



**1. GET
THE APP**



**2. VISIT SESSIONS
AND SPONSORS,
RATE THE SESSIONS**



**3. EARN
COLLABCOINS**



**4. SPEND COLLABCOINS
ON SWAG AND
VOUCHERS**

**5. TOP 5 WIN A
RASPBERRY PI 400**



csmmt.eu/app



LEARN HOW TO USE MICROSOFT SEARCH AND INTEGRATE YOUR BUSINESS DATA

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EUROPEAN COLLABORATION SUMMIT



EUROPEAN CLOUD SUMMIT

29TH NOVEMBER – 1ST DECEMBER 2021



♥ DIAMOND AND PLATINUM SPONSORS ♥



In work life...



20%

of work time
spent searching for info
(and often in the wrong location)

Source: McKinsey Global Institute

Agenda



- How to use and configure Microsoft Search
- Create your own Graph Connector

What is is?



Simple, intelligent search across Microsoft 365 and your company

Data is secure, private, and never shared

An experience that's consistent and familiar, everywhere you search

Results are personalized for you and your work

Search from any device, anywhere

Where is it?



- Outlook on the web
- Microsoft Office apps on Windows
- OneDrive for Business
- SharePoint
- Office.com or the starting pages for Word, Excel, and PowerPoint
- Bing
- “Over time the Microsoft Search box will come to more of the apps in Microsoft 365”

**It's personal!
& permissions!**



DEMO MICROSOFT SEARCH



Why use the Microsoft Search?

ONE unified search endpoint for Microsoft cloud data

- No setup
- Easy to use
- Personal search
- Personal history
- Spell correction
- Configuration
- Automatic crawling
- Integrate other data sources
- Integrate custom data

Differences btw. Microsoft Search and SharePoint Search



Microsoft Search

- Modern search experience
- Microsoft Search is personal
- Using the same existing SPO Index
- At: SharePoint start page, hub sites, communication sites, and modern team sites
- Microsoft Search experience cannot be customized *
- Can be extended with custom data easily

SharePoint Search

- Classic Search
- Same result for everyone
- Using the existing SPO Index
- At: publishing sites, classic team sites, and in the Search Center
- Search admin can customize the classic search experience

<https://docs.microsoft.com/en-us/sharepoint/differences-classic-modern-search#:~:text=SharePoint%20in%20Microsoft%20365%20has,search%20index%20to%20find%20results>



Current downsides of Microsoft Search

- No influence in the result
- Missing customizations *
- Missing other M365 services data *
- No control of the crawling schedule *
- Text only *

* more to come...

Microsoft Search technologies



Microsoft Search

- Ready-to-use for content in M365
- Built-in features like AI, history, spell checker, etc
- Configure bookmarks, QnA, locations, acronyms
- Ingest your custom data easily

SharePoint Syntex

- Content extraction from unstructured documents
- Automatic forms extraction
- Power Platform AI Builder
- No-Code AI Models
- Trainable with document types

Viva Topics

- Discover important topics highlighted in content
- Automatically identify, process, and organize content
- Automatically build topic pages
- [Community, communications, and knowledge sharing with Yammer, Teams, Outlook and Viva \(Dan Holme\)](#)

Azure Cognitive Search

- No out-of-the-box solution – for developers
- Full control of the Indexing pipeline
- Powered by AI for OCR, translations, pictures, custom data recognition
- Data from Azure and SP0
- [Using AI and Azure Cognitive Search to Enrich, Index and Search your enterprise data \(Donald Hessing\)](#)



GRAPH CONNECTORS + API

Using Graph connectors



Graph connectors support virtually any data source



Microsoft-built
connectors



Partner connectors

`{ api }`

Microsoft Graph API

> 100 connectors



USE AZURE DATA LAKE STORAGE GEN2 GRAPH CONNECTOR

[HTTPS://DOCS.MICROSOFT.COM/EN-US/MICROSOFTSEARCH/AZURE-DATA-LAKE-CONNECTOR](https://docs.microsoft.com/en-us/microsoftsearch/azure-data-lake-connector)

[Home](#)[Users](#)[Teams & groups](#)[Billing](#)[Setup](#)[Show all](#)[Home](#) > [Search & intelligence](#) > [Data sources](#)[Dark mode](#)

Search & intelligence











[Insights](#)[Answers](#)[Data sources](#)[Customizations](#)[Configurations](#)

Search connection quota utilization (1.34%)



168 items indexed out of 12,500.①

[Refresh](#)

Name	Required actions	Connection ID	Publisher	Connection status
 parts	-	parts	Search Connector App	 Ready
 workshops	Create Vertical Create Result type	workshops	Search Connector App	 Ready
 trainings	-	trainings	Search Connector App	 Ready
 cloud	Create Result type	cloud	Search Connector App	
 contracts	-	contracts	Microsoft	



**Connect to data source**

Connect to data source

Choose a data source to create a connection for your organization. [Learn more about connectors.](#)

[Find More Connectors.](#)

**ADLS Gen2**

Connect to ADLS
Gen2

**Oracle SQL
database**

Connect to Oracle
SQL database

**ServiceNow**

Connect to
ServiceNow catalog..

