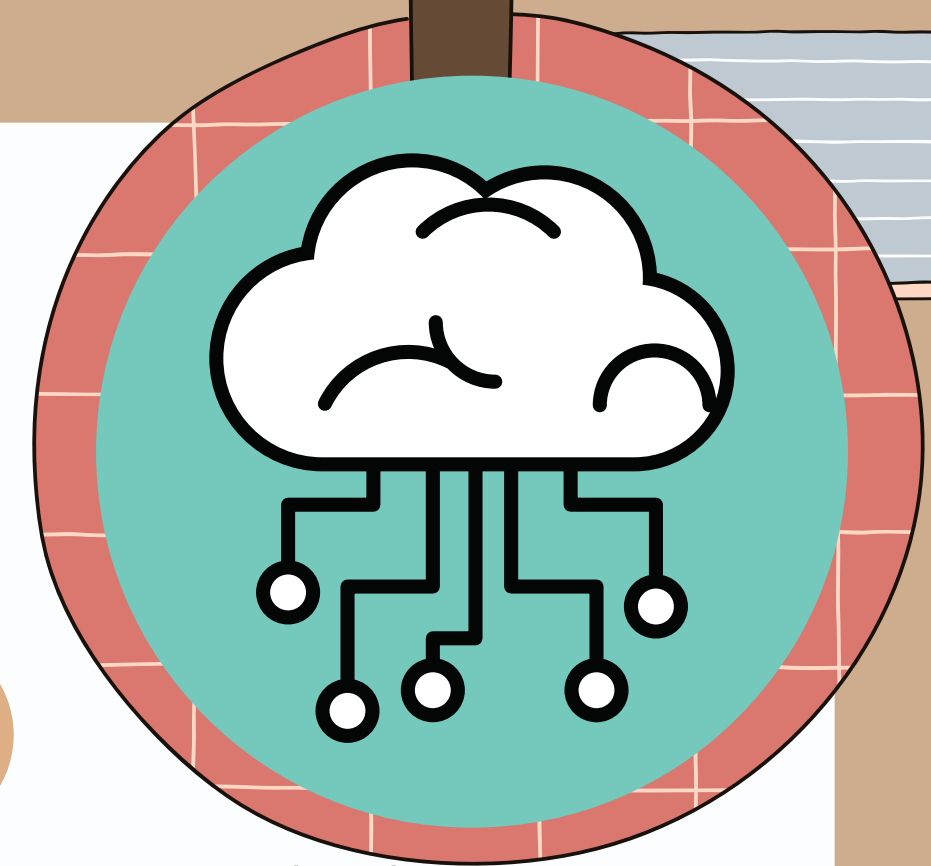


CLOUD COMPUTING

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THE BASIC CONCEPTS OF CLOUD COMPUTING



Cloud Storage

The Internet acts as a “cloud” of servers



Definition

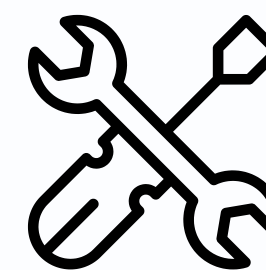
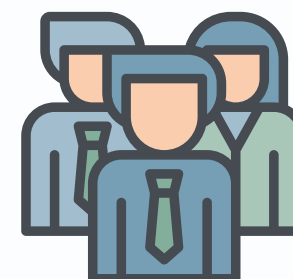
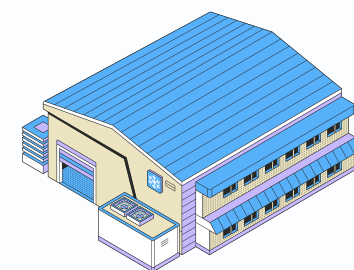
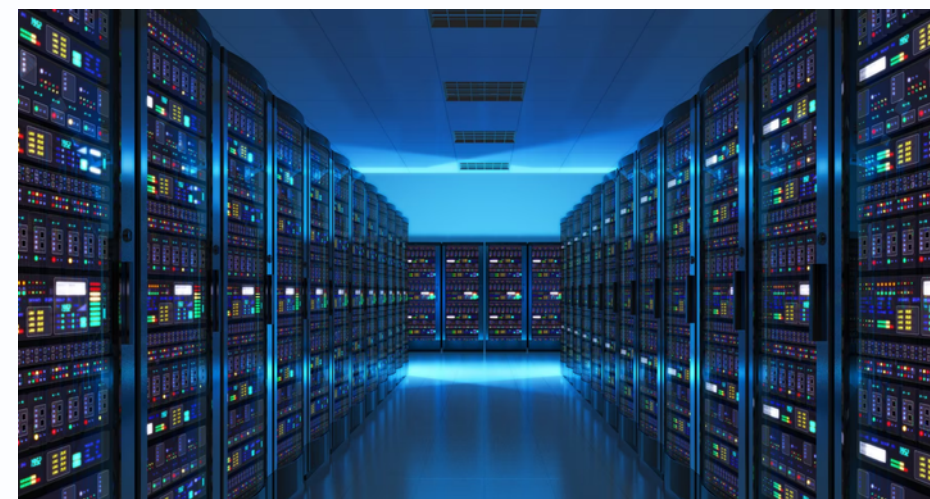
Cloud computing is the on-demand delivery of compute power, database, storage, applications, and other IT resources via the internet with pay-as-you-go pricing.



