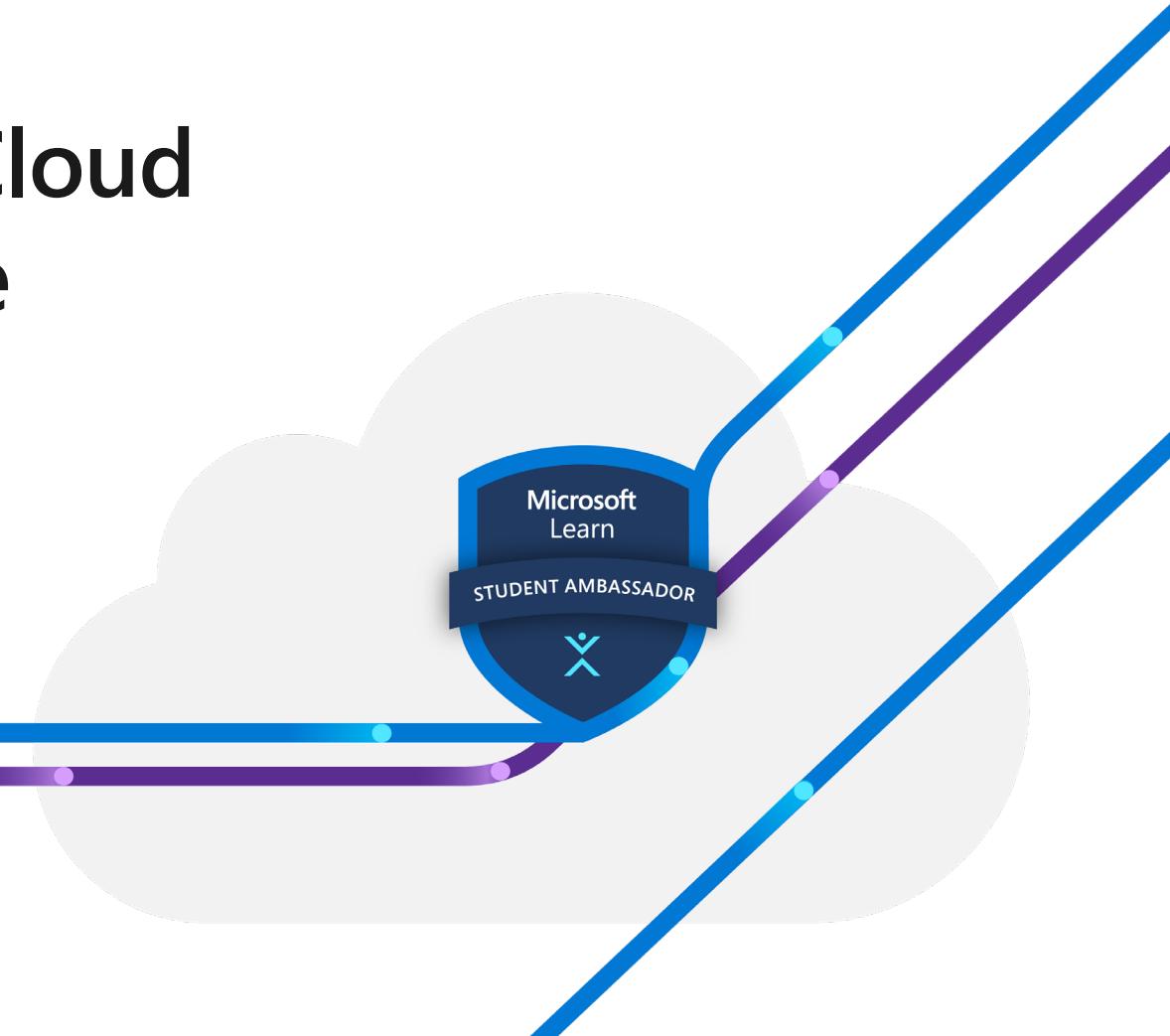


Introduction to the world of Cloud Computing & Microsoft Azure

By Abhishek Varma G V S
Alpha Microsoft Learn Student Ambassador

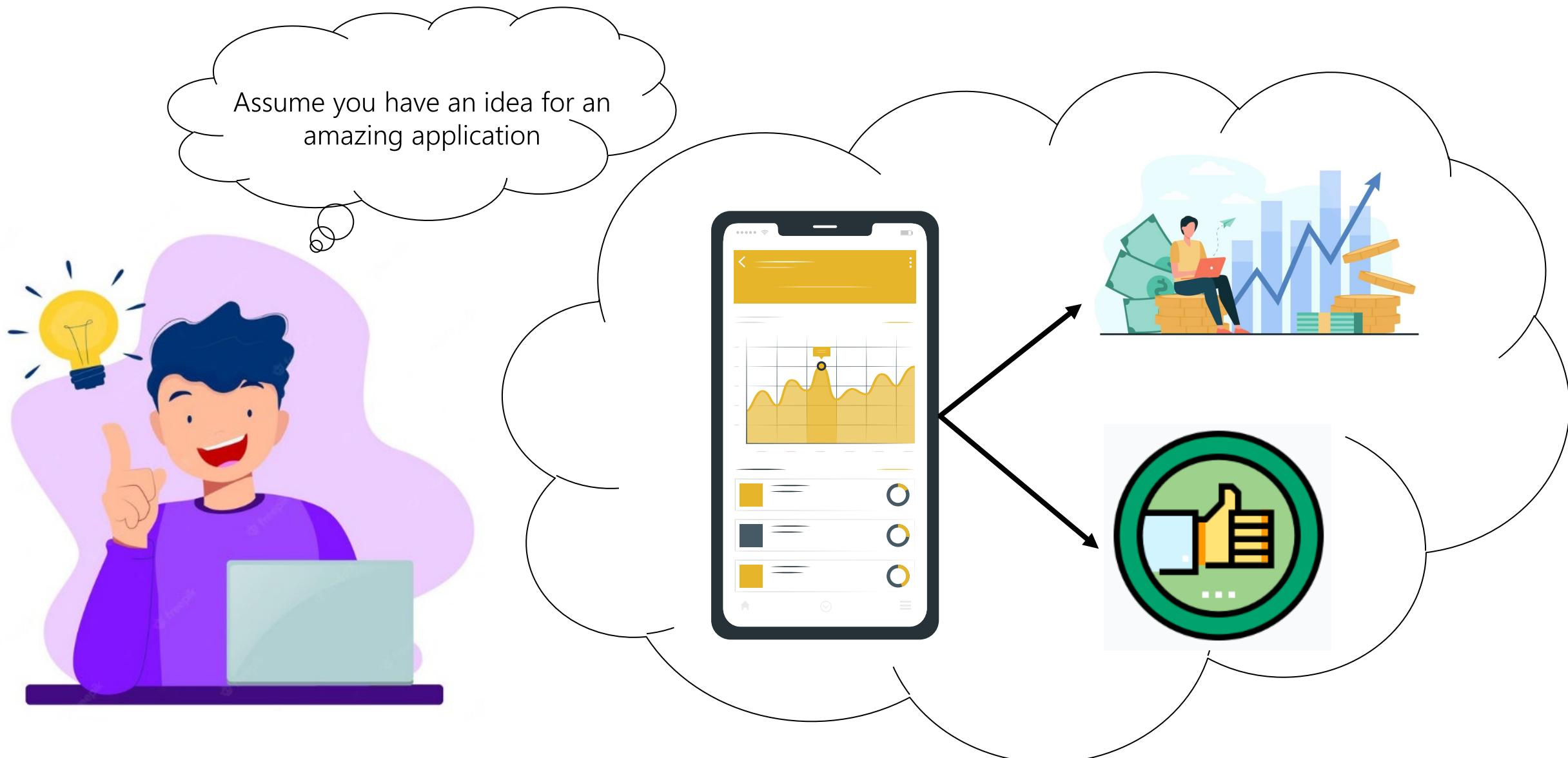


Agenda of the Event :

- Quick review of Cloud Concepts
- Benefits of Cloud Computing
- Types of Deployment Models
- Types of Service Models
- What is Microsoft Azure?
- Azure Services
- Features of Azure
- Realtime Azure deployment
- Brief Introduction to Microsoft Learn Student Ambassador Program

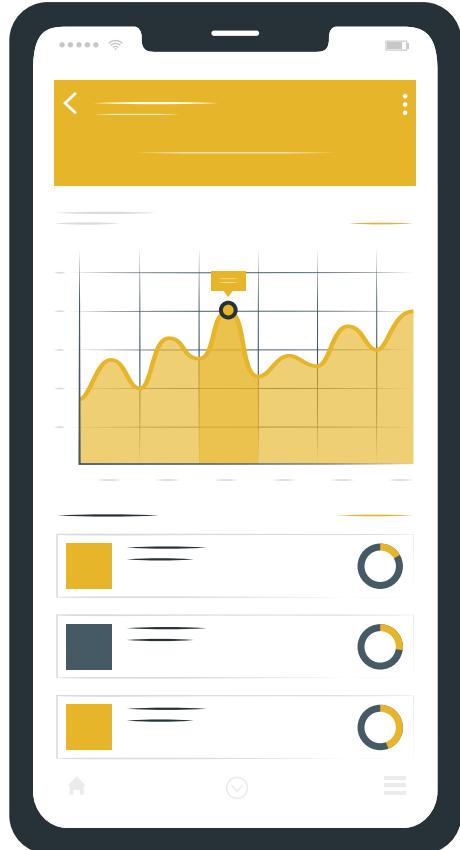


Why Cloud Computing?



Why Cloud Computing?

For it to be successful, you'll have to release it on the Internet



Why Cloud Computing? Over Private Hosting.



