#AzureBonn

“Azure AD Identity Security”

Thomas Naunheim

Freitag, 16. April 2021 | 13:15 Uhr

Azure Meetup HAMBURG

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#GlobalAzure

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Azure Meetup BONN

MVP Microsoft® Most Valuable Professional

Microsoft Certified Azure Solutions Architect Expert

Most Valuable Mentor

AGENDA

Strong Authentication

Reduced attack surface

Detection of identity threats

STRONG AUTHENTICATION

PROTECTED IDENTITY

OVERVIEW OF AUTHENTICATION METHODS

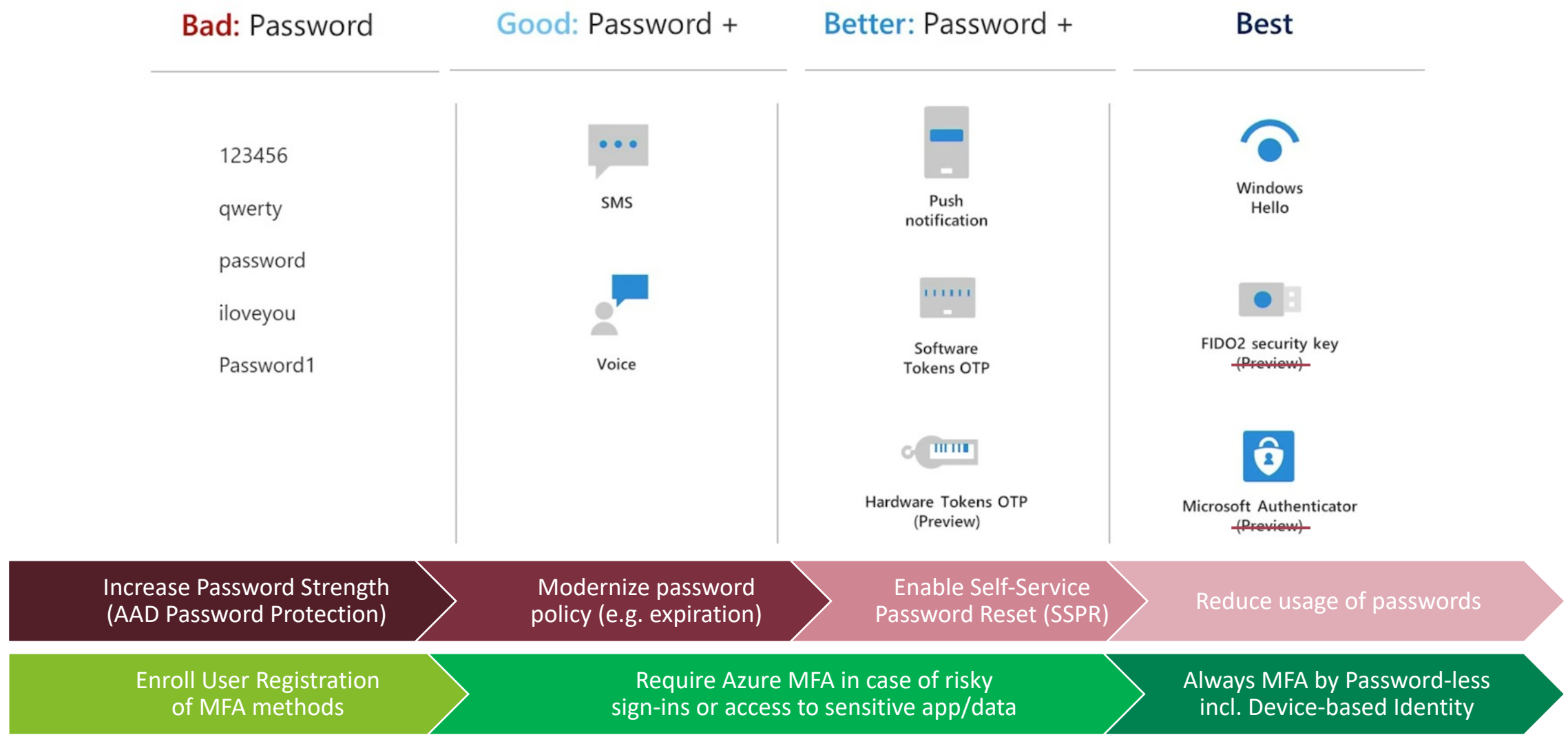
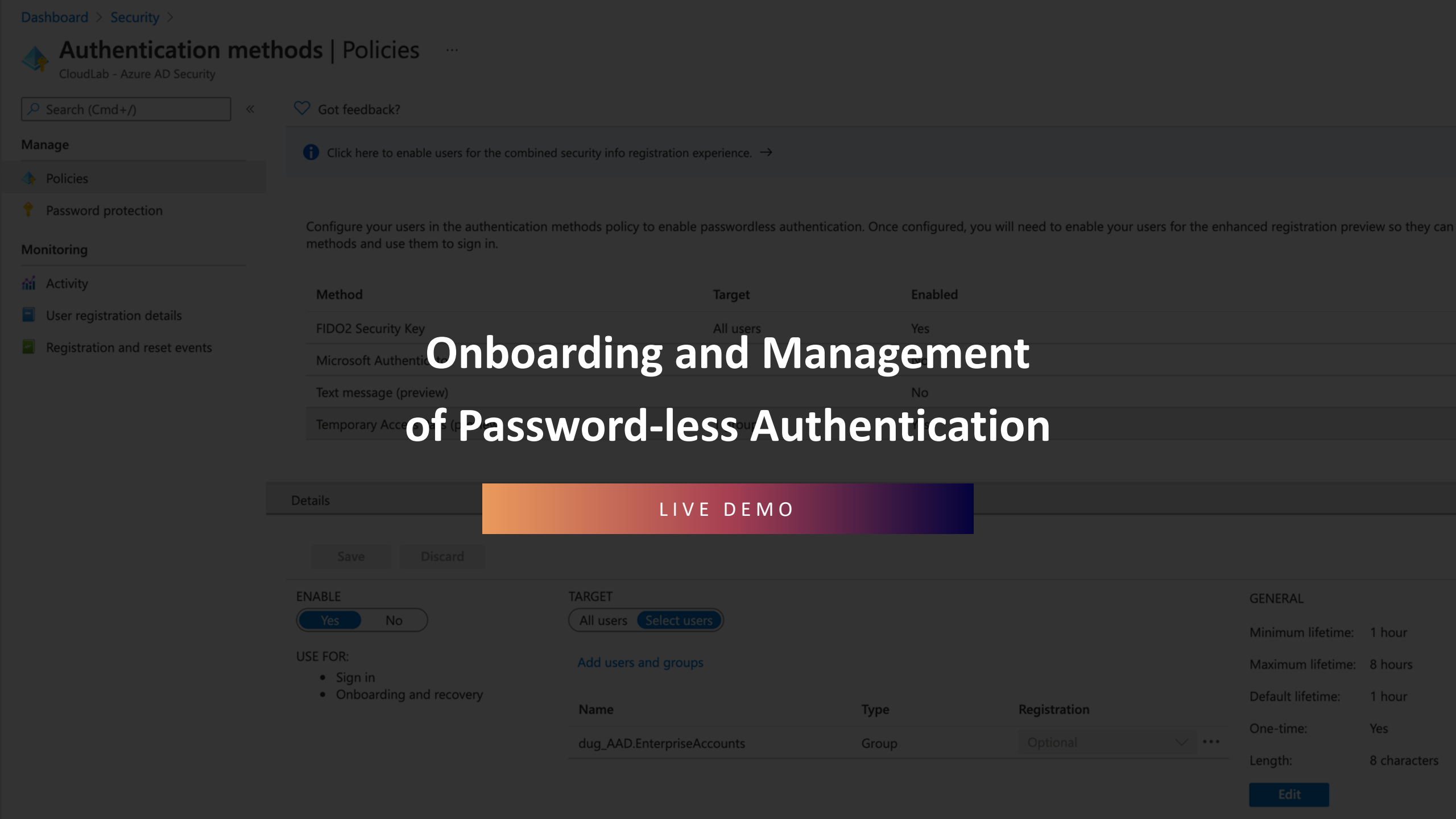


