

# Identity Concepts in the Microsoft Cloud



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# Overview



**Authentication and authorization**

**Modern authentication**

**Microsoft Active Directory**

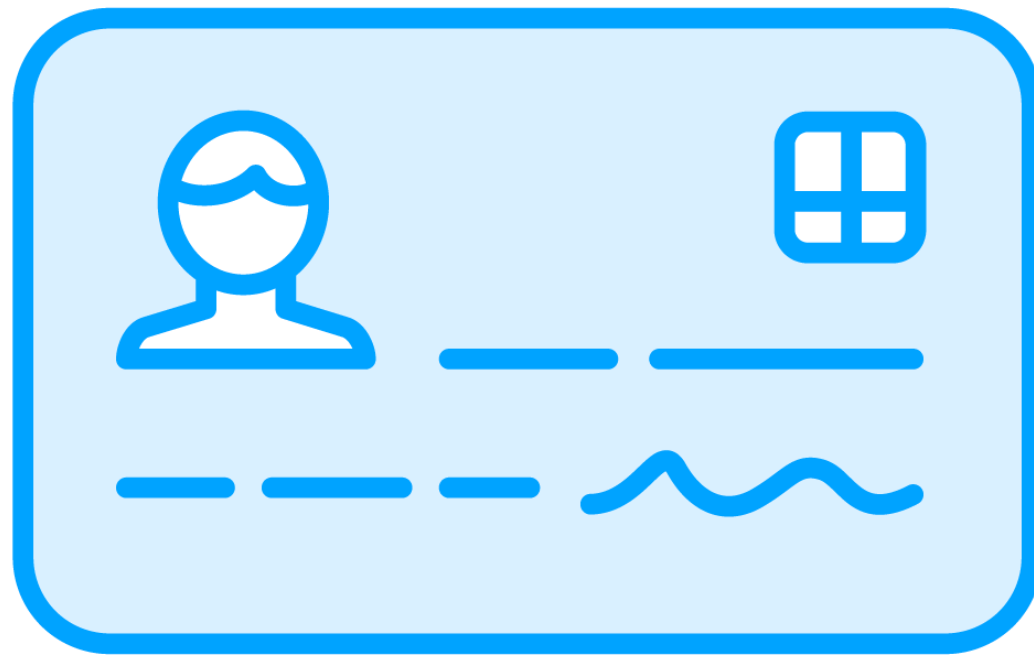




# Authentication and Authorization



# Authentication and Authorization



Authentication and authorization are very different processes

Authentication is validating that users are whom they claim to be

Authorization is the process of giving the user permissions for a specific resource



