Welcome to MSA Azure & Cloud Fundamentals Bootcamp

1. We will be commencing shortly
2. This is a Microsoft Teams Live event, so you are placed on mute for the entire duration.
3. If you have any questions, please select "Ask a question" or upvote by liking existing ones.
4. Captions can be turned on anytime by clicking the "CC" icon.
5. At any point where you get lost, you can rewind the live stream to any point in time.
6. This workshop is being recorded and all recordings can be accessed via the same link you used to access this live event.
7. Having this workshop being recorded, should you not consent, please feel free to leave if you wish.
8. For updates on the program, please join our Facebook group at https://aka.ms/MSAFacebook
9. We hope you enjoy the session!

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MSA
Microsoft Student Accelerator

presents

Azure & Cloud Fundamentals

Agenda

01 Welcome Announcements

02 Keynote Speakers

03 Cloud & Azure Concepts

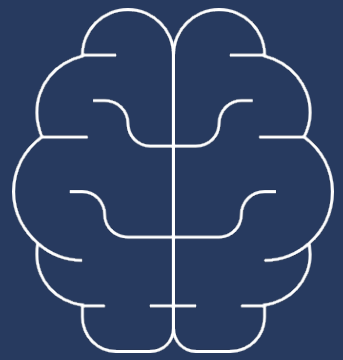
04 Live Demo

05 Submission & Marking Guidelines

06 Q&A

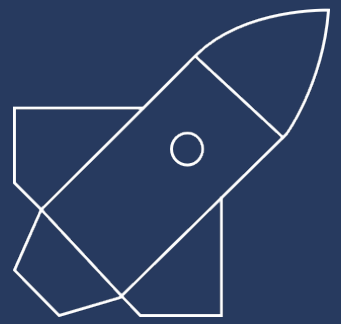
Become a Microsoft Learn Student Ambassador

What is it?



Grow your skills

Get unique access to Microsoft resources to develop both yourself and your community.



Expand your boundaries

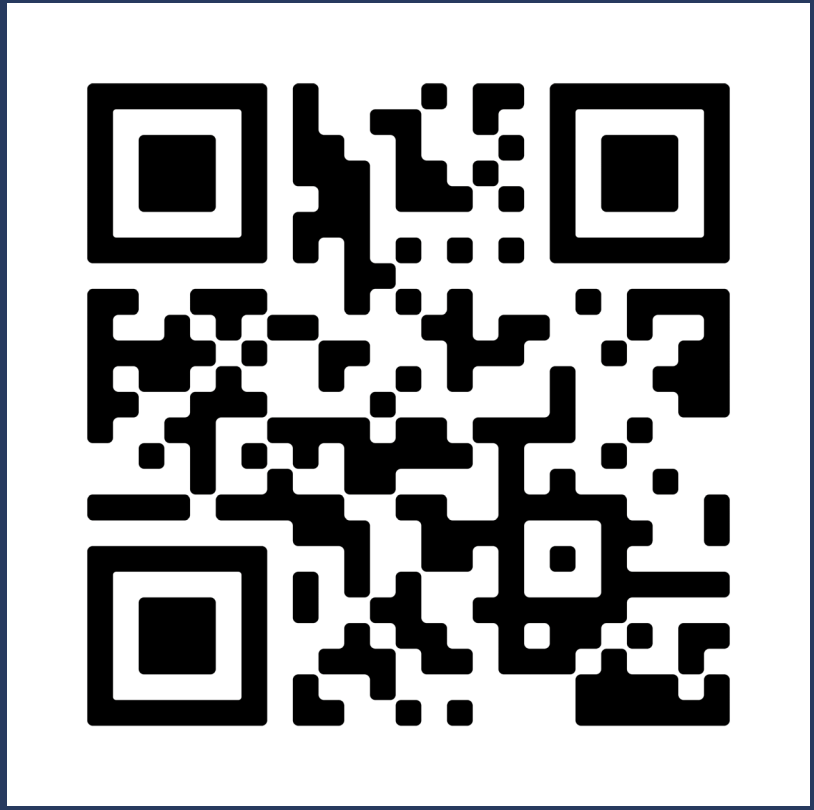
Be part of a global team of student ambassadors and gain access to special global events.

