



Intro to Cloud Computing

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- SRE Nivel 3
- 17+ years in IT industry
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Important Notes



Identify yourself in Zoom, using your name and last name



Mute your microphone along the course unless you have questions



Raise the hand if you have questions during the session



Focus your questions on the presented topic

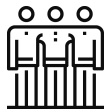


Turn off your camera in case of connection issues

DSA Code of Conduct



Be respectful, there are no bad questions or ideas.



Be welcoming and patient



Be careful in the words that you choose

Session Goal

At the end of this session, you will be able to:

- Become familiar with the cloud computing concepts and benefits.
- Understand the shared responsibility model and which security tasks are handled by the cloud provider and which tasks are handled by you.
- Know the main cloud models and their own set of benefits could serve the needs of various businesses
- Be able to calculate the pricing of Azure services based on your business case.

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An overview of what is cloud computing



Shared responsibility models

Relieve the customer's operational burden



Cloud models

The three major cloud service models



Consumption-based model

Service provision and payment scheme





Introduction

An overview of what is cloud computing



CLOUD COMPUTING STATISTICS BY THE NUMBERS

The value of the global
**CLOUD COMPUTING
MARKET**



\$371.4 billion in 2020

\$832.1 billion by 2025



94%
OF ALL ENTERPRISES
use cloud services

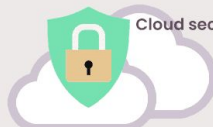
48%
OF BUSINESSES



store classified and most important data
on the cloud

HUMAN ERROR
is to blame
for cloud breaches in

88%  **of cases**



Cloud security is a top concern for

3/4
ENTERPRISES

By 2025, there will be over

100 ZETTABYTES
OF DATA STORED IN THE CLOUD

*1 zettabyte = 1,000,000,000 (1 billion) terabytes = 1,000,000,000,000 (1 trillion) gigabytes



[Last Updated: 07 Jun'22](#)

What is cloud computing?

It's the delivery of computing services over the internet, which is otherwise known as the cloud. These services include servers, storage, databases, networking, software, analytics, and intelligence. Cloud computing offers faster innovation, flexible resources, and economies of scale.



Why is cloud computing typically cheaper to use?

You typically pay only for the cloud services you use, by using a pay-as-you-go pricing model:

1. Lower your operating costs.
2. Run your infrastructure more efficiently.
3. Scale as your business needs change.



Why should I move to the cloud?

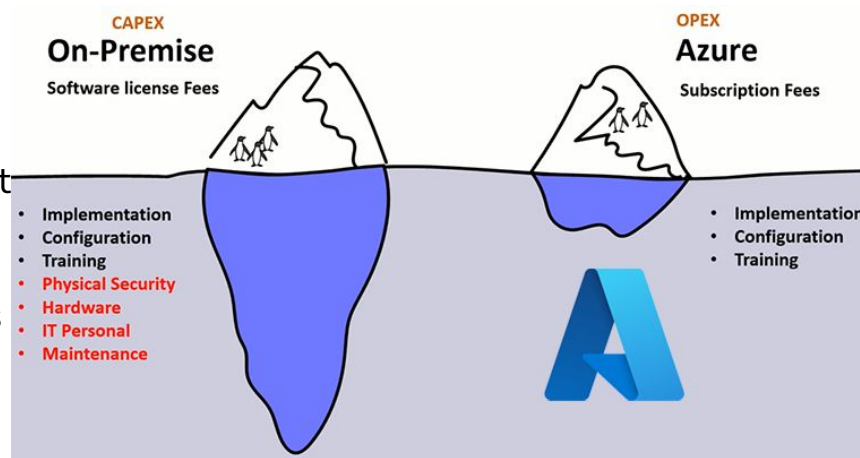
The cloud helps you move faster and innovate in ways that were once nearly impossible.

1. Teams deliver new features to their users at record speeds.
2. Users expect an increasingly rich and immersive experience with their devices and with software.



What is TCO in cloud computing?

