CERT STAR

Bring Your Own Threat Intelligence Feeds

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CENTER

Microsoft

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Contents

Bring Your Own Threat Intelligence Feeds

Abstract and learning objectives

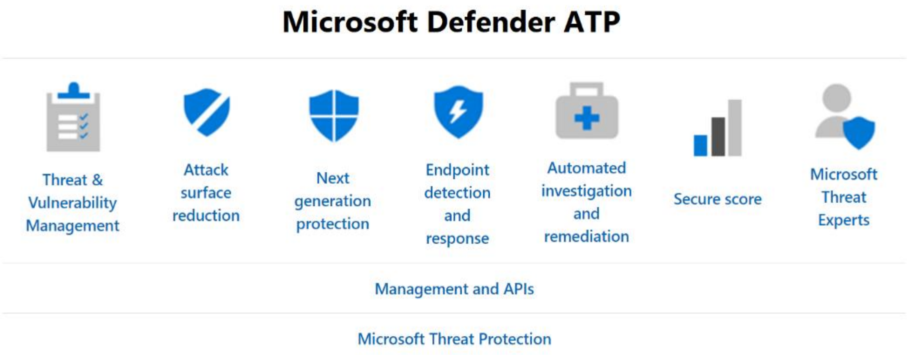
Understand how to push 3rd party threat feeds into Microsoft Cloud Services: Microsoft Defender ATP and Azure Sentinel

Overview

In this lab, attendees will deploy Microsoft Defender Advanced Threat Protection and Azure Sentinel focusing on how to integrate 3rd party threat feeds.

Microsoft Defender Advanced Threat Protection is a platform designed to help enterprise networks prevent, detect, investigate, and respond to advanced threats. MDATP uses the following combination of technologies enabled by Microsoft's cloud:

- **Endpoint behavioral sensors**
- **Cloud Security Analytics**
- **Threat Intelligence**


Microsoft Defender ATP
Threat & Vulnerability Management
Attack surface reduction
Next generation protection
Endpoint detection and response
Automated investigation and remediation
Secure score
Microsoft Threat Experts
Management and APIs
Microsoft Threat Protection

Azure Sentinel is Microsoft's cloud-native **SIEM** — *Security Information Event Management* — and **SOAR** — *Security Orchestration Automated Response* — that provides intelligent security analytics. It can easily collect data from all cloud and/or on-premises assets: Office 365, Azure resources, and other clouds. The core capabilities are:

1. **Collect** data at cloud scale across all users, devices, applications, and infrastructure, both on-premises and in multiple clouds.
2. **Detect** previously undetected threats, and minimize false positives using Microsoft's analytics and threat intelligence.

3. **Investigate** threats with artificial intelligence, and hunt for suspicious activities at scale.
4. **Respond** to incidents rapidly with built-in orchestration and automation of common tasks.

Azure Sentinel displays a number of connectors for Microsoft solutions. In addition, there are built-in connectors to the broader security ecosystem for non-Microsoft solutions. You can also use common event format, Syslog or REST-API to connect your data sources with Azure Sentinel as well.

If you are interested in understanding built-in connector availability and configuration, the updated list and documentation is here.

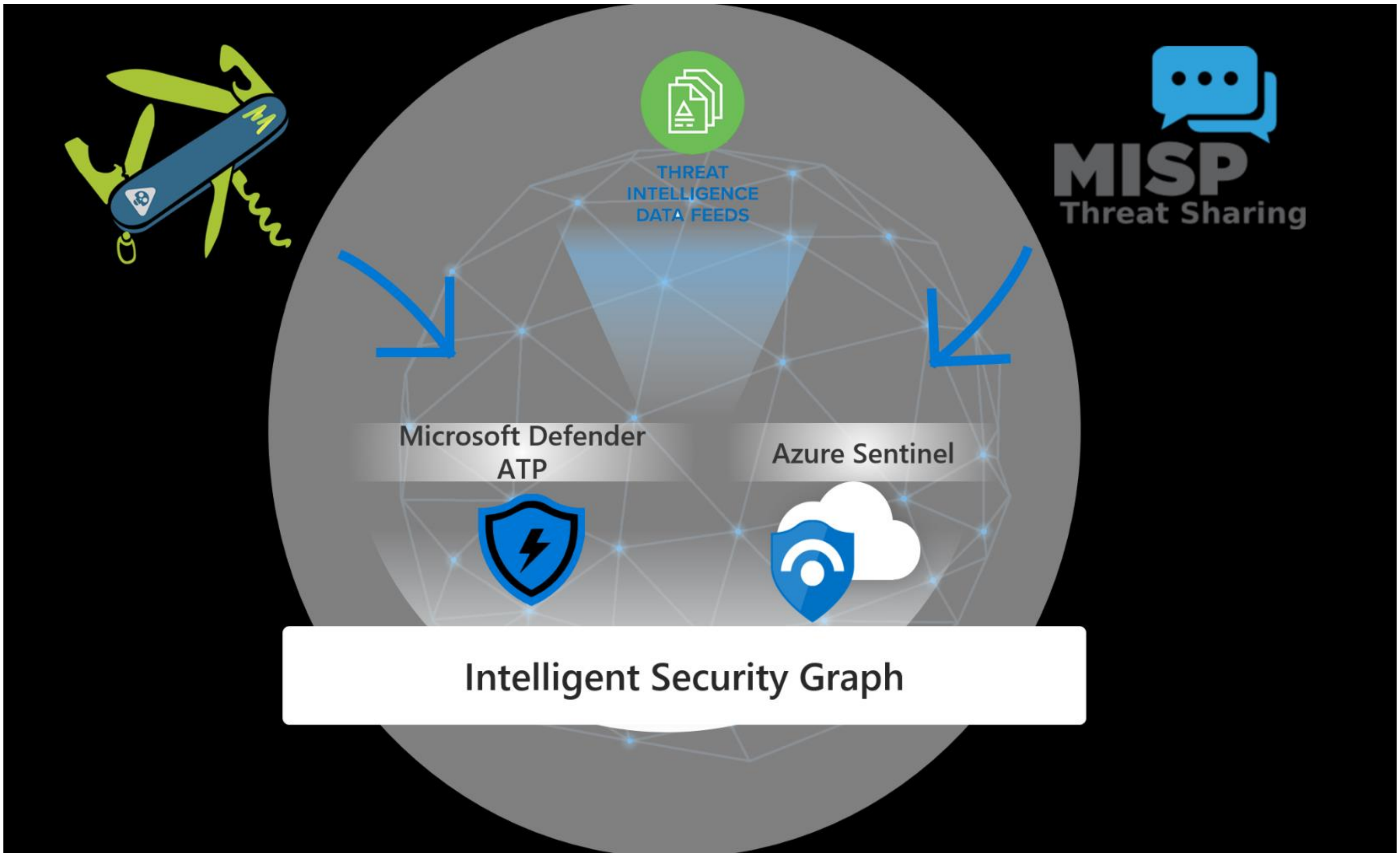
MISP - Malware Information Sharing Platform - is an Open Source Threat Intelligence Platform & Open Standards for Threat Information Sharing.

It’s a threat intelligence platform for sharing, storing and correlating Indicators of Compromise of targeted attacks, threat intelligence, financial fraud information, vulnerability information or even counter-terrorism information. Discover how MISP is used today in multiple organizations. Not only to store, share, collaborate on cyber security indicators, malware analysis, but also to use the IoCs and information to detect and prevent attacks, frauds or threats against ICT infrastructures, organizations or people.

MineMeld, by **Palo Alto Networks**, is an open source Threat Intelligence processing framework. MineMeld can be used to collect, aggregate and filter indicators from a variety of sources and make them available for consumption to peers or to the Palo Alto Networks security platforms.

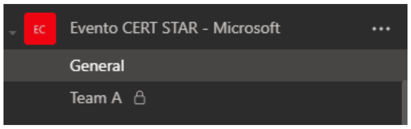
MineMeld can be used to aggregate multiple threat intelligence feeds and extend to your Microsoft Defender ATP tenant. Microsoft Defender ATP can ingest: IPv4 addresses, File hashes, URLs, Domains and FQDNs

Solution architecture



Credentials

Note: TeamX means TeamA or TeamB, etc, it depends on members assignment. Please take a note of Microsoft Teams channel you are part of.


EC Evento CERT STAR - Microsoft

General

Team A

Means TeamA@certstarmicrosoftlab.it – TeamA – teama

Resource	Username	Password	Description
Microsoft Cloud Services	TeamX@certstarmicrosoftlab.it	M10d6nj! (needs reset at first sign-in)	portal.azure.com, Microsoft Defender ATP, Azure Sentinel
MineMeld	TeamX	M10d6nj!	
MISP	TeamX@certstarmicrosoftlab.it	M10d6nj!M10d6nj!	
Server MISP (ssh)	teamx	M10d6nj!	

Lab Requirements

In this lab scenario, attendees will be provided an overview of the Microsoft Defender ATP and Azure Sentinel. Requirements are as follows based on the solution diagram previously shown.

1. Join the Microsoft Teams Channel
2. Credentials
3. SSH client

Exercise 1: Microsoft Defender ATP – Threat Intelligence Platform integration

This exercise will lead you through setting up TIP (Threat Intelligence Platform) integration using MineMeld.

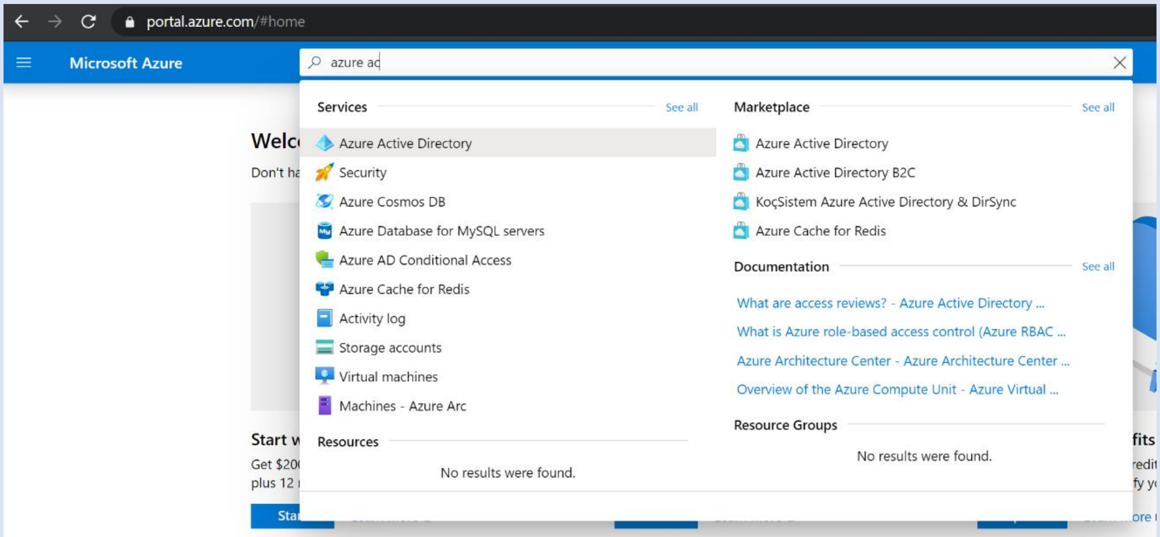
In order to connect MineMeld to Microsoft Defender ATP, the main tasks are the following:

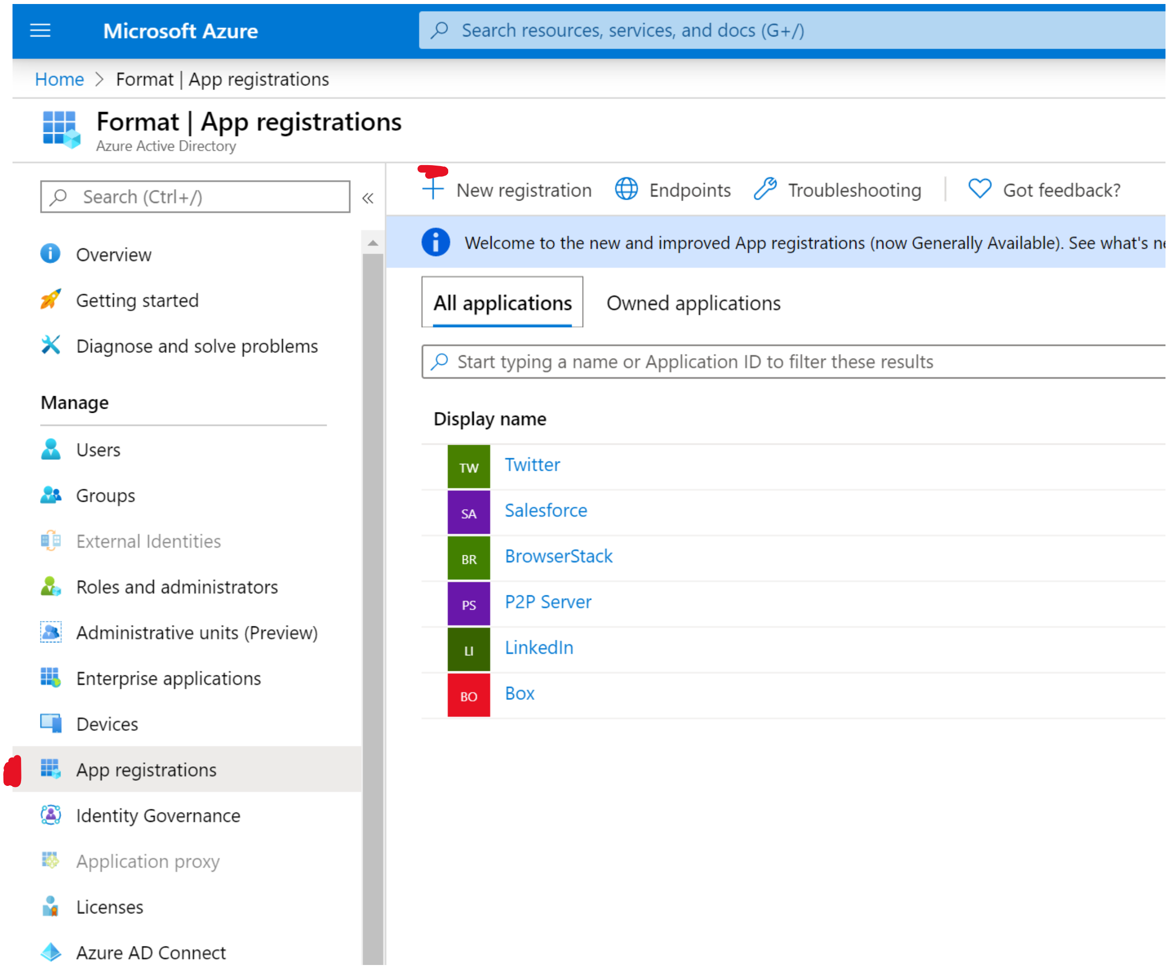
1. Create custom Azure Active Directory application
2. Install MineMeld — MDATP extension
3. Configure MDATP extension

All detailed steps are fully described here: https://live.paloaltonetworks.com/t5/MineMeld-Articles/How-to-configure-MineMeld-to-send-Indicators-to-Microsoft/ta-p/244121

Let's start with Task n.1:

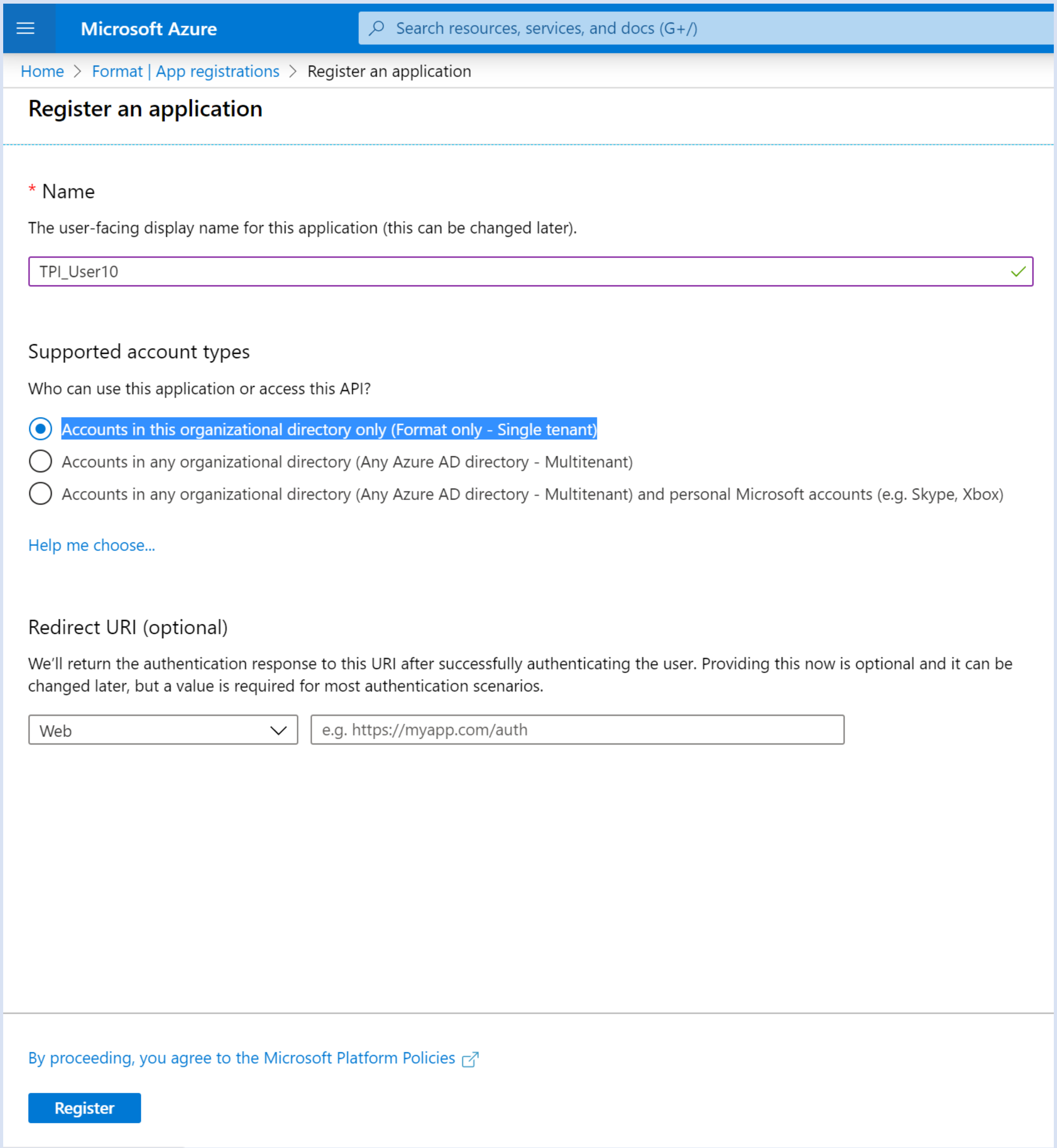
Task 1: Create Azure Active Directory app registration

Step	Action
1.	Login on https://portal.azure.com with credentials provided
2.	Search for Azure Active Directory service  portal.azure.com/#home Microsoft Azure azure ad Services See all Azure Active Directory Security Azure Cosmos DB Azure Database for MySQL servers Azure AD Conditional Access Azure Cache for Redis Activity log Storage accounts Virtual machines Machines - Azure Arc Resources No results were found. Marketplace See all Azure Active Directory Azure Active Directory B2C KoçSistem Azure Active Directory & DirSync Azure Cache for Redis Documentation See all What are access reviews? - Azure Active Directory ... What is Azure role-based access control (Azure RBAC ... Azure Architecture Center - Azure Architecture Center ... Overview of the Azure Compute Unit - Azure Virtual ... Resource Groups No results were found.

Step	Action
3.	Create new app registration. Azure AD → App Registration → + New Registration 

Welcome to the new and improved App registrations (now Generally Available). See what's n

	Display name
TW	Twitter
SA	Salesforce
BR	BrowserStack
PS	P2P Server
LI	LinkedIn
BO	Box

Step	Action
4.	Insert Name: TPI_TeamX, select “Accounts in this organizational directory only (Format only - Single tenant)” and click Register 

Microsoft Azure
Search resources, services, and docs (G+/)
Home > Format | App registrations > Register an application
Help me choose...
Register

Register an application

* Name

The user-facing display name for this application (this can be changed later).

TPI_User10 ✓

Supported account types

Who can use this application or access this API?