Initial setup is very expensive and risky



But there are 2 major disadvantages to this approach

If the number of users increase, you will have to buy more servers to keep up with demand



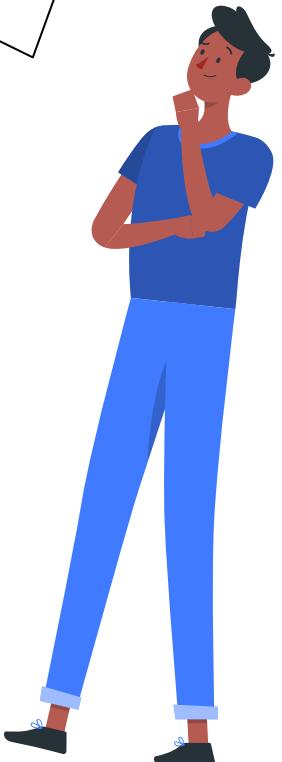
Why Cloud Computing?



ON-PREMISE



CLOUD COMPUTING



ON-PREMISE



1. Higher Pay, less Scalability
2. Allot huge spaces for servers
3. Appoint a team for hardware and software maintenance
4. Poor Data Security
5. Less chance of data recovery
6. Lack of flexibility
7. No automatic updates
8. Less Collaboration
9. Data cannot be accessed remotely

CLOUD COMPUTING



1. Pay for what you use
2. No server space required
3. No experts required for hardware and software maintenance
4. Better Data Security
5. Disaster recovery
6. High flexibility
7. Automatic software updates
8. Teams can collaborate from widespread locations
9. Data can be accessed & shared anywhere on net

Virtual Machines (IaaS) – Custom Software, Custom requirements, Very specialized, High degree of control

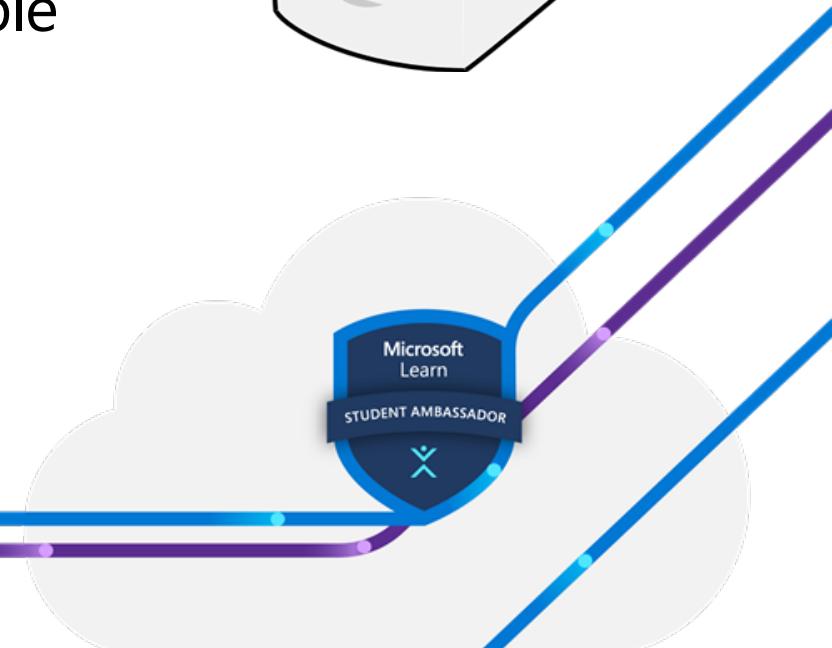
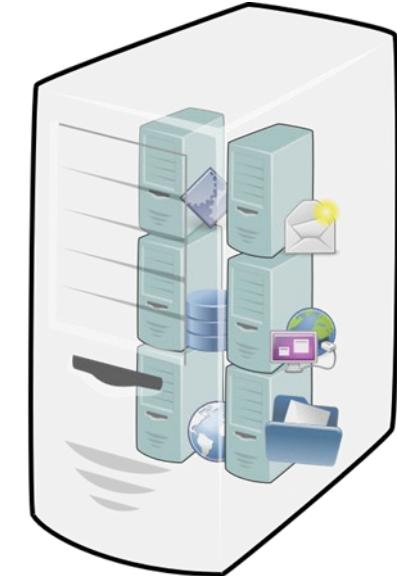
VM Scale Sets (IaaS) – Auto-scaled workloads for VMs

Container Instance (PaaS) – Simple container hosting, easy to start

Kubernetes Service (PaaS) – Highly scalable and customizable container hosting platform

App Services (PaaS) – Web applications, a lot of enterprise web hosting features, easy to start

Functions(PaaS) – micro/nano-services, Serverless



Why Cloud Computing?

You are right!
Cloud Computing is better than
on-premise.



ON-PREMISE

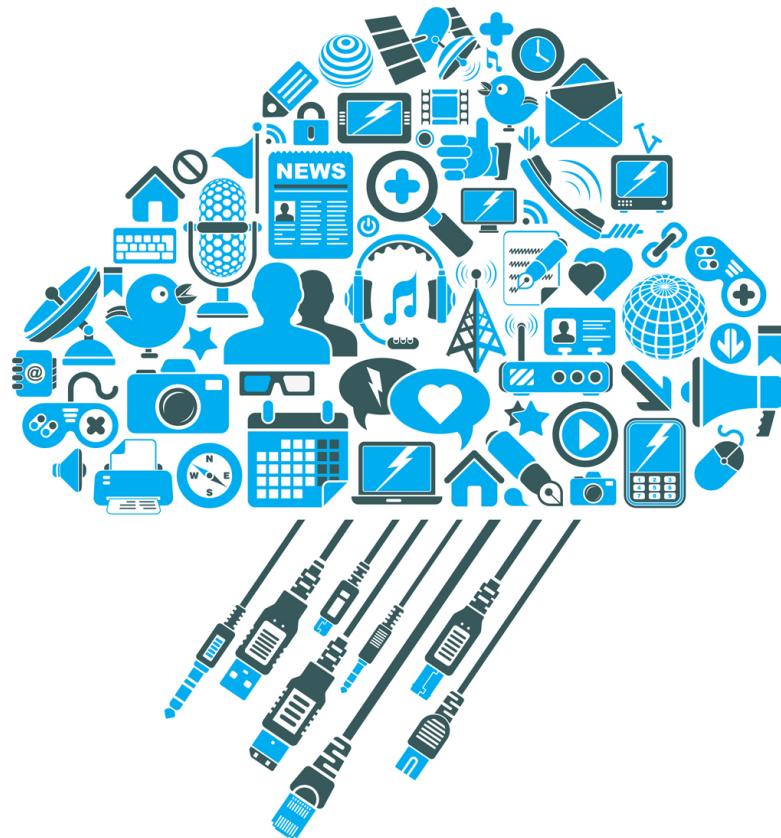


CLOUD COMPUTING



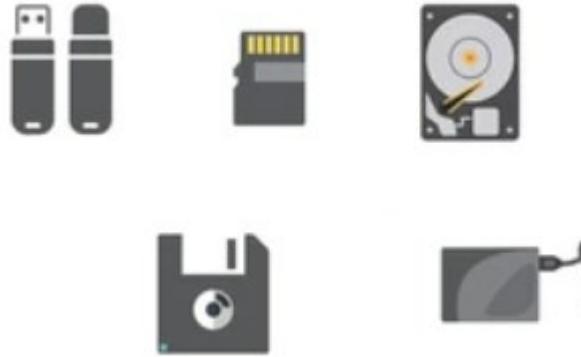
What is Cloud Computing?

Cloud Computing is the delivery of on-demand computing services over the internet on a pay-as-you-go basis.



What is Cloud Computing?

Rather than managing the files on a local storage device, cloud computing makes it possible to save them over internet.



STORAGE DEVICE



SAVING FILES OVER THE INTERNET

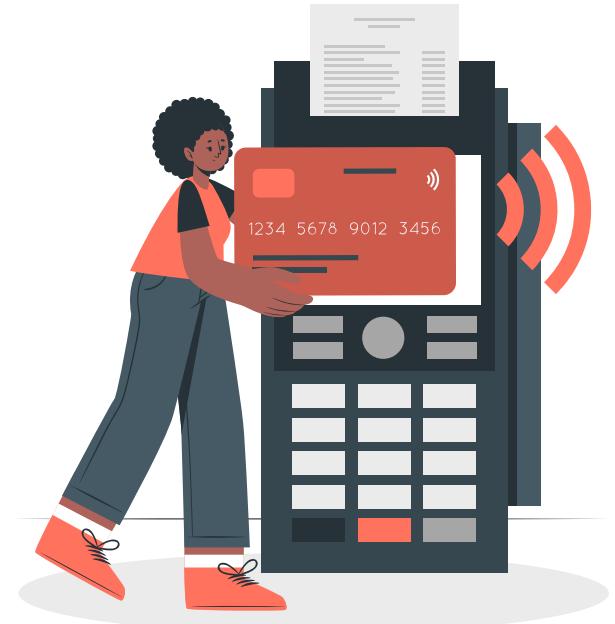
What is Cloud Computing?



