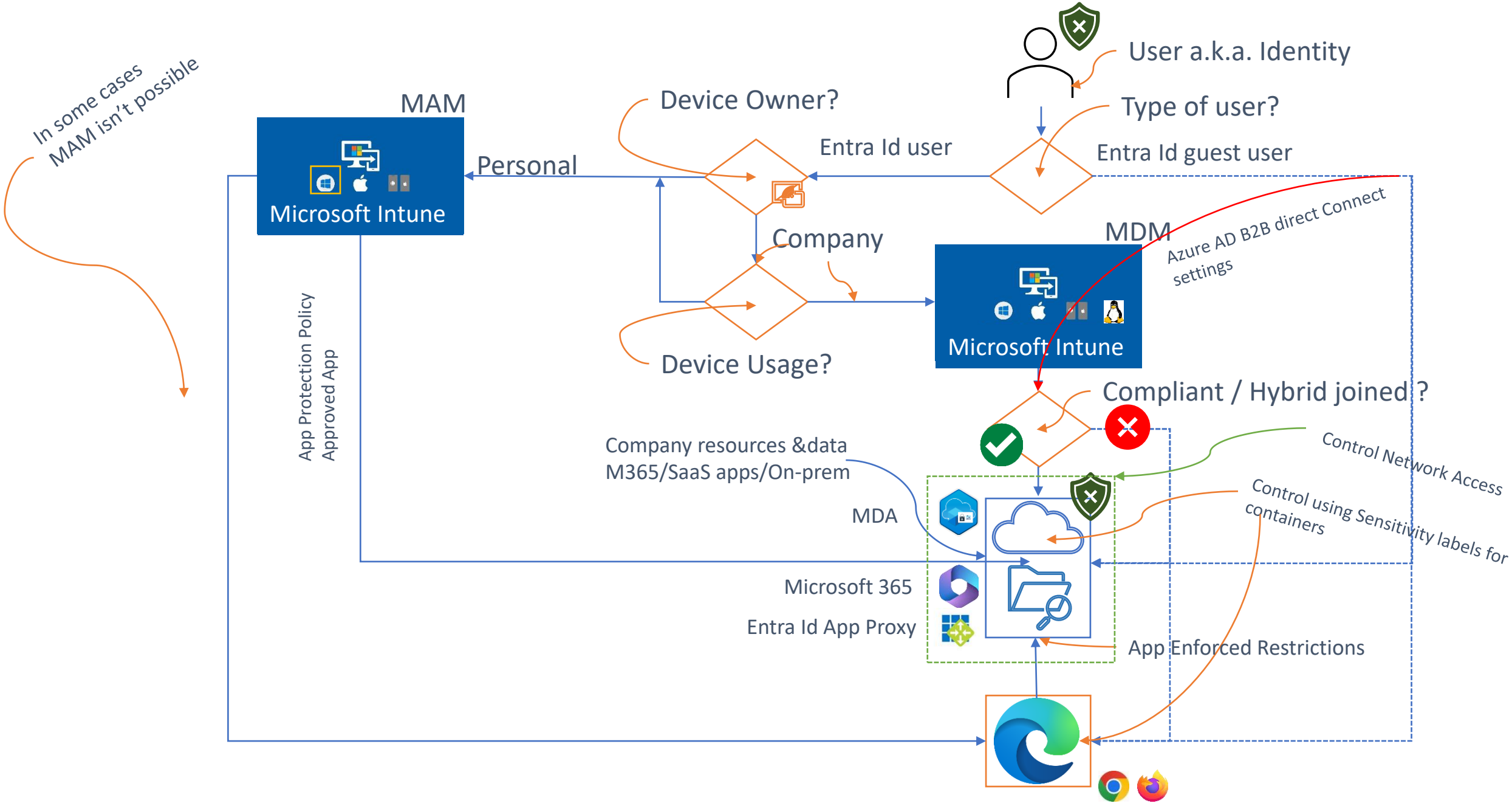
MC2MC

Implementing and building advanced Microsoft Entra ID Conditional Access scenarios


Are you REALLY ready to go
“Advanced” ?