● Accounts in this organizational directory only (Format only - Single tenant)

○ Accounts in any organizational directory (Any Azure AD directory - Multitenant)

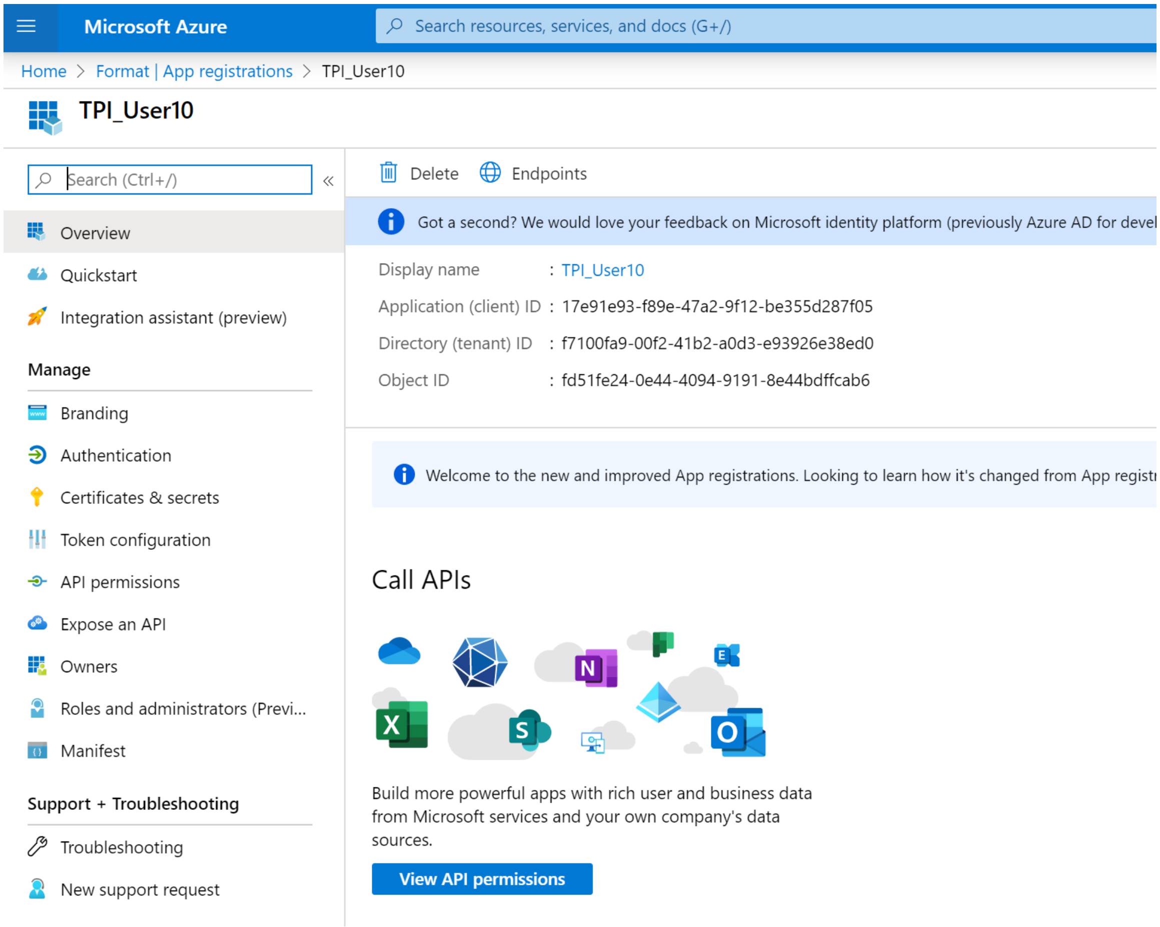
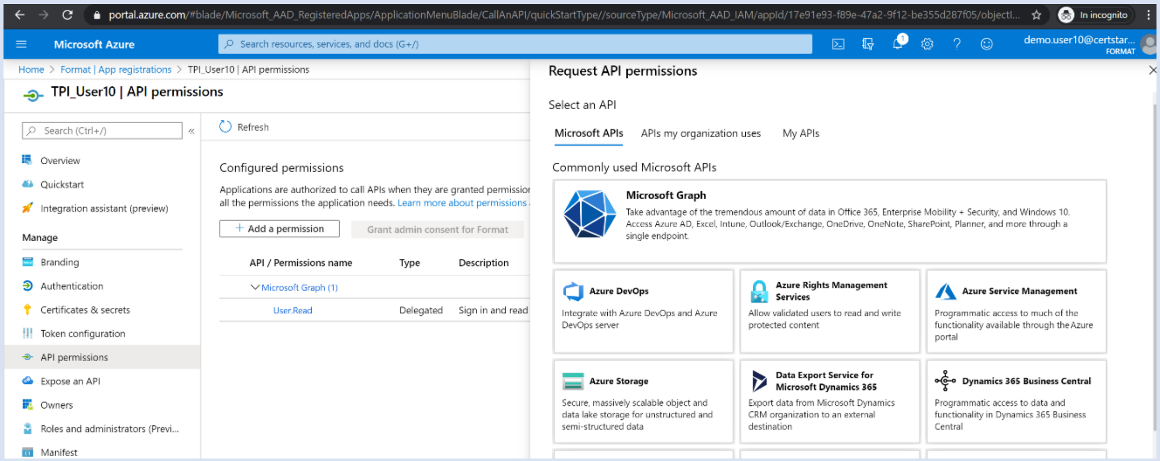
○ Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)

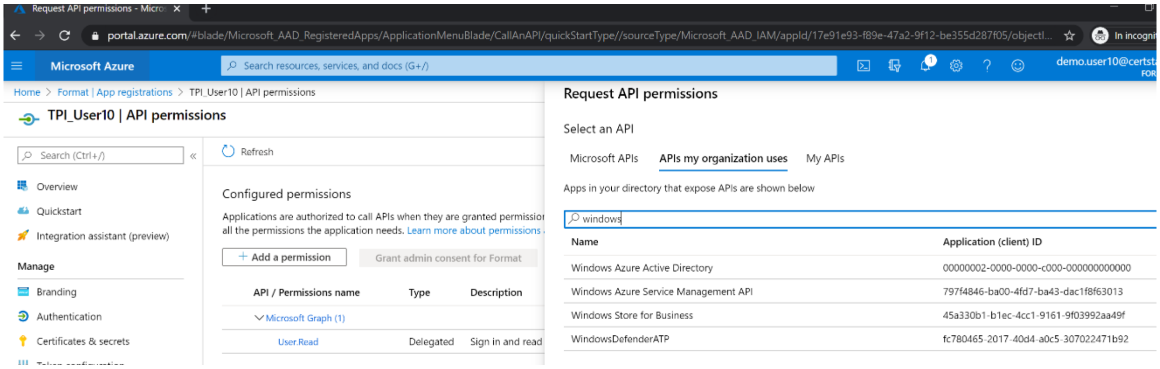
Redirect URI (optional)

We'll return the authentication response to this URI after successfully authenticating the user. Providing this now is optional and it can be changed later, but a value is required for most authentication scenarios.

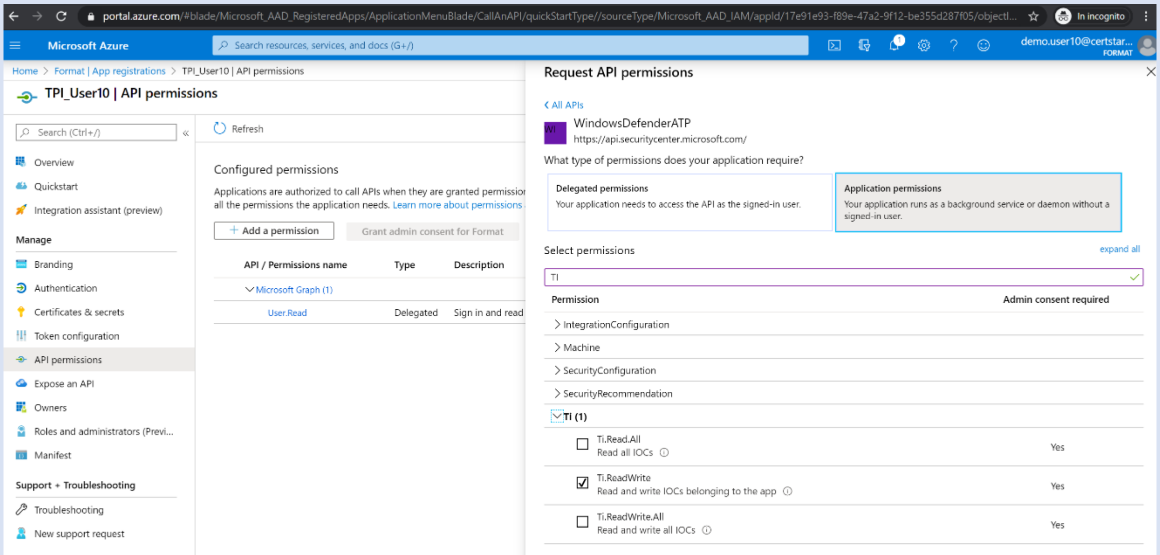
Web | e.g. https://myapp.com/auth

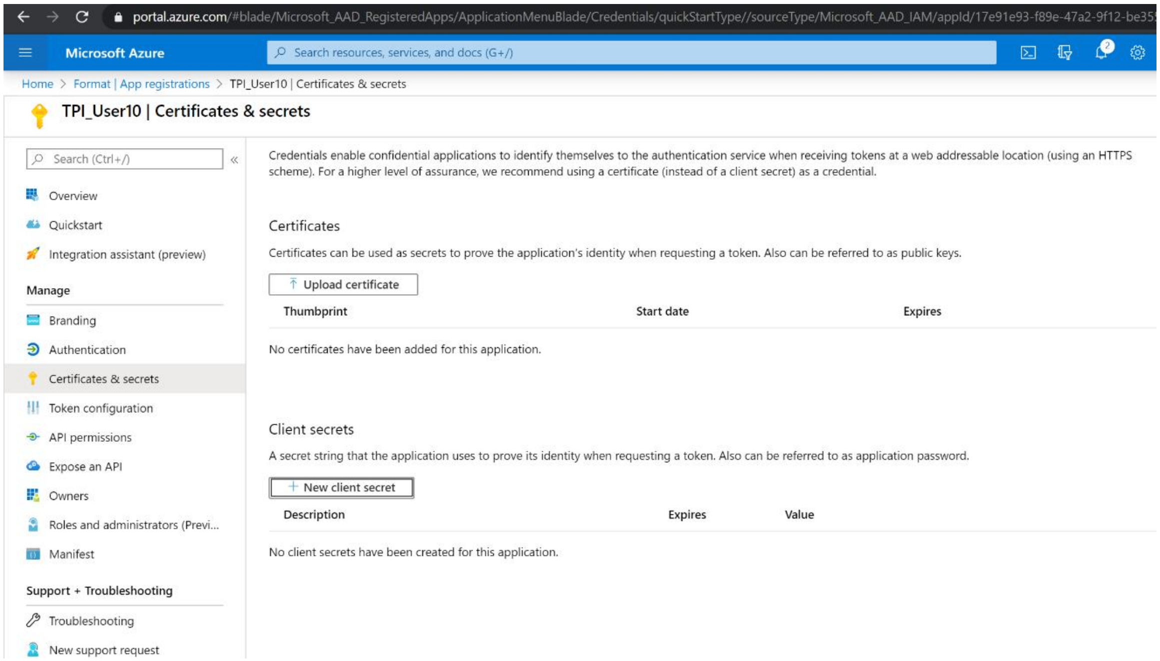
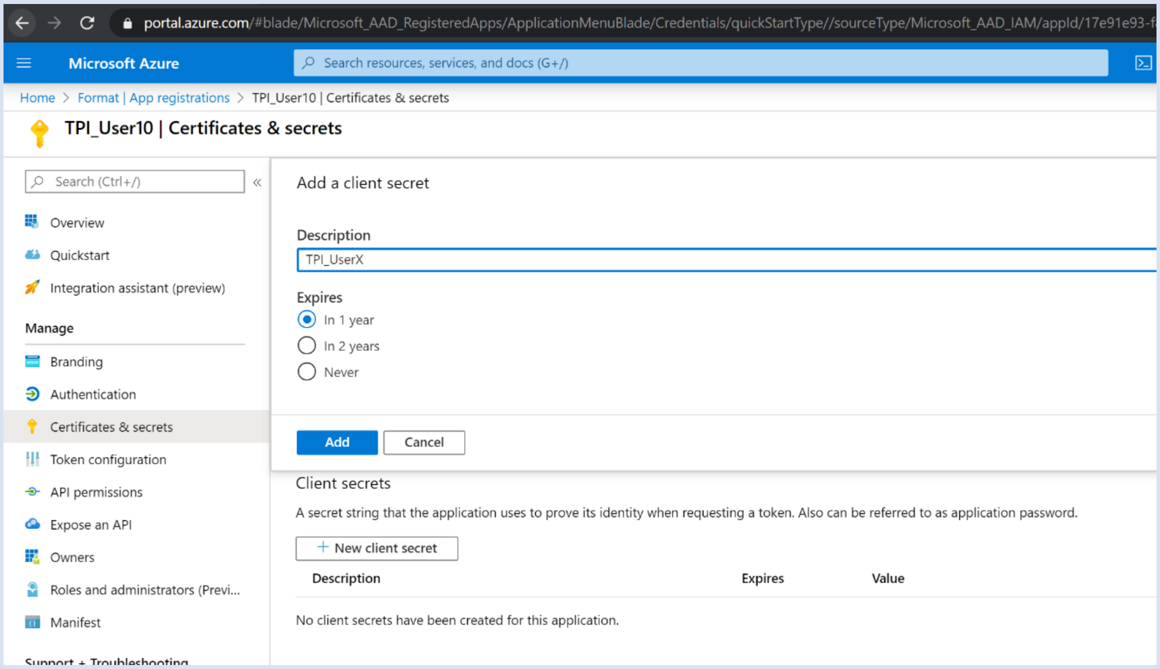
By proceeding, you agree to the Microsoft Platform Policies

Step	Action
5.	take note of **Application ID** and **Tenant ID**  Microsoft Azure Search resources, services, and docs (G+/) Home > Format | App registrations > TPI_User10 TPI_User10 Search (Ctrl+/) Overview Quickstart Integration assistant (preview) Manage Branding Authentication Certificates & secrets Token configuration API permissions Expose an API Owners Roles and administrators (Previ... Manifest Support + Troubleshooting Troubleshooting New support request Delete Endpoints Got a second? We would love your feedback on Microsoft identity platform (previously Azure AD for devel Display name : TPI_User10 Application (client) ID : 17e91e93-f89e-47a2-9f12-be355d287f05 Directory (tenant) ID : f7100fa9-00f2-41b2-a0d3-e93926e38ed0 Object ID : fd51fe24-0e44-4094-9191-8e44bdffcab6 Welcome to the new and improved App registrations. Looking to learn how it's changed from App registr Call APIs Build more powerful apps with rich user and business data from Microsoft services and your own company's data sources.
6.	Inside Azure AD app just created → API Permissions → +Add a permission and select "APIs my organization uses"  portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationMenuBlade/CallAnAPI/quickStartType//sourceType/Microsoft_AAD_IAM/appId/17e91e93-f89e-47a2-9f12-be355d287f05/objectI... In incognito Microsoft Azure Search resources, services, and docs (G+/) demo.user10@certstar... FORMAT Home > Format | App registrations > TPI_User10 | API permissions TPI_User10 | API permissions Search (Ctrl+/) Overview Quickstart Integration assistant (preview) Manage Branding Authentication Certificates & secrets Token configuration API permissions Expose an API Owners Roles and administrators (Previ... Manifest Refresh Configured permissions Applications are authorized to call APIs when they are granted permissio all the permissions the application needs. Learn more about permissions API / Permissions name | Type | Description Microsoft Graph (1) User.Read | Delegated | Sign in and read Request API permissions Select an API Commonly used Microsoft APIs **Microsoft Graph** Take advantage of the tremendous amount of data in Office 365, Enterprise Mobility + Security, and Windows 10. Access Azure AD, Excel, Intune, Outlook/Exchange, OneDrive, OneNote, SharePoint, Planner, and more through a single endpoint. **Azure DevOps** Integrate with Azure DevOps and Azure DevOps server **Azure Rights Management Services** Allow validated users to read and write protected content **Azure Service Management** Programmatic access to much of the functionality available through the Azure portal **Azure Storage** Secure, massively scalable object and data lake storage for unstructured and semi-structured data **Data Export Service for Microsoft Dynamics 365** Export data from Microsoft Dynamics CRM organization to an external destination **Dynamics 365 Business Central** Programmatic access to data and functionality in Dynamics 365 Business Central

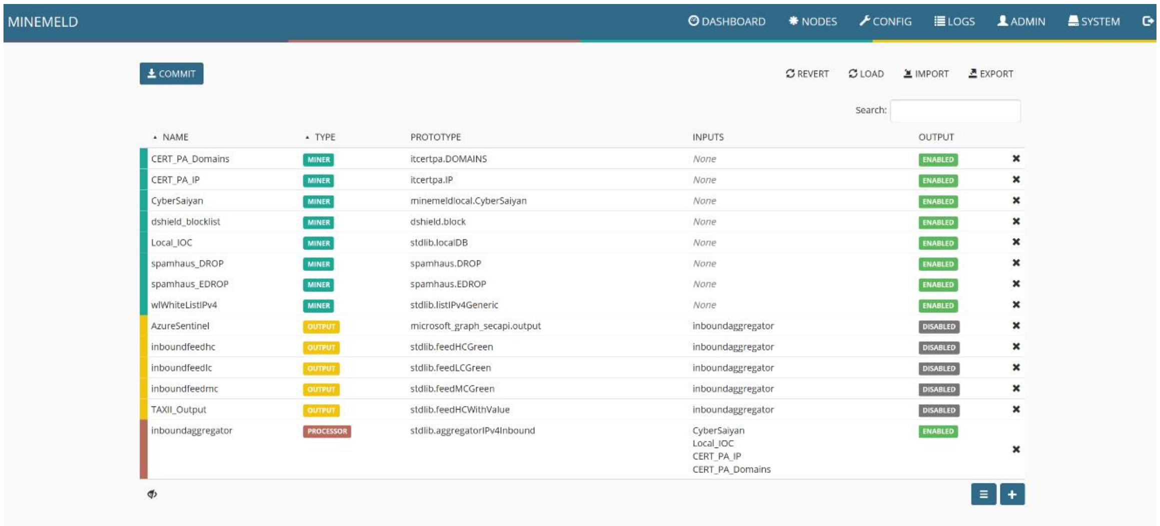
<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>7.</td><td>Search anc click on “WindowsDefenderATP”

portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationMenuBlade/CallAnAPI/quickStartType//sourceType/Microsoft_AAD_IAM/appId/17e91e93-f89e-47a2-9f12-be355d287f05/objectI...
Home &gt; Format | App registrations &gt; TPI_User10 | API permissions
TPI_User10 | API permissions
Configured permissions
Applications are authorized to call APIs when they are granted permissio all the permissions the application needs. Learn more about permissions
API / Permissions name | Type | Description
Microsoft Graph (1)
User.Read | Delegated | Sign in and read
Request API permissions
Select an API
Apps in your directory that expose APIs are shown below
windows
Name | Application (client) ID
Windows Azure Active Directory | 00000002-0000-0000-c000-000000000000
Windows Azure Service Management API | 797f4846-ba00-4fd7-ba43-dac1f8f63013
Windows Store for Business | 45a330b1-b1ec-4cc1-9161-9f03992aa49f
WindowsDefenderATP | fc780465-2017-40d4-a0c5-307022471b92

Request API permissions - Micro
Microsoft Azure
Search resources, services, and docs (G+/)
demo.user10@certst
Search (Ctrl+/)
Overview
Quickstart
Integration assistant (preview)
Manage
Branding
Authentication
Certificates &amp; secrets
Refresh
Add a permission
Grant admin consent for Format
Microsoft APIs
APIs my organization uses
My APIs

