

2/18/2020

Security Training

Windows Hello for Business, Conditional Access
& MFA



A D E B
V B A

ELEVATING CONSTRUCTION TOGETHER

Xylos

AGENDA

Opening and Introduction

Windows Hello for Business

Azure Multi-Factor Authentication

Conditional Access

Q&A

Introduction

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- 10 years of experience in IT

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- [Linkedin](#)



Windows Hello for Business

Overview

Security Threats with Passwords

- Strong passwords can be difficult to remember, and users often reuse passwords on multiple sites.
- Server breaches can expose symmetric network credentials (passwords).
- Passwords are subject to [replay attacks](#).
- Users can inadvertently expose their passwords due to [phishing attacks](#).



Windows Hello

- Biometric logon
 - Face Recognition
 - Fingerprint
- PIN configuration
- FIDO2 support
- Supporting Hello for Business
 - Password-less Authentication
 - Based on certificates



Difference between Windows Hello and Windows Hello for Business

- Individuals can create a PIN or biometric gesture on their personal devices for convenient sign-in. This use of Windows Hello is unique to the device on which it is set up, however it is not backed by asymmetric (public/private key) or certificate-based authentication.
- Windows Hello for Business, which is configured by Group Policy or mobile device management (MDM) policy, uses key-based or certificate-based authentication.

What and Why do you need a PIN to use biometrics?

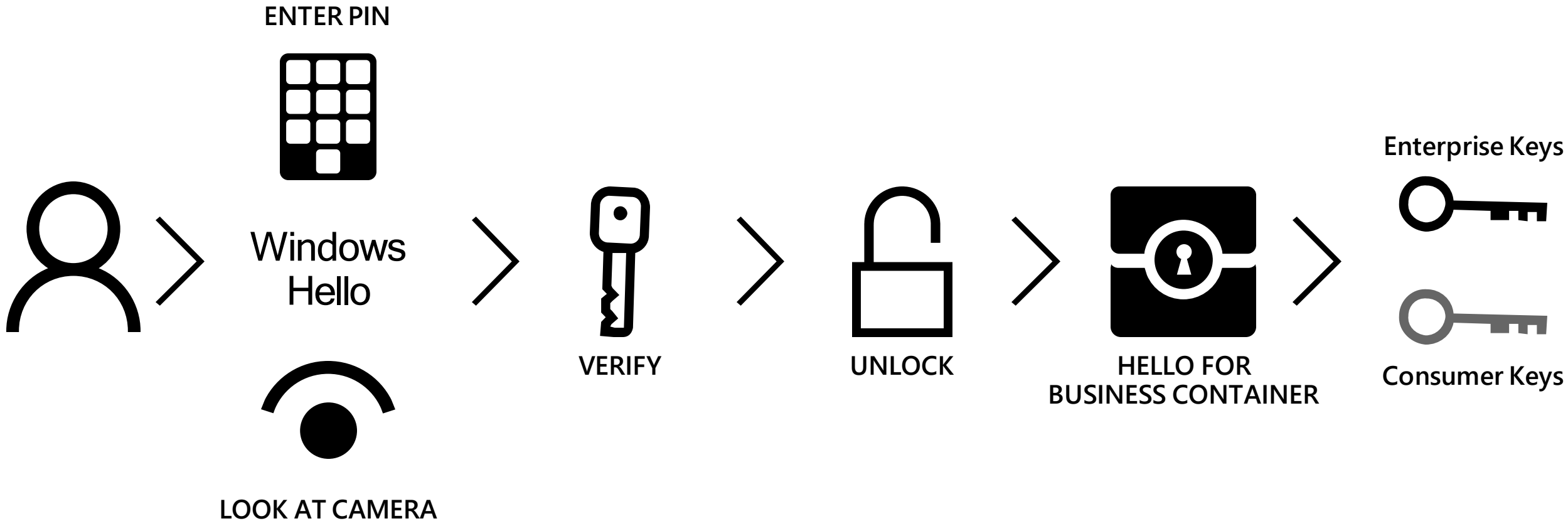
- A PIN can be compared to a Password but is better
- A PIN is more secure because it is:
 - Tied to the device
 - Local to the device
 - Backed by the device hardware (TPM)
- If Biometrics sign-in doesn't work (i.e. sensor failure)
- Without the PIN, a user would need to login again with Username & Password

How Hello for Business Works?

- Windows Hello Credentials are based on certificates (Asymmetric)
- Credentials & tokens are bound to the device
- Keys are stored in TPM hardware (If available) or via software encryption
- Two-factor authentication
 - Device + PIN
 - Device + Biometric
- PIN or Biometric trigger the private key to:
 - Sign authentication data
 - Send to the Identity Provider (AD or AzureAD)
- Identity Provider use public dkey to verify and authenticate the user

