M.Sc.(Cs)-I Sem-I 2021-2022

MICROSOFT AZURE

BY,

A09 Aniruddha Dighe

A15   Dhiraj Patil

Table Of Content

- History.
- Microsoft Azure.
- Microsoft Azure in the Cloud Computing?
- What Is Microsoft Azure Cloud Service?
- How Microsoft Views the Cloud?
- What Is Microsoft Azure Used For?
- Microsoft Azure Architecture Details.
- Microsoft Azure Features

Microsoft Azure

- What is Microsoft Azure and how it works?
  Azure is **a cloud computing platform and an online portal that allows you to access and manage cloud services and resources provided by Microsoft**. These services and resources include storing your data and transforming it, depending on your requirements.

History

- Microsoft Azure is a public cloud platform with more than 200 products and services accessible over the public internet. Like other public cloud vendors, Azure manages and maintains hardware, infrastructure, and resources that can be accessed for free or pay-per-use, on-demand basis.

- Since its creation in 2008, Microsoft Azure has grown to become the second-largest of the top three public cloud platforms just behind market leader Amazon Web Services (AWS) and ahead of Google Cloud Platform (GCP).

- As of the second quarter of 2021, AWS controlled 31% of the market, Microsoft Azure took 22%, and Google Cloud sat at 8% market share — according to Statista.

- Today, Microsoft Azure serves millions of applications, integrations, and customers. But its humble origins can be traced back to 2008 when it was announced as Project Red Dog.

- The name "Azure" for those who never got too deep into the jumbo-sized crayon box is taken from a lovely shade of sky blue.

WHAT IS AZURE?

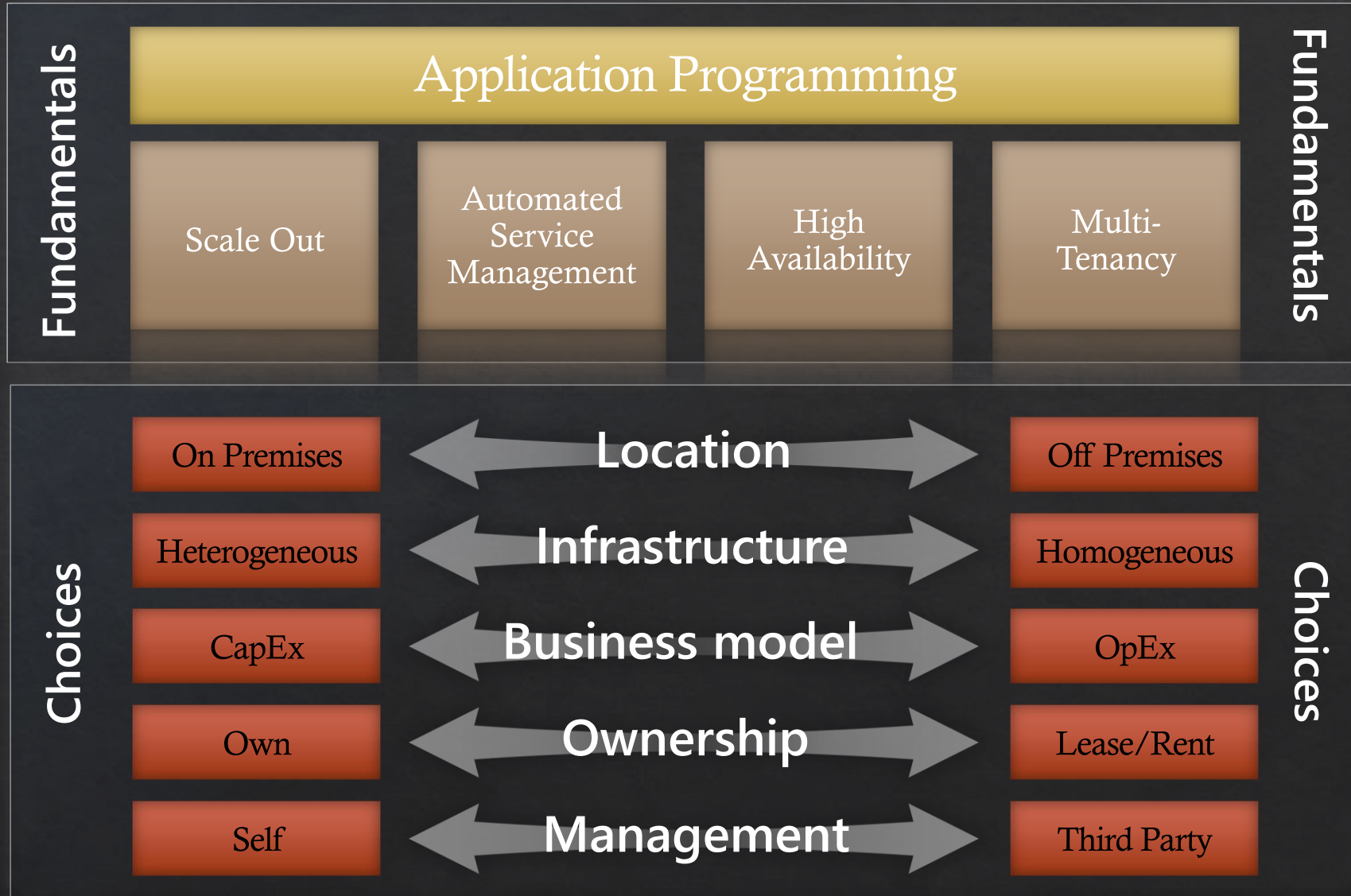# What Is Microsoft Azure in *the Cloud Computing*?