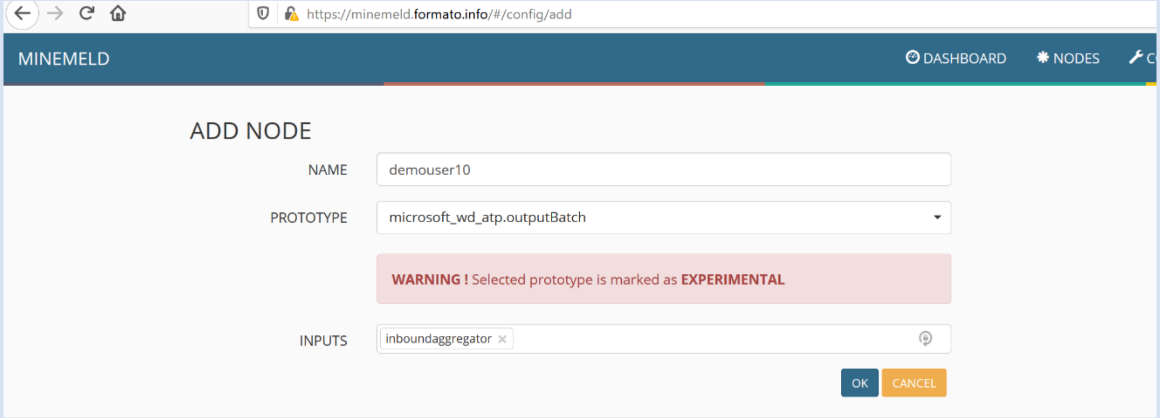
</td></tr>
<tr><td>8.</td><td>Click on Application Permissions → search and Select “<b>Ti.ReadWrite</b> - Read and write IOCs belonging to the app”. That means application will use MDATP API to read and write IoCs. → Click on add permissions

portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationMenuBlade/CallAnAPI/quickStartType//sourceType/Microsoft_AAD_IAM/appId/17e91e93-f89e-47a2-9f12-be355d287f05/objectI...
Home &gt; Format | App registrations &gt; TPI_User10 | API permissions
TPI_User10 | API permissions
Configured permissions
Applications are authorized to call APIs when they are granted permissio all the permissions the application needs. Learn more about permissions
API / Permissions name | Type | Description
Microsoft Graph (1)
User.Read | Delegated | Sign in and read
Request API permissions
WindowsDefenderATP
https://api.securitycenter.microsoft.com/
What type of permissions does your application require?
Delegated permissions: Your application needs to access the API as the signed-in user.
Application permissions: Your application runs as a background service or daemon without a signed-in user.
Select permissions
TI
Permission | Admin consent required
IntegrationConfiguration
Machine
SecurityConfiguration
SecurityRecommendation
Ti (1)
□ Ti.Read.All – Read all IOCs | Yes
☑ Ti.ReadWrite – Read and write IOCs belonging to the app | Yes
□ Ti.ReadWrite.All – Read and write all IOCs | Yes
 </td></tr>
<tr><td>9.</td><td>You will receive a notification on top saying: “You are editing permission(s) to your application, users will have to consent even if they’ve already done so previously.”
That means Global Admin consent is required.</td></tr>
<tr><td>10.</td><td>Please <b><u>send a message on General Teams channel with your Team Name asking for consent</u></b>.
Tutors will apply Consent to you App Registration remotely upon your request. Please note that this step is mandatory and necessary to proceed further.</td></tr>
</table>

Step	Action
11.	Create a new client secret in “Certificate” & Secrets”. Take a note of Secret created, it will show just once.  portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationMenuBlade/Credentials/quickStartType//sourceType/Microsoft_AAD_IAM/appId/17e91e93-f89e-47a2-9f12-be35 Microsoft Azure Search resources, services, and docs (G+/) Home > Format | App registrations > TPI_User10 | Certificates & secrets TPI_User10 | Certificates & secrets Search (Ctrl+/) Overview Quickstart Integration assistant (preview) Manage Branding Authentication Certificates & secrets Token configuration API permissions Expose an API Owners Roles and administrators (Previ... Manifest Support + Troubleshooting Troubleshooting New support request Credentials enable confidential applications to identify themselves to the authentication service when receiving tokens at a web addressable location (using an HTTPS scheme). For a higher level of assurance, we recommend using a certificate (instead of a client secret) as a credential. Certificates Certificates can be used as secrets to prove the application's identity when requesting a token. Also can be referred to as public keys. Upload certificate Thumbprint Start date Expires No certificates have been added for this application. Client secrets A secret string that the application uses to prove its identity when requesting a token. Also can be referred to as application password. + New client secret Description Expires Value No client secrets have been created for this application.
12.	Click “+ New client secret” → Add Description “TPI_UserX”, Select 1 year and click Add  portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationMenuBlade/Credentials/quickStartType//sourceType/Microsoft_AAD_IAM/appId/17e91e93-f Microsoft Azure Search resources, services, and docs (G+/) Home > Format | App registrations > TPI_User10 | Certificates & secrets TPI_User10 | Certificates & secrets Search (Ctrl+/) Overview Quickstart Integration assistant (preview) Manage Branding Authentication Certificates & secrets Token configuration API permissions Expose an API Owners Roles and administrators (Previ... Manifest Support + Troubleshooting Add a client secret Description: TPI_UserX Expires ● In 1 year ○ In 2 years ○ Never Add Cancel Client secrets A secret string that the application uses to prove its identity when requesting a token. Also can be referred to as application password. + New client secret Description Expires Value No client secrets have been created for this application.
13.	**Copy** the new client secret Value on your text editor.

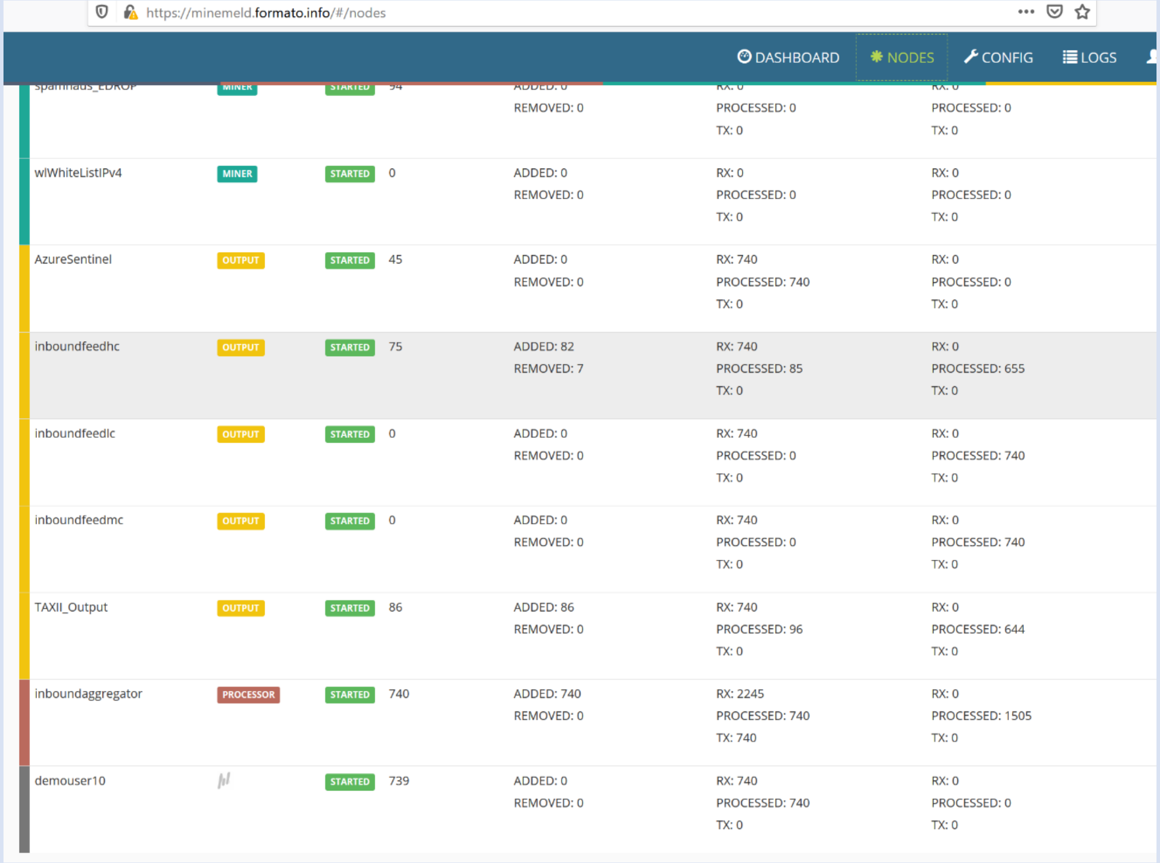
Task 2: Connect MineMeld to Microsoft Defender ATP

Step	Action
1.	Login on https://minemeld.formato.info with credentials provided
2.	Minemeld operates on a three-step process. First, is the process of consuming logs from a given intelligence source. In minemeld terminology, a process that collects threat intelligence data from a disparate source for consolidation and correlation by the minemeld platform and/or downstream devices is called a **miner**. In this lab Minemeld has several Miners collecting data from: CERT PA, CyberSaiyan and from Local DB The second step of the process is selecting a **processor** to analyze the mined data for a specific data type, aggregating that data type from miners, then deduplicating it. The processor is where users can choose the type of data or IOC that to aggregate and/or deduplicate. Each processor can handle MULTIPLE miners, and a single miner can send its data to multiple processors for different data types. The third step of the process involves configuring **outputs**. We are going to set up Output node for Microsoft Defender ATP.
3.	Configure Miners to aggregate Threat Indicators. Click Config → click on "Eye" icon on the left down hand side of the screen, a + button will appear → Click on it 

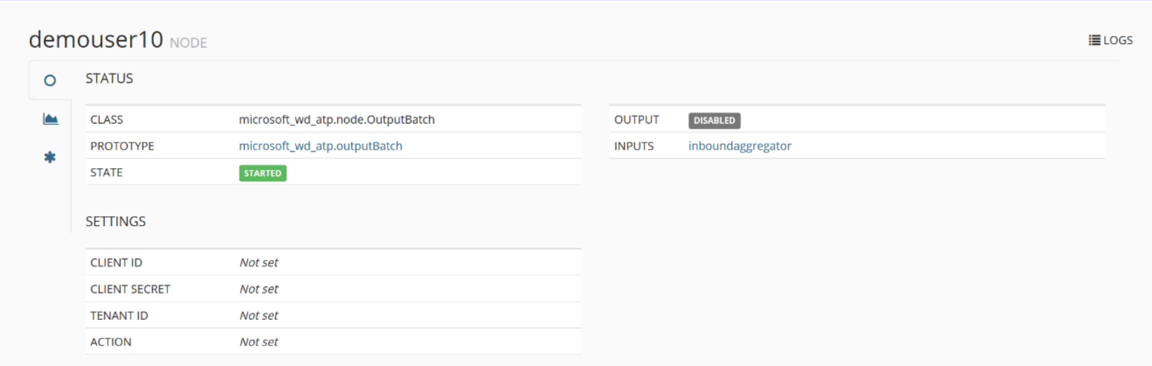
NAME	TYPE	PROTOTYPE	INPUTS	OUTPUT	
CERT_PA_Domains	MINER	itcertpa.DOMAINS	None	ENABLED	✖
CERT_PA_IP	MINER	itcertpa.IP	None	ENABLED	✖
CyberSaiyan	MINER	minemeldlocal.CyberSaiyan	None	ENABLED	✖
dshield_blocklist	MINER	dshield.block	None	ENABLED	✖
Local_IOC	MINER	stdlib.localDB	None	ENABLED	✖
spamhaus_DROP	MINER	spamhaus.DROP	None	ENABLED	✖
spamhaus_EDROP	MINER	spamhaus.EDROP	None	ENABLED	✖
wlWhiteListIPv4	MINER	stdlib.listIPv4Generic	None	ENABLED	✖
AzureSentinel	OUTPUT	microsoft_graph_secapi.output	inboundaggregator	DISABLED	✖
inboundfeedhc	OUTPUT	stdlib.feedHCGreen	inboundaggregator	DISABLED	✖
inboundfeedlc	OUTPUT	stdlib.feedLCGreen	inboundaggregator	DISABLED	✖
inboundfeedmc	OUTPUT	stdlib.feedMCGreen	inboundaggregator	DISABLED	✖
TAXII_Output	OUTPUT	stdlib.feedHCWithValue	inboundaggregator	DISABLED	✖
inboundaggregator	PROCESSOR	stdlib.aggregatorIPv4Inbound	CyberSaiyan Local_IOC CERT_PA_IP CERT_PA_Domains	ENABLED	✖

Step	Action
4.	Name “demouserX” → Prototype “microsoft_wd_adtp.outputBatch” (don’t worry about the alert)→ Inputs “inboundaggregator” → click OK  https://minemeld.formato.info/#/config/add MINEMELD DASHBOARD NODES OK CANCEL ADD NODE NAME demouser10 PROTOTYPE microsoft_wd_atp.outputBatch **WARNING !** Selected prototype is marked as **EXPERIMENTAL** INPUTS inboundaggregator
5.	Click “Commit” and wait for COMPLETE services restart.

6. Edit MDATP node properties in “Nodes” → click on the node just created, scroll to “Settings” section and provide: **CLIENT ID (Azure AD Application ID), CLIENT SECRET: (Client Secret), TENANT ID (Azure AD Identifier)**



spamhaus_EDROP	MINER	STARTED	94	ADDED: 0 REMOVED: 0	RX: 0 PROCESSED: 0 TX: 0	RX: 0 PROCESSED: 0 TX: 0
wlWhiteListIPv4	MINER	STARTED	0	ADDED: 0 REMOVED: 0	RX: 0 PROCESSED: 0 TX: 0	RX: 0 PROCESSED: 0 TX: 0
AzureSentinel	OUTPUT	STARTED	45	ADDED: 0 REMOVED: 0	RX: 740 PROCESSED: 740 TX: 0	RX: 0 PROCESSED: 0 TX: 0
inboundfeedhc	OUTPUT	STARTED	75	ADDED: 82 REMOVED: 7	RX: 740 PROCESSED: 85 TX: 0	RX: 0 PROCESSED: 655 TX: 0
inboundfeedlc	OUTPUT	STARTED	0	ADDED: 0 REMOVED: 0	RX: 740 PROCESSED: 0 TX: 0	RX: 0 PROCESSED: 740 TX: 0
inboundfeedmc	OUTPUT	STARTED	0	ADDED: 0 REMOVED: 0	RX: 740 PROCESSED: 0 TX: 0	RX: 0 PROCESSED: 740 TX: 0
TAXII_Output	OUTPUT	STARTED	86	ADDED: 86 REMOVED: 0	RX: 740 PROCESSED: 96 TX: 0	RX: 0 PROCESSED: 644 TX: 0
inboundaggregator	PROCESSOR	STARTED	740	ADDED: 740 REMOVED: 0	RX: 2245 PROCESSED: 740 TX: 740	RX: 0 PROCESSED: 1505 TX: 0
demouser10		STARTED	739	ADDED: 0 REMOVED: 0	RX: 740 PROCESSED: 740 TX: 0	RX: 0 PROCESSED: 0 TX: 0



demouser10 NODE

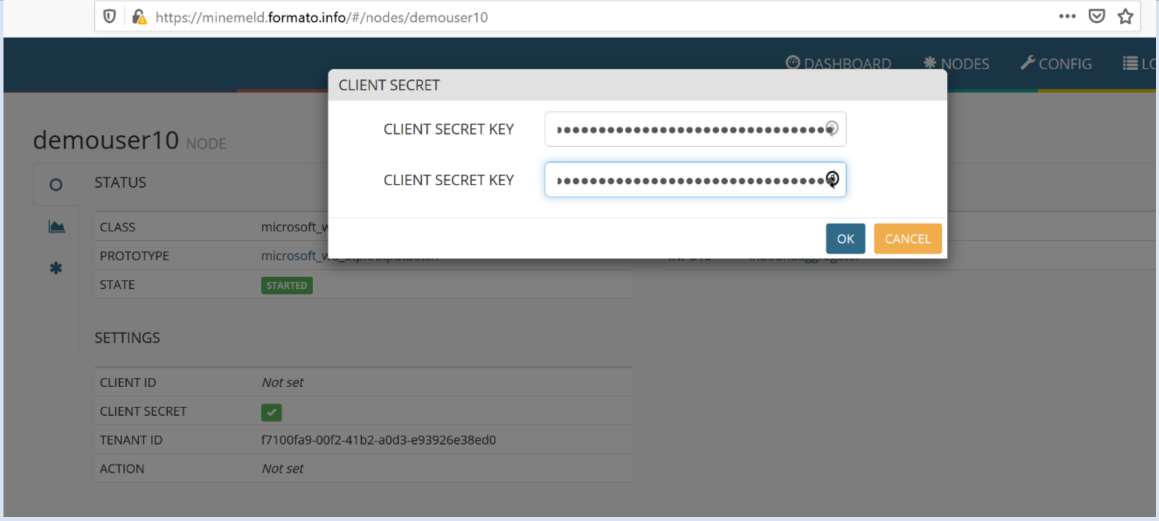
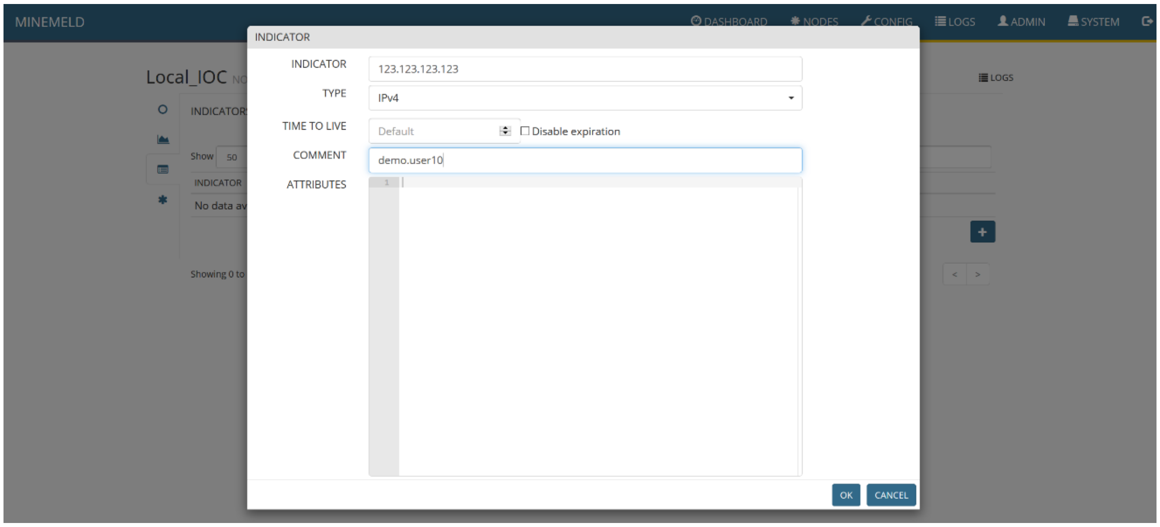
STATUS

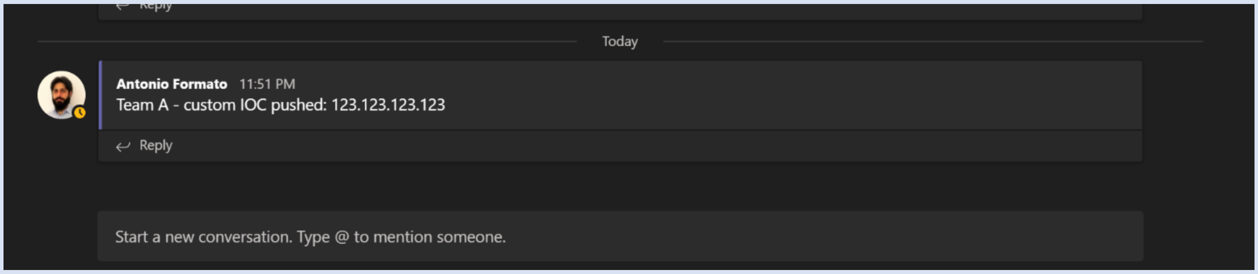
CLASS	microsoft_wd_atp.node.OutputBatch
PROTOTYPE	microsoft_wd_atp.outputBatch
STATE	STARTED

OUTPUT	DISABLED
INPUTS	inboundaggregator

SETTINGS

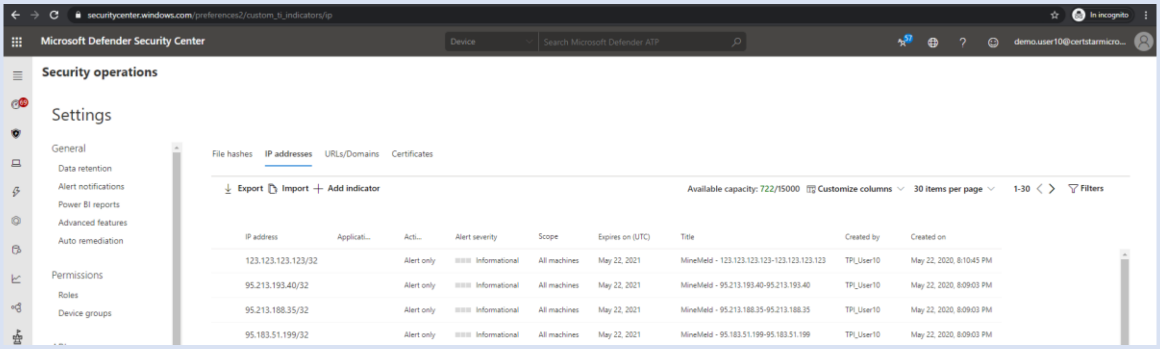
CLIENT ID	*Not set*
CLIENT SECRET	*Not set*
TENANT ID	*Not set*
ACTION	*Not set*

Step	Action
	 https://minemeld.formato.info/#/nodes/demouser10 DASHBOARD NODES CONFIG LO demouser10 NODE STATUS CLASS microsoft_w PROTOTYPE microsoft_w STATE STARTED SETTINGS CLIENT ID *Not set* CLIENT SECRET ✓ TENANT ID f7100fa9-00f2-41b2-a0d3-e93926e38ed0 ACTION *Not set* CLIENT SECRET CLIENT SECRET KEY •••••••••••••••••••••••••••••••• CLIENT SECRET KEY •••••••••••••••••••••••••••••••• OK CANCEL
7.	Insert TeamX’s indicators. Note: MineMeld do not push duplicated indicators. In order to see your own IOC implement below procedure. **MineMeld → Node → Local IOC –> select 3rd tab on the left “Indicators” and click on + Add Indicator** Insert you indicator i.e. 123.123.123.123 → Type IPv4 → Comment insert your account name “demo.userX”. Click OK Comment: TeamX (it could be useful for troubleshooting purpose if needed)  MINEMELD DASHBOARD NODES CONFIG LOGS ADMIN SYSTEM Local_IOC INDICATOR INDICATOR 123.123.123.123 TYPE IPv4 TIME TO LIVE Default □ Disable expiration COMMENT demo.user10 ATTRIBUTES OK CANCEL

Step	Action
8.	Please chat custom IOC pushed to General MS Teams channel chat  Antonio Formato 11:51 PM Team A - custom IOC pushed: 123.123.123.123 Reply Start a new conversation. Type @ to mention someone.