Apply and Join

Apply now and join the team of global student ambassadors to empower your community.

Apply Now!

- Applications close by the **end of May**.
- Apply here: https://studentambassadors.microsoft.com



MSA Stories

A monthly contest to upskill MSA students to learn new technologies on MS Learn and write technical blogs and share your MSA journey experience.

More information will be sent to you via email!

Prizes

Every month, we will be giving out several cool Microsoft swags including free Microsoft exam vouchers, power banks and T-Shirts for the top blog posts.

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Keynote Speaker

Microsoft

Cloud Concepts

Agenda

01 Introduction to Cloud Computing

02 Benefits

03 Diving Deeper into Cloud Computing

04 Introduction to Azure

05 Explore Azure services

06 Demystify Technical Jargons

What is Cloud Computing?

- Cloud computing is renting resources
- You only pay for what you use.
- You can upgrade or downsize as per your requirements

Typical Cloud Services

Compute power - such as Linux servers or web applications

Storage - such as files and databases

Networking - such as secure connections between the cloud provider and your company

Analytics - such as visualizing telemetry and performance data

Benefits of Cloud

Cost-effective

Scalable

Elastic

Reliable

Secure

Types of Cloud Services

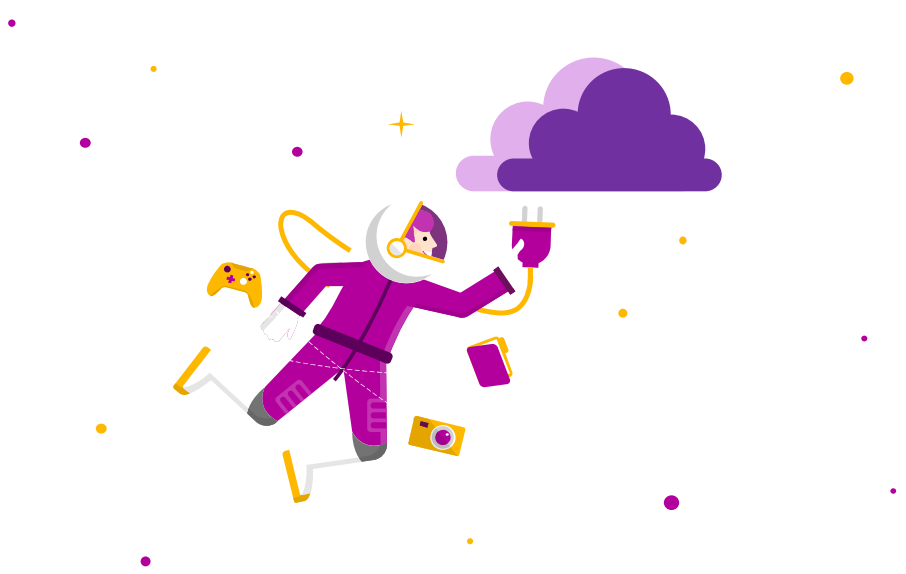
Infrastructure as a service (**IaaS**)

Platform as a service (**PaaS**)

Software as a service (**SaaS**)