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



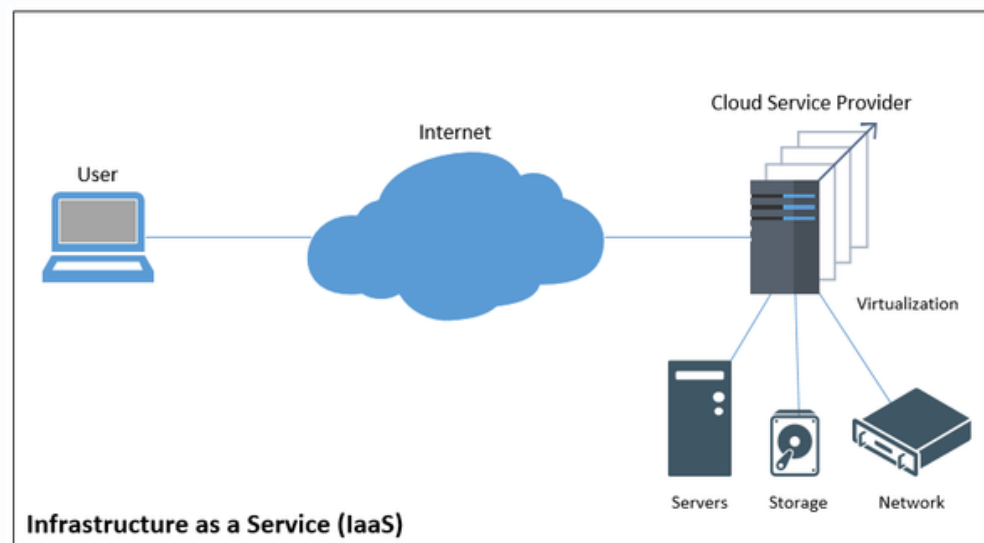
Cloud Computing Model



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

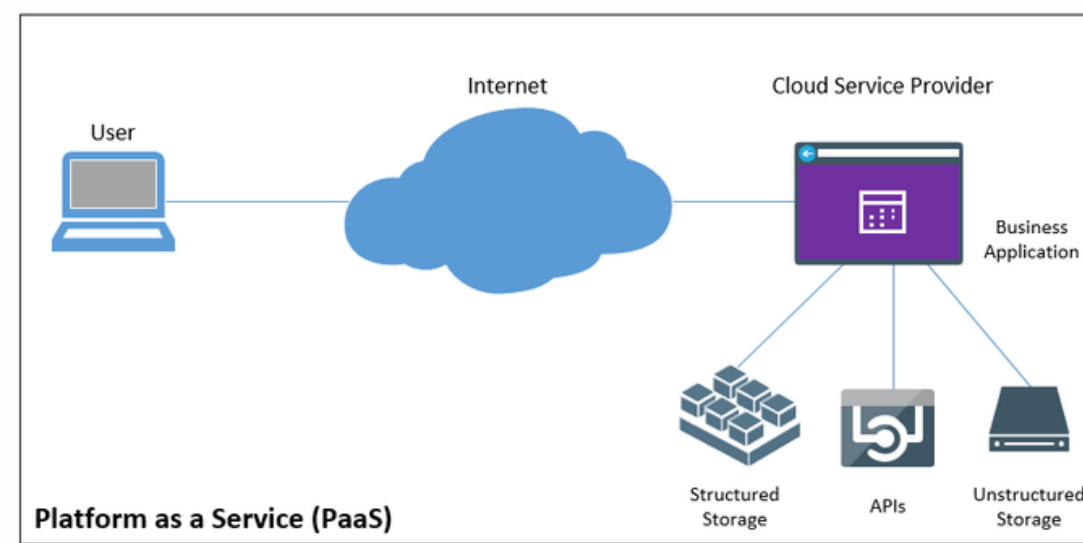
CLOUD SERVICE MODELS

Infrastructure as a service (IaaS)