Task 3: Use Data on MDATP

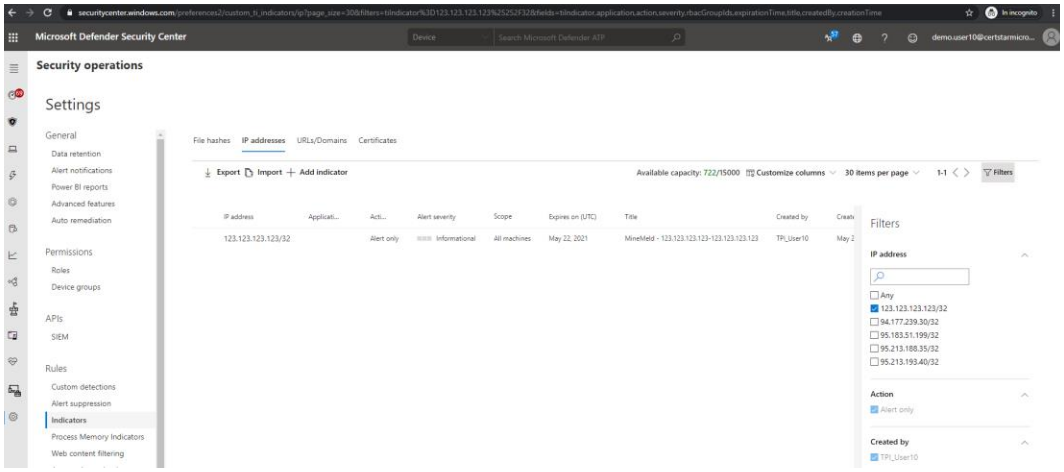
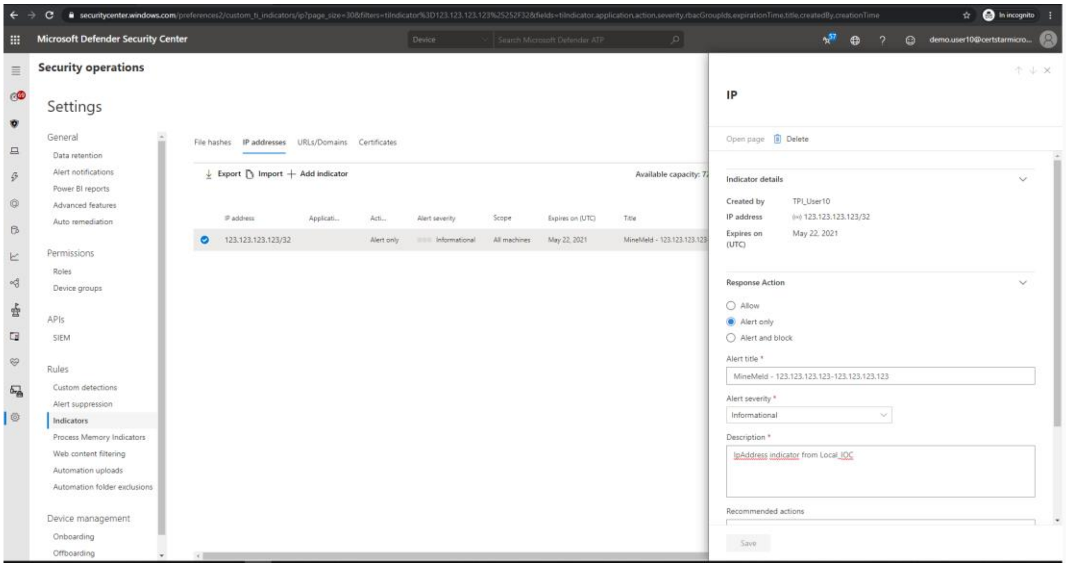
<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1.</td><td>Login on https://securitycenter.windows.com with credentials provided</td></tr>
<tr><td>2.</td><td>
Open the hamburger menu and expand “Settings” →In “Rules” section click on “Indicators” → IP Addresses



securitycenter.windows.com/preferences2/custom_ti_indicators/ip

IP address	Applicati...	Acti...	Alert severity	Scope	Expires on (UTC)	Title	Created by	Created on
123.123.123.123/32		Alert only	Informational	All machines	May 22, 2021	MineMeld - 123.123.123.123-123.123.123.123	TPI_User10	May 22, 2020, 8:10:45 PM
95.213.193.40/32		Alert only	Informational	All machines	May 22, 2021	MineMeld - 95.213.193.40-95.213.193.40	TPI_User10	May 22, 2020, 8:09:03 PM
95.213.188.35/32		Alert only	Informational	All machines	May 22, 2021	MineMeld - 95.213.188.35-95.213.188.35	TPI_User10	May 22, 2020, 8:09:03 PM
95.183.51.199/32		Alert only	Informational	All machines	May 22, 2021	MineMeld - 95.183.51.199-95.183.51.199	TPI_User10	May 22, 2020, 8:09:03 PM

Notice “Created by” field. You can Filter on this fied to see your IoCs
</td></tr>
</table>

Step	Action
3.	Click on Filter and search for you custom IOC  

securitycenter.windows.com/preferences2/custom_ti_indicators/ip?page_size=30&filters=tiIndicator%3D123.123.123.123%25252F32&fields=tiIndicator,application,action,severity,rbacGroupIds,expirationTime,title,createdBy,creationTime

Available capacity: 722/15000

IP address	Applicati...	Acti...	Alert severity	Scope	Expires on (UTC)	Title	Created by	Creat...
123.123.123.123/32		Alert only	Informational	All machines	May 22, 2021	MineMeld - 123.123.123.123-123.123.123.123	TPI_User10	May 2

Filters

IP address

- □ Any
- ☑ 123.123.123.123/32
- □ 94.177.239.30/32
- □ 95.183.51.199/32
- □ 95.213.188.35/32
- □ 95.213.193.40/32

Action

- ☑ Alert only

Created by

- ☑ TPI_User10

IP

Indicator details

Created by TPI_User10
IP address 123.123.123.123/32
Expires on (UTC) May 22, 2021

Response Action

- ○ Allow
- ● Alert only
- ○ Alert and block

Alert title * MineMeld - 123.123.123.123-123.123.123.123

Alert severity * Informational

Description * IpAddress indicator from Local_IOC

Recommended actions

Exercise 2: Azure Sentinel – MISP integration

This exercise will lead you through setting up MISP integration.

Azure Sentinel lets you import the threat indicators your organization is using, which can enhance your security analysts' ability to detect and prioritize known threats. Several features from Azure Sentinel then become available or are enhanced:

- **Analytics** includes a set of scheduled rule templates you can enable to generate alerts and incidents based on matches of log events from your threat indicators.
- **Workbooks** provide summarized information about the threat indicators imported into Azure Sentinel and any alerts generated from analytics rules that match your threat indicators.
- **Hunting** queries allow security investigators to use threat indicators within the context of common hunting scenarios.
- **Notebooks** can use threat indicators when you investigate anomalies and hunt for malicious behaviors.

You can stream threat indicators to Azure Sentinel by using one of the integrated threat intelligence platform (TIP) products listed in the next section, connecting to TAXII servers, or by using direct integration with the Microsoft Graph Security tiIndicators API.

Integrated threat intelligence platform products

- MISP Open Source Threat Intelligence Platform

For a sample script that provides clients with MISP instances to migrate threat indicators to the Microsoft Graph Security API, see the MISP to Microsoft Graph Security Script.

- Anomali ThreatStream

To download ThreatStream Integrator and Extensions, and the instructions for connecting ThreatStream intelligence to the Microsoft Graph Security API, see the ThreatStream downloads page.

- Palo Alto Networks MineMeld

For guided instructions, see Sending IOCs to the Microsoft Graph Security API using MineMeld.

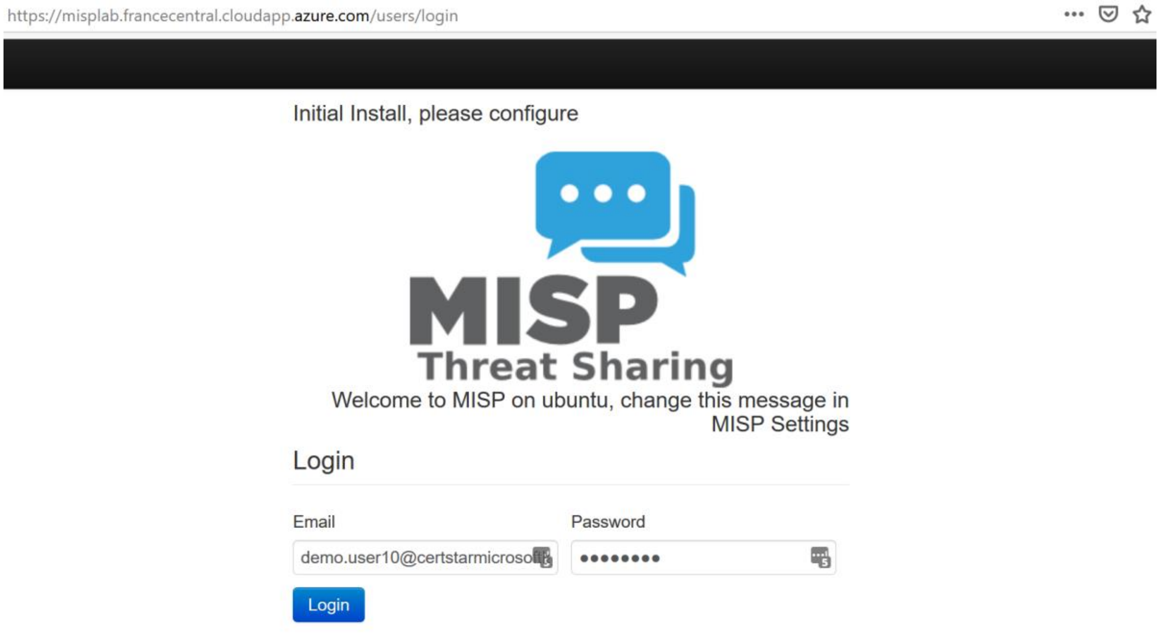
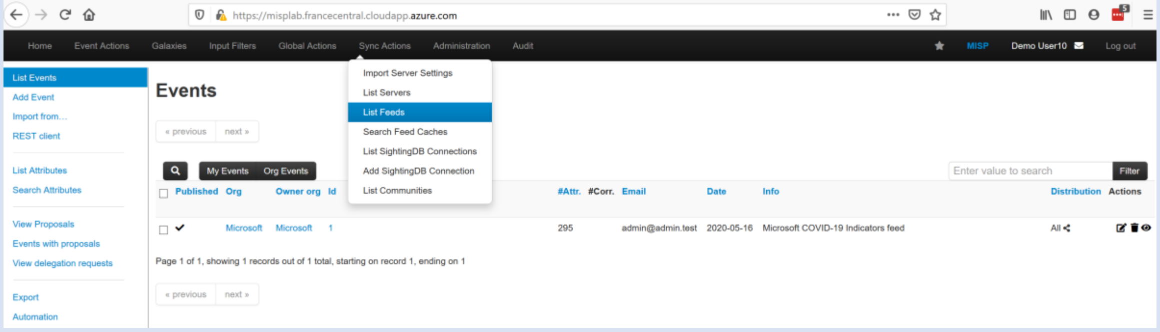
- ThreatConnect Platform

For information, see ThreatConnect Integrations and look for Microsoft Graph Security API on the page.

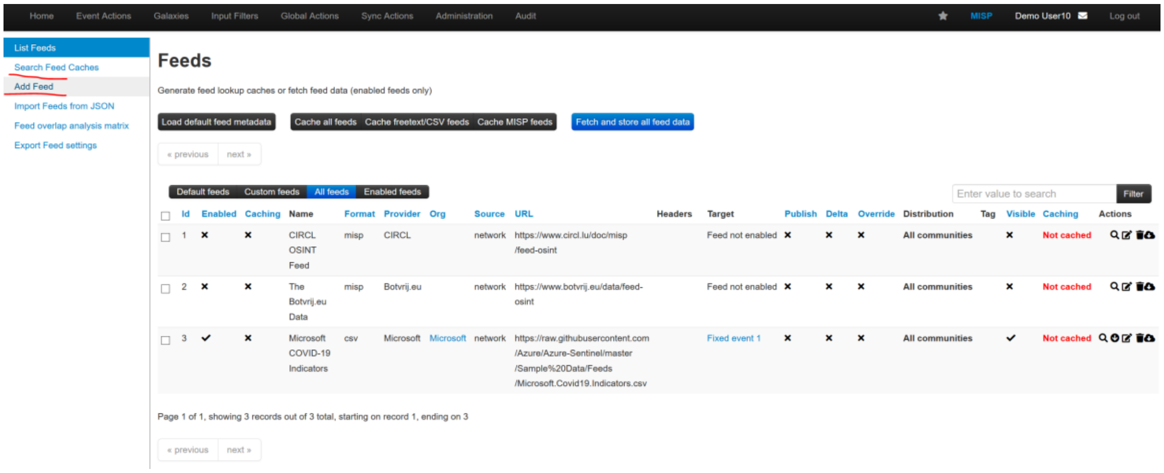
In order to connect MineMeld to Microsoft Defender ATP, the main steps are:

1. **Add feed to the MISP server**
2. **Install MineMeld — MDATP extension**
3. **Configure MDATP extension**

Task 1: Adding feed to the MISP server

Step	Action
1.	Login on https://misplab.francecentral.cloudapp.azure.com with credentials provided  https://misplab.francecentral.cloudapp.azure.com/users/login Initial Install, please configure Welcome to MISP on ubuntu, change this message in MISP Settings Login Email: demo.user10@certstarmicroso Password: •••••••• Login
2.	The next step is to add the Microsoft feed to the MISP server. Click on "Sync Actions" pn the top menu → "List Feeds"  https://misplab.francecentral.cloudapp.azure.com Home Event Actions Galaxies Input Filters Global Actions Sync Actions Administration Audit MISP Demo User10 Log out Import Server Settings List Servers List Feeds Search Feed Caches List SightingDB Connections Add SightingDB Connection List Communities List Events Add Event Import from… REST client List Attributes Search Attributes View Proposals Events with proposals View delegation requests Export Automation « previous next » My Events Org Events Enter value to search Filter Events □ Published · Org · Owner org · Id · #Attr. · #Corr. · Email · Date · Info · Distribution · Actions □ ✓ · Microsoft · Microsoft · 1 · 295 · · admin@admin.test · 2020-05-16 · Microsoft COVID-19 Indicators feed · All Page 1 of 1, showing 1 records out of 1 total, starting on record 1, ending on 1

Step	Action
3.	Click on “Add feeds”



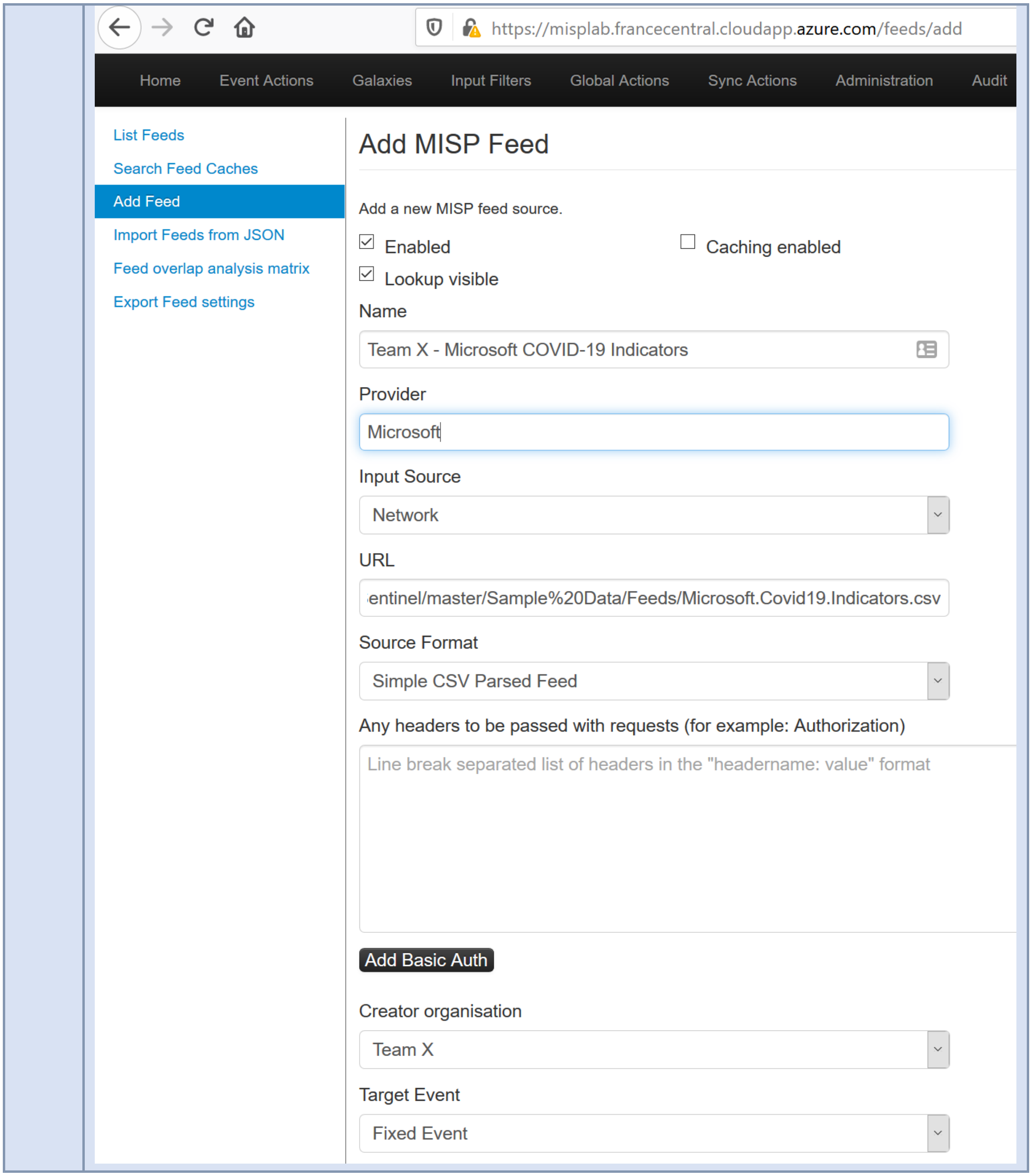
Feeds

Generate feed lookup caches or fetch feed data (enabled feeds only)

□	Id	Enabled	Caching	Name	Format	Provider	Org	Source	URL	Headers	Target	Publish	Delta	Override	Distribution	Tag	Visible	Caching	Actions
□	1	✗	✗	CIRCL OSINT Feed	misp	CIRCL		network	https://www.circl.lu/doc/misp/feed-osint		Feed not enabled	✗	✗	✗	All communities		✗	Not cached	
□	2	✗	✗	The Botvrij.eu Data	misp	Botvrij.eu		network	https://www.botvrij.eu/data/feed-osint		Feed not enabled	✗	✗	✗	All communities		✗	Not cached	
□	3	✓	✗	Microsoft COVID-19 Indicators	csv	Microsoft	Microsoft	network	https://raw.githubusercontent.com/Azure/Azure-Sentinel/master/Sample%20Data/Feeds/Microsoft.Covid19.Indicators.csv		Fixed event 1	✗	✗	✗	All communities		✓	Not cached	

Page 1 of 1, showing 3 records out of 3 total, starting on record 1, ending on 3

4.	• Enter the address of Microsoft’s COVID-19 feed: https://raw.githubusercontent.com/Azure/Azure-Sentinel/master/Sample%20Data/Feeds/Microsoft.Covid19.Indicators.csv • Select “Enabled” • Name: “Team X - Microsoft COVID-19 Indicators” → X is your team’s ID (letter) • Provider = Microsoft • Input Source = Network • Source Format = Simple CSV Parsed Feed • Creator Organisation, select Team X → X is your team’s ID (letter) • Set the ‘Value field(s) in the CSV’ to 2 • Select “Auto Publish” • Distribution = Your organisation only • Add



Add MISP Feed

Add a new MISP feed source.

