



SNS COLLEGE OF ENGINEERING

Coimbatore-35
An Autonomous Institution



Accredited by NBA – AICTE and Accredited by NAAC – UGC with 'A+' Grade
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

DEPARTMENT OF CSE (IoT, Cyber Security including Blockchain Technology)

19SB731 – CLOUD COMPUTING & VIRTUALIZATION

IV YEAR/ VII SEMESTER

UNIT 2 – CLOUD IMPLEMENTATION

TOPIC –Public in cloud computing, Overview of cloud computing



OVERVIEW OF CLOUD COMPUTING



The delivery of computing services, including servers, storage, databases, networking, software, analytics, and intelligence, over the internet (“the cloud”) to offer faster innovation, flexible resources, and economies of scale.

➤ **Key Characteristics:**

On-Demand Self-Service: Users can access computing resources as needed without human intervention from the service provider.

Broad Network Access: Services are available over the network and accessed through standard mechanisms (e.g., web browsers).

Resource Pooling: The provider's computing resources are pooled to serve multiple consumers, with different physical and virtual resources dynamically assigned and reassigned according to demand.

Rapid Elasticity: Resources can be rapidly and elastically provisioned to quickly scale up or down based on demand.

Measured Service: Cloud systems automatically control and optimize resource use by leveraging a metering capability, which tracks and reports usage.



PUBLIC CLOUD IN CLOUD COMPUTING



A type of cloud computing where services are delivered over the public internet and shared across multiple organizations (tenants). Public clouds are owned and operated by third-party cloud service providers, who deliver their computing resources, such as servers and storage, over the internet.

➤ **Key Characteristics:**

Multi-Tenancy: Multiple customers share the same infrastructure, but their data and workloads are isolated.

Scalability: Easily scales to meet high demand; users can scale up or down depending on their business needs.

Pay-as-You-Go Pricing: Users pay only for the resources they consume, often with the ability to forecast costs based on usage.

Accessibility: Accessible from any internet-connected device, making it highly convenient for remote work and global teams.



PUBLIC CLOUD IN CLOUD COMPUTING



➤ Disadvantages:

Limited Control: Less control over infrastructure and services compared to private cloud models.

Security and Compliance: Although secure, some industries may have compliance requirements that are difficult to meet in a public cloud environment.

Potential for Latency: Depending on internet connectivity and the provider's infrastructure, there could be latency issues affecting performance.

➤ Advantages:

Cost-Effectiveness: Eliminates the need for organizations to invest in and maintain on-premises hardware and software.

No Maintenance: The cloud service provider is responsible for the maintenance of the infrastructure, freeing up internal resources.

Reliability: Providers offer robust infrastructure with high availability and disaster recovery options, ensuring business continuity.

Security: Public cloud providers invest heavily in advanced security measures, including encryption, firewalls, and compliance with global standards.



USE CASES FOR PUBLIC CLOUD



➤ **Startups and SMEs:**

Cost-Effective Growth: Public cloud provides a low-cost way for small businesses and startups to access enterprise-level IT infrastructure without significant upfront investment.

Agility: Enables rapid deployment of applications and services, which is crucial for startups looking to innovate and scale quickly.

➤ **Web Applications and Websites:**

Scalability: Ideal for hosting web applications and websites that experience varying levels of traffic, as it can scale resources up or down as needed.

Global Reach: Ensures that applications and content can be delivered to users worldwide with minimal latency.

