**Course: Advance Bio Informatics**

**Module Title: Cloud Deployment Models**

**Module No: 141**

**Deployment Models**

There are different deployment models of cloud computing

* Potential stakeholders
* Owner of infrastructure
* User of cloud service
* Location of cloud infrastructure
* Public, Community
* Private & Hybrid cloud

**Public cloud**

Public clouds are owned and operated by companies that offer rapid access over a public network to affordable computing resources. With public cloud services, users don’t need to purchase hardware, software or supporting infrastructure, which is owned and managed by providers. SoftLayer

**Key aspects of Public Cloud**

It is an Innovative of SaaS business apps for applications ranging from customer resource management (CRM) to transaction management and data analytics. It is a flexible, scalable IaaS for storage and compute services on a moment’s notice. Powerful PaaS for cloud-based application development and deployment environments. Flexibility to access the resources you need, when you need them.

**Private cloud**

A private cloud is infrastructure operated solely for a single organization, whether managed internally or by a third party and hosted either internally or externally. Private clouds can take advantage of cloud’s efficiencies, while providing more control of resources and steering clear of multi-tenancy.

IBM infrastructure for private cloud

**Key aspects of Private Cloud**

A self-service interface controls services, allowing IT staff to quickly provision, allocate and deliver on-demand IT resources. Highly automated management of resource pools for everything from compute

capability to storage, analytics and middleware. Sophisticated security and governance designed for a company’s specific requirements .The additional level of security you want with the benefits of cloud.

**Hybrid cloud**

A hybrid cloud uses a private cloud foundation combined with the strategic integration and use of public cloud services. The reality is a private cloud can’t exist in isolation from the rest of a company’s IT resources and the public cloud. Most companies with private clouds will evolve to manage workloads across data centers, private clouds and public clouds—thereby creating hybrid clouds.

IBM hybrid cloud

**Key aspects of Hybrid Cloud**

It allows companies to keep the critical applications and sensitive data in a traditional data center environment or private cloud. Enables taking advantage of public cloud resources like SaaS, for the latest applications, and IaaS, for elastic virtual resources. It facilitates portability of data, apps and services and more choices for deployment models.

**Community Cloud**

Community cloud is exclusive use by a specific community of consumers from organizations that have shared concerns. Owned, managed, and operated by one or more of the organizations in the community, a third party. Exist on or off premises.

**Bio Informatics Cloud**

**Private cloud:** personal consumers like lab units, researchers etc. Public cloud will serve needs of potential users

**Community cloud:** concerns (e.g. policies, mission, requirements) matches with other research laboratories