one part of the Region, they are distant enough to reduce the chance that multiple Availability Zones are affected.

**Edge locations**

An **edge location** is a site that Amazon CloudFront uses to store cached copies of your content closer to your customers for faster delivery.

**Ways to interact with AWS services**

**AWS Management Console**

The **AWS Management Console** is a web-based interface for accessing and managing AWS services. You can quickly access recently used services and search for other services by name, keyword, or acronym. The console includes wizards and automated workflows that can simplify the process of completing tasks.  
  
You can also use the AWS Console mobile application to perform tasks such as monitoring resources, viewing alarms, and accessing billing information. Multiple identities can stay logged into the AWS Console mobile app at the same time.

**AWS Command Line Interface**

To save time when making API requests, you can use the **AWS Command Line Interface (AWS CLI)**. AWS CLI enables you to control multiple AWS services directly from the command line within one tool. AWS CLI is available for users on Windows, macOS, and Linux.

By using AWS CLI, you can automate the actions that your services and applications perform through scripts. For example, you can use commands to launch an Amazon EC2 instance, connect an Amazon EC2 instance to a specific Auto Scaling group, and more.

**software development kits**

Another option for accessing and managing AWS services is the **software development kits (SDKs)**. SDKs make it easier for you to use AWS services through an API designed for your programming language or platform. SDKs enable you to use AWS services with your existing applications or create entirely new applications that will run on AWS.

To help you get started with using SDKs, AWS provides documentation and sample code for each supported programming language. Supported programming languages include C++, Java, .NET, and more.

**AWS Elastic Beanstalk**

With **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
* Automatic scaling
* Application health monitoring

**AWS CloudFormation**

With **AWS CloudFormation**, you can treat your infrastructure as code. This means that you can 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. It determines the right operations to perform when managing your stack and rolls back changes automatically if it detects errors.

**Number of**

**Regions < availability zone < edge location**

**Amazon Virtual Private Cloud (Amazon VPC)**

Imagine the millions of customers who use AWS services. Also, imagine the millions of resources that these customers have created, such as Amazon EC2 instances. Without boundaries around all of these resources, network traffic would be able to flow between them unrestricted.

A networking service that you can use to establish boundaries around your AWS resources is [**Amazon Virtual Private Cloud (Amazon VPC)**](https://aws.amazon.com/vpc/).

Amazon VPC enables you to provision an isolated section of the AWS Cloud. In this isolated section, you can launch resources in a virtual network that you define. Within a virtual private cloud (VPC), you can organize your resources into subnets. A **subnet** is a section of a VPC that can contain resources such as Amazon EC2 instances.