🌐 2. Key Feature or Characteristics of Cloud Computing

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Key Feature or Characteristics of Cloud Computing refers to the essential traits that define cloud computing services. According to AWS and NIST (National Institute of Standards and Technology), here are the **core characteristics** explained in a simple and memorable way:

🌐 Key Features of Cloud Computing

1️⃣ On-Demand Self-Service

- You can provision (launch), manage, or terminate resources like servers or storage without human interaction.
- **Real-life example**: Like using a vending machine — you select, pay, and get it instantly.

2️⃣ Broad Network Access

- Services are accessible from anywhere over the internet using laptops, phones, tablets, etc.
- **Example**: You can access your AWS EC2 or S3 resources from your browser or API anywhere in the world.

3️⃣ Resource Pooling (Multi-Tenant Model)

- Cloud providers serve multiple customers using shared resources (e.g., CPU, storage), dynamically assigned based on demand.
- **Analogy**: Like a hotel — different guests (users) use separate rooms (virtual resources), but share the same building (physical servers).

4️⃣ Rapid Elasticity

- Resources can automatically scale up or down as needed.
- **Example**: During Black Friday sales, AWS can add more EC2 servers instantly, and remove them when traffic drops.

5️⃣ Measured Service (Pay-as-You-Go)

- You only pay for what you use — whether it's compute hours, storage, or data transfer.
- **Analogy**: Like an electricity bill — billed by actual usage.

6️⃣ Agility

- The cloud allows rapid experimentation, testing, and deployment without the need for infrastructure investment.
- **Example**: Developers can spin up test environments in minutes, experiment, and shut them down just as quickly.