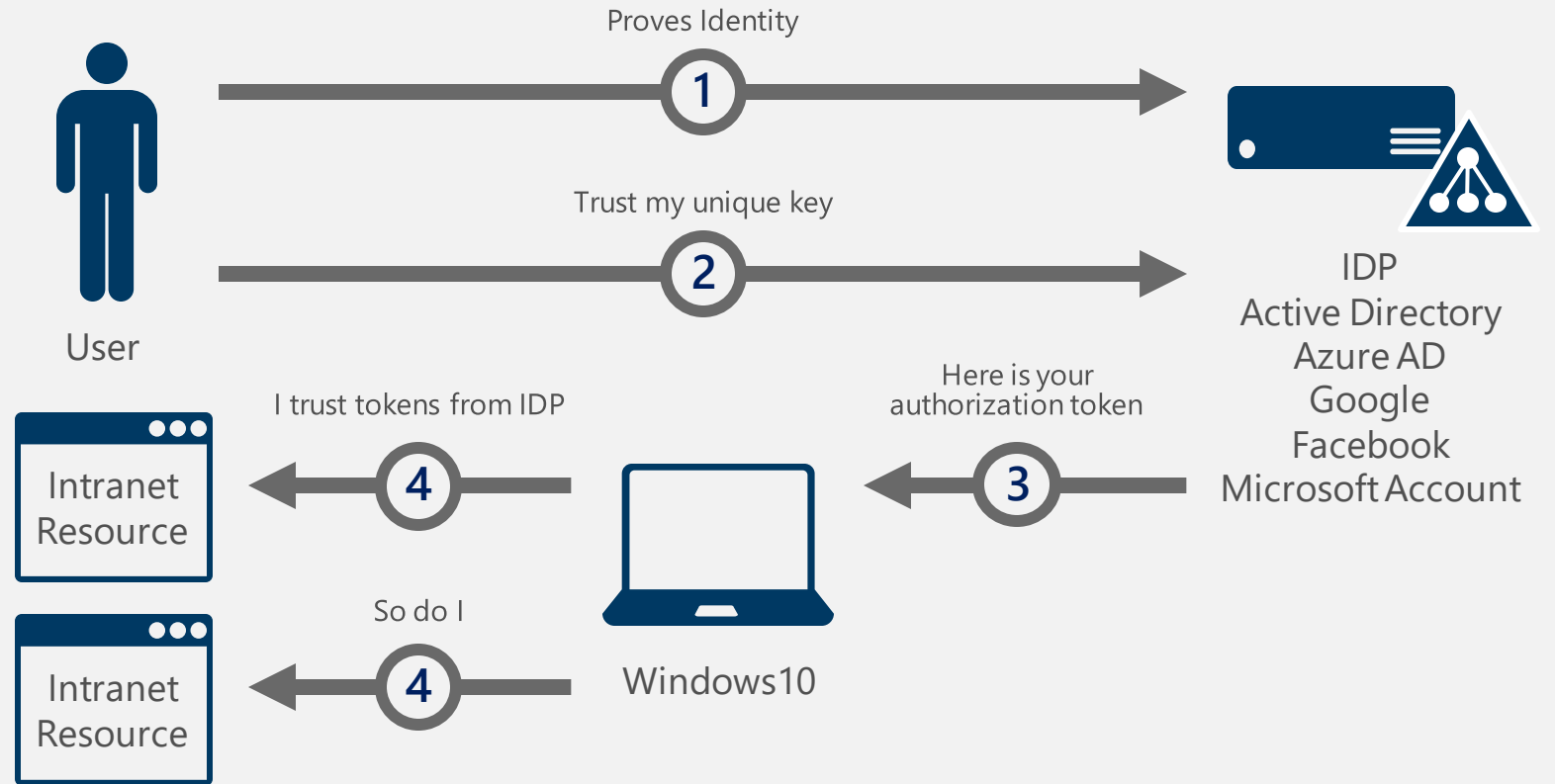


Windows Hello and Biometrics

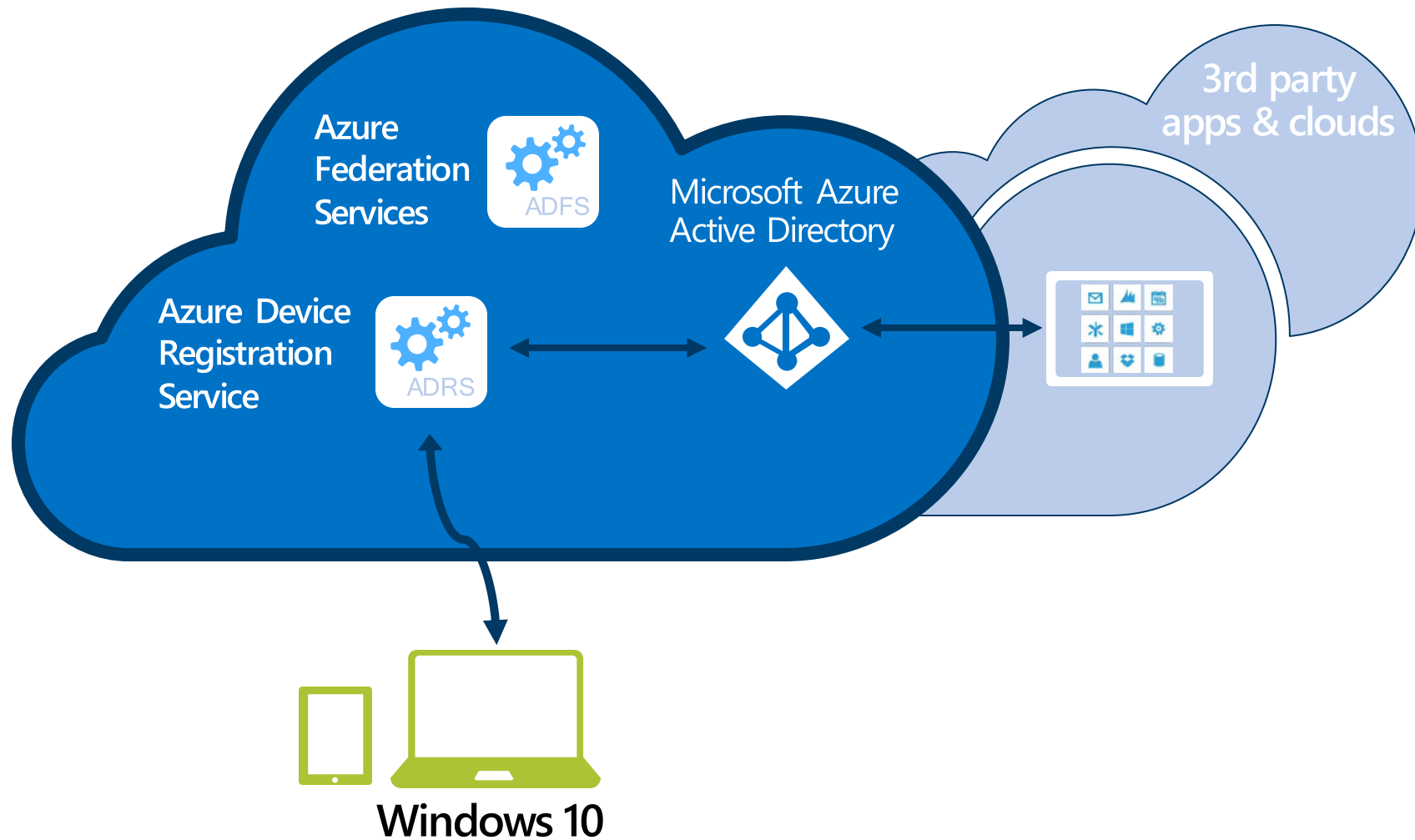


Authentication and Access flow

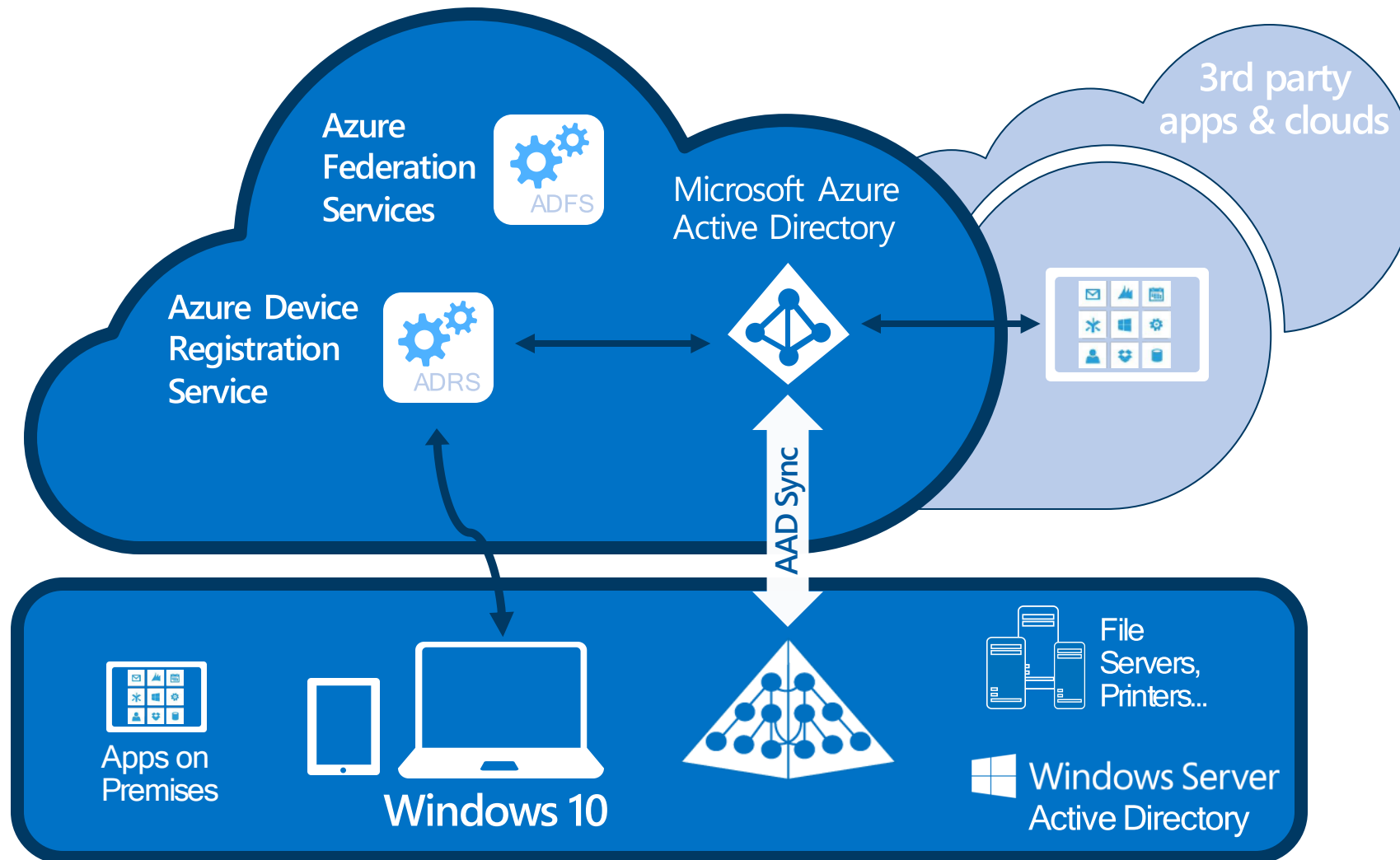
Workflow



Azure Active Directory only



Azure Active Directory + Active Directory AD Hybrid

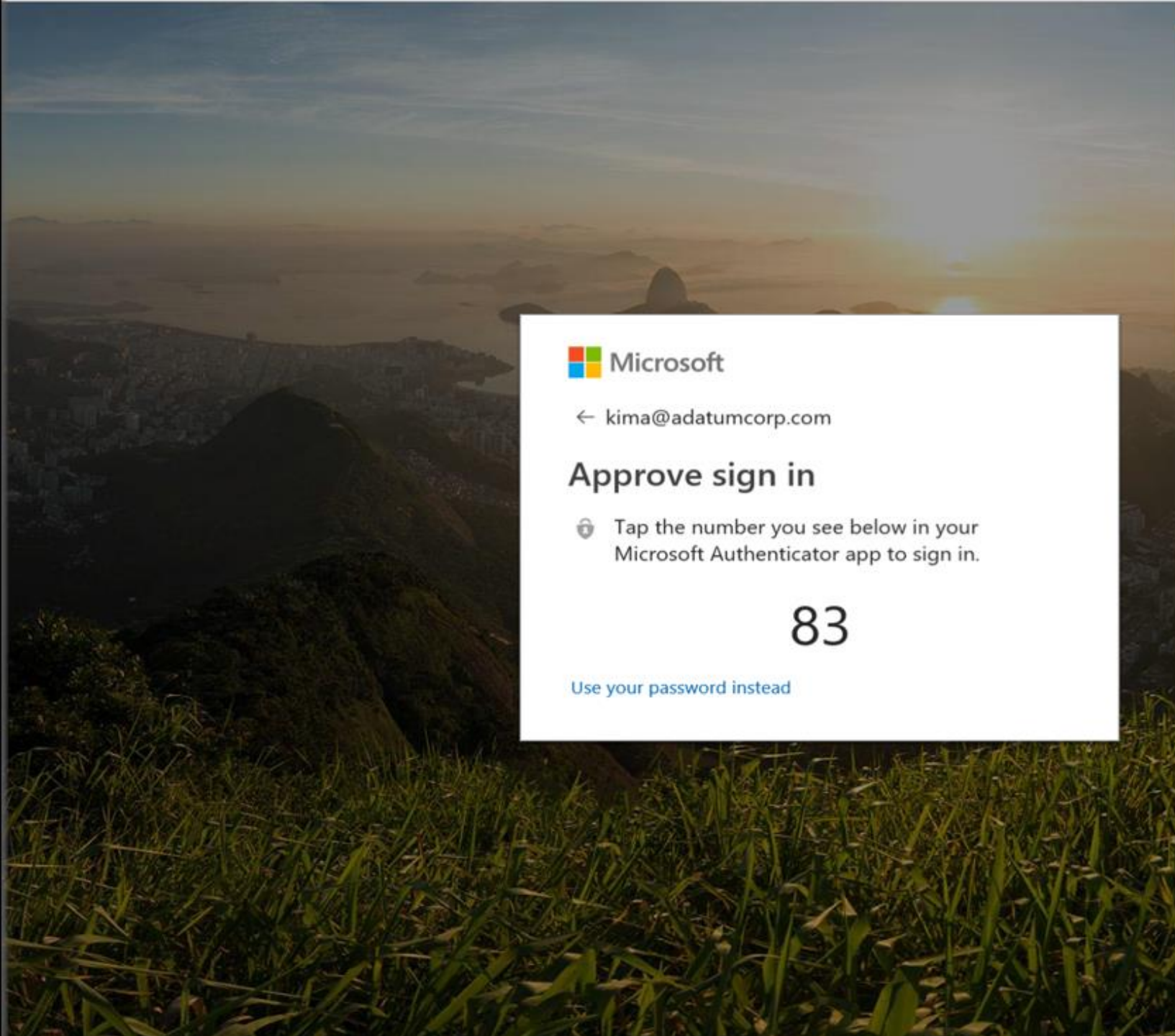


Bootstrapping the Trust process

User-proofing Enrollment

Users will enroll using:

- Existing password
- OTP
- Code (e.g.: SMS)
- ...



 Microsoft

← kima@adatumcorp.com


Approve sign in

 Tap the number you see below in your Microsoft Authenticator app to sign in.

83

[Use your password instead](#)



Adatum Corp 



KimA@adatumcorp.com

013 760 

Approve sign-in?

