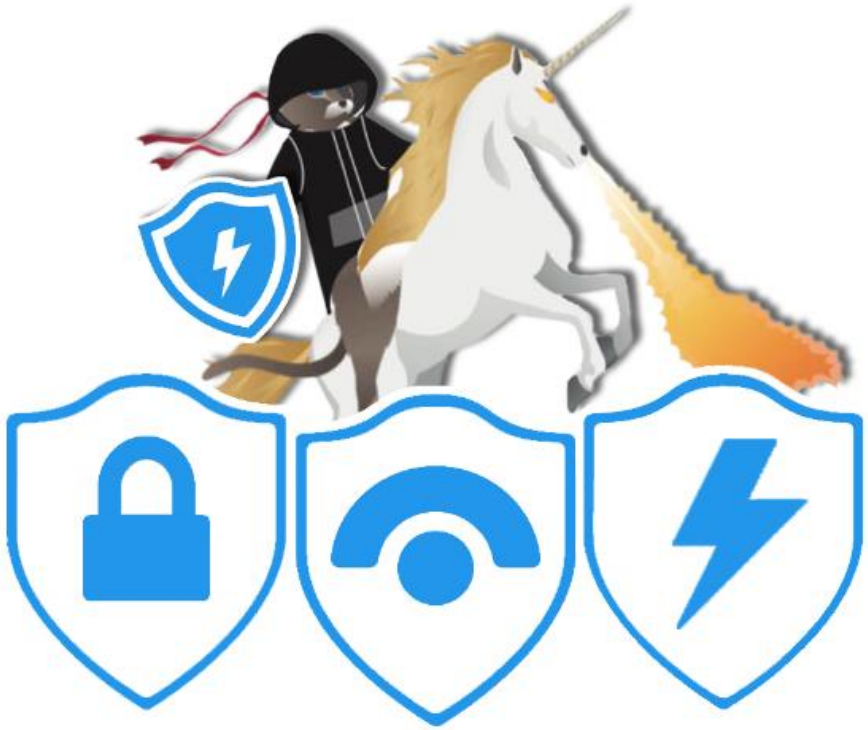
Welcome to



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@MsSecUGNorway
#MSUGN

Who we are and what we do

Sanna Diana Tomren

Marius Sandbu

Linda Andersen

Haflidi Fridthjofsson

Craig Forshaw

Purpose of this community

- Have fun
- Build network
- Share knowledge
- Learn from each other
- Giving power to the community
- Develop technology for a secure and sustainable future

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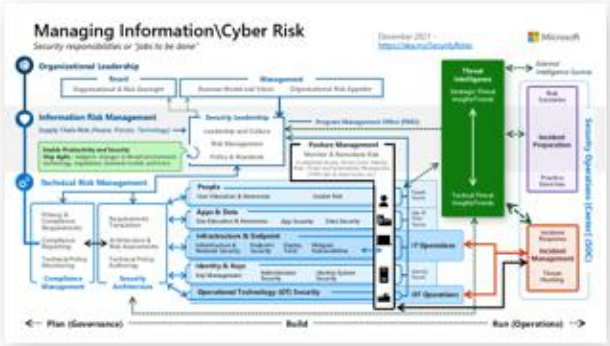
Microsoft Security, where to start?

Microsoft Cybersecurity Reference Architectures (MCRA)

Capabilities
What cybersecurity capabilities does Microsoft have?

Build Slide

People
How are roles & responsibilities evolving with cloud and zero trust?



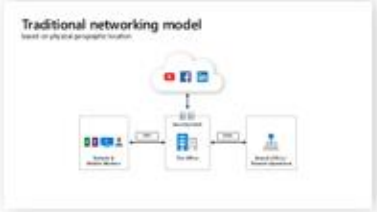
Zero Trust User Access
How to validate trust of user/devices for all resources?

Azure Native Controls
What native security is available?

Security Operations
How to enable rapid incident response?

Multi-Cloud & Cross-Platform
What clouds & platforms does Microsoft protect?

Secure Access Service Edge (SASE)
What is it? How does it compare to Zero Trust?



Attack Chain Coverage
How does this map to insider and external attacks?

Build Slide

Operational Technology
How to enable Zero Trust Security for OT?

aka.ms/MCRA | December 2021 | Microsoft

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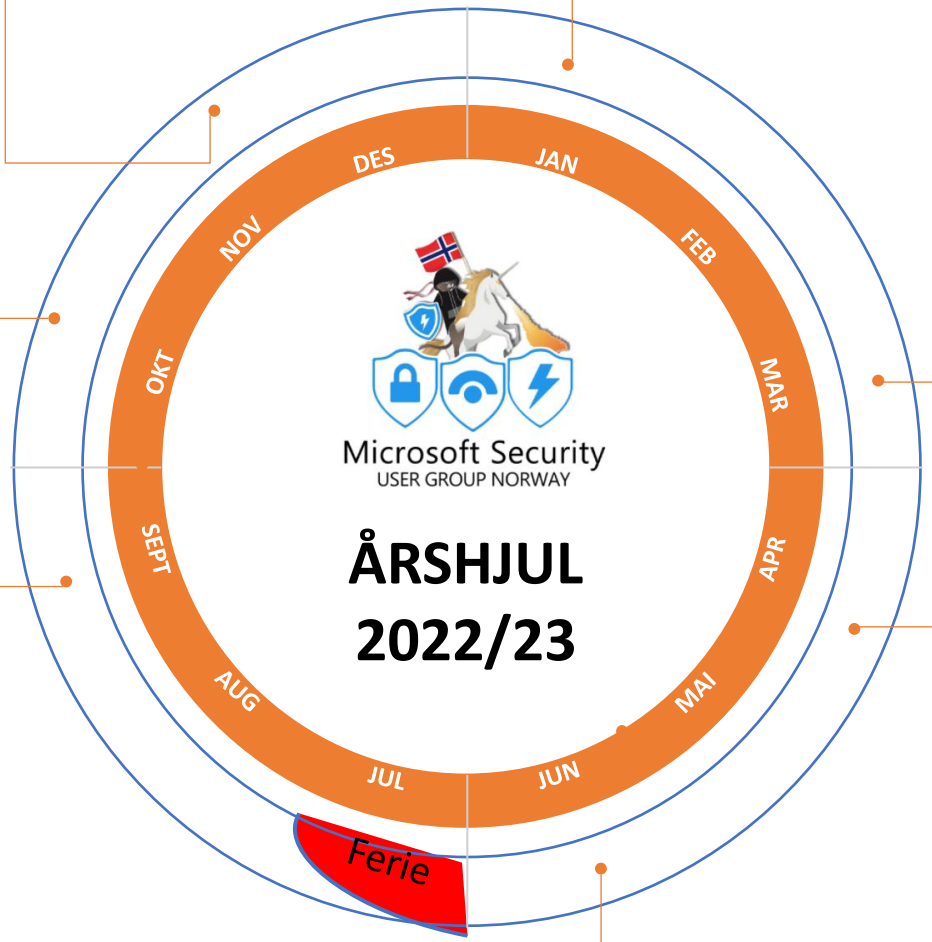


Desember 2022

Januar 2023

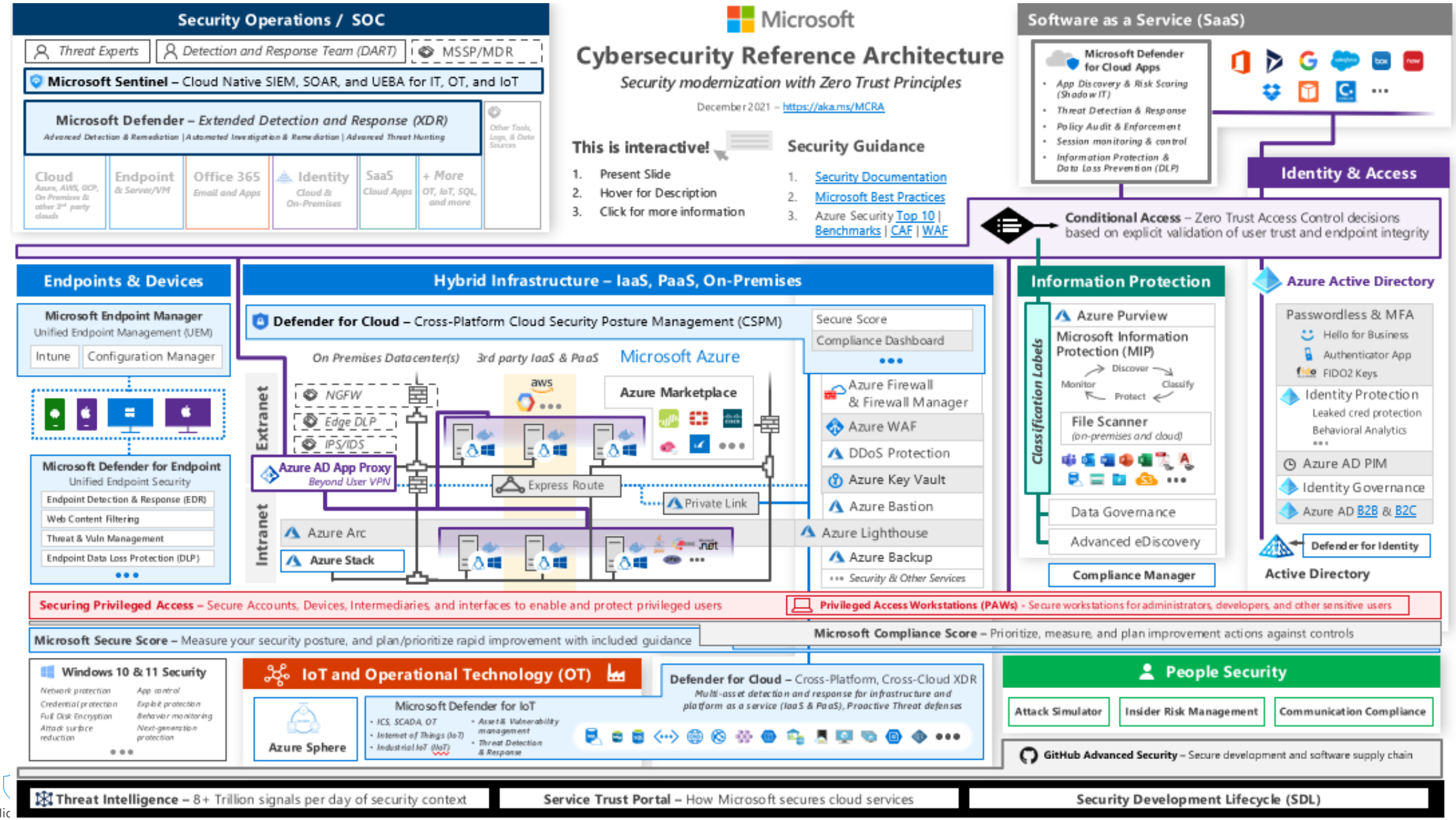
Oktober 2022

Mars 2023

September 2022

20. april 2022
Kickoff MSUG

Juni 2022



Thanks to our sponsors

avanade

Microsoft

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Go to **www.menti.com** and use the code **4642 6287**

What topic would you want to hear about in our next Meetups ?

Mentimeter

Microsoft Security
USER GROUP

A recap from the latest Microsoft Defender updates

Who am I?

