



# Microsoft Azure Fundamentals Training (AZ-900)

## Module 4



# Agenda

01

What is Access Management in Azure?

02

Role-based Access Control

03

Identity Management & Azure Active Directory

04

Windows AD vs Azure AD

05

Service Audience

06

Terminologies in Azure Active Directory

07

Azure Policies

08

Identity Solution for Hybrid Environments

09

Implementing Authentication in Azure

10

What is Self Service Password Reset?

11

Why Self Service Password Reset?

12

Multi-factor Authentication

# Agenda

**13** Azure AD Join

**17** Azure DevOps

**21** Azure Support

**14** Azure Big data and analytics

**18** Azure Pricing

**22** Azure Service Level Agreement

**15** Azure IoT

**19** Azure Pricing Calculator

**16** Azure AI

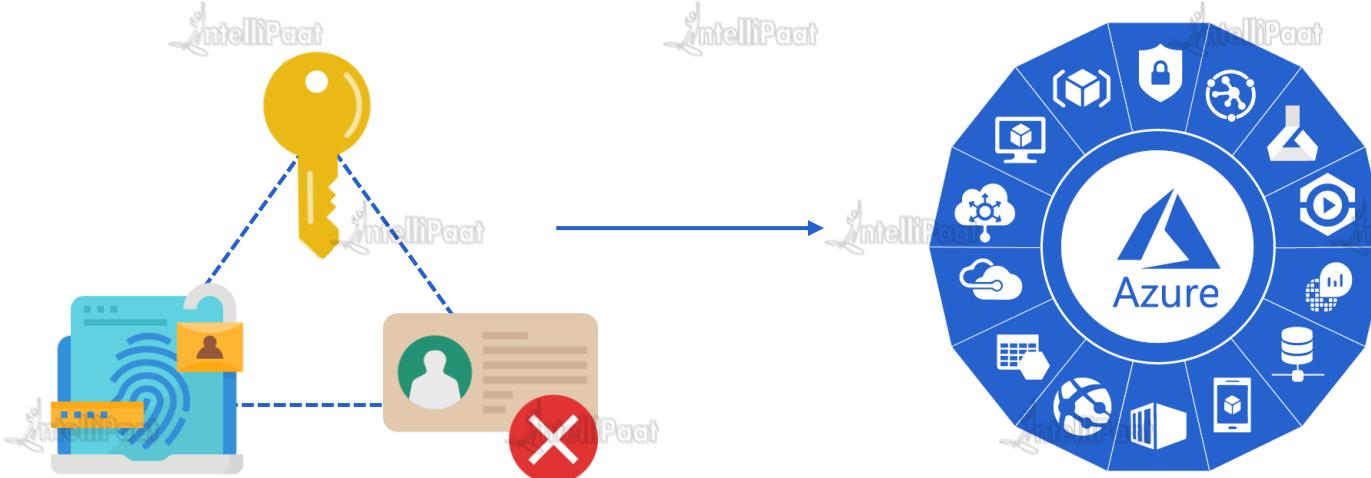
**20** Azure Best Practices



# What Is Access management in Azure?

# What is Access management in Azure?

Access management in Azure refers to the process that allows, denies or restricts access to Azure services or resources. It also includes, deciding who gets access and up to what extent, in Azure cloud.





# Role based Access Control



# What is RBAC?



Azure employs role based access control (RBAC) method for access management in Azure cloud. RBAC is used to manage who (user) has access to Azure resources.

**RBAC works by creating and assigning roles and then enforcing permissions on those roles.**  
**You can use RBAC to:**

01

Allow an application to access only a few Azure resources from a resource group.

02

Allow one user to manage only one particular resource in a subscription.

03

Restrict a user from managing only one particular resource in a subscription.

# Built-in Roles in Azure

RBAC can be used to create custom roles with permissions of our choice. There are some built-in roles in Azure with pre-defined permissions that can be assigned and used.

01

**Owner**

Has full access to all resources including the right to delegate access to others.

02

**Contributor**

Can create and manage all types of Azure resources but can't grant access to others.

03

**Reader**

Can view existing Azure resources.

04

**User Access Administrator**

Lets you manage user access to Azure resources.

# Built-in Roles in Azure

Apart from these built in roles, Azure also offers some resource specific built-in roles that can be used to perform actions on particular resources and not on other resources.

01

## Owner

Has full access to all resources including the right to delegate access to others.

02

## Contributor

Can create and manage all types of Azure resources but can't grant access to others.

03

## Reader

Can view existing Azure resources.

04

## User Access Administrator

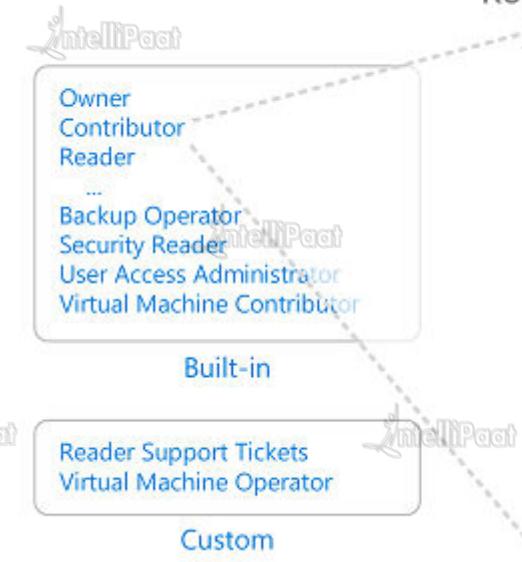
Lets you manage user access to Azure resources.

# What are Role Definitions?

A role definition is a collection of permissions. A role definition lists the operations that can be performed, such as read, write, and delete. It can also list the operations that can't be performed or operations related to underlying data.

## Role definition

```
Contributor
{
    "Actions": [
        "*"
    ],
    "NotActions": [
        "Authorization/*/Delete",
        "Authorization/*/Write",
        "Authorization/elevateAccess/Action"
    ],
    "DataActions": [],
    "NotDataActions": [],
    "AssignableScopes": [
        "/"
    ]
}
```



# Hands-On: Create a Custom role



Roles assignment essentially comprises of three elements, namely, security principal, role & role definition and finally a scope.

## Security principal

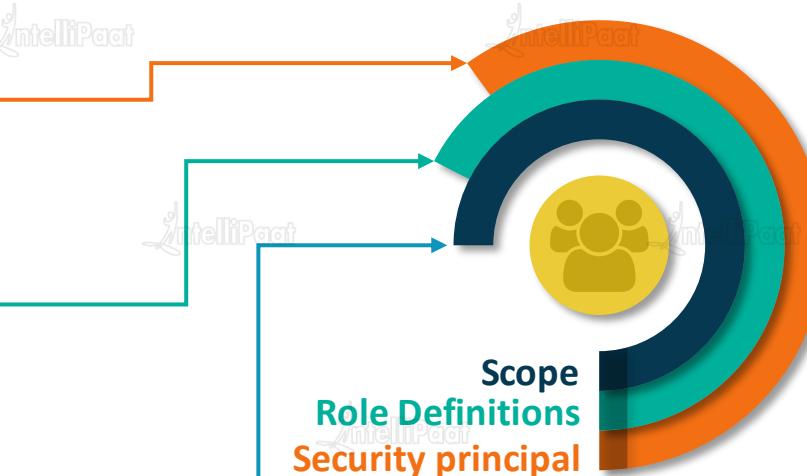
A user, group, service principle or a managed identity that is requesting access to Azure resources is called security principal.

## Role Definitions

A set of permissions and operations that can or cannot be performed.

## Scope

Scope is the set of resources that the access is applied to. You can specify a scope at multiple levels, like, management group, subscription, resource group, or resource.

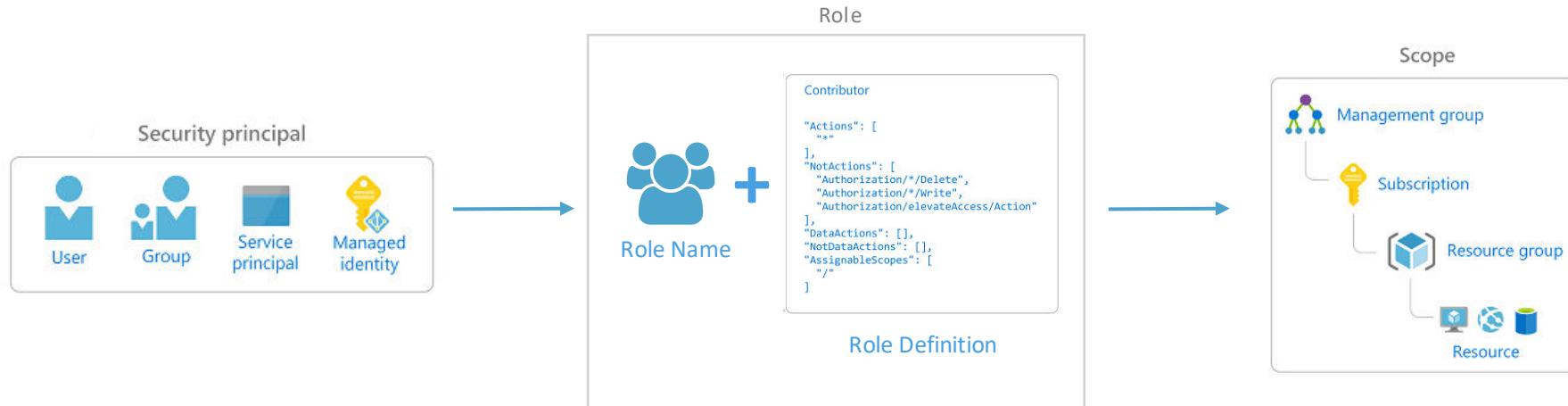


Scope  
Role Definitions  
Security principal

# Role Assignment

A role assignment is the process of attaching a role containing a role definition to a user, group, service principle, or managed identity at a particular scope for the purpose of granting access.

**Access is granted by creating a role assignment, and access is revoked by removing a role assignment.**





IntelliPaat



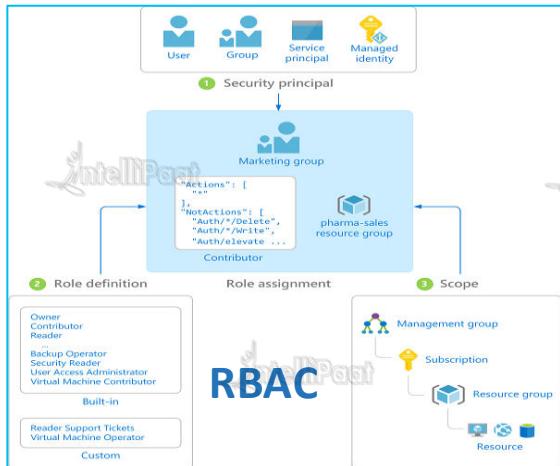
# Identity Management & Azure Active Directory



# Identity And Access Management in Azure



Azure not only offers identity and access management for Azure cloud but also for hybrid environments.



