**Deployment Of an Application into cloud environment**

Developers have to deploy web services into cloud environment to provide as public use. To deploy an application into cloud environment we can use different types of cloud technologies Cloud deployment technologies are used to place services into a cloud computing environment. Developers have to understand the cloud deployment options that are available which is best.

Currently, there are two main technology options:

* VMs
* Containers

Virtualization in the form of virtual machines (VMs) was initially used to deploy workloads in a cloud environment. In VMs the operating systems (OS) and their applications share hardware resources from a single host server, or from a pool of host servers. VM requires its own underlying OS, and the hardware is virtualized

On the other hand, in container just the OS is virtualized. Container shares the host OS kernel and, usually, the binaries and libraries. These libraries reduce the need to reproduce the operating system code, and means that a server can run multiple workloads with a single operating system installation. Thus, the containers are light weight and also consume less time to run apps.

Cloud service providers offer the other three options in various service:

* SaaS: Software as a Service.
* PaaS: Platform as a Service.
* IaaS: Infrastructure as a Service.

SaaS: Software as a Service -:

SaaS uses the internet to deliver applications, which are managed by a third-party vendor, to its users. A majority of SaaS applications run directly through our web browser, which means they do not require any downloads or installations on the client side. For example: Gmail, Facebook etc. With SaaS, developers have to do nothing to deploy an app because everything is handled by vendor, they manage all potential technical issues, such as data, middleware, servers, and storage, resulting in streamlined maintenance and support for the business.

PaaS: Platform as a Service -:

In PaaS developers can build the software without having to worry about operating systems, software updates, storage, or infrastructure. So, developers can focus on their application without the headache of maintaining the software.

IaaS: Infrastructure as a Service -:

IaaS is fully self-service for accessing and monitoring computers, networking, storage, and other services. Hardware purchases can be based on consumption. Resources can be purchased as-needed. Developers have to handle the middle ware and application operations in this platform.

On another type is called On-premises in this platform for deploying any web service users have to manage all operations like low level, middleware and Front end also. Users have to set whole environment for deployment.

By using cloud deployment technologies according to their requirement user can use any platform to place their web applications into cloud environment. Now days the following platforms are available:

1. Amazon Web Services
2. Google Cloud Platform
3. Microsoft Azure
4. IBM Bluemix
5. Alibaba

Users can create account on any platform to deploy their apps to cloud. They have to pay for these deployment services according to use of these technologies.