



SNS COLLEGE OF ENGINEERING

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An Autonomous Institution

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Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING(IoT and
Cybersecurity Including BCT)**

COURSE NAME : cloud service management

III YEAR / V SEMESTER

Unit II-cloud service management fundamentals

Topic : Cloud service deployment models



Cloud service deployment models



Cloud service deployment models describe where and how cloud computing resources and services are physically located and made available to users. There are three primary cloud service deployment models:

Public Cloud:

Description: In a public cloud deployment, cloud resources and services are owned and operated by a third-party cloud service provider and made available to the general public or a large customer base. These services are typically delivered over the internet.

Characteristics:

Shared infrastructure: Resources are shared among multiple customers.

Cost-effective: Pay-as-you-go pricing, suitable for small to large organizations.

Scalable: Easily scale resources up or down as needed.

No infrastructure management: Customers do not manage the underlying hardware or infrastructure.

Use Cases: Public clouds are commonly used for web hosting, email, development and testing, and running software applications. They are suitable for organizations of all sizes, from startups to enterprises.

Examples: Amazon Web Services (AWS), Microsoft Azure, Google Cloud Platform (GCP), IBM Cloud.



Private Cloud:

Description: Private cloud deployments are dedicated to a single organization. Resources and services in a private cloud can be hosted either on-premises (in the organization's data centers) or by a third-party cloud provider.

Characteristics:

Dedicated infrastructure: Resources are exclusive to the organization.

Control: Organizations have greater control over the infrastructure and security.

Compliance: Ideal for industries with strict data security and compliance requirements.

Customization: Infrastructure can be tailored to specific business needs.

Use Cases: Private clouds are often used by government agencies, financial institutions, and organizations with sensitive data or strict regulatory requirements.

Examples: VMware vCloud, OpenStack, Oracle Cloud at Customer.



Hybrid Cloud:

Description: Hybrid cloud deployments combine both public and private cloud resources, allowing data and applications to be shared between them. This model provides greater flexibility and can facilitate a balance between cost-effectiveness and control.

Characteristics:

Data and application portability: Data and applications can move between public and private clouds.

Scalability: Organizations can use public cloud resources to scale up during peak demand.

Security and compliance: Sensitive data can be kept in the private cloud, while less-sensitive workloads can use the public cloud.

Use Cases: Hybrid clouds are beneficial for organizations that need to maintain control over sensitive data, while leveraging the scalability and cost-efficiency of public clouds. They are also used in scenarios requiring disaster recovery and backup.

Examples: Many cloud providers offer hybrid cloud solutions. Organizations can create hybrid deployments using their chosen private and public cloud services.