Image Source "Overview of Authentication Methods": Winning Azure Active Directory strategies for identity security and governance

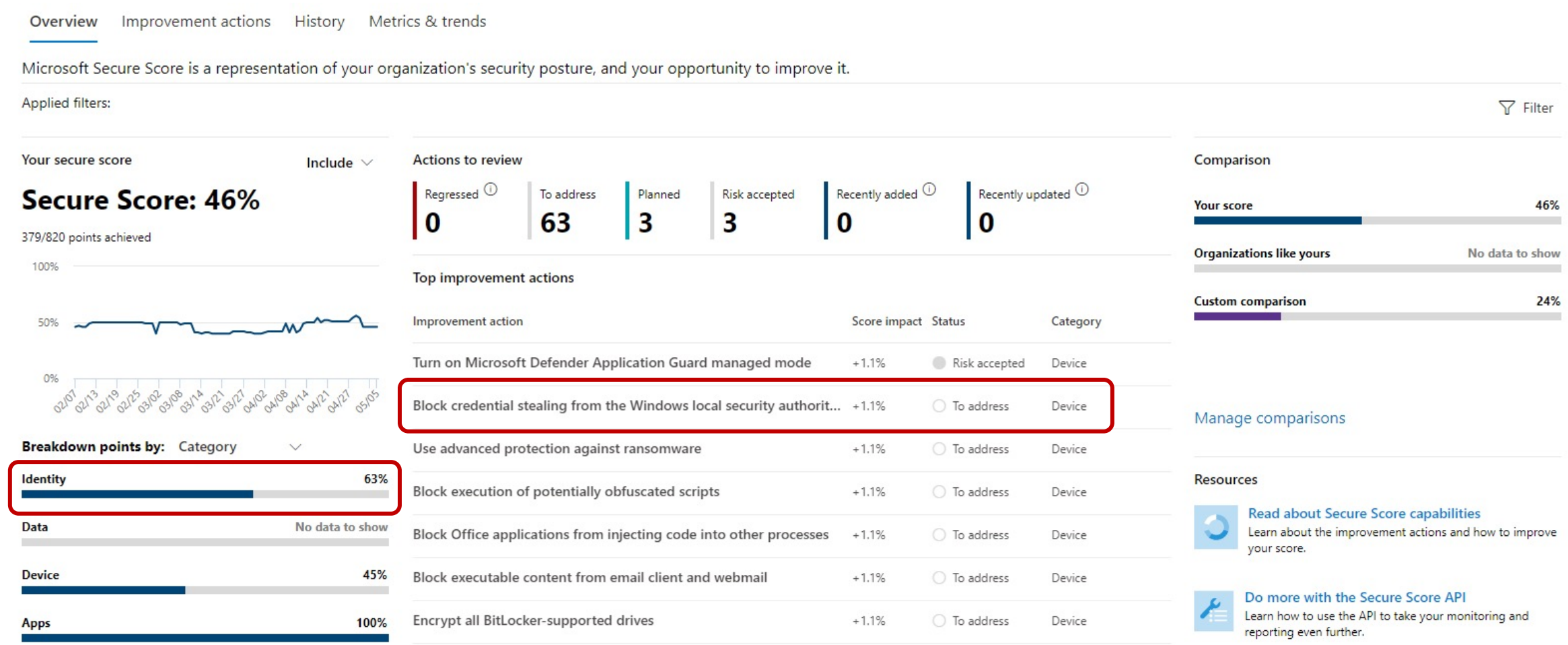

Dashboard > Security >
Authentication methods | Policies
CloudLab - Azure AD Security
Search (Cmd+/)
Got feedback?
Manage
Policies
Password protection
Monitoring
Activity
User registration details
Registration and reset events
Click here to enable users for the combined security info registration experience.
Configure your users in the authentication methods policy to enable passwordless authentication. Once configured, you will need to enable your users for the enhanced registration preview so they can
methods and use them to sign in.
Method
Target
Enabled
FIDO2 Security Key
All users
Yes
Text message (preview)
No
Onboarding and Management
of Password-less Authentication
LIVE DEMO
Details
Save
Discard
ENABLE
Yes
No
TARGET
All users
Select users
USE FOR:
Sign in
Onboarding and recovery
Add users and groups
Name
Type
Registration
dug_AAD.EnterpriseAccounts
Group
Optional
GENERAL
Minimum lifetime:
1 hour
Maximum lifetime:
8 hours
Default lifetime:
1 hour
One-time:
Yes
Length:
8 characters
Edit

REDUCED ATTACK SURFACE

SECURITY POSTURE & CA POLICIES

REDUCED ATTACK SURFACE

MICROSOFT SECURE SCORE



Source: Microsoft (Overview "Microsoft Secure Score")

REDUCED ATTACK SURFACE

IDENTITY SECURE SCORE

Secure Score for Identity

43.99%

Last updated 3/28/2021, 1:00:00 AM
View your Microsoft Secure Score.

Comparison

CloudLab	43.99%
Industry average	0%
Typical 0-5 person company	12.99%

Change industry

Score history

7 days | 30 days | 60 days | 90

Improvement actions

Download | Columns

Name	Score Impact	User Impact
Disable Print spooler service on domain controllers	4.20%	Low
Install Defender for Identity Sensor on all Domain Controllers	3.36%	Low
Configure Microsoft Defender for Endpoint Integration	0.84%	Low
Configure VPN integration	0.84%	Low
Reduce lateral movement path risk to sensitive entities	4.20%	Low
Resolve unsecure account attributes	4.20%	Low
Stop clear text credentials exposure	4.20%	Low

Active Directory and On-Premises enviroment

Improvement action

Stop clear text credentials exposure

SCORE IMPACT
+4.20%

CURRENT SCORE
0

MAX SCORE
5

STATUS
To address

DESCRIPTION
Entities exposing credentials in clear text increase risk because unsecure traffic, such as LDAP simple-bind, is highly susceptible to interception. Attackers can then engage in malicious activities like stealing credentials. Through a security assessment, Azure Advanced Threat Protection detects credentials being exposed in clear text through network traffic and event monitoring.

USER IMPACT
Low

IMPLEMENTATION COST
Low

WHAT AM I ABOUT TO CHANGE?
In

HOW WILL IT AFFECT MY USERS?
Any user or application that relies on authentication in clear text will no longer be able to work.

