Cloud Computing: **cloud computing** is the delivery of **computing** services—including servers,deploying sites, storage, databases, networking, Virtual desktops over Internet. With pay as you go pricing.

Instead of buying big servers and storages and maintain it we can use clound provider such as AWS/ GCP/ Azure.

Two types of Clound Computing:

1. Deployment Model:

a. Public Cloud: (BUS) The cloud Infrastructure is made available to general Public over the internet and its own by cloud provider e.g AWS, Azure, GCP .

b.Private Cloud: (OWN CAR) Cloud Infrastructur is Exclusively operated by Single organization.

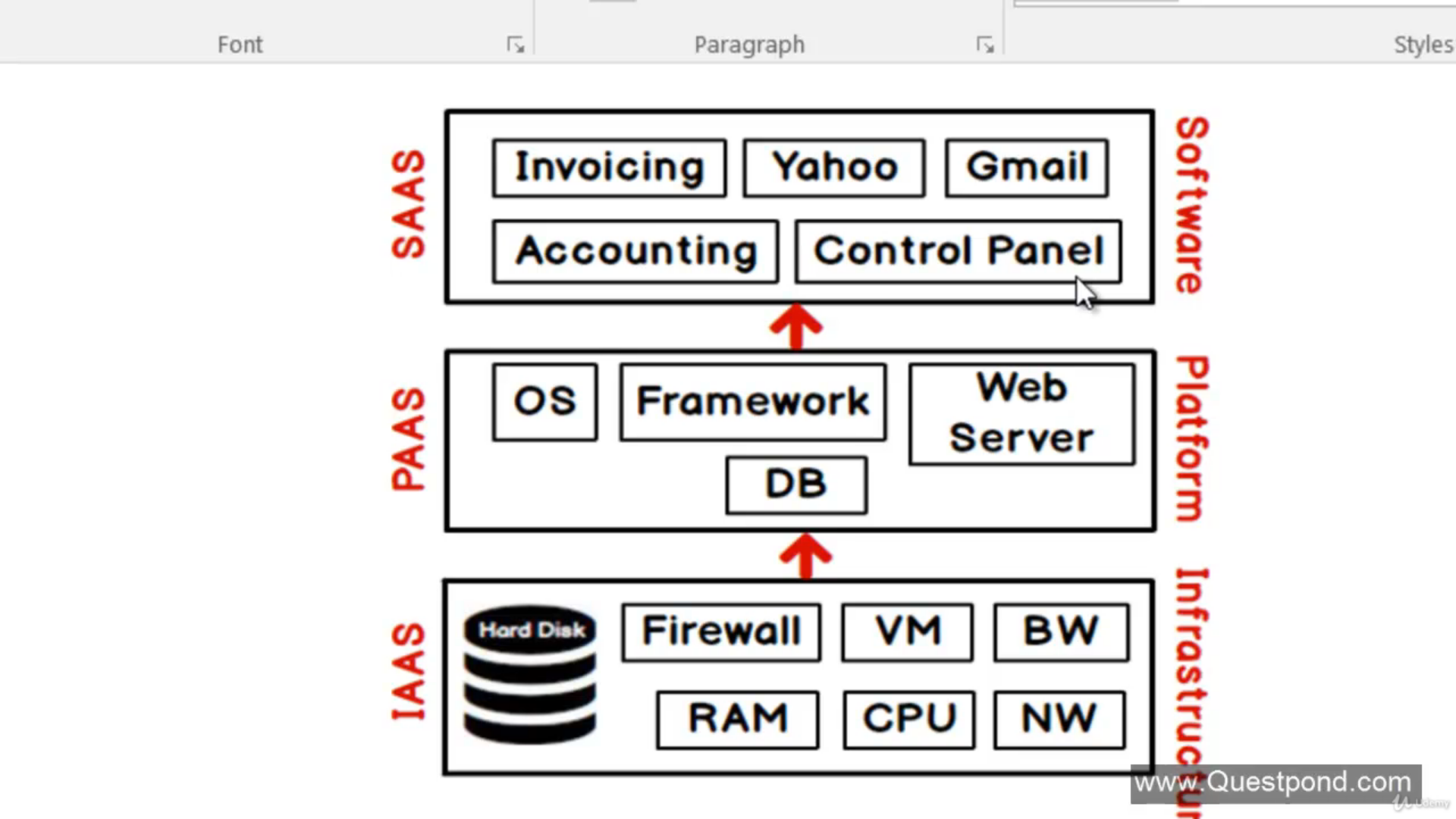
c.Hybrid Cloud: ( Taxi ) Organization which uses Both.

2. Service Model:

a. IAAS (Infrastruture as a Service): Cloud Offers Essential Computer storage and networking Resources, like storage, VMs etc.

b. PAAS(Platform as a Service) : it provide runtime environment for developing testing and managing applications e.g heroku, App Service( i.e deployment purpose)

c. SAAS (Software as a Service): Software as a service (SaaS) allows users to connect to and use cloud-based apps over the Internet. Common examples are email, calendaring and office tools (such as Microsoft Office 365).