Microsoft Azure  
Identity and Access  
management

Access  
Control

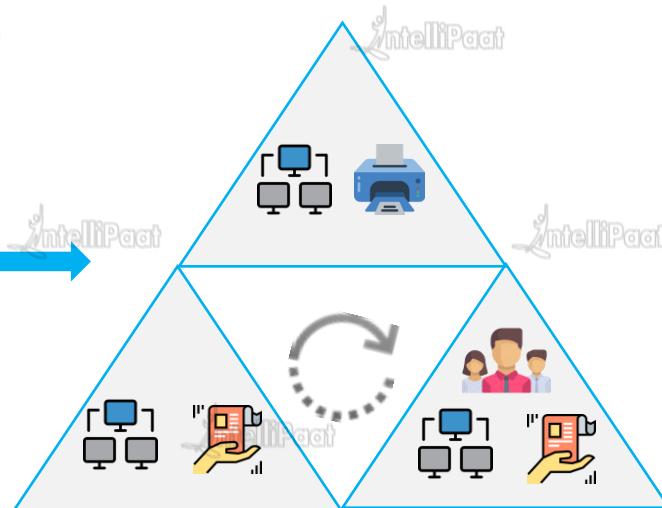
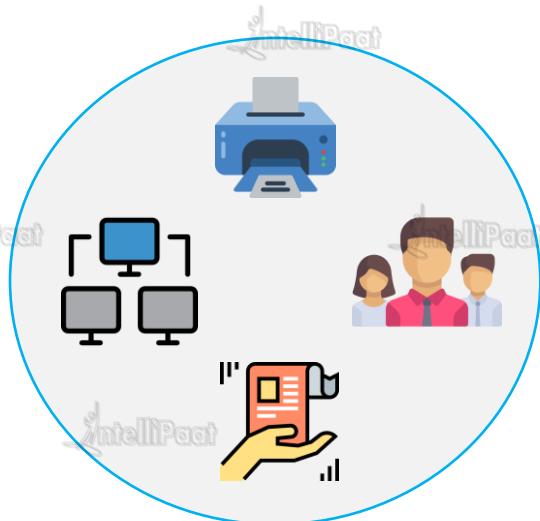


Microsoft Azure  
Active Directory

Identity  
management

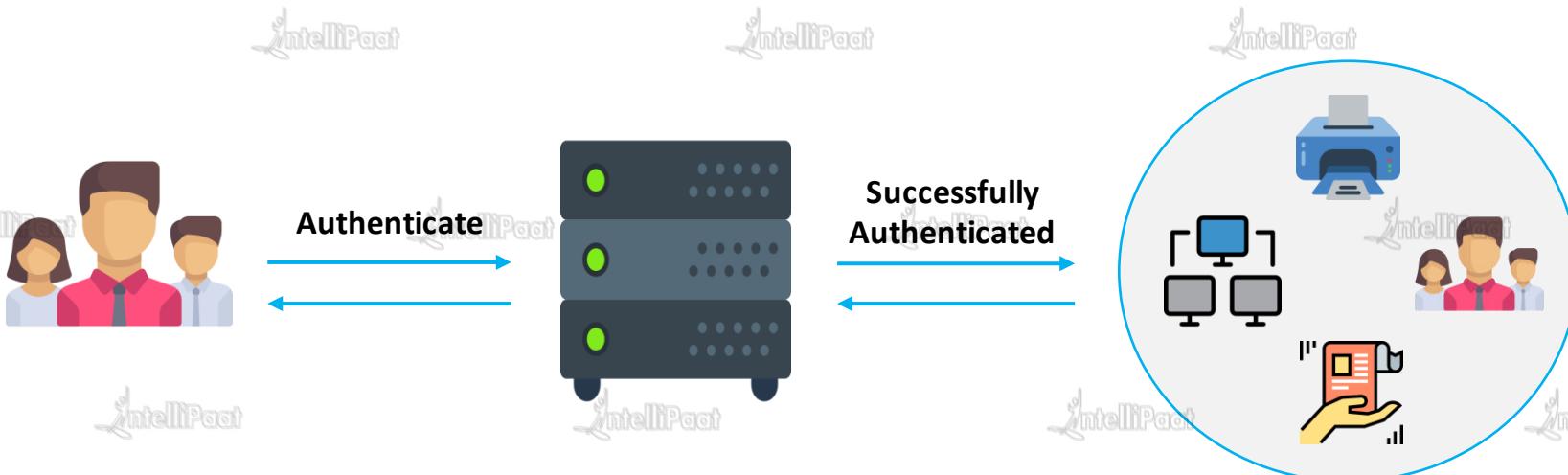
# What is Active Directory?

Active directory is used to store and organize information about various elements of an organization's network such as computers, users, resources like printers, shared files or folders.



# What is Active Directory?

Active directory information can be used to authenticate and authorize the users, computers, resources that are part of the organization's network.



# What is Azure Active Directory?



Azure Active directory (Azure AD) is the identity management solution for Azure. It is a live directory or a database that stores user accounts and their passwords, computers, files shares, security groups, permissions and so much more.



# What is Azure Active Directory?

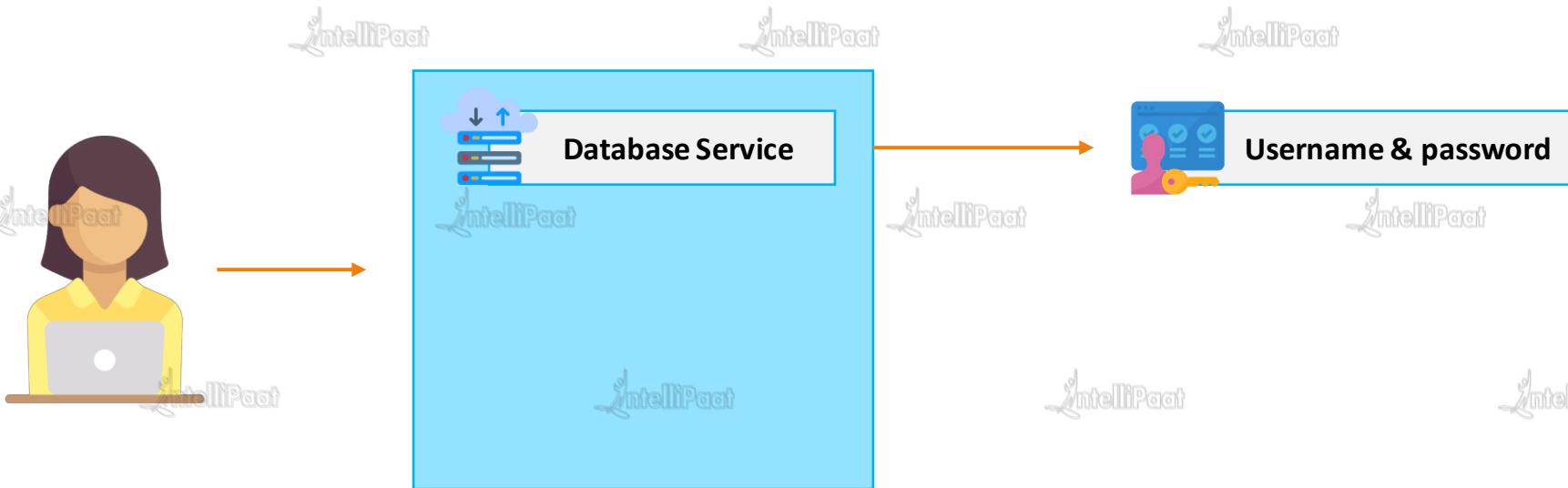


Azure active directory is Microsoft's multi tenant, identity solution for Azure. Azure AD is a one stop solution for core directory services for cloud, application access management and identity authentication.



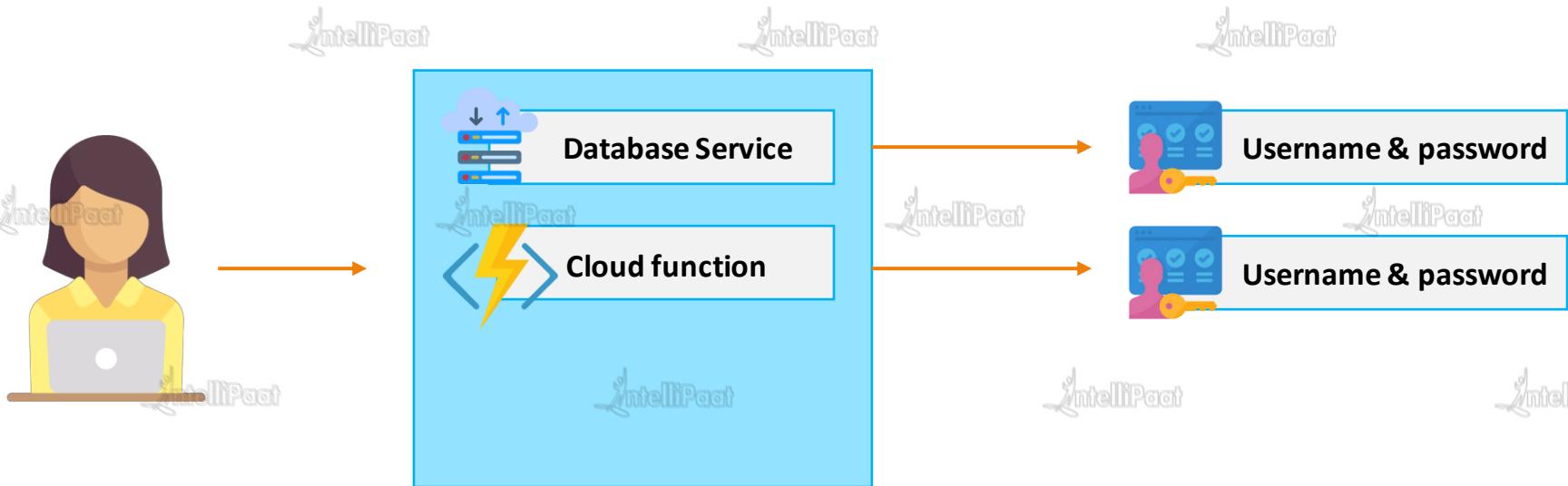
# Before Azure Active Directory?