Get Started

REDUCED ATTACK SURFACE

IDENTITY SECURE SCORE

Secure Score for Identity

43.99%

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Comparison

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Change industry

Score history

7 days | 30 days | 60 days | 90 d

Improvement actions

Download | Columns

Name	Score Impact	User Impact	
Enable Password Hash Sync if hybrid	4.20%	Low	Prerequites and configuration of Identity Protection
Turn on user risk policy	5.88%	Moderate	
Turn on sign-in risk policy	5.88%	Moderate	
Enable self-service password reset	0.84%	Moderate	Modernized Password Policy
Do not expire passwords	6.72%	Moderate	
Do not allow users to grant consent to unmanaged applications	3.36%	Moderate	App Integration
Require MFA for administrative roles	8.40%	Low	Conditional Access and MFA Design
Ensure all users can complete multi-factor authentication for secure access	7.56%	High	
Enable policy to block legacy authentication	6.72%	Moderate	

Improvement action

Do not allow users to grant consent to unmanaged applications

SCORE IMPACT
+3.36%

CURRENT SCORE
4

MAX SCORE
4

STATUS
To address

DESCRIPTION
Tighten the security of your services by regulating the access of third-party integrated apps. Only allow access to necessary apps that support robust security controls. Third-party applications are not created by Microsoft, so there is a possibility they could be used for malicious purposes like exfiltrating data from your tenancy. Attackers can maintain persistent access to your services through these integrated apps, without relying on compromised accounts.

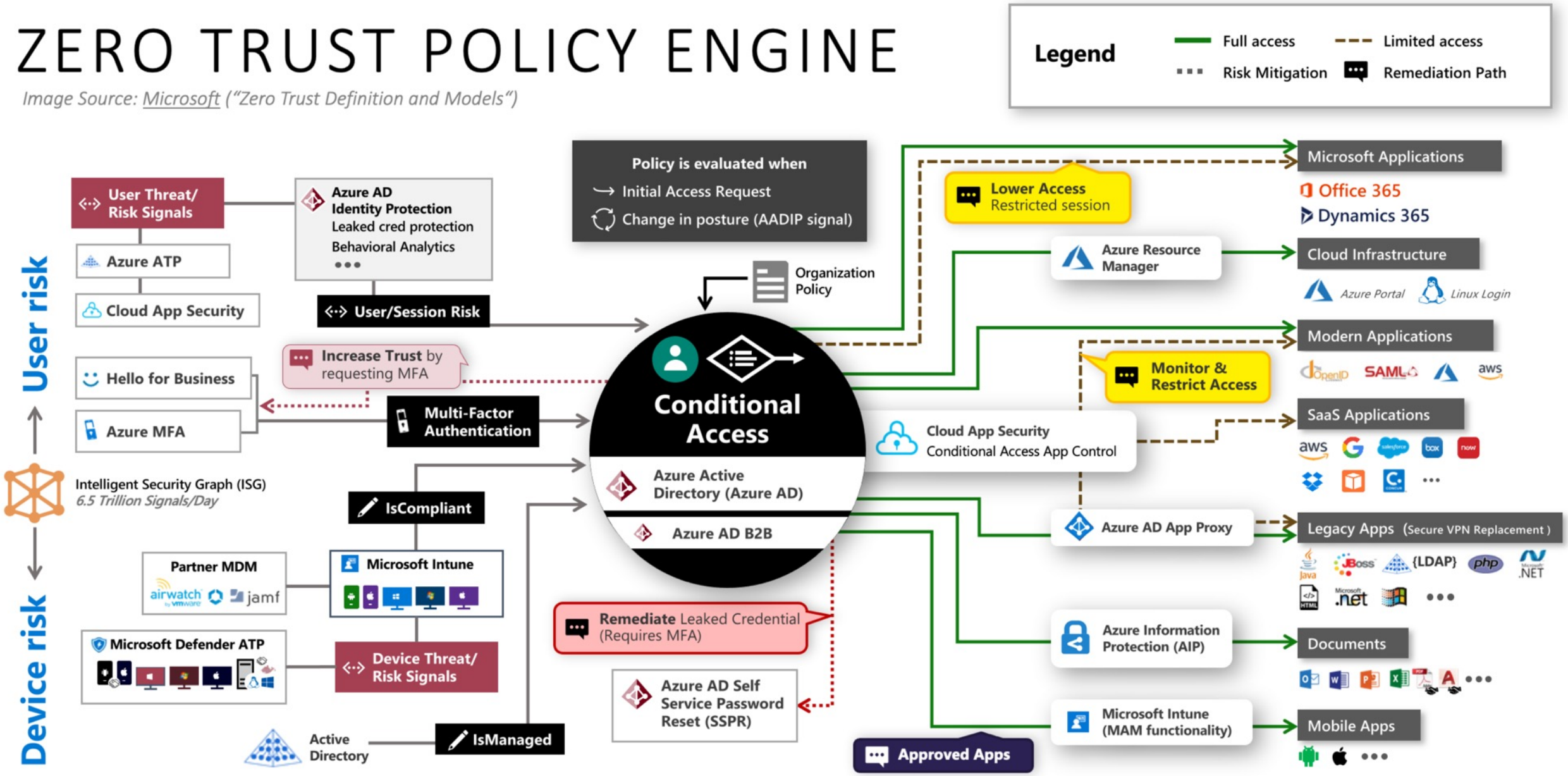
USER IMPACT
Moderate

IMPLEMENTATION COST
Low

WHAT AM I ABOUT TO CHANGE?
To prevent users in your organization from allowing third-party apps to access their Office 365 information, and require future consent operations to be performed by an administrator, go to the Azure Active Directory admin center > Enterprise applications > User settings > Enterprise applications. Set the toggle "Users

ZERO TRUST POLICY ENGINE

Image Source: Microsoft ("Zero Trust Definition and Models")



Signal
to make an informed decision

Decision
based on organizational policy

Enforcement
of policy across resources

DESIGN YOUR CA POLICY BASELINE

Ensure to protect **every user and every app by baseline policy set**!