Marius Sandbu
Cloud Evangelist @ Sopra Steria

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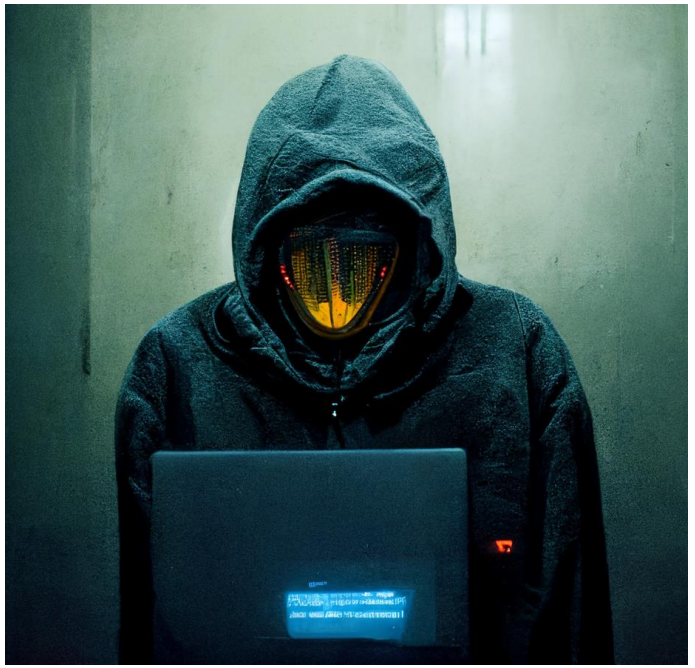
BLOG msandbu.org

Trusselsky

CLOUDFIRST

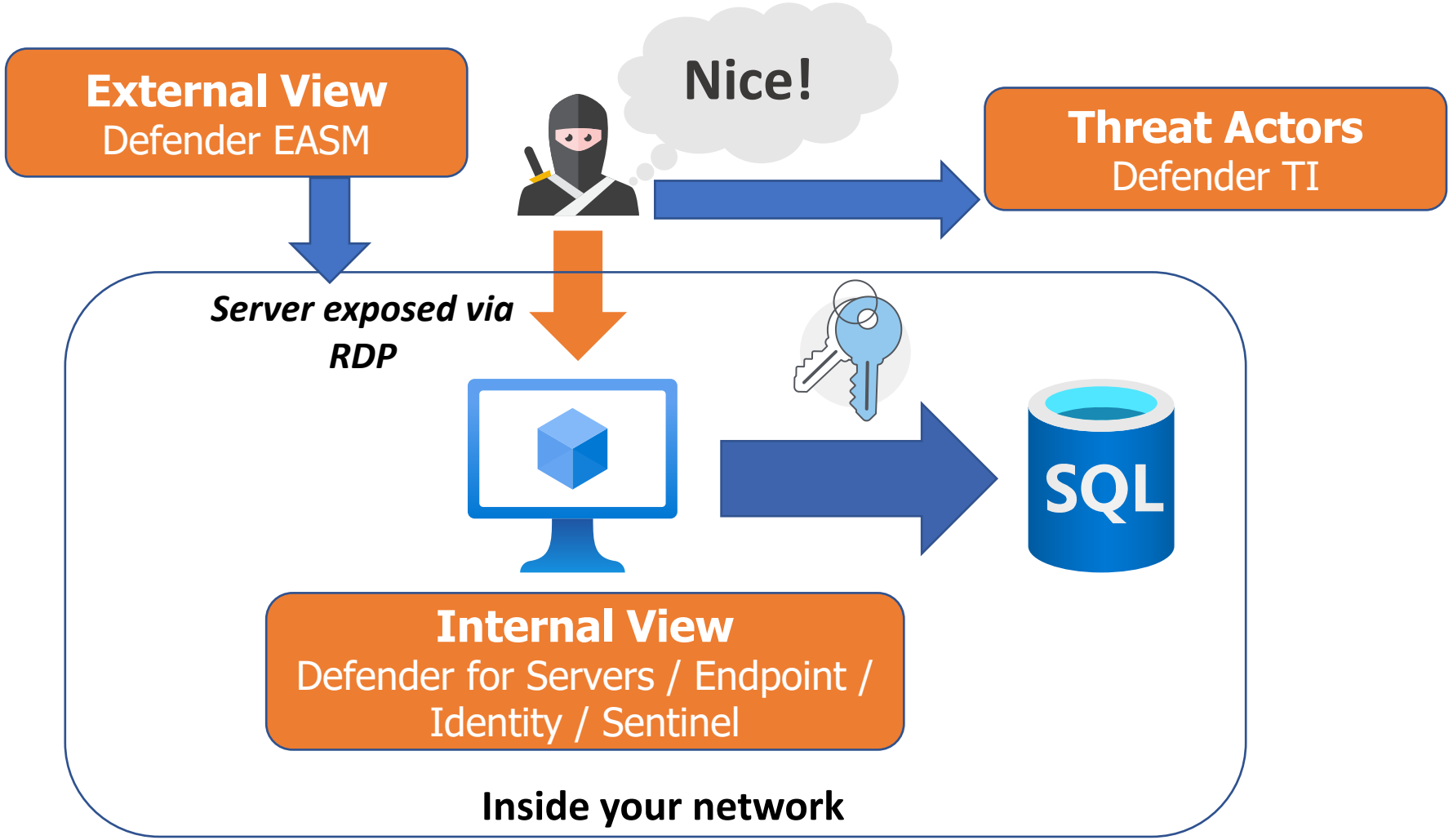
Agenda

- Defender **Threat Intelligence** (TI)
- Defender **External Attack Surface Management** (EASM)
- Defender for Cloud updates
- Defender for Servers updates
- Other updates (if > time)



Automatic Generated Picture from Midjourney (fun fun!)

Why do we need to have all these security services?!



What is Microsoft Threat Intelligence?

RISKIQ®

Microsoft Defender Product Family

Defender Threat Intelligence

Microsoft Defender Threat Intelligence is a threat intelligence (TI) solution, that helps customers with insights—context, indicators, implications, and strategies—about threat actors and adversary-threat infrastructure. Defender Threat Intelligence aggregates observations and provides curated open-source intelligence (OSINT), along with threat research articles, advanced proprietary threat indicators, and vulnerability intelligence for exploits found in the wild.

Select license quantity

1

Select billing frequency

- €3,513.80 license/month
  Pay monthly, annual commitment
- €42,165.60 license/year
  Pay yearly, annual commitment

Subtotal before applicable taxes

€3,513.80

Buy Start free trial

Compare details

There are no details to display.

One-month free trial via Admin Portal

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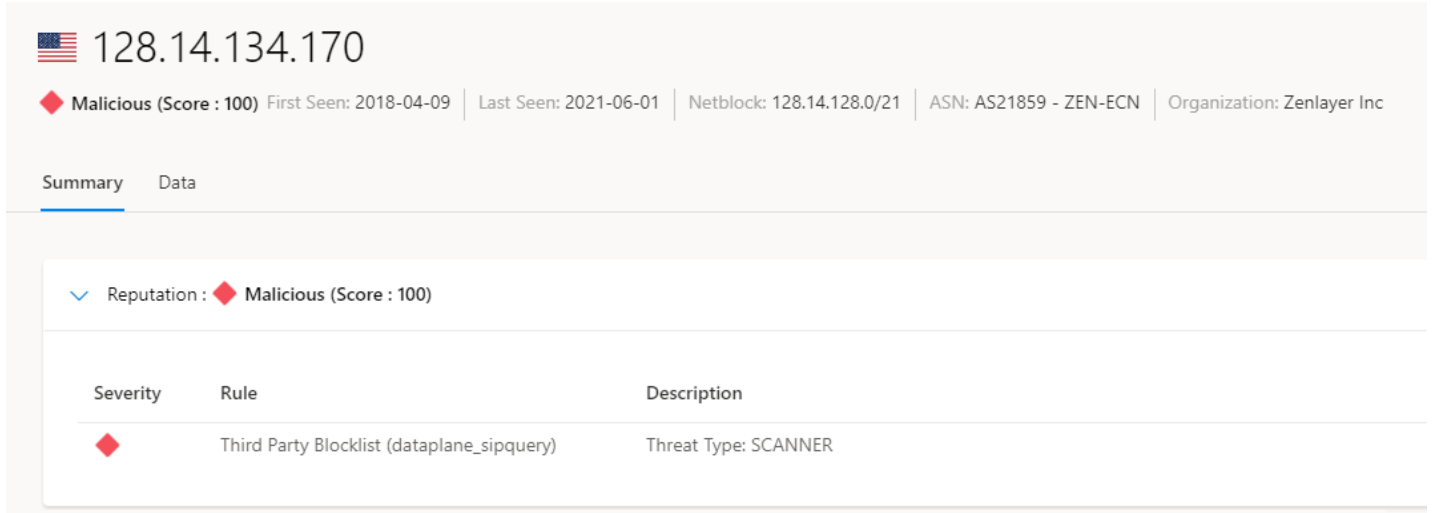
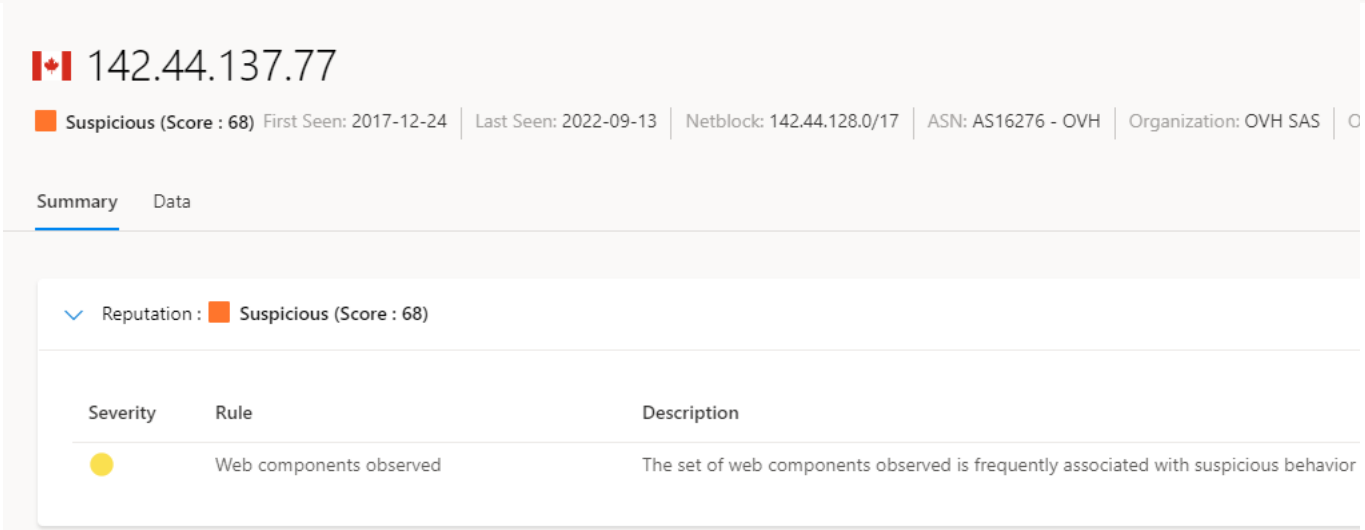
What is Microsoft Threat Intelligence?

```
3  AZFWNatRule
4  | summarize count() by SourceIp
```

Results | Chart

SourceIp	count_
107.178.200.234	2
107.178.231.249	1
107.178.232.185	2
107.178.232.247	1
107.178.232.252	2
107.178.232.253	2
107.178.236.1	2
107.178.236.19	2
107.178.236.21	1
107.178.236.23	2
128.14.134.170	1
128.14.137.178	1





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Microsoft Threat Intelligence API Access

```
$headers = @{
 Authorization="Bearer AzureADACCESSTOKEN
}

import-csv '.\query_data (1).csv' | ForEach-Object {
Invoke-WebRequest -Uri
https://ti.defender.microsoft.com/api/reputation?query=$
($_.SourceIp) -Method Get -Headers $headers -
UseBasicParsing -ContentType "application/json".Content
| ConvertFrom-Json
}
```

Microsoft Threat Intelligence API Access

```
score classification rules
----- -------------- -----
    2 UNKNOWN        {}
   74 SUSPICIOUS     {@{name=ASN; description=Infrastructure hosted by this ASN frequently exhibits suspicious
    0 UNKNOWN        {}
  100 MALICIOUS      {@{name=Third Party Blocklist (dataplane_sshclient); description=Threat Type: SCANNER; sev
   66 SUSPICIOUS     {@{name=ASN; description=Infrastructure hosted by this ASN frequently exhibits suspicious
    9 UNKNOWN        {}
    2 UNKNOWN        {}
    1 UNKNOWN        {}
   66 SUSPICIOUS     {@{name=ASN; description=Infrastructure hosted by this ASN frequently exhibits suspicious
   73 SUSPICIOUS     {@{name=ASN; description=Infrastructure hosted by this ASN frequently exhibits suspicious
    0 UNKNOWN        {}
    0 UNKNOWN        {}
```

[Microsoft Defender Threat Intelligence (Defender TI) Reputation Scoring | Microsoft Docs]

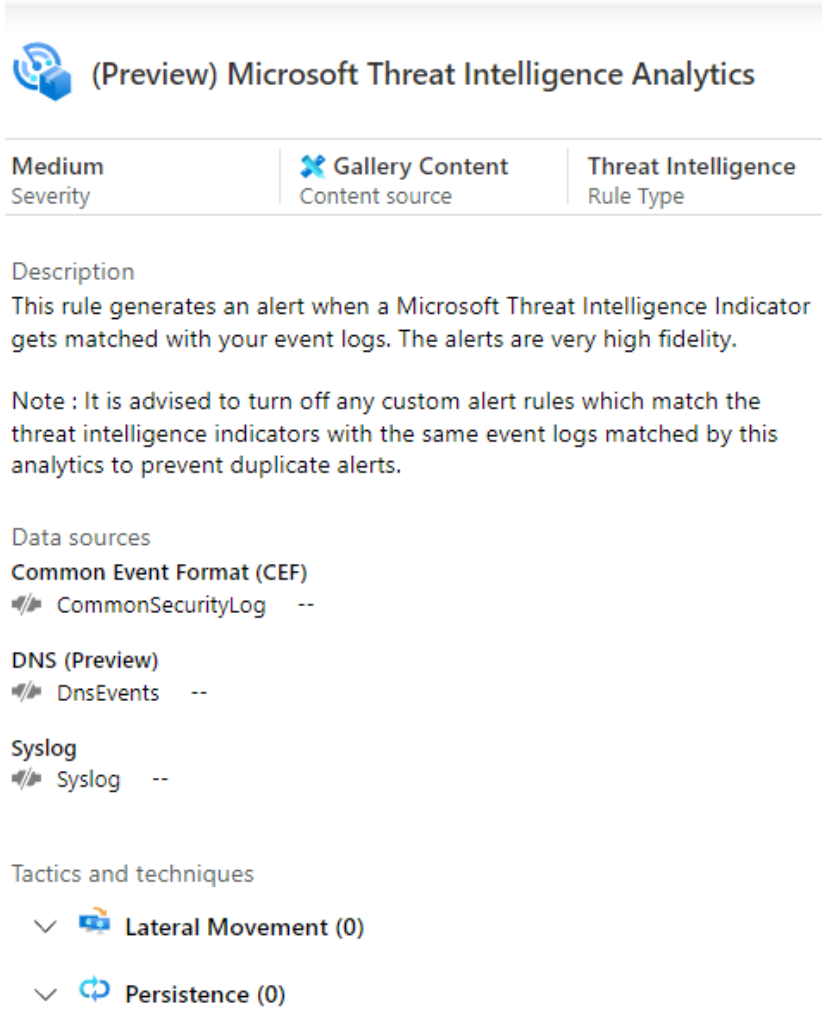
Microsoft Threat Intelligence

Access to free tier via **ti.defender.microsoft.com**

Limited integration options with Microsoft Security

One Analytics rules that uses the dataset → (DNS from DC)

More Analytics Rule to come!



