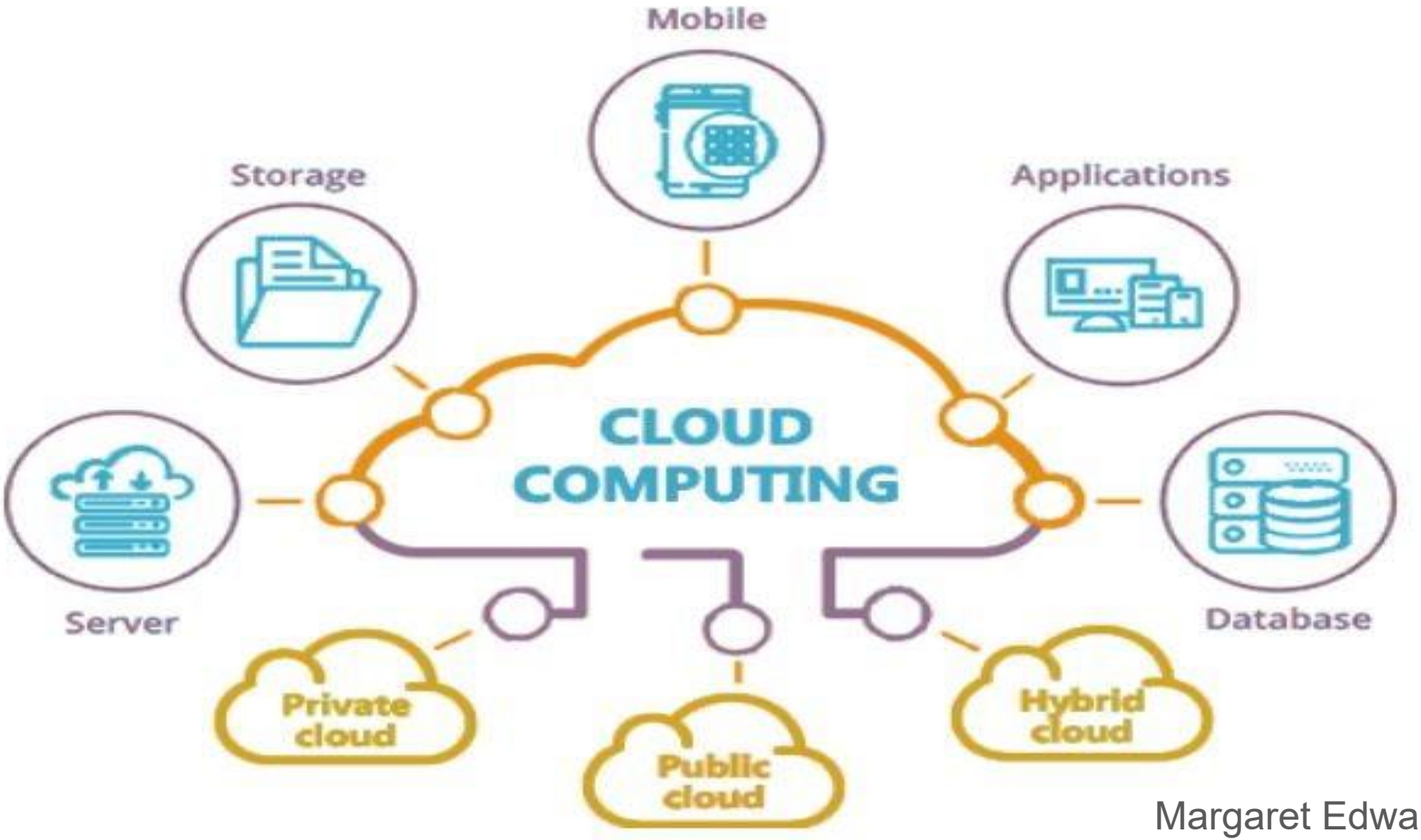


Margaret Edwards

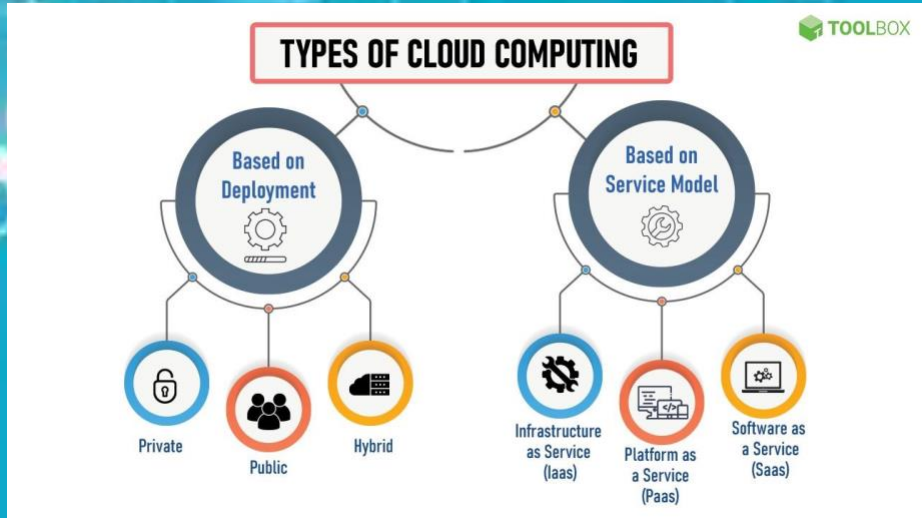
Types of Cloud Computing (Deployment Models)

Private

- A computing environment that is exclusively used by a single organization.
- Offers a higher level of control and security, making them suitable for handling sensitive data.
- The hybrid cloud environment typically involves ● The end-user organization is responsible for the establishing connections between on-premises operation of a private cloud as if it were a traditional data centers and public cloud services. on-premises infrastructure.

Hybrid

- A hybrid cloud integrates on-premises infrastructure, private cloud, and third-party public cloud services.