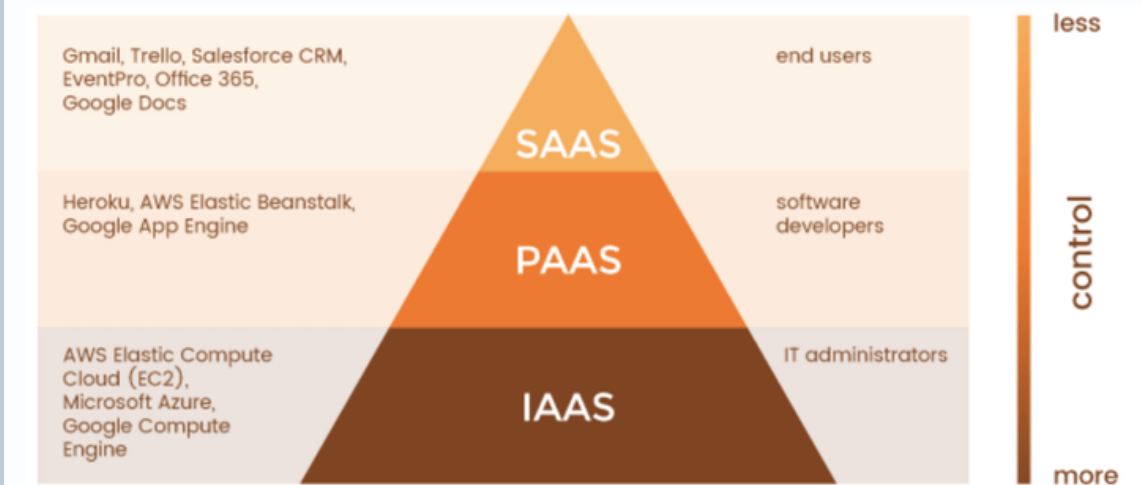
- Provide underlying infrastructure such as storage, servers, network and virtualization.
- Allows user to manage their own runtime, middleware and operating system on-demand.
- Migrating (move)
- Example : Microsoft Azure, IBM cloud and Google Compute Engine.

Platform as a service (PaaS)



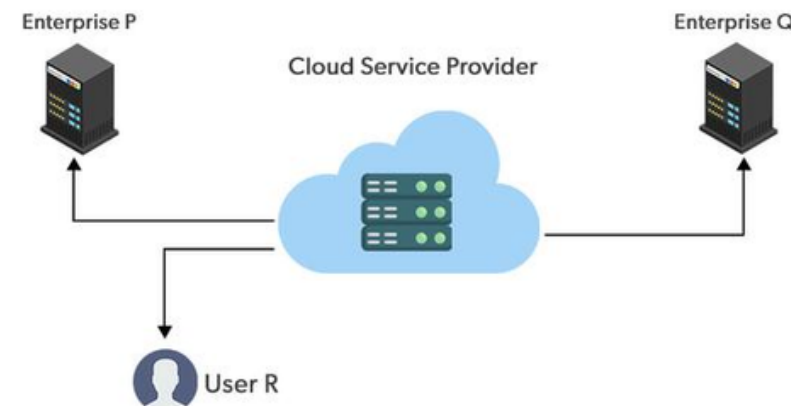
- Provide tools and services for application development.
- User do not need to manage the underlying infrastructure and only manage their application and data.
- Build
- Example : AWS Elastic Beanstalk, Google App Engine and Adobe Commerce

Software as a service (SaaS)