Cloud providers own massive datacenters which have hundreds of servers, storage systems and components critical to the organization's working



Users can access any service, based on their requirement



Users only pay for the services they use and nothing else

Benefits of Cloud Computing



**BACK-UP &
RESTORE DATA**



**IMPROVED
COLLABORATION**



**EXCELLENT
ACCESSIBILITY**



LOW MAINTENANCE COST



**SERVICES IN THE PAY-
PER-USE MODEL**



MOBILITY



DATA SECURITY

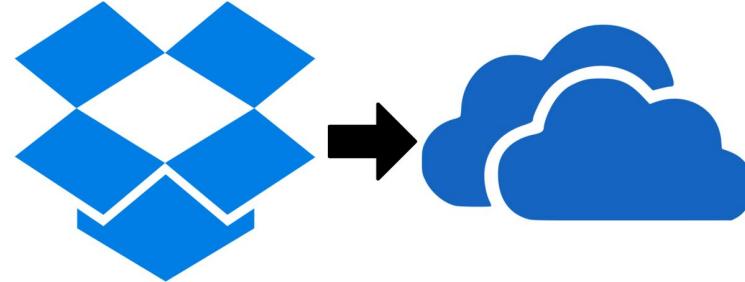


**UNLIMITED STORAGE
CAPACITY**

Disadvantages of Cloud Computing



SECURITY



VENDOR LOCK-IN

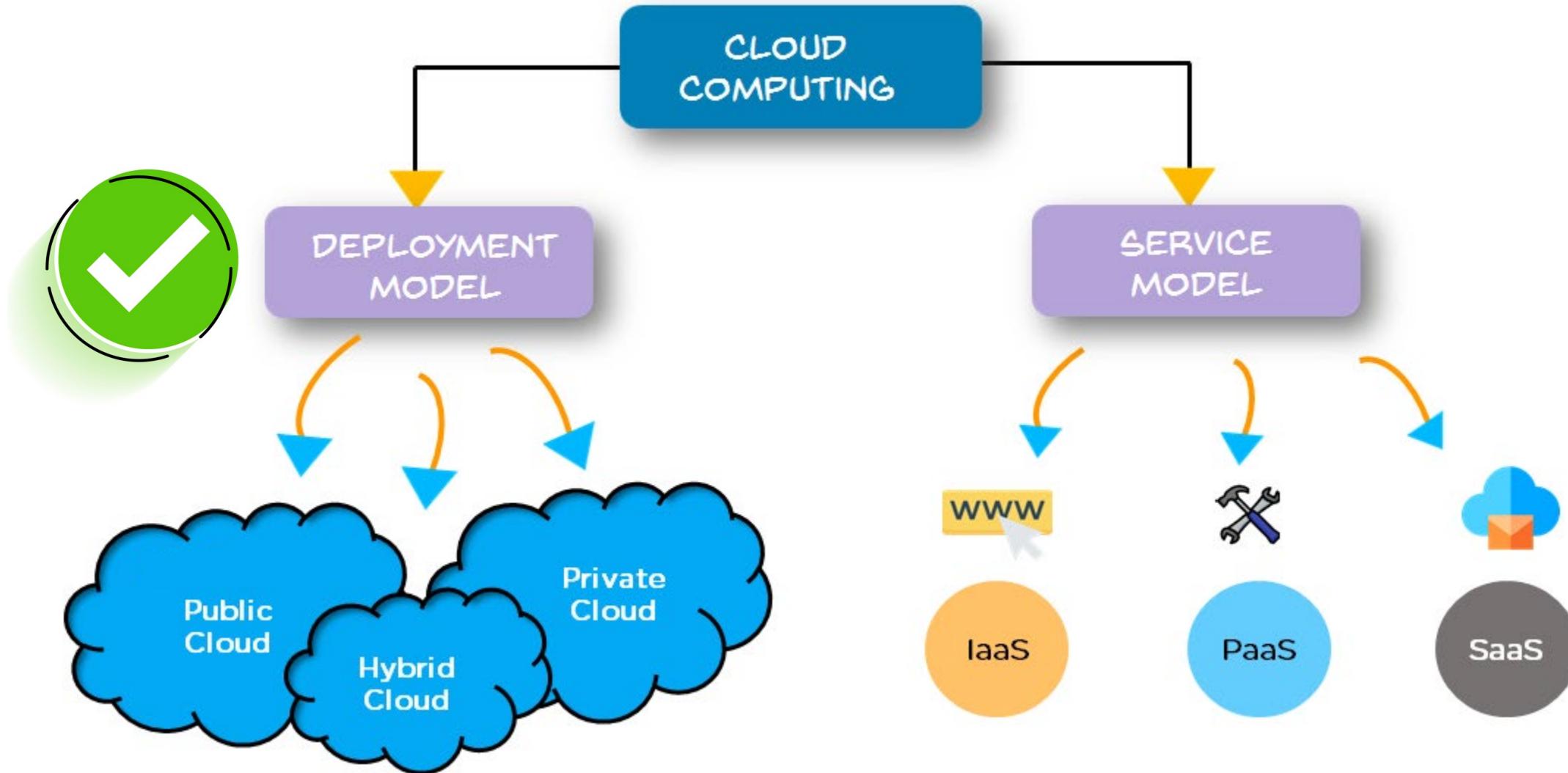


LIMITED CONTROL



INTERNET CONNECTIVITY

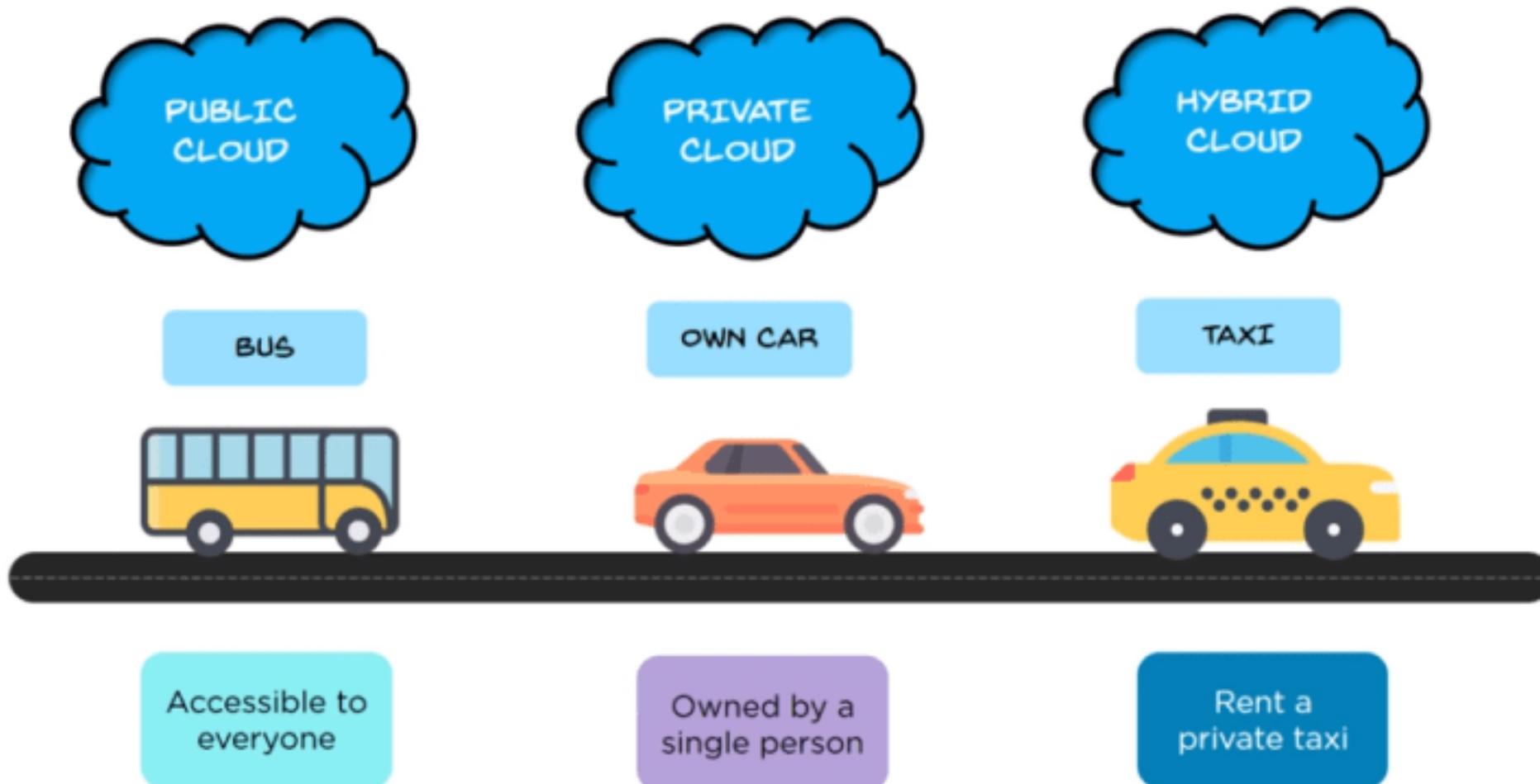
Types of Cloud Computing



2021 Gartner Magic Quadrant for Cloud



Types of Deployment Models