Note : Database is act as a platform.

Resource Group: All resources belongs to 1 project is sotred in resource group.

While creating resource group, there is option called resource group location: it means that in which location you want to store the **MetaData** of that resource group.

Hosting the Application :

To host webApps we use AppService Resource of Azure.

While creating resource you can choose App Service Plan according to your need.

Method for Deployment:

1. Using visual studio
2. FTP method
3. Kudu
4. Using CI/CD devops.

Virtual Machines:

If you stop your Virtual Machines it will not stop costing, Because your Virtual Machine also cost you for Storage, So Storage Cost will still charged.

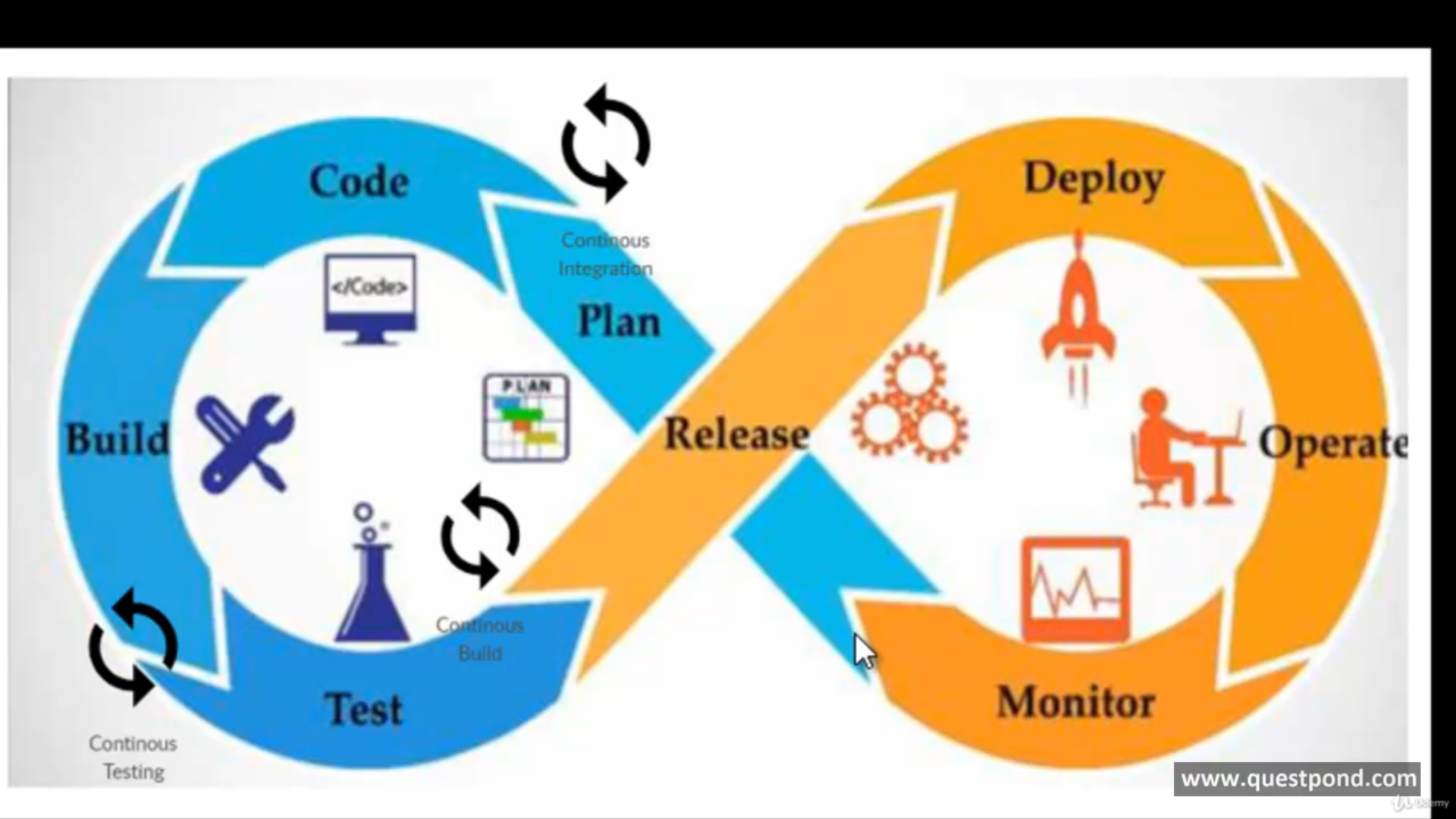
While Crating VM you need to choose Region where your Company’s belong.

We can choose Availability option to separate our 2 VMs(if we have more then 1) into separate regions in any case of floods, EarthQuakes etc.

DevOps:

Development + Operations

This is a Philosophy/Mindset Term only, maintain relationship between developers and Operations teams for Agile. Inshort DevOps engineer do both things.