Public

- A public cloud is operated and managed by a third-party service provider rather than an organization's internal IT team.
- The infrastructure, maintenance, and security of the public cloud are the responsibility of the external service provider.

Types of Cloud Computing (Service Models)

IaaS

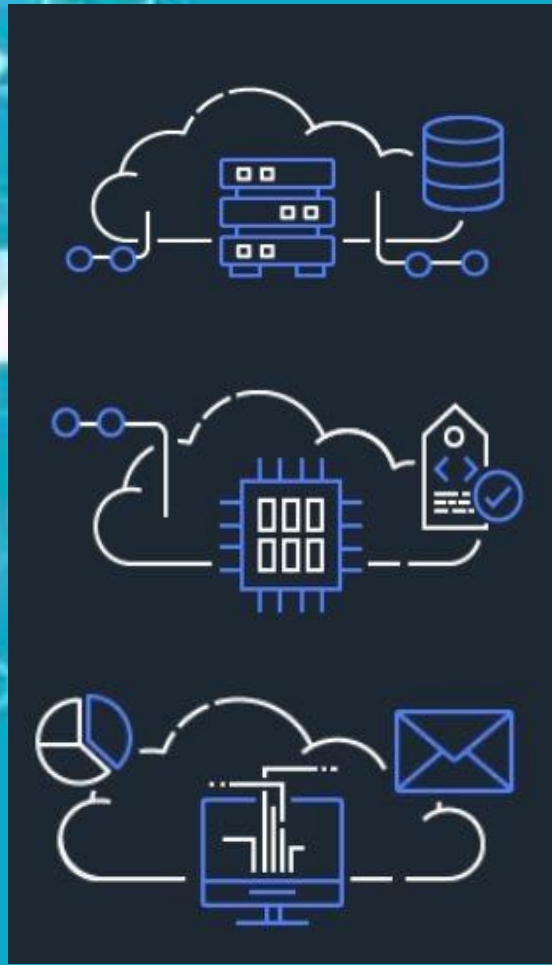
- Infrastructure as a Service (IaaS) constitutes the fundamental components for cloud IT infrastructure.
- Provides access to networking features, virtual or dedicated hardware for computing, and storage space for data.
- IaaS offers the utmost flexibility and management control over IT resources.

