Cloud computing can be categorized based on deployment models and service models.

Deployment Models

- **Public Cloud: Everything is stored and accessed through the internet, and permissions can be given to internet users.**
- **Private Cloud: Infrastructure is exclusively for a single organization, either locally or outsourced to a public cloud provider.**
- **Hybrid Cloud: Combination of public and private cloud, allowing organizations to keep some applications locally and some in the cloud.**

Service Models

- **Infrastructure as a Service (IaaS): Renting servers, network, and storage on an hourly basis, with access to the provisioned resources.**
- **Platform as a Service (PaaS): Providers offer a prebuilt platform where users can deploy their codes and applications.**
- **Software as a Service (SaaS): Cloud providers sell end products, such as software or applications, on a subscription basis.**

The software and client maintain full control of the software and do not maintain any equipment. Amazon and Azure also sell products that are software as a service. The chart below explains the difference between the four models:

- **On-premises: The client manages all resources**
- **Infrastructure as a Service: The client manages some resources**
- **Platform as a Service: The client manages fewer resources**
- **Software as a Service: The client buys the software and does not manage any infrastructure**

The life cycle of a cloud computing solution starts with understanding the requirements. It is important to properly pick the right service offered by the provider based on these requirements. Defining the hardware and storage, as well as the network and security services, are also crucial steps. Additionally, there are various deployment, automation, monitoring, and testing tools available.

Disk Storage: Choose between HDD or solid-state drives for cost-effective storage options for virtual machines.

Blob Storage: Optimized for storing massive amounts of unstructured data, including text and binary data.

File Storage: Managed file storage accessible via the SMB protocol.

Queue Storage: Provides durable message queuing for large workloads accessible from anywhere in the world.

Azure can be used for application development, testing, hosting web applications, creating virtual machines, integrating features, collecting and storing metrics, virtual hard drives for storing large amounts of data, and much more.

If you're looking for a video that explains all the services in Azure, click on the top right corner for an AWS versus Azure comparison video.

Without any further delay, let's get started!

In a city not so far away, a CEO had plans to expand his company globally. He called one of his IT personnel, Mike, for an IT opinion. Mike explained the situation: the company's data centers were running out of space, and setting up new ones would be expensive and time-consuming. The CEO had done his homework and came up with a solution called Microsoft Azure.

Mike, being an honest and hardworking IT professional, asked how Azure solves the problem. The CEO began explaining Azure and its cloud computing services.

Microsoft Azure is a cloud service provider that offers a range of cloud services, including compute, analytics, storage, and networking. It allows users to develop and scale applications, as well as run existing applications in the public cloud. Azure is both a platform as a service and infrastructure as a service.