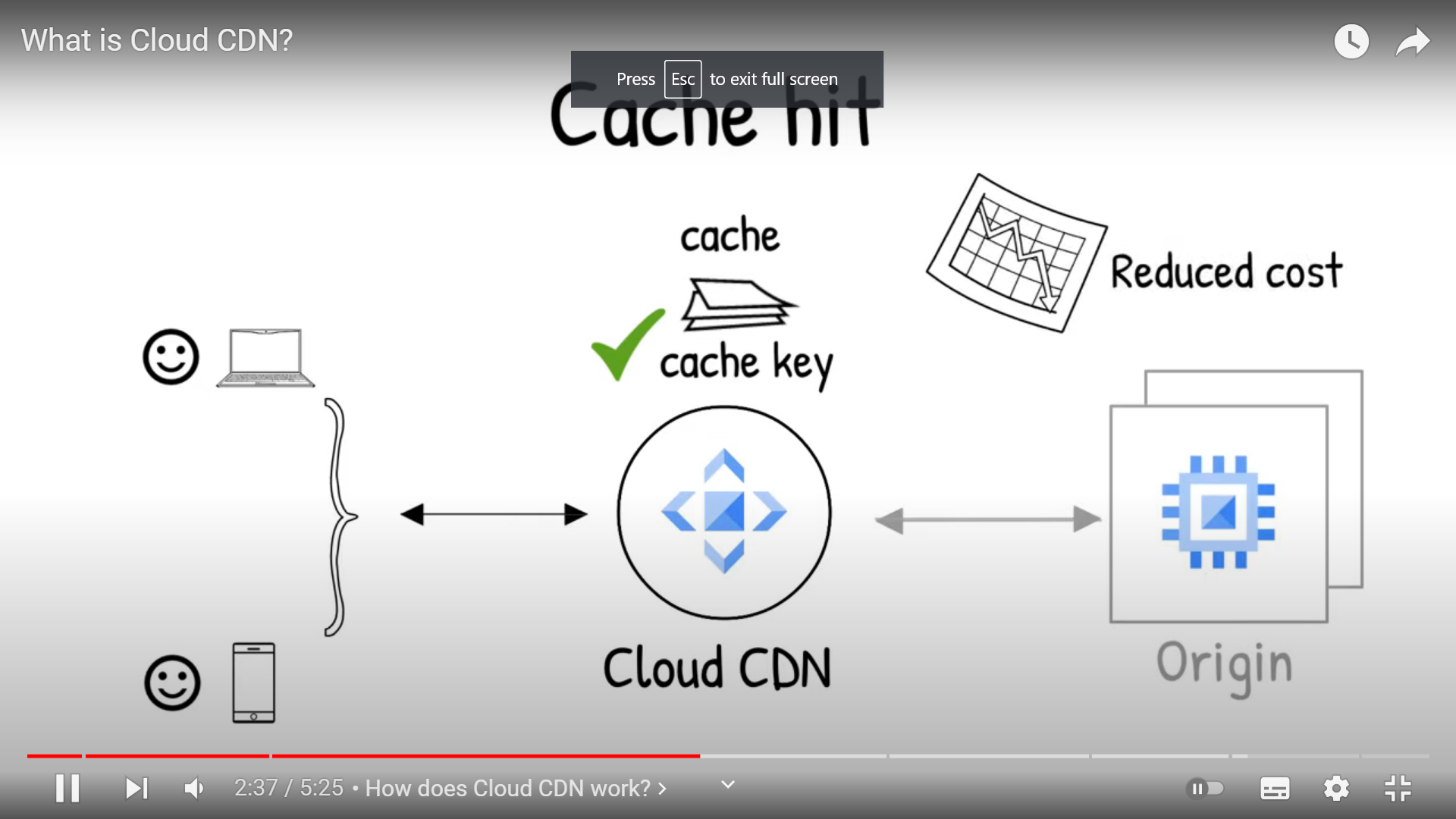


Developers: do Plan, code , build application, testing, Release to operation team

Operations: do deployment, operate, Manage, configure it as per environment, release to customer, helps the customer to know about the changes. {Inshort works on cloud like Azure.}

This Above cycle in picture can be done by creating Azure Devops resource/organization in Azure

**CLOUD CDN (**Content Delivery Network**)**



Here origin is Backend Server

A content delivery network (CDN) refers to a geographically distributed group of servers which work together to provide fast delivery of Internet content.

A CDN allows for the quick transfer of assets needed for loading Internet content including HTML pages, javascript files, stylesheets, images, and videos.

Cloud CDN Brings the Servers close to the users, so that every request did not need to travel overseas servers, 1st request it will go to origin/original server through LoadBalancer then response will store in cloud CDN in Cache form, so next time request will receive data from cloud cdn instead of travelling to origin/original server back.

Load balancer: Every request will sent to server where load is minimum this is the function of Load Balancer.