Azure Directory Services

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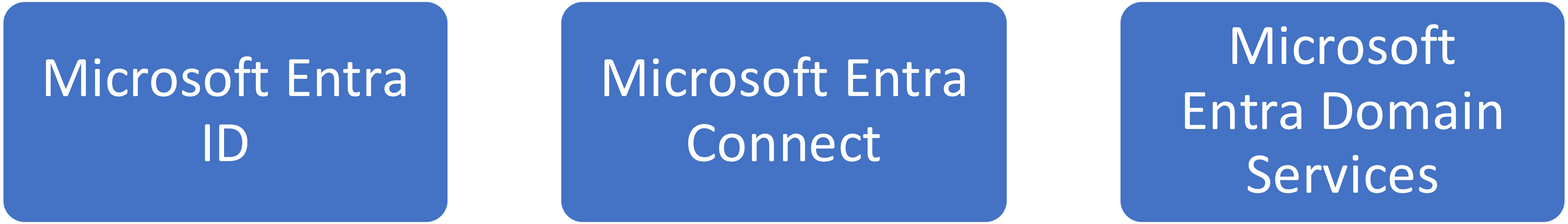
Types of AD Services in Azure



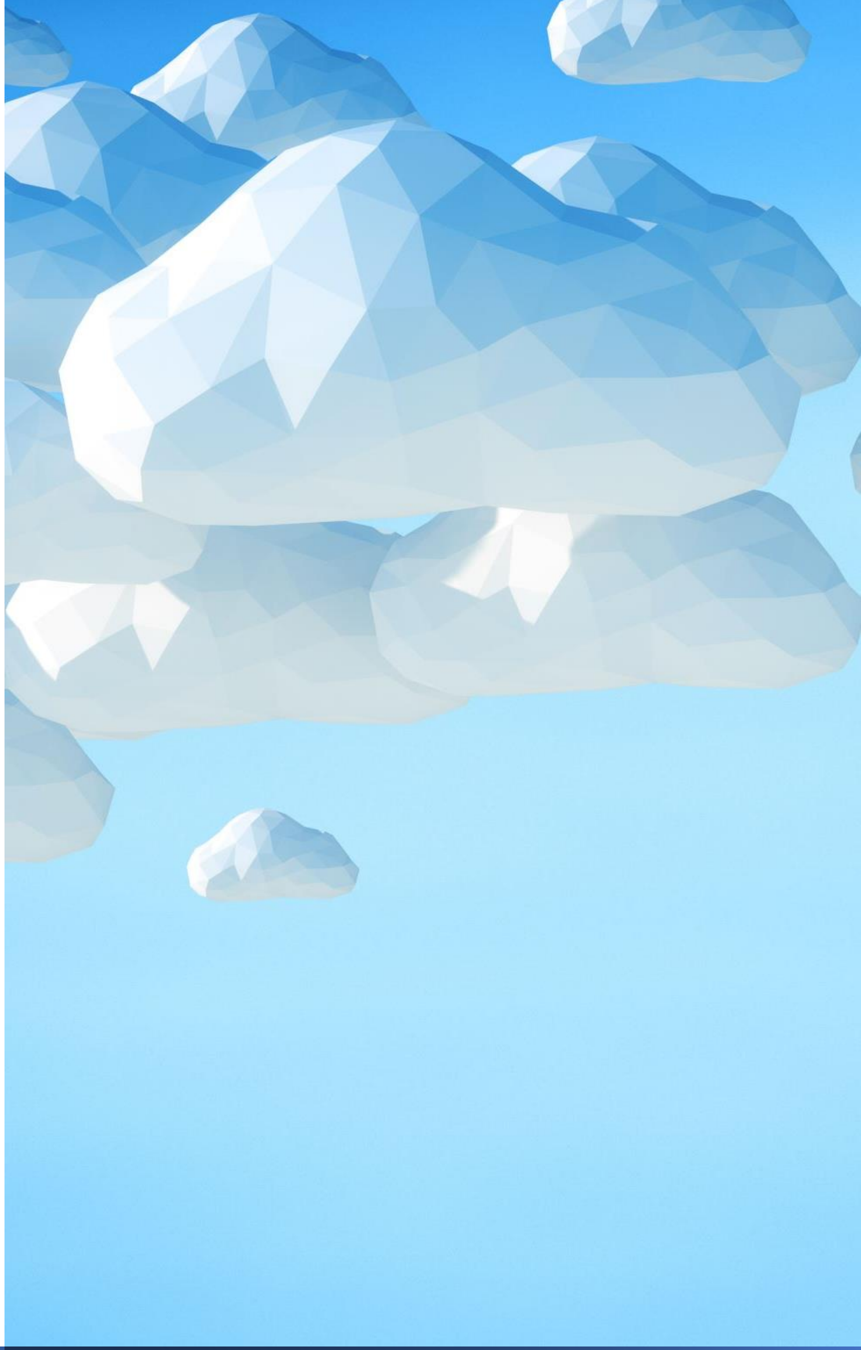
Microsoft Entra ID

Microsoft Entra Connect

Microsoft Entra Domain Services

Microsoft Entra ID: Overview

- Access Microsoft apps
- Access custom apps
- AD on cloud



Microsoft Entra ID: Features

- Authentication
- Single Sign-on (SSO)
- Application management

Microsoft Entra ID: Users

- Administrators
- Developers
- End-users

Microsoft Entra Connect

- Connect on-prem AD with Microsoft Entra ID.
- Syncs identities

Microsoft Entra Directory Services: Overview

- Managed domain services
- Supports legacy apps
- Integrates with Microsoft Entra ID

Microsoft Entra Domain Services: Features

- Domain join
- Group policy

Azure Authentication Methods

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Authentication Methods

- Standard passwords
- Single sign-on (SSO)
- Multifactor authentication (MFA)
- Passwordless

Standard Passwords

Low security but high convenience

Common with apps

Simple to implement and use

Single Sign-On (SSO)

Sign in once and use multiple apps

Ease of account management

Multifactor Authentication (MFA)

Additional identification during sign-in

At least two methods of authentication

More secured form of authentication

Microsoft Entra Multi-Factor Authentication

Azure offering of MFA

Passwordless Authentication

Authenticate without manual passwords

Increased convenience.

Azure offerings:

Windows Hello for Business

Microsoft Authenticator app

FIDO2 security keys

Azure External Identity

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Overview of Azure External Identity

- Secure authentication with external users
- Grant or revoke access to guests
- Support for B2B and B2C use cases