Goals

Protect company data hosted in Microsoft 365 and protect identity and network location of users


In some cases
MAM isn't possible
MAM
Microsoft Intune
Personal
Device Owner?
Entra Id user
Company
Device Usage?
User a.k.a. Identity
Type of user?
Entra Id guest user
MDM
Microsoft Intune
Azure AD B2B direct Connect settings
App Protection Policy
Approved App
Compliant / Hybrid joined ?
Company resources &data
M365/SaaS apps/On-prem
MDA
Microsoft 365
Entra Id App Proxy
Control Network Access
Control using Sensitivity labels for containers
App Enforced Restrictions

Compliant

or

Hybrid Microsoft Entra Joined

Non-compliant

Can be managed
Or unmanaged

Azure AD Conditional Access Whitepaper version 1.4

December 2022 edition, 140 pages of Conditional Access goodness. Written by: Kenneth van Surksum

Now also available to download and import from Github

Available at: https://www.vansurksum.com

Microsoft Most Valuable Professional

wpninjas.nl

White paper

Latest release: The December 2022 update of the Conditional Access demystified whitepaper.

- Major release (from 95 to 140 pages)
- Includes updated workflow cheat sheet
- Much more information added

Download the paper from my blog at:

https://www.vansurksum.com/2022/12/15/december-2022-update-of-the-conditional-access-demystified-whitepaper-and-workflow-cheat-sheet/

About “Kenneth van Surksum”

Focus

Modern Workplace Consultant, Microsoft Certified Trainer, Co-founder and organizer at Workplace Ninja User Group Netherlands

Microsoft MVP Most Valuable Professional

Experts Live Netherlands

Secure At Work

From

The Netherlands

My Blog

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Certifications

Microsoft 365 Certified Enterprise Administrator

Microsoft Certified Azure Solutions Architect

Hobbies

Cooking on my Kamado Joe & Sports

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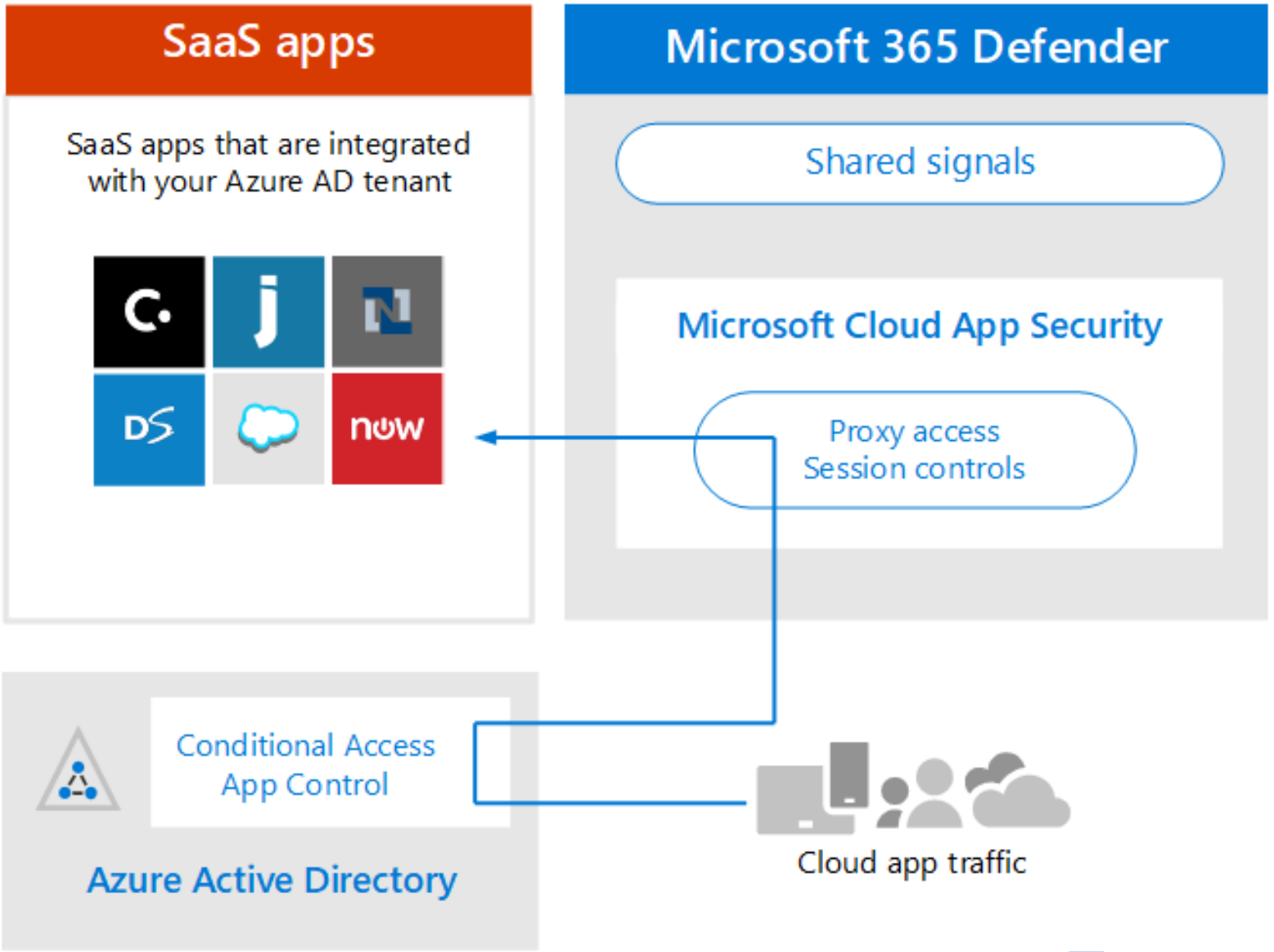
Microsoft Defender for Cloud Apps (MDA)