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Microsoft Threat Intelligence – Free vs Paid

Features	Defender TI Free	Defender TI Premium
Articles	✓ New articles first in Premium	✓ Directly available
Articles description	✓	✓
Articles Public indicators	✓	✓
Articles Defender TI indicators	✗	✓
Reputation	✗	✓
Analytics insights	✗	✓
Data: Historical data	✗	✓
Data: Whois information	✗	✓
Data: Whois historical information	✗	✓
Data: Cookies	✗	✓
Data: Components	✗	✓

Demo of Microsoft Threat Intelligence

Microsoft Defender External Attack Surface Management

Some of the features

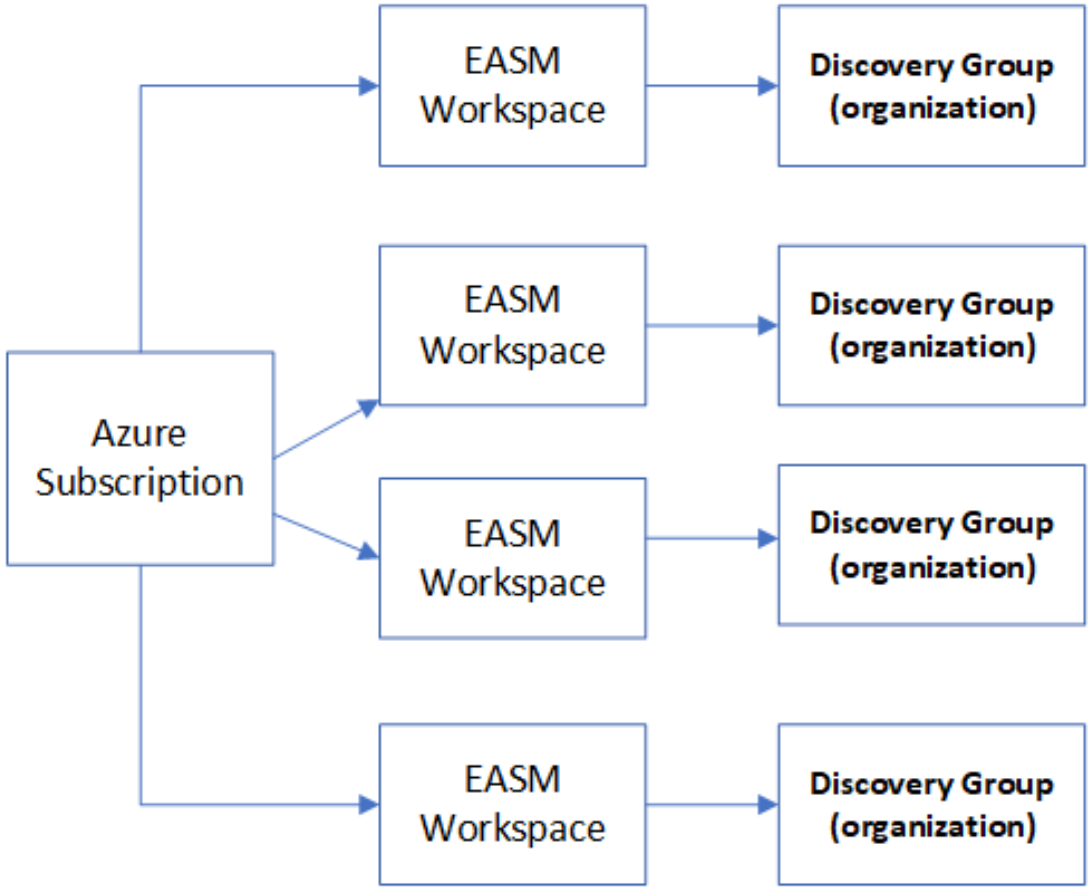
+ Preview features

Defender EASM

Terraform AzAPI Example

```
resource "azapi_resource" "easm" {
  type = "Microsoft.Easm/workspaces@2022-04-01-
preview"
  name = "easmdemo"
  parent_id = azurerm_resource_group.aksrg.id
  location = "swedencentral"
  schema_validation_enabled = false
}
```

Microsoft Defender External Attack Surface Management



One Workspace can have multiple Discovery Groups

One Discovery Group can contain mulitple seeds

Seeds:

- Domains
- IP Blocks
- Hosts
- Email Contacts
- ASNs
- Certificate Common Names
- Whois Organizations

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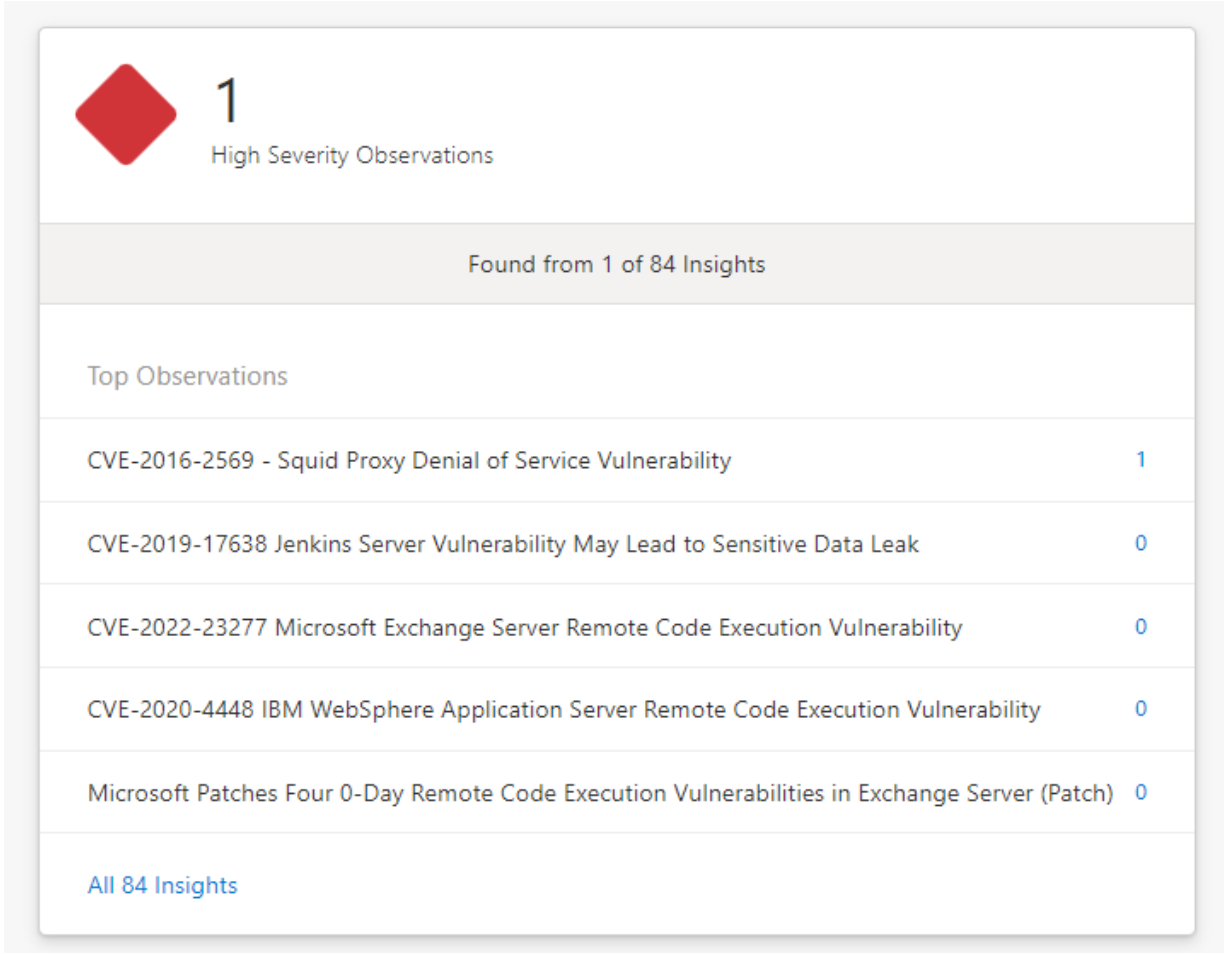
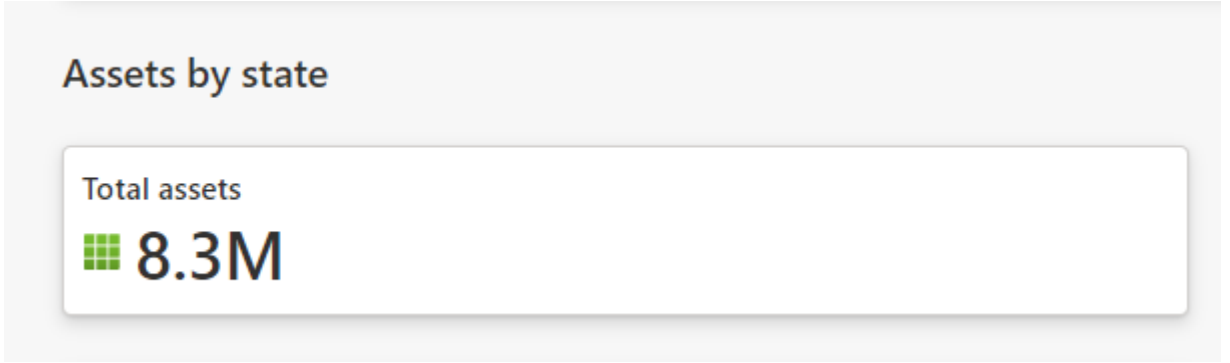
So what do we get?

- Mapping of our infrastructure from an «outside» view
- Assets – External Services – Vulnerability mapping
- CVE Exposure – IP Reputation – SSL Configuration
- Customize which seeds should be monitored
- Dashboards!



Important to note

- Currently not integrated with Security Graph API
- Not available in most regions yet (Sweden Central closest)
- Cost is per Asset = 0.104,- per day
- Example: 100 Assets = 320,- per month (30-day trial)