Enter the correct number to sign in.
KimA@adatumcorp.com

10

63

83

Deny

Deployment and Management

Windows Hello for Business

Deployment type

- Three deployment models:
 - Cloud Only
 - Hybrid
 - Key trust deployment
 - Certificate trust deployment
 - On-premises
 - Key trust deployment
 - Certificate trust deployment
- The model to choose depends on your current infrastructure
- Requirements depend on the deployment model that suits your organization

Cloud Only Deployment

- Windows 10, version 1511 or later
- Microsoft Azure Account
- Azure Active Directory
- Azure Multi-factor authentication
- Modern Management (Intune or supported third-party MDM), optional
- Azure AD Premium subscription - optional, needed for automatic MDM enrollment when the device joins Azure Active Directory

Hybrid Deployment

Key trust Group Policy managed

Windows 10, version 1511 or later

Windows Server 2016 Schema

Windows Server 2008 R2
Domain/Forestfunctional level

Windows Server 2016 or later
Domain Controllers

Windows Server 2012 or later
Certificate Authority

Certificate trust Mixed managed

Hybrid Azure AD Joined:
Minimum: Windows 10, version 1703
Best experience: Windows 10, version 1709 or later (supports synchronous certificate enrollment).
Azure AD Joined:
Windows 10, version 1511 or later

Windows Server 2016 Schema

Windows Server 2008 R2
Domain/Forestfunctional level

Windows Server 2008 R2 or later
Domain Controllers

Windows Server 2012 or later
Certificate Authority

Key trust Modem managed

Windows 10, version 1511 or later

Windows Server 2016 Schema

Windows Server 2008 R2
Domain/Forestfunctional level

Windows Server 2016 or later
Domain Controllers

Windows Server 2012 or later
Certificate Authority

Certificate trust Modem managed

Windows 10, version 1511 or later

Windows Server 2016 Schema

Windows Server 2008 R2
Domain/Forestfunctional level

Windows Server 2008 R2 or later
Domain Controllers

Windows Server 2012 or later
Certificate Authority

Hybrid Deployment

Key trust Group Policy managed

N/A

Azure MFA tenant, or
AD FS w/Azure MFA adapter, or
AD FS w/Azure MFA Server
adapter, or
AD FS w/3rd Party MFA Adapter

Azure Account

Azure Active Directory

Azure AD Connect

Azure AD Premium, optional

Certificate trust Mixed managed

Windows Server 2016 AD FS
with [KB4088889 update](#) (hybrid
Azure AD joined clients),
and
Windows Server 2012 or later
Network Device Enrollment Service
(Azure AD joined)

Azure MFA tenant, or
AD FS w/Azure MFA adapter, or
AD FS w/Azure MFA Server
adapter, or
AD FS w/3rd Party MFA Adapter

Azure Account

Azure Active Directory

Azure AD Connect

Azure AD Premium, needed for
device write-back

Key trust Modem managed

N/A

Azure MFA tenant, or
AD FS w/Azure MFA adapter, or
AD FS w/Azure MFA Server
adapter, or
AD FS w/3rd Party MFA Adapter

Azure Account

Azure Active Directory

Azure AD Connect

Azure AD Premium, optional for
automatic MDM enrollment

Certificate trust Modem managed

Windows Server 2012 or later
Network Device Enrollment Service

Azure MFA tenant, or
AD FS w/Azure MFA adapter, or
AD FS w/Azure MFA Server
adapter, or
AD FS w/3rd Party MFA Adapter

Azure Account

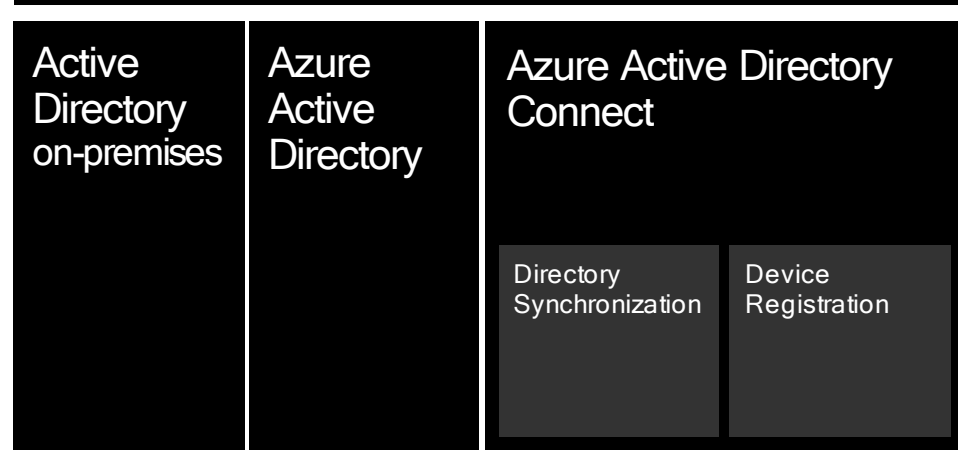
Azure Active Directory

Azure AD Connect

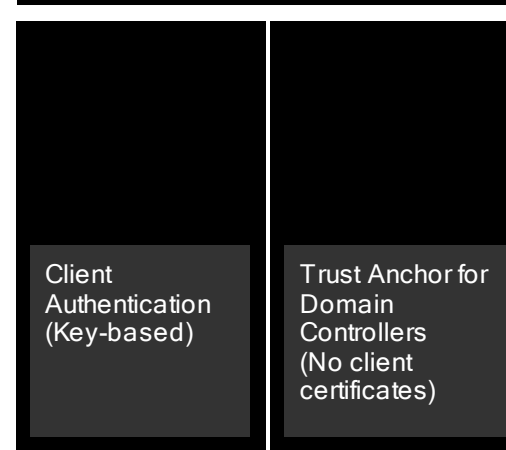
Azure AD Premium, optional for
automatic MDM enrollment

Key-Trust (Hybrid)

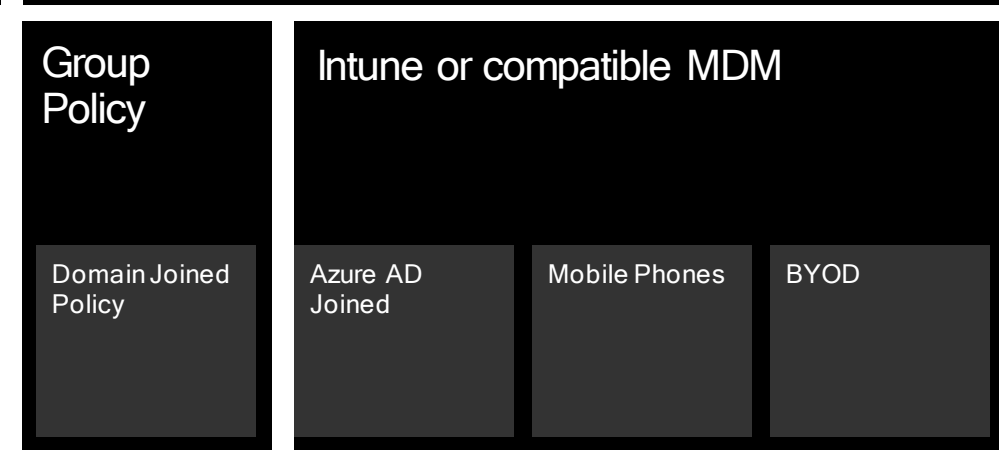
DIRECTORY



INFRASTRUCTURE



MANAGEMENT



Certificate-Trust (Hybrid)

DIRECTORY

Active Directory on-premises	Azure Active Directory	Azure Active Directory Connect	
		Directory Synchronization	Device Registration