SaaS apps
SaaS apps that are integrated with your Azure AD tenant
Microsoft 365 Defender
Shared signals
Microsoft Cloud App Security
Proxy access
Session controls
Conditional Access App Control
Azure Active Directory
Cloud app traffic

Authentication Context

What is an Authentication Context?

*Defined label used outside of Conditional Access, which **triggers** a Conditional Access policy*

Where can Authentication Context be used?

- Protected Actions
- Privileged Identity Management
- Sensitivity Labels
- Microsoft Defender for Cloud Apps

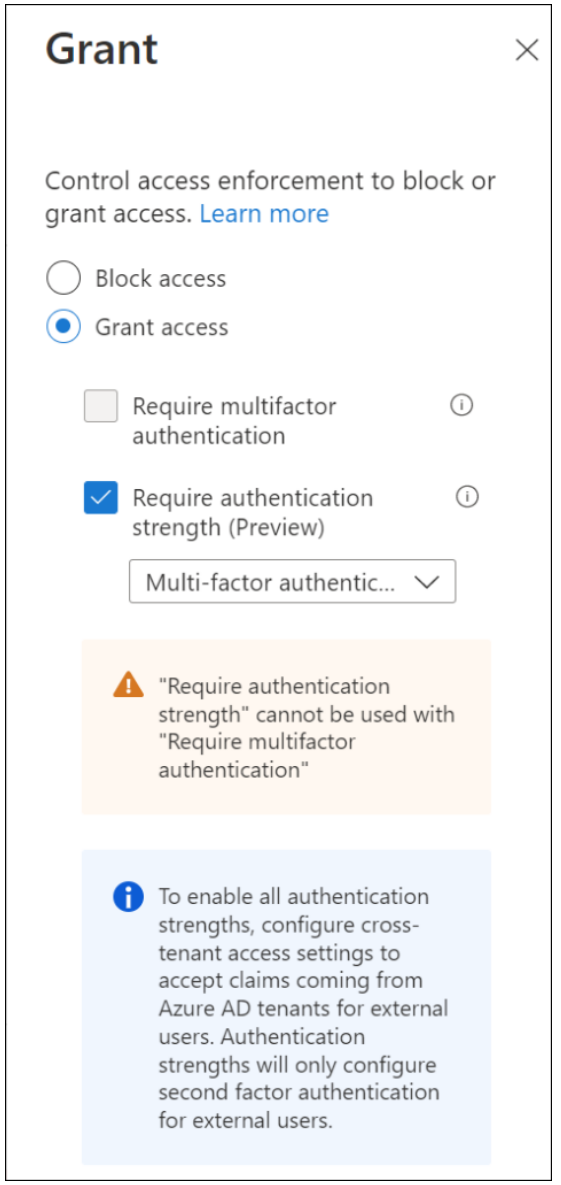
Possible Scenario's

- Only allow protected actions to be performed from Hybrid joined/Compliant devices
- Require step-up authentication when performing protected action
- Only allow PIM activation from a Privileged Access Workstation (PAW)
- Trigger step-up authentication when elevating to a privileged role using PIM
- Require phishing resistant MFA when accessing highly sensitive SharePoint site
- Trigger TOC agreement when accessing files classified with sensitive label
- Much more…..

