CLOUD COMPUTING

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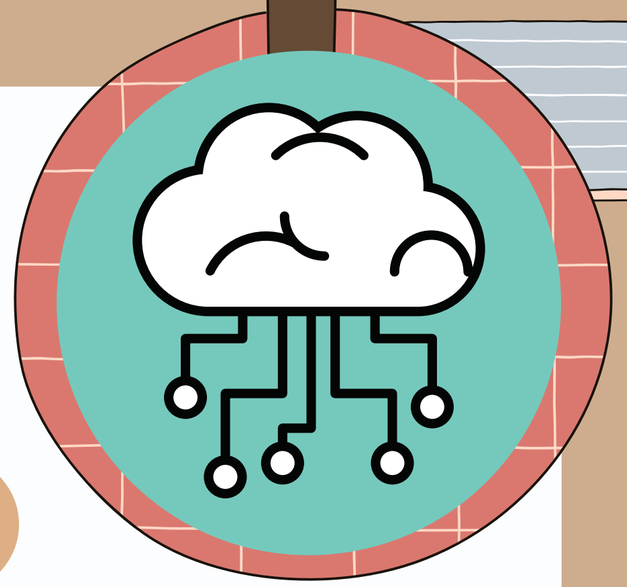
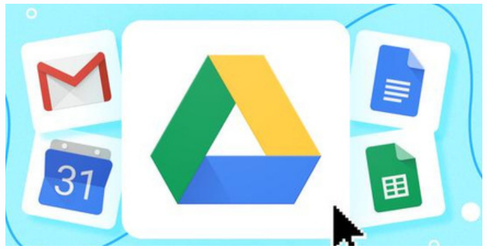
THE BASIC CONCEPTS OF CLOUD COMPUTING



Cloud Storage

The Internet acts as a “cloud” of servers



Definition

Cloud computing is the on-demand delivery of compute power, database, storage, applications, and other IT resources via the internet with pay-as-you-gopricing.

Infrastructure as software

Cloud computing enables you to stop thinking of your infrastructure as hardware, and instead think of (and use) it as software.

Traditional Computing Model

Infrastructure as hardware

Hardware solutions:

- Require space, staff, physical security, planning, capital expenditure
- Have a long hardware procurement cycle
- Require you to provision capacity by guessing theoretical maximum peaks

Cloud Computing Model

Infrastructure as software

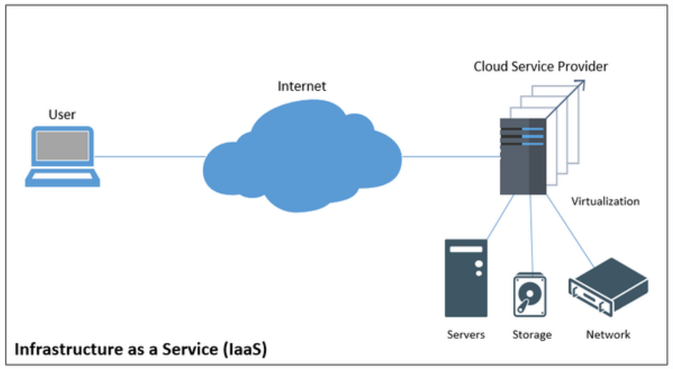
Software solutions:

- Are flexible
- Can change more quickly, easily, and cost-effectively than hardware solutions
- Eliminate the undifferentiated heavy-lifting tasks

The Internet

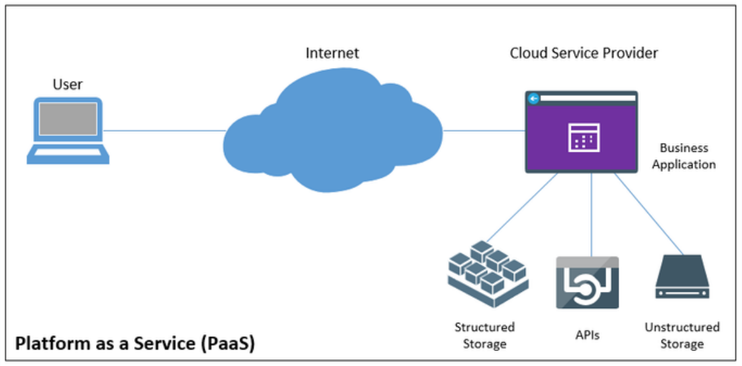
CLOUD SERVICE MODELS

Infrastructure as a service (Iaas)



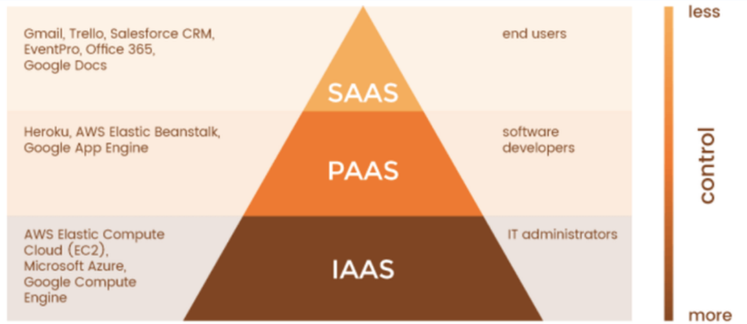
- Provide underlying infrastructure such as storage, servers, network and virtualization.
- Allows user to manages their own runtime, middleware and operating system on-demand.
- Migrating (move)
- Example : Microsoft Azure, IBM cloud and Google Compute Engine.