# Authentication

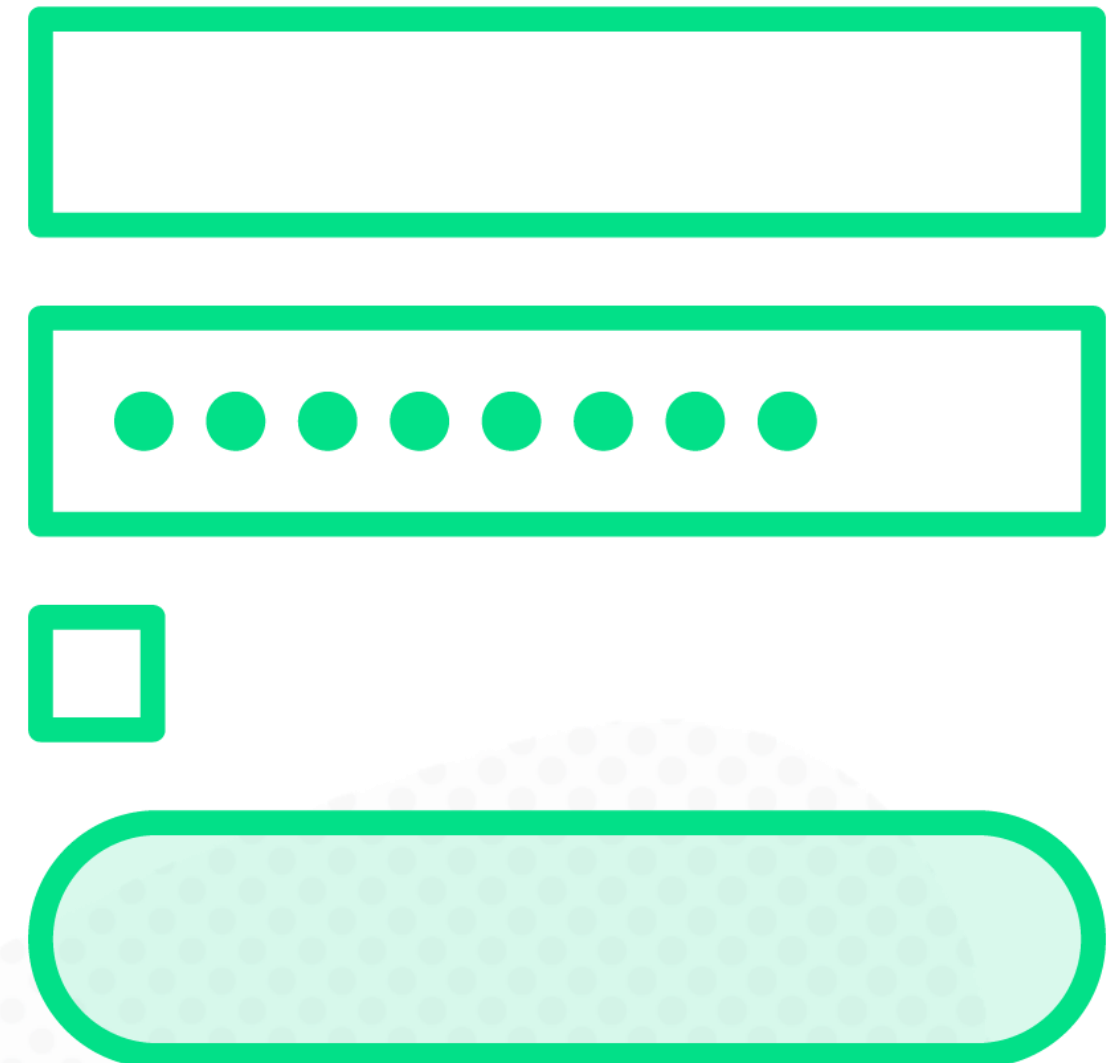
Traditionally done by username and password

Single-factor authentication

Authentication confirms you are who you say you are

Multi-factor authentication (MFA) is recommended

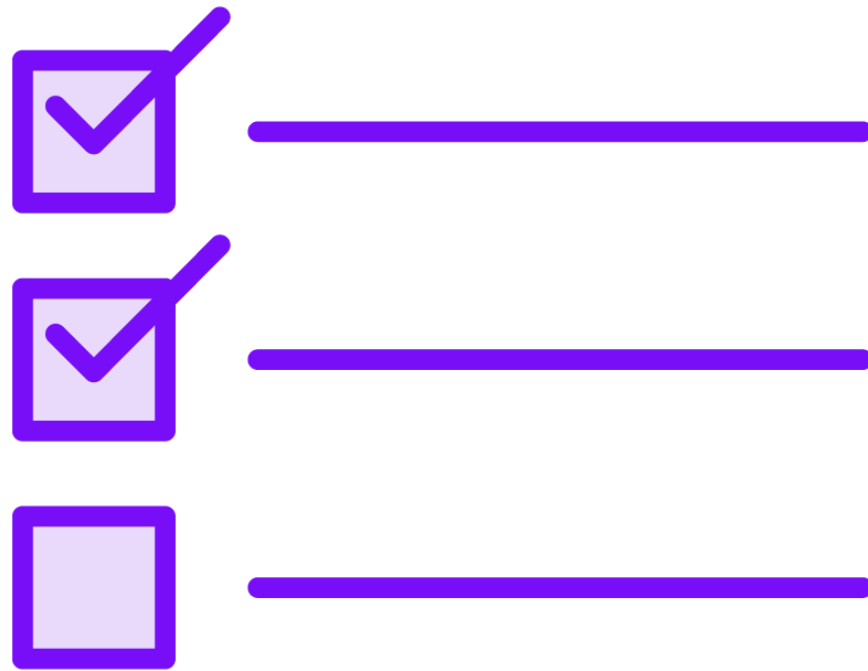
Authentication is always done before authorization



