



Hunting for accumulations of sensitive data with Content Search and Defender for Cloud Apps

CollabDays Bremen 2025

Tatu Seppälä



★ Data security
★ Insider risk
Power Platform
Governance
IAM / Entra ID
Generative AI



The Digital
Neighborhood



Tatu Seppälä
Security & Compliance Architect



Microsoft®
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Topics

- › Why do we need to discover accumulations?
- › **Demo!** **High-level discovery:** Content Search
- › **Demo!** **Targeted discovery:** Defender for Cloud Apps
- › Putting your findings to work
- › RBAC, governance and other considerations



More data is being created than ever

Stale data is almost never purged

Ungoverned sensitive data accumulates

→ Perpetual & unsustainable risk



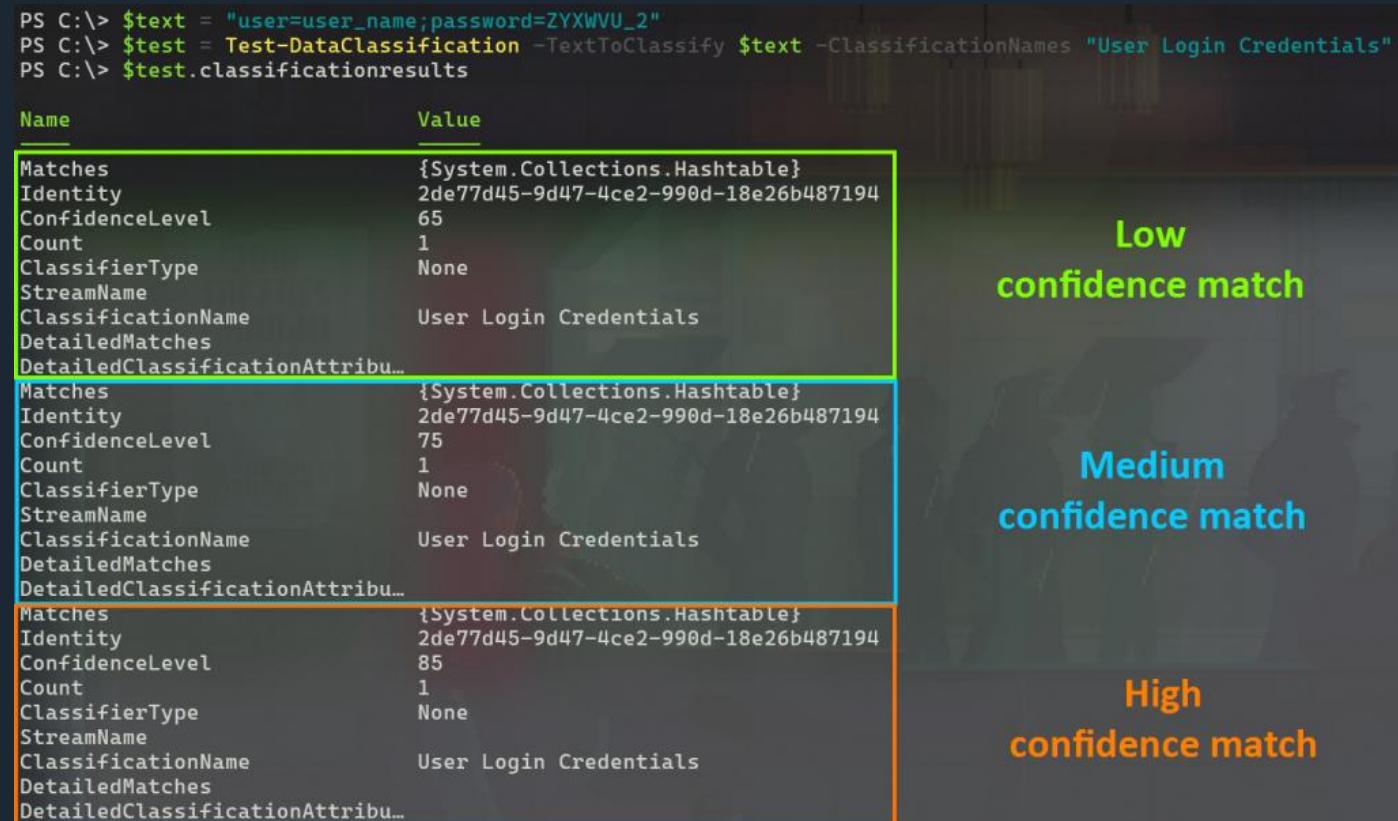
Why?

- › Data leak & breach risk
- › Data governance and quality
- › Compliance (laws & regulations)
- › Copilot for Microsoft 365 considerations



Understand SIT confidence levels

- › To get the most out of Content Search & MDA File Policies, you need to understand SIT confidence levels & scoring
- › Purview under the hood: Classifier confidence scoring, rule packs and the inconsistency of bundled SITs – Seppala365.cloud



```
PS C:\> $text = "user=user_name;password=ZYXWVU_2"
PS C:\> $test = Test-DataClassification -TextToClassify $text -ClassificationNames "User Login Credentials"
PS C:\> $test.classificationresults
```

Name	Value
Matches	{System.Collections.Hashtable}
Identity	2de77d45-9d47-4ce2-990d-18e26b487194
ConfidenceLevel	65
Count	1
ClassifierType	None
StreamName	
ClassificationName	User Login Credentials
DetailedMatches	
DetailedClassificationAttribu...	
Matches	{System.Collections.Hashtable}
Identity	2de77d45-9d47-4ce2-990d-18e26b487194
ConfidenceLevel	75
Count	1
ClassifierType	None
StreamName	
ClassificationName	User Login Credentials
DetailedMatches	
DetailedClassificationAttribu...	
Matches	{System.Collections.Hashtable}
Identity	2de77d45-9d47-4ce2-990d-18e26b487194
ConfidenceLevel	85
Count	1
ClassifierType	None
StreamName	
ClassificationName	User Login Credentials
DetailedMatches	
DetailedClassificationAttribu...	

Low
confidence match

Medium
confidence match

High
confidence match



Sensitive information type entity definitions

Article • 02/08/2024 • 2 contributors

Feedback

This article is a list of all sensitive information type (SIT) entity definitions. Each link takes you to the definition of that specific SIT and shows what a DLP policy looks for to detect each type. To learn more about sensitive information types, see [Sensitive information types](#).



