Practical no 2 : Cloud Computing Architecture

Aim: study of Cloud Computing Architecture

cloud computing technology is used by both small and large organizations to **store the information** in cloud and **access** it from anywhere at anytime using the internet connection.

Cloud computing architecture is a combination of **service-oriented architecture** and **event-driven architecture**.

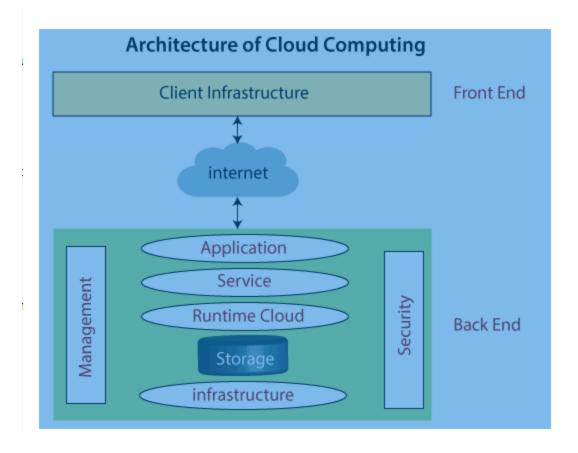
Cloud computing architecture is divided into the following two parts -

• Front End

-The front end includes web servers (including Chrome, Firefox, internet explorer, etc.), thin & fat clients, tablets, and mobile devices.

• Back End

-The back end is used by the service provider. It manages all the resources that are required to provide cloud computing services. It includes a huge amount of data storage, security mechanism, virtual machines.



Components of Cloud Computing Architecture

. Client Infrastructure

Client Infrastructure is a Front end component. It provides GUI (Graphical User Interface) to interact with the cloud.

The application may be any software or platform that a client wants to access.

3. Service

A Cloud Services manages that which type of service you access according to the client's requirement.

Cloud computing offers the following three type of services:

i. Software as a Service (SaaS) – It is also known as cloud application services. Mostly, SaaS applications run directly through the web browser means we do not require to download and install these applications. Some important example of SaaS is given below

Example: Google Apps, Salesforce Dropbox, Slack, Hubspot, Cisco WebEx.

ii. Platform as a Service (PaaS) – It is also known as **cloud platform services**. It is quite similar to SaaS, but the difference is that PaaS provides a platform for software creation, but using SaaS, we can access software over the internet without the need of any platform.

Example: Windows Azure, Force.com, Magento Commerce Cloud, OpenShift.

iii. Infrastructure as a Service (IaaS) – It is also known as **cloud infrastructure services**. It is responsible for managing applications data, middleware, and runtime environments.

Example: Amazon Web Services (AWS) EC2, Google Compute Engine (GCE), Cisco Metapod.

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Cloud-Based Software Development Platforms for Scalability

Cloud-Based Software Development Platforms for Scalability

Software development is a rapidly evolving field, and development teams need to be able to scale their processes and infrastructure to meet changing demands. Cloud-based software development platforms have become increasingly popular for development teams to manage their software development processes effectively. These platforms provide a scalable and flexible environment that enables development teams to work efficiently and effectively.

pecific benefits of using cloud-based software development platforms for scalability:

1. **Flexibility:** Cloud-based software development platforms provide a flexible

- environment that can meet the changing needs of development teams.
- 2. **Scalability:** Cloud-based software development platforms provide a scalable environment that can grow and evolve with business growth.
- 3. **Collaboration:** Cloud-based software development platforms provide collaboration tools for development teams, enabling them to work together more effectively and reduce communication overhead.

Example of Team management and collaboration