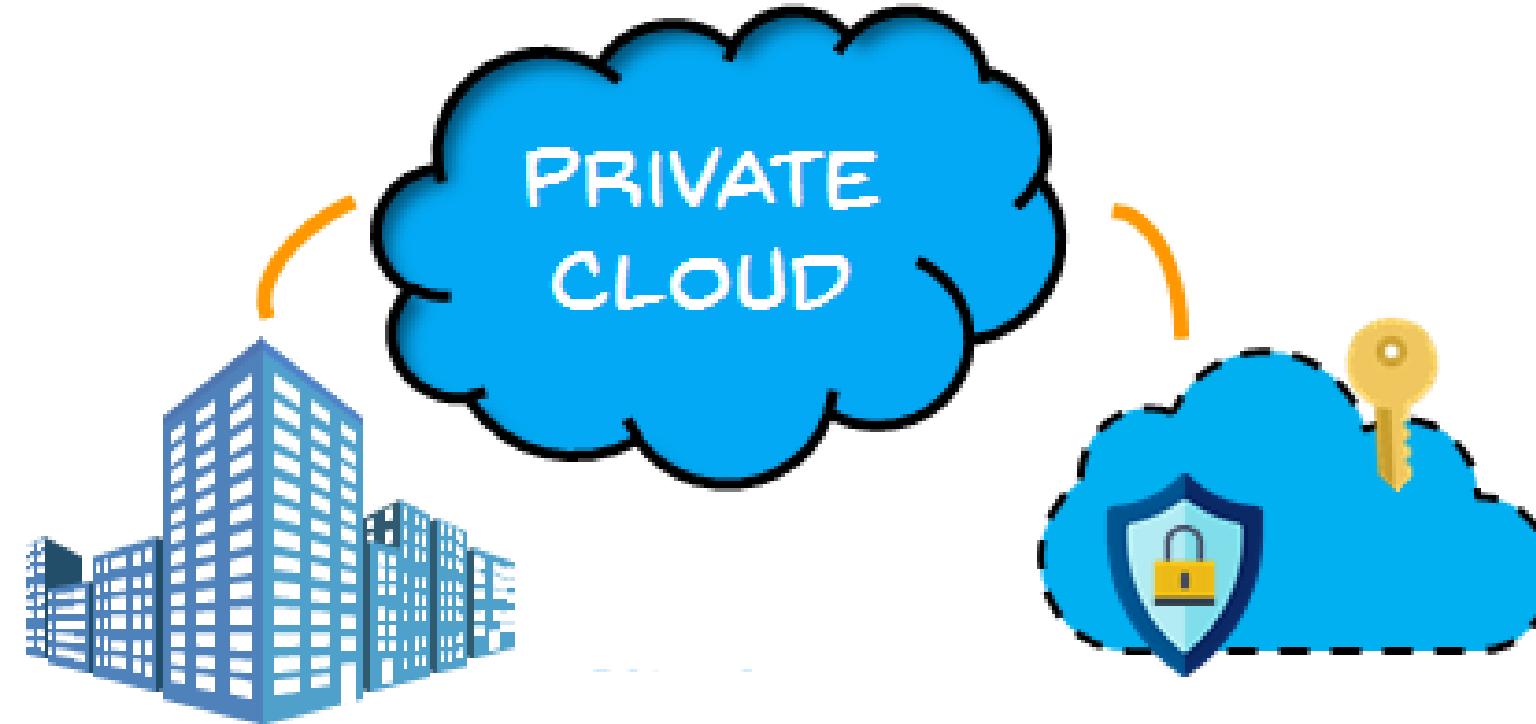
Public Cloud



The cloud infrastructure is made available to the general public over the internet and is owned by a cloud provider.

Example – AWS, Microsoft Azure, IBM's Blue Cloud and Sun Cloud

Private Cloud



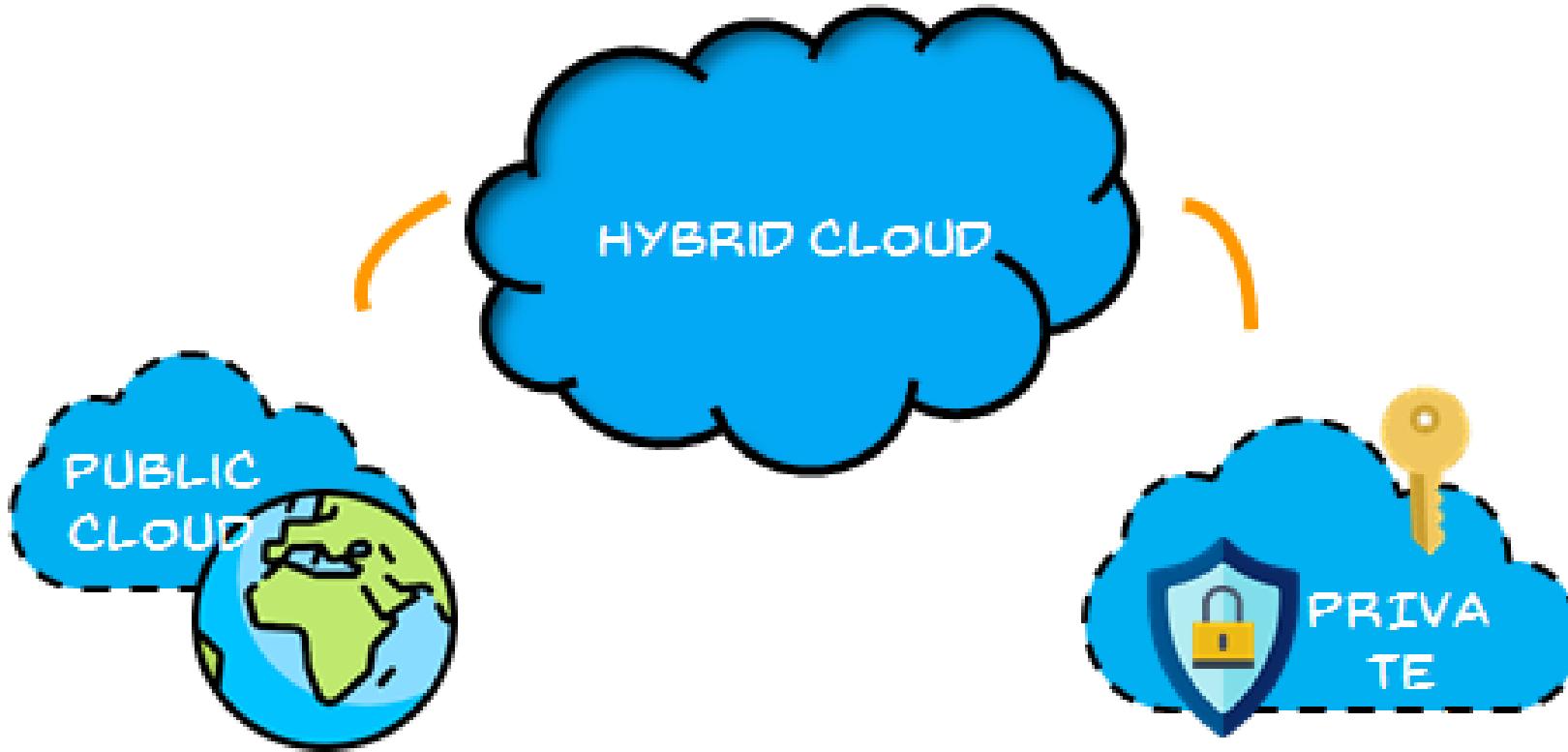
ORGANIZATION

SECURITY

The cloud infrastructure is exclusively operated by a single organisation. It can be managed by the organisation or a third-party and may exist on-premise or off-premise.

Example – AWS, VMware

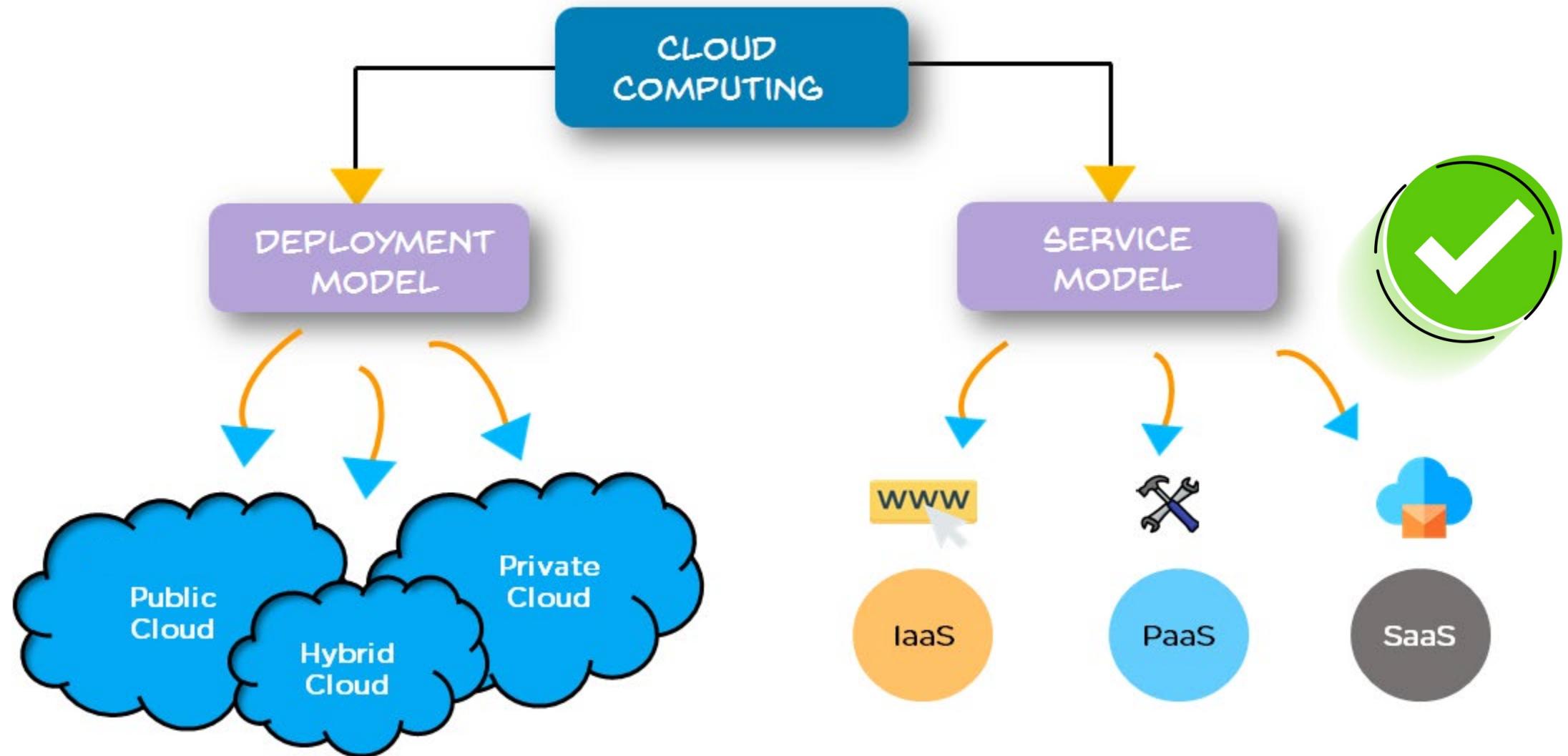
Hybrid Cloud



It consists the functionalities of both public and private cloud.

For example: Federal agencies opt for private clouds when sensitive information is involved. Also, they use the public cloud to share datasets with general public or other government departments.