- Microsoft Azure, formerly known as Windows Azure was released in 2010 by Microsoft as a public cloud services platform where users could build, test, deploy, and manage their applications using Microsoft's cloud-based data centers.

- The servers that make up these data centers are scattered across 140 countries and growing.

- Through Azure, Microsoft offers a host of services on different domains, such as Compute, Database, Content Delivery, and Networking.

What Is Microsoft Azure Cloud Service?

- Microsoft launched Windows Azure on February 1, 2010 (renamed Microsoft Azure in 2014) to offer developers tools for simpler management of data and file storage.

- Over the next nine years, Microsoft Azure grew and expanded dramatically to compete with solutions offered by Amazon (AWS), IBM (Watson and Bluemix), and Google (Google Cloud).

- Today, you can go directly to the Microsoft Azure site and access a list of the latest services and comprehensive support.
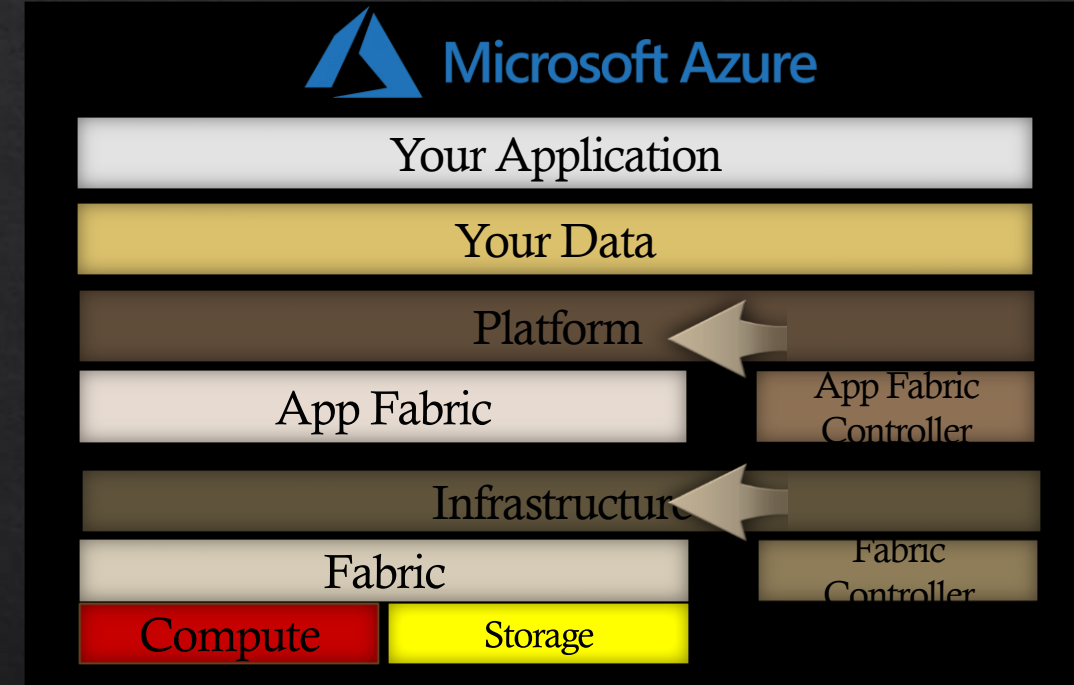
How Microsoft Views the Cloud

Fundamentals

Application Programming

| Scale Out | Automated Service Management | High Availability | Multi-Tenancy |

Choices

On Premises	← Location →	Off Premises
Heterogeneous	← Infrastructure →	Homogeneous
CapEx	← Business model →	OpEx
Own	← Ownership →	Lease/Rent
Self	← Management →	Third Party

Microsoft Azure Architecture Details :-

- Microsoft Azure architecture is like other cloud platforms, Microsoft Azure depends on a technology called virtualization, which is the emulation of computer hardware in software.

- By mapping software instructions to emulate hardware instructions, virtualized hardware can use software to function like "real" hardware.

- Cloud providers maintain multiple data centers, each one having hundreds of physical servers that execute virtualized hardware for customers.

- Microsoft Azure architecture runs on a massive collection of servers and networking hardware, which, in turn, hosts a complex collection of applications that control the operation and configuration of the software and virtualized hardware on these servers.

Microsoft Azure Features:-

- Improved Backup and Disaster Recovery.
- Develop and Host Web and Mobile Apps.
- Integration with Active Directory.
- Microsoft Azure Architecture Best Practices.
- Design with Security in Mind.
- Design for Scalable Performance.
- Design for Recoverability.
- Design for Efficiency.

What Is Microsoft Azure Used For?

➢ Azure is a quick, flexible, and more importantly for enterprises affordable cloud platform
But what exactly can you do with it? Below are a few examples of Azure solutions:

- App Development - Users can create virtually any web application in Azure

- App Hosting - After development, you can then host the application on Azure

- Software Testing - Users can also test applications on Azure

- Virtual Machine Creation - Add virtual machines to your IT infrastructure using Azure

- Virtual Hard Drives - Expand your fleet of virtual machines with virtual hard drives (or cloud-based storage)

- Integration and Synchronization - Azure lets you integrate cloud-based apps with your existing IT infrastructure

Thank You...!