A stylized illustration of a login form. It consists of four vertically stacked elements, all outlined in a thick teal color. The first element is a rectangular box for a username. The second element is a rectangular box for a password, containing eight teal dots. The third element is a small square checkbox. The fourth element is a rounded rectangular button with a teal border and a light teal background filled with a pattern of small dots.



# Authorization



Authorization occurs after authentication  
Determines what permissions you have



# Authentication and Authorization



## Authentication

Confirms users are who they say they are



## Authorization

Checks if users are allowed to access a resource





# Modern Authentication



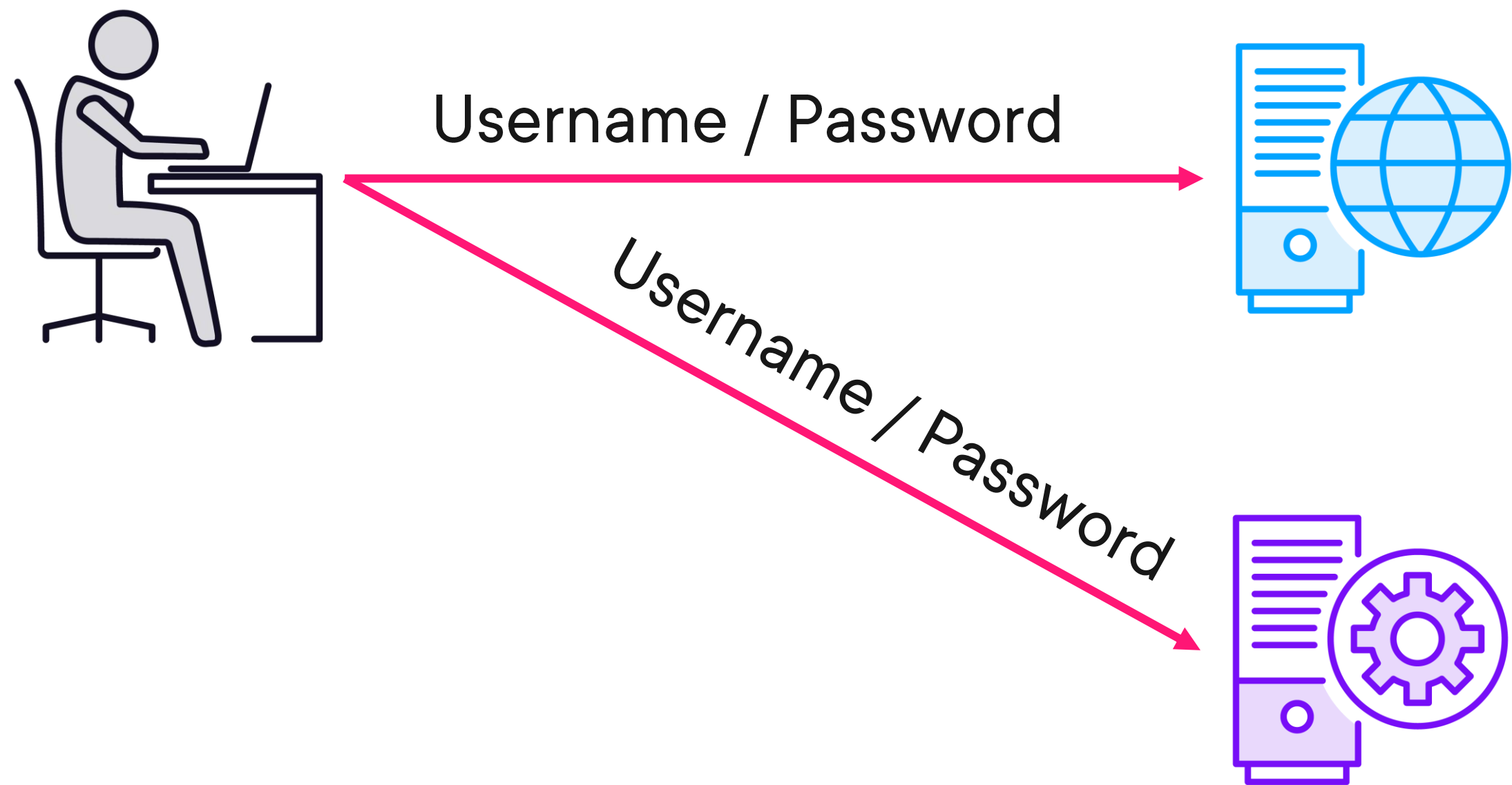


# Modern Authentication

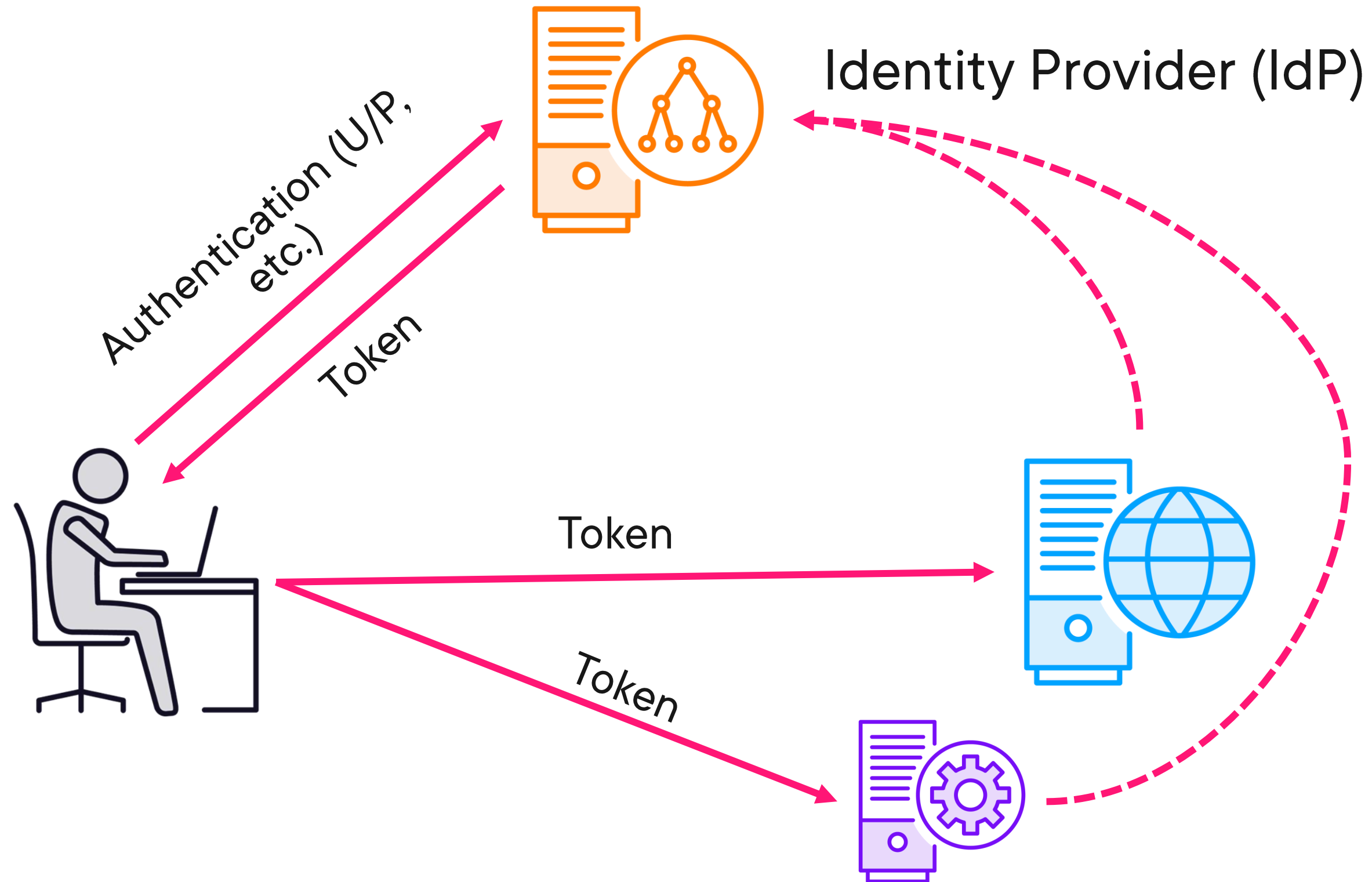
Modern authentication is a Microsoft umbrella term for authentication and authorization methods between client and server