Platform as a service (Paas)



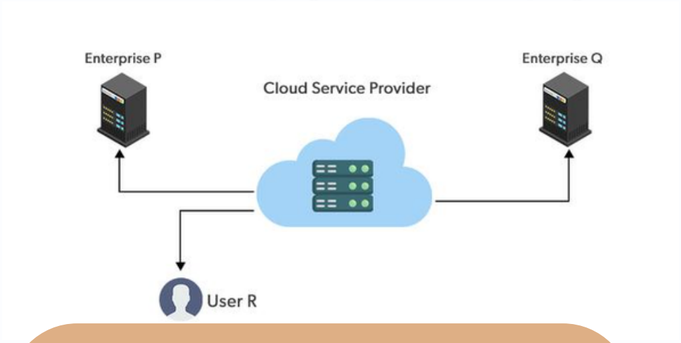
- Provide tools and services for application development.
- User do not need to manage the underlying infrastructure and only manage their application and data.
- Build
- Example : AWS Elastic Beanstalk, Google App Engine and Adobe Commerce

Software as a service (Saas)



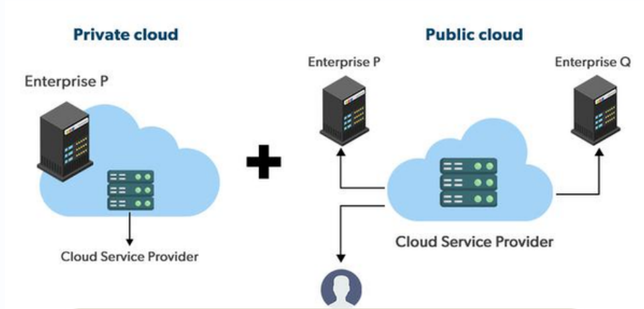
- Provide complete services or application to end-user.
- User do not need to manage the application or the underlying infrastructure.
- Usually accessed through web browser.
- Use
- Example : Dropbox, Google Workspace and Salesforce.

CLOUD COMPUTING DEPLOYMENT MODELS



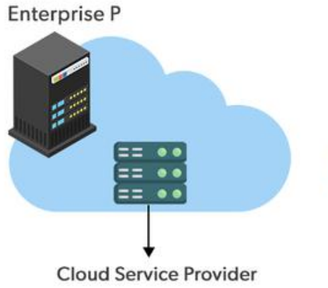
CLOUD

- Possible for anybody to access systems and services.
- Provided over the internet to the general people or major industry groups.
- Storage backup and retrieval services are given for free on a per-user basis.
- Example: Google Docs, Google Drive etc.



HYBRID

- The most common method of hybrid deployment is between the cloud and existing on-premises infrastructure.
- Can host the app in a secure location and benefit from the public cloud's financial.
- Organizations can move data and applications between different clouds.
- Example: Azure Stack



ON-PREMISES

- It's a one-on-one environment for a single user.
- Shared with private organizations by service providers over the internet.
- Specific services as per the need of the enterprise are available in a private cloud.
- Example : Microsoft KVM, VMWare etc.

JAIN, S. (2023, MAY 3). CLOUD DEPLOYMENT MODELS. GEEKSFORGEEKS. RETRIEVED NOVEMBER 8, 2023, FROM HTTPS://WWW.GEEKSFORGEEKS.ORG/CLOUD-DEPLOYMENT-MODELS/

ADVANTAGES OF CLOUD COMPUTING

- Trade capital expense for variable expense
- Massive economies of scale
- Eliminate capacity planning guesswork
- Enhance speed and agility
- Quit investing in data centre operations and maintenance
- Expand quickly over the world

CHALLENGES OF CLOUD COMPUTING

POLICY AND ORGANIZATION ISSUE

- Dataprivacy and Protection
- Licensing Risk

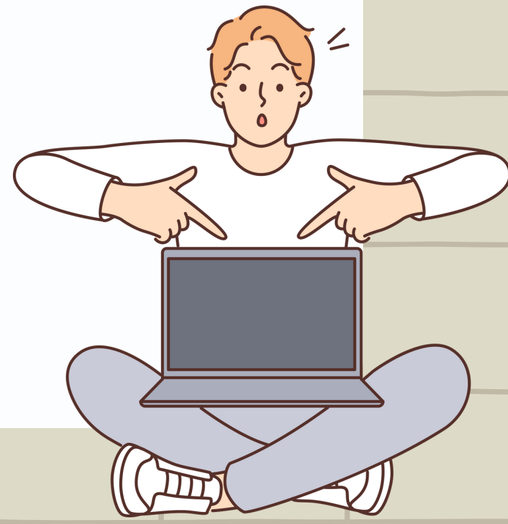
LEGAL ISSUE

Major problem in cloud computing

- Malicious insider
- Denial of Service
- Natural Disaster

TECHNICAL ISSUE

- Lock-in Vendor
- Loss of Governanance



EXTRA

Microsoft Azure:

- Owned by Microsoft Corporation's Intelligent Cloud
- Second largest cloud service

- The company delivers a consistent hybrid cloud experience, developer productivity, artificial intelligence (AI) capabilities, and security & compliance.
- Build, run, and manage applications across multiple clouds, on-premises and at the edge, with the tools.


Thank You