Demonstration: Microsoft Defender for Cloud Apps & Authentication Context

Authentication Strength

Authentication Strength



Bad: Password	Good: Password and...	Better: Password and...	Best: Passwordless
123456	SMS	Authenticator (Push Notifications)	Authenticator (Phone Sign-in)
qwerty			Window Hello
password	Voice	Software Tokens OTP	FIDO2 security key
iloveyou			
Password1		Hardware Tokens OTP (Preview)	**Certificates**



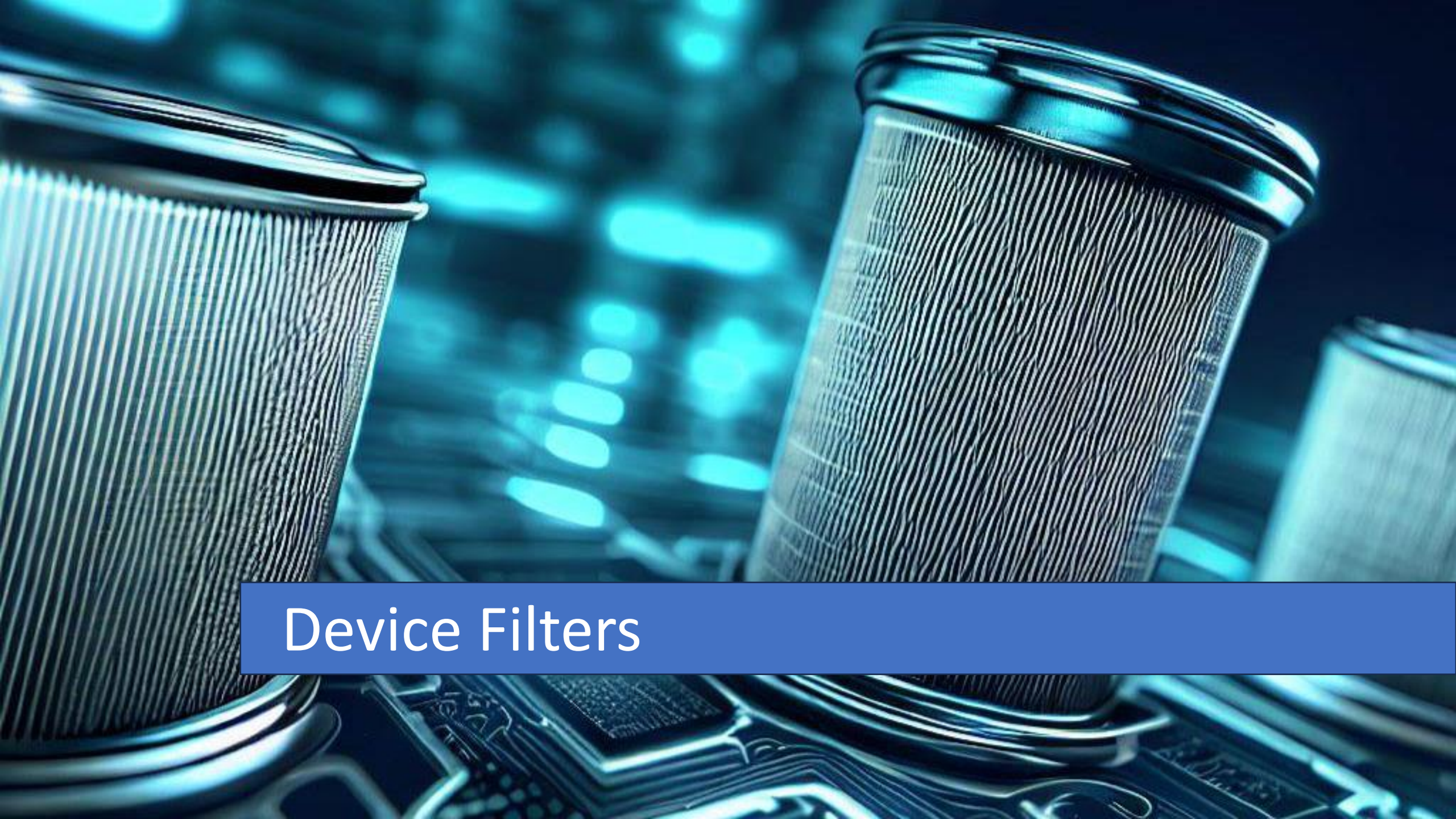






Demonstration: Authentication Strength in Action


FILTERS.
FILTERS EVERYWHERE.
makeameme.org



Device Filters

Device Filters

Device state (deprecated)

Control user access when the device the user is signing-in from is not "Hybrid Azure AD joined" or "marked as compliant". This has been deprecated. Use 'Filter for devices' instead. Learn more

Configure

Yes | No

Include | Exclude

Select the device state condition used to exclude devices from policy.