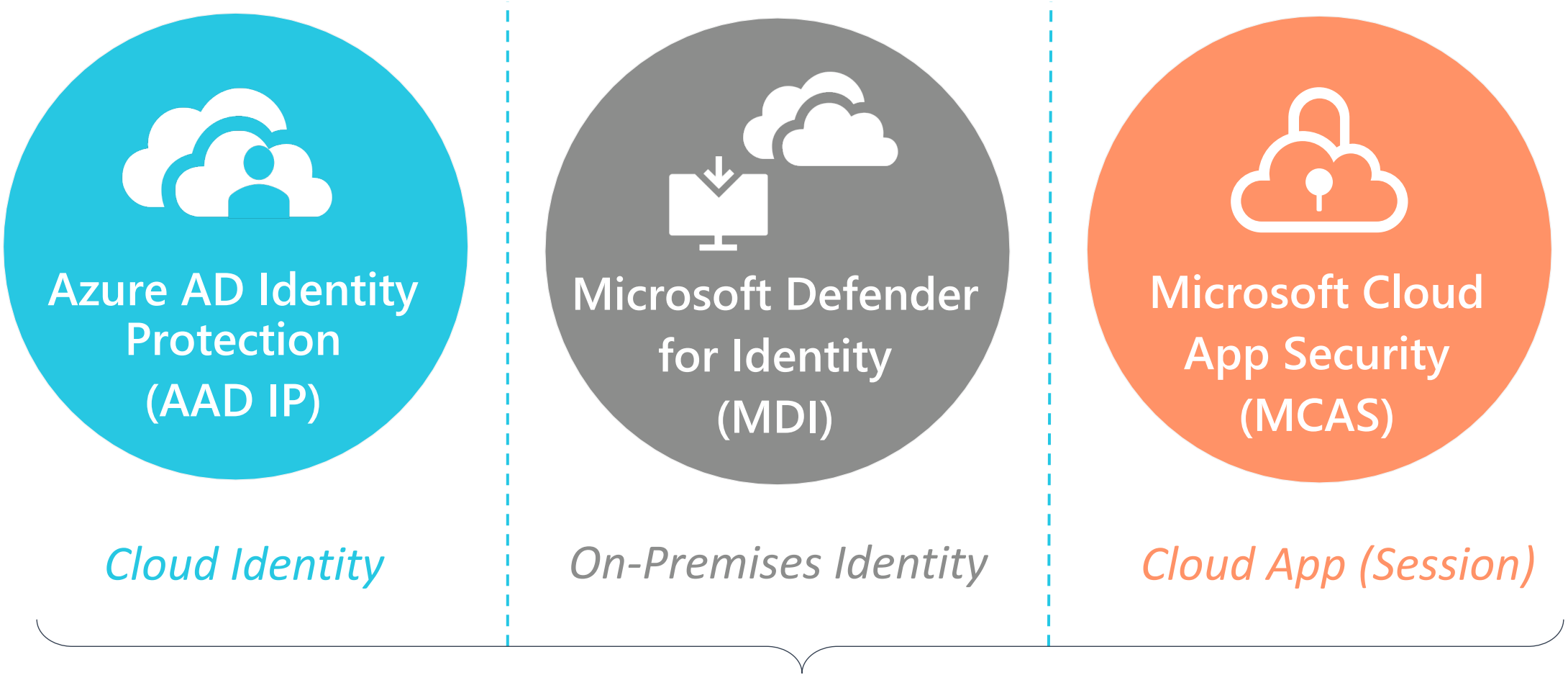
Consider your environment (types of apps, devices and authentication methods)!