Note

Mapping of confidence level (high/medium/low) with accuracy number (numeric value of 1 to 100)

- Low confidence: 65 or below
- Medium confidence: 75
- High confidence: 85

- ABA routing number
- All credentials
- All full names
- All medical terms and conditions
- All Physical Addresses
- Amazon S3 Client Secret Access Key
- Argentina national identity (DNI) number
- Argentina Unique Tax Identification Key (CUIT/CUIL)
- ASP.NET machine Key
- Australia bank account number
- Australia business number
- Australia company number
- Australia drivers license number
- Australia medical account number
- Australia passport number
- Australia physical addresses
- Australia tax file number
- Austria drivers license number
- Austria identity card
- Austria passport number
- Austria physical addresses
- Austria social security number
- Austria tax identification number

Where to start?

- Look through Microsoft's list of built-in Sensitive Information Types (SITs) and pick out the relevant ones
- You can programmatically get a list of SITs with full metadata with the Security & Compliance PowerShell command:

`Get-DlpSensitiveEntityType`



High-level accumulation discovery with..

Content Search



High-level discovery

Content Search

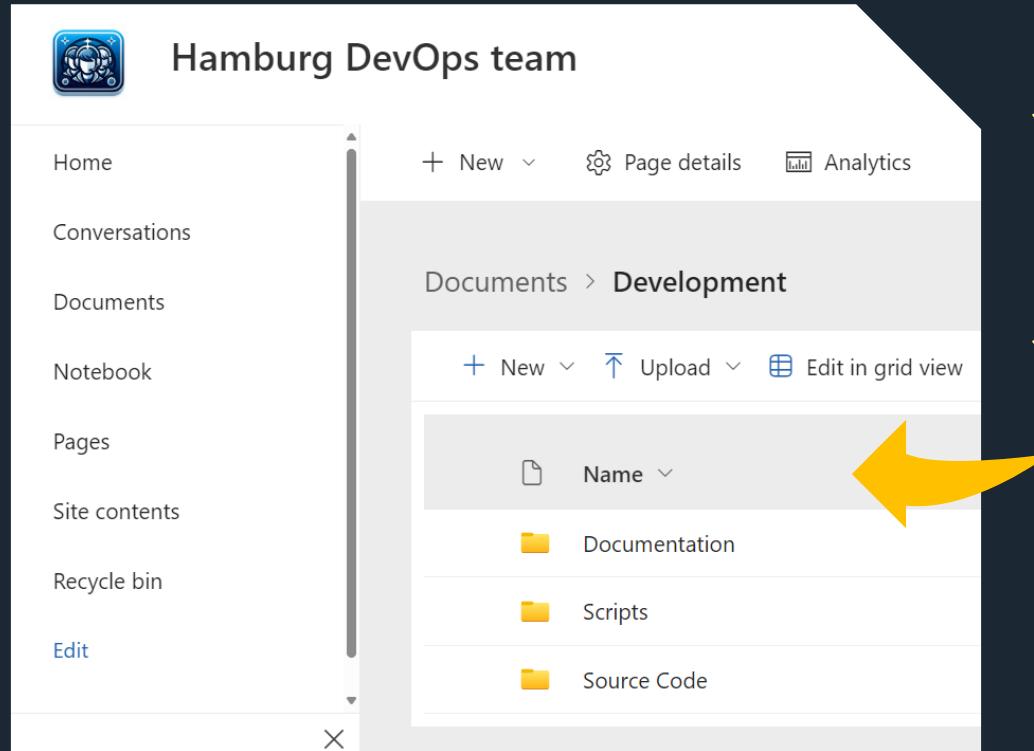
- › Rapidly identify top accumulations in  
- › Searching by SITs doesn't work with email!
- › You need a bit of Keyword Query Language (KeyQL)
– *not KQL!*
- › Built-in and custom Sensitive Info Types are supported
- › You can filter for stale and/or externally shared docs + more..





Content Search: common use cases

Find **sites** with many documents containing any # of SIT matches



For example:

- › An e-commerce department's SharePoint site with order forms containing customer credit card numbers
- › An IT or dev team's site with configuration files that include credentials like server passwords and API keys



Content Search: common use cases

Find **sites** with many documents containing any # of SIT matches

KeyQL

SensitiveType:"Credit card number|*|85..."

Sensitive Information Type

Required number
of matches

Required
confidence score
(0-100)



Content Search: common use cases

Find individual documents..

- ..with **many** sensitive info type matches
- ..with **medium** confidence

Employee 1

- Name: Hans Müller
- Employee ID: 001
- Email: hans.mueller@example.com
- Phone: (040) 123-4567
- **Passport number: 5959JJNLC2**
- Department: Marketing
- Job Title: Senior Marketing Manager
- **Address: Mönckebergstraße 123, Hamburg, 20095**

Employee 2

- Name: Anna Schmidt
- Employee ID: 002
- Email: anna.schmidt@example.com



For example:

- An employee database export containing multiple instances of personal data
- A configuration file with numerous occurrences of API keys and access tokens for various services



Content Search: common use cases

Find individual documents..

- ..with **many** sensitive info type matches
- ..with **medium** confidence

KeyQL

```
SensitiveType:"Credit card number|10..|75.."
```



Content Search: common use cases

Find accumulations of **stale** sensitive information (esp. personal data)

For example:

- › Archived HR site with old employee records containing national ID numbers
- › HR specialists' OneDrive sites w/ departed employees' PII data
- › Legacy internal corporate travel arrangements site with outdated travel documents containing passport numbers.



Content Search: common use cases

Find accumulations of **stale** sensitive information (esp. personal data)

