What is cloud computing?

The “cloud” is just someone else’s computer.

Could computing is special because it enables the ability to rent computing resources on demand.

Services:

There are multiple services available in Azure (Link: https://portal.azure.com/#allservices/category/All)

Shared Responsibility Model

For on premises responsibility is on you. This includes building security, physical security, physical computer security, operating system patches, network and firewall settings, application settings, authentication platform, user accounts, devices, and data.

Cloud virtual machine responsibility is responsible for physical aspects. This includes building security, physical security, and physical computer security.

There is also “Cloud App Service Responsibility”. In this case, cloud providers provide hardware and operating systems, and we are allowed to run the apps. In this case we are sharing responsibility for networking and firewall settings.

In “Cloud SaaS Responsibility”, could provider take responsibility up to application settings. Then shared responsibility in authentication platform, and the rest becomes user responsibilities.

Could Environments

Mainly there are 3 types of cloud environments: public, private, and hybrid.

Public Cloud:

The public cloud is defined as computing services offered by third-party providers (MS Azure) over the public internet, making them available to anyone who want to use or purchase them.

In Azure case, Microsoft owns the hardware on their network and infrastructure. As a customer, we simply rent/subscribe to those services by creating an account. In this case it comes as a operational expenditure (OpEx).

Private cloud:

The private cloud is defined as computing services offered either over the internet or a private internal network or a private internal network and only to select users instead of the general public. Here access is restricted and as we own the hardware/rent it is a capital expenditure (CapEx). Example: Government cloud

MS offer Azure Local (formerly Azure Stack HCI): This let run Azure functionality in own private hardware.

Hybrid Cloud:

This is a computing environment that combines a private cloud with a public cloud.

Cloud Pricing

Cloud pricing depends on how you actually use it. This is convenience and unpredictable at the same time. When suing Azure there are several factors affecting pricing. For a virtual machine: region, operating system, size (CPU and RAM), disk type (SSD), bandwidth, backup storage.

Azure pricing falls into a few categories: pay for time (compute time), pay for GB for storage, pay for operations (read, write, list, delete).