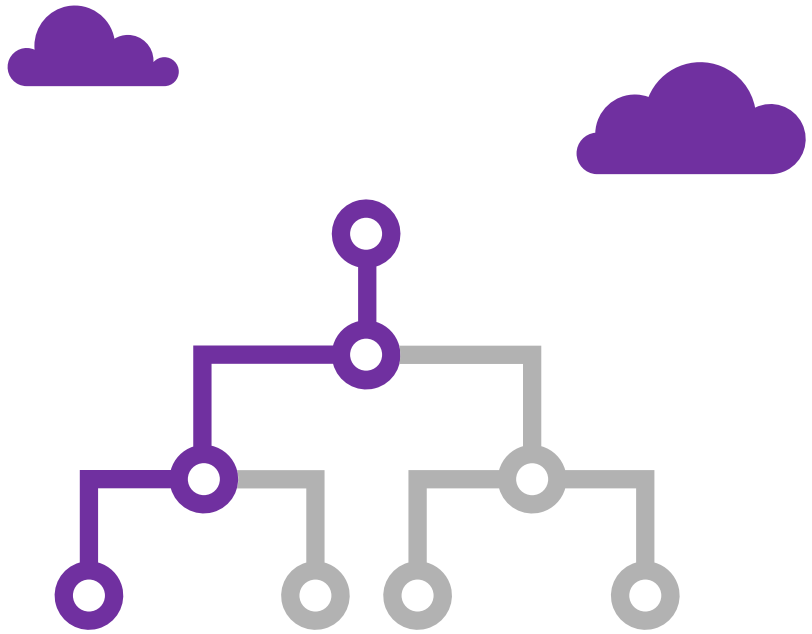
Infrastructure as a Service (Iaas)

- Infrastructure as a Service is the most flexible category of cloud services.
- Instead of buying hardware, with IaaS, you rent it.
- Typically used for migration, test & development, storage, backup etc.



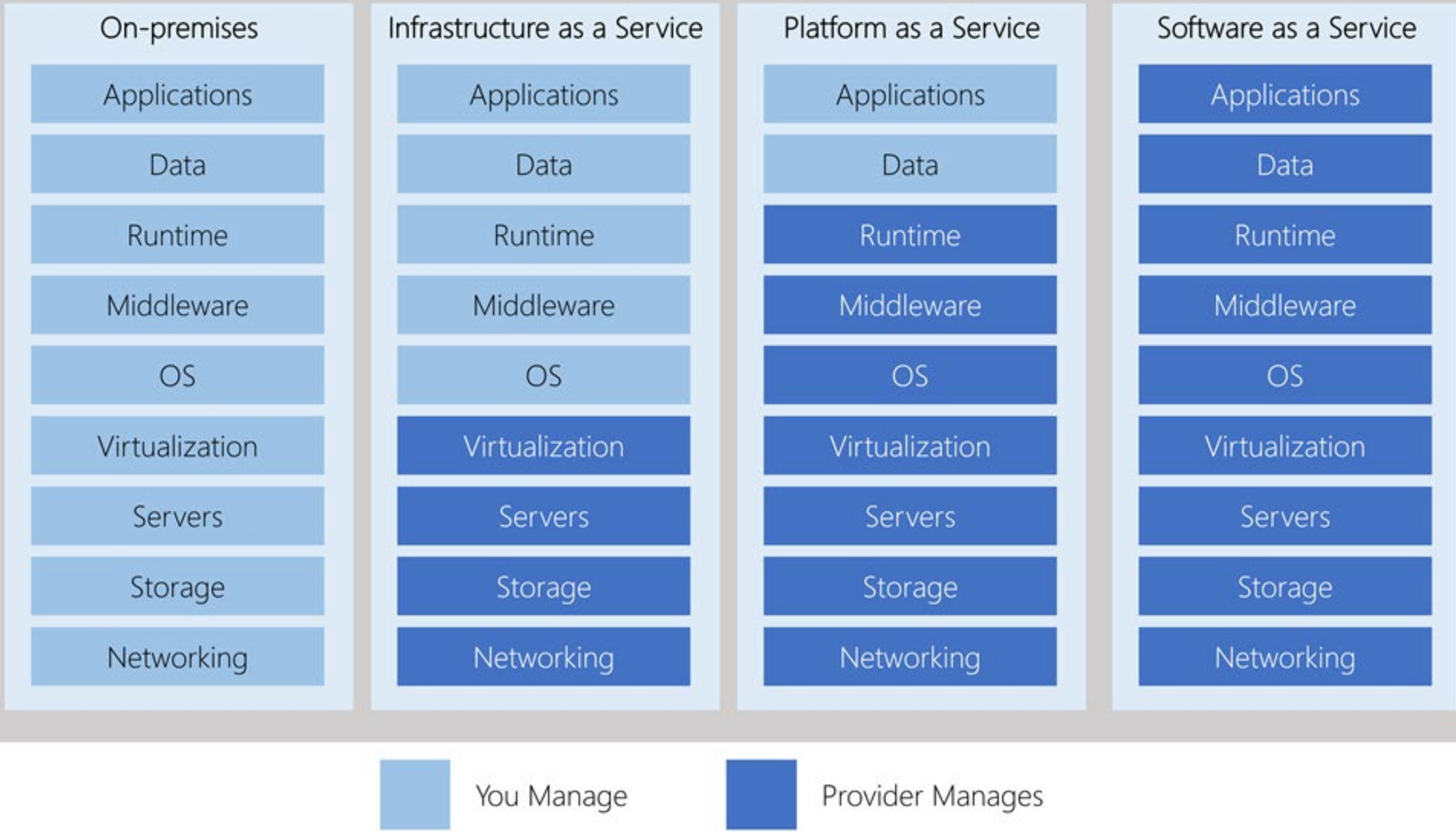
Platform as a Service (Paas)