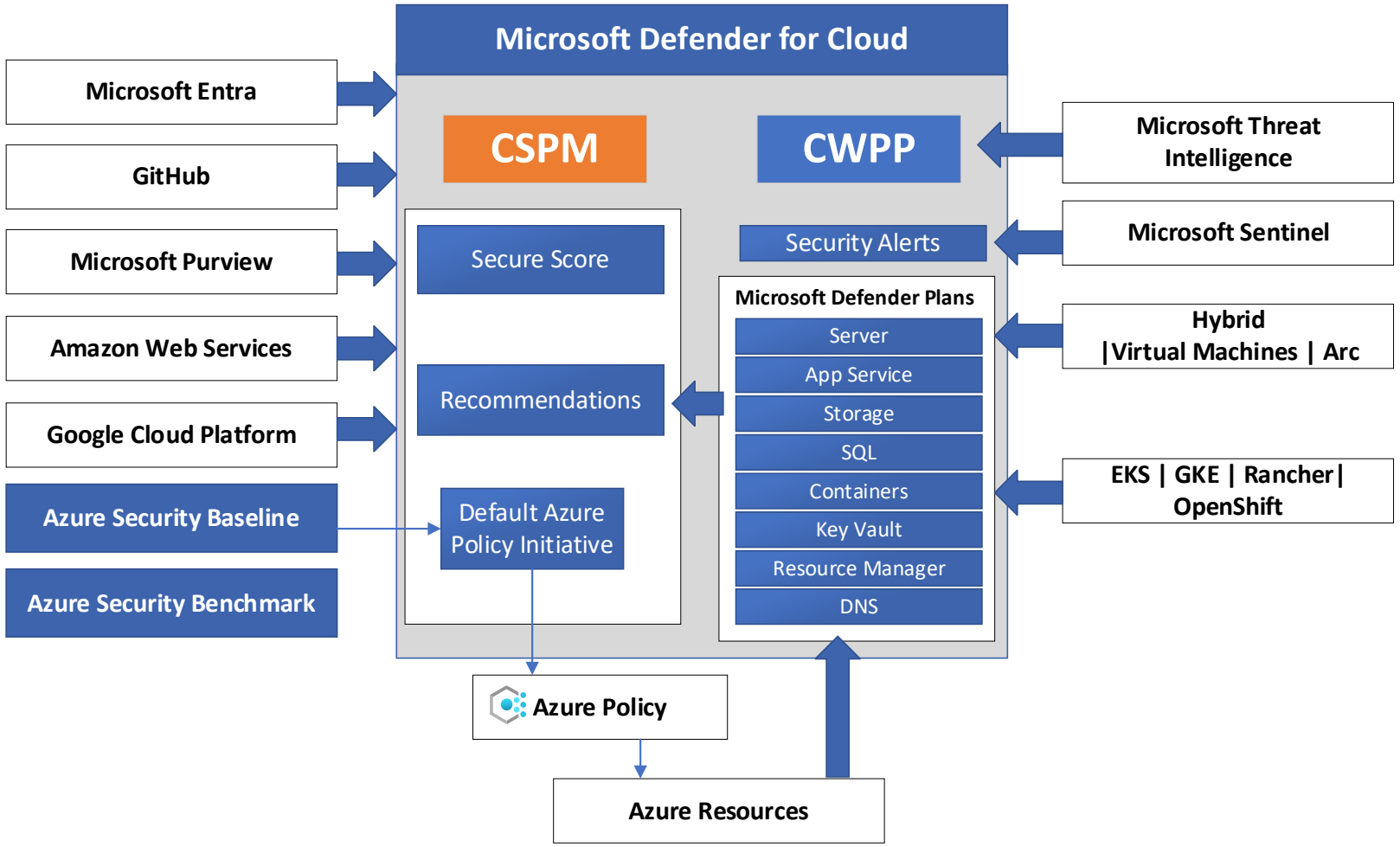


Total Cost of Assets for Netflix Inc

= 863.000,- per day

Demo of Microsoft EASM

Defender for Cloud what is it?



CSPM = Cloud Security Posture Management

How secure is your Cloud Platform setup?

CWPP = Cloud Workload Protection Platform

How secure is your actual workload?

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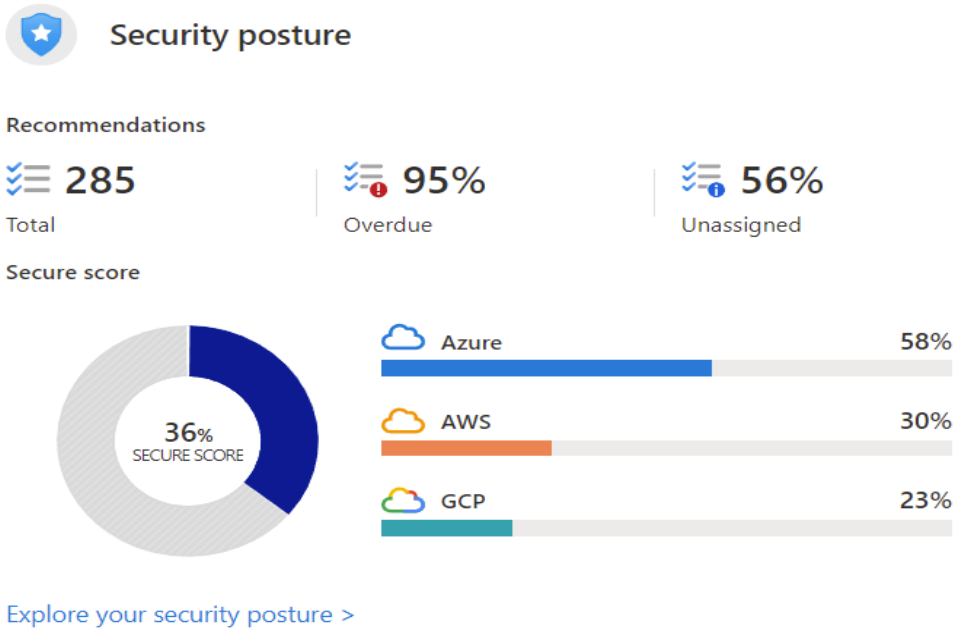
Updates for Defender for Cloud

Governance Rules

Support for Azure Monitor Agent
https://portal.azure.com/?feature.includePreviewTemplates=true (workbook)

Defender for Containers

Not directly related...
New firewall log schema for Azure Firewall logging



Azure Monitor Agent

- **DCR rules**
- **Multihoming**
- **Single Agent**
- **A bunch of features in Public Preview**

[Supported features in Azure Monitor vs Log Analytics Services]

Updates for Defender for Cloud

- Auto-provisioning for Endpoint Unified Solution
- Defender for Cosmos DB & ARM
- Integration with Entra Permissions Management
- JIT Access for VMs in AWS EC2
- A lot of features in Private Preview coming soon!

Permission Creep Index for an Azure Enviroment – **Showing service account with high amount of privileges**

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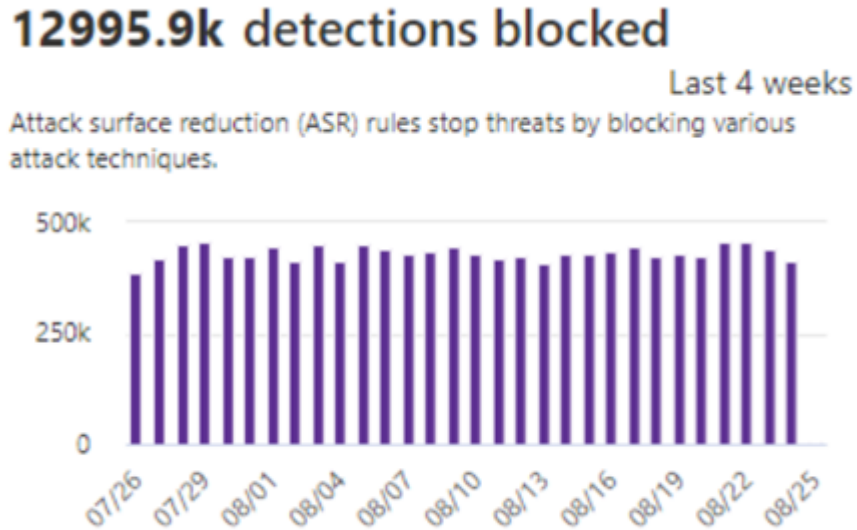
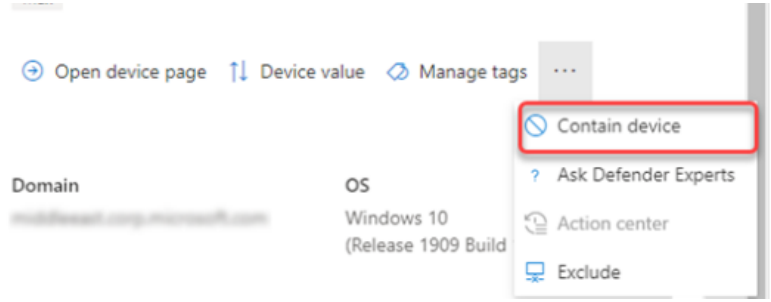
Updates for Defender for Server

- Attack Surface Reduction Rules reporting in Defender
- Network and Web Protection for Linux and MacOS
- Block vulnerable applications (Currnetly for Windows Client OS)
- Contain Devices from the Network (Windows 10 + 2019)





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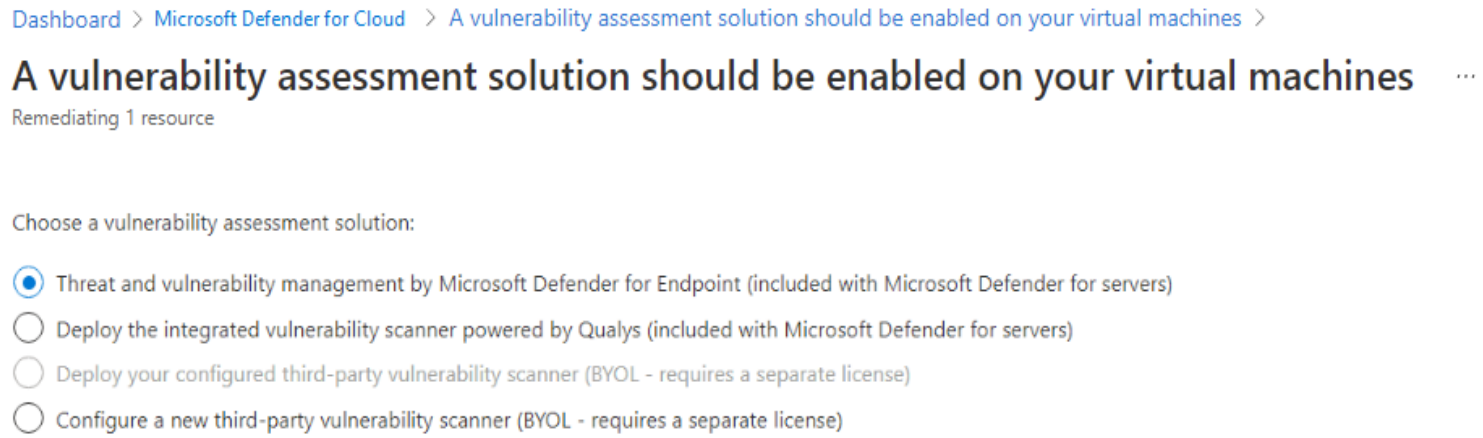
Updates for Defender for Server

Two plans (1 or 2)
50,- or 150,- per month

Plan 1 does not include vulnerability scanning from Qualys (only from Microsoft)

Plan 1 does not include EDR capabilities



Demo of Microsoft Defender

New stuff from Azure AD the last year (if time..)

- Group Write Back in Azure AD
- FIDO2 Azure MFA Vertification
- Nested Group membership
- Continous Access Evaluation GA
- Custom Attributes Based Access
- Cloud Trust (Preview)
- Microsoft decided to change all names to Entra...
- Entra Permissions Management (Cloudknox)
- Improved Identity Flow with Logic App and Entitlement Managemnet
- Removing of legacy authentication in October
- TOTP MFA for Azure AD B2C
- Possibility to adjust Access token lifetime
- On-prem provisioning (LDAP and SQL)
- Workload Identity
- Cross tenant federation
- Secure authentication with temporary pass
- Certificate basert authentication
- Automatic removal of guest accounts based upon access review
- Azure AD basert Kerberos
- Lifecycle Workflows

[What's new? Release notes - Azure Active Directory - Microsoft Entra | Microsoft Docs]

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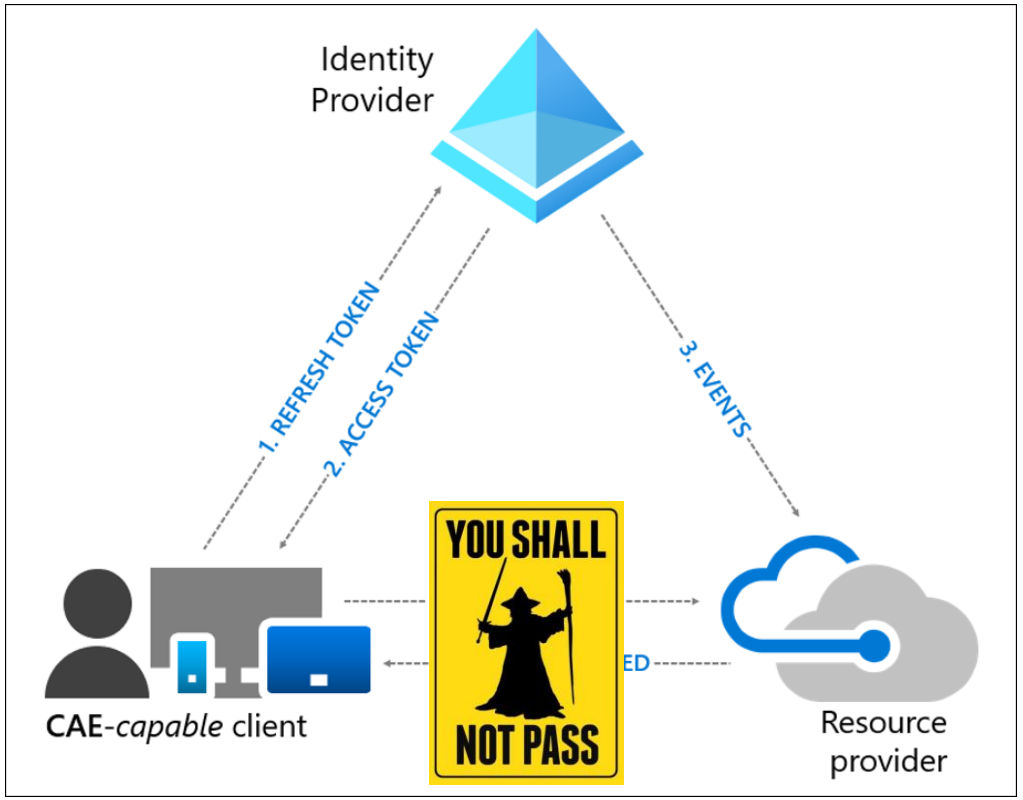
Continious Access Evaluation (CAE)