PaaS

- Platform as a Service (PaaS) eliminates the necessity to manage underlying infrastructure, typically hardware and operating systems.
- Allows a focus on application deployment and management
- PaaS relieves users from the routine tasks associated with running applications.

SaaS

- Software as a Service (SaaS) delivers a fully managed product by the service provider.
- With SaaS, users only need to focus on utilizing the specific software, not worrying about the intricacies of maintenance or infrastructure management.



Amazon Web Services

- Amazon Web Services (AWS), launched in 2006, is a leading cloud services platform that offers a wide range of infrastructure services, platform services, and software services.
- Widely adopted by enterprises of all sizes, startups, and government organizations for various computing needs.
- AWS plays a crucial role in the streaming entertainment industry, powering popular platforms like Netflix, Hulu, and Disney+.

AWS Computing services

EC2

- Amazon Elastic Compute Cloud (EC2) is a core service within Amazon Web Services (AWS).
- EC2 provides scalable virtual servers in the cloud, allowing users to run applications and manage computational workloads.
- Users have the flexibility to choose different instance types optimized for diverse workloads, ensuring tailored computational resources based on specific requirements.

Lambda

- AWS Lambda is a serverless computing service that allows you to run code without provisioning or managing servers.
- Lambda executes code in response to events, automatically scaling based on workload demands.
- With Lambda, you only pay for the compute time consumed during code execution, offering cost efficiency and flexibility.

AWS Storage services

S3 (Simple Storage Service)

- Amazon S3 (Simple Storage Service) is a scalable and secure object storage service offered by AWS.
- S3 enables users to store and retrieve any amount of data from anywhere on the web, making it highly versatile.

EBS (Elastic Block Store)

- EBS is a scalable block storage service provided by Amazon Web Services (AWS).
- It allows users to create persistent block storage volumes that can be attached to Amazon EC2 instances.
- EBS is designed to deliver high-performance and reliable storage for applications and data within the AWS cloud environment.

Benefits of Cloud computing

Cost efficiency

- Pay only for the resources you consume, reducing upfront infrastructure costs. (Pay-as-You-Go Model)
- No need for ongoing maintenance and upgrades of physical hardware.
- Adjust resources based on demand, optimizing costs during varying workloads.

Accessibility and Collaboration

- Services are accessible over the internet from anywhere in the world.
- Users can access cloud services from various devices, including laptops, smartphones, and tablets 24/7.
- Facilitates seamless collaboration among geographically dispersed teams.

Scalability and Performance

- No need to allocate excessive resources upfront for potential future demand peaks.
- Effortlessly scale resources up or down to accommodate changes in business activity.
- Efficiently handle increased workloads without compromising performance.

Leading Cloud Service Providers

Amazon Web Services (AWS), Microsoft Azure, and Google

Cloud Platform (GCP) collectively dominate the cloud market, with AWS holding the largest market share at around 32%.

AWS, Microsoft Azure, and Google Cloud have data centers spread across the globe, with AWS operating in 25 geographic regions.

Statistics

The global cloud computing market is expected to reach $927.51 billion by 2027, growing at a CAGR of 14.9% from 2020 to 2027

Cost Savings:

- 70% of organizations report saving money by moving to the cloud.

Remote Work Impact:

- The COVID-19 pandemic accelerated cloud adoption, with 91% of businesses citing the cloud as essential for meeting the demands of remote work.

Business Impact:

- Cloud users experience an average of 21.7% improvement in time-to-market and a 20.66% reduction in IT spending.

Thank You!