- PaaS provides an environment for building, testing, and deploying software applications
- Create an application quickly without managing the underlying infrastructure.
- Commonly used for deploying services like websites, perform business analytics etc.



Software as a Service (Saas)

- SaaS is software that is centrally hosted and managed for the end customer.
- Customers don't need to worry about developing and managing the underlying software
- Office 365, Skype, and Dynamics CRM Online are perfect examples of SaaS software.


On-premises
Applications
Data
Runtime
Middleware
OS
Virtualization
Servers
Storage
Networking
Infrastructure as a Service
Applications
Data
Runtime
Middleware
OS
Virtualization
Servers
Storage
Networking
Platform as a Service
Applications
Data
Runtime
Middleware
OS
Virtualization
Servers
Storage
Networking
Software as a Service
Applications
Data
Runtime
Middleware
OS
Virtualization
Servers
Storage
Networking
You Manage
Provider Manages

Cloud Deployment Models

Public

Private

Hybrid

Public vs Private vs Hybrid

Model	Advantages	Disadvantages
Public	• High Scalability • Pay-as-you-go pricing • Minimal Technical knowledge required	• Specific security requirements • Government policies • Unique business requirements
Private	• Can meet any business requirements • You can control (and responsibility) over security • Can meet any strict compliance requirement	• Some initial cost • Can limit agility as you own the equipments • Requires IT skills and expertise
Hybrid	• In short, has most of the advantages of both models combined	• More expensive than just selecting one model • Complicated to set up and manage

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Introduction to Azure

What is Azure?

- Microsoft's cloud computing platform
- Built on 2008 as "Project Red Dog", released as "Windows Azure" and later changed to "Microsoft Azure"
- Provides over 100 different services of IaaS, PaaS and SaaS