Is a method used to tally the various costs to host, run, integrate, secure and manage workloads in the cloud over their lifetime. These include fees associated with the resources consumed, such as compute, data transfer and storage.

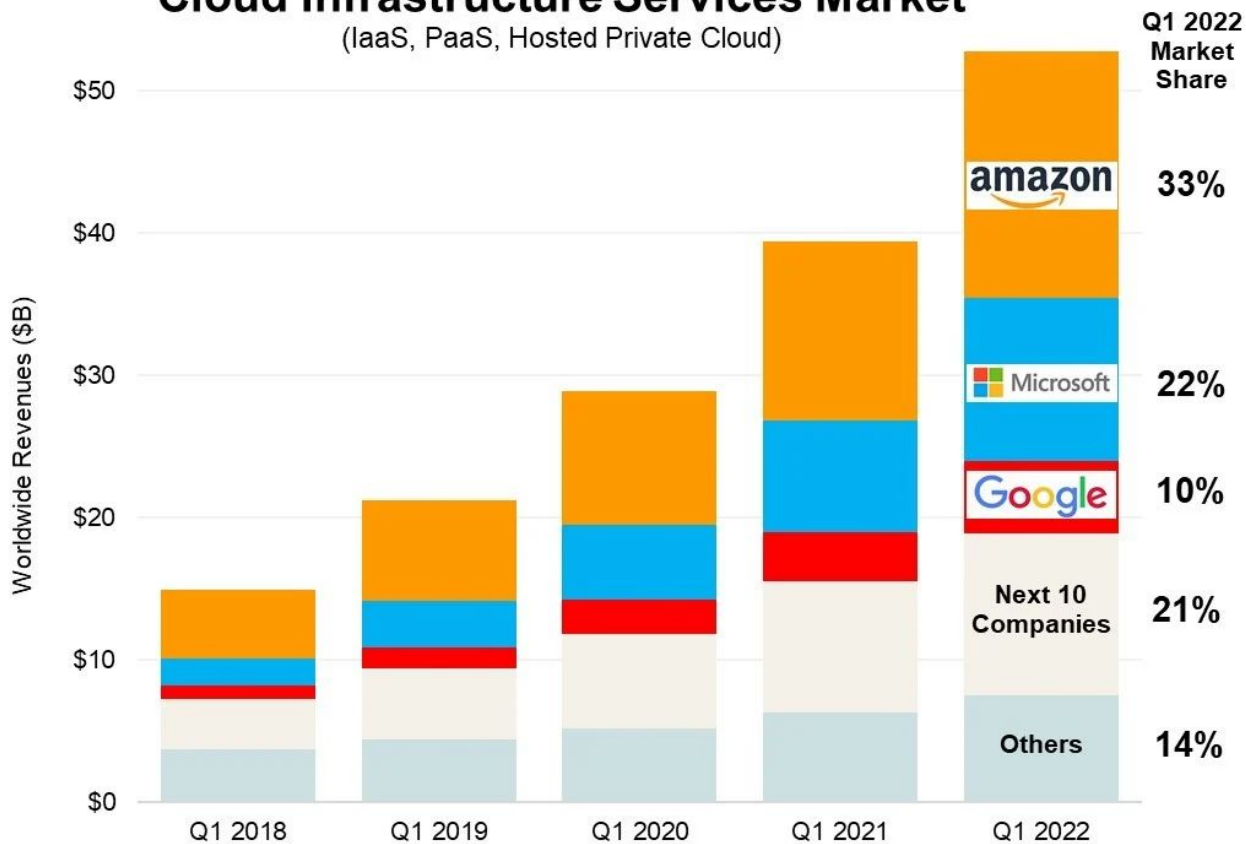


Cloud providers



Cloud Infrastructure Services Market

(IaaS, PaaS, Hosted Private Cloud)