☑ Enabled ☐ Caching enabled

☑ Lookup visible

Name: Team X - Microsoft COVID-19 Indicators

Provider: Microsoft

Input Source: Network

URL: entinel/master/Sample%20Data/Feeds/Microsoft.Covid19.Indicators.csv

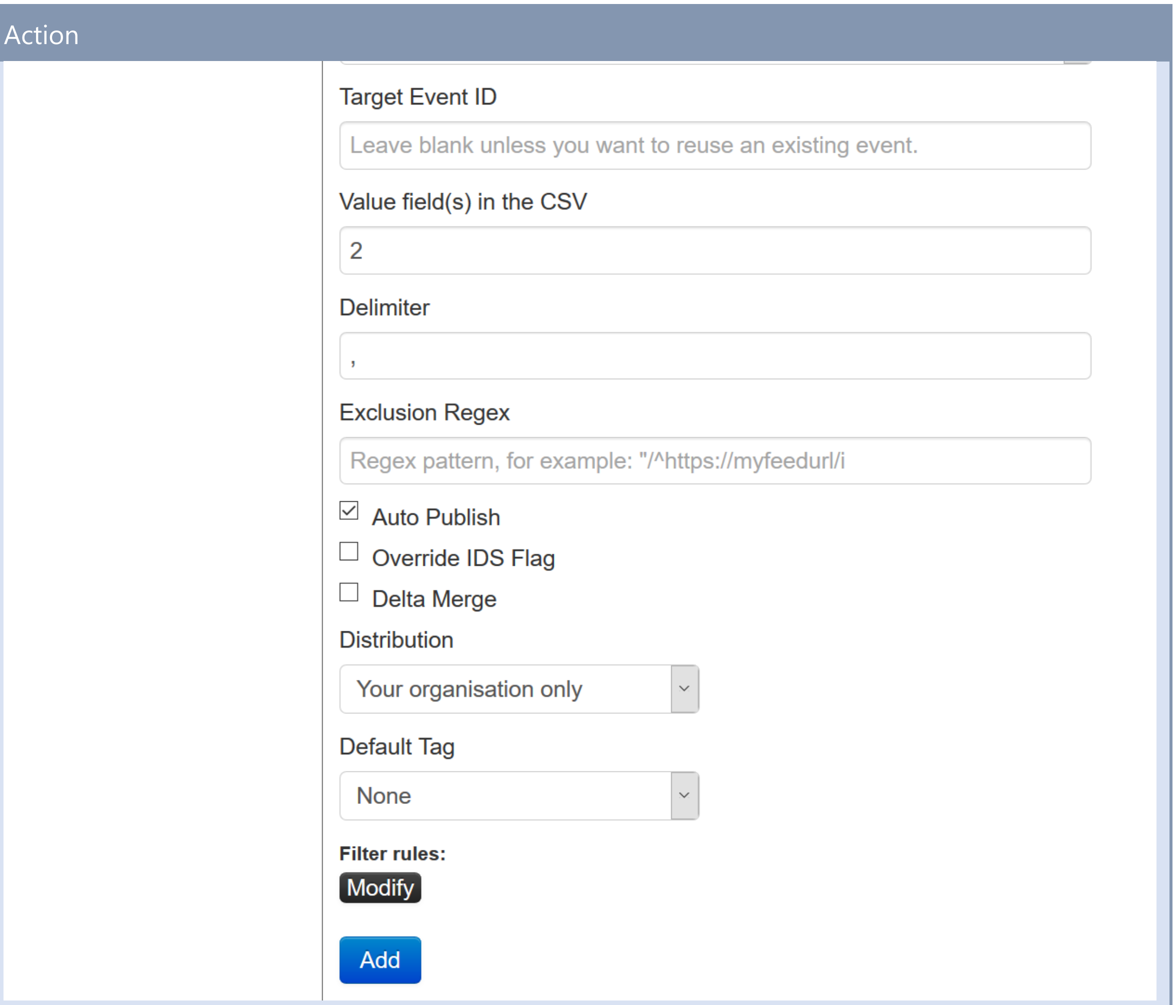
Source Format: Simple CSV Parsed Feed

Any headers to be passed with requests (for example: Authorization)

Line break separated list of headers in the "headername: value" format

Creator organisation: Team X

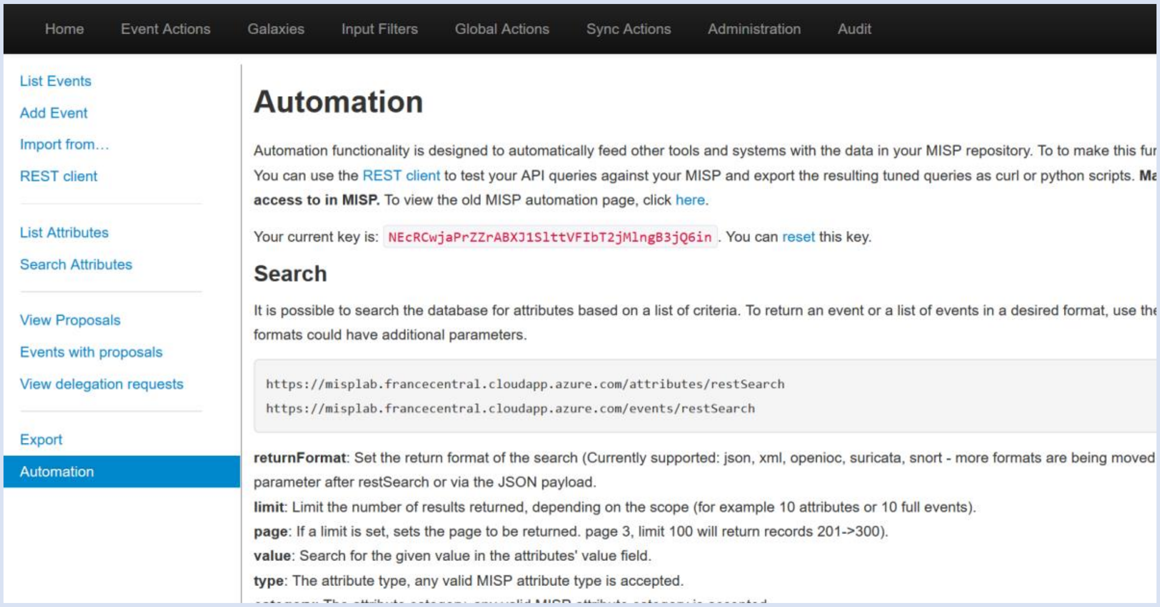
Target Event: Fixed Event

Step	Action
	 Target Event ID Leave blank unless you want to reuse an existing event. Value field(s) in the CSV 2 Delimiter , Exclusion Regex Regex pattern, for example: "/^https://myfeedurl/i ☑ Auto Publish □ Override IDS Flag □ Delta Merge Distribution Your organisation only Default Tag None **Filter rules:** Modify Add There are several other 3rd party feeds you may also want to enable and have available in your Sentinel workspace. Each of these will need to be enabled separately.
5.	The next step is to ensure that the feed is automatically updated. In the 'Scheduled Tasks' section of the Administration menu on the top set the fetch_feeds task frequency to 1h.

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>6.</td><td>

Retrieve your MISP auth key.

Within the MISP web interface click ‘Event Actions’ on the menu bar then select ‘Automation’. Your MISP auth key will be listed on the screen, note this down for entry into the script later.



Automation

Automation functionality is designed to automatically feed other tools and systems with the data in your MISP repository. To to make this fur

You can use the REST client to test your API queries against your MISP and export the resulting tuned queries as curl or python scripts. **Ma**

access to in MISP. To view the old MISP automation page, click here.

Your current key is: `NEcRCwjaPrZZrABXJ1SlttVFIbT2jMlngB3jQ6in`. You can reset this key.

Search

It is possible to search the database for attributes based on a list of criteria. To return an event or a list of events in a desired format, use the formats could have additional parameters.

```
https://misplab.francecentral.cloudapp.azure.com/attributes/restSearch
https://misplab.francecentral.cloudapp.azure.com/events/restSearch
```

returnFormat: Set the return format of the search (Currently supported: json, xml, openioc, suricata, snort - more formats are being moved parameter after restSearch or via the JSON payload.

limit: Limit the number of results returned, depending on the scope (for example 10 attributes or 10 full events).

page: If a limit is set, sets the page to be returned. page 3, limit 100 will return records 201->300).

value: Search for the given value in the attributes' value field.

type: The attribute type, any valid MISP attribute type is accepted.

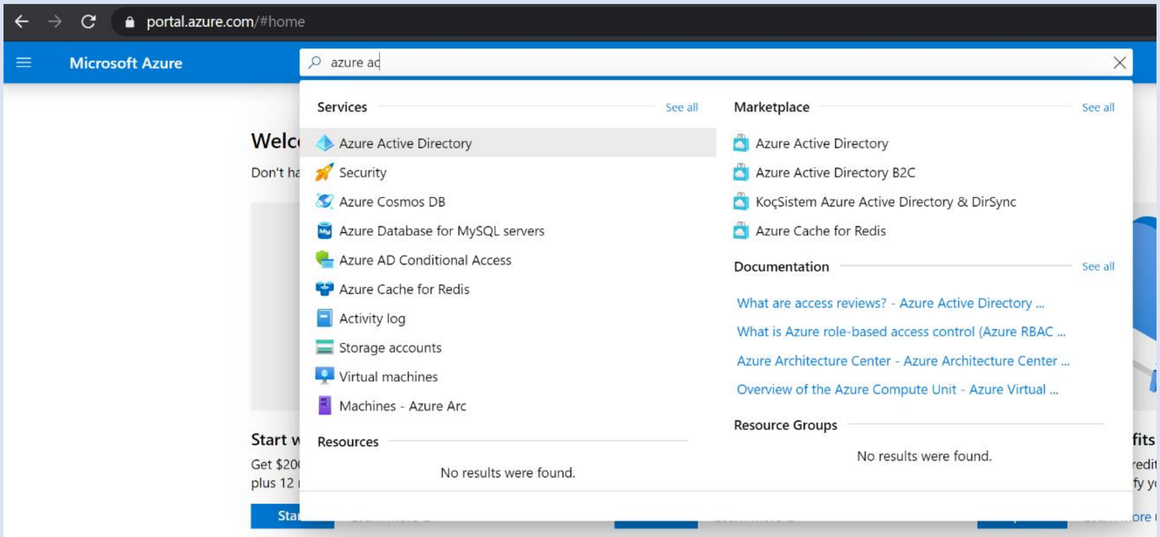
MISP Auth Key is the red string.

</td></tr>
</table>

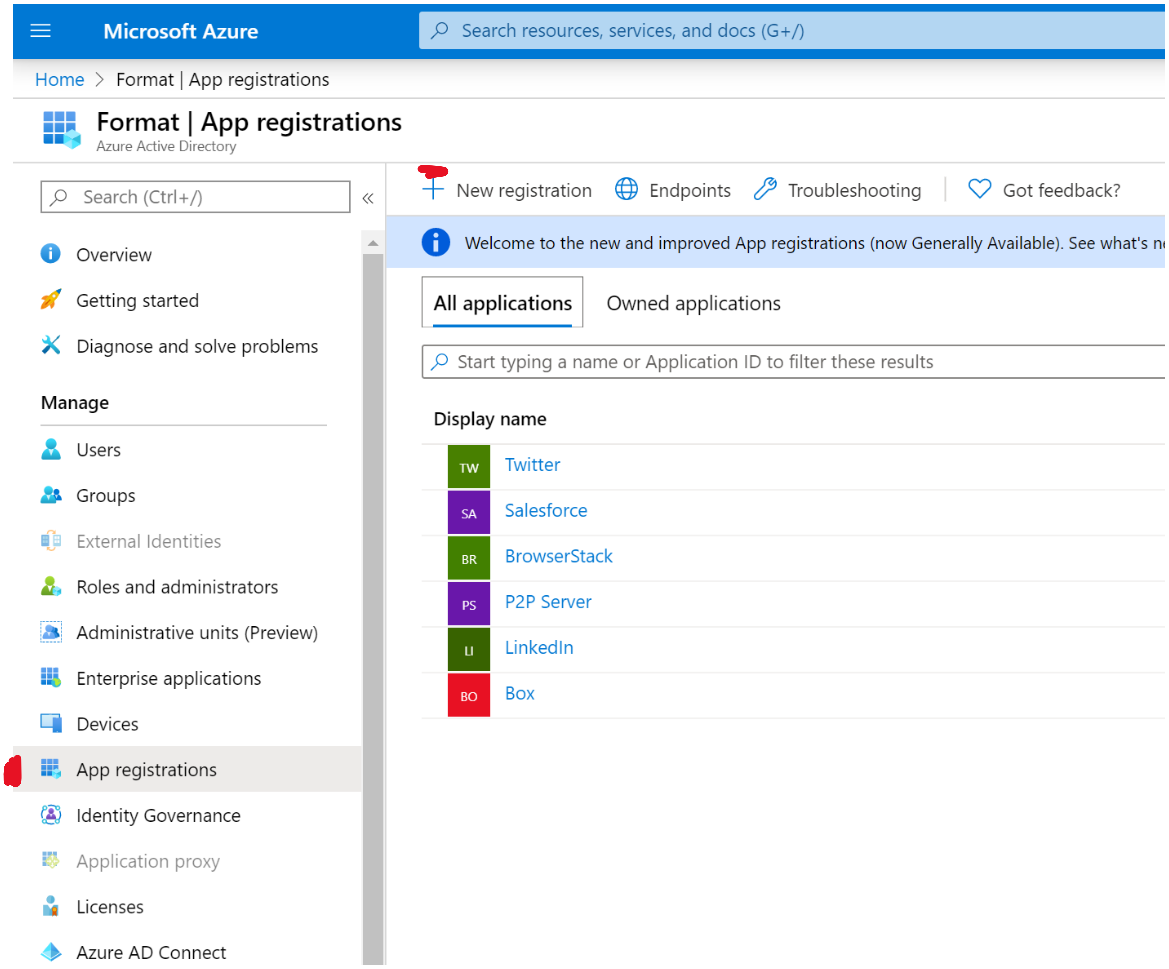
Task 2: Create an App Registration with the required permissions

<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1.</td><td>Login on https://portal.azure.com with credentials provided</td></tr>
<tr><td>2.</td><td>

Search for Azure Active Directory service


portal.azure.com/#home
Microsoft Azure
azure ad
Services
See all
Azure Active Directory
Security
Azure Cosmos DB
Azure Database for MySQL servers
Azure AD Conditional Access
Azure Cache for Redis
Activity log
Storage accounts
Virtual machines
Machines - Azure Arc
Resources
No results were found.
Marketplace
See all
Azure Active Directory
Azure Active Directory B2C
KoçSistem Azure Active Directory & DirSync
Azure Cache for Redis
Documentation
See all
What are access reviews? - Azure Active Directory ...
What is Azure role-based access control (Azure RBAC ...
Azure Architecture Center - Azure Architecture Center ...
Overview of the Azure Compute Unit - Azure Virtual ...
Resource Groups
No results were found.

</td></tr>
</table>

Step	Action
3.	Create new app registration. Azure AD → App Registration → + New Registration 

Microsoft Azure

Search resources, services, and docs (G+/)

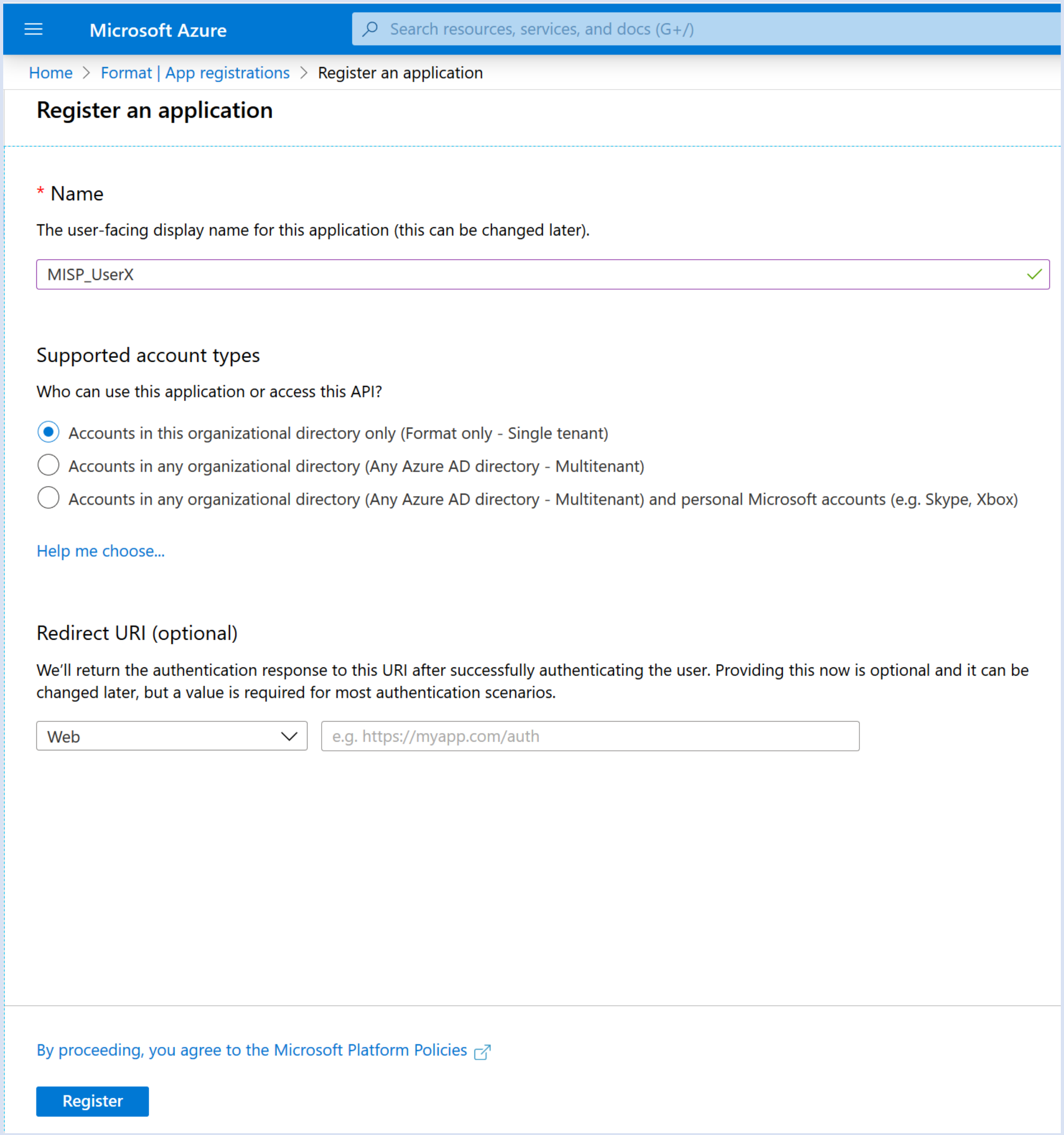
Home > Format | App registrations

Format | App registrations

Azure Active Directory

Welcome to the new and improved App registrations (now Generally Available). See what's n

	Display name
TW	Twitter
SA	Salesforce
BR	BrowserStack
PS	P2P Server
LI	LinkedIn
BO	Box

Step	Action
4.	Insert Name: “**MISP_UserX**”, select “Accounts in this organizational directory only (Format only - Single tenant)” and click Register 

Microsoft Azure
Search resources, services, and docs (G+/)
Home > Format | App registrations > Register an application

Register an application

* Name

The user-facing display name for this application (this can be changed later).