Tour of Azure Services

Compute Services

Cloud Storage

Networking

App Hosting

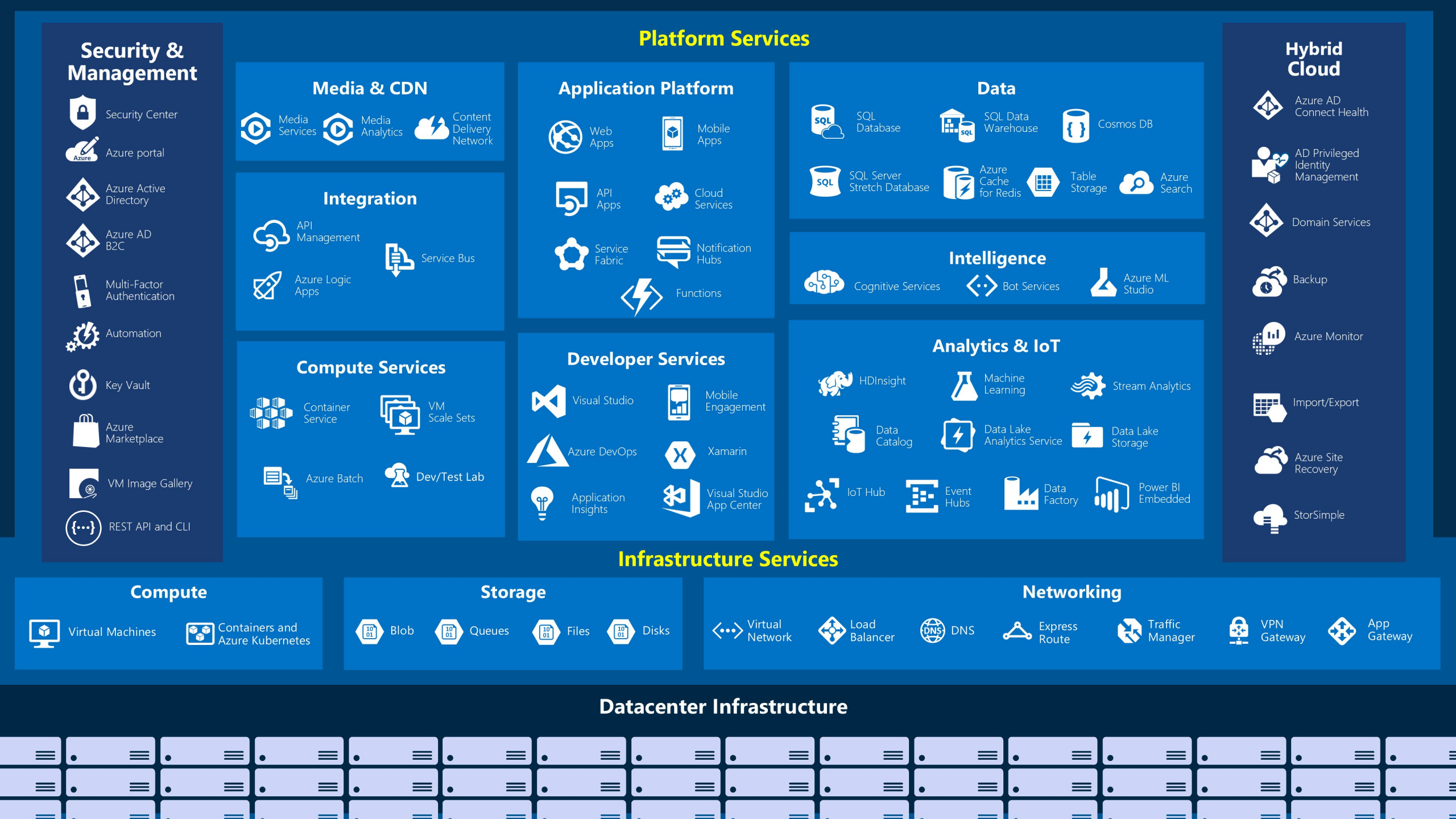
Tour of Azure Services

Artificial Intelligence

Internet of Things

Integration

Security


Platform Services
Security & Management
Security Center
Azure portal
Azure Active Directory
Azure AD B2C
Multi-Factor Authentication
Automation
Key Vault
Azure Marketplace
VM Image Gallery
REST API and CLI
Media & CDN
Media Services
Media Analytics
Content Delivery Network
Integration
API Management
Service Bus
Azure Logic Apps
Compute Services
Container Service
VM Scale Sets
Azure Batch
Dev/Test Lab
Application Platform
Web Apps
Mobile Apps
API Apps
Cloud Services
Service Fabric
Notification Hubs
Functions
Developer Services
Visual Studio
Mobile Engagement
Azure DevOps
Xamarin
Application Insights
Visual Studio App Center
Data
SQL Database
SQL Data Warehouse
Cosmos DB
SQL Server Stretch Database
Azure Cache for Redis
Table Storage
Azure Search
Intelligence
Cognitive Services
Bot Services
Azure ML Studio
Analytics & IoT
HDInsight
Machine Learning
Stream Analytics
Data Catalog
Data Lake Analytics Service
Data Lake Storage
IoT Hub
Event Hubs
Data Factory
Power BI Embedded
Hybrid Cloud
Azure AD Connect Health
AD Privileged Identity Management
Domain Services
Backup
Azure Monitor
Import/Export
Azure Site Recovery
StorSimple
Infrastructure Services
Compute
Virtual Machines
Containers and Azure Kubernetes
Storage
Blob
Queues
Files
Disks
Networking
Virtual Network
Load Balancer
DNS
Express Route
Traffic Manager
VPN Gateway
App Gateway
Datacenter Infrastructure