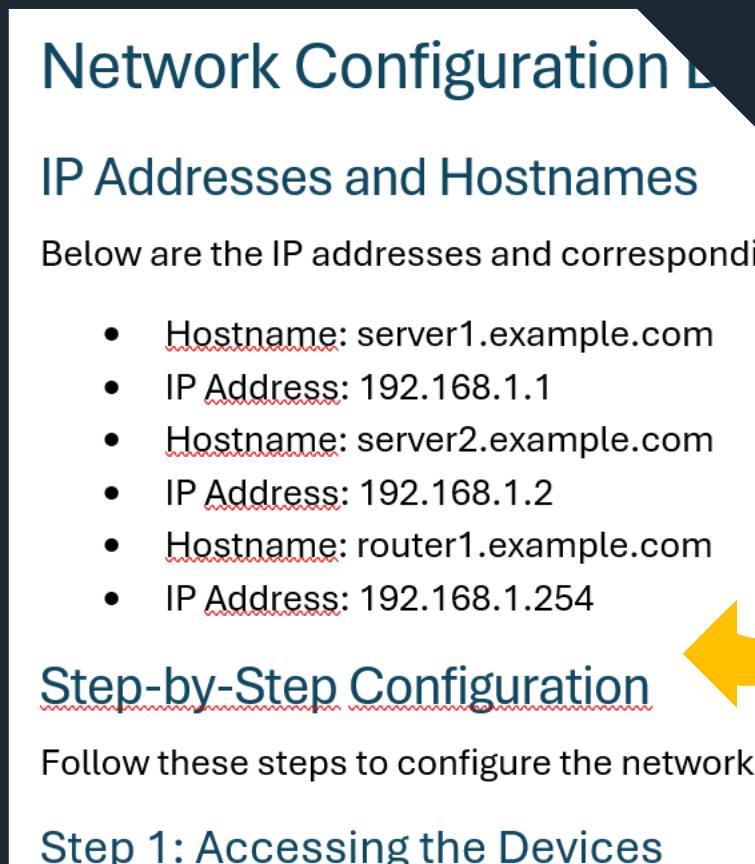
KeyQL

```
SensitiveType:"Germany Identity Card Number|*|85.."  
AND LastModifiedTime>=2023-12-31
```



Content Search: common use cases

Find accumulations of **externally shared** sensitive information



Network Configuration

IP Addresses and Hostnames

Below are the IP addresses and corresponding hostnames for the network devices:

- Hostname: server1.example.com
- IP Address: 192.168.1.1
- Hostname: server2.example.com
- IP Address: 192.168.1.2
- Hostname: router1.example.com
- IP Address: 192.168.1.254

Step-by-Step Configuration

Follow these steps to configure the network:

Step 1: Accessing the Devices

For example:

- › A financial report shared with an external auditor containing multiple IBAN numbers for vendor payments
- › Solution documentation shared with and worked on by vendors containing internal server hostnames along with IP addresses



Content Search: common use cases

Find accumulations of **externally shared** sensitive information

KeyQL

```
SensitiveType:"User Login Credentials|*|85.."  
AND ViewableByExternalUsers:true
```



Content Search: search tips

You can look for many types of sensitive information in a single query.

Max query length = 4000 characters

👉 Good for credentials, passport numbers, national IDs & more..

```
SensitiveType:"Azure SQL Connection String|*|85.."  
KeyQL OR SensitiveType:"Client Secret / Api Key|*|85.."  
OR SensitiveType:"User Login Credentials|*|85.."
```



Content Search: search tips

Standardize your search naming convention & orchestrate with the Security & Compliance PowerShell!

New-ComplianceSearch

```
-Name "Discovery / Credit card numbers / High confidence"  
-SharePointLocation "All"  
-Description "Discovery search: Credit card numbers / High  
confidence"  
-ContentMatchQuery 'SensitiveType:"Credit Card Number|*|85.."'
```



Content Search: search tips

Standardize your search naming convention & orchestrate with the Security & Compliance PowerShell!

```
# Run or rerun all created credential content searches  
Get-ComplianceSearch  
| Where-Object {$_.name -like "Discovery / Credentials*"}  
| Start-ComplianceSearch
```



```

1 # SIT: Amazon S3 Client Secret Access Key
2 New-ComplianceSearch -Name "Discovery / Credentials: Amazon S3 Client Secret Access Key / High confidence" -SharePointLocation "All" -Description "Discovery search: Amazon S3 Client Secret Access Key / High confidence." -ContentMatchQuery 'SensitiveType:"Amazon S3 Client Secret Access Key|*|85.."' 
3
4 # SIT: ASP.NET Machine Key
5 New-ComplianceSearch -Name "Discovery / Credentials: ASP.NET Machine Key / High confidence" -SharePointLocation "All" -Description "Discovery search: ASP.NET Machine Key / High confidence." -ContentMatchQuery 'SensitiveType:"ASP.NET Machine Key|*|85.."' 
6
7 # SIT: Azure AD Client Access Token
8 New-ComplianceSearch -Name "Discovery / Credentials: Azure AD Client Access Token / High confidence" -SharePointLocation "All" -Description "Discovery search: Azure AD Client Access Token / High confidence." -ContentMatchQuery 'SensitiveType:"Azure AD Client Access Token|*|85.."' 
9
10 # SIT: Azure AD Client Secret
11 New-ComplianceSearch -Name "Discovery / Credentials: Azure AD Client Secret / High confidence" -SharePointLocation "All" -Description "Discovery search: Azure AD Client Secret / High confidence." -ContentMatchQuery 'SensitiveType:"Azure AD Client Secret|*|85.."' 
12
13 # SIT: Azure AD User Credentials
14 New-ComplianceSearch -Name "Discovery / Credentials: Azure AD User Credentials / High confidence" -SharePointLocation "All" -Description "Discovery search: Azure AD User Credentials / High confidence." -ContentMatchQuery 'SensitiveType:"Azure AD User Credentials|*|85.."' 
15
16 # SIT: Azure App Service Deployment Password
17 New-ComplianceSearch -Name "Discovery / Credentials: Azure App Service Deployment Password / High confidence" -SharePointLocation "All" -Description "Discovery search: Azure App Service Deployment Password / High confidence." -ContentMatchQuery 'SensitiveType:"Azure App Service Deployment Password|*|85.."' 
18
19 # SIT: Azure Batch Shared Access Key
20 New-ComplianceSearch -Name "Discovery / Credentials: Azure Batch Shared Access Key / High confidence" -SharePointLocation "All" -Description "Discovery search: Azure Batch Shared Access Key / High confidence." -ContentMatchQuery 'SensitiveType:"Azure Batch Shared Access Key|*|85.."' 
21
22 # SIT: Azure Bot Framework Secret Key
23 New-ComplianceSearch -Name "Discovery / Credentials: Azure Bot Framework Secret Key / High confidence" -SharePointLocation "All" -Description "Discovery search: Azure Bot Framework Secret Key / High confidence." -ContentMatchQuery 'SensitiveType:"Azure Bot Framework Secret Key|*|85.."' 
24
25 # SIT: Azure Bot Service App Secret
26 New-ComplianceSearch -Name "Discovery / Credentials: Azure Bot Service App Secret / High confidence" -SharePointLocation "All" -Description "Discovery search: Azure Bot Service App Secret / High confidence." -ContentMatchQuery 'SensitiveType:"Azure Bot Service App Secret|*|85.."' 
27