MISP_UserX ✓

Supported account types

Who can use this application or access this API?

● Accounts in this organizational directory only (Format only - Single tenant)
○ Accounts in any organizational directory (Any Azure AD directory - Multitenant)
○ Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)

Help me choose...

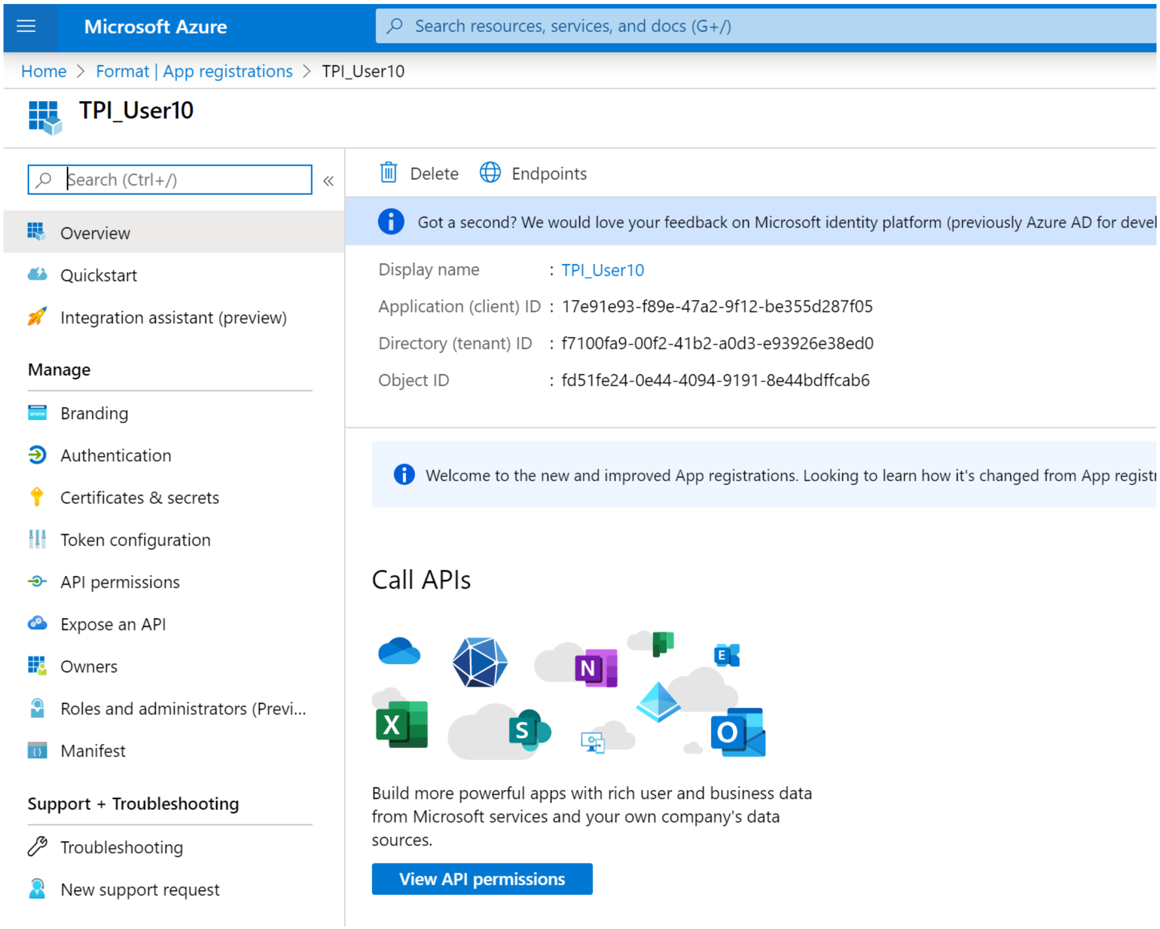
Redirect URI (optional)

We'll return the authentication response to this URI after successfully authenticating the user. Providing this now is optional and it can be changed later, but a value is required for most authentication scenarios.

Web | e.g. https://myapp.com/auth

By proceeding, you agree to the Microsoft Platform Policies

Step	Action
5.	take note of Application ID and Tenant ID



Got a second? We would love your feedback on Microsoft identity platform (previously Azure AD for devel

Display name : TPI_User10

Application (client) ID : 17e91e93-f89e-47a2-9f12-be355d287f05

Directory (tenant) ID : f7100fa9-00f2-41b2-a0d3-e93926e38ed0

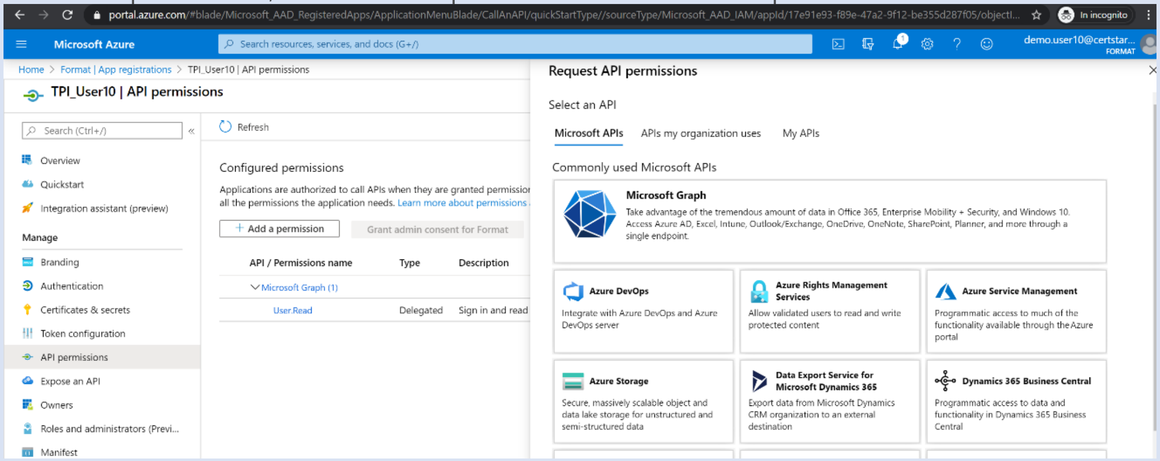
Object ID : fd51fe24-0e44-4094-9191-8e44bdffcab6

Welcome to the new and improved App registrations. Looking to learn how it's changed from App registr

Call APIs

Build more powerful apps with rich user and business data from Microsoft services and your own company's data sources.

Step	Action
6.	Under API permissions, choose Add a permission > Microsoft Graph.


portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationMenuBlade/CallAnAPI/quickStartType//sourceType/Microsoft_AAD_IAM/appId/17e91e93-f89e-47a2-9f12-be355d287f05/objectI...
In incognito
Microsoft Azure
Search resources, services, and docs (G+/)
demo.user10@certstar...
FORMAT
Home > Format | App registrations > TPI_User10 | API permissions
TPI_User10 | API permissions
Search (Ctrl+/)
Overview
Quickstart
Integration assistant (preview)
Manage
Branding
Authentication
Certificates & secrets
Token configuration
API permissions
Expose an API
Owners
Roles and administrators (Previ...
Manifest
Refresh
+ Add a permission
Grant admin consent for Format
Request API permissions
Select an API
Microsoft APIs
APIs my organization uses
My APIs

Configured permissions

Applications are authorized to call APIs when they are granted permissio all the permissions the application needs. Learn more about permissions

API / Permissions name	Type	Description
Microsoft Graph (1)		
User.Read	Delegated	Sign in and read

Commonly used Microsoft APIs

Microsoft Graph
Take advantage of the tremendous amount of data in Office 365, Enterprise Mobility + Security, and Windows 10. Access Azure AD, Excel, Intune, Outlook/Exchange, OneDrive, OneNote, SharePoint, Planner, and more through a single endpoint.

Azure DevOps
Integrate with Azure DevOps and Azure DevOps server

Azure Rights Management Services
Allow validated users to read and write protected content

Azure Service Management
Programmatic access to much of the functionality available through the Azure portal

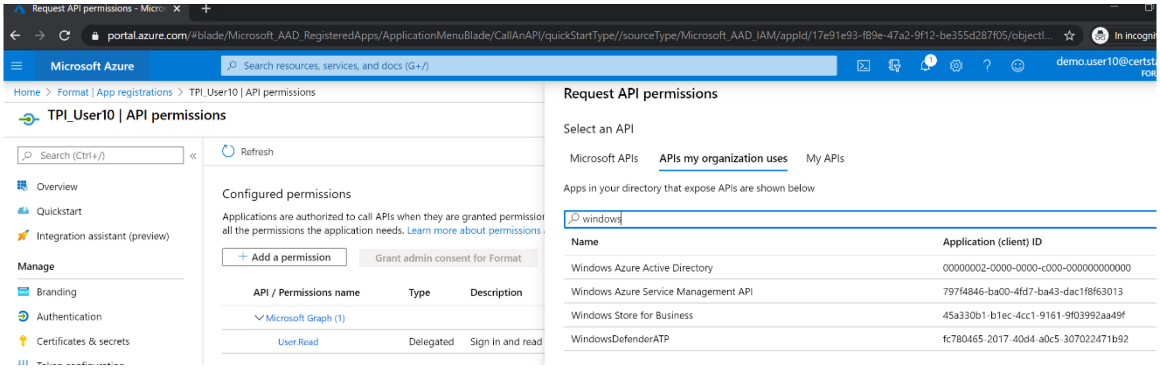
Azure Storage
Secure, massively scalable object and data lake storage for unstructured and semi-structured data

Data Export Service for Microsoft Dynamics 365
Export data from Microsoft Dynamics CRM organization to an external destination

Dynamics 365 Business Central
Programmatic access to data and functionality in Dynamics 365 Business Central

Step	Action

7. Search anc click on “WindowsDefenderATP”



Request API permissions - Micro
portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationMenuBlade/CallAnAPI/quickStartType//sourceType/Microsoft_AAD_IAM/appId/17e91e93-f89e-47a2-9f12-be355d287f05/objectI...
In incogni
Microsoft Azure
Search resources, services, and docs (G+/)
demo.user10@certst
FOR
Home > Format | App registrations > TPI_User10 | API permissions
Search (Ctrl+/)
Overview
Quickstart
Integration assistant (preview)
Manage
Branding
Authentication
Certificates & secrets
Refresh
Add a permission
Grant admin consent for Format

TPI_User10 | API permissions

Configured permissions

Applications are authorized to call APIs when they are granted permissio all the permissions the application needs. Learn more about permissions

API / Permissions name	Type	Description
Microsoft Graph (1)		
User.Read	Delegated	Sign in and read

Request API permissions

Select an API

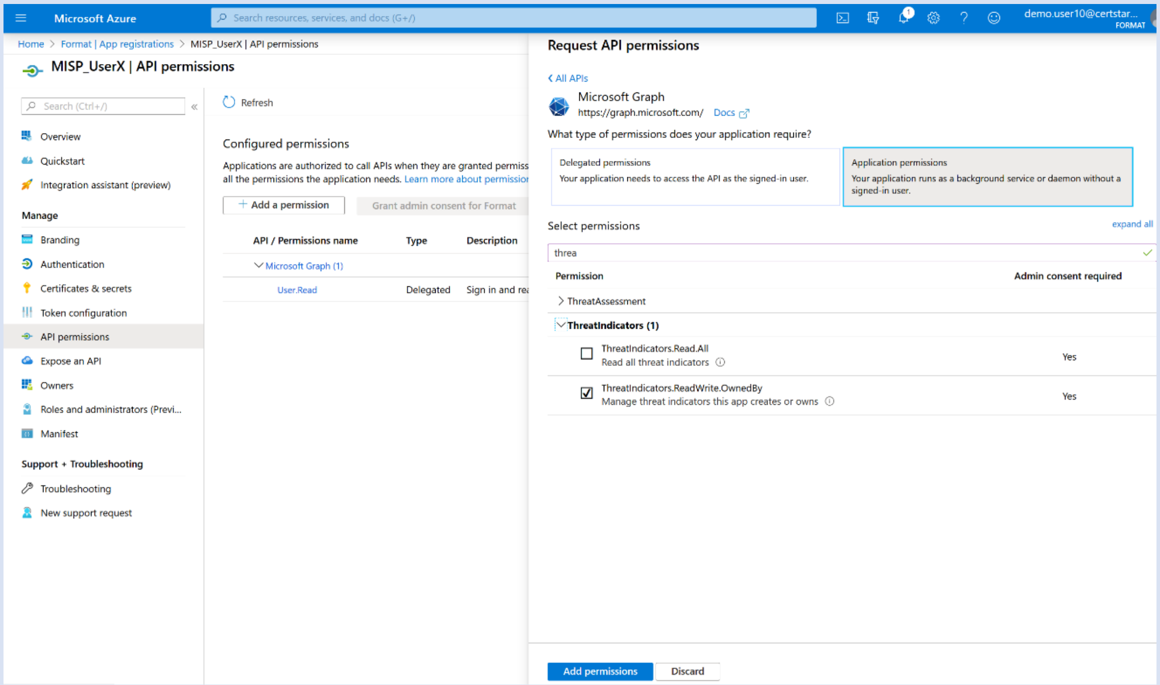
Microsoft APIs
APIs my organization uses
My APIs

Apps in your directory that expose APIs are shown below

windows

Name	Application (client) ID
Windows Azure Active Directory	00000002-0000-0000-c000-000000000000
Windows Azure Service Management API	797f4846-ba00-4fd7-ba43-dac1f8f63013
Windows Store for Business	45a330b1-b1ec-4cc1-9161-9f03992aa49f
WindowsDefenderATP	fc780465-2017-40d4-a0c5-307022471b92

8. Under Application Permissions, add **ThreatIndicators.ReadWrite.OwnedBy**.



MISP_UserX | API permissions

Configured permissions

Applications are authorized to call APIs when they are granted permiss all the permissions the application needs. Learn more about permissio

API / Permissions name	Type	Description
Microsoft Graph (1)		
User.Read	Delegated	Sign in and rea

Request API permissions

Microsoft Graph
https://graph.microsoft.com/

What type of permissions does your application require?

Delegated permissions
Your application needs to access the API as the signed-in user.

Application permissions
Your application runs as a background service or daemon without a signed-in user.

Select permissions

threa

Permission	Admin consent required
ThreatAssessment	
ThreatIndicators (1)	
□ ThreatIndicators.Read.All Read all threat indicators	Yes
☑ ThreatIndicators.ReadWrite.OwnedBy Manage threat indicators this app creates or owns	Yes

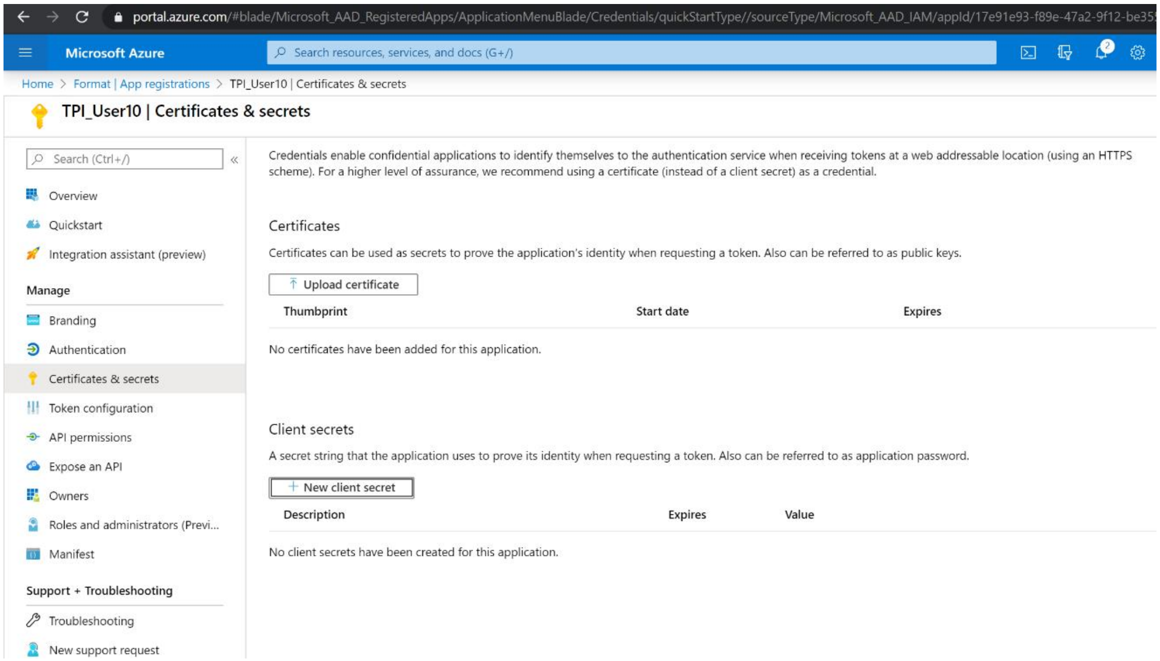
9. Note message: “You are editing permission(s) to your application, users will have to consent even if they’ve already done so previously.”

That means Global Admin consent is required

10. **Send message on General Teams channel with your Team Name asking for consent.**

Tutors will apply Consent to you App Registration

Step	Action
11	Create a new client secret in "Certificate" & Secrets"


portal.azure.com/#blade/Microsoft_AAD_RegisteredApps/ApplicationMenuBlade/Credentials/quickStartType//sourceType/Microsoft_AAD_IAM/appId/17e91e93-f89e-47a2-9f12-be35
Microsoft Azure
Search resources, services, and docs (G+/)
Home > Format | App registrations > TPI_User10 | Certificates & secrets
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Branding
Authentication
Certificates & secrets
Token configuration
API permissions
Expose an API
Owners
Roles and administrators (Previ...
Manifest
Support + Troubleshooting
Troubleshooting
New support request
Upload certificate
New client secret

TPI_User10 | Certificates & secrets

Credentials enable confidential applications to identify themselves to the authentication service when receiving tokens at a web addressable location (using an HTTPS scheme). For a higher level of assurance, we recommend using a certificate (instead of a client secret) as a credential.

Certificates

Certificates can be used as secrets to prove the application's identity when requesting a token. Also can be referred to as public keys.

Thumbprint	Start date	Expires

No certificates have been added for this application.

