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# Topic – Cloud Services

# Roll No. -29

## Cloud Services

Cloud services are application and infrastructure resources that exist on the Internet. Third-party providers contract with subscribers for these services, allowing customers to leverage powerful computing resources without having to purchase or maintain hardware and software.

## Benefits of Cloud Services

**Scalability**: Scale resources up or down in response to demand instantly.

**Flexibility**: Easily access and modify computer resources to respond to changing business needs.

**Processing Speed**: Fast processing speeds for quick data analysis, application deployment, and productivity.

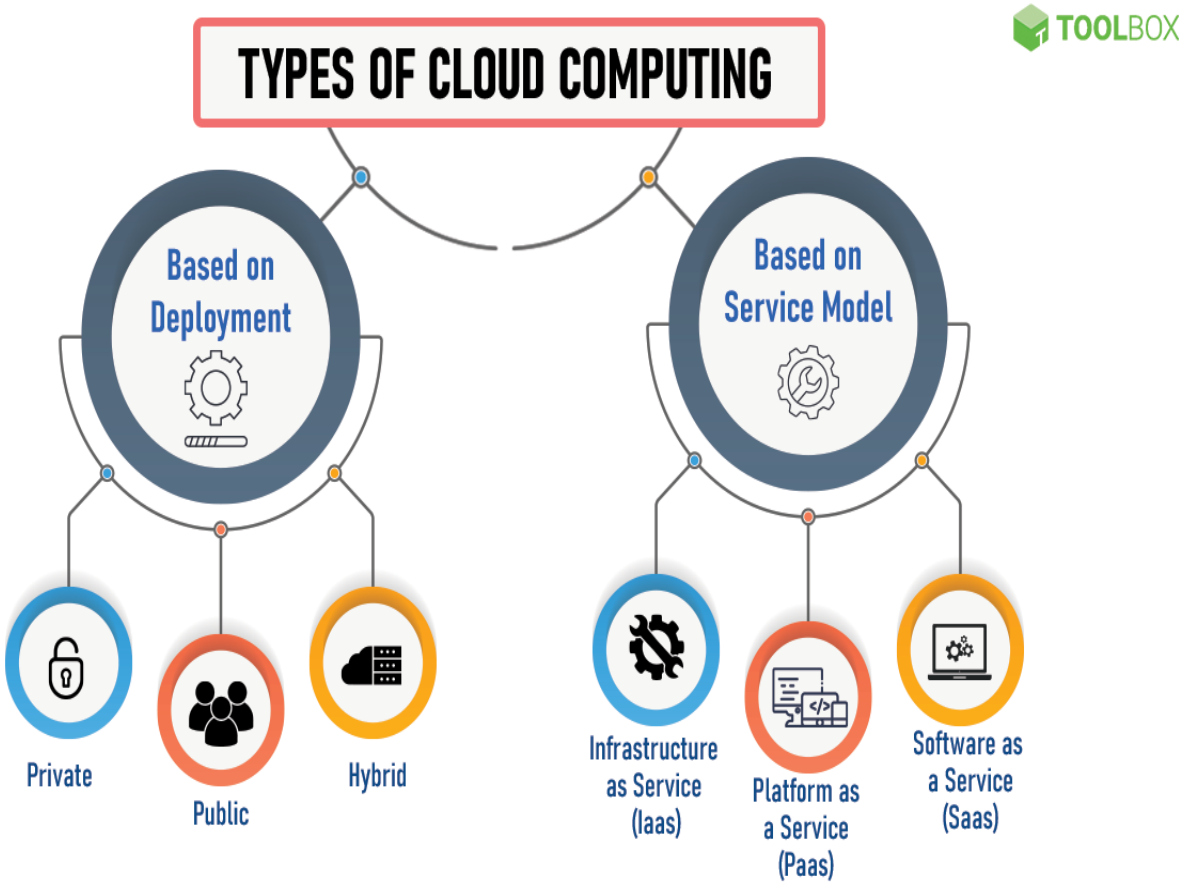
**Security**: Strong security features, including encryption, access limits, and monitoring, to guard against threats and breaches.

**Cost Efficiency**: Pay-as-you-go pricing and no upfront hardware and infrastructure investments.

**Disaster Recovery**: Automatic backup, replication, and recovery procedures ensure data resilience and business continuity.

## Types of cloud computing

The three main types of cloud computing include Infrastructure as a Service, Platform as a Service, and Software as a Service. Each type of cloud computing provides different levels of control, flexibility, and management so that you can select the right set of services for your needs.



## 1. Infrastructure as a Service (IaaS) :

**Description**: Provides virtualized computing resources over the internet.

**Key Features**:Virtual machines (VMs) with various configurations.Scalable storage option.Networking capabilities, such as virtual private networks (VPNs).On-demand resource provisioning.

**Examples**: Amazon Web Services (AWS) EC2, Microsoft Azure, Google Cloud Compute Engine..

## 2. Platform as a Service (PaaS):

**Description**: Offers a platform for developers to build, deploy, and manage applications without handling the underlying infrastructure.

**Key Features:**Development frameworks and tools.Middleware for application integration.Database management systems.Automated scalability and load balancing.

**Examples**: Google App Engine, Heroku, Red Hat OpenShift.

## 3. Software as a Service (SaaS) :

**Description**: Delivers software applications over the internet, typically on a subscription basis.

**Key Features:**Accessible via web browsers or APIs.Automatic updates and patch management.Multi-tenancy architecture for shared resources.User management and authentication features.

**Examples**: Salesforce, Microsoft 365, Google Workspace, Slack.