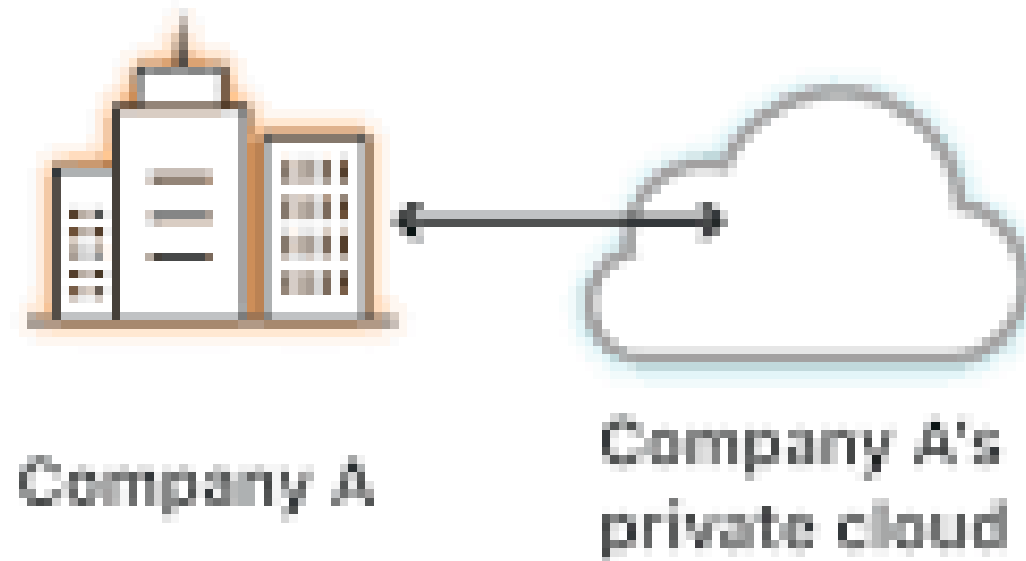
➤ **Development and Testing:**

Environment Flexibility: Public cloud provides developers with a flexible and scalable environment to develop, test, and deploy applications without the need for physical infrastructure.

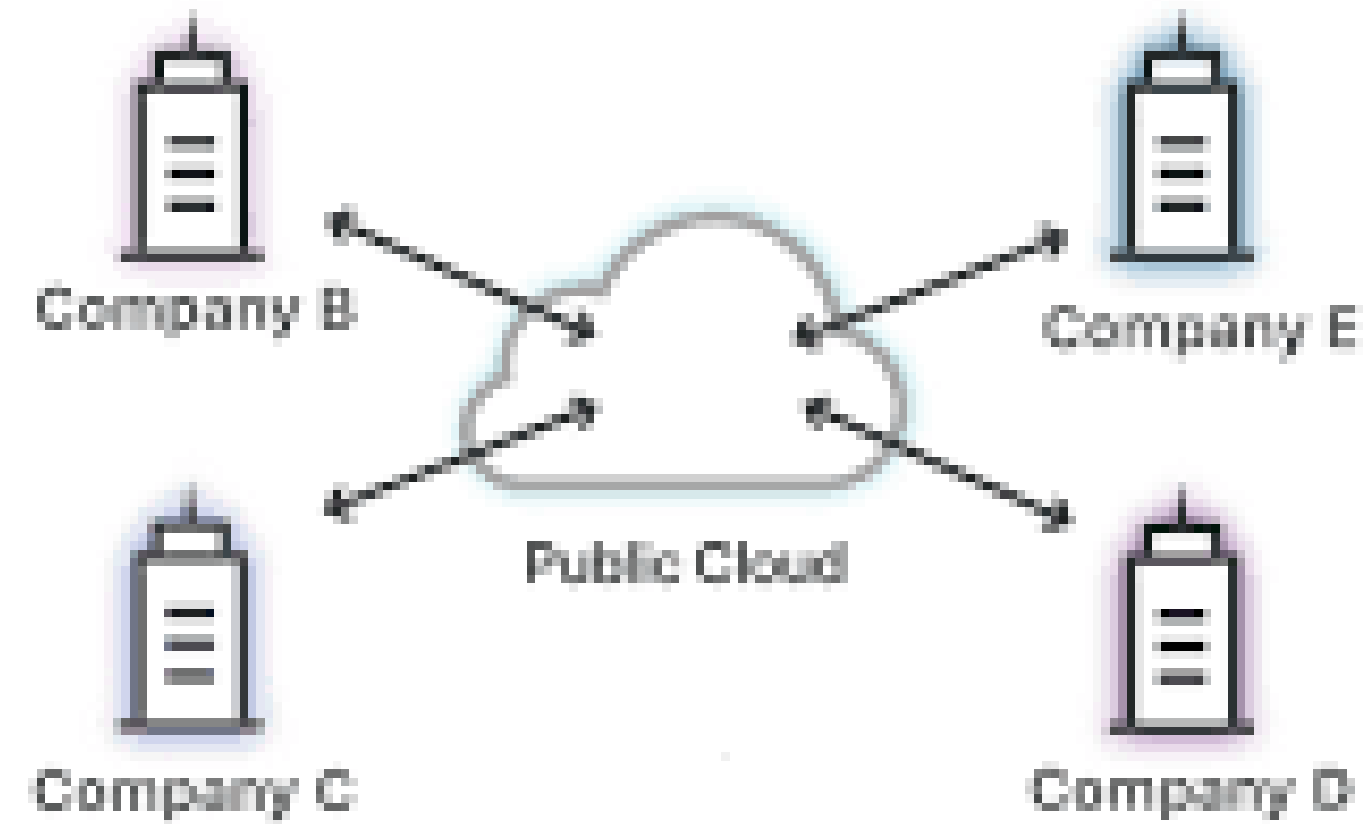
➤ **Big Data Processing:**

High-Performance Computing: Public cloud services can handle large-scale data processing tasks, such as analytics, AI, and machine learning, by providing access to vast computational power.

Private cloud



Public cloud shared by multiple companies





Thank You!