For any service that you might want to use, you are given a set of username and password, using which you can access that particular service for which the username and password is created.



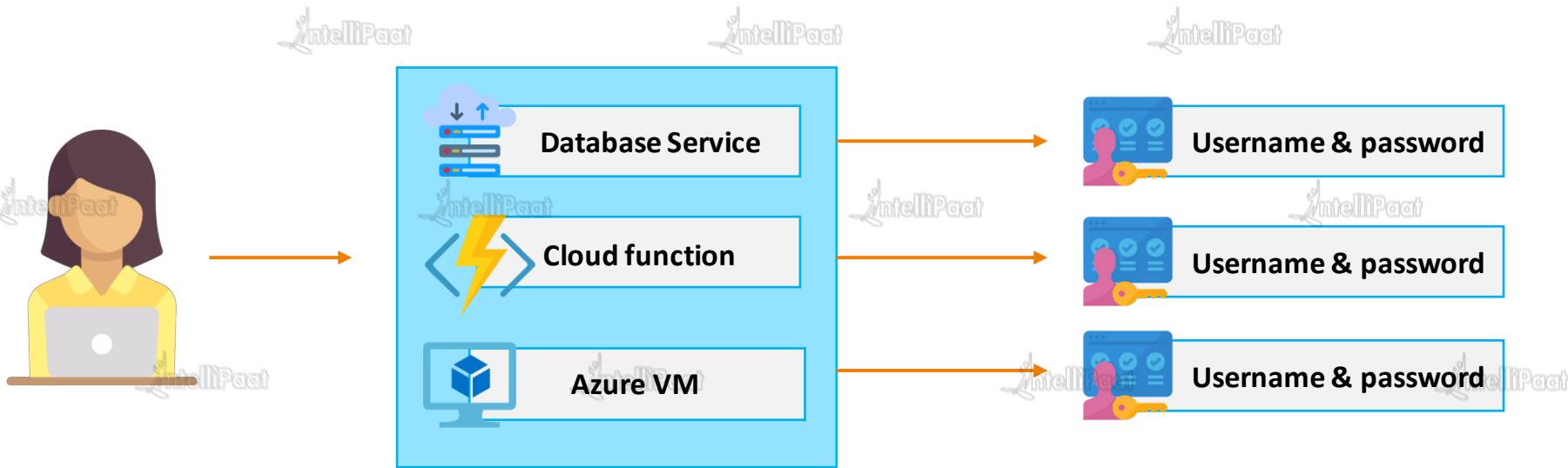
# Before Azure Active Directory?

For any service that you might want to use, you are given a set of username and password, using which you can access that particular service for which the username and password is created.



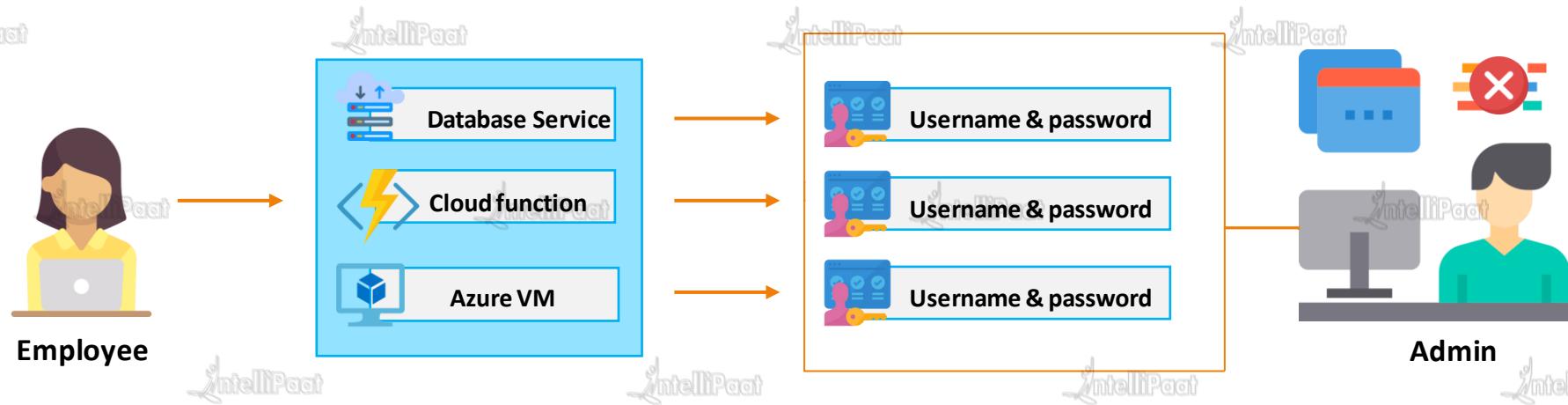
# Before Azure Active Directory?

For any service that you might want to use, you are given a set of username and password, using which you can access that particular service for which the username and password is created.



# Before Azure Active Directory?

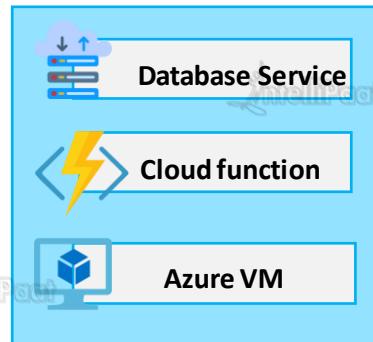
For any service that you might want to use, you are given a set of username and password, using which you can access that particular service for which the username and password is created.



# After Azure Active Directory?

For any service that you might want to use, you are given a single set of username and password, using which you can access any service that you want, as long as the admin has given you the permission.

## Azure Active directory provides single sign on feature



Admin



# Windows AD Vs. Azure AD

# What is Windows Active Directory?

Windows Active directory is a windows OS directory service that offers a single interface for organizing and maintaining information about the organization's network.

Windows Active directory works on different layers. Each layer to perform different tasks

1 ADDS (Windows Active Directory Domain Services)

2 ADFC (Active Directory Federation Services)

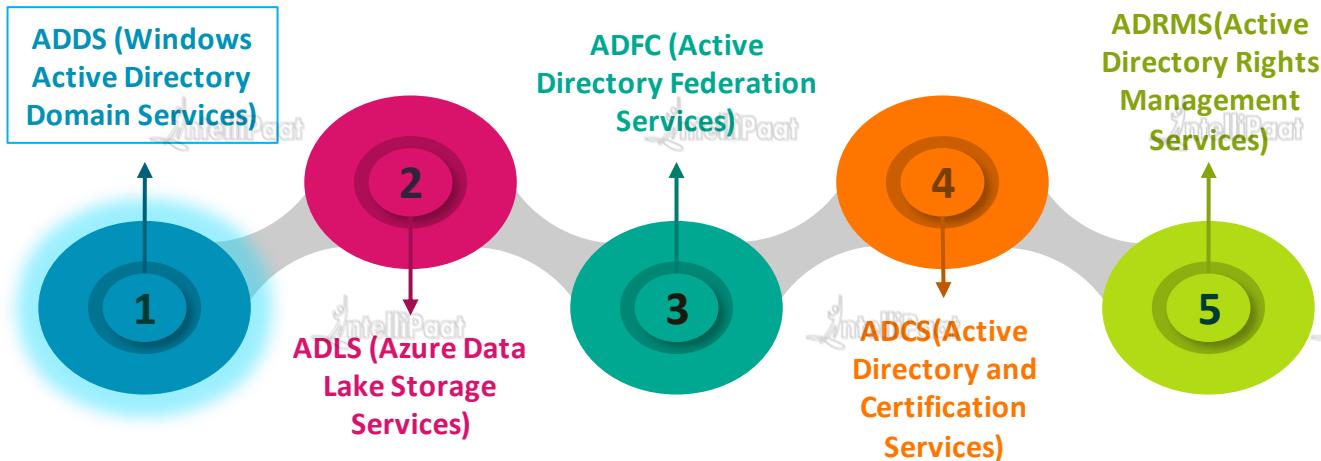
3 ADRMS (Active Directory Rights Management Services)

4 ADLS (Azure Data Lake Storage Services)

5 ADCS (Active Directory and Certification Services)

# What is Windows Active Directory?

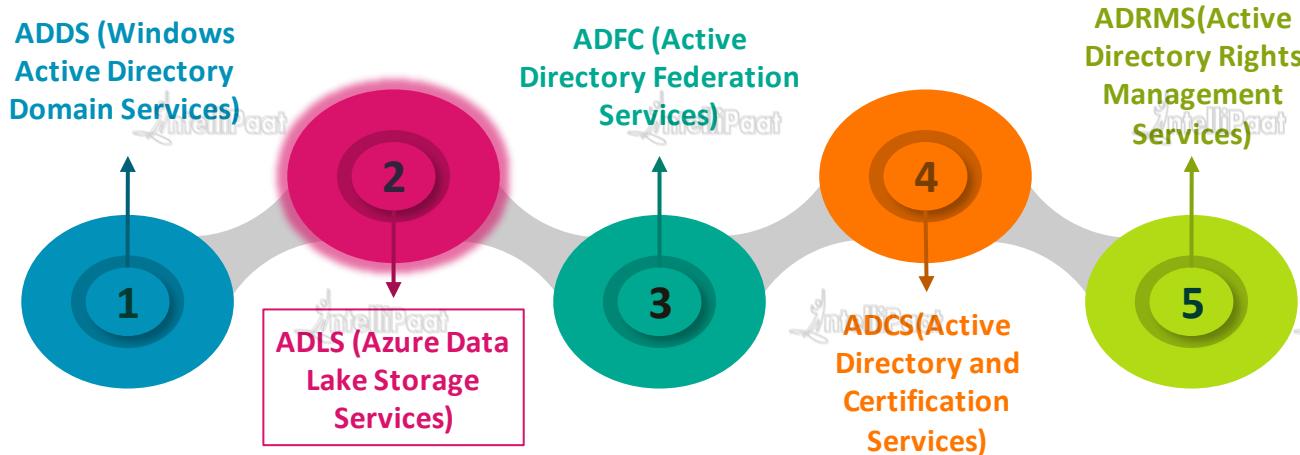
**Windows Active** directory works on different layers. Each layer to perform different tasks



This layer allows admins to manage and monitor the information related to user logins.