```

Content search

Search your organization for content in emails, documents, Skype for Business conversations, and more. You can

Search Export

+ New search  Refresh

Name	Status
<input type="checkbox"/> Discovery / Credentials: Amazon S3 Client Secret Access Key / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: ASP.NET Machine Key / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure AD Client Access Token / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure AD Client Secret / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure AD User Credentials / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure App Service Deployment Password / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure Batch Shared Access Key / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure Bot Framework Secret Key / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure Bot Service App Secret / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure Cognitive Search API Key / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure Cognitive Service Key / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure Container Registry Access Key / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure COSMOS DB Account Access Key / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure Databricks Personal Access Token / High confidence	Completed
<input type="checkbox"/> Discovery / Credentials: Azure DevOps App Secret / High confidence	Completed

```

1 # SIT: Amazon S3 Client Secret Access
2 New-ComplianceSearch -Name "Discovery / Credentials: Amazon S3 Client Secret Access Key / High confidence" -SharePointLocation "All" -Description "Discovery search: Amazon S3 Client Secret Access Key / High confidence." -ContentMatchQuery 'SensitiveType:"Amazon S3 Client Secret Access Key"[*|85.."'
3
4 # SIT: ASP.NET Machine Key
5 New-ComplianceSearch -Name "Discovery / Credentials: ASP.NET Machine Key" -SharePointLocation "All" -Description "Discovery search: ASP.NET Machine Key" -ContentMatchQuery 'SensitiveType:"ASP.NET Machine Key"[*|85.."'
6
7 # SIT: Azure AD Client Access Token
8 New-ComplianceSearch -Name "Discovery / Credentials: Azure AD Client Access Token" -SharePointLocation "All" -Description "Discovery search: Azure AD Client Access Token" -ContentMatchQuery 'SensitiveType:"Azure AD Client Access Token"[*|85.."'
9
10 # SIT: Azure AD Client Secret
11 New-ComplianceSearch -Name "Discovery / Credentials: Azure AD Client Secret" -SharePointLocation "All" -Description "Discovery search: Azure AD Client Secret" -ContentMatchQuery 'SensitiveType:"Azure AD Client Secret"[*|85.."'
12
13 # SIT: Azure AD User Credentials
14 New-ComplianceSearch -Name "Discovery / Credentials: Azure AD User Credentials" -SharePointLocation "All" -Description "Discovery search: Azure AD User Credentials" -ContentMatchQuery 'SensitiveType:"Azure AD User Credentials"[*|85.."'
15
16 # SIT: Azure App Service Deployment Password
17 New-ComplianceSearch -Name "Discovery / Credentials: Azure App Service Deployment Password" -SharePointLocation "All" -Description "Discovery search: Azure App Service Deployment Password" -ContentMatchQuery 'SensitiveType:"Azure App Service Deployment Password"[*|85.."'
18
19 # SIT: Azure Batch Shared Access Key
20 New-ComplianceSearch -Name "Discovery / Credentials: Azure Batch Shared Access Key" -SharePointLocation "All" -Description "Discovery search: Azure Batch Shared Access Key" -ContentMatchQuery 'SensitiveType:"Azure Batch Shared Access Key"[*|85.."'
21
22 # SIT: Azure Bot Framework Secret Key
23 New-ComplianceSearch -Name "Discovery / Credentials: Azure Bot Framework Secret Key" -SharePointLocation "All" -Description "Discovery search: Azure Bot Framework Secret Key" -ContentMatchQuery 'SensitiveType:"Azure Bot Framework Secret Key"[*|85.."'
24
25 # SIT: Azure Bot Service App Secret
26 New-ComplianceSearch -Name "Discovery / Credentials: Azure Bot Service App Secret / High confidence" -SharePointLocation "All" -Description "Discovery search: Azure Bot Service App Secret / High confidence" -ContentMatchQuery 'SensitiveType:"Azure Bot Service App Secret"[*|85.."'
27

```

Rapid setup script from my GitHub



Discovery / Credentials	Description	Status
Discovery / Credentials: Amazon S3 Client Secret Access Key / High confidence		Completed
Discovery / Credentials: ASP.NET Machine Key / High confidence		Completed
Discovery / Credentials: Azure AD Client Access Token / High confidence		Completed
Discovery / Credentials: Azure AD Client Secret / High confidence		Completed
Discovery / Credentials: Azure AD User Credentials / High confidence		Completed
Discovery / Credentials: Azure App Service Deployment Password / High confidence		Completed
Discovery / Credentials: Azure Batch Shared Access Key / High confidence		Completed
Discovery / Credentials: Azure Bot Framework Secret Key / High confidence		Completed
Discovery / Credentials: Azure Bot Service App Secret / High confidence		Completed
Discovery / Credentials: Azure Cognitive Search API Key / High confidence		Completed
Discovery / Credentials: Azure Cognitive Service Key / High confidence		Completed
Discovery / Credentials: Azure Container Registry Access Key / High confidence		Completed
Discovery / Credentials: OSMOS DB Account Access Key / High confidence		Completed
Discovery / Credentials: Azure Databricks Personal Access Token / High confidence		Completed
Discovery / Credentials: Azure DevOps App Secret / High confidence		Completed



Discovery / Credit card numbers / High confidence

Search content

Condition report

Top locations

[Download your top locations report.](#)

Location	Location type	Items	Size
https://seppala365.sharepoint.com/sites/Landingpad	SharePoint	5	0.09
 https://seppala365.sharepoint.com/sites/Marketsteam	SharePoint	4	0.07
https://seppala365-my.sharepoint.com/personal/adm-tatu_...	SharePoint	4	0.04
https://seppala365.sharepoint.com/sites/OfficeTeam	SharePoint	1	0.02
https://seppala365.sharepoint.com/sites/Onboarding-Welco...	SharePoint	1	0.02

Actions ▾

Review sample

Close

Discovery / Credit card numbers / High confidence samples

[Download list](#) [Refresh](#)

1 selected [Customize columns](#)