Exclusions and lifecycle of **policies must be managed very carefully!**

DETECTION OF IDENTITY THREAT

IDENTITY SECURITY MONITORING

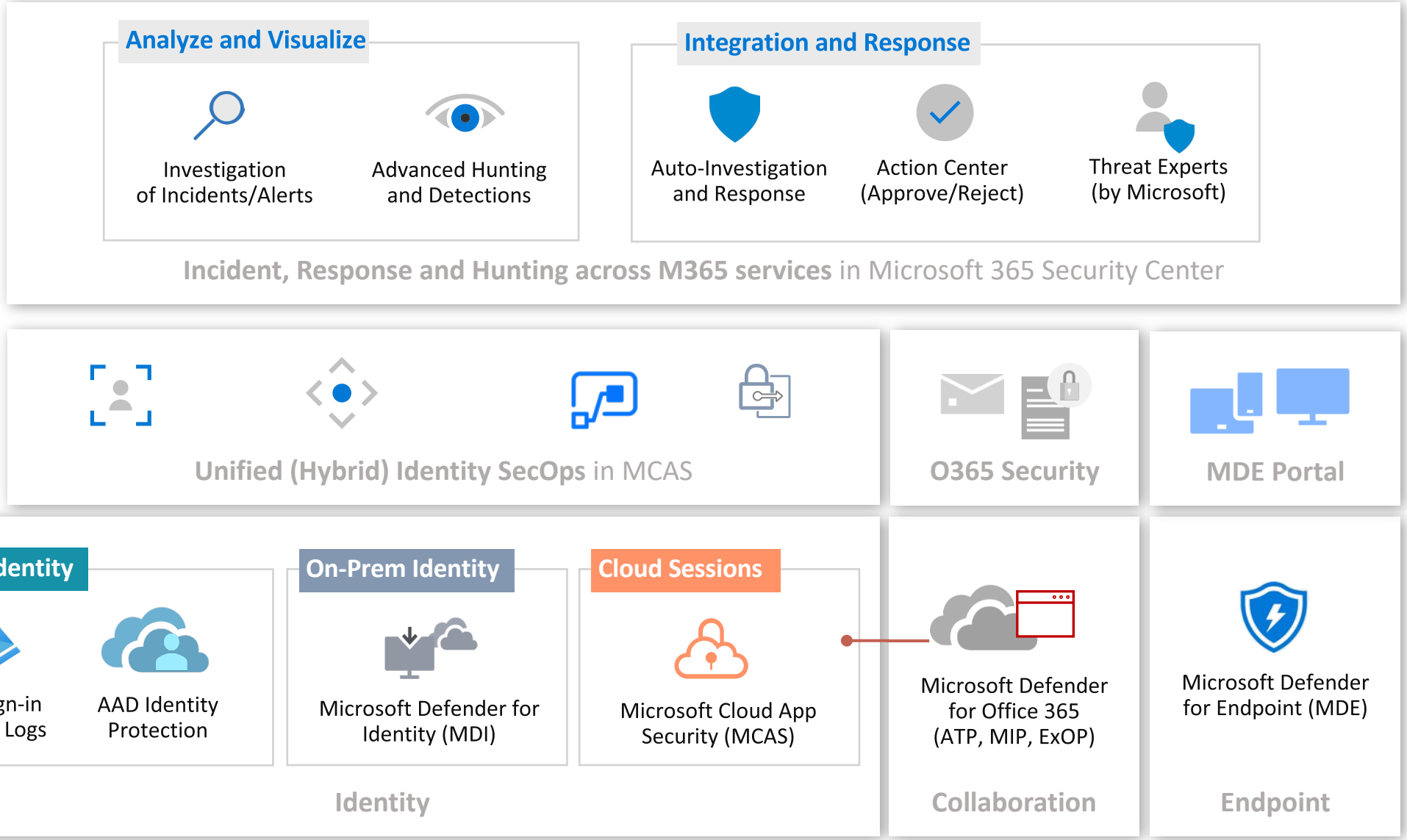
END-TO-END IDENTITY PROTECTION



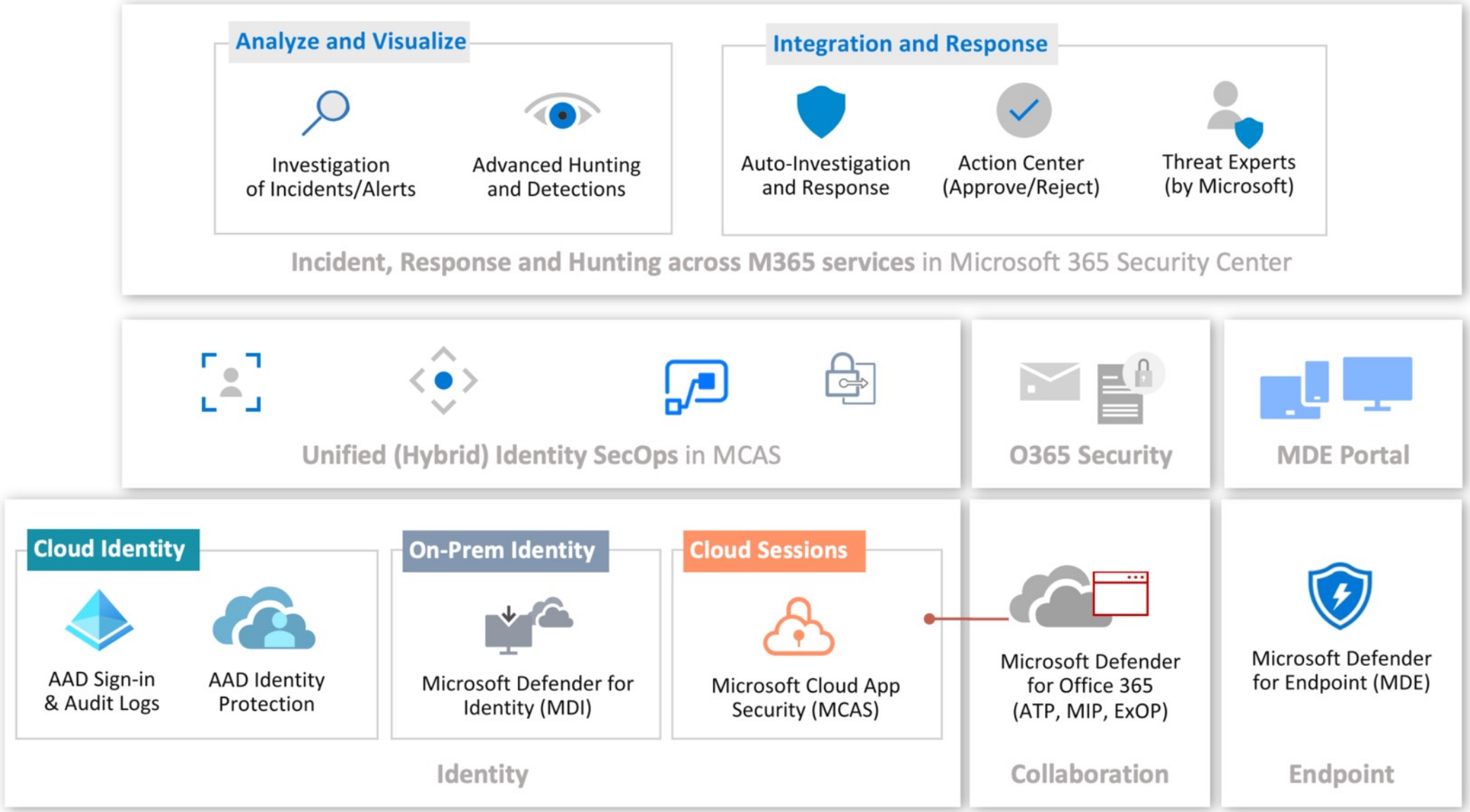
ATTACK AND DEFENSE SCENARIOS

	Azure Active Directory (AAD) *Azure AD Identity Protection + Microsoft Cloud App Security*	Windows Server Active Directory (AD) *Microsoft Defender for Identity + Microsoft Cloud App Security*
Initial Access	• Brute Force, Password Spray or Leaked Credentials	
Compromised Account and Device	• Risky user or sign-ins • Pass-the-PRT	• Suspicious VPN or logons • Pass-the-Hash/-Ticket,…
Lateral movement to compromise domain	• Monitoring of privileged IAM and assets (SAW/PAW, PIM) • Detect reconnaissance and privilege escalation paths	
Access sensitive and Exfiltrate Data	• Mass Download/DLP	• SMB Exfiltration
Compromised or installed backdoor in directory	• Add credentials to existing or create service principals	• Change password of privileged service account