# What is Windows Active Directory?

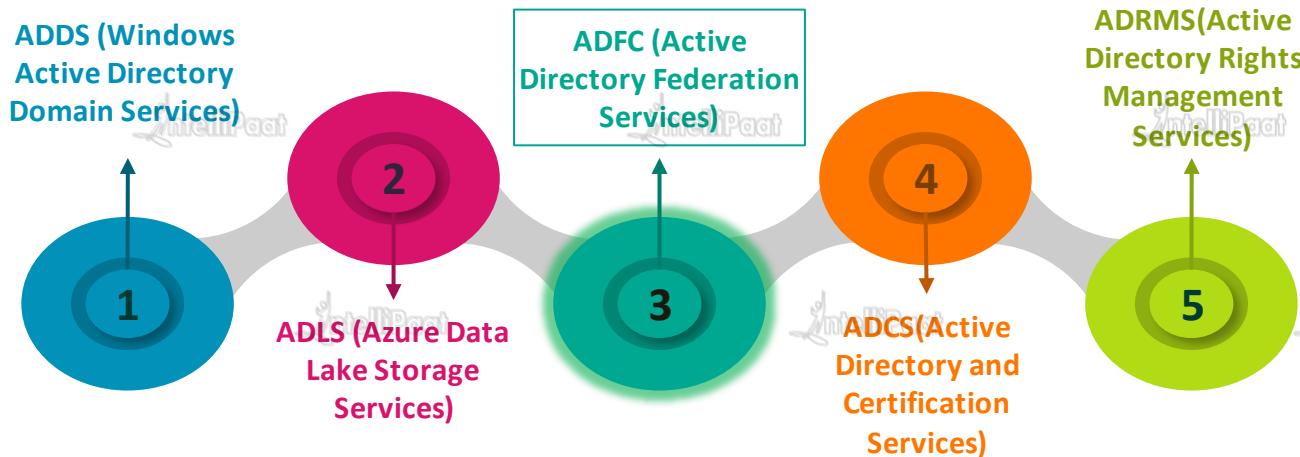
**Windows Active** directory works on different layers. Each layer to perform different tasks



This layer allows the admin the store any amount of data of any type and size.

# What is Windows Active Directory?

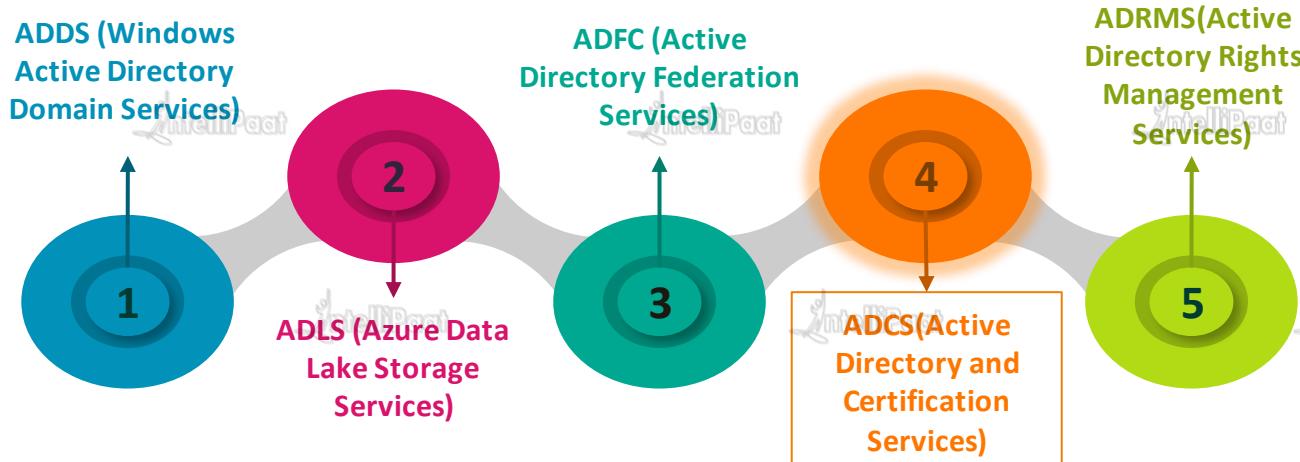
**Windows Active** directory works on different layers. Each layer to perform different tasks



ADFS layer allows you to have single sign-on access to systems and applications within the organization's network.

# What is Windows Active Directory?

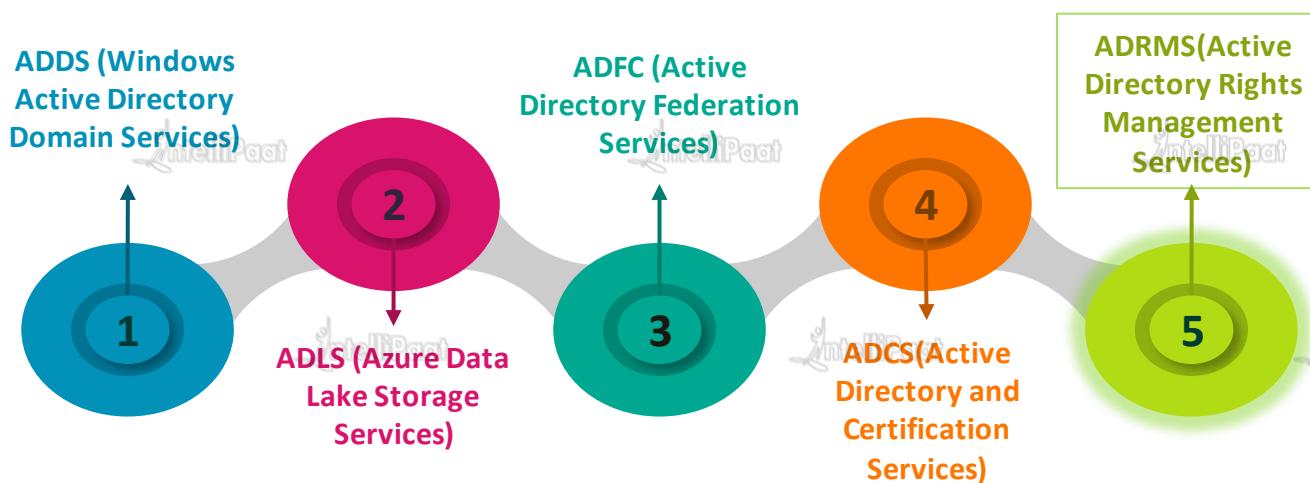
**Windows Active** directory works on different layers. Each layer to perform different tasks



This layers enables admins to customize services in order to issue and manage public certificates

# What is Windows Active Directory?

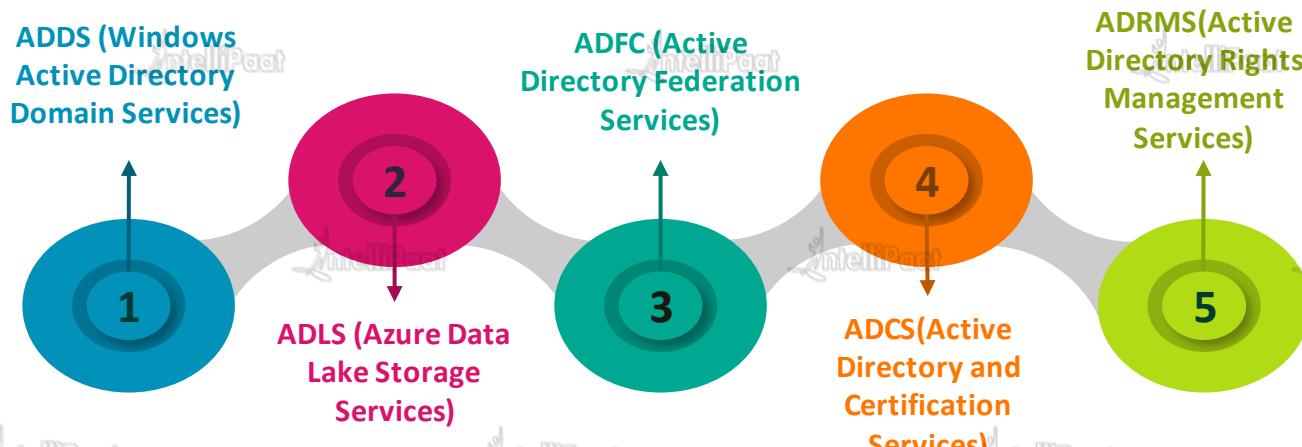
**Windows Active** directory works on different layers. Each layer to perform different tasks



ADRMS layer is used for data protection.

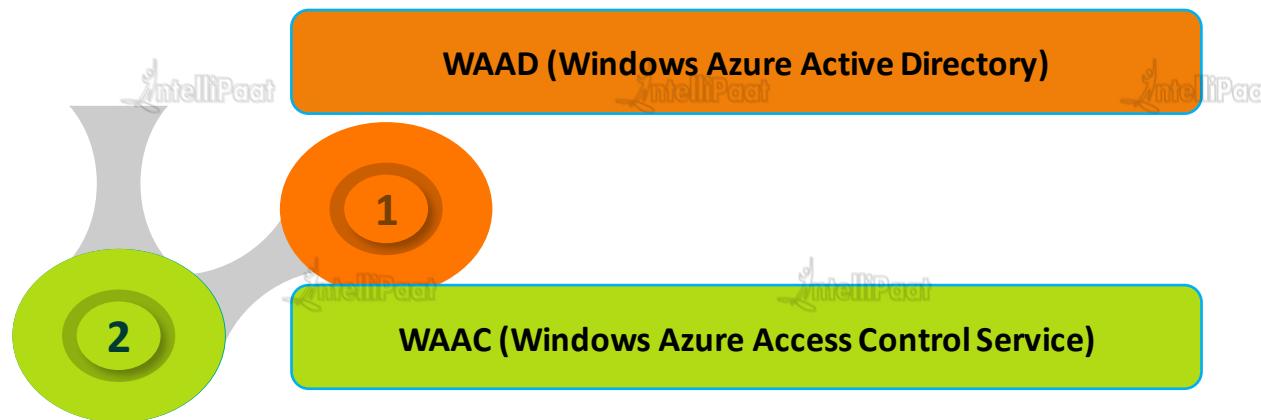
# Windows AD Vs. Azure AD

Azure Active directory merged all these layers into just two layers.



# Windows AD Vs. Azure AD

Azure Active directory merged all these layers into just two layers.