INFRASTRUCTURE

Domain Controller Certificates	Client Certificates
--------------------------------	---------------------

MANAGEMENT

Active Directory on-premises	SCCM (Current Branch)	Intune or compatible MDM	
Domain Joined Policy	Domain Joined Certificate Enrollment	Mobile Phones	BYOD

On-premises Deployment

Key trust

Group Policy managed

Windows 10, version 1703 or later

Windows Server 2016 Schema

Windows Server 2008 R2 Domain/Forest functional level

Windows Server 2016 or later Domain Controllers

Windows Server 2012 or later Certificate Authority

Windows Server 2016 AD FS with [KB4088889 update](#)

AD FS with Azure MFA Server, or
AD FS with 3rd Party MFA Adapter

Azure Account, optional for Azure MFA billing

Certificate trust

Group Policy managed

Windows 10, version 1703 or later

Windows Server 2016 Schema

Windows Server 2008 R2 Domain/Forest functional level

Windows Server 2008 R2 or later Domain Controllers

Windows Server 2012 or later Certificate Authority

Windows Server 2016 AD FS with [KB4088889 update](#)

AD FS with Azure MFA Server, or
AD FS with 3rd Party MFA Adapter

Azure Account, optional for Azure MFA billing

Key-Trust (On-premises)

DIRECTORY

Active Directory
on-premises

Azure Active Federation
Services 2016

Domain
Registration

Key
Registration

INFRASTRUCTURE

Client Authentication
(Key-based)

Trust Anchor for Domain
Controllers
(No client certificates)

MANAGEMENT

Group Policy or
Configuration Manager

Certificate-Trust (On-premises)

DIRECTORY

Active Directory
on-premises

Azure Active Federation
Services 2016

Device
Registration

Certificate
Registration
Authority

INFRASTRUCTURE

Domain
Controller
Certificates

Client
Authentication
Certificates

MANAGEMENT

Group Policy
(Configuration Manager
optional)

Domain Joined Devices

Windows Hello for Business

Features

WHFB features

- Conditional access
- Dynamic lock
- PIN reset
- Dual Enrollment
- Remote Desktop with Biometrics

Conditional Access

To:

- Empower the end users to be productive wherever and whenever
- Protect the corporate assets at any time

Requirements:

- Azure Active Directory
- Hybrid Windows Hello for Business deployment

Dynamic Lock

Automatic lock of your device if your paired device is it out of range

Example: Smartphone that is paired to your Windows device via bluetooth

Requirements:

- Windows 10, version 1703

PIN reset

Users will be able to reset their PIN if forgotten

Requirements:

- Azure Active Directory
- Hybrid Windows Hello for Business deployment
- Azure AD registered, Azure AD joined, and Hybrid Azure AD joined
- Windows 10, version 1709 or later, Enterprise Edition

Dual Enrollment

Dual enrollment enables administrators to perform elevated, administrative functions by enrolling both their non-privileged and privileged credentials on their device.

Requirements

- Hybrid and On-premises Windows Hello for Business deployments
- Enterprise Joined or Hybrid Azure joined devices
- Windows 10, version 1709

Remote Desktop with Biometrics

Using Windows Hello for Business to Remote desktop to your Windows device.

Requirements

- Hybrid and On-premises Windows Hello for Business deployments
- Azure AD joined, Hybrid Azure AD joined, and Enterprise joined devices
- Certificate trust deployments
- Biometric enrollments
- Windows 10, version 1809

Only works with Certificate trust models

DEMO



10:36

Friday, September 14

Azure Multi-Factor Authentication

What is Azure Multi-Factor Authentication

What it is

- A standalone Azure identity and access management service, also included in Azure Active Directory Premium
- Prevents unauthorized access to both on-premises and cloud applications by providing an additional level of authentication
- Trusted by thousands of enterprises to authenticate employee, customer, and partner access



Per-User MFA versus Conditional Access

Per-User MFA

- Require MFA always, for all applications
- Free of charge for all Azure AD admins and all Azure admins

Conditional Access

- Require MFA under specific conditions
- For a specific app e.g. Azure Admin Portal
- When not on work network
- When sign-in considered high risk

Azure AD Premium feature

- Licenses needed for users who are affected by policy

Prerequisites

Scenario

Cloud-only identity environment with modern authentication

Hybrid identity scenarios

On-premises legacy applications published for cloud access

Using Azure MFA with RADIUS Authentication

Users have Microsoft Office 2010 or earlier, or Apple Mail for iOS 11 or earlier

Prerequisite

No additional prerequisite tasks

[Azure AD Connect](#) is deployed and user identities are synchronized or federated with the on-premises Active Directory Domain Services with Azure Active Directory.

Azure AD [Application Proxy](#) is deployed.

A [Network Policy Server \(NPS\)](#) is deployed.

Upgrade to [Microsoft Office 2013 or later](#) and Apple mail for iOS 12 or later. Conditional Access is not supported by legacy authentication protocols.

Multi-Factor Authentication - Getting started

Getting started

Settings

- Account lockout
- Block/unblock users
- Fraud alert
- Notifications
- OATH tokens
- Phone call settings
- Providers

Manage MFA Server

- Server settings
- One-time bypass
- Caching rules
- Server status

Reports

- Activity report

Troubleshooting + Support

- Troubleshoot
- New support request

« [Got feedback?](#)

Azure Multi-Factor Authentication

[Use MFA to protect your users and data.](#) There are many ways of deploying MFA with Azure AD. The best way is to use Azure MFA in the cloud and to apply it to your users using conditional access.

Configure

[Additional cloud-based MFA settings](#)

Learn more

- [Deploy cloud-based Azure Multi-Factor Authentication](#)
- [Configure Azure Multi-Factor Authentication](#)
- [What is conditional access in Azure Active Directory?](#)
- [Best practices for conditional access in Azure Active Directory](#)

Account lockout



Multi-Factor Authentication - Account lockout



Save



Discard



Got feedback?

Getting started

Settings

Account lockout

Block/unblock users

Fraud alert

Notifications

OATH tokens

Phone call settings

Providers

Account lockout

Temporarily lock accounts in the multi-factor authentication service if there are too many denied authentication attempts in a row. This feature only applies to users who enter a PIN to authenticate.

Number of MFA denials to trigger account lockout

Minutes until account lockout counter is reset

Minutes until account is automatically unblocked

Block/Unblock Users

- User won't receive an MFA request
- Request is automatically denied
- Users remain blocked for 90 days from the time they are blocked

The screenshot shows a web interface for managing Multi-Factor Authentication. The main heading is "Multi-Factor Authentication - Block/unblock users". On the left is a navigation sidebar with options: "Getting started", "Settings", "Account lockout", "Block/unblock users" (highlighted), "Fraud alert", "Notifications", "OATH tokens", "Phone call settings", and "Providers". The main content area includes a "+ Add" button and a "Got feedback?" link. Below this is a section titled "Block/unblock users" with a descriptive paragraph: "A blocked user will not receive Multi-Factor Authentication requests. Authentication attempts for that user will be automatically denied. A user will remain blocked for 90 days from the time they are blocked. To manually unblock a user, click the 'Unblock' action." Underneath is a table titled "Blocked users" with columns for "USER", "REASON", "DATE", and "ACTION". The table currently displays "No results".