- [x] Device Hybrid Azure AD joined
- [x] Device marked as compliant

Filter for devices

Configure a filter to apply policy to specific devices. Learn more

Configure

Yes | No

Devices matching the rule:

- ( ) Include filtered devices in policy
- (•) Exclude filtered devices from policy

You can use the rule builder or rule syntax text box to create or edit the filter rule.

And/Or	Property	Operator	Value
	isCompliant	Equals	True
Or	trustType	Equals	Hybrid Microsoft Entra joined

+ Add expression

Rule syntax

```
device.isCompliant -eq True -or device.trustType -eq "ServerAD"
```

deviceId, displayName, manufacurer, mdmAppId, model, operatingSystem, operatingSystemVersion, physicalIds, profileType, systemLabels, trustType and extensionAttributes

Beware!

For a device that is **unregistered** with Azure AD, all device properties are considered as null values

- Make properties available

Condition “Device Platform” depends on User Agent String

- Can easily be mimicked

Possible Scenario's

- Give access to Azure Management for privileged users only, coming from privileged or secure admin workstations
- Block access from devices running non supported Windows versions (like Windows 7, 8.1)
- Do not require MFA for specific account (traditional AD service accounts) when used on specific devices, like Teams phones or Surface Hub devices

Filters for Apps & Workload Identities

Role	Description
Attribute Assignment Administrator	Assign custom security attribute keys and values to supported Azure AD objects.
Attribute Assignment Reader	Read custom security attribute keys and values for supported Azure AD objects.
Attribute Definition Administrator	Define and manage the definition of custom security attributes.
Attribute Definition Reader	Read the definition of custom security attributes.

Security and identity

Security comes as standard with all Microsoft products and technologies. No matter the size of your organisation, use these practical resources to get secure today and protect against threats in the future. Protect your data and block attacks with built-in security.

Workload Identities Premium

This per-workload identity licensed offer enables customers to detect and respond to compromised workload identities and helps simplify lifecycle management.

From €2.80 licenses/month

Details Compare

Workload Identities Premium (Month to Month)

YOU OWN THIS

This per-workload identity licensed offer enables customers to detect and respond to compromised workload identities and helps simplify lifecycle management.

From €3.40 licenses/month

Details Compare

Possible Scenario's

- Create a specific Conditional Access policy for all Apps which are tagged with a tag UsedByDepartment and value Finance
- Create a specific Conditional Access policy only allowing “tagged” workload identities to be used from trusted locations
- Create a specific Conditional Access policy, which blocks medium and high “Service Principal risk” for “tagged” workload identities

Sensitivity Labels

Content can be shared with:

SharePoint | OneDrive

Most permissive

Anyone
Users can share files and folders using links that don't require sign-in.

New and existing guests
Guests must sign in or provide a verification code.

Existing guests
Only guests already in your organization's directory.

Least permissive

Only people in your organization
No external sharing allowed.

Unmanaged devices

The setting you select here will apply to all users in your organization.

Learn more about controlling access from unmanaged devices.

To customize conditional access policies, save your selection and go to the Azure AD admin center.

- (•) Allow full access from desktop apps, mobile apps, and the web
- ( ) Allow limited, web-only access
- ( ) Block access

If you don't want to limit or block access organization-wide, you can do so for specific sites.

Learn how to control access to specific sites by using Microsoft PowerShell

Define external sharing and conditional access settin

Control who can share SharePoint content with people outside your organization and unmanaged devices.

☑ **Control external sharing from labeled SharePoint sites**

When this label is applied to a SharePoint site, these settings will replace existing external sh

Content can be shared with

- ( ) Anyone ⓘ
  Users can share files and folders using links that don't require sign-in.
- (•) New and existing guests ⓘ
  Guests must sign in or provide a verification code.
- ( ) Existing guests ⓘ
  Only guests in your organization's directory.
- ( ) Only people in your organization
  No external sharing allowed.

☑ **Use Azure AD Conditional Access to protect labeled SharePoint sites**

You can either control the level of access users have from unmanaged devices or select an ex

- (•) Determine whether users can access SharePoint sites from unmanaged devices (whic Intune).

  ⓘ For this setting to work, you must also configure the SharePoint feature that blocks or limits

  - ( ) Allow full access from desktop apps, mobile apps, and the web
  - (•) Allow limited, web-only access ⓘ
  - ( ) Block access ⓘ
- ( ) Choose an existing authentication context (preview). Each context has an Azure AD C more about authentication context

  High Authentication Context - Requires compliant device, TOU, or MFA

Demonstration: Granular SharePoint access on Unmanaged devices using Sensitivity Labels