Source: Synergy Research Group

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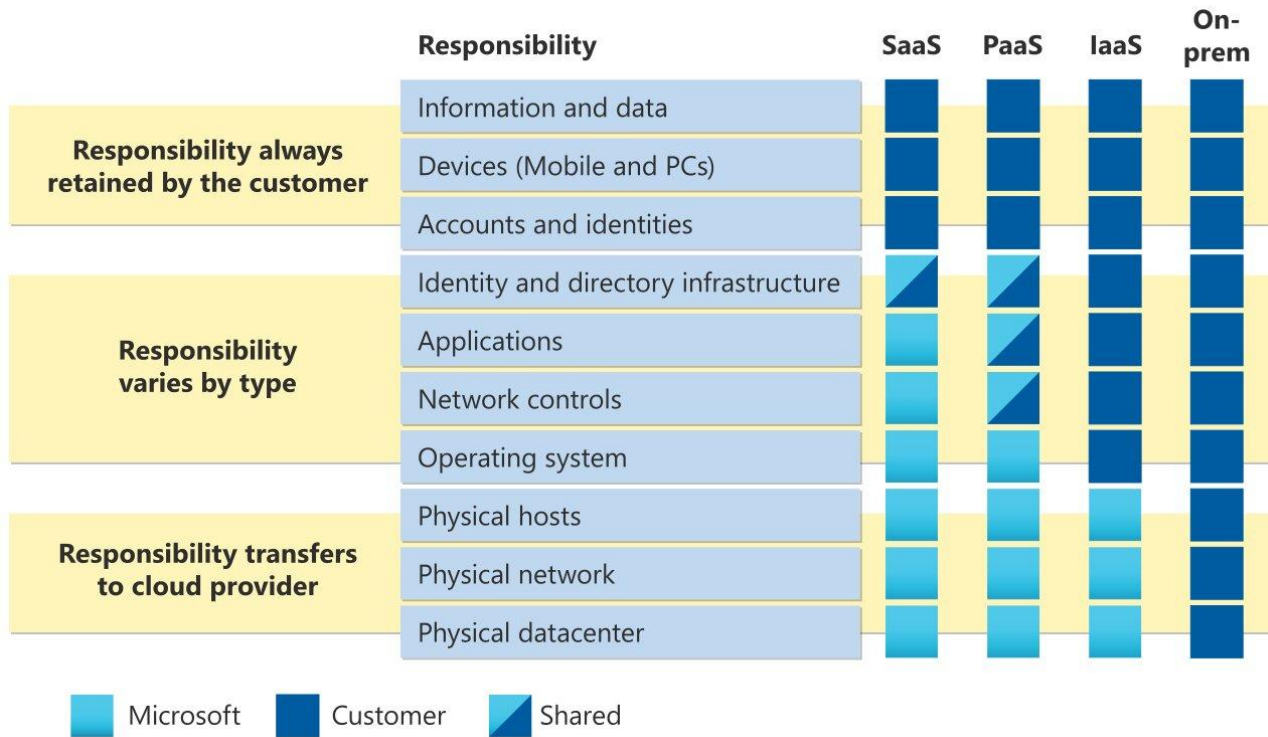