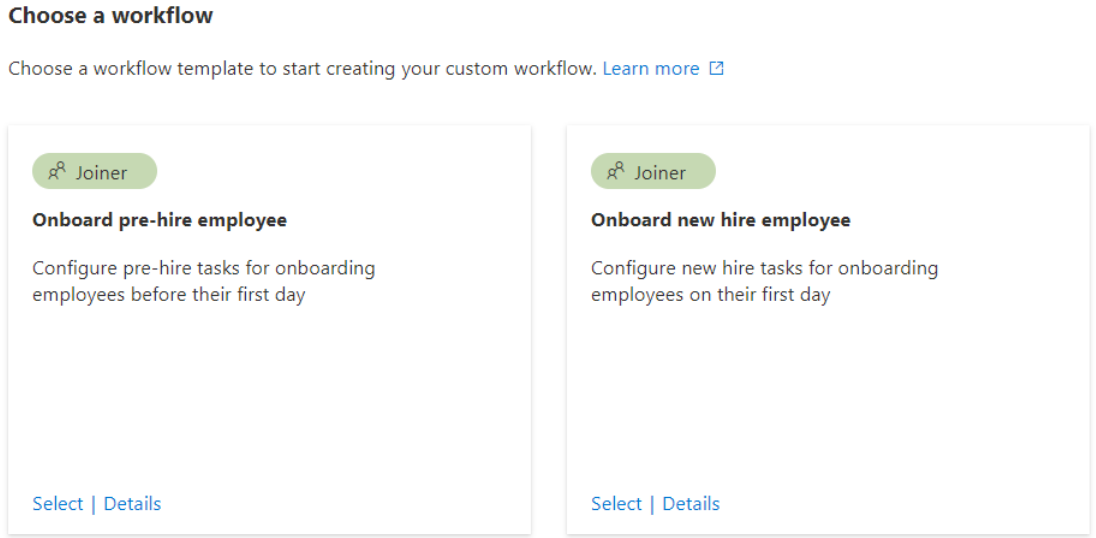
- **Activites that trigger a new evaluation**
  - Accounts deleted or deactivated
  - Password changed or reset
  - MFA enabled for account
  - High-risk detection in PIM
  - Administrator revokes token
- **At the moment only support in Microsoft Office**
- **If no CAE used the token is alive for 1 hour**

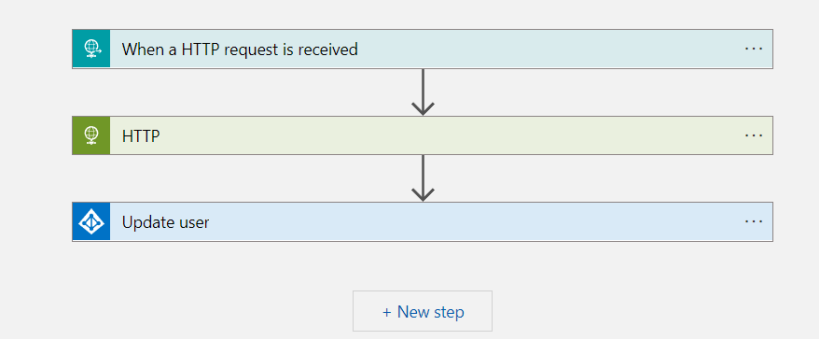


Lifecycle Workflows

- **Workflow Jobs**
  - Can be triggered manually or automagicly
  - Based upon user attributes
  - Can be defined on Azure AD account or via Sync Endine

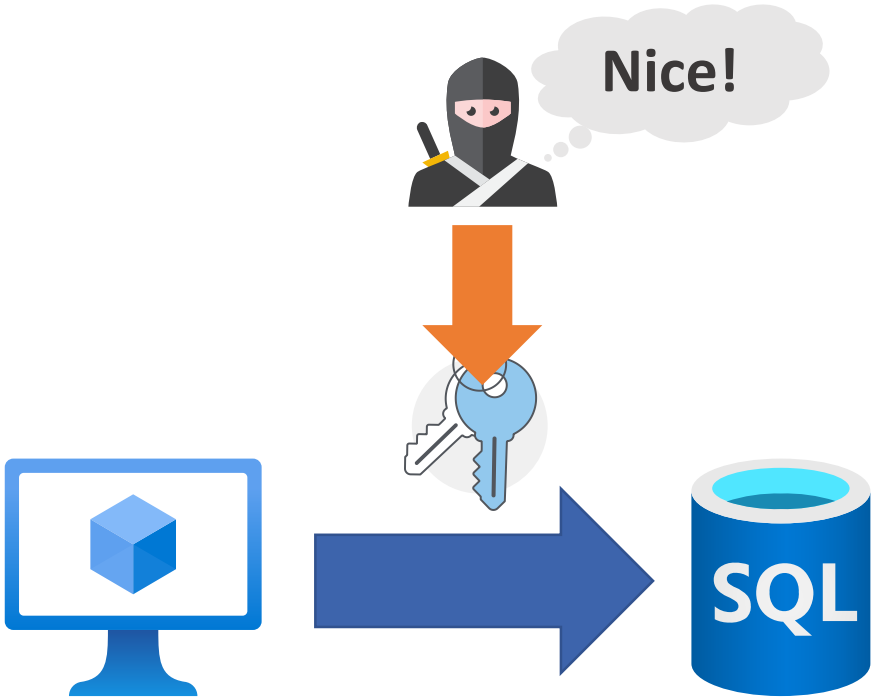
  - Customed workflow via Logic Apps
  - Based upon the attribute **NewEmployeeHireDate**

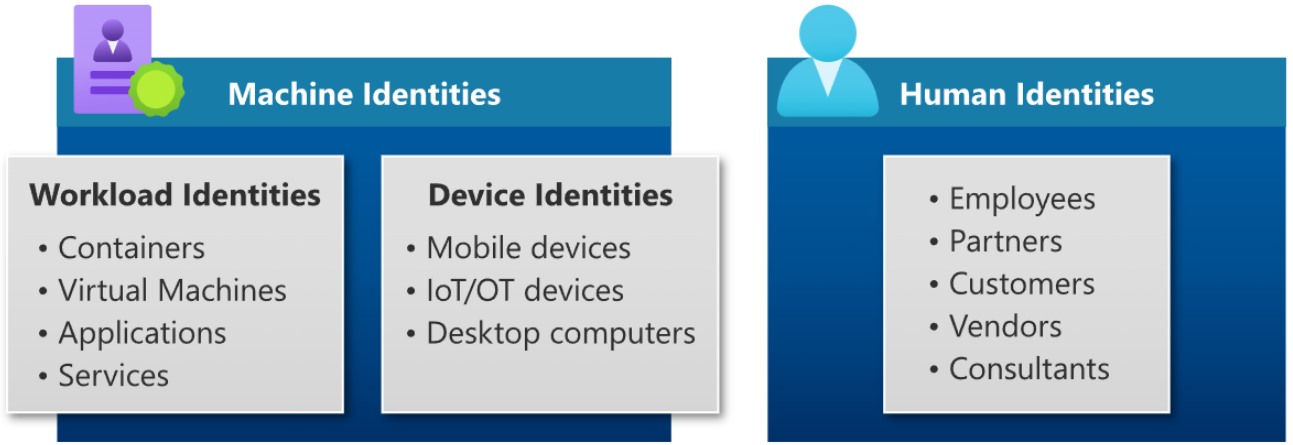




Logic Apps

Workload Identity

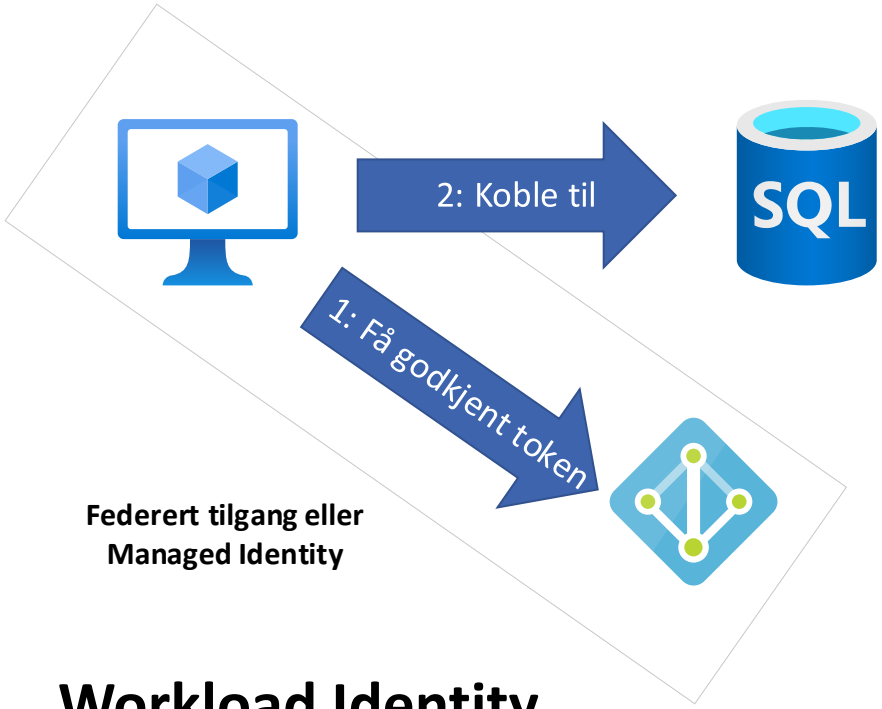


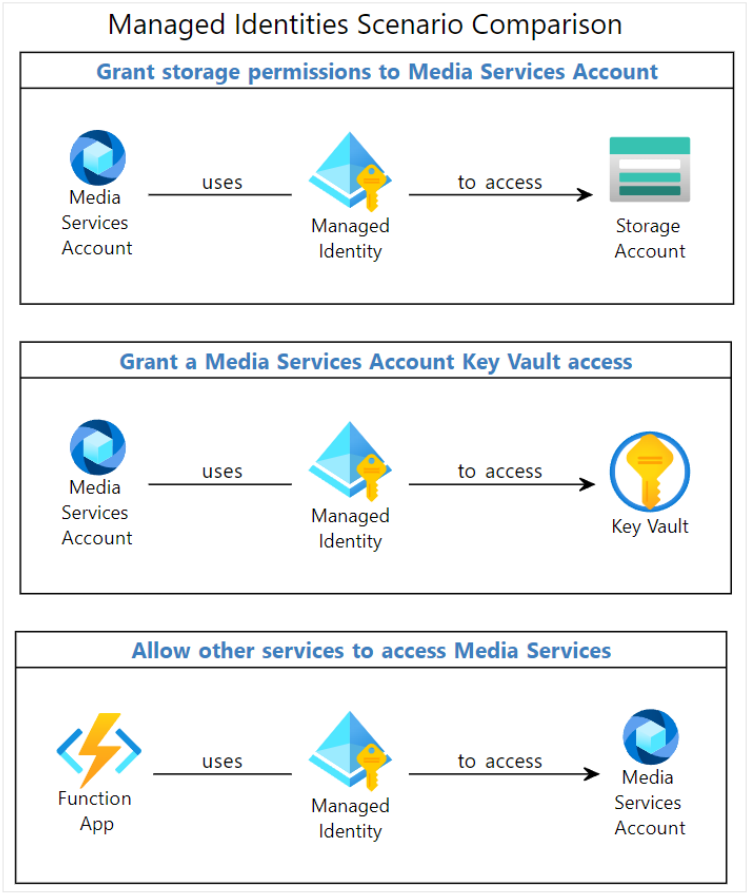


How to solve service authentication?

- Username and password?
- Certificate?
- Active directory?