IlPaat



# Service Audience

# Service Audience

## IT Administrator



- ✓ IT administrator will be responsible for all sign-ups and sign-ins.
- ✓ Provide relevant authentication and permissions to customers or users
- ✓ Resolve authentication issues

## Application Developer



Developers get easy and hassle free access to the relevant services to develop applications

## Online Customers



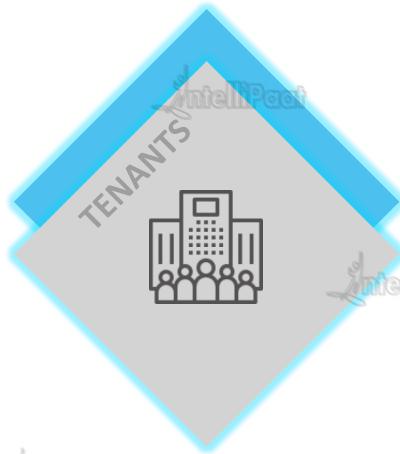
Online customers can access services such as office 365 and other CRM services with their Azure active directory credentials.



# Terminologies in Azure Active Directory



# Terminologies in Azure Active Directory



## TENANTS

Tenant is an organization. Microsoft ensures that all the tenants or the organizations using Microsoft Cloud services stay isolated and separated, in order to maintain their services separately.



## DOMAINS

A domain is a DNS zone for which the tenant has proven ownership. Each tenant has a core domain (onmicrosoft.com)



## USER

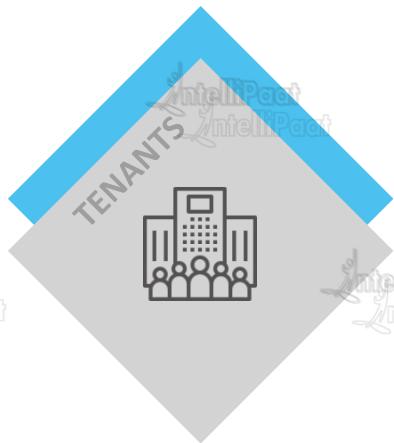
Users are the individuals that are given permission and set of username and password to access and use certain services



## GROUPS

Groups are the logical group of users. Groups are created to organize the users or devices on the basis of geographic location, department, types of services or hardware characteristics.

# Terminologies in Azure Active Directory



## TENANTS

Tenant is an organization. Microsoft ensures that all the tenants or the organizations using Microsoft Cloud services stay isolated and separated, in order to maintain their services separately.



## DOMAINS

A domain is a DNS zone for which the tenant has proven ownership. Each tenant has a core domain (onmicrosoft.com)



## USER

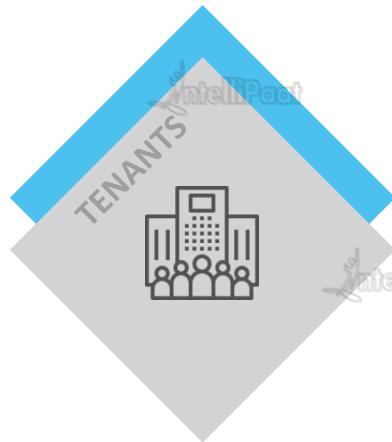
Users are the individuals that are given permission and set of username and password to access and use certain services



## GROUPS

Groups are the logical group of users. Groups are created to organize the users or devices on the basis of geographic location, department, types of services or hardware characteristics.

# Terminologies in Azure Active Directory



## TENANTS

Tenant is an organization. Microsoft ensures that all the tenants or the organizations using Microsoft Cloud services stay isolated and separated, in order to maintain their services separately.



## DOMAINS

A domain is a DNS zone for which the tenant has proven ownership. Each tenant has a core domain (onmicrosoft.com)



## USER

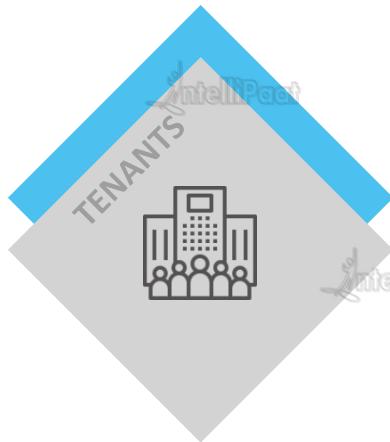
Users are the individuals that are given permission and set of username and password to access and use certain services



## GROUPS

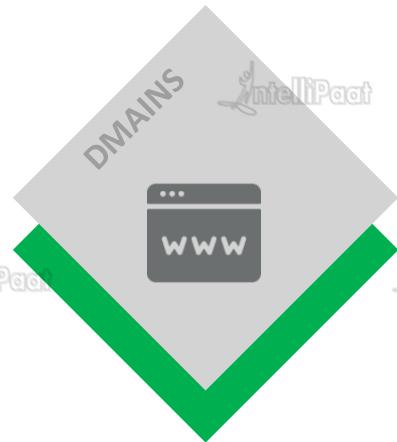
Groups are the logical group of users. Groups are created to organize the users or devices on the basis of geographic location, department, types of services or hardware characteristics.

# Terminologies in Azure Active Directory



## TENANTS

Tenant is an organization. Microsoft ensures that all the tenants or the organizations using Microsoft Cloud services stay isolated and separated, in order to maintain their services separately.



## DOMAINS

A domain is a DNS zone for which the tenant has proven ownership. Each tenant has a core domain (onmicrosoft.com)



## USER

Users are the individuals that are given permission and set of username and password to access and use certain services



## GROUPS

Groups are the logical group of users. Groups are created to organize the users or devices on the basis of geographic location, department, types of services or hardware characteristics.



# Hands-on: Creating a User and adding in a group



IntelliPaat

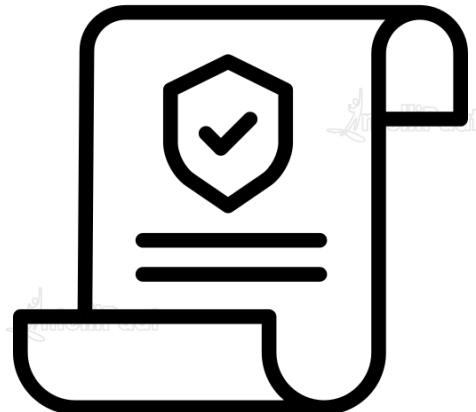


# Azure Policies

# Azure Policies

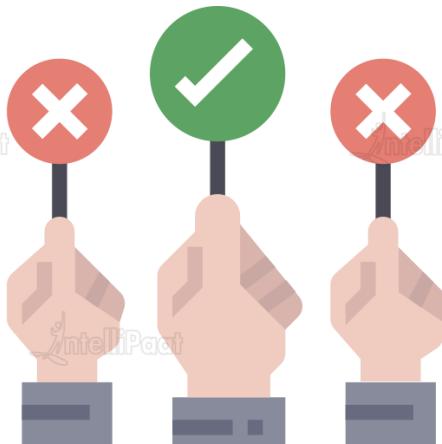
Azure policies is a service provided by Microsoft azure to be able to create, manage and assign new policies to Azure resources.

They make sure that the resources adhere to the **service level agreement** and **corporate standards**.



# How is it different from RBAC?

RBAC focuses on user action at different roles whereas, azure policy focuses on resource properties during deployment and for resources that have already been deployed. Azure policy controls properties such as types or location of Azure resources.





# Identity Solution for Hybrid Environments



# Implementing Authentication in Azure

- Self Service password Reset

- Multi-factor Authentication



# What is Self Service Password Reset

# Self Service Password Reset



Self Service password reset(SSPR) offers a means for IT Admins to enable the users to reset or unlock their own passwords or accounts without any IT intervention.

If SSPR is enabled, you must select at least one of the following options/Gates for the authentication methods.

01 **Mobile phone**

03 **Office phone**

05 **Security questions**

02 **Mobile app notification**

04 **Email**

06 **Mobile app code**



# Why Self Service Password Reset?



# Why Self-Service Password Reset?

Reduces helpdesk Call Volumes and expedites the password reset procedure

Eliminates the drawback of many help desks, that is intruder attack to claim a new password



Ensures that password problems are only resolved after adequate user authentication

Helps users set a password of their own convenience, which later helps them remember their password easily



# Multi-factor Authentication

# What is Multi-factor Authentication?

Multi factor Authentication combines multiple number of independent credentials to create a layered defense against unauthorized authentication or unauthorized access.

For example, it might use the combination of following credentials:

- what the user knows, that is password
- what the user has, that is security token on a trusted device
- what the user is, that is biometric verification

**Username**

**Password**





IPa

# Azure AD Join

# What are Azure AD joined devices?



AD joined devices are signed into using an organizational Azure AD account.

## The main purpose behind AD Join is to:

- Windows deployments of work-owned devices
- Access to organizational apps and resources from any Windows device
- Cloud-based management of work-owned devices
- Users to sign in to their devices with their Azure AD or synced Active Directory work or school accounts

# Use case: Azure AD Join

One of the major cases where azure AD Join is used is when the organization does not have an on-premise Windows server AD infrastructure, Few other scenarios where it can be certainly used are



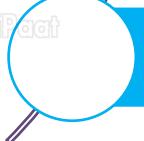
- Organization's users primarily need to access Office 365 or other SaaS apps integrated with Azure AD



Transitioning to cloud-based infrastructure using Azure AD and MDM like Intune



- Providing joining capabilities to workers in remote branch offices with limited on-premises infrastructure



- Users to sign in to their devices with their Azure AD or synced Active Directory work or school accounts



# Azure Big data and analytics

# Azure Big data and analytics



Deliver better experiences and make better decisions by analyzing massive amounts of data in real time. Get the insight you need to deliver intelligent actions that improve customer engagement, increase revenue and lower costs.

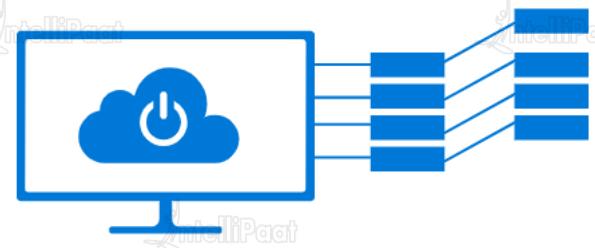
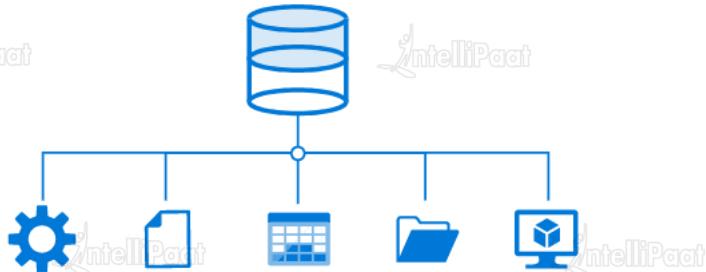


# Azure Big data and analytics

## What Big Data and Analytics solutions does Azure Provide?

Bring together all of the data you need.  
Analyze from a diverse dataset.