# Before Modern Authentication



# Modern Authentication



# The Identity Provider



**The Identity Provider is at the center of modern authentication**

**An Identity Provider offers authentication, authorization, and auditing services**

**A modern Identity Provider offers single sign-on (SSO)**

- You can also setup SSO between multiple identity providers (Federation)



# Federation

## Create an account

First Name

Last Name

Email

Password


☐ Show


When you Register, you agree to our [User Agreement](#) and acknowledge reading our [User Privacy Notice](#).


Register

or

Continue with Google

Continue with Facebook

Continue with Apple

PLURALSIGHT

Email or Username

Password

Sign in

Forgot password?

Sign in with company or school



# Federated Services

Federation enables access of services across organizational or domain boundaries

Establishes trust relationships between different identity providers

No need for a user to maintain a different username / password for other domains

## Create an account


First Name  Last Name


Email


Password  ☐ Show

When you Register, you agree to our [User Agreement](#) and acknowledge reading our [User Privacy Notice](#).

or

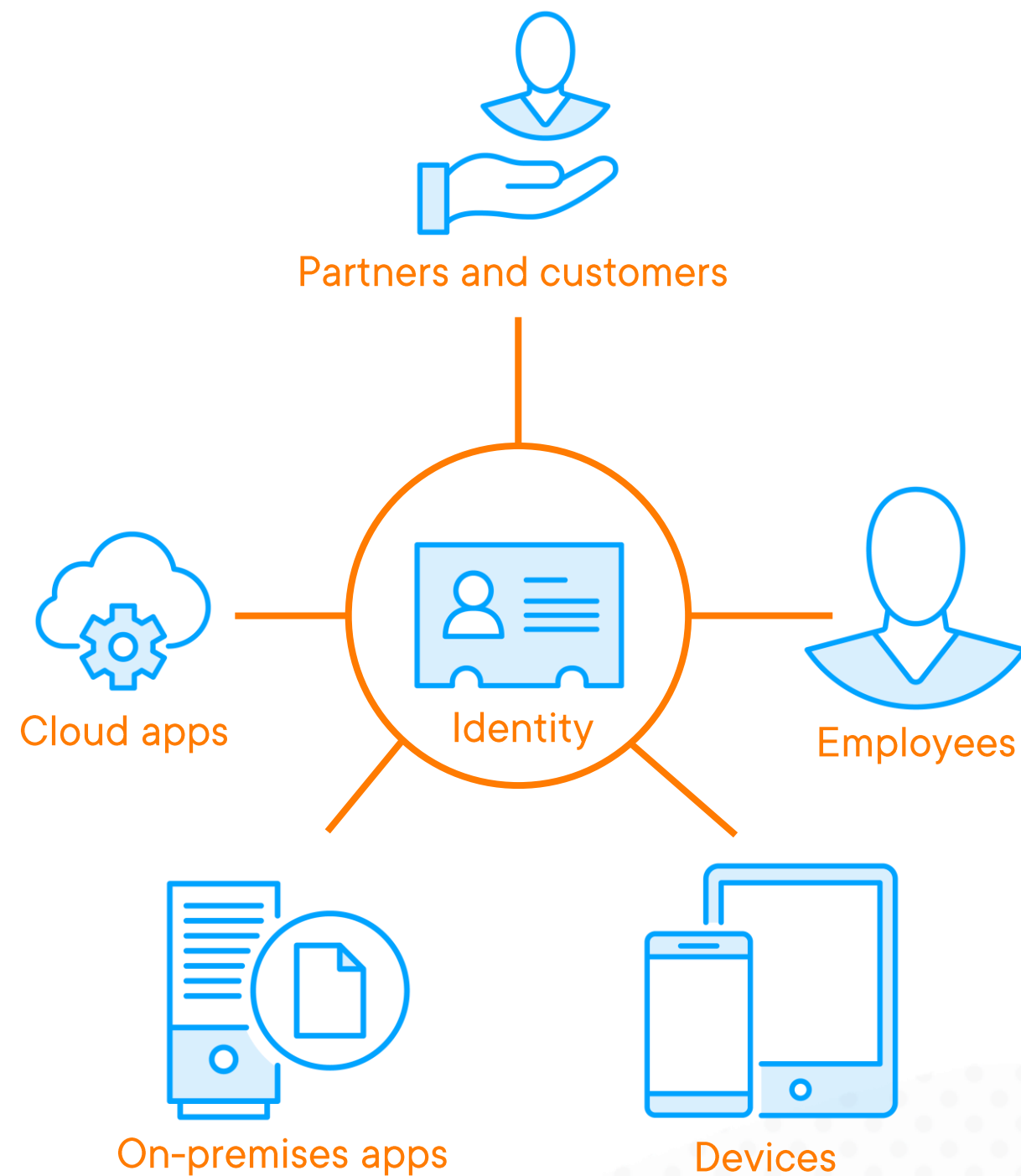
 Continue with Google

 Continue with Facebook

 Continue with Apple



# Identity as the Primary Security Perimeter



**Identity as the primary security perimeter is a concept that works alongside the Zero Trust methodology**

- The network and firewall are not a valid perimeter anymore

**An identity is how someone (or something) can be verified and authenticated**

- User
- Application
- Device



# Four Pillars of Identity

## Administration

Creating and managing identities

## Authentication

How much assurance for a particular identity is enough