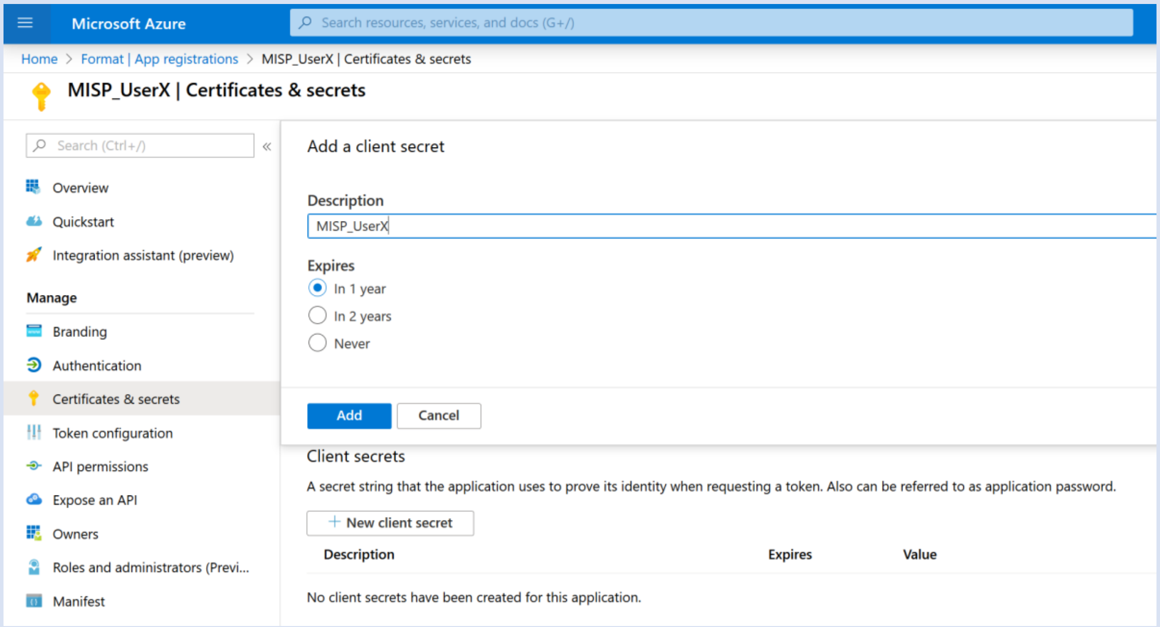
Client secrets

A secret string that the application uses to prove its identity when requesting a token. Also can be referred to as application password.

Description	Expires	Value

No client secrets have been created for this application.

Step	Action
12	Click "+ New client secret" → Add Description "MISP_UserX", Select 1 year and click Add



MISP_UserX | Certificates & secrets

Add a client secret

Description: MISP_UserX

Expires

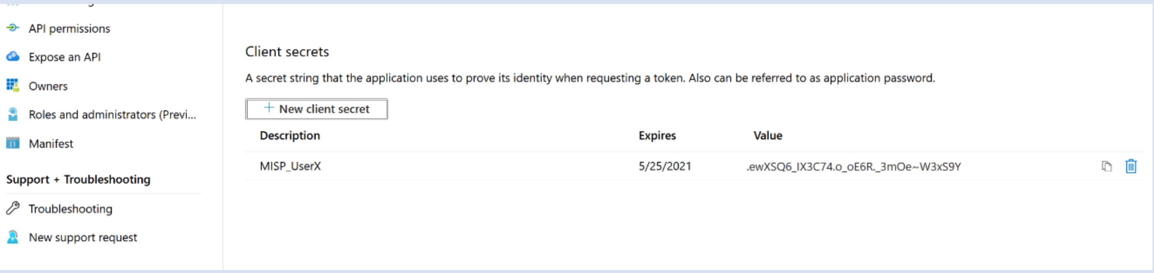
● In 1 year
○ In 2 years
○ Never

Client secrets

A secret string that the application uses to prove its identity when requesting a token. Also can be referred to as application password.

Description	Expires	Value

No client secrets have been created for this application.



Client secrets

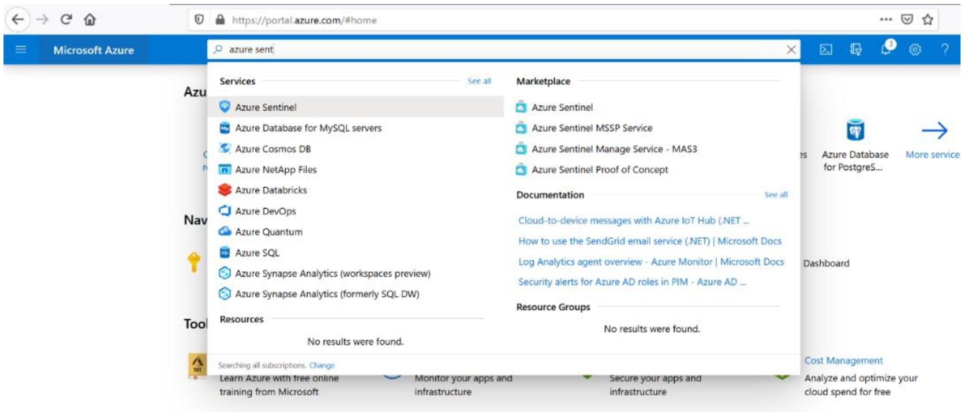
A secret string that the application uses to prove its identity when requesting a token. Also can be referred to as application password.

Description	Expires	Value
MISP_UserX	5/25/2021	.ewXSQ6_IX3C74.o_oE6R._3mOe~W3xS9Y

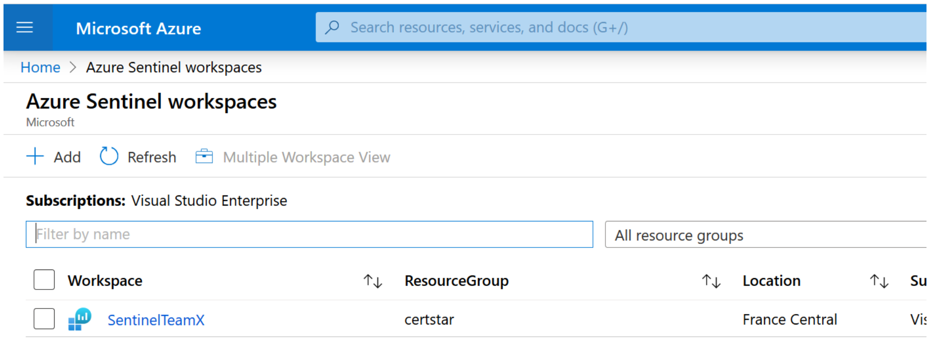
Step	Action
13	Copy Value on your text editor.

Task 3: Enable Azure Sentinel Connector

Step	Action
1.	Login on https://portal.azure.com with credentials provided and open your Azure Sentinel


https://portal.azure.com/#home
Microsoft Azure
azure sent
Services
See all
Azure Sentinel
Azure Database for MySQL servers
Azure Cosmos DB
Azure NetApp Files
Azure Databricks
Azure DevOps
Azure Quantum
Azure SQL
Azure Synapse Analytics (workspaces preview)
Azure Synapse Analytics (formerly SQL DW)
Resources
No results were found.
Searching all subscriptions. Change
Marketplace
Azure Sentinel
Azure Sentinel MSSP Service
Azure Sentinel Manage Service - MAS3
Azure Sentinel Proof of Concept
Documentation
See all
Cloud-to-device messages with Azure IoT Hub (.NET ...
How to use the SendGrid email service (.NET) | Microsoft Docs
Log Analytics agent overview - Azure Monitor | Microsoft Docs
Security alerts for Azure AD roles in PIM - Azure AD ...
Resource Groups
No results were found.
Azure Database for PostgreS...
More service
Dashboard
Cost Management
Analyze and optimize your cloud spend for free
Learn Azure with free online training from Microsoft
Monitor your apps and infrastructure
Secure your apps and infrastructure

- Select your workspace → SentinelTeamX


Microsoft Azure
Search resources, services, and docs (G+/)
Home > Azure Sentinel workspaces
Azure Sentinel workspaces
Microsoft
+ Add
Refresh
Multiple Workspace View

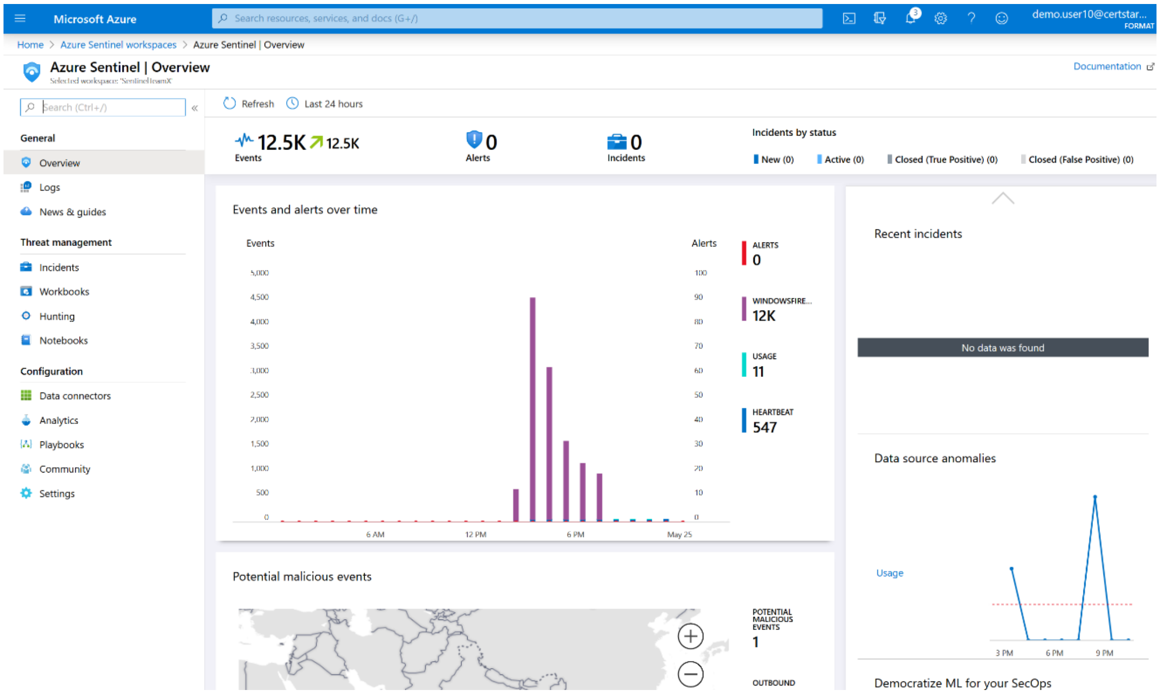
Subscriptions: Visual Studio Enterprise

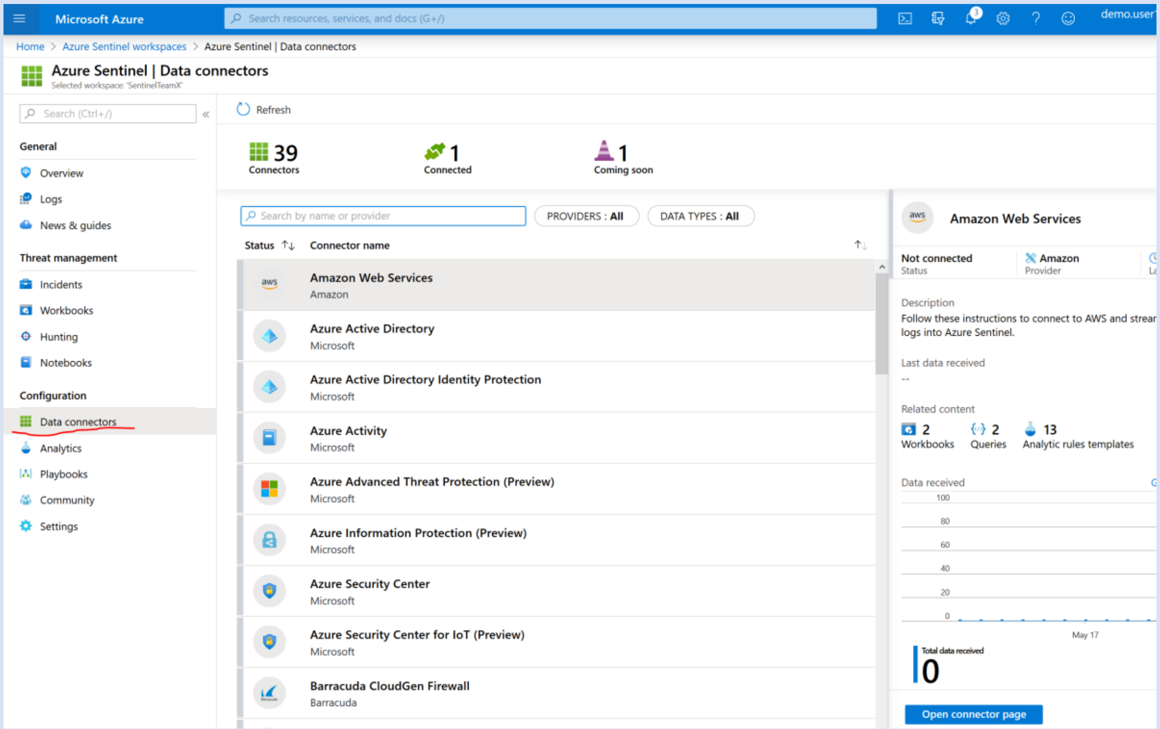
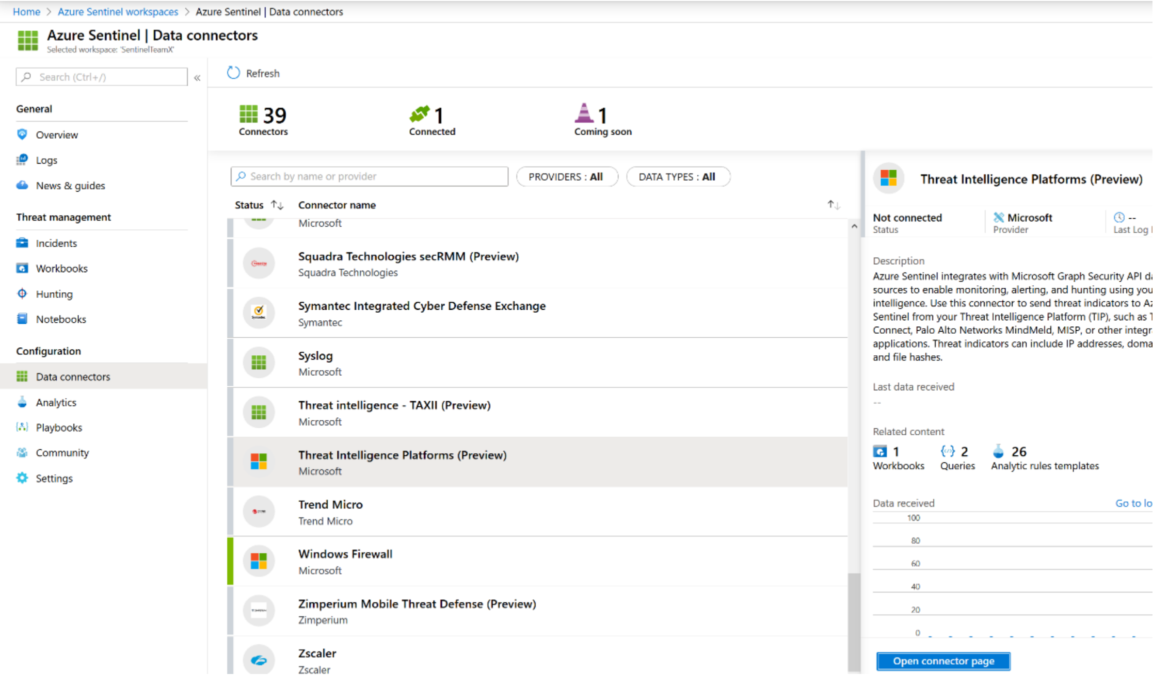
Filter by name

All resource groups

	Workspace	ResourceGroup	Location	Su
□	SentinelTeamX	certstar	France Central	Vis

-



Step	Action
2.	Click on Data Connector 
3.	click 'Data connectors' and then look for the 'Threat Intelligence Platforms' connection. Open the connector 

Connector name	Provider
Amazon Web Services	Amazon
Azure Active Directory	Microsoft
Azure Active Directory Identity Protection	Microsoft
Azure Activity	Microsoft
Azure Advanced Threat Protection (Preview)	Microsoft
Azure Information Protection (Preview)	Microsoft
Azure Security Center	Microsoft
Azure Security Center for IoT (Preview)	Microsoft
Barracuda CloudGen Firewall	Barracuda

Amazon Web Services

Not connected Status · Amazon Provider

Description
Follow these instructions to connect to AWS and strear logs into Azure Sentinel.

Last data received
--

Related content
2 Workbooks · 2 Queries · 13 Analytic rules templates

Data received: 100, 80, 60, 40, 20, 0 · May 17

Total data received 0

Connector name	Provider
	Microsoft
Squadra Technologies secRMM (Preview)	Squadra Technologies
Symantec Integrated Cyber Defense Exchange	Symantec
Syslog	Microsoft
Threat intelligence - TAXII (Preview)	Microsoft
Threat Intelligence Platforms (Preview)	Microsoft
Trend Micro	Trend Micro
Windows Firewall	Microsoft
Zimperium Mobile Threat Defense (Preview)	Zimperium
Zscaler	Zscaler

Threat Intelligence Platforms (Preview)

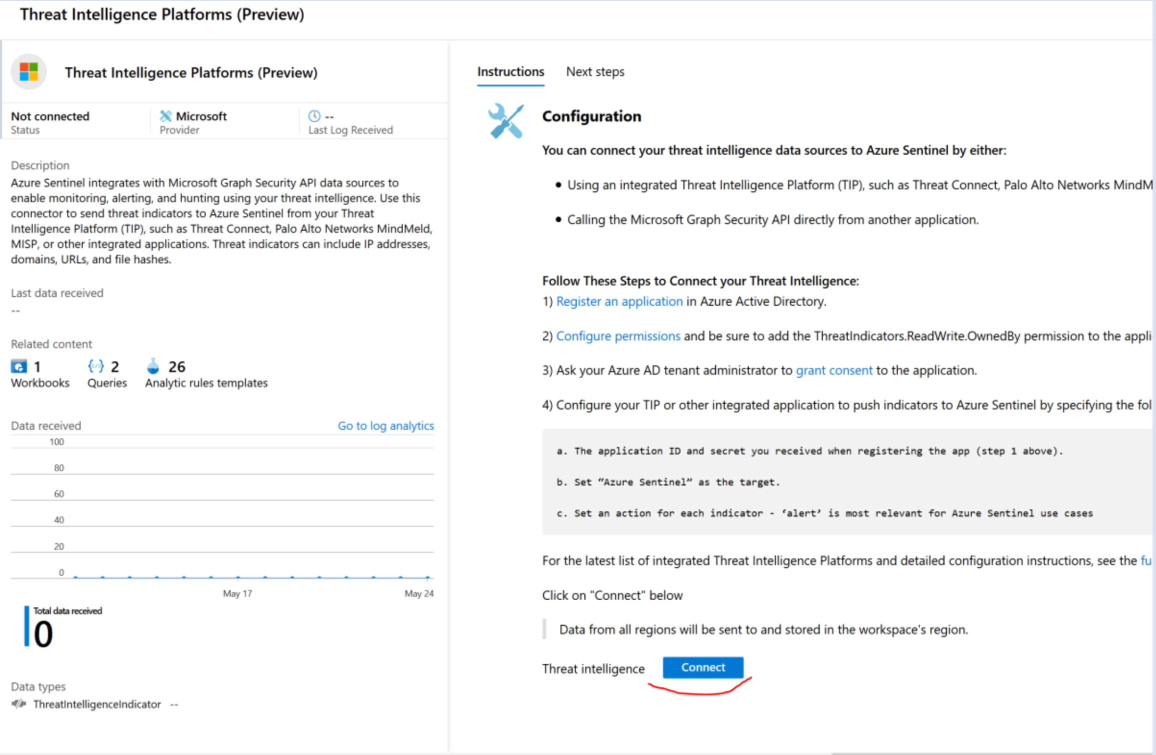
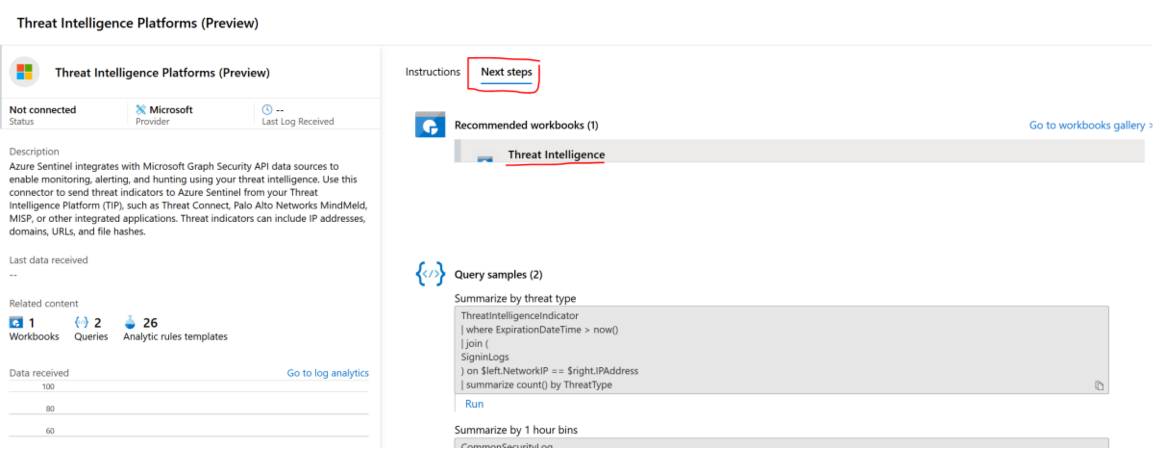
Not connected Status · Microsoft Provider · -- Last Log

Description
Azure Sentinel integrates with Microsoft Graph Security API d sources to enable monitoring, alerting, and hunting using you intelligence. Use this connector to send threat indicators to A Sentinel from your Threat Intelligence Platform (TIP), such as T Connect, Palo Alto Networks MindMeld, MISP, or other integr applications. Threat indicators can include IP addresses, doma and file hashes.