Fraud alerts

For users to alert fraudulent attempts to access their resources

Multi-Factor Authentication - Fraud alert

« [Save](#) [Discard](#) | [Got feedback?](#)

- Getting started
- Settings
 - Account lockout
 - Block/unblock users
 - Fraud alert**
 - Notifications
 - OATH tokens
 - Phone call settings
 - Providers

Fraud alert

Allow your users to report fraud if they receive a two-step verification request that they didn't initiate.

Allow users to submit fraud alerts

On Off

Automatically block users who report fraud

On Off

Code to report fraud during initial greeting

Notifications

Multi-Factor Authentication - Notifications

« Save Discard

Getting started

Settings

- Account lockout
- Block/unblock users
- Fraud alert
- Notifications**
- OATH tokens
- Phone call settings
- Providers

RECIPIENT'S EMAIL ADDRESS

No results

Authentication methods available

Authentication Method	Usage
Password	MFA and SSPR
Security questions	SSPR Only
Email address	SSPR Only
Microsoft Authenticator app	MFA and SSPR
OATH Hardware token	Public preview for MFA and SSPR
SMS	MFA and SSPR
Voice call	MFA and SSPR
App passwords	MFA only in certain cases

Register OATH tokens

- OATH-TOTP SHA-1 tokens of the 30-second variety
- OATH-TOTP SHA-1 tokens of the 60-second variety
- Vendor of choice
- Secret keys are limited to 128 characters and need to be encoded in base32

⚙️ Multi-Factor Authentication - OATH tokens

⏪ Upload Download Delete Refresh Documentation Columns Got feedback?

To get started, select the Upload button above and choose a .csv file. This file should contain the secret keys for the OATH tokens you wish to use. The columns in the file should be: "upn, serial number, secret key, time interval, manufacturer, model".
[For more information, view the public documentation.](#)

Username Show

NAME	USERNAME	SERIAL NUMBER	MODEL	MANUFACTURER	ACTIVATED
No results					

Phone call settings

- Use custom voice messages
- User receive message in language depending on configured language for that user

Home > Betawalks > Multi-Factor Authentication - Phone call settings

Multi-Factor Authentication - Phone call settings

« + Add greeting Save Discard

Phone call settings

Customize the verification phone calls that your users receive.

MFA caller ID number (US phone number only)

Operator required to transfer extensions ⓘ On **Off**

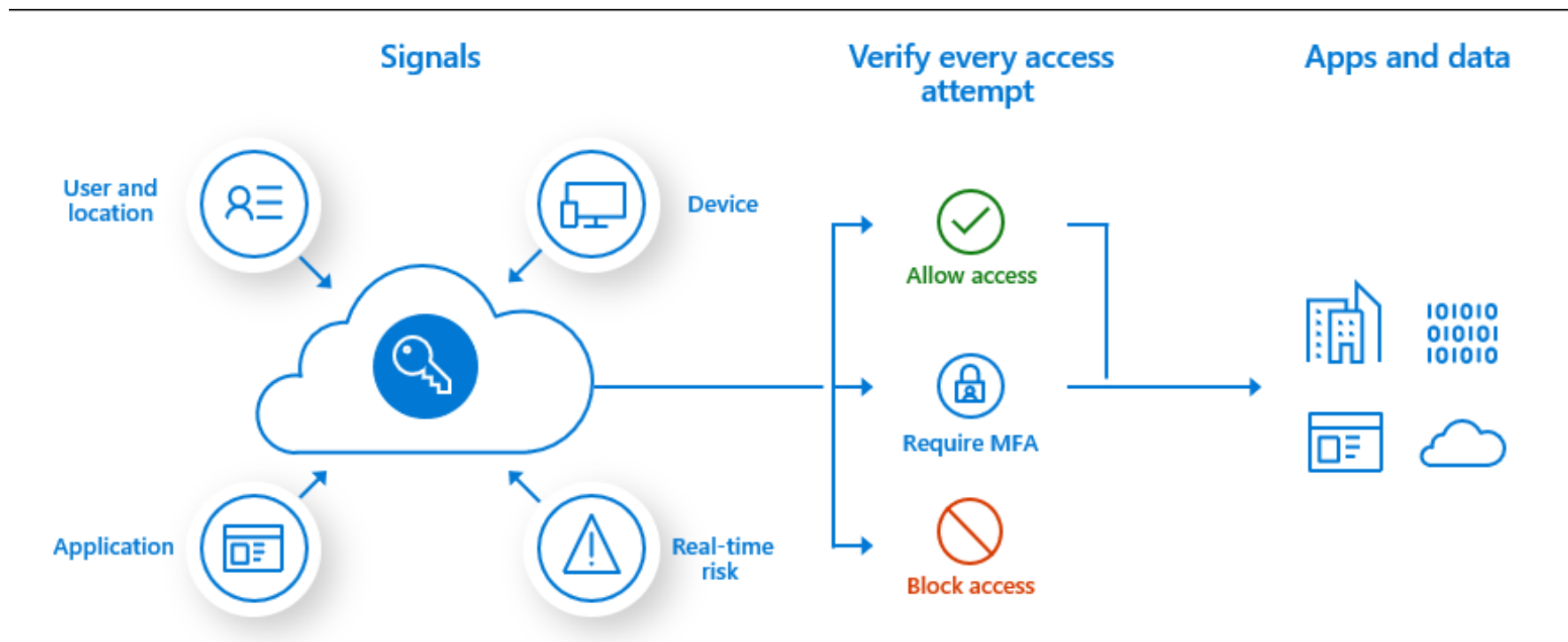
Number of PIN attempts allowed per call

GREETING TYPE	LANGUAGE	APPLICATION	SOUND FILE
No results			

Conditional Access

Conditional Access





Common signals

- User or group membership
 - Policies can be targeted to specific users and groups giving administrators fine-grained control over access.
- IP Location information
 - Organizations can create trusted IP address ranges that can be used when making policy decisions.
 - Administrators can specify entire countries IP ranges to block or allow traffic from.
- Device
 - Users with devices of specific platforms or marked with a specific state can be used when enforcing Conditional Access policies.

Common signals

- Application
 - Users attempting to access specific applications can trigger different Conditional Access policies.
- Real-time and calculated risk detection
 - Signals integration with Azure AD Identity Protection allows Conditional Access policies to identify risky sign-in behavior. Policies can then force users to perform password changes or multi-factor authentication to reduce their risk level or be blocked from access until an administrator takes manual action.
- Microsoft Cloud App Security (MCAS)
 - Enables user application access and sessions to be monitored and controlled in real time, increasing visibility and control over access to and activities performed within your cloud environment.