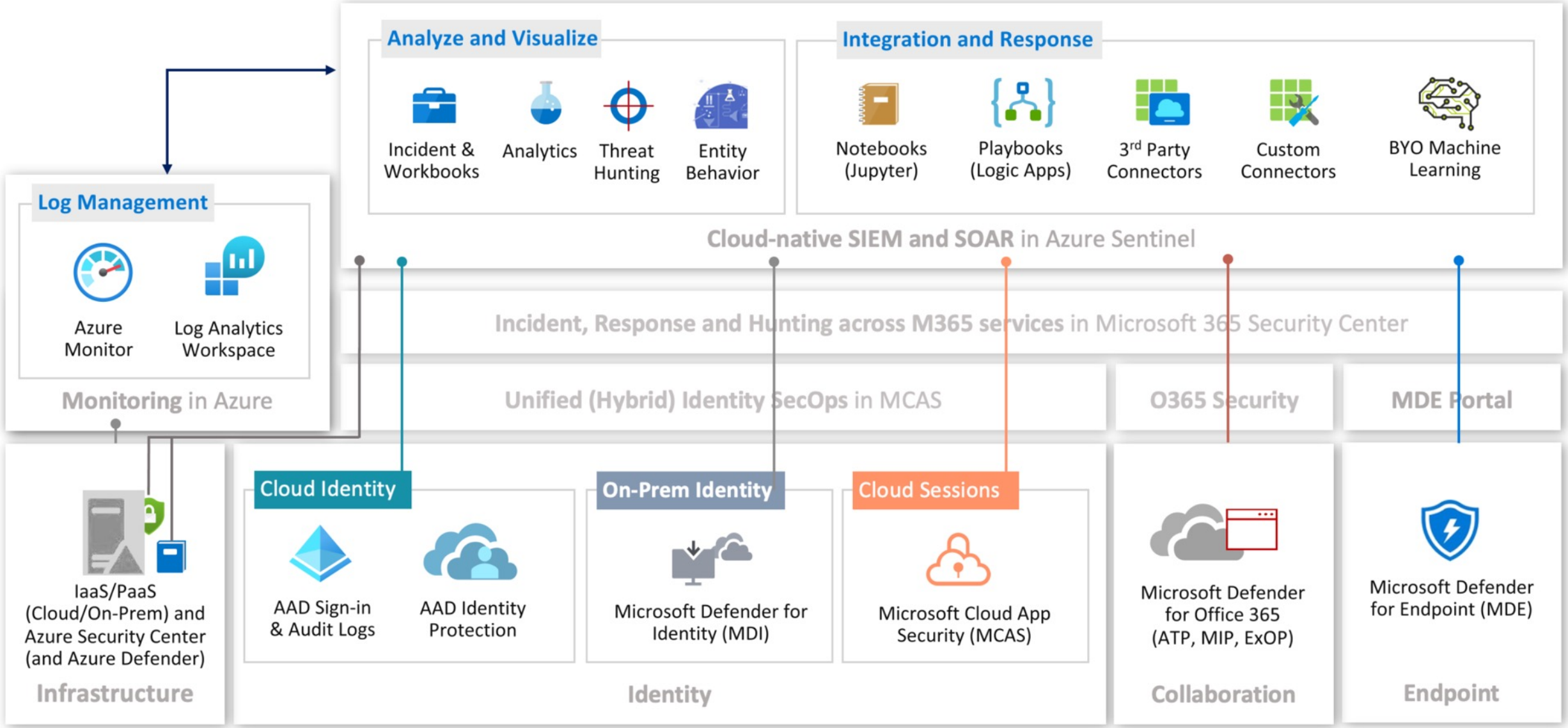
IDENTITY SECURITY OPERATIONS

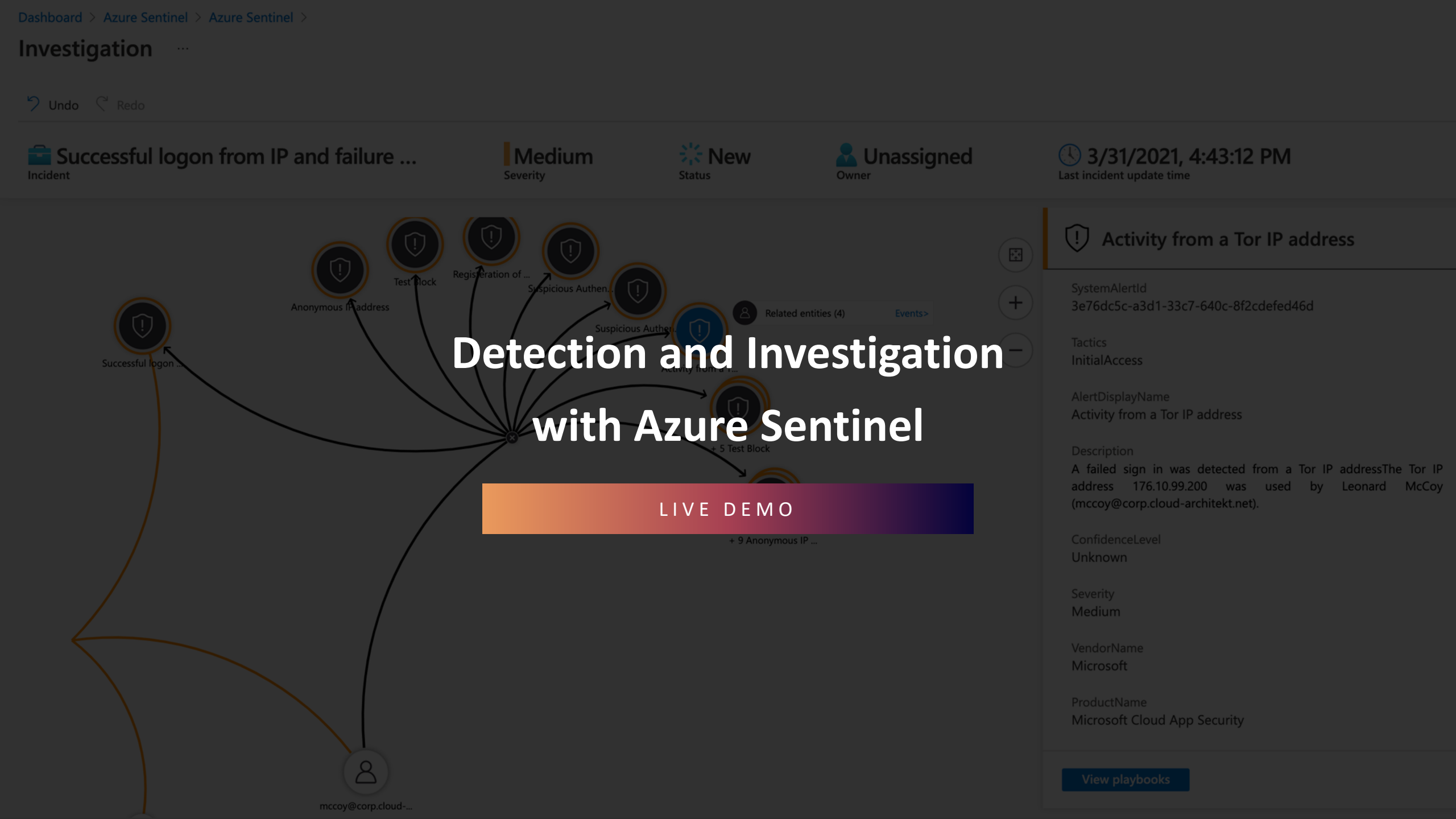


SECOPS WITH M365 DEFENDER



SECOPS WITH AZURE SENTINEL





Detection and Investigation with Azure Sentinel

LIVE DEMO

THANK YOU

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