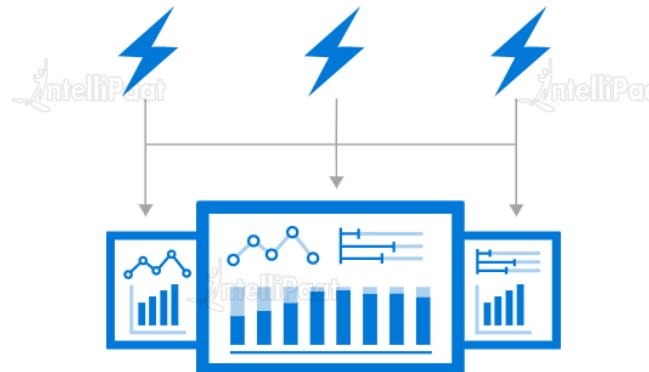
Hold onto your most valuable asset—big data.  
Keep your organization's data indefinitely, no  
matter the size.



## What Big Data and Analytics solutions does Azure Provide?

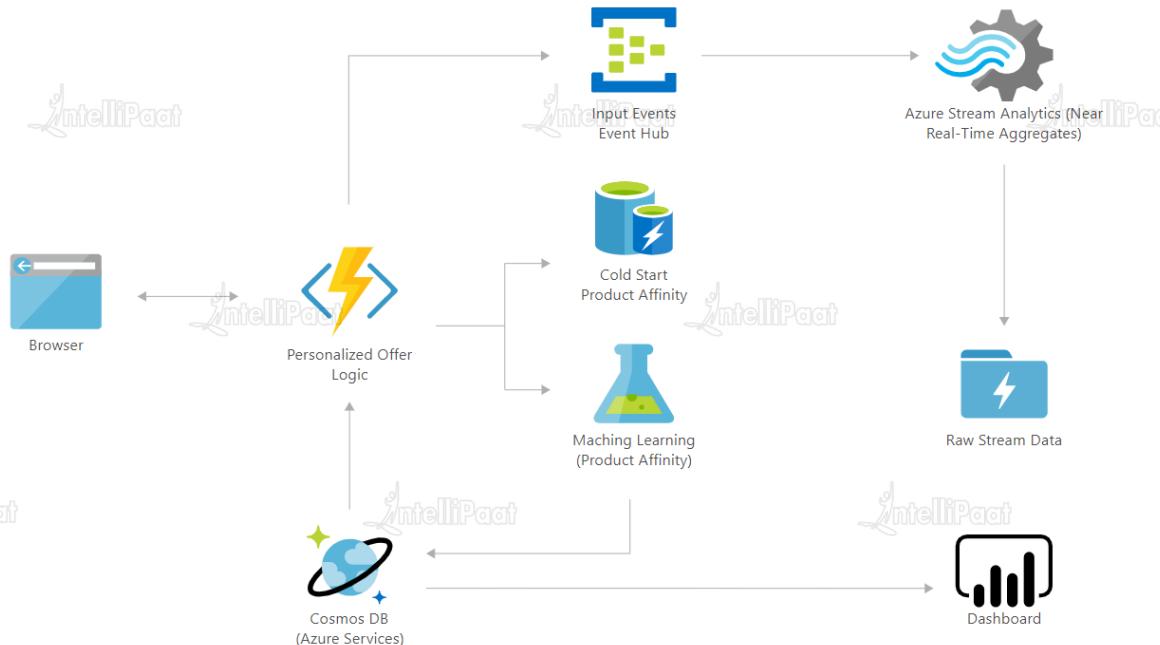
Deliver a personalized experience to customers.

Create a more cost-effective supply chain



# Azure Big data and analytics

## Sample architecture for personalized marketing using Azure



# Azure Big data and analytics



## Databases



### Azure SQL Database

Managed, intelligent SQL in the cloud



### Azure Cosmos DB

Globally distributed, multi-model database for any scale



### Azure Synapse Analytics

Limitless analytics service with unmatched time to insight (formerly SQL Data Warehouse)



### Azure Database for PostgreSQL

Managed PostgreSQL database service for app developers



### Azure Database for MySQL

Managed MySQL database service for app developers

# Azure Big data and analytics



## Analytics



### HDInsight

Provision cloud Hadoop, Spark, R Server, HBase, and Storm clusters



### Azure Stream Analytics

Real-time analytics on fast moving streams of data from applications and devices



### Machine Learning Studio

Easily build, deploy and manage predictive analytics solutions



### Data Factory

Hybrid data integration at enterprise scale, made easy



### Data Catalog

Get more value from your enterprise data assets



### Data Lake Analytics

Distributed analytics service which makes big data easy



IntelliPaat



# Azure IoT

# Azure IoT

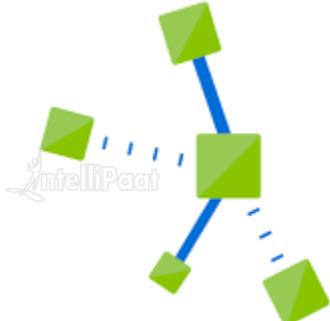
Quickly build and deploy secure, scalable Internet of Things (IoT) applications using the comprehensive Azure IoT portfolio of managed and platform services



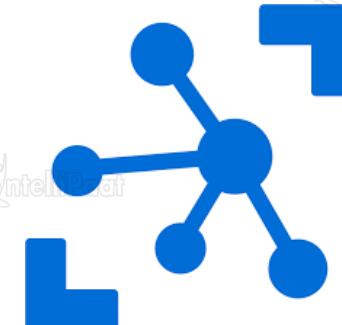
Azure IoT is built on decades of Microsoft enterprise experience and is designed to be accessible for all organizations. Azure IoT has all of the devices, tools, data analytics and security capabilities you need to achieve your IoT goals.

Let's look into 2 Azure IoT services:

## Azure IoT Edge



## Azure IoT Hub





## Azure IoT Edge

Azure IoT Edge is a fully managed service built on Azure IoT Hub. Deploy your cloud workloads—artificial intelligence, Azure and third-party services, or your own business logic—to run on Internet of Things (IoT) edge devices via standard containers.



## Azure IoT Edge Features



### Certified IoT Edge Hardware:

Works with your Linux or Windows devices that support container engines



### Modules:

Docker-compatible containers from Azure services to run your business logic at the edge



### Runtime:

Free and open-source under the MIT license to give you more control and code flexibility

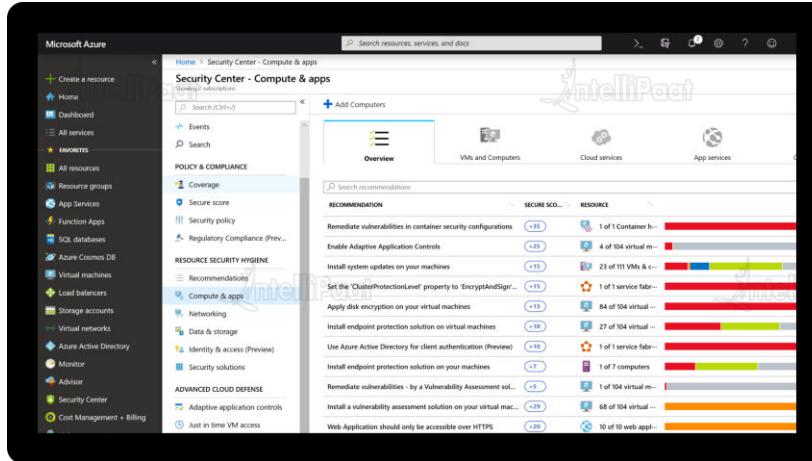


### Cloud interface:

Remotely manage and deploy workloads from the cloud through Azure IoT Hub

## Azure IoT Hub

Enable highly secure and reliable communication between your IoT application and the devices it manages. Azure IoT Hub provides a cloud-hosted solution backend to connect virtually any device.



## Azure IoT Hub Features



**Security-enhanced communication channel** for sending and receiving data from IoT devices



**Built-in device management** and provisioning to connect and manage IoT devices at scale



**Full integration with Event Grid** and serverless compute, simplifying IoT application development



**Compatibility with Azure IoT Edge** for building hybrid IoT applications

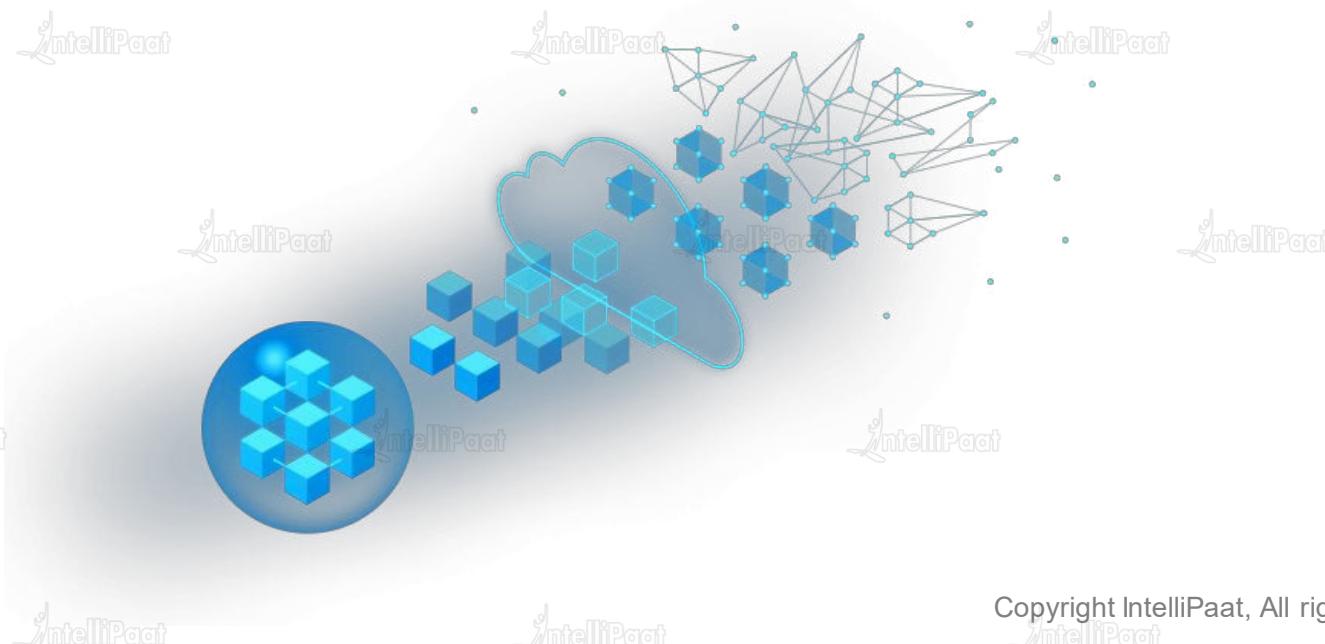


IntelliPaat



# Azure AI

AI is the capability of a machine to imitate intelligent human behavior. Through AI, machines can analyze images, comprehend speech, interact in natural ways and make predictions using data.