Service Model



Types of Service Models

IaaS

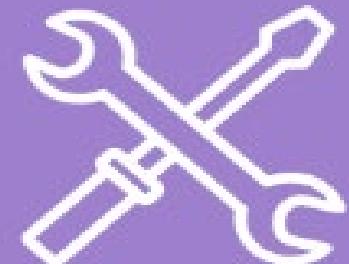
Infrastructure
as a Service



If your business
needs a virtual
machine, opt for
Infrastructure as a
Service

PaaS

Platform
as a Service



If your company
requires a platform
for building software
products, pick
Platform as a Service

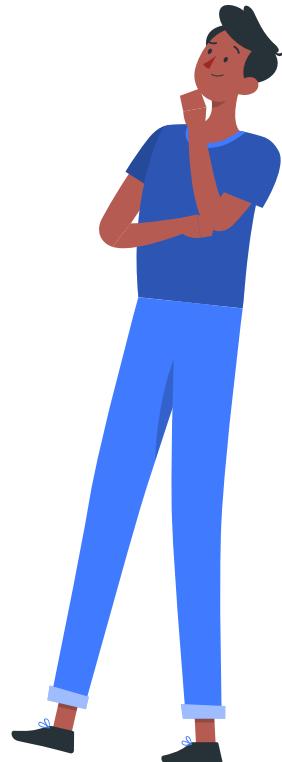
SaaS

Software
as a Service



If your business
doesn't want to
maintain any IT
equipment, choose
Software as a Service

Which cloud is suitable for you?



IaaS

IaaS is a cloud service that provides basic computing infrastructure

Services are available on PAY-FOR-WHAT-YOU-USE model

IaaS providers include Amazon Web Services, Microsoft Azure and Google Compute Engine

Users: IT Administrators

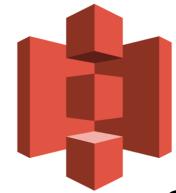
IAAS PRODUCTS AND SERVICES



DigitalOcean



Amazon EC2



Amazon S3



rackspace
the open cloud company



IaaS



IBM Cloud



VM

Microsoft Azure VM

PaaS

IaaS is a cloud service that provides basic computing infrastructure

Services are available on PAY-FOR-WHAT-YOU-USE model

IaaS providers include Amazon Web Services, Microsoft Azure and Google Compute Engine

Users: IT Administrators



SaaS

In SaaS, cloud providers host and manage the software application on a pay-as-you-go pricing model

All software and hardware are provided and managed by a vendor so you don't have to maintain anything.

Users: End Customers



Differences between IaaS, PaaS and SaaS



On-Premises



IaaS

Infrastructure as a Service



PaaS

Platform as a Service



SaaS

Software as a Service

Applications	Applications	Applications	Applications
Data	Data	Data	Data
Runtime	Runtime	Runtime	Runtime
Middleware	Middleware	Middleware	Middleware
O/S	O/S	O/S	O/S
Virtualization	Virtualization	Virtualization	Virtualization
Servers	Servers	Servers	Servers
Storage	Storage	Storage	Storage
Networking	Networking	Networking	Networking



You Manage



Other Manages

Differences between IaaS, PaaS and SaaS

EXAMPLE:

Consider a task where you are planning to bake a cake.



Differences between IaaS, PaaS and SaaS



On-Premises

Dinning Table

Water

Electricity

Oven

Cake Pan

Flour

Sugar

Butter

Eggs



Made at Home



You Manage



Other Manages

Differences between IaaS, PaaS and SaaS



IaaS

Infrastructure as a Service

Dinning Table

Water

Electricity

Oven

Cake Pan

Flour

Sugar

Butter

Eggs



You Manage



Other Manages

Differences between IaaS, PaaS and SaaS



PaaS

Platform as a Service

Dinning Table

Water

Electricity

Oven

Cake Pan

Flour

Sugar

Butter

Eggs

Cake delivery



You Manage



Other Manages

Differences between IaaS, PaaS and SaaS



SaaS

Software as a Service

Dinning Table

Water

Electricity

Oven

Cake Pan

Flour

Sugar

Butter

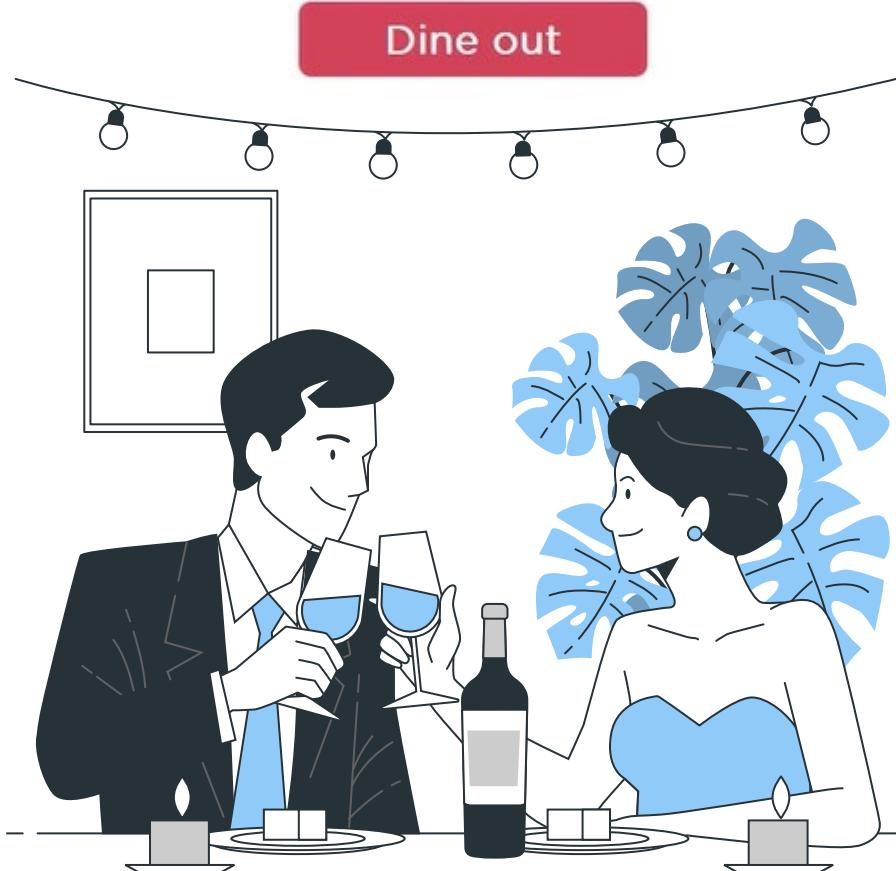
Eggs



You Manage



Other Manages

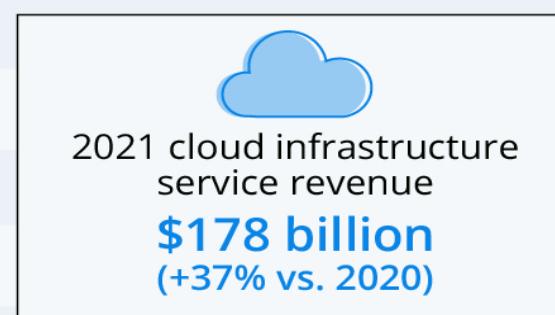
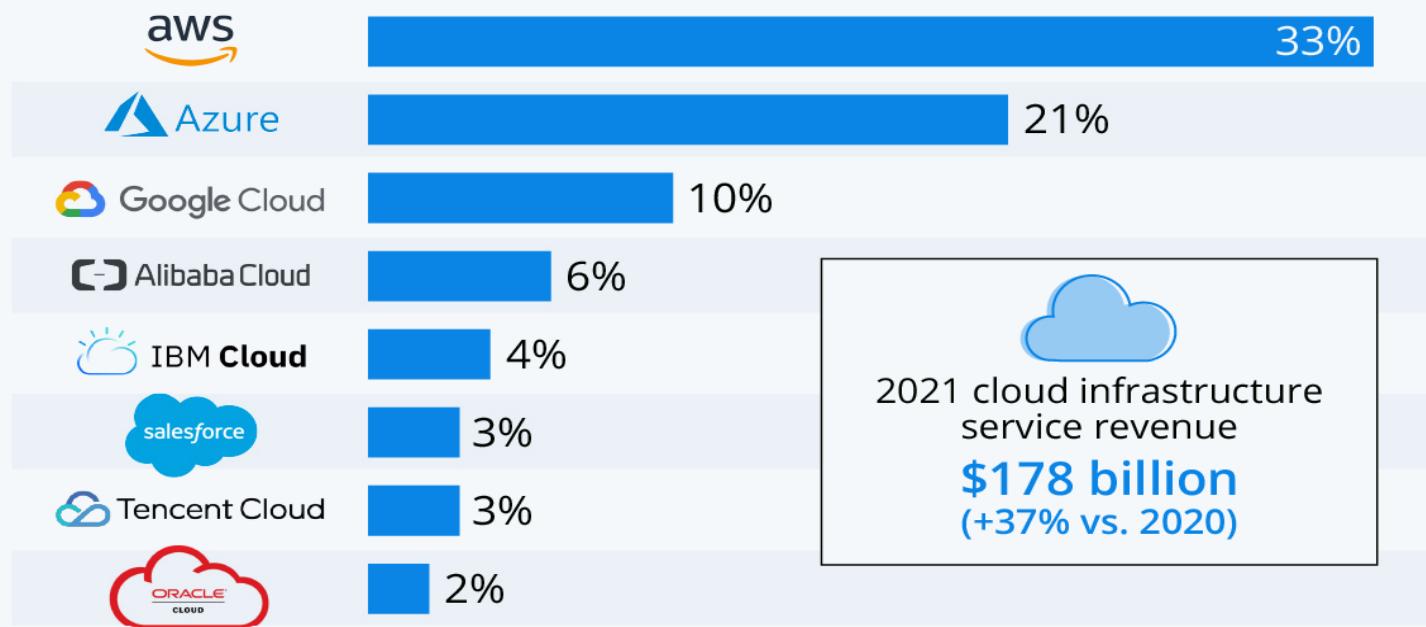


Dine out

Cloud Computing market share Q4, 2021

Amazon Leads \$180-Billion Cloud Market

Worldwide market share of leading cloud infrastructure service providers in Q4 2021*



* includes platform as a service (PaaS) and infrastructure as a service (IaaS) as well as hosted private cloud services

Source: Synergy Research Group



Microsoft Azure

What is Azure?