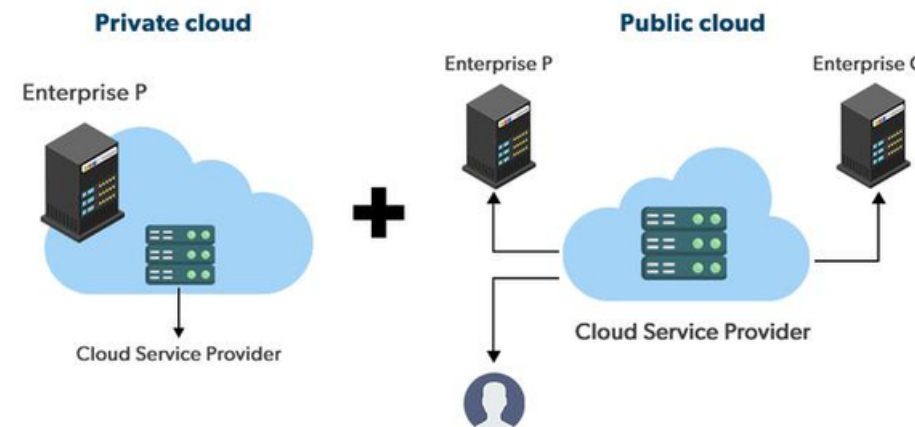
- Provide complete services or application to end-user.
- User do not need to manage the application or the underlying infrastructure.
- Usually accessed through web browser.
- Use
- Example : Dropbox, Google Workspace and Salesforce.

CLOUD COMPUTING DEPLOYMENT MODELS



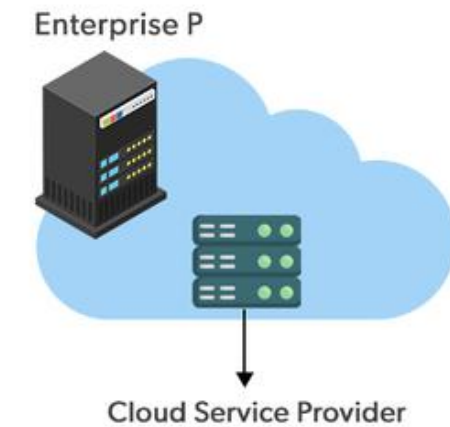
CLOUD

- 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.

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



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graph TD; A[CHALLENGES OF CLOUD COMPUTING] --> B[POLICY AND ORGANIZATION ISSUE]; A --> C[LEGAL ISSUE]; A --> D[TECHNICAL ISSUE]; B --> B1[• Dataprivacy and Protection]; B --> B2[• Licensing Risk]; C --> C1[Major problem in cloud computing]; C --> C2[• Malicious insider]; C --> C3[• Denial of Service]; C --> C4[• Natural Disaster]; D --> D1[• Lock-in Vendor]; D --> D2[• Loss of Governanance];
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POLICY AND ORGANIZATION ISSUE

- Dataprivacy and Protection
- Licensing Risk

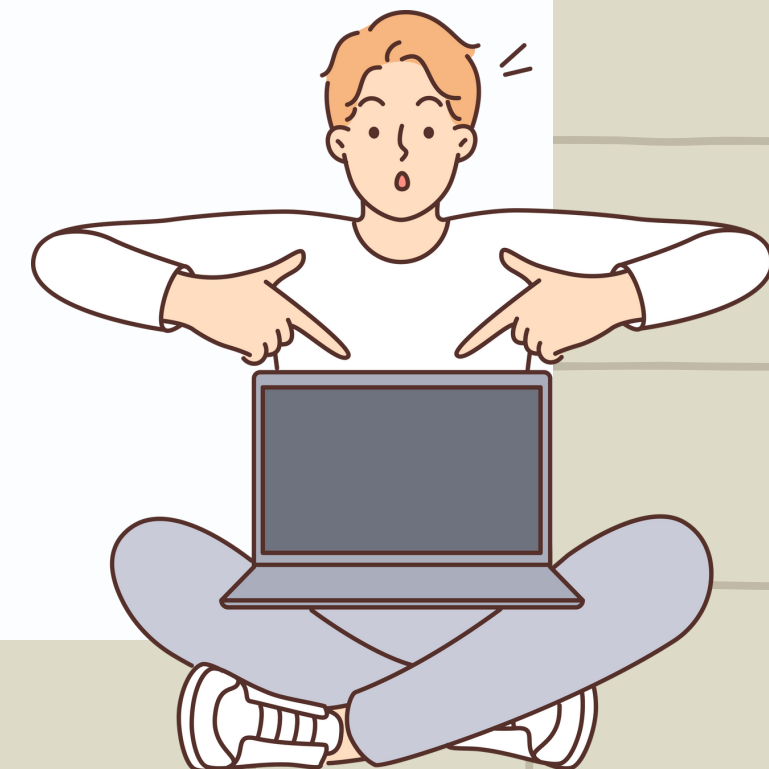
LEGAL ISSUE

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