## Microsoft first to achieve human parity in:



### Vision

Object recognition



### Speech

Speech recognition



### Language

Machine  
translation

# Azure AI



There are 3 main AI services available in Microsoft Azure:

## Azure Machine Learning

A Python-based machine learning service with automated machine learning and edge deployment capabilities.

## Azure Cognitive Search

Only search service with industry leading AI capabilities to easily extract insights from all your content. This is used for Knowledge mining.

## Cognitive Services

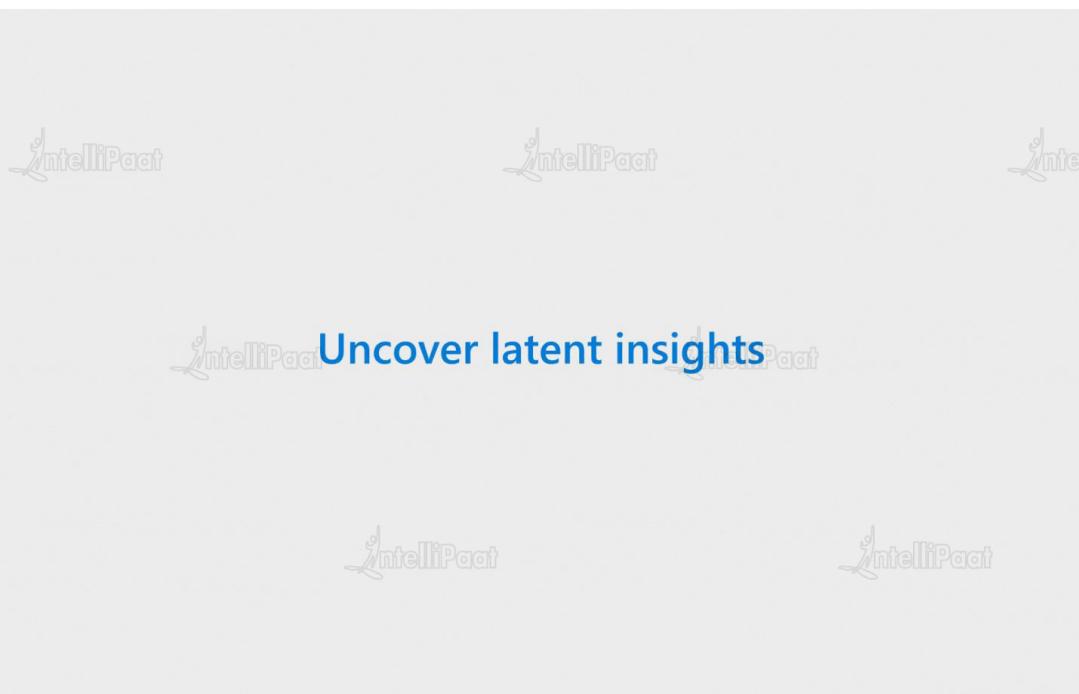
A collection of domain specific pre-trained AI models that can be customized with your data.

## Azure Machine Learning



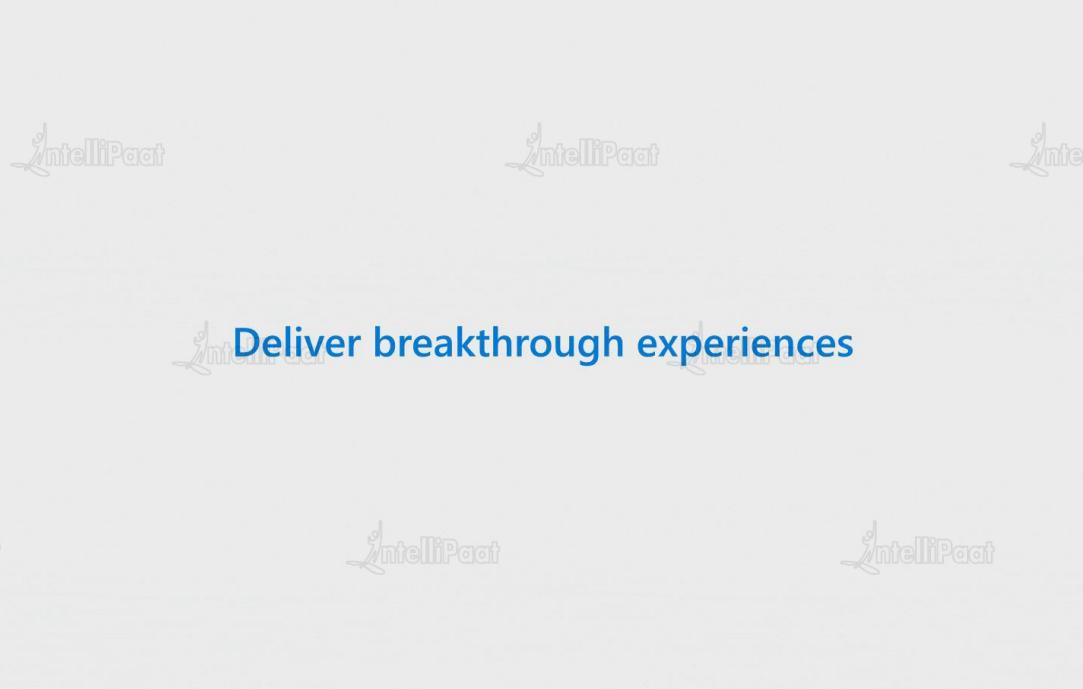
Build models quickly

## Knowledge Mining – Azure Cognitive Search



Uncover latent insights

## AI Apps and agents – Azure Cognitive Services





IntelliPaat



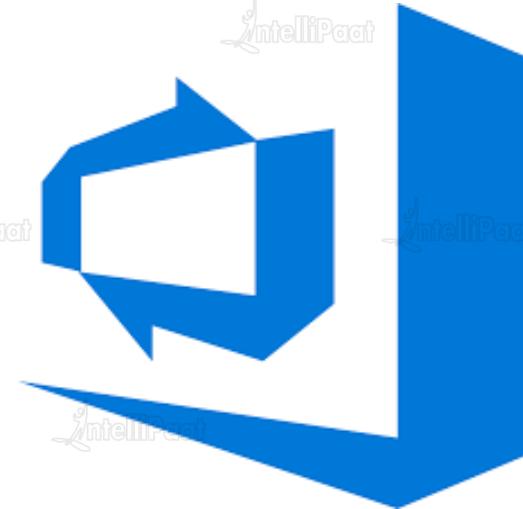
# Azure DevOps

# Azure DevOps



Azure DevOps is a tool provided by Microsoft Azure which can be used to implement a DevOps lifecycle in a business

*Visual Studio Team Services (VSTS) has been upgraded and rebranded to Azure DevOps*

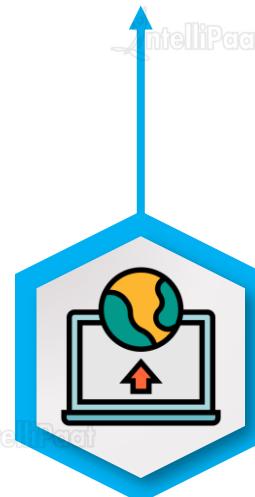


## Benefits of using Azure DevOps

### Orchestration



### Rapid Deployment



**Easy Automation**

**Effective Monitoring**

## Azure DevOps Tools

Azure Boards



1



Azure Repos



2



3



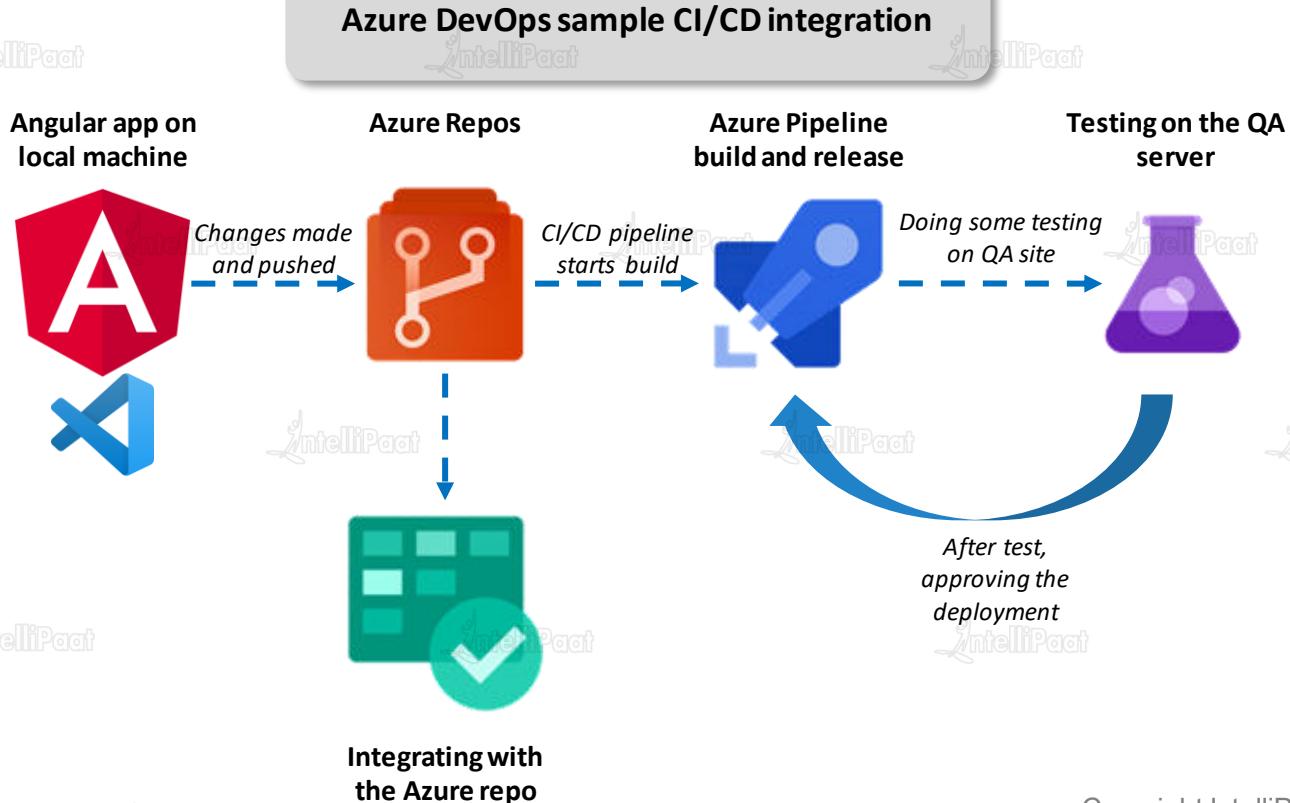
4

Azure Artifacts



5

# Azure DevOps





IntelliPaat



IntelliPaat



Copyright IntelliPaat. All rights reserved.