Common decisions

- Block access
 - Most restrictive decision
- Grant access
 - Least restrictive decision, can still require one or more of the following options:
 - Require multi-factor authentication
 - Require device to be marked as compliant
 - Require Hybrid Azure AD joined device
 - Require approved client app
 - Require app protection policy (preview)

Typical policies deployed by organizations

- Requiring multi-factor authentication for users with administrative roles
- Requiring multi-factor authentication for Azure management tasks
- Blocking sign-ins for users attempting to use legacy authentication protocols
- Risk-based Conditional Access (Requires Azure AD Premium P2)
- Require trusted location for MFA registration
- Blocking or granting access from specific locations
- Require compliant device
- Requiring organization-managed devices for specific applications

Licensing

Built conditional access policies

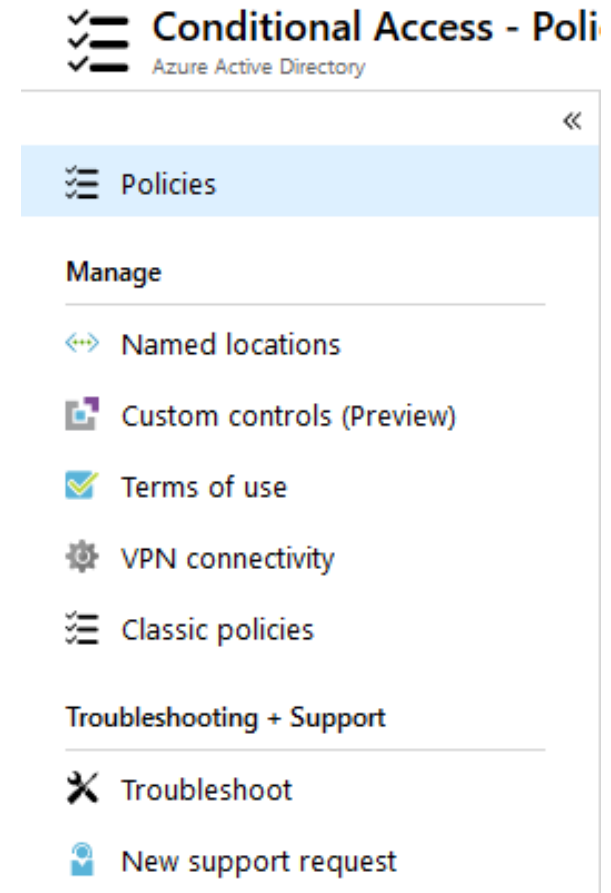
- Policies are made up of:
 - Assignments
 - Conditions
 - Controls

Policy minimum configuration requirements

- Name of the policy.
- Assignments
 - Users and/or groups to apply the policy to.
 - Cloud apps or actions to apply the policy to.
- Access controls
 - Grant or Block controls

Configuration navigation menu

- Named Locations - info in following slide
- Custom Controls - redirect authentication requests to a third party for additional Identity Management
- Terms of Use - info in following slide
- VPN Connectivity - Windows 10 feature that installs a VPN certificate provided by Azure
- Classic Policies - any remaining policies from the previous Azure Portal



Named locations

- Upload/Download a text file of IP ranges
- Location Name
- Use IP Ranges or Countries of Origin
- Mark as trusted to use with the All Trusted Locations setting in the Policy
- Enter IP ranges
- If Country is selected, a checkbox for unknown areas is available - IP Addresses that cannot be mapped to a country or region

Blocked countries

* Name

Blocked countries

Define the location using:

- IP ranges
- Countries/Regions

Nigeria

Include unknown areas ⓘ

Terms of use

- Name/Display Name
- PDF Upload
- Require users to scroll through it all
- Enforce with policy templates*
- Selected templates


New terms of use

Terms of use

Create and upload documents

* Name ⓘ

* Display name ⓘ

Terms of use document ⓘ  ▾

+ Add language

Require users to expand the terms of use ⓘ On Off

Require users to consent on every device ⓘ On Off

Expire consents ⓘ On Off

Duration before re-acceptance required (days) ⓘ

Conditional access

* Enforce with conditional access policy templates ⓘ ▾

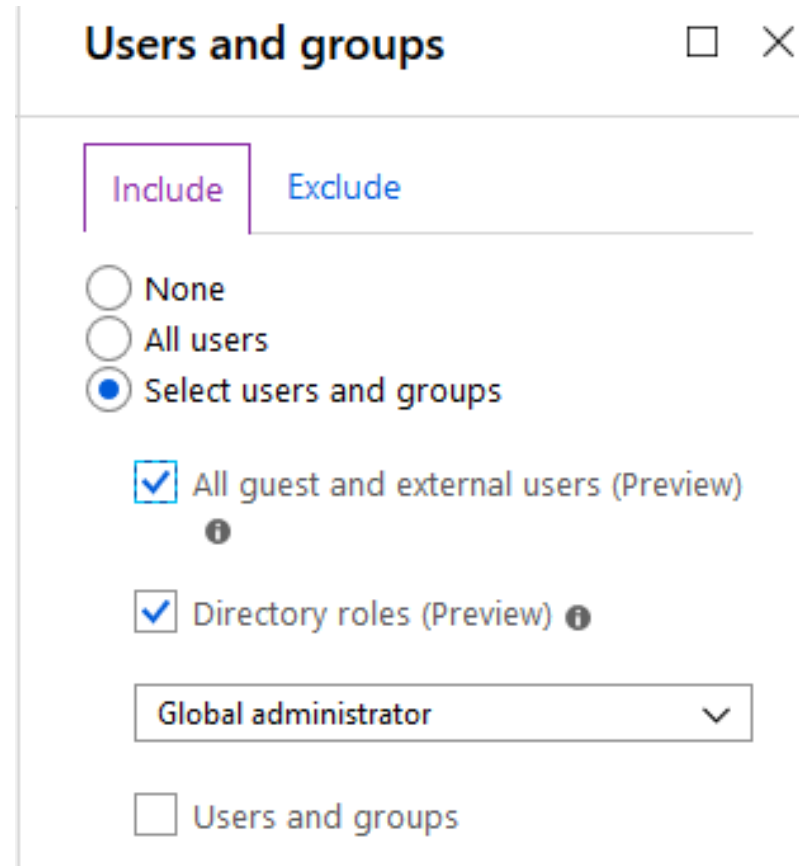
*Selecting Create a policy and Access to cloud apps enforces the terms of use for all users and all cloud apps

Assignments

The assignments portion controls the who, what, and where of the Conditional Access policy

Users & Groups

- Include or Exclude
- All Users
- Selection of
 - All guest users
 - Directory roles
 - Users and/or groups



The screenshot shows a window titled "Users and groups" with a close button (X) in the top right corner. Below the title bar, there are two tabs: "Include" (highlighted with a purple border) and "Exclude". Under the "Include" tab, there are three radio button options: "None", "All users", and "Select users and groups" (which is selected with a blue dot). Below these are two checked checkboxes: "All guest and external users (Preview)" and "Directory roles (Preview)", each with an information icon (i) to its right. A dropdown menu is set to "Global administrator" with a downward arrow. At the bottom, there is an unchecked checkbox labeled "Users and groups".

Cloud apps or User actions

- Include or Exclude
- All cloud apps (Includes Default, Intune and Azure Gallery Apps)
- Select individual apps
- User actions

Cloud apps or actions ✕

Select what this policy applies to

Cloud apps User actions

Include Exclude

- None
 All cloud apps
 Select apps

Cloud apps or actions ✕

Select what this policy applies to

Cloud apps User actions

Select the action this policy will apply to

Register security information (Preview)

Conditions

A policy can contain multiple conditions.