## Authorization

Determine the level of access of an authenticated person

## Auditing

Tracking who does what, where, and how







# Microsoft Active Directory



# Introduction to Directory Services



**Customizable information store**

**Functions as a single point where users can locate resources across the network**

- User and groups
- Devices
- Printers
- And more

**Single point for administrators to manage all those resources**



# Active Directory Domain Services (AD DS)

AD DS introduced by Microsoft with Windows 2000

For on-premises networks

Central component in organizations with on-premises IT Infrastructure

Microsoft Entra ID is the next evolution of Microsoft identity solutions

Cloud based



## Microsoft Entra ID was named Azure Active Directory

Rebranded in 2023

Many online resources  
still refer to Azure AD

Only the name changed

### Azure AD is becoming Microsoft Entra ID

Azure AD Free

Azure AD Premium P1

Also included in Microsoft 365 E3

Azure AD Premium P2

Also included in Microsoft 365 E5

Azure AD External Identities

Microsoft Entra ID Free

Microsoft Entra ID P1

Also included in Microsoft 365 E3

Microsoft Entra ID P2

Also included in Microsoft 365 E5

Microsoft Entra External ID

Image Source: <https://techcommunity.microsoft.com/t5/microsoft-entra-azure-ad-blog/azure-ad-is-becoming-microsoft-entra-id/ba-p/2520436>



## Module Conclusion



### Authentication

- Confirms users are who they say they are

### Authorization

- Checks if users are allowed to access a resource

### Modern authentication

- Identity as the primary security perimeter
- Identity provider
  - Single sign-on (SSO)
  - Federation

### Directory services

- Active Directory Domain Services (AD DS)





**Up Next:**

# **Compliance Concepts in the Microsoft Cloud**

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