# Azure Pricing



Meet your organization's business needs and budget with competitive, pay-as-you-go pricing. Realize cost savings whether you are migrating your first workload or fine-tuning complex deployments.

AWS is comparatively 5 times more expensive than Azure for Windows server and SQL database server

## Windows Virtual Machines

UP TO

**71** percent savings<sup>2</sup>

compared to AWS EC2

## SQL Database Managed Instance

UP TO

**85** percent savings<sup>3</sup>

compared to Amazon RDS

## SQL Server virtual machines

UP TO

**45** percent savings<sup>4</sup>

compared to AWS EC2

# Azure Pricing



You can use Azure cost management tools to do the following:

- ✓ Monitor cloud consumption and cost trends continuously.
- ✓ Improve organizational accountability by allocating cloud costs to business units and projects.
- ✓ Optimize and save by eliminating idle resources with virtual machine right-sizing.



IntelliPaat

# Azure Pricing Calculator



IntelliPaat



Copyright IntelliPaat. All rights reserved.

# Azure Pricing Calculator



We can use Pricing calculator to estimate how will a service or a set of Azure services we use will cost

## Pricing calculator

Configure and estimate the costs for Azure products



Products

Example Scenarios

Saved Estimates

FAQ

Select a product to include it in your estimate.

Search products

Featured

Virtual Machines

Storage Accounts

Azure SQL Database

# Azure Pricing Calculator



Click on a service and it will add the services in calculator. Then we can estimate the cost of that service.

Featured

Compute

Networking

Storage

Web

Mobile

Containers

Databases

Analytics

AI + Machine Learning

Internet of Things

## Virtual Machines

Provision Windows and Linux virtual machines in seconds

## Storage Accounts

Durable, highly available and massively scalable cloud storage

## Azure SQL Database

Managed, intelligent SQL in the cloud

## App Service

Quickly create powerful cloud apps for web and mobile



## Cosmos DB

Distributed, multi-model database

## Azure Kubernetes Service (AKS)

Simplify the deployment, management and operations of Kubernetes

## Azure Functions

Process events with serverless code

## Cognitive Services

Add smart API capabilities to enable contextual interactions

## Cost Management + Billing

Optimise what you spend on the cloud, while maximising cloud potential

# Azure Pricing Calculator



The service I selected was Virtual Machines. Now if we go down, we can check out the estimate of a Windows VM and a Linux VM.

Windows VM in West US

Your Estimate

Virtual Machines

1 D2 v3 (2 vCPU(s), 8 GB RAM) x 730 Hours; Windows...

REGION: West US OPERATING SYSTEM: Windows TYPE: (OS Only)

Clone Delete More info

Pricing details Product details

Estimate total: US\$152.62 US\$152.62

This screenshot shows the Azure Pricing Calculator interface for a Windows VM in the West US region. It displays the estimated cost of \$152.62 for one D2 v3 instance running for 730 hours. The configuration includes 2 vCPUs, 8 GB of RAM, and the Windows operating system. The calculator also provides links for more information, cloning, deleting, and viewing detailed pricing and product details.

Linux VM in West US

Your Estimate

Virtual Machines

1 D2 v3 (2 vCPU(s), 8 GB RAM) x 730 Hours; Linux – U...

REGION: West US OPERATING SYSTEM: Linux TYPE: Ubuntu

Clone Delete More info

Pricing details Product details

Estimate total: US\$85.46 US\$85.46

This screenshot shows the Azure Pricing Calculator interface for a Linux VM in the West US region. It displays the estimated cost of \$85.46 for one D2 v3 instance running for 730 hours. The configuration includes 2 vCPUs, 8 GB of RAM, and the Ubuntu operating system. Similar to the Windows VM, it offers options for cloning, deleting, and viewing detailed information.

# Azure Pricing Calculator



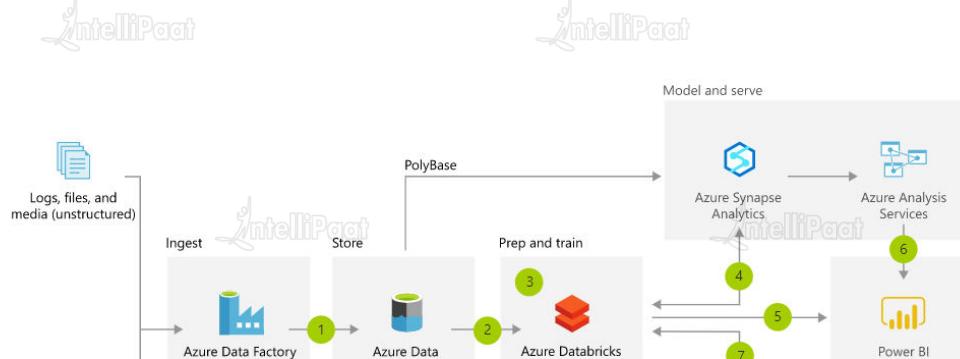
Example Scenarios are also available to check out how to calculate the cost of an entire architecture.

[Products](#)[Example Scenarios](#)[Saved Estimates](#)[FAQ](#)

Select an example scenario to include in your estimate. You may add or remove products in your example scenario.

## Advanced analytics on big data

Transform your data into actionable insights using the best-in-class machine learning tools. This architecture allows you to combine any data at any scale and to build and deploy custom machine learning models at scale.



## CI/CD for Azure Web Apps



## CI/CD for Containers

## Products



Azure Analysis Services



Azure Cosmos DB



Data Factory



Azure Databricks



IntelliPaat



# Azure Best Practices

## Security best practices for IaaS workloads in Azure

- Protect VMs by using authentication and access control. Use Azure policies to establish conventions for resources in your organization and create customized policies.
- Monitor VM performance. Use Azure Monitor to check out the health of your VMs
- Manage your VM updates. Rapidly apply security updates to VMs.



Azure Best Practices Site

<https://docs.microsoft.com/en-us/azure/security/fundamentals/best-practices-and-patterns>





IntelliPaat



# Azure Support

# Azure Support



Billing and subscription support is available to all Azure customers. If you have an Azure support plan or need help with billing or subscription management, sign in to create and manage support requests.

## Trial, testing and development

If you are using Azure in a non-production environment or just trying it out, the **Developer plan** provides unlimited technical support during business hours.

## Production workloads

When you are running a production workload on Azure and need a fast response, the **Standard plan** provides you with unlimited technical support 24x7.

## Business-critical functions

If you need faster response times, advisory services and high-severity incident escalation management from a collaborative account management team, choose **Professional Direct support**.

## Comprehensive Microsoft technology support

If you need company-wide support across Azure and other Microsoft technologies, consider **Premier Support**.

# Azure Support



There is a lot of free resources for support. If you are new to Azure, Documentation will help a lot. Also, if you have a technical query, you can discuss it with the support community.



## Documentation and guides

Explore get started guides, SDKs, tools, documentation and more.



## Support FAQ

Understand Azure support plans, terminology and how to use support.



## Issues signing up

Troubleshoot issues signing up for Azure.



## Learn about billing

Get tips for monitoring usage and understanding your bill.



## Azure Advisor



Get personalised recommendations to optimise your Azure resources.



## Azure Service Health



Get personalized guidance and support for when issues in Azure services affect you.



## SLAs

Read the SLAs to learn about our uptime guarantees and downtime credit policies.



## Support community



Engage with Microsoft engineers and Azure community experts.

# Azure Support



## Available Support plans and their Scope

|   | BASIC  | DEVELOPER  | STANDARD   | PROFESSIONAL DIRECT  | PREMIER  |
|---|--|--|--|--|--|
|   | Request support  | Purchase support   | Purchase support   | Purchase support   | Contact Premier  |
| Scope                                       | Available to all Microsoft Azure accounts  | Microsoft Azure: Trial and non-production environments   | Microsoft Azure: Production workload environments  | Microsoft Azure: Business-critical dependence  | All Microsoft Products, including Azure: Substantial dependence across multiple products                         |
| Customer Service, Self-Help and Communities | 24x7 access to billing and subscription support, online self-help, documentation, whitepapers and support forums | 24x7 access to billing and subscription support, online self-help, documentation, whitepapers and support forums | 24x7 access to billing and subscription support, online self-help, documentation, whitepapers and support forums | 24x7 access to billing and subscription support, online self-help, documentation, whitepapers and support forums | 24x7 access to billing and subscription support, online self-help, documentation, whitepapers and support forums |
| Best Practices                              | Access to full set of Azure Advisor recommendations  | Access to full set of Azure Advisor recommendations  | Access to full set of Azure Advisor recommendations  | Access to full set of Azure Advisor recommendations  | Access to full set of Azure Advisor recommendations  |



# Azure Service Level Agreement



# Azure Service Level Agreement



The Service Level Agreement (SLA) describes Microsoft's commitments for uptime and connectivity.

## Lets take a look at SLAs of few Azure Services

- App Service - We guarantee that Apps running in a customer subscription will be available 99.95% of the time. No SLA is provided for Apps under either the Free or Shared tiers.
- Application Gateway - We guarantee that each Application Gateway Cloud Service having two or more medium or larger instances will be available at least 99.95% of the time.
- Azure Maps - We guarantee that Azure Maps will be available at least 99.9% of the time
- SLA summary site - <https://azure.microsoft.com/en-in/support/legal/sla/summary/>



**India: +91-7847955955**



**US: 1-800-216-8930 (TOLL FREE)**



**[support@intellipaat.com](mailto:support@intellipaat.com)**

**24/7 Chat with Our Course Advisor**