Workload Identity or Managed Identity





Workload Identity

- Conditional Access
- Workload Federation support for
  - Github Actions
  - Google Cloud
  - Kubernetes tjenester
  - Egenutviklet applikasjoner

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Token lifetime Configuration

Tokens in Azure and expiration

- Access Tokens (60 – 90 minutes)
- SAML Tokens (60 minutes)
- Refresh Tokens (24 hours / 90 days)
- Session token (24 hours or 180 days)
- Primary Refresh Token (14 days)

- Conditional Access Sign-in frequency can override **90 day refresh token**

```
$policy = New-AzureADPolicy -
Definition
@('{"TokenLifetimePolicy":{"Versi
on":1,"AccessTokenLifetime":"02:0
0:00"}}') -DisplayName
"WebPolicyScenario" -
IsOrganizationDefault $false -
Type "TokenLifetimePolicy"
```

Login for the first time

- Access token
- ID token
- Refresh Token
- PRT (if Azure AD maskin)

→ Refresh Token sent to Azure AD → Application gets a new access token

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Group Writeback in Azure AD

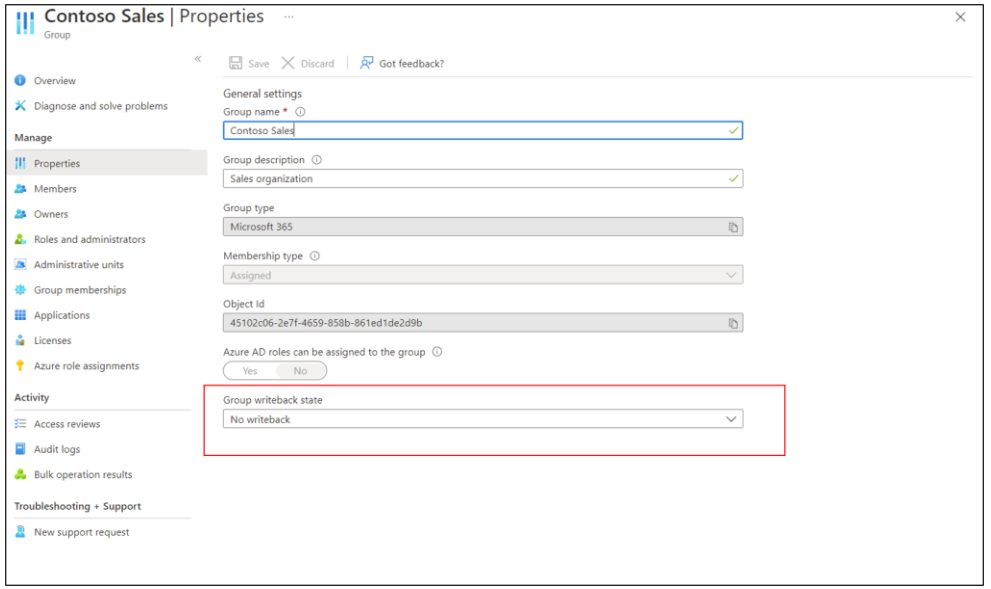
To features currently available

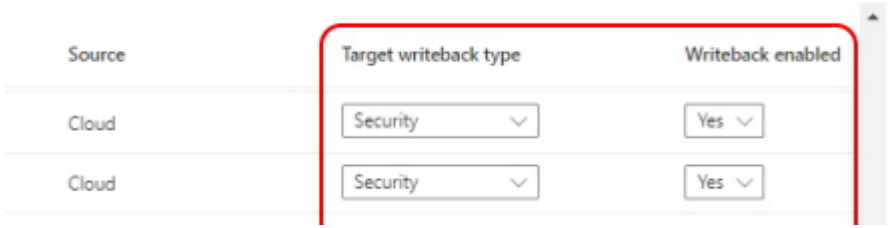
- **GA - Microsoft 365 Groups to distribution groups**
- **Preview** (Writing back as security groups

- **Can be combined with PIM and Entitlement Management**

- Means that the source of authority for groups are in Azure AD and not the other way around

- Cannot force ownership on existing syncronized groups





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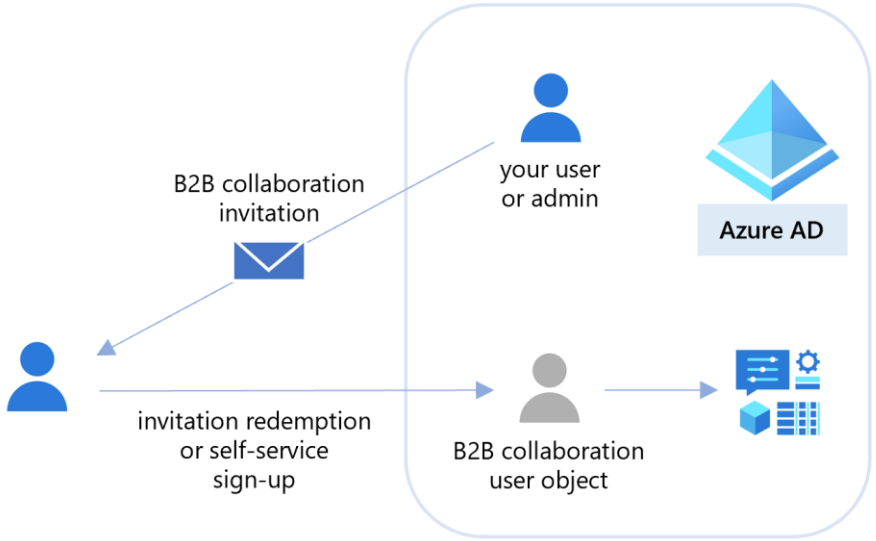
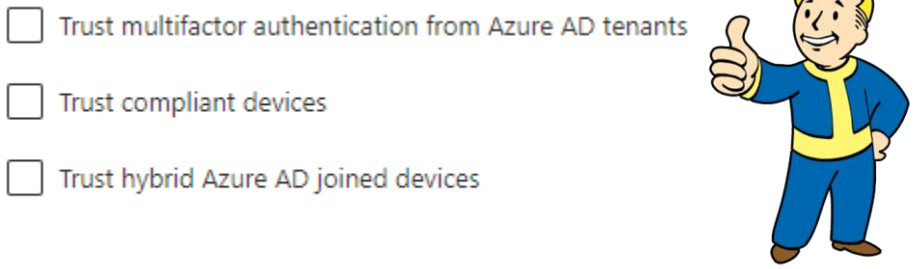
Cross-tenant access

- **B2B Collaboration in Azure AD**
  - User A becomes guest in tenant B
  - Typically by inviting members to a Team Channel
  - Challenges with MFA, Device Health and Conditional Access

- **B2B Direct Connect**
  - To use Shared Channels in Microsoft Teams
  - Directly federation between organizations
  - Can define trust other organizations security settings





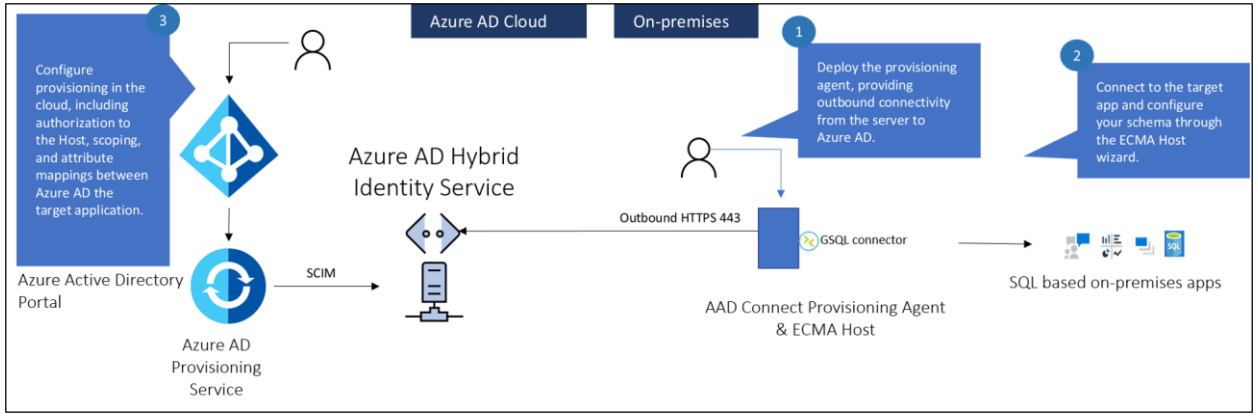
[Say goodbye to unmanaged Azure AD accounts for B2B collaboration - Microsoft Tech Community]

LDAP, SQL and SCIM provisioning

- **LDAP**
  - AD LDS
  - OpenLDAP
  - Apache LDAP
  - Oracle
  - IBM Tivoli

- **SQL Server**
  - Supporterte SQL Servere
  - Microsoft SQL Server
  - IBM DB2
  - Oracle
  - MySQL

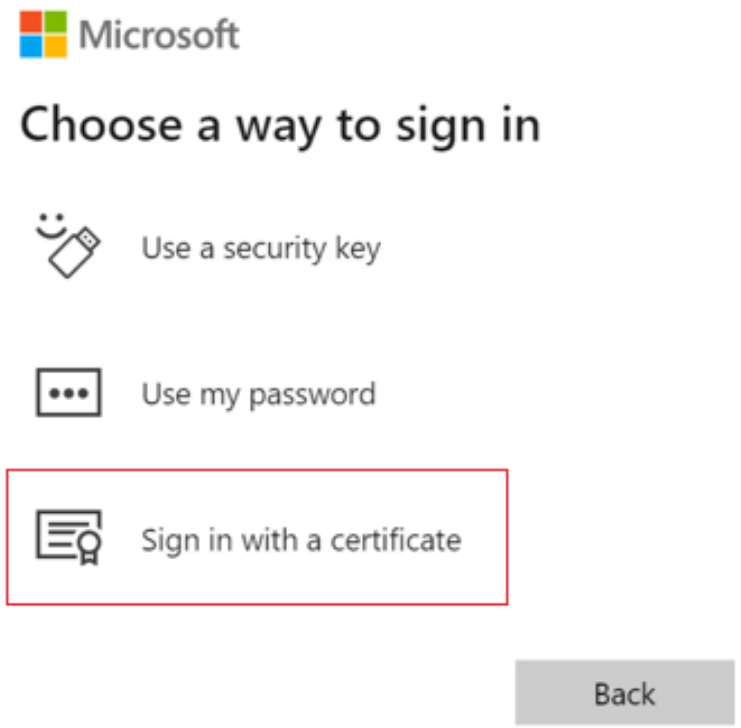
- **Azure AD already supports a bunch of other SaaS services**



It is only the old MIM / FIM Engine in disguise….

Certificate based authentication (Preview)

- SmartCard login supported on the latest version of Windows 11 insider
- Free feature in Azure AD (belive it or not!)
- Built-in support already for most Microsoft applications on mobile devices
- Must used a UPN based certificate
- Cannot use public PKI service
- Can be used as a single factor or combined multifactor authentication



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Cloudknox (Entra Permission Management)

Are you sure you are running with least-privilege?

Google Cloud
Amazon Web Services
Microsoft Azure

Keys
Access Keys
Service Principles
Managed Identities
Roles

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Go to **www.menti.com** and use the code **4642 6287**

What topic would you want to hear about in our next Meetups ?

Mentimeter

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15 Min
Break

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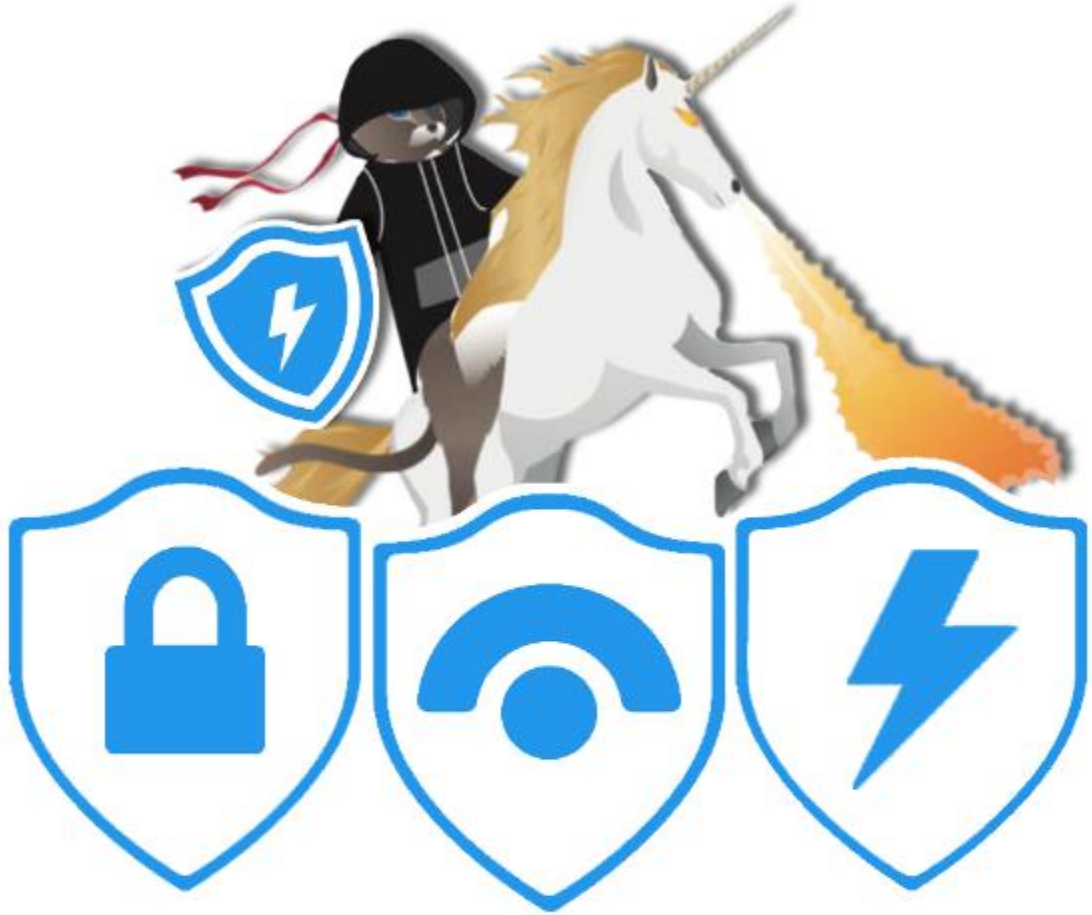

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#MSUGN

Ready, set, log ?