**File share**

Connect to on-prem
network file share

**Microsoft SQL
server(New)**

Connect to Microsoft
SQL 2008 or later

**Enterprise
websites****MediaWiki****Salesforce****Azure SQL**[Next](#)

**Name the connection**

○ Connection settings

○ Assign property labels

○ Manage schema

○ Manage search permissions

○ Refresh settings

○ Review connection

○ Complete

Connection Name

To get started, fill out the basic information for the connection.

Name *

marketing

Connection ID *

marketing

Description

marketing

Next

Save and Close



Home > m365search



m365search | Access keys ...

Storage account

Search (Ctrl+ /)

Data migration

Events

Storage browser (preview)

Data storage

Containers

File shares

Queues

Tables

Security + networking

Networking

Access keys




Shared access signature

Encryption

Security

Data management

Geo-replication

 Hide keys  Set rotation reminder  Refresh

Access keys authenticate your applications' requests to this storage account. Keep your keys in a secure location like Azure Key Vault, and replace them often with new keys. The two keys allow you to replace one while still using the other.


Remember to update the keys with any Azure resources and apps that use this storage account. [Learn more](#)

Storage account name

m365search

key1

Last rotated: 11/3/2021 (23 days ago)

 Rotate key

Key

2B2+ck86dm3Q...


Connection string

DefaultEndpointsProtocol=https;AccountName=m365search;AccountKey=2B2+ck...

Copy to clipboard

key2

Last rotated: 11/3/2021 (23 days ago)

 Rotate key

Key

54BF8q1hLImGa...



Home > m365search

m365search | Storage browser (preview)

Storage account

Search (Ctrl+/)

Overview

Activity log

Tags

Diagnose and solve problems

Access Control (IAM)

Data migration

Events

Storage browser (preview)

Data storage

Containers

File shares

Queues

Tables

Security + networking

Networking

Access keys

m365search

Favorites

Recently viewed

Blob containers

File shares

Queues

Tables

+ Add queue

Refresh

Delete

Edit columns

Queues

Search queues by prefix

Showing all 1 items

Name

Url

notifications

https://m365search.queue.core.windows.net/notifications

Add queue

Queue name

marketingnotifications

Ok

Cancel



Home > m365search



m365search | Storage browser (preview)

Storage account

Search (Ctrl+/)

Overview

Activity log

Tags

Diagnose and solve problems

Access Control (IAM)

Data migration

Events

Storage browser (preview)

m365search

Favorites

> Recently viewed

Blob containers

File shares

Queues

Tables

+ Add queue

Refresh



Delete



Edit columns

Queues

Search queues by prefix

Showing all 2 items

Name

Url



marketingnotificatio...

https://m365search.queue.core.windows.net/marketingnotifications

notifications

marketingnotifications.queue.core.windows.net/notifications

✓ Successfully created storage queue

Successfully created storage queue
'marketingnotifications'

☒ Name the connection☒ **Connection settings**☐ Assign property labels☐ Manage schema☐ Manage search permissions☐ Refresh settings☐ Review connection☐ Complete

Connection settings

Step to setup the authentication and configuration of ADLS Gen2 connector

Default Read access is not granted to "Other" in ADLS. So if you choose the option "Limited to Access Control Level (ACL)" in Search Permissions, please make sure to grant "Other" Read Access at the top most blob container or top most folder, so that indexed items from ADLS are returned in Search Results for users in your Org.

> Follow these steps to find the connection string for your ADLS resource.

Primary storage connection string *

DefaultEndpointsProtocol=https;AccountName=m365search;Accoun...

☒ Same with primary storage

Notifications storage connection string

DefaultEndpointsProtocol=https;AccountName=m365search;Accoun...

Notification queue name

marketingnotifications

Test connection

Back

Next

☒ Name the connection☒ **Connection settings**☐ Assign property labels☐ Manage schema☐ Manage search permissions☐ Refresh settings☐ Review connection☐ Complete

Connection settings

Step to setup the authentication and configuration of ADLS Gen2 connector

Default Read access is not granted to "Other" in ADLS. So if you choose the option "Limited to Access Control Level (ACL)" in Search Permissions, please make sure to grant "Other" Read Access at the top most blob container or top most folder, so that indexed items from ADLS are returned in Search Results for users in your Org.

The connection is successful.

> Follow these steps to find the connection string for your ADLS resource.

Primary storage connection string *

DefaultEndpointsProtocol=https;AccountName=m365search;Accoun...