Subject/Title	Date	Sender/Author
<input type="checkbox"/> Examples-CreditCardNumbers (3)	Aug 26, 2024 11:43 AM	ADM Tatu Seppälä
<input type="checkbox"/> Examples-CreditCardNumbers (2)	Aug 26, 2024 11:43 AM	ADM Tatu Seppälä
<input type="checkbox"/> Examples-CreditCardNumbers (1)	Aug 26, 2024 11:43 AM	ADM Tatu Seppälä
<input checked="" type="checkbox"/> Examples-CreditCardNumbers	Aug 26, 2024 11:43 AM	ADM Tatu Seppälä
<input type="checkbox"/> Examples-CreditCardNumbers1_2C62287B-C157-4135-AFB...	Aug 21, 2024 9:43 PM	ADM Tatu Seppälä
<input type="checkbox"/> Examples-CreditCardNumbers1_E60069A5-411E-4FF3-9535...	Aug 21, 2024 9:40 PM	ADM Tatu Seppälä
<input type="checkbox"/> Dynamic token demonstration - SharePoint - Credit card n...	Aug 8, 2024 9:36 PM	ADM Tatu Seppälä
<input type="checkbox"/> Dynamic token demonstration - SharePoint - Credit card n...	Aug 8, 2024 9:35 PM	ADM Tatu Seppälä
<input type="checkbox"/> Dynamic token demonstration - SharePoint - Credit card n...	Aug 8, 2024 9:27 PM	ADM Tatu Seppälä
<input type="checkbox"/> Dynamic token demonstration - SharePoint - Credit card n...	Aug 8, 2024 9:25 PM	ADM Tatu Seppälä
<input type="checkbox"/> Dynamic token demonstration - SharePoint - Credit card n...	Aug 8, 2024 8:57 PM	ADM Tatu Seppälä
<input type="checkbox"/> token demonstration - SharePoint - Credit card numbers t...	Aug 8, 2024 6:54 PM	ADM Tatu Seppälä
<input type="checkbox"/> Dynamic token demonstration - OneDrive - Credit card nu...	Aug 7, 2024 9:39 PM	ADM Tatu Seppälä
<input type="checkbox"/> Examples-CreditCardNumbers	May 7, 2024 11:16 AM	ADM Tatu Seppälä
<input type="checkbox"/> Examples-CreditCardNumbers_39D95054-E4EA-48D6-B5C...	May 7, 2024 10:20 AM	ADM Tatu Seppälä
<input type="checkbox"/> Examples-CreditCardNumbers	May 7, 2024 10:20 AM	ADM Tatu Seppälä

Examples-CreditCardNumbers

Source

This document type is not supported by preview. Please [click here](#) to download a copy.

Discovery / PII / National IDs / Low to High confidence

Top locations

[Download your top locations report.](#)

Location	Location type	Items	Size
https://seppala365dev.sharepoint.com/sites/HRteam	SharePoint	12	0.25
https://seppala365dev.sharepoint.com/sites/C-levelteam	SharePoint	9	0.22
https://seppala365dev-my.sharepoint.com/personal/adm-ta...	SharePoint	6	0.1
https://seppala365dev-my.sharepoint.com/personal/tatu_se...	SharePoint	5	3.23
https://seppala365dev.sharepoint.com/sites/Valhalla	SharePoint	2	0.04
https://seppala365dev.sharepoint.com/sites/Seppala365	SharePoint	2	0.04

Actions ▾

Review sample

Close

	A	B
1	Row Labels	Sum of Items
2	SharePoint	
3	https://contoso.sharepoint.com/sites/Smart	
4	Financial IBAN High confidence	
5	PII Finland National IDs Medium to High confi	
6	PII Passport numbers Medium to High confi	
7	Credentials User Login Credentials High confi	
8	Credentials Client Secret Api Key High confi	
9	https://contoso.sharepoint.com/sites/Quan	
10	PII Finland National IDs Medium to High confi	
11	Financial IBAN High confidence	
12	PII Passport numbers Medium to High confi	
13	Credentials User Login Credentials High confi	
14	Any credentials Medium to High confidence	
15	Financial Credit card numbers High confidence	
16	https://contoso.sharepoint.com/sites/Tech	
17	Financial IBAN High confidence	
18	PII Finland National IDs Medium to High confi	
19	PII Passport numbers Medium to High confi	
20	Credentials General Password High confidence	
21	Credentials User Login Credentials High confi	
22	https://contoso.sharepoint.com/sites/InnovateHub	
23	Financial IBAN High confidence	
1	Row Labels	Sum of Items
2	SharePoint	12320
3	Financial IBAN High confidence	9644
4	PII Finland National IDs Medium to High confidence	2574
5	PII Passport numbers Medium to High confidence	31
6	Financial Credit card numbers High confidence	23
7	https://contoso.sharepoint.com/sites/InnovateHub	11
8	https://contoso.sharepoint.com/sites/TechPioneers	4
9	https://contoso.sharepoint.com/sites/DigitalDynamics	2
10	https://contoso.sharepoint.com/sites/QuantumLeap	1
11	https://contoso.sharepoint.com/sites/NextGenTech	1
12	https://contoso.sharepoint.com/sites/CyberSolutions	1
13	https://contoso.sharepoint.com/teams/ITSupportTeam	1
14	https://contoso.sharepoint.com/sites/CodeMasters	1
15	https://contoso.sharepoint.com/sites/ByteBuilders	1
16	Any credentials Medium to High confidence	19
17	Credentials User Login Credentials High confidence	18
18	Credentials General Password High confidence	10
19	Credentials Client Secret Api Key High confidence	1
20	Grand Total	12320
21	1258	
22	1137	
23		8365

More granular insights from..