Part 1

Microsoft Security User Group

whoami

Kim Ytredal

- Information security industry for 13 years
- Worked as a security analyst and security advisor
- I love creating smart security solutions
- Have multiple certifications

Hobbies

Breaking things, security, boating, politics, economics, bacon and beer

This session

- What does data logging mean?
- Which logs and metrics should we keep
- Some sources to consider
- How long should we keep logs
- When logs containing personal data
- Get data to log analytics (sentinel)
- Senario 1 – Linux Agentless
- Senario 2 – OMS gateway
- Senario 3 – compliance
- Senario 4 – The way ?
- Table, column, row, value
- Standard preliminary processing
- Log Health

What Does Data Logging Mean?

Data logging is the process of collecting and storing data over a period of time in order to analyze specific trends or record the data-based events/actions of a system, network or IT environment. It enables the tracking of all interactions through which data, files or applications are stored, accessed or modified on a storage device or application.

Ref: https://www.techopedia.com/definition/25410/event-log-networking

Which logs and metrics should we keep

- Planing
  - What is the purpose and what is my mandate

    Example:

    We want to collect logs to uncover if someone is trying to steal our intellectual property

    Which value chains and systems support ours intellectual property

    Which logs can we retrieve from these systems

    Is it sufficient to be able to detect leakage
    -Forensics logs
    –Analytics (detection) logs

    Do we need more technology?

- Design
  - Design your solution in accordance with legislation and internal controls
    More on this on this later*
  - Security and operations
  - Flexibility and robustness
  - Access Control
  - Timestamp unification across sources

Some sources to consider

Cloud solution activity logs
DNS
DHCP
Command line logs
PowerShell transactions
File auditing
File integrity changes
File name changes
Login failures
Malware attacks seen by IDS or other evidence
Malware detection

Modified registry valuesNew login events
New processes started or running processes stopped
New service installation
New user accounts
Password changes
Scans on your firewalls open and closed ports
Shared access events
Lateral network connections
Unauthorized logins

Etc.

How long should we keep logs

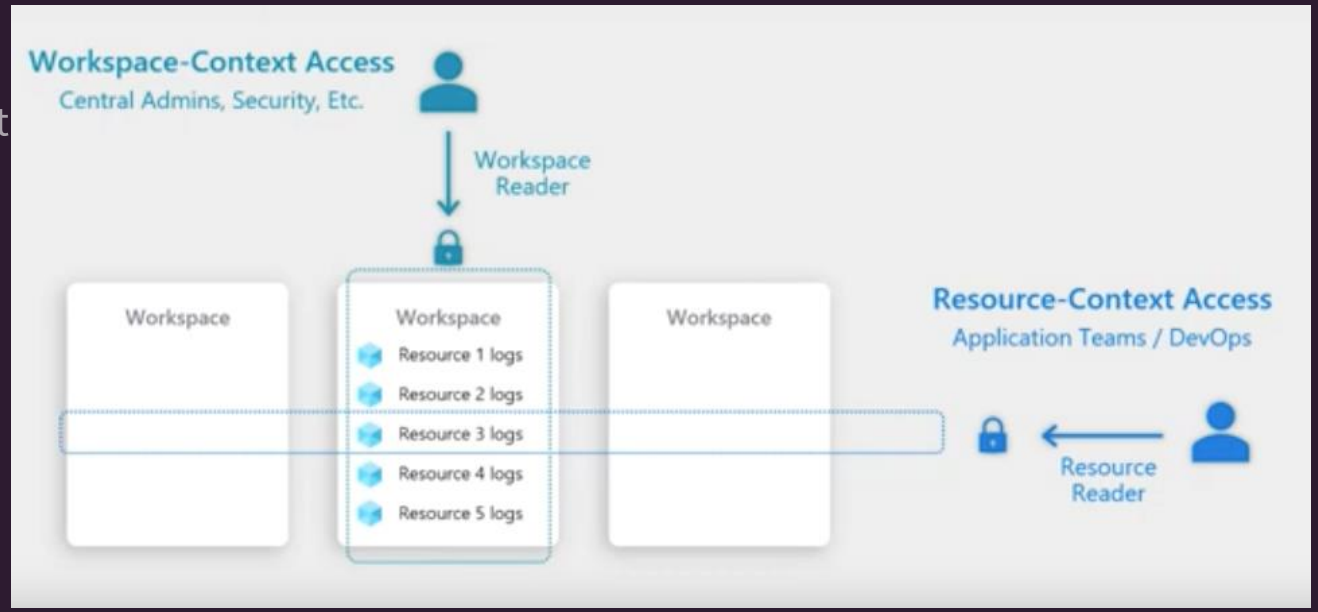
- It takes on average 212 days to identify a breach
  - In many cases, it is because we are notified by a third party
  - Cost of breach depends on
    - Business's size
    - Complexity
    - And most importantly, the threat actor's objective
- My recommendation is to store for at least a year

Small demo

- Set workspace retention
- Archive periode

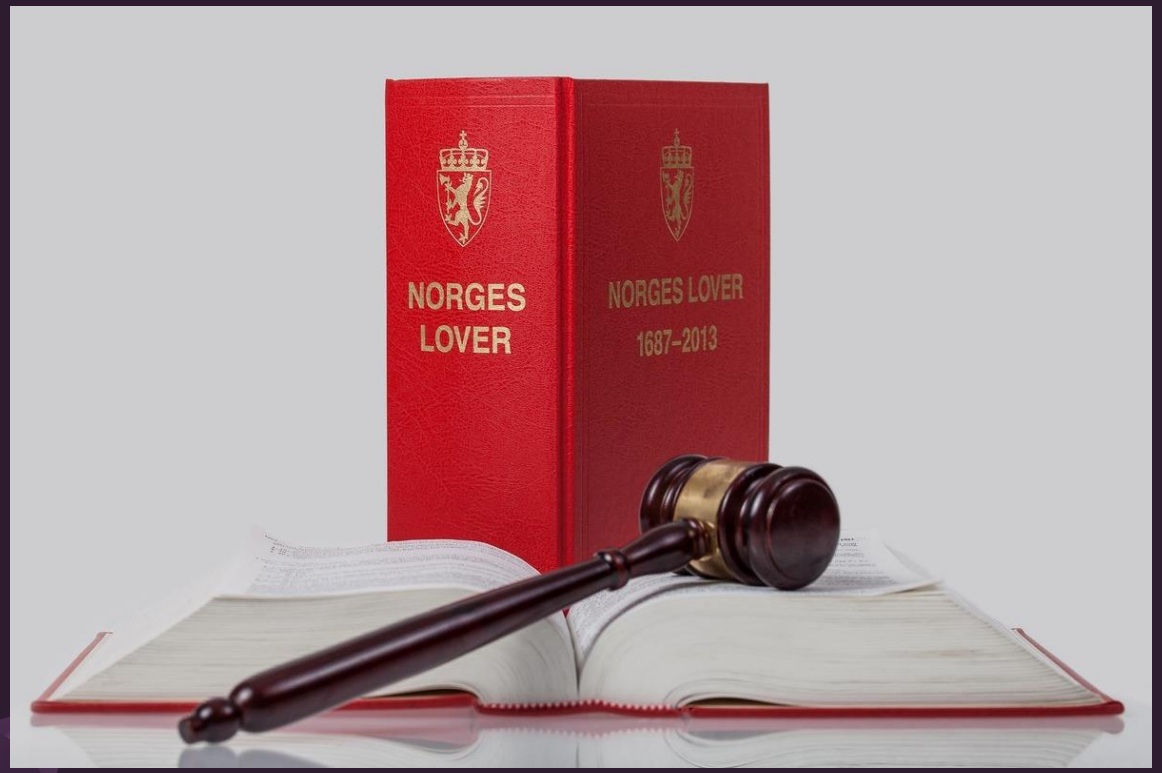
When logs containing personal data

- General Data Protection Regulation (GDPR)
  - Update or create data processing activities document “Behandlingsprotokoll”
    - Reflect what is processed and why
  - Data minimization of personal data
  - How long can we store with privacy in mind
  - Access control
  - Who watched what when (for log analytics this is LAQueryLogs)



Disclaimer, im not a lawyer and this is not legal advice
https://www.datatilsynet.no/rettigheter-og-plikter/virksomhetenes-plikter/protokoll-over-behandlingsaktiviteter/

Please note that there may be special legislation that apply to you or your customer



Small demo

- Check log analytics access policy
- Activate LAQueryLogs

Collect security data from sources

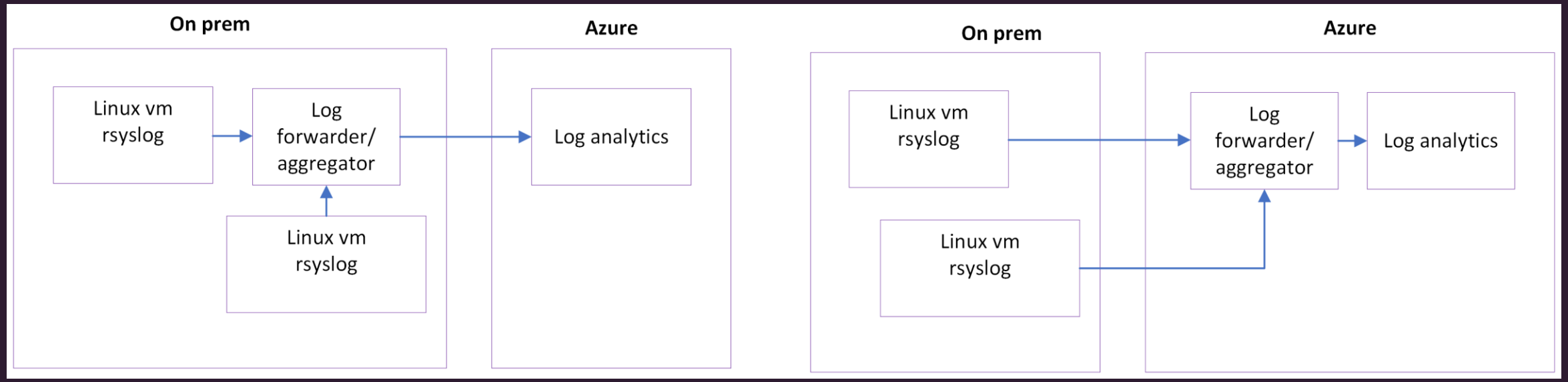
- Office 365 and Azure
  - Security alerts, activity logs
- Collectors
  - Syslog, CEF, Windows, Linux
- Threat intel
  - MS Graph and Taxii
- API
  - Custom logs

Log analytics

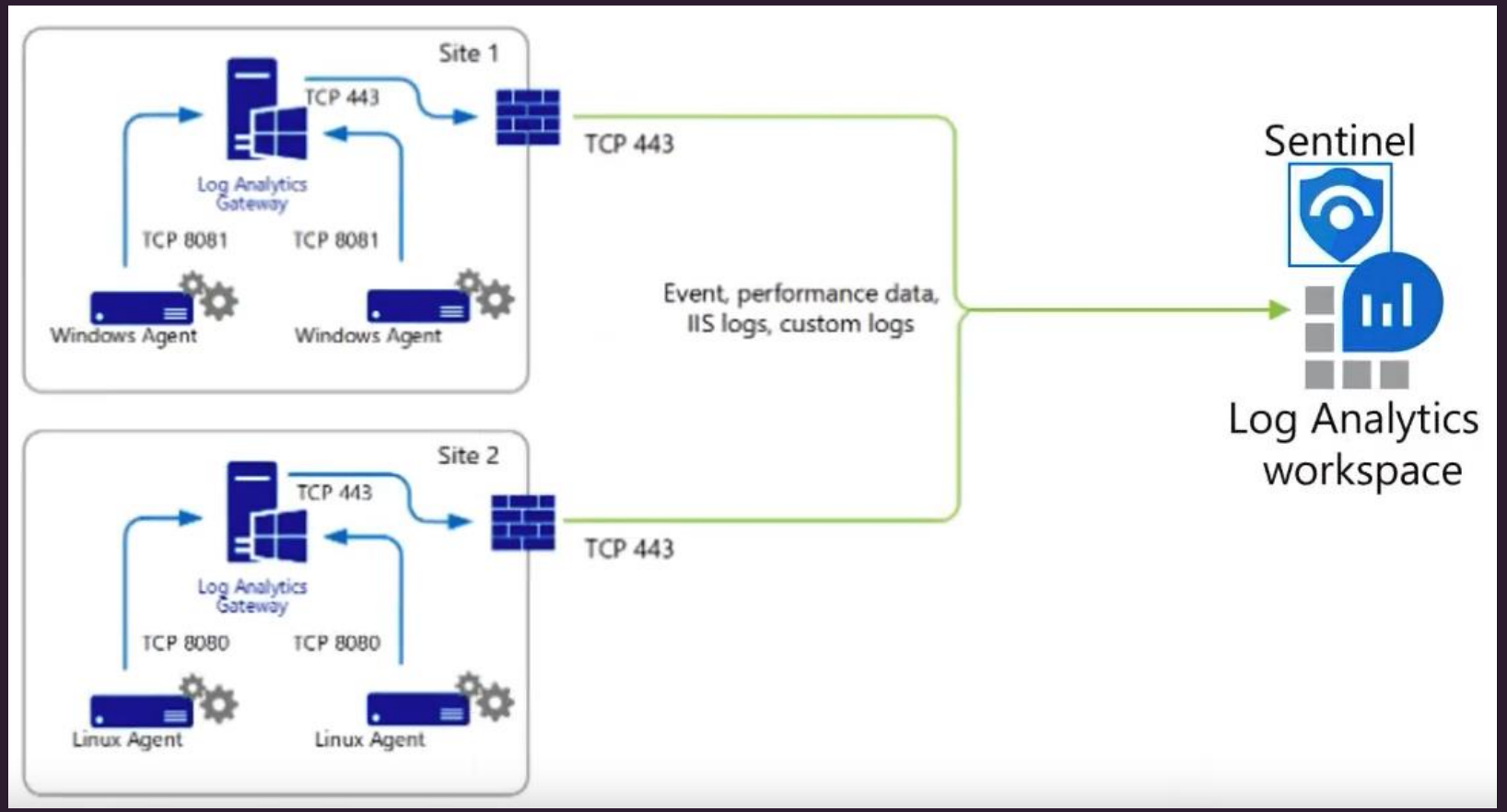
Get data to log analytics (sentinel)