Types of Azure External Identities

Business to Business:
B2B Collaboration

Business to Business:
B2B Direct Connect

Business to Consumer:
Azure AD B2C

Azure Conditional Access

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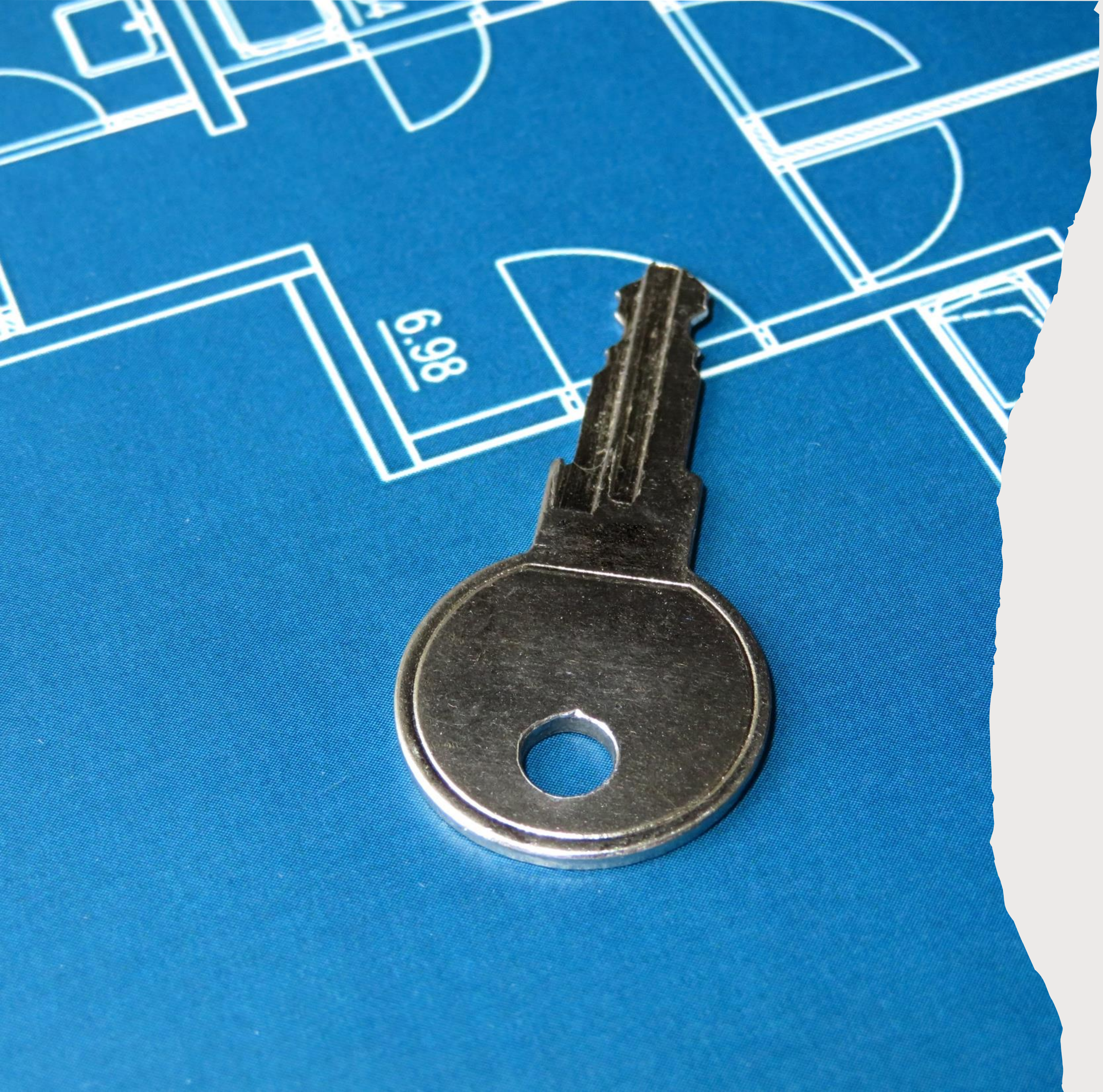

Conditional Access allows or blocks access to resources based on certain conditions (signals)

Uses of Conditional Access

Access resources from anywhere

Secure resources

More refined MFA

Conditional Access

Parameters

- User location
- User device
- App used

Action

- Allow full access
- Require second authentication
- Block access

Azure Role-Based Access Control

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Azure RBAC: Overview

Detailed access management

Based on roles

Roles applied to scope

Azure RBAC: Benefits

Improved security

Easier administration

Azure RBAC: Use Cases

- Control access to Azure resources
- Temporary access to guests
- Enforce least privilege model

Defense-in-depth and Zero Trust Models

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Zero Trust Model: Overview

- Requires authentication & authorization for all access
- Uses least privilege model
- Threat detection

Zero Trust Model: Benefits

IMPROVED SECURITY

REDUCED RISK

INCREASED FLEXIBILITY

Zero Trust Model: Limitations

Complexity

Cost

Implementation challenges

Defense-in-depth

Protect information and prevent it from being stolen by those who aren't authorized to access it

Defense-in-depth: Layers

- Physical security
- Identity and access
- Perimeter
- Network
- Compute
- Application
- Data

Defense-in-depth: Benefits

Limit attacks

Layered approach for security

Slows down an attack & its impact

Defender for Cloud

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Microsoft Defender for Cloud offers high-level security monitoring and advanced threat protection for cloud environments

Defender for Cloud: Supported Environments

- Azure
  - Azure services
- On-Prem
  - Extends to your non-Azure on-prem server
- Multi-cloud
  - AWS and GCP

Defender for Cloud: Operation

Assess

Secure

Defend