Defender for Cloud Apps

File Policies





Targeted discovery

Defender for Cloud Apps

File Policies help reinforce **specific weaknesses** of Content Search

Files matching all of the following

App equals 30 selected

Sensitivity label Microsoft Information Protection does not equal

Add a filter

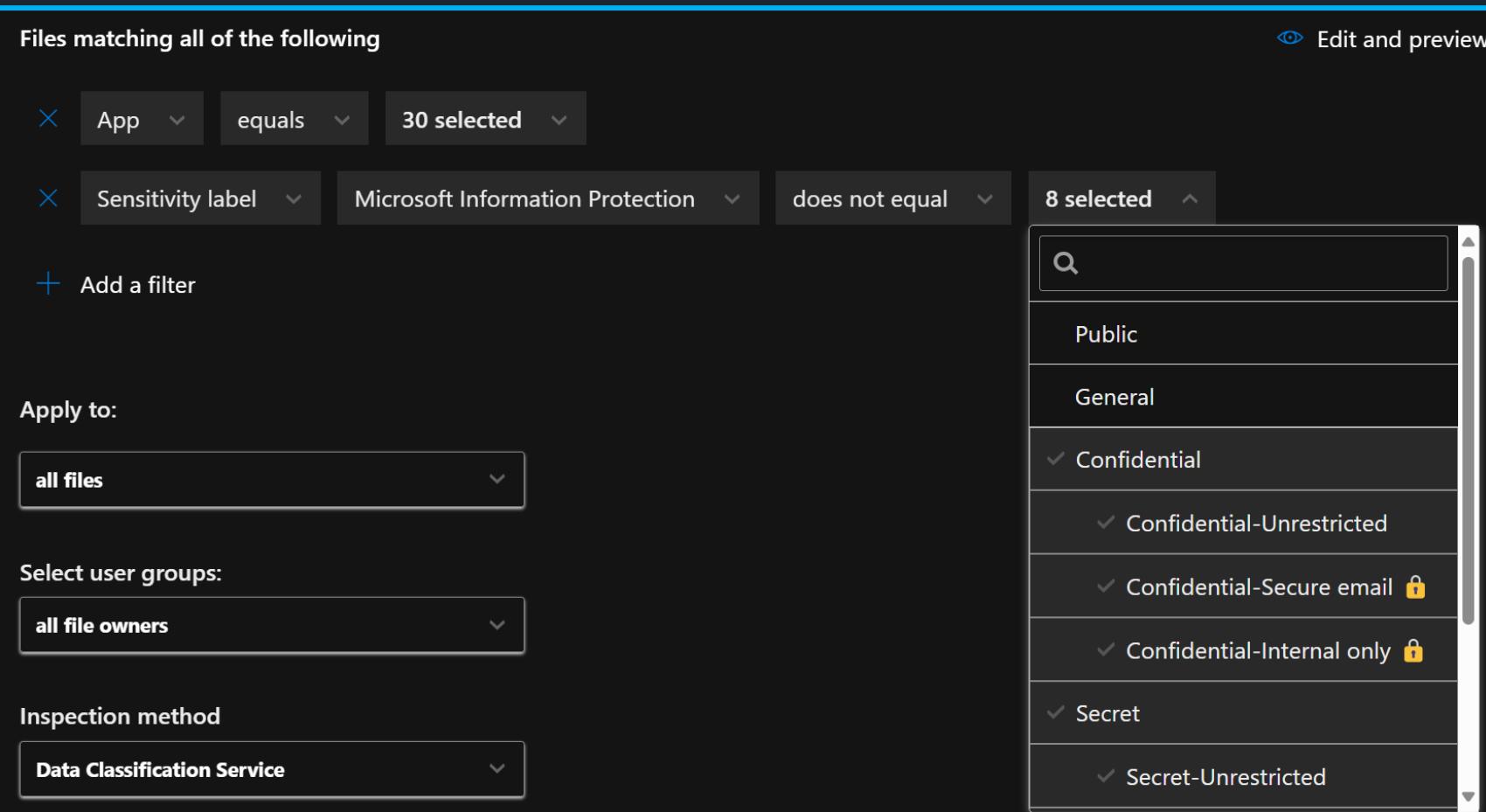
Apply to: all files

Select user groups: all file owners

Inspection method Data Classification Service

8 selected

- Public
- General
- ✓ Confidential
 - ✓ Confidential-Unrestricted
 - ✓ Confidential-Secure email 
 - ✓ Confidential-Internal only 
- ✓ Secret
 - ✓ Secret-Unrestricted



Policy granularity



Discovery/Credentials

Matching now Quarantined History

Filters:

Advanced filters

Authorization: App: **Select apps** Owner: **Select users**

Owner OU: **Select organizational units**

Bulk selection Export

File name

Owner

Examples-Credentials.xlsx

ADM Tatu Seppälä

Access level: **Public (Internet), External, Public**

- Public (Internet)**
Anyone on the Internet can find and access
- Public**
Anyone with a link has access
- External**
Specific people outside of the organization have access
- Internal**
Users in the organization have access
- Private**
Only the file owner has access

File type: **Document, Spreadsheet, Presentation**

1 - 1 of 1 files Show details

Policies

Detection ...

2 policy matches

Aug 27, 2024

Flexible post-search filtering

Discovery/Credentials ⓘ

Matching now Quarantined History

Filters:

 Advanced filtersAuthorization: ! ✓ App: Select apps ▼ Owner: Select users ▼ Access level: Public (Internet), External, Public ▼ File type: Document, Spreadsheet, Presentation ▼Owner OU: Select organizational units ▼ Bulk selection ▼ ▼ Export1 - 1 of 1 files ↔ Show details Table settings ▼

File name ▼	Owner ▼	App ▼	Collaborators ▼	Policies ▼	Detection ... ▼
 Examples-Credentials.xlsx	ADM Tatu Seppälä	 Microsoft SharePoint O...	 3 collaborators	2 policy matches	Aug 27, 2024 ✓ ⋮
Path: Landing pad / Shared Documents / General / Purview demo documents - View hierarchy		URL: https://seppala365.sharepoint.com/sites/Landingpad/Shared%20Documents/General/Purview%20demo%20documents copy			
Type: spreadsheet	Owner: ADM Tatu Seppälä		Created: May 7, 2024	Policies: 2 Externally shared document with credenti...	
MIME type: application/vnd.openxmlformats-offic...	Owner OU: —		Modified: May 7, 2024	Sensitivity labels: 2 AZURE RMS ENCRYPTED FILE ...	
File identifiers: View file identifiers	Collaborators: 3 collaborators		File size: ~23 KB	Scan status: 1 completed, 1 failed	

Enriched metadata for each match

Collaborators

X

 Search for collaborators with direct sharing...

▼  Landing pad Visitors

EXTERNAL 

 **Tatu Seppälä** <tatu.seppala@sulava.com>

>  Landing pad Owners

INTERNAL

>  Landing pad Members

INTERNAL



Close

Deep visibility into sharing scenarios



Ok, so now you've got the visibility..

Putting your findings to work



Putting your findings into practice

Bremen DevOps team

Private group • General

Email View site

This site has a compliance policy set to block deletion.