Senario	Solution
Filtered, transformed og aggregated	* Logstash * Other solutions
Filtered	* Logstash * Other solutions * AMA (Azure Monitoring Agent + data collection rules)
Agentless	* Syslog collection with upstream solution (logstash) * Windows (was on roadmap)
System without direct internet access	* OMS gateway * Other intermediate solutions (like logstash)
Multiple log analytics – Security and operations	* MMA (Microsoft Monitoring Agent) (Switch to AMA if possible) * AMA (Azure Monitoring Agent + data collection rules) -With multiple destinations
Custom logs	* Logstash * Other solutions
Office 365, Microsoft 365 Defender, etc	Data connectors in sentinel

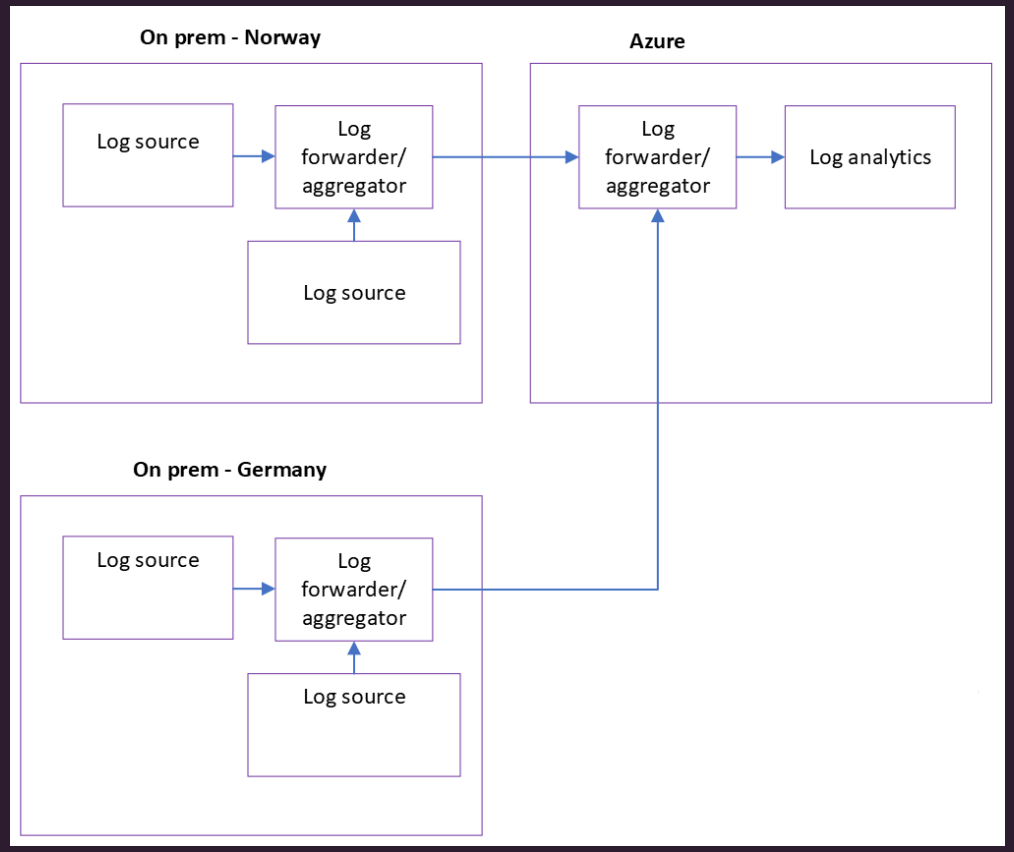
Senario 1 – Linux Agentless



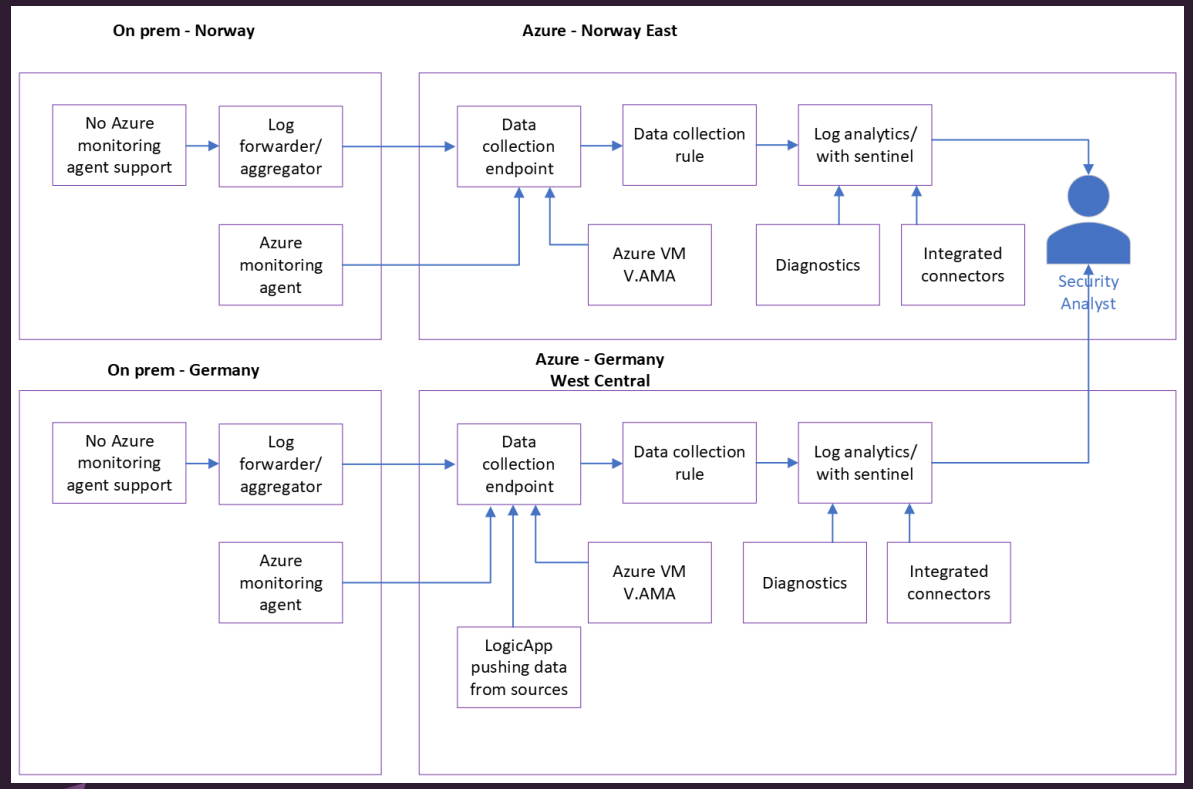
Senario 2 – OMS gateway



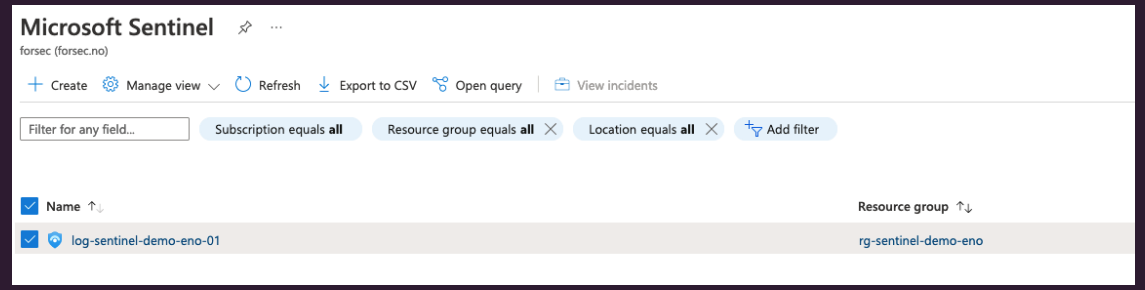
Senario 3 – Compliance



Senario 4 – The way ?



* Helpful with multi tenant
* works with lighthouse



Table, column, row, value

Table

Column

Row

TimeGenerated[UTC]	Col 2	Col 3	Col 4
Value			

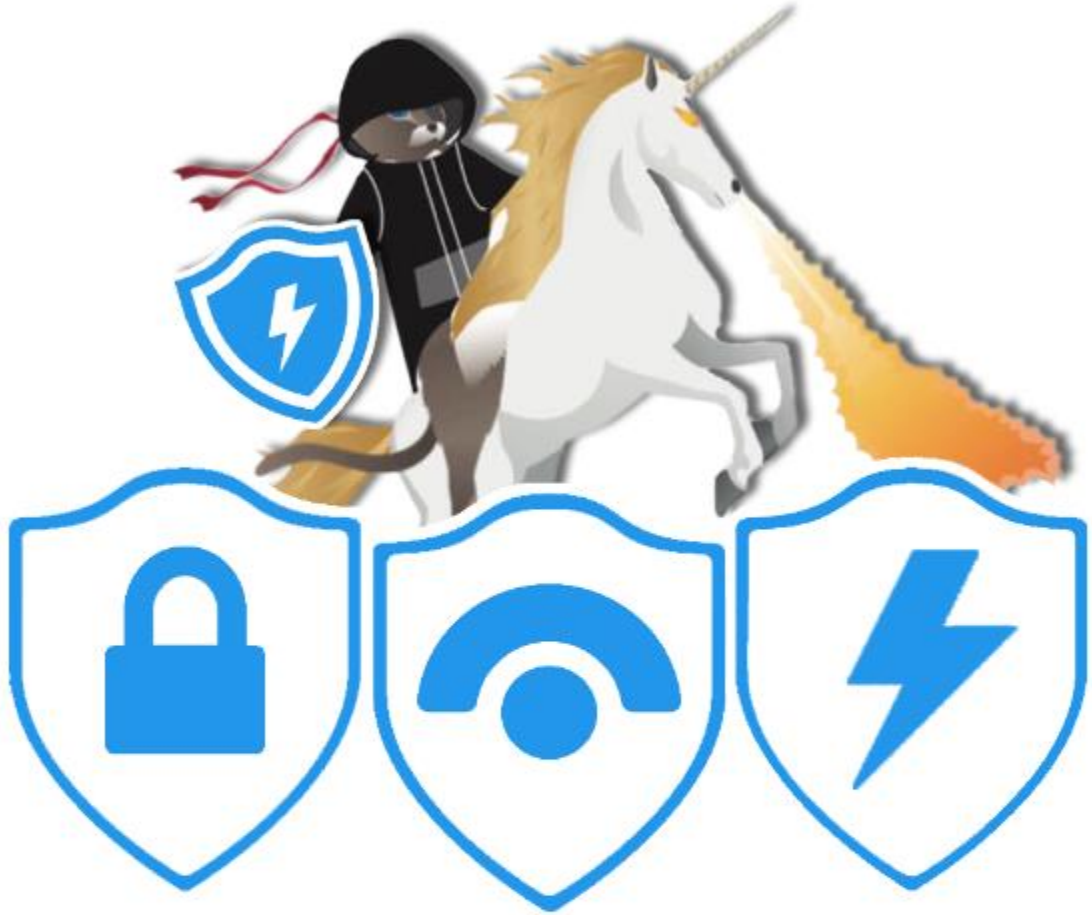
Standard preliminary processing

Action	What	Why
Filtering	Columns Values Row	• Remove sensitive data • Only relevante data • Cost reduction
Transformation	Values	• Masking sensitive data
Aggregation	statistics over –values	• Cost reduction • Faster querying
Table unification - (A)SIM	Normalized schema - Column names	• Easyer to query across tables • Easyer to document and learn

Log Health

- Log ingestion
  - Drop
  - Decrease
  - Increase
  - Missing endpoints
- System upgrades can change column names
- Column errors

The end of part 1



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