Conditions

- Sign-in Risk
- Device Platforms
- Locations
- Client apps
- Device state

Sign-in Risk

- Configure Yes/No
- Select Risk Level (defined on next slide)

Conditions ×

Info

Sign-in risk ⓘ
Not configured >

Device platforms ⓘ
Not configured >

Locations ⓘ
Not configured >

Client apps (Preview) ⓘ
Not configured >

Device state (Preview) ⓘ
Not configured >

Sign-in risk □ ×

Info

Configure ⓘ
Yes No

Select the sign-in risk level this policy will apply to

High

Medium

Low

No risk

How sign-in risk is determined

- **High:** High confidence and high severity risk event. These events are strong indicators that the user's identity has been compromised, and any user accounts impacted should be remediated immediately.
- **Medium:** High severity, but lower confidence risk event, or vice versa. These events are potentially risky, and any user accounts impacted should be remediated.
- **Low:** Low confidence and low severity risk event. This event may not require an immediate action, but when combined with other risk events, may provide a strong indication that the identity is compromised.

Examples of Event Levels

- Leaked credentials - High
- Sign-ins from anonymous IP Addresses - Medium
- Impossible Travel to atypical locations - Medium
- Sign-in from unfamiliar locations - Medium
- Sign-ins from infected devices - Low
- Sign-ins from IP addresses with suspicious activity - Medium

Device platforms

- Configure Yes/No
- Include/Exclude
- Any device
- Selection of device platforms

The screenshot shows a configuration window with two main panes. The left pane, titled 'Conditions', lists several settings, all currently 'Not configured'. The 'Device platforms' condition is highlighted in blue. The right pane, titled 'Device platforms', contains the following configuration options:

- Apply policy to selected device platforms. [Learn more](#)
- Configure **Configure** (Info icon)
 - Yes/No toggle (Yes is selected)
- Include/Exclude buttons (Include is selected)
- Radio button options:
 - Any device
 - Select device platforms
 - Android
 - iOS
 - Windows Phone
 - Windows
 - macOS

Locations

- Configure Yes/No
- Include/Exclude
- Any location
- All trusted locations
- Selected locations

Conditions ×

Locations □ ×

Info

Sign-in risk ⓘ
Not configured >

Device platforms ⓘ
Not configured >

Locations ⓘ
Not configured >

Client apps (Preview) ⓘ
Not configured >

Device state (Preview) ⓘ
Not configured >

Control user access based on their physical location. [Learn more](#)

Configure ⓘ

Yes No

Include Exclude

Any location
 All trusted locations
 Selected locations

Select
Blocked countries >

Blocked countries ...

Client apps

- Configure Yes/No
- Include/Exclude
- Browser
- Mobile apps and desktop clients
 - Modern authentication
 - Exchange ActiveSync clients
 - Other clients

Conditions ×

Info

Sign-in risk ⓘ
Not configured >

Device platforms ⓘ
Not configured >

Locations ⓘ
Not configured >

Client apps (Preview) ⓘ
Not configured >

Device state (Preview) ⓘ
Not configured >

Client apps (Preview) □ ×

Configure ⓘ

Yes No

Select the client apps this policy will apply to

Browser



Mobile apps and desktop clients

Modern authentication clients

Exchange ActiveSync clients

Apply policy only to supported platforms

Other clients ⓘ

 Exchange ActiveSync currently does not support all other conditions 

Device state

- Configure Yes/No
- Include/Exclude
- All device state

- Exclude
 - Hybrid joined devices
 - Compliant devices

The screenshot displays two side-by-side panels. The left panel, titled 'Conditions', lists several criteria that are currently 'Not configured': Sign-in risk, Device platforms, Locations, Client apps (Preview), and Device state (Preview). The right panel, titled 'Device state (Preview)', shows configuration options: a 'Configure' toggle set to 'Yes', 'Include' and 'Exclude' buttons, and a radio button selected for 'All device state'.

Conditions	Device state (Preview)
Info	Info
Sign-in risk i Not configured >	Configure i <input checked="" type="radio"/> Yes <input type="radio"/> No
Device platforms i Not configured >	<input checked="" type="checkbox"/> Include <input type="checkbox"/> Exclude
Locations i Not configured >	<input checked="" type="radio"/> All device state
Client apps (Preview) i Not configured >	
Device state (Preview) i Not configured >	

Access controls

The access controls portion of the Conditional Access policy controls how a policy is enforced.

Access controls

- Block access
- Grant access
 - Require multi-factor authentication (Azure Multi-Factor Authentication)
 - Require device to be marked as compliant (Intune)
 - Require Hybrid Azure AD joined device
 - Require approved client app
 - Require app protection policy
- Session
 - Use app enforced restrictions
 - Use Conditional Access App Control
 - Sign-in frequency
 - Persistent browser session

Grant controls

- Grant/Block
- Require MFA
- Require Compliant - an iOS and Android device compliance policy in Intune
 - Specifies password requirements, versions, conditions
- Require Hybrid Azure AD joined - requires additional configuration on Azure AD Connect
- Require approved Client App - currently Microsoft Apps like Office 2016, and apps configured in Intune
- Require app protection policy

Grant

Select the controls to be enforced.

Block access

Grant access

Require multi-factor authentication ⓘ

Require device to be marked as compliant ⓘ

Require Hybrid Azure AD joined device ⓘ

Require approved client app ⓘ
[See list of approved client apps](#)

Require app protection policy (Preview) ⓘ
[See list of policy protected client apps](#)

RequirePingIDMfa

For multiple controls

Require all the selected controls

Require one of the selected controls



Session controls

- App enforced restrictions
- Use conditional access app control
- Sign-in frequency
- Persistent browser session

Session □ ×

Session controls enable limited experiences within a cloud app. Select the session usage requirements.
[Learn more](#)

Use app enforced restrictions ⓘ

 This control only works with supported apps. Currently Exchange Online and SharePoint Online are the only cloud apps that support app enforced restrictions. Click here to learn more. 

Use Conditional Access App Control ⓘ

Sign-in frequency (Preview) ⓘ

Persistent browser session (Preview) ⓘ

Best Practices

As a best practice, create a user account that is:

- Dedicated to policy administration
- Excluded from all your policies

Avoid doing

For all users, all cloud apps:

- Block access - This configuration blocks your entire organization, which is definitely not a good idea.
- Require compliant device - For users that have not enrolled their devices yet, this policy blocks all access including access to the Intune portal.
- Require domain join - This policy block access has also the potential to block access for all users in your organization if you don't have a domain-joined device yet.
- Require app protection policy - This policy block access has also the potential to block access for all users in your organization if you don't have an Intune policy.

For all users, all cloud apps, all device platforms:

- Block access - This configuration blocks your entire organization, which is definitely not a good idea.

Troubleshooting

- Simulate sign-in behavior with the conditional access What if tool
- Azure Active Directory user sign-in logs

DEMO

Questions?

care.grow.passion.

Xylos