# AWS GLOBAL INFRASTRUCTURE

Pros;

Understanding this systems helps us build fault tolerance system and highly available system.

* Data center contains 100’s of server in a single location, what if the server goes down?
* Clients can’t access their data till data center is back up.

How to overcome this scenarios;

* AWS Data centers are organized into Availability Zone(AZ)
* Within AZ there are multiple Data centers
* Data center are inter connected to each other in AZ.
* Each AZ is physically separated but connected with high speed cables.
* AZ are located in low risk areas

**AWS regions;**

* Multiple AZ form a Region
* There are 16 registered AZ as of 2017
* One region can contain multiple AZ
* To avoid latency need to always select nearest region or any websites.
* Designing infrastructure should be highly available and fault tolerance. To achieve that, we need to have servers in multiple AZs.
* Total 44 AZs across the world.