The selected sensitivity label has inherent external file sharing setting, this overrides the existing setting. [Learn more about sensitivity labels](#)

General Activity Membership Settings

Email

Let people outside the organization email this team

Send copies of team emails and events to team members' inboxes

Don't show team email address in Outlook

Privacy

Private

Public

Sensitivity label

General

External file sharing

New and existing guests

More sharing settings

Custom scripts

Blocked

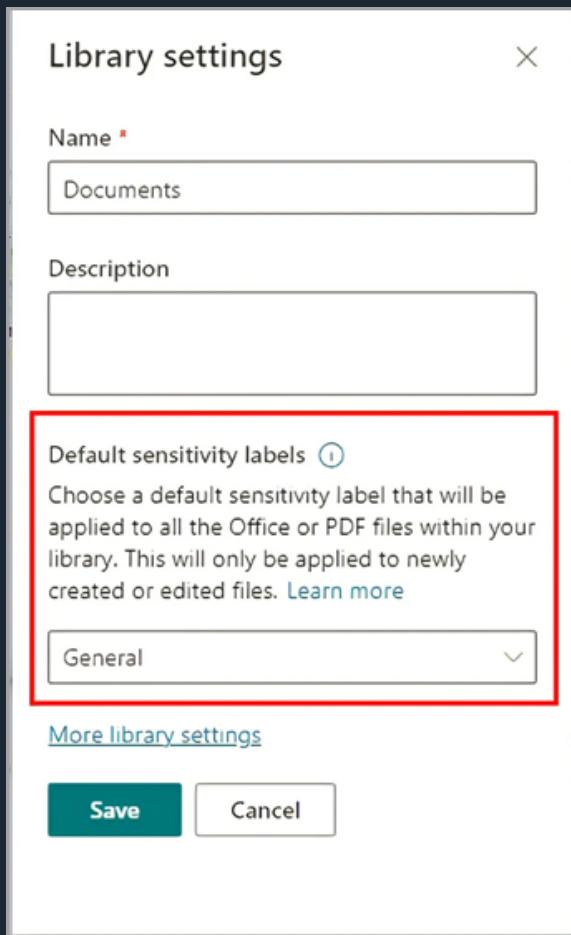
Edit

Apply elevated container sensitivity labels to most risky sites

- > Sharing guardrails
- > Access controls

```
PS C:\> (get-label Secret).settings
[contenttype, File, Email, Site, UnifiedGroup]
[tooltip, Highest confidentiality. Cannot be shared externally.]
[displayname, Secret]
[color, #A4262C]
[defaultsublabelid, 8bf9f609-91f9-4eda-998b-6fcf20a16870]
[defaultsharelinktoexistingaccess, True]
[memberscanshare, MemberShareNone]
```

Putting your findings into practice



Apply default sensitivity label to document libraries in sites w/ accumulations

- › Newly-created and modified files on the site get protection by default unless already manually labeled
- › It's easier to train users to apply **exceptions**
- › **Auto-labeling** can also elevate the sensitivity applied by this mechanism



Putting your findings into practice

- › Fetch a report of SharePoint sites & relevant sharing & access controls
 - [Get-SPOSite \(Microsoft.Online.SharePoint.PowerShell\)](#)
- › Pull in additional data from Content Search & MDA File Policies
- › Contact owners of identified sites with stale data and facilitate cleanups
- › Harden sharing settings and implement additional access controls

	A	B	C	D	E	F	G
1	Url	Title	Files w/ credentials	Owner	ConditionalAccessPolicy	SharingCapability	SiteDefinedSharingCapability
79	https://seppala365.sharepoint.com/sites/Landingpad	Landing pad	5		AllowFullAccess	ExternalUserSharingOnly	ExternalUserSharingOnly
80	https://seppala365.sharepoint.com/sites/TeamBremen	Team Bremen	1		AllowFullAccess	ExternalUserSharingOnly	ExternalUserSharingOnly
81	https://seppala365.sharepoint.com/sites/Informationprotectionctr	Information protection training hub	1	tatu@seppala365.cloud	AllowFullAccess	Disabled	Disabled
82	https://seppala365.sharepoint.com/sites/Arkuontoistentietojen	Arkuontoisten tietojen sääli	1		AllowFullAccess	ExternalUserSharingOnly	ExternalUserSharingOnly



SAM is your friend

[+](#) Initiate site access review [View all reviews](#) [Restrict site access](#)

100 of 10,000 items



Filters: Site Template: Classic sites, +3 Privacy (Team sites only): Private Sensitivity: Confidential, +24 External sharing: On

<input type="checkbox"/>	Site name	URL	Items shared ↓	Primary admin	Teams	Template	Sensitivity	External sharing	Privacy
<input type="checkbox"/>	Contoso HR	../teams/contosohr	435	John Doe		Team site	Top secret	On	Private
<input type="checkbox"/>	Contoso Sales	../teams/contososales	354	Group owners		Classic site	Top secret	On	Private
<input type="checkbox"/>	Contoso Finance	../sites/contosofin	234	Sesha Mani		Team site	Highly confidential	On	Private
<input type="checkbox"/>	Contoso Giving	../sites/contosogiv	205	Karthik Gangidi		Team site	Top secret	On	Private
<input type="checkbox"/>	Contoso team	../sites/contosoteam	178	Group owners		Team site	Top secret	On	Private
<input type="checkbox"/>	Contoso Vac	../sites/contosovac	146	Shikha Verma		Classic site	Highly confidential	On	Private
<input type="checkbox"/>	Contoso HRA	../teams/contosohra	123	Group owners		Team site	Top secret	On	Private
<input type="checkbox"/>	Contoso Media	../sites/contosomedia	100	Brenda Thomas		Team site	Top secret	On	Private
<input type="checkbox"/>	Contoso in house	../sites/contosoinh	89	Chris Smith		Classic site	Highly confidential	On	Private
<input type="checkbox"/>	Contoso infra	../sites/contosoinfra	75	Group owners		Team site	Top secret	On	Private
<input type="checkbox"/>	Contoso design	../sites/contosodesign	64	Jack Becker		Classic site	Highly confidential	On	Private
<input type="checkbox"/>	Contoso leaders	../teams/contosolead	56	Zhao Zhang		Classic site	Highly confidential	On	Private
<input type="checkbox"/>	Contoso data	../teams/contosodata	40	Emily Baker		Team site	Top secret	On	Private
<input type="checkbox"/>	Contoso BI	../teams/contosobi	30	Emily Baker		Team site	Top secret	On	Private