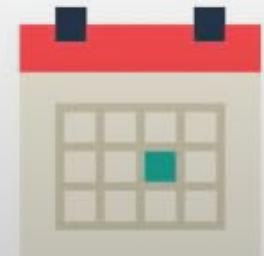


- 1 Azure is a cloud computing platform and an online portal to access and manage resources and services provided by Microsoft
- 2 Microsoft Azure is set of cloud services to help your organisation meet your business challenges
- 3 It's the freedom to build, manage and deploy application on a massive, global network using your favorite tools and frameworks

What is Azure?



Free to start and also provides pay-per-use model



Launched on February 1st, 2010



80% of fortune 500 companies use Azure services



Supports multiple programming languages like C#, Node.Js, Java etc.



Datacenters in 42 regions around the world

Azure Services

- Azure services are divided into 18 categories and contain more than 200 services.



Azure Services-Compute



A virtual machine is a virtual representation, or emulation, of a physical computer. They are often referred to as a guest while the physical machine they run on is referred to as the host

App services are Designed as enterprise grade web application service. Supports multiple programming language and containers



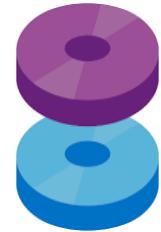
Container Instances is **a service that enables a developer to deploy containers on the Microsoft Azure public cloud** without having to provision or manage any underlying infrastructure

Azure Web Apps is a cloud computing based platform for hosting websites, created & operated by Microsoft. It is a platform as a service which allows publishing Web apps running on multiple frameworks and written in different programming languages,



Azure Kubernetes Service (AKS) is a fully-managed service that allows you to run Kubernetes in Azure without having to manage your own Kubernetes clusters.

Azure Services-Storage



Azure Disk Storage is the only shared cloud block storage that supports both Windows and Linux-based clustered or high-availability applications via Azure shared disks. There are two types of Disks in Azure :Managed Disks and Unmanaged Disks



Blob (Binary large object) **storage** is optimized for storing massive amounts of unstructured data. Unstructured data is data that doesn't adhere to a particular data model or definition, such as text or binary data.



Azure Files offer fully managed File shares in the cloud that are accessible via the industry-standard SMB. Azure File shares can be mounted concurrently by cloud or on-premises deployments of Windows, Linux, and macOS. It can be cached on Windows servers with Azure File Sync for faster access.



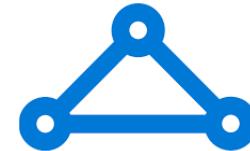
Azure Queue Storage is a service for storing large numbers of messages. You access messages from anywhere in the world via authenticated calls using HTTP or HTTPS.

Azure Services-Networking



Content Delivery Network (CDN) puts stuff like blobs and other static content in a cache. The process involves placing the data at strategically chosen locations and caching it

ExpressRoute is an Azure service that lets you create private connections between Microsoft datacentres and infrastructure that's on your premises or in a colocation facility



An Azure Virtual Network (VNet) is a representation of your own network in the cloud. It is a logical isolation of the Azure cloud dedicated to your subscription

Azure DNS host your Domain Name System (DNS) domains in Azure. By hosting your domains in Azure, you can manage your DNS records by using the same credentials, APIs, tools, and billing as your other Azure services.



Features of Azure

On-demand Provisioning	Scalability in minutes	Pay as you consume	Abstract Resources
<ul style="list-style-type: none">Ask for what you need, when you need & when to stop	<ul style="list-style-type: none">Scale out or in, up or down, depending on usage or needs	<ul style="list-style-type: none">Pay only for what you use	<ul style="list-style-type: none">Focus only on your needs, not on the hardware specs

Efficiency of Experts	Measurable
<ul style="list-style-type: none">Utilize the skills, knowledge and resources of experts	<ul style="list-style-type: none">Every unit of usage (i.e. managed service) is measurable

Why should I choose it for my business?



- Runs on both PC and Mac
- Can support large & complex applications
- Ci/cd shortens development cycles



- Amazing management tools to meet your needs
- Completely focus on your application and not infrastructure



- Cloud services trusted by 90% of Fortune 500 companies.
- Built-in security controls help respond to security needs

Become Microsoft Certified

LAST UPDATED JULY 2022

No matter your experience level, you can advance your career and demonstrate your achievements through industry-recognized Microsoft Certifications.

Learn more at:
microsoft.com/certifications

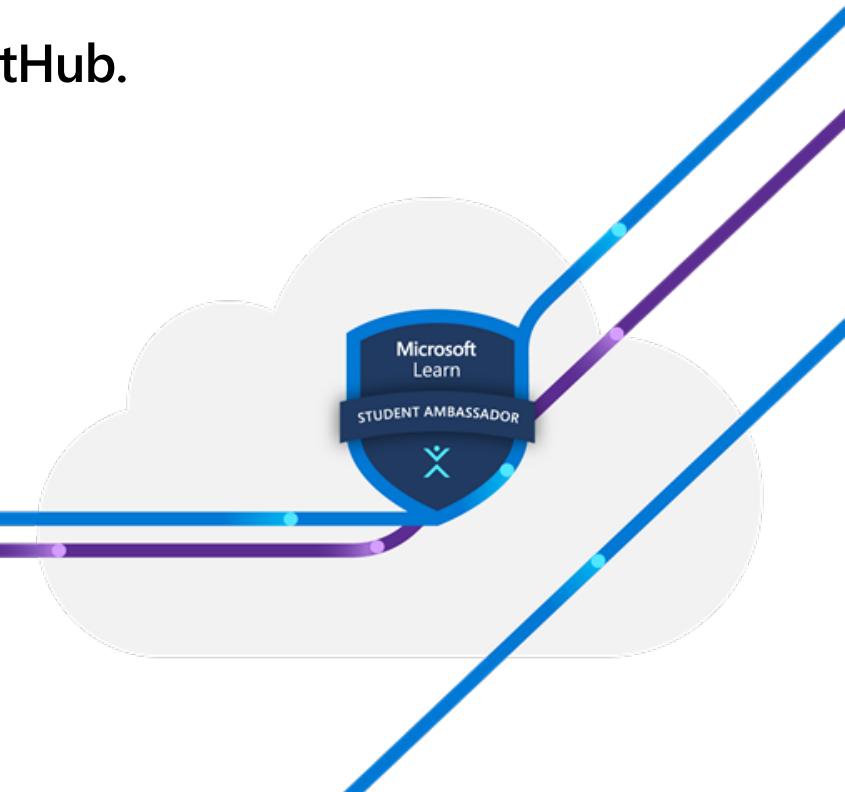
Full certification title ★ Expert certification
This certification has prerequisites
PL-200 + MB-210 Exam requirements

So, if interested in
Microsoft certifications

Azure		Microsoft 365		Dynamics 365		Power Platform	
Role-based Expand your technical skill set	Azure Administrator Associate AZ-104 Azure Security Engineer Associate AZ-500 Azure Network Engineer Associate AZ-700 Azure AI Engineer Associate AI-102 Azure Data Engineer Associate DP-203 Azure Enterprise Data Analyst Associate DP-500 Azure Solutions Architect Expert AZ-305	Azure Developer Associate AZ-204 Azure Stack Hub Operator Associate AZ-600 Windows Server Hybrid Administrator Associate AZ-800 + AZ-801 Azure Data Scientist Associate DP-100 Azure Database Administrator Associate DP-300 DevOps Engineer Expert AZ-400	Developer Associate MS-600 Modern Desktop Administrator Associate MD-100 + MD-101 Teams Administrator Associate MS-700 Enterprise Administrator Expert MS-100 + MS-101	Messaging Administrator Associate MS-203 Security Administrator Associate MS-500 Teams Voice Engineer Expert MS-720	Dynamics 365 Sales Functional Consultant Associate PL-200 + MB-210 Dynamics 365 Customer Service Functional Consultant Associate PL-200 + MB-230 Dynamics 365 Finance Functional Consultant Associate MB-300 + MB-310 Dynamics 365 Supply Chain Management Functional Consultant Associate MB-300 + MB-330 Dynamics 365 Commerce Functional Consultant Associate MB-300 + MB-340 Dynamics 365 Finance and Operations Apps Developer Associate MB-300 + MB-500 Dynamics 365 Business Central Functional Consultant Associate MB-600	Dynamics 365 Marketing Functional Consultant Associate PL-200 + MB-220 Dynamics 365 Field Service Functional Consultant Associate PL-200 + MB-240 Dynamics 365 Supply Chain Management Functional Consultant Associate MB-300 + MB-320 Dynamics 365 Commerce Functional Consultant Associate MB-300 + MB-340 Dynamics 365 Finance and Operations Apps Solution Architect Expert MB-700	Power Platform App Maker Associate PL-100 Power BI Data Analyst Associate PL-300 Power Automate RPA Developer Associate PL-500 Power Platform Solution Architect Expert PL-600
Specialty Deepen your technical skills and manage industry solutions	Azure for SAP Workloads Specialty AZ-120 Azure Support Engineer for Connectivity Specialty AZ-720 Azure Cosmos DB Developer Specialty DP-420	Azure Virtual Desktop Specialty AZ-140 Azure IoT Developer Specialty AZ-220	Exchange Online Support Engineer Specialty MS-220 Teams Support Engineer Specialty MS-740	Customer Data Platform Specialty MB-260			
Fundamentals Master the basics	Azure Fundamentals AZ-900 Azure AI Fundamentals AI-900 Azure Data Fundamentals DP-900	Microsoft 365 Fundamentals MS-900	Dynamics 365 Fundamentals (CRM) MB-910	Dynamics 365 Fundamentals (ERP) MB-920	Power Platform Fundamentals PL-900		
Security, Compliance, and Identity	Fundamentals — Master the basics Security, Compliance, and Identity Fundamentals SC-900	Role-based — Expand your technical skill set Azure Security Engineer Associate AZ-500	Microsoft 365 Security Administrator Associate MS-500	Security Operations Analyst Associate SC-200	Identity and Access Administrator Associate SC-300	Information Protection Administrator Associate SC-400	Cybersecurity Architect Expert SC-100



So will deploy a Realtime static website using azure static apps and GitHub.