Last data received
--

Related content
1 Workbooks · 2 Queries · 26 Analytic rules templates

Data received · Go to lo
100, 80, 60, 40, 20, 0

Step	Action
4.	Click "Connect" 
5.	Click "Next Steps" →"Threat Intelligence" under Recommended workbooks 

Step 4 screenshot:

Threat Intelligence Platforms (Preview)

Threat Intelligence Platforms (Preview)

Not connected Status | **Microsoft** Provider | -- Last Log Received

Description
Azure Sentinel integrates with Microsoft Graph Security API data sources to enable monitoring, alerting, and hunting using your threat intelligence. Use this connector to send threat indicators to Azure Sentinel from your Threat Intelligence Platform (TIP), such as Threat Connect, Palo Alto Networks MindMeld, MISP, or other integrated applications. Threat indicators can include IP addresses, domains, URLs, and file hashes.

Last data received
--

Related content
1 Workbooks · 2 Queries · 26 Analytic rules templates

Data received · Go to log analytics

Total data received
0

Data types
ThreatIntelligenceIndicator --

Instructions · Next steps

Configuration

You can connect your threat intelligence data sources to Azure Sentinel by either:

- Using an integrated Threat Intelligence Platform (TIP), such as Threat Connect, Palo Alto Networks MindM
- Calling the Microsoft Graph Security API directly from another application.

Follow These Steps to Connect your Threat Intelligence:
1) Register an application in Azure Active Directory.

2) Configure permissions and be sure to add the ThreatIndicators.ReadWrite.OwnedBy permission to the appli

3) Ask your Azure AD tenant administrator to grant consent to the application.

4) Configure your TIP or other integrated application to push indicators to Azure Sentinel by specifying the fol

```
a. The application ID and secret you received when registering the app (step 1 above).

b. Set "Azure Sentinel" as the target.

c. Set an action for each indicator - 'alert' is most relevant for Azure Sentinel use cases
```

For the latest list of integrated Threat Intelligence Platforms and detailed configuration instructions, see the fu

Click on "Connect" below

Data from all regions will be sent to and stored in the workspace's region.

Threat intelligence **Connect**

Step 5 screenshot:

Threat Intelligence Platforms (Preview)

Threat Intelligence Platforms (Preview)

Not connected Status | **Microsoft** Provider | -- Last Log Received

Description
Azure Sentinel integrates with Microsoft Graph Security API data sources to enable monitoring, alerting, and hunting using your threat intelligence. Use this connector to send threat indicators to Azure Sentinel from your Threat Intelligence Platform (TIP), such as Threat Connect, Palo Alto Networks MindMeld, MISP, or other integrated applications. Threat indicators can include IP addresses, domains, URLs, and file hashes.

Last data received
--

Related content
1 Workbooks · 2 Queries · 26 Analytic rules templates

Data received · Go to log analytics

Instructions · **Next steps**

Recommended workbooks (1) · Go to workbooks gallery ›

Threat Intelligence

Query samples (2)

Summarize by threat type

```
ThreatIntelligenceIndicator
| where ExpirationDateTime > now()
| join (
SigninLogs
) on $left.NetworkIP == $right.IPAddress
| summarize count() by ThreatType
```

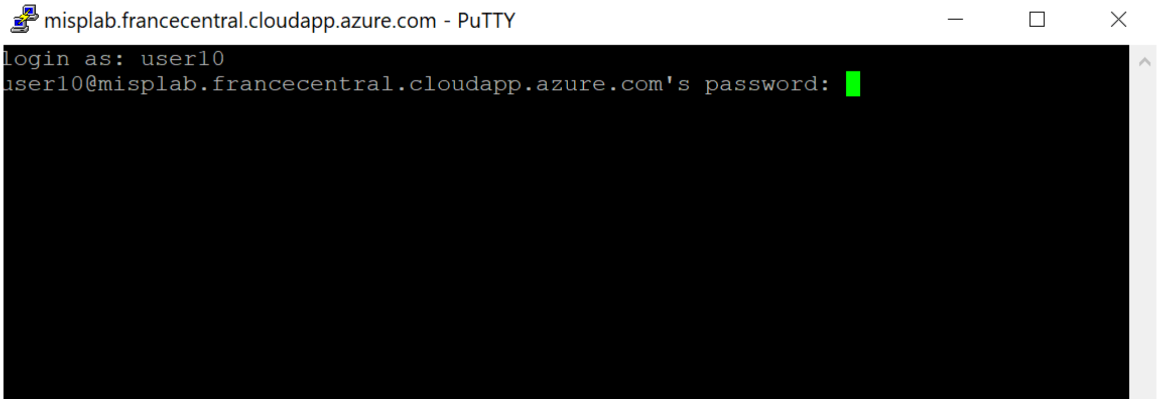
Run

Summarize by 1 hour bins

```
CommonSecurityLog
```

Task 4: Setup the script

Step	Action
6.	Using putty (or your preferred SSH client) logon to: **misplab.francecentral.cloudapp.azure.com** using credential provided



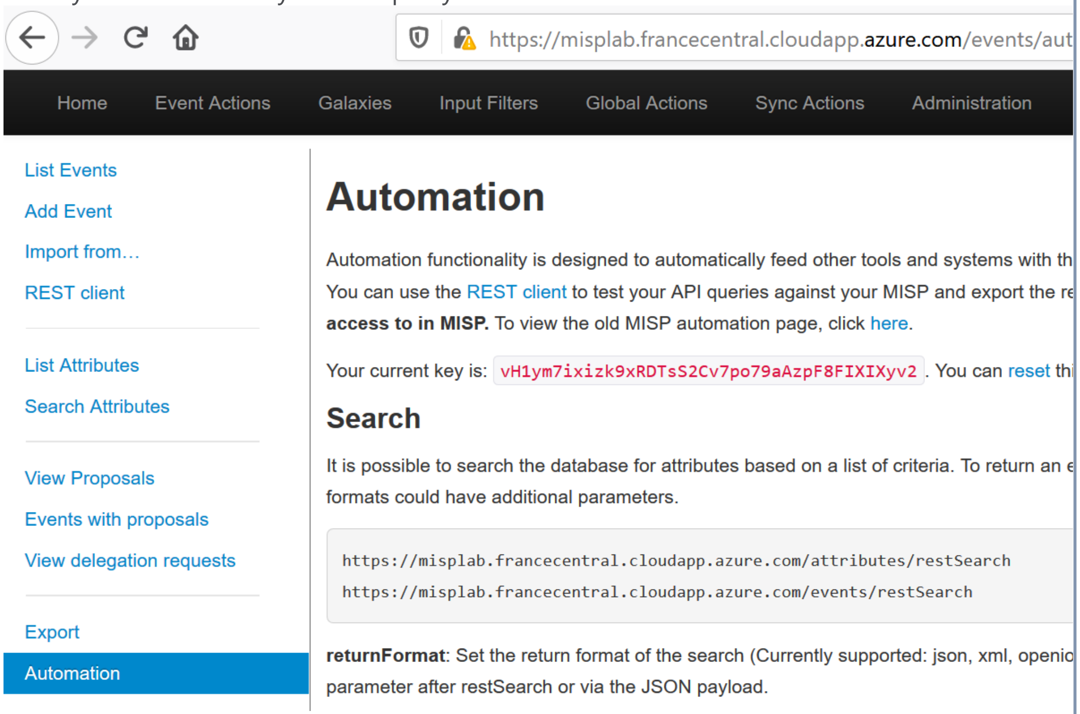
```
login as: user10
user10@misplab.francecentral.cloudapp.azure.com's password:
```

Step	Action
7.	Enter the following commands. These will create an environment for the script to run, download it from GitHub, install the necessary prerequisites and open the configuration file.

```
sudo apt-get install python3-venv
python3 -m venv mispToSentinel
cd mispToSentinel
source bin/activate
git clone https://github.com/microsoftgraph/security-api-solutions
cd security-api-solutions/Samples/MISP/
pip install -r requirements.txt
nano config.py
```

Step	Action
8.	There are a few options that need to be changed in the configuration file:

- Under the graph_auth key enter the details from the AAD App Registration earlier.
- Set the '<targetProduct>' to be 'Azure Sentinel'.
- I added a # comment at the start of each line in the misp_event_filters section to effectively disable any filtering, all data from the MISP server will be available in Sentinel.
- Set '<action>' to 'alert'.
- Enter you MISP auth key in '<misp key>→ MISP GUI →Event Action →Automation



Automation

Automation functionality is designed to automatically feed other tools and systems with th
You can use the REST client to test your API queries against your MISP and export the re
access to in MISP. To view the old MISP automation page, click here.

Your current key is: `vH1ym7ixizk9xRDTsS2Cv7po79aAzpF8FIXIXyv2`. You can reset thi

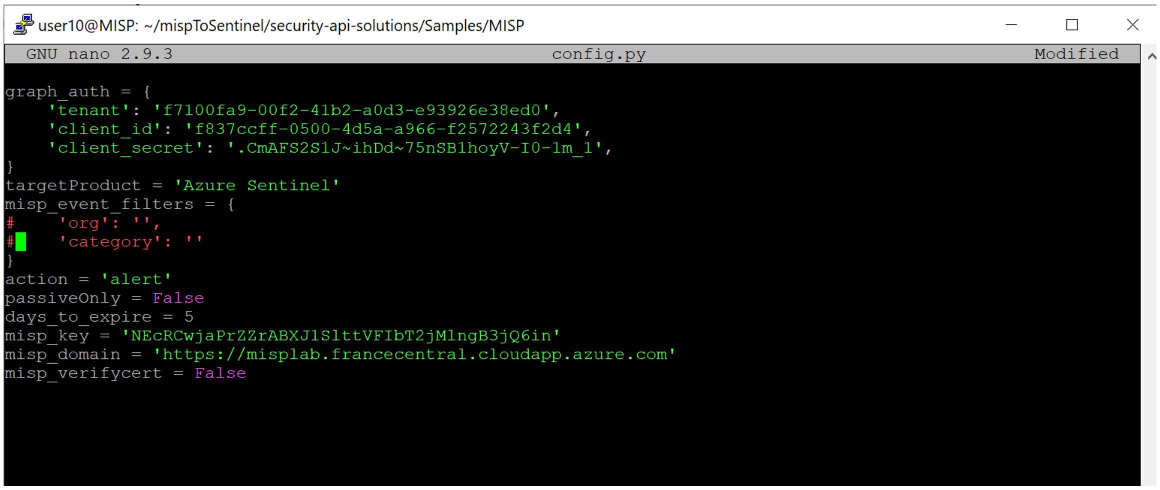
Search

It is possible to search the database for attributes based on a list of criteria. To return an e
formats could have additional parameters.

```
https://misplab.francecentral.cloudapp.azure.com/attributes/restSearch
https://misplab.francecentral.cloudapp.azure.com/events/restSearch
```

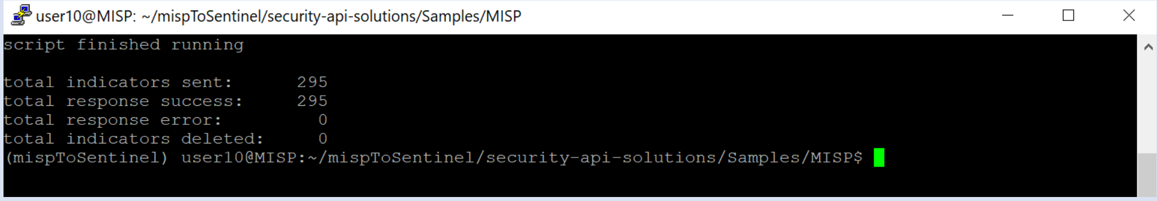
returnFormat: Set the return format of the search (Currently supported: json, xml, openio
parameter after restSearch or via the JSON payload.

-
- Enter MISP URL in '<misp url>= https://misplab.francecentral.cloudapp.azure.com'.
- Finally set the lifetime for this data, I would recommend 30-60 days depending on your use case.


user10@MISP: ~/mispToSentinel/security-api-solutions/Samples/MISP

```
  GNU nano 2.9.3                          config.py                          Modified

graph_auth = {
    'tenant': 'f7100fa9-00f2-41b2-a0d3-e93926e38ed0',
    'client_id': 'f837ccff-0500-4d5a-a966-f2572243f2d4',
    'client_secret': '.CmAFS2S1J~ihDd~75nSB1hoyV-I0-1m_1',
}
targetProduct = 'Azure Sentinel'
misp_event_filters = {
#     'org': '',
#     'category': ''
}
action = 'alert'
passiveOnly = False
days_to_expire = 5
misp_key = 'NEcRCwjaPrZZrABXJ1SlttVFIbT2jMlngB3jQ6in'
misp_domain = 'https://misplab.francecentral.cloudapp.azure.com'
misp_verifycert = False
```

Ctrl + X → Yes

Step	Action
9.	You can now run the script to pull data from the MISP instance and push into your Sentinel workspace.
	`python script.py`
	

```
python script.py
```

user10@MISP: ~/mispToSentinel/security-api-solutions/Samples/MISP

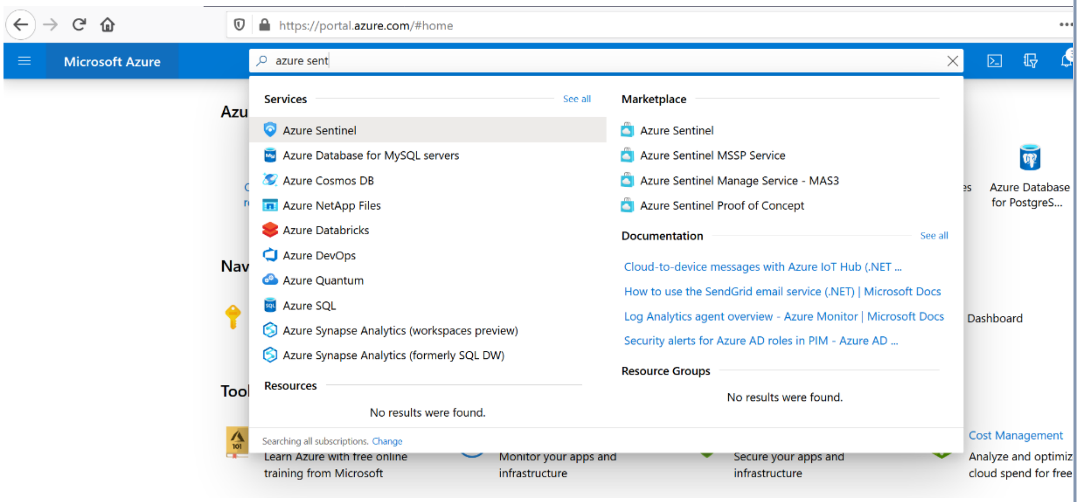
```
script finished running

total indicators sent:      295
total response success:     295
total response error:         0
total indicators deleted:     0
(mispToSentinel) user10@MISP:~/mispToSentinel/security-api-solutions/Samples/MISP$
```

Task 5: Use the data

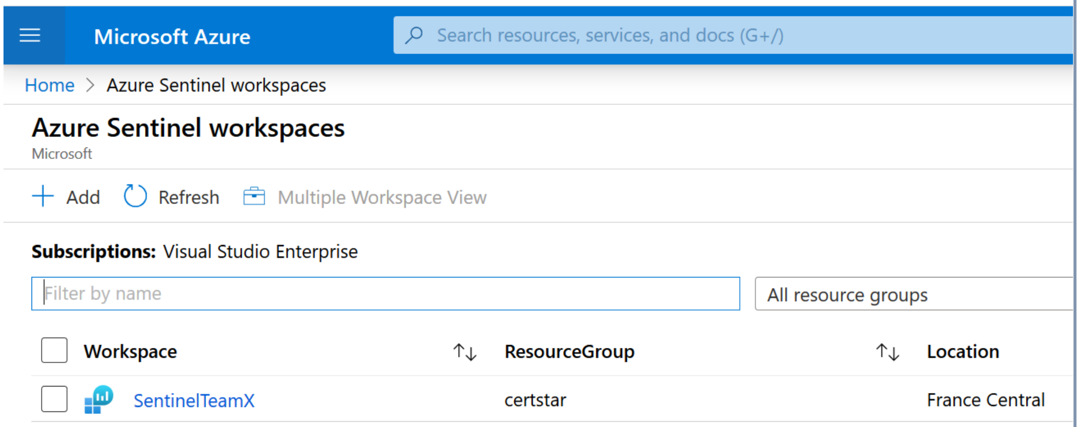
<table>
<tr><th>Step</th><th>Action</th></tr>
<tr><td>1.</td><td>

Login on https://portal.azure.com with credentials provided and open your Azure Sentinel Workspace.

- https://portal.azure.com
- Search for “Azure Sentinel”


https://portal.azure.com/#home
Microsoft Azure
azure sent
Services
See all
Azure Sentinel
Azure Database for MySQL servers
Azure Cosmos DB
Azure NetApp Files
Azure Databricks
Azure DevOps
Azure Quantum
Azure SQL
Azure Synapse Analytics (workspaces preview)
Azure Synapse Analytics (formerly SQL DW)
Resources
No results were found.
Marketplace
Azure Sentinel
Azure Sentinel MSSP Service
Azure Sentinel Manage Service - MAS3
Azure Sentinel Proof of Concept
Documentation
See all
Cloud-to-device messages with Azure IoT Hub (.NET ...
How to use the SendGrid email service (.NET) | Microsoft Docs
Log Analytics agent overview - Azure Monitor | Microsoft Docs
Security alerts for Azure AD roles in PIM - Azure AD ...
Resource Groups
No results were found.
Searching all subscriptions. Change
Azure Database for PostgreS...
Dashboard
Cost Management
Analyze and optimiz cloud spend for free
Learn Azure with free online training from Microsoft
Monitor your apps and infrastructure
Secure your apps and infrastructure

- Select your workspace → SentinelTeamX



Azure Sentinel workspaces
Microsoft

Subscriptions: Visual Studio Enterprise

	Workspace	ResourceGroup	Location
□	SentinelTeamX	certstar	France Central

</td></tr>
<tr><td>2.</td><td>

After a few minutes you should be able to query the ThreatIntelligenceIndicator table in your Sentinel workspace.

Click on “Logs” section and type search:

```
ThreatIntelligenceIndicator
| count
```

</td></tr>
</table>

.

Authors

The following authors contributed to the creation of this deliverable.

Antonio Formato Antonio.Formato@Microsoft.com	Technical Specialist Security & Compliance	https://www.linkedin.com/in/antonioformato/
Rebecca Travasi Rebecca.Travasi@microsoft.com	Technical Specialist Security & Compliance	https://www.linkedin.com/in/rebeccatravasi/

References

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- https://docs.microsoft.com/en-us/azure/sentinel/connect-threat-intelligence
- https://github.com/format81/CERTStarLAB
- https://github.com/microsoftgraph/security-api-solutions/tree/master/Samples/MISP
- https://raw.githubusercontent.com/Azure/Azure-Sentinel/master/Sample%20Data/Feeds/Microsoft.Covid19.Indicators.csv
- https://www.microsoft.com/security/blog/2020/05/14/open-sourcing-covid-threat-intelligence/
- https://www.paloaltonetworks.com/products/secure-the-network/subscriptions/minemeld
- https://live.paloaltonetworks.com/t5/minemeld/ct-p/MineMeld
- https://github.com/PaloAltoNetworks/minemeld/wiki
- https://www.misp-project.org/
- https://github.com/MISP/MISP
- https://github.com/CyberSaiyanIT/InfoSharing
- https://github.com/microsoftgraph/security-api-solutions/tree/master/Samples/MISP