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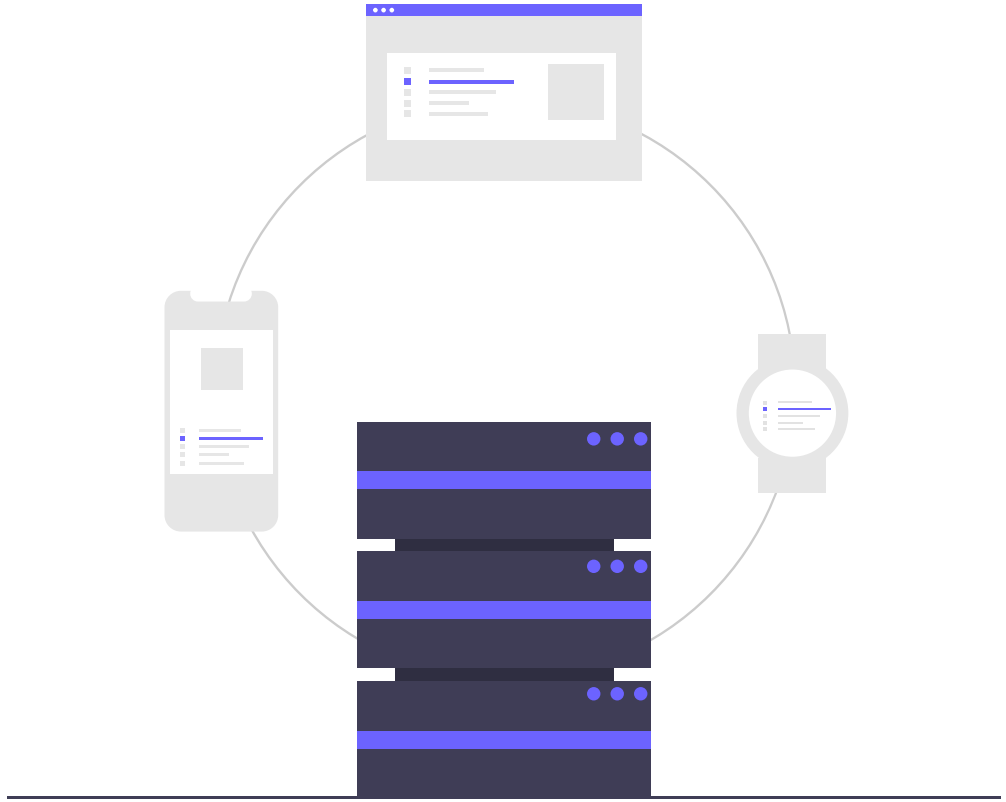
Demystifying Technical Jargons

Internet of Things (IoT)

- Connectivity of everyday objects via internet
- Enables them to “talk” to each other
- Allows remote execution of various tasks