☒ Same with primary storage

Notifications storage connection string

DefaultEndpointsProtocol=https;AccountName=m365search;Accoun...

Notification queue name

marketingnotifications

Back

Next





- ✓ Name the connection
- ✓ Connection settings
- Assign property labels**
- Manage schema
- Manage search permissions
- Refresh settings
- Review connection
- Complete

Assign property labels

You can select a source property to assign to each label. Assigning properties is optional, but can improve search relevance and ensure more accurate search results for people in your organization.

Label	Description	Type	Source properties
Title	The title of the item that you want shown i...	String	<input type="text" value="Name"/>
url	The target URL of the item in the data sou...	String	<input type="text" value="Url"/>
Last modified by	Name of the person who most recently edi...	String	<input type="text" value="Select"/>
Last modified date time	Date & time the item was last modified in ...	DateTime	<input type="text" value="LastModifiedDateTime"/>
File name	In case of a file, the name of the file in the ...	String	<input type="text" value="Select"/>

[Back](#)[Next](#)

Search & intelligence > Data sources > Add New 'ADLS Gen2' Connector

- Name the connection
- Connection settings
- Assign property labels
- Manage schema
- Manage search permissions
- Refresh settings
- Review connection
- Complete

Content Property

The content property you select will be used to generate result snippets and descriptions in search results.

Content

12 items Search Filter

Source properties	Alias	Type	Labels	Query
BlobSASUri	SystemIncludeAuthzSign1	String		<input checked="" type="checkbox"/>
Content (Content)	<div></div>	String		<input type="checkbox"/>
ContentLength	<div></div>	Int64		<input type="checkbox"/>
ContentPreview	<div></div>	String		<input type="checkbox"/>

Back


Next


Save and Close


- ☒ Name the connection
- ☒ Connection settings
- ☒ Assign property labels
- ☒ **Manage schema**
- ☐ Manage search permissions
- ☐ Refresh settings
- ☐ Review connection
- ☐ Complete

used to generate result snippets and descriptions in search results.

12 items

 Search

 Filter

	Type	Labels	Query	Search	Retrieve	Refine
<div>mIncludeAuthzSign1 </div>	String		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<div></div>	String		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<div></div>	Int64		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<div></div>	String		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>





- ✓ Name the connection
- ✓ Connection settings
- ✓ Assign property labels
- ✓ Manage schema
- Manage search permissions**
- Refresh settings
- Review connection
- Complete

Manage search permissions

These users will see search results from this data source.



Only people with access to this data source

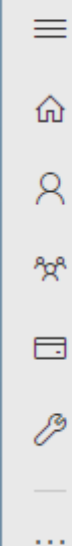
Only users in your source Access Control List (ACL) will see search results from this data source. An ACL specifies which users can access files and other items.



Everyone

Everyone in your organization will see search results from this data source.

[Back](#)[Next](#)[Save and Close](#)



- ✓ Name the connection
- ✓ Connection settings
- ✓ Assign property labels
- ✓ Manage schema
- ✓ Manage search permissions
- Refresh settings**
- Review connection
- Complete

Refresh settings

Set the refresh interval to update data that's changed

Incremental refresh interval

15 minutes



Full refresh interval

1 day



1 day

1 week

2 weeks

4 weeks

Back

Next

Save and Close





- ✓ Name the connection
- ✓ Connection settings
- ✓ Assign property labels
- ✓ Manage schema
- ✓ Manage search permissions
- ✓ Refresh settings
- Review connection**
- Complete

Review connection

Review the configured settings for the connection

Connection Name

marketing

[Edit Connection Name](#)

Data source

m365search

[Edit Data Source](#)

Schema

12 properties added.

[Edit Schema](#)

Search Permissions

Visible to everyone

[Edit Search Permissions](#)

[Back](#)

[Finish](#)

[Save and Close](#)





- ✓ Name the connection
- ✓ Connection settings
- ✓ Assign property labels
- ✓ Manage schema
- ✓ Manage search permissions
- ✓ Refresh settings
- ✓ Review connection
- **Complete**

New connection created

This connection will be published in a few minutes, and then it will get indexed. If the data source is large, indexing may take a few hours.

When this connection is published, which you'll see on the Connectors tab, you'll need to add a Vertical for this connector to view insights on how users search this data source.