Shared responsibility models

Relieve the customer's operational burden

Division of responsibility



Pizza as a service

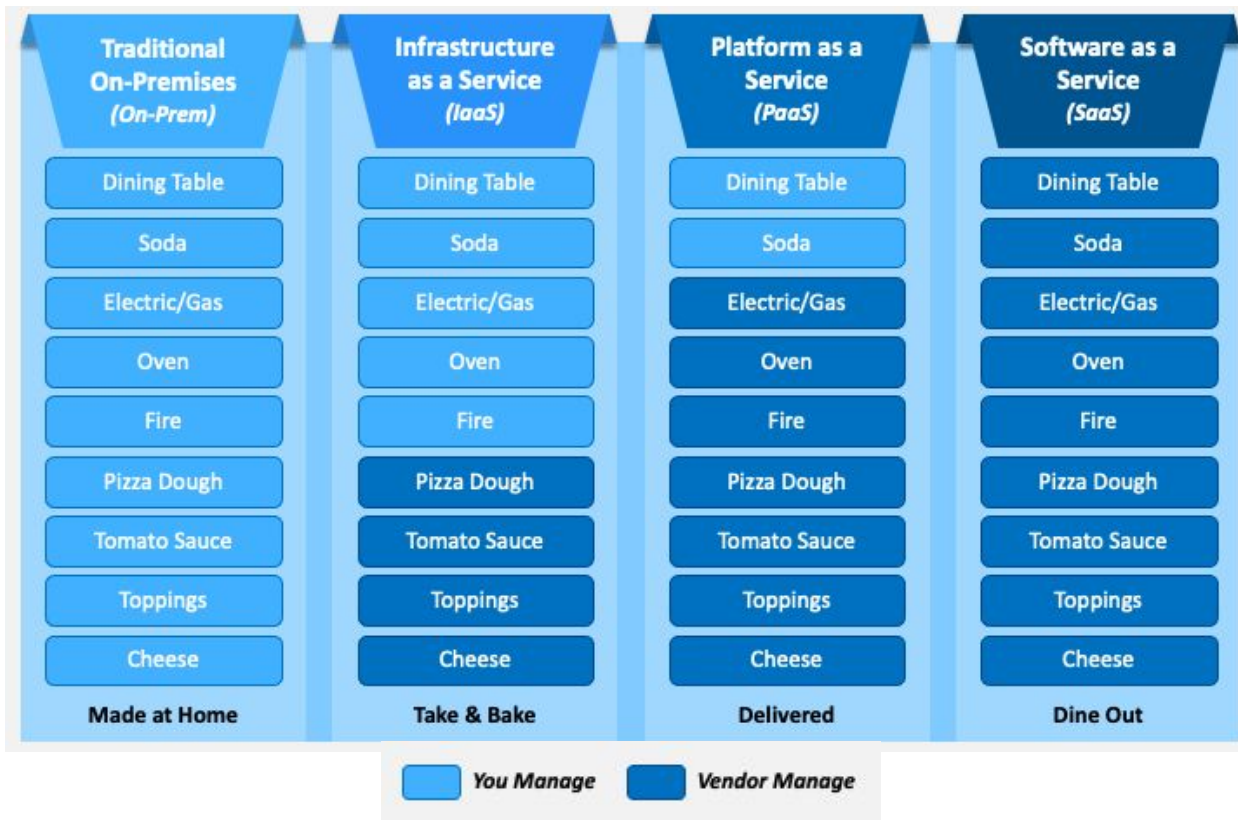


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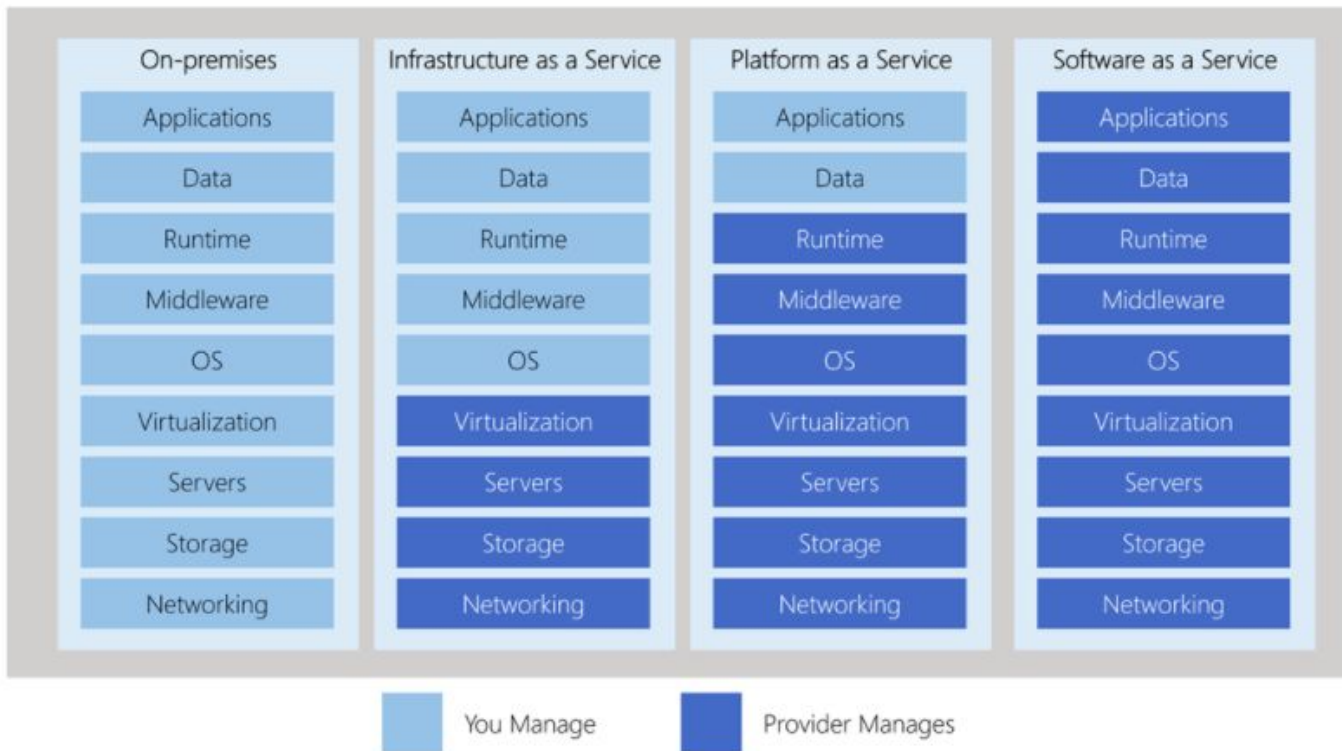


Cloud models



The three major cloud service models

Azure Cloud Service Models



Infrastructure as a service (IaaS)

1. You are responsible for managing the operating systems, data, and applications.
2. IaaS helps you to extend resources rapidly to meet the spikes required for your application.



Azure Virtual Machine



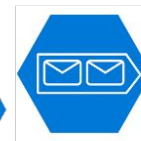
Blob Storage



File Storage



Table Storage



Queue Storage

Platform as a service (PaaS)

1. Less user management
2. The operating systems are managed by the cloud provider, while the user is responsible for the applications and data they run and store.
3. PaaS offers all the functionality you need to support the entire lifecycle of web applications: building, testing the application, deploying the source code, managing, and updating within the same integrated environment.



Azure App Service



Azure SQL Database



Azure Databases MySQL



Azure Databases for PostgreSQL



Azure Databases for MariaDB

Software as a service (SaaS)

1. Least amount of management
2. The cloud provider is responsible for managing everything, and the end-user just uses the software.
3. Allows users to connect to and use cloud-based apps over the Internet.
Common examples are email, calendaring, and office tools (such as Microsoft Office 365).



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Consumption-based model



Service provision and payment scheme

Consumption and fixed cost models



Fixed cost models

Consumption-based
price

Consumption-based price

You are charged for only what you use. This model is also known as the Pay-As-You-Go rate.

Fixed price

You provision resources and are charged for those instances whether or not they are used.

Free tier

The Azure Free Tier provides you the ability to explore and try out Azure services free of charge up to specified limits for each service. The Free Tier is comprised of three different types of offerings, a 12-month Free Tier, an Always Free offer, and short-term trials.

Azure: The Free Tier



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Overall Recap and Takeaways



Recap:

- Cloud computing benefits
- Cloud Providers
- Shared responsibility
- Cloud models (IaaS, PaaS & SaaS)
- Cost models

Q&A



Resources



References of interest:

- [What is Azure?](#)
- [Case study introduction](#)
- [Create your Azure Free account](#)
- [Azure pricing calculator](#)



Thank you