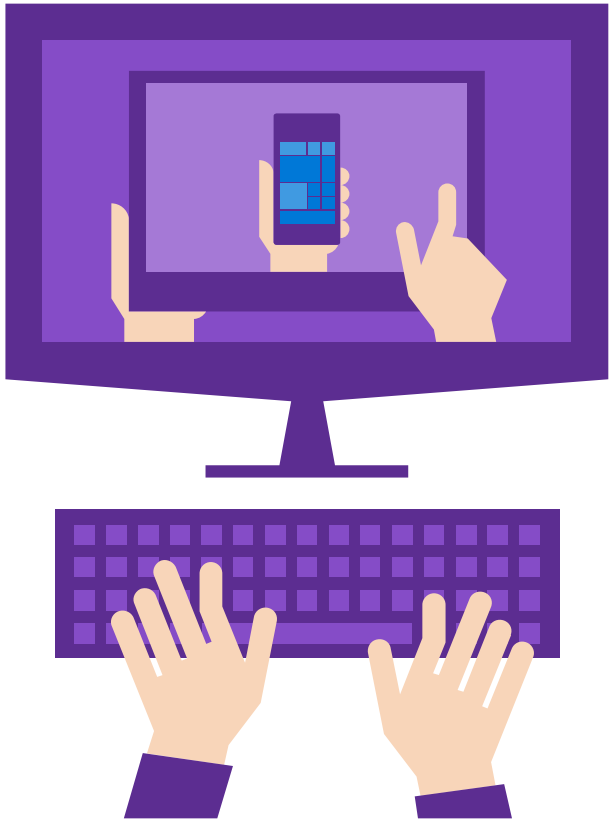
Telemetry

- Automated communications process
- Measurement and other data from remote or inaccessible areas are transmitted
- Utilised for monitoring and maintenance



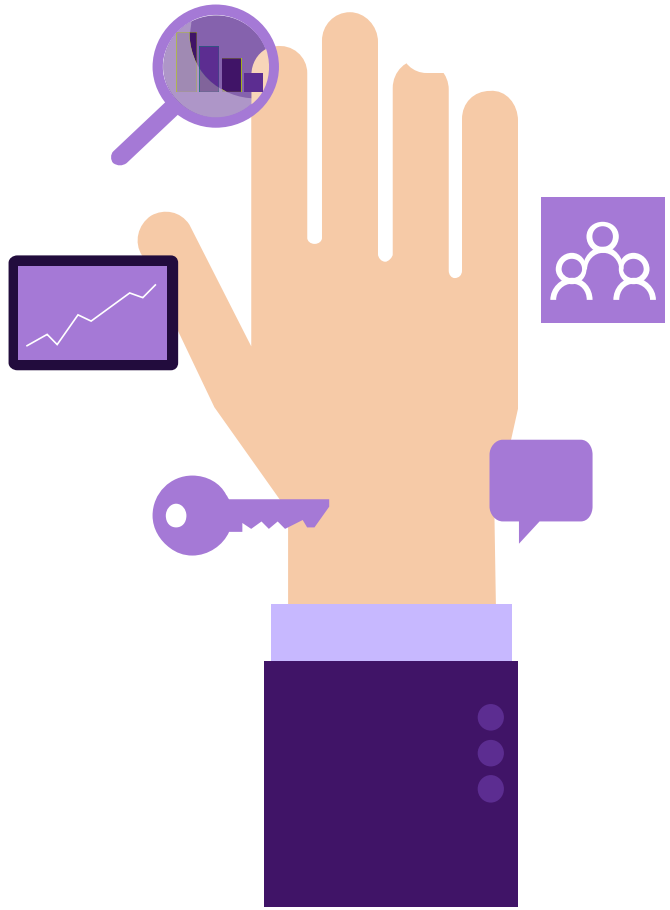
Virtual Machines (VM)

- A virtual representation or “emulation” of physical computers
- Can be used to run applications, programs etc inside a desired environment



Containers

- Isolated environment to execute applications
- Similar to VMs except they don't require a guest operating system.



Attendance Form

https://aka.ms/msaattendance

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Project walk-through

Agenda

1

Introduction to Azure Portal

2

Walkthrough of Project

3

Marking Guidelines

Microsoft

Questions and Answers

Thank you for attending!

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2. All resources can be found on our GitHub repo which can be accessed via the link we sent to your email.