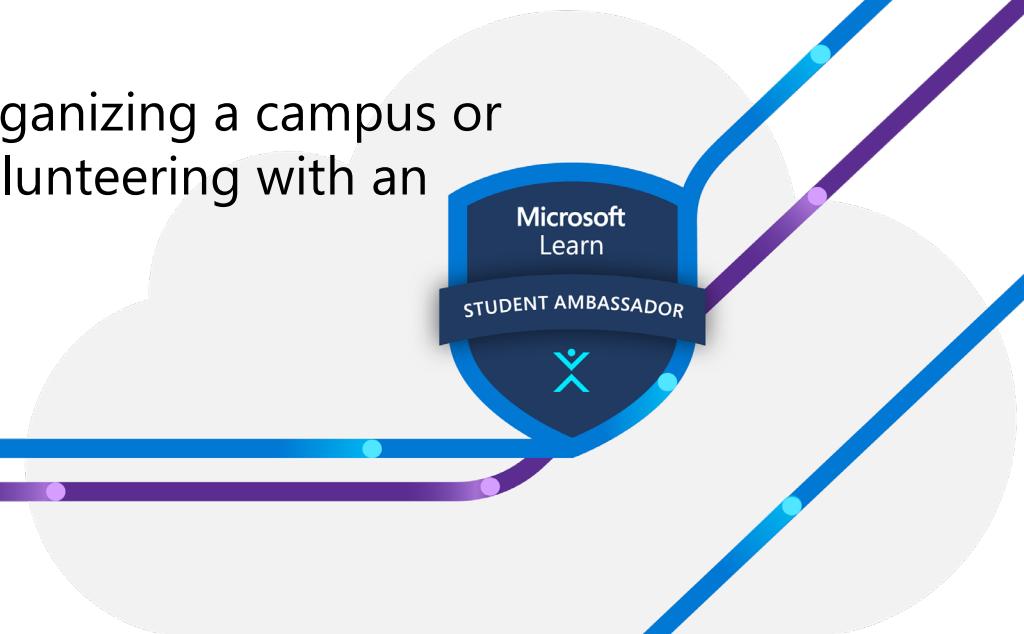
AZURE/CLOUD: Career Benefits

- cloud skills are in higher demand than any other area of technology
 - can grab a better job role
 - can earn more than their counterparts
 - become a part of the Microsoft community Contributor.



WHAT IS MICROSOFT LEARN STUDENT AMBASSADOR PROGRAM?

- The Microsoft Learn Student Ambassadors program is a global group of on-campus ambassadors who are eager to help students and their communities, lead in their local tech circles, and develop technical and non-technical skills for the future.
- It aims to bring together all the students from all over the world, who have a passion for technology and a desire to help and give back to the community, at one place.
- As a Student Ambassador, you might find yourself organizing a campus or community hackathon, mentoring other students, volunteering with an elementary school STEM class, etc.

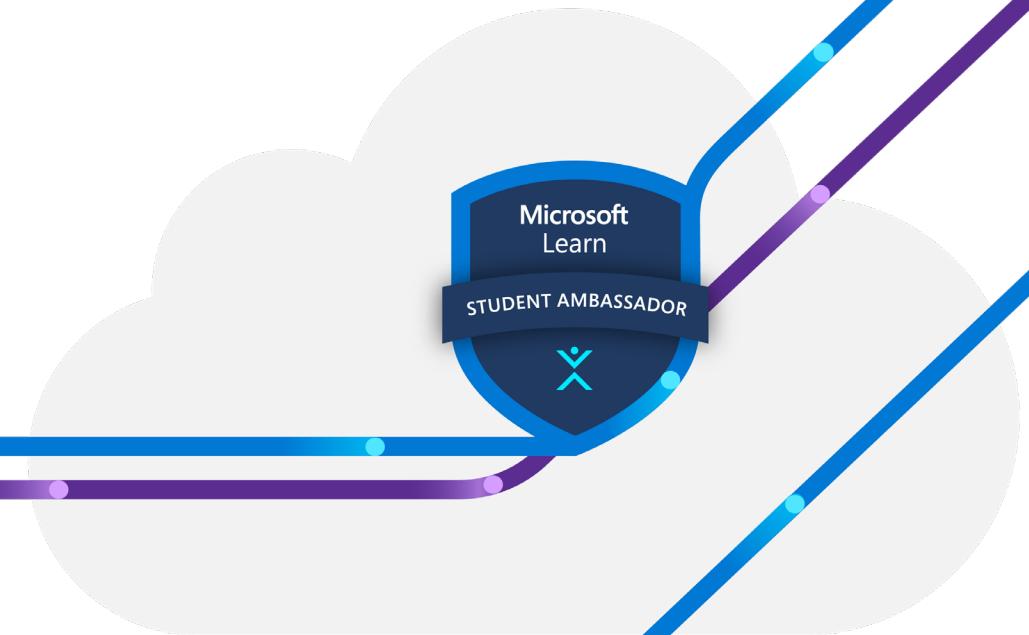


ELIGIBILITY CRITERIA

- The only eligibility criteria is that:

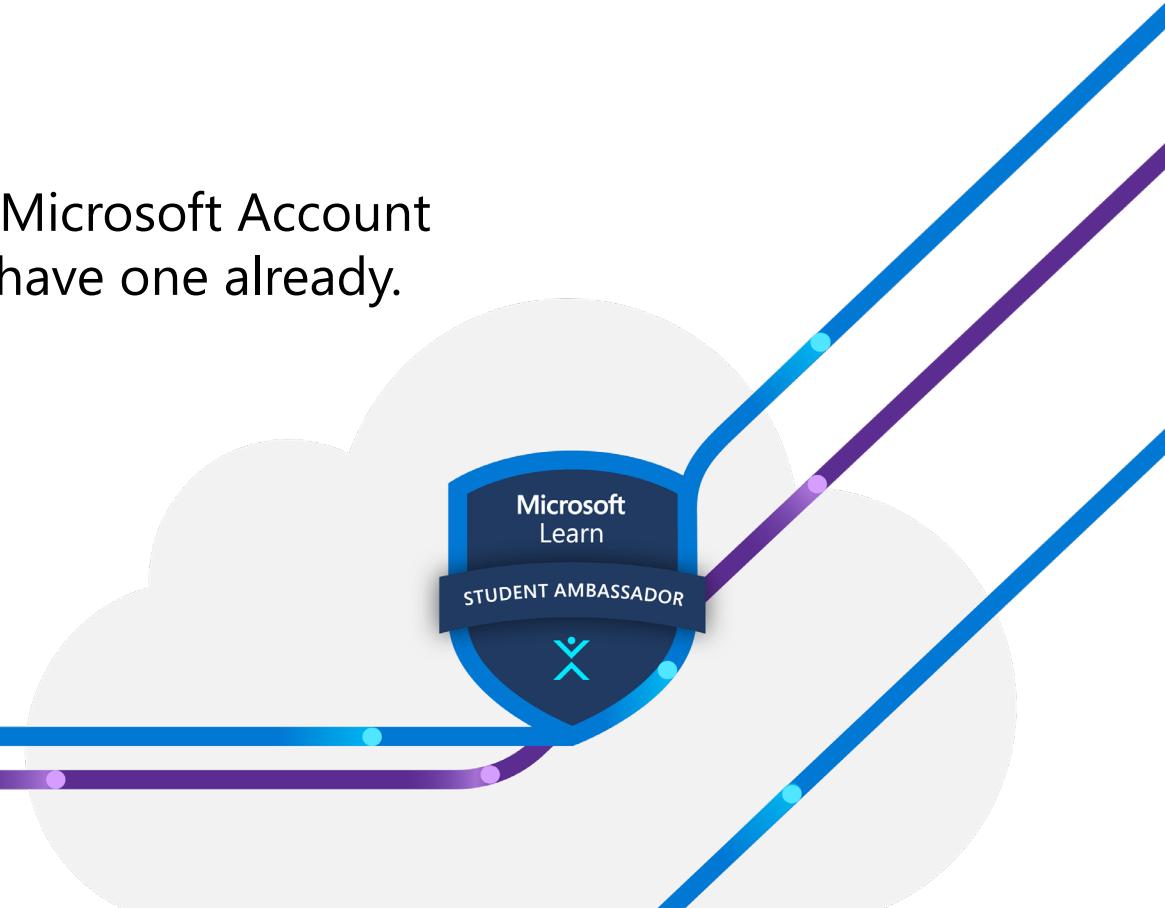
You must be at least **16** years old, have valid identification and be actively enrolled in an accredited, higher education academic institution.

- **No** branch and year restriction is there.