SAM is your friend

Discover sites with specific sensitivity labelled files

Know your site admins

Govern these sites for right policy settings

Site ID	Site URL	Primary Admin	Primary Admin Email	Labelled documents	Site Sensitivity	Site Sensitivity	Site Unmanaged Device Policy	Site External Sharing
f7dab2e5-e0...	.../sites/InvestmentBanking	Michelle Harris	micelle.harris@contoso.onmicrosoft.com	971	162fbb5e-1f	General	None	TRUE
00bb177f-22...	.../sites/ContosoLife	Caleb Foster	caleb.foster@contoso.oncalrosoft.com	933	162fbb5e-1f	General	Limited, web-only access	FALSE
bde6e6c9-9e...	.../sites/LeadershipTeam	Avery Howard	avery.howard@contoso.onaveroft.com	911	162fbb5e-1f	Confidential	Block access	FALSE
3aefb921-e9...	.../sites/USSales	Riley Ramirez	riley.ramirez@contoso.onrilrosoft.com	908	222a35d4-8a	Confidential	Block access	FALSE
6d75c83f-3e...	.../sites/Operations	Amber Rodriguez	amber.rodriguez@contoso.onambrosoft.com	908	162fbb5e-1f	General	Limited, web-only access	TRUE
3c6e4459-8a...	.../sites/DroneWorkshop	Maria Sullivan	maria.sullivan@contoso.onmarrosoft.com	868	162fbb5e-1f	General	None	TRUE
160f9cc7-8e...	.../sites/FlySafeConference	Grace Taylor	grace.taylor@contoso.ongrarosoft.com	839	162fbb5e-1f	General	Limited, web-only access	FALSE
eb95ec98-9f...	.../sites/LeadershipConnection	Sam Centrell	sam.centrell@contoso.onsamrosoft.com	634	222a35d4-8a	Confidential	Block access	FALSE
aee6640b-30...	.../sites/MarkProjectTeam	Vance DeLeon	vance.deleon@contoso.onvanrosoft.com	588	162fbb5e-1f	Confidential	Block access	FALSE
d2bdc732-9e...	.../sites/Give	Cameron Baker	cameron.baker@contoso.oncamrosoft.com	558	162fbb5e-1f	General	Limited, web-only access	TRUE
46d12cf3-76...	.../sites/NewEmployeeOnboarding	Oscar Ward	oscar.ward@contoso.onoscrosoft.com	501	162fbb5e-1f	General	None	TRUE
50f07137-47...	.../sites/ParentsofContoso	Eugenia Lopez	eugenia.lopez@contoso.oneugrosoft.com	479	222a35d4-8a	General	Limited, web-only access	FALSE
7ba4e7e9-3a...	.../sites/ContosoBrand	Casey Jensen	casey.jensen@contoso.oncasrosoft.com	446	162fbb5e-1f	Confidential	Block access	FALSE
d84d7015-71...	.../sites/ProductSupport	Brandon Stuart	brandon.stuart@contoso.onbrarosoft.com	360	162fbb5e-1f	Confidential	Block access	FALSE
8836bd59-35...	.../sites/RetailOperations	Devon Torres	devon.torres@contoso.ondevrosoft.com	341	162fbb5e-1f	General	Limited, web-only access	TRUE
08f03943-20...	.../sites/SalesandMarketing	Michael Peltier	michael.peltier@contoso.onmicrosoft.com	218	222a35d4-8a	General	None	TRUE
50f748af-4b...	.../sites/SalesBestPractices	Kayla Lewis	kayla.lewis@contoso.onkayrosoft.com	174	162fbb5e-1f	General	Limited, web-only access	FALSE
51763230-74...	.../sites/USSales	Isabel Gracia	isabel.gracia@contoso.onisarosoft.com	171	162fbb5e-1f	Confidential	Block access	FALSE
3a0abc9c-61...	.../sites/AllCompany	Kerry Allen	kerry.allen@contoso.onkerrosoft.com	150	162fbb5e-1f	Confidential	Block access	FALSE
32b81ef7-26...	.../sites/Benefits	Parker McLean	parker.mclean@contoso.onparrosoft.com	130	222a35d4-8a	General	Limited, web-only access	TRUE

Sharing link reports

These reports are useful in identifying sites which are active in collaboration and hence no mitigate any potential oversharing risk. These 'RecentActivity' based reports identify sites number of sharing links in the last 28 days.

Anyone sharing links created in last 28 days

PowerShell

```
Start-SPODataAccessGovernanceInsight -ReportEntity SharingLinks_Anyone -Workload
```



Provide the workload value as 'OneDriveForBusiness' to get all OneDrive accounts with the

PeopleInYourOrg sharing links created in last 28 days

PowerShell

 Copy

```
Start-
```

[Manage Data access governance reports using SharePoint Online](#)
[PowerShell - SharePoint in Microsoft 365 | Microsoft Learn](#)

Provide the workload value as 'OneDriveForBusiness' to get all OneDrive accounts with the same criteria.



RBAC, governance & more



RBAC & governance considerations

Content Search (classic)

- › Everyone with sufficient admin privileges can see everyone else's Content Searches and can review + export the results
- › Purge unnecessary search jobs once data has been collected and analyzed

Name	Modified by
Legal team / Insider investigation 29082024	Tatu Seppälä
Discovery / Credentials / Medium to High confidence	ADM Tatu Seppälä



New Content Search fixes the issue

Permission Error



In the new experience, all content searches are part of an eDiscovery case. By default, eDiscovery managers and administrators have access.

You are not a member of the Content Search case. Please contact your eDiscovery manager or administrator for access.

[Learn more](#)



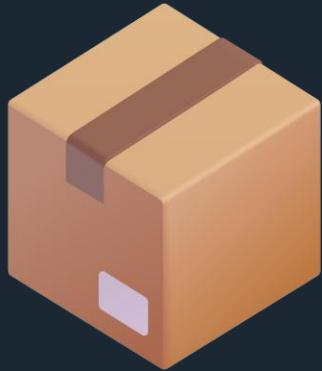
RBAC & governance considerations

Defender for Cloud Apps File Policies

- › Be mindful that MDA File Policies give access to previews of snippets of file content even without special additional roles
- › In some countries this might pose a compliance challenge due to various privacy and other laws and regulations
- › MDA File Policies take time to crawl your entire data estate. Create them as early as possible and give them a week or two before reviewing results.
 - They keep running persistently so you don't need to rerun them periodically



What's next?



Starting **June 2025**, admins can **inherit** document library default label from the container label of a group/site/team.



By **September 30, 2025**, Microsoft will detect and remove the **Everyone Except External User** permission from the root site of each user's OneDrive and the default document library in OneDrive.





Comments or
questions?

Connect with me!