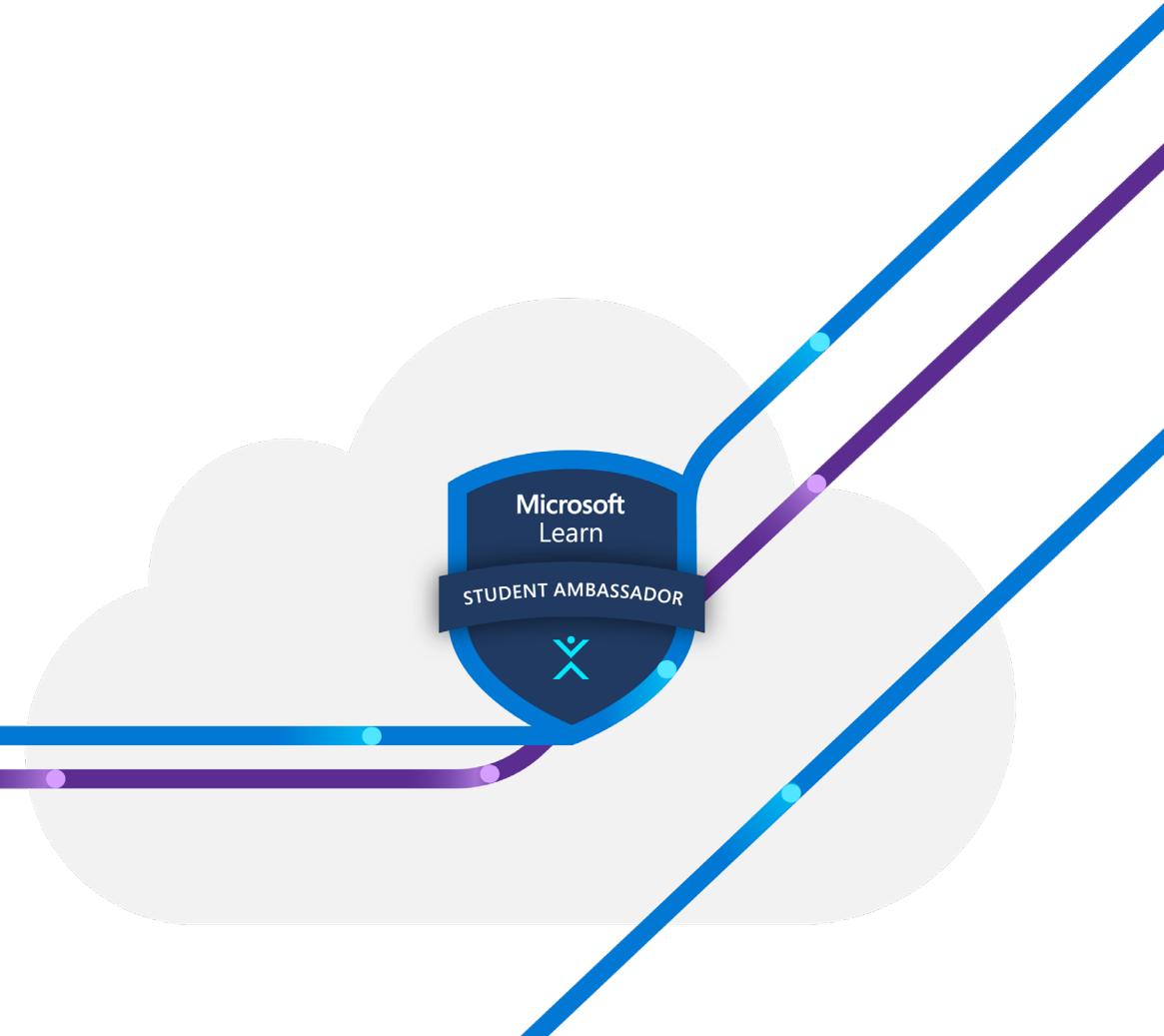
APPLICATION PROCESS

- Visit the website : <https://studentambassadors.microsoft.com/>
- Click on the 'Apply Now' button.
- It will redirect you to a login page. Login with your Microsoft Account credentials. Make a new account in case you don't have one already.
- After logging in, the application form will open.



QUICK WALKTHROUGH OF THE APPLICATION FORM

- Home Page
- Application Notifications
- Privacy and Terms
- Personal information
- Academic Institution information
- Application Questions
- Social Media
- Additional Information





Microsoft Learn Student Ambassadors

Become a Student Ambassador

Finding your community is more important than ever as classes and social activities take place virtually. Amplify your impact and bring together your peers to learn new skills, solve real-world problems, and build communities across the globe.

[Apply now >](#)

Application

Application Notifications



- Applications received after November 30, 2021 will be considered for admission with a start date of April 2022. Students will be notified by email approximately one week before the respective start date.
- U.S. F-1 students should check with the Designated Academic Institution Official at the International Student office of their Academic Institution (or their own personal immigration legal counsel) to see if participation in this Program would constitute a violation of their F-1 status. A violation may not only impact a student's ability to continue with their F-1 studies, but may also affect his or her eligibility for future U.S. immigration-related benefits.
- The majority of program events will be hosted in English. It is strongly recommended that applicants have at least intermediate level English proficiency so they can fully engage with Microsoft Learn Student Ambassadors content and global community.
- The application will be automatically saved, you can leave at any time and come back later to continue your application.

Next

Thank you for your interest in the Microsoft Learn Student Ambassadors program. If you would like to become a Student Ambassador, please fill out this application with valid information. Please note, not all students who apply will be accepted into the program. If you have any questions about the Student Ambassadors program, please contact sa-help@microsoft.com.

All applying students must

- Be at least 16 years old at the time of application
- Be enrolled full-time in an accredited academic institution (e.g. College, University)
- Be an individual person (not a corporate entity)
- Not be a Microsoft employee or current contractor

Your information is subjected to the [Microsoft Privacy Statement](#). When you submit this application, your information will be shared with the Microsoft program lead who manages Microsoft Learn Student Ambassadors selection in your region. They may ask for additional information to evaluate your suitability for the program. If your application is not accepted, all the information you provided will be removed from our servers within twelve months of the application submission date. If you would like to request removal of your application data at any time, please send your request to sa-help@microsoft.com.

By completing this application, you agree to Microsoft Privacy Statement and confirm your eligibility for the Microsoft Learn Student Ambassadors program.

Privacy and Terms Agreement *

I agree and wish to continue.

[Delete your data](#)

Back

Next

Personal Information

^

First Name * ⓘ

MAHI

Gender * ⓘ

Female

Contact Email * ⓘ

vemahi077@gmail.com

Select your Country or Region * ⓘ

India

Last Name * ⓘ

RANJAN

Pronoun ⓘ

She/Her/Hers

Date of Birth * ⓘ

Saturday Apr 6 2002



State or Province ⓘ

Select state or province

Phone opt-in

Check this box to opt-in to receive transactional, program-specific updates to this phone number via text message/SMS. Message and data rates may apply. You may opt-out any time by unchecking this box.

Phone Code * ⓘ

India (+91)

[Get Verification Code](#)

Primary Phone Number * ⓘ

Back

Next

Academic Institution Information



Country / Region * ⓘ

India

State / Province ⓘ

Rajasthan

Name * ⓘ

Banasthali Vidyapith X

Degree Program * ⓘ

Engineering - Other

Degree Level * ⓘ

Bachelor

Expected Graduation Date * ⓘ

Thursday May 30 2024



Back

Next

Application Questions

^

Please answer the questions in the following section with one video and two written responses. Only one video (under 2 minutes) should be provided. Please make sure you are recording in a quiet space with minimal background noise so that we can hear you clearly.

If you would prefer to submit your video in your native language, you can do so. If you choose to record your video in any language that is not English, you are required to include English subtitles. Because most Microsoft Learn Student Ambassadors events are hosted in English, program participants should have at least intermediate level English proficiency.

Please select the area where you can demonstrate your public speaking skills with a video * (i)

Teach (How would you teach a technical concept to a friend)

▼

Teach * (i)

How would you take a technical concept and teach it to a friend or peer that has never heard of it?

https://

Input required.

Inspire * (i)

How have you acted as an agent of change to inspire and influence your peers? Please detail a specific example.

.

Minimum 100 Characters

1 / 1999 Characters

Please provide the required number of characters.

Promote * (i)

If you were hosting a technical event, what steps would you take to increase awareness about your event and attract the targeted audience?

^

Input required.

If you have written a technical blog post (in any language) please provide the URL

If you have recorded any technical how-to videos (in any language) please provide the URL

If you have an online resume or website please provide the URL

If you have a GitHub repository you maintain, please provide the URL

If you have a LinkedIn profile please provide the URL

If you maintain your own technical blog site (in any language) please provide the URL

If you have a Pluralsight profile please provide the URL

If you have a Stack Overflow profile please provide the URL

If you have an Instagram account please provide the URL

If you have a Twitter account please provide the URL

Additional Information



Which of the following technologies interest you? *



Is there anything else you would like to share with us?



Back

Cancel

Submit

Please resolve the validation issues before submitting.

PROGRAM MILESTONES/LEVELS

- The whole program has 4 levels, and you keep getting upgraded after completing the requirements for each level.
- The levels are:
New Ambassador → Alpha Ambassador → Beta Ambassador → Gold Ambassador.



MLSA BENEFITS

1. NEW:

- Access to an amazing community of like minded people.
- Free Microsoft 365 account.
- Access to softwares like Techsmith Snagit and Techsmith Camtasia.

2. ALPHA:

- Azure credits(Azure credits of \$150 per month).
- Visual Studio Enterprise subscription.
- Free LinkedIn Learning subscription.
- MTC Voucher
- A free Domain Name(Name.com)
- All the benefits of New ambassador will remain as it is.

MLSA BENEFITS

3. BETA:

- 1 more MTC Voucher.
- Prizing Pilot for AI Gaming Tournaments.
- Expense reimbursement.
- Beta swag Kit with amazing goodies!.
- Consideration for student ambassador summit.
- All the benefits of New and Alpha ambassador will remain as it is.

4. GOLD:

- 4 more MTC Vouchers.
- Consideration for special events and speaking engagements at events like Build and Ignite.
- Opportunity for program leadership.
- Microsoft MVP(Most Valuable Professional) interaction.
- Gold Swag Kit with super amazing goodies!!
- All the benefits of New, Alpha and Beta ambassador will remain as it is.

So to apply for these types of programs

- <https://studentambassadors.microsoft.com/>
- Last date for this cohort
31/8/2022
- Under Microsoft Student Ambassadors Community
- <https://education.github.com/experts>
- Application will close on September 4, 2022, 23:00 Pacific Time.
- Under Github.com(Microsoft)

Thank you for attending! 😊

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