[Done](#)

Search & intelligence







Insights Answers Data sources Customizations Configurations

Search connection quota utilization (1.48%)




185 items indexed out of 12,500. ⓘ

[+ Add](#) [Refresh](#)

Name	Required actions	Connection
 parts	-	parts
 workshops	Create Vertical Create Result type	workshops
 trainings	-	trainings
 cloud	Create Result type	cloud
 contracts	-	contracts
 marketing	Create Vertical Create Result type	marketing

marketing

 [||](#)
 marketing • Microsoft

Detail Statistics Error

Description

marketing

Current Crawl

Next Crawl

Start time	Type
11/27/2021, 11:12 PM	Incremental

Last Crawl

Total item errors	Data source
-------------------	-------------



Search & intelligence

Insights Answers Data sources Customizations Configurations

Search connection quota utilization (1.48%)



185 items indexed out of 12,500. ⓘ

+ Add Refresh

Name	Required actions	Connection
parts	-	parts
workshops	Create Vertical Create Result type	workshops
trainings	-	trainings
cloud	Create Result type	cloud
contracts	-	contracts
marketing	Create Vertical Create Result type	marketing



marketing

marketing • Microsoft

Last Crawl

Total item errors

0

Data source

m365search

Permissions

Visible to everyone

Items indexed

17

Schema

12 properties added.

Crawl Schedule

Full refresh interval
1 day

Incremental refresh interval
15 minutes





Be aware: Azure Data Lake Storage Gen2 Graph connector

- Files size needs to be 4 MB or less for it to be crawled.
- Word (.docx, .docm, .dotx, .dotm)
- PowerPoint (.pptm, .pptx, .potm, .potx, .ppam, .ppsm, .ppsx)
- Excel (.xlsx, .xlsm)
- Legacy Office formats (.doc, .dot, etc.)
- Text (.txt)
- HTML
- PDF
- Binary files like images (.jpg, .bmp, etc. , also when embedded) are not supported

<https://docs.microsoft.com/en-us/microsoftsearch/azure-data-lake-connector>



Microsoft Graph connector API limits

- 10 connections per Microsoft 365 tenant
- Max. 700,000 items per connection
- Max. 70 GB byte size of a connection
- Max. 128 properties per schema
- Max. 100,000 external groups per Microsoft 365 tenant
- Max. 1000 requests/sec (HTTP 429)
- Item ingestion: 4 items/sec (250 MB/hour)
- Item ingestion: 4 MB is the maximum size of an item (request body size)

<https://docs.microsoft.com/en-us/graph/connecting-external-content-api-limits>



USE THE API WITH C# CODE

[HTTPS://GITHUB.COM/MICROSOFTGRAPH/MSGGRAPH-SEARCH-CONNECTOR-SAMPLE](https://github.com/microsoftgraph/msgraph-search-connector-sample)



USE THE API WITH POWERSHELL

[HTTPS://GITHUB.COM/TONIPOHL/MICROSOFTSEARCH](https://github.com/tonipoehl/microsoftsearch)



USE THE API WITH THE READY TO USE PNP SEARCH SOLUTION

[HTTPS://GITHUB.COM/MICROSOFT-SEARCH/SPFX-SAMPLES/TREE/MASTER/SAMPLE1.0](https://github.com/microsoft-search/spfx-samples/tree/master/sample1.0)

Microsoft Search Summary



- How to configure Microsoft Search?
 - Do nothing. It comes with M365 automatically
- Does it cost extra?
 - No (included in the M365 licenses)
- What happens if a user has no Search license?
 - The “Microsoft Search” plan is assigned automatically. It can’t be unassigned.
- Does it support various languages?
 - Yes
- Does it search Team chats?
 - Currently, no
- Does it search pictures (OCR, ...)?
 - No. Use Azure Cognitive Search
- What does Microsoft Search search?
 - See graphics
- How many connectors can I configure?
 - You can add a maximum of ten Graph connections to each tenant.
- Can you customize the refiners?
 - Currently, no
- Can you customize the search results?
 - Currently only for your own connectors (but December is a good month...)
- What quota/what if I reach the quota?
 - e.g. E5: 500 items * 100 users = 50,000 items index quota
 - Add Extra Graph Connector Capacity licenses
- What other data and features will be included in future?
 - Coming...

Knowledge & Content Services roadmap 2021-2022

	Experiences	Foundation	Language support	Clouds
Viva Topics	<ul style="list-style-type: none">• Topics in Teams – Preview• Topics in Outlook and Yammer• Question concierge• Topic management updates• Support for topic types	<ul style="list-style-type: none">• Graph connected content available for knowledge indexing• Shared components for topics• API in Microsoft Graph• Syntex taxonomy integration	<ul style="list-style-type: none">• Extended language support French, German, Spanish	Government Community Cloud (GCC) availability
SharePoint Syntex	<ul style="list-style-type: none">• Content assembly• Advanced metadata search• Contract management• Image tagging	<ul style="list-style-type: none">• APIs in Microsoft Graph	<ul style="list-style-type: none">• Extended language support French, German, Italian, Spanish	GCC High availability
Microsoft Search	<ul style="list-style-type: none">• Azure Cognitive Search results in Microsoft Search• Recommended Bookmarks• Recommended Q&A• Connector results on All vertical• Personal query history in SharePoint and Office.com• Semantic search• People-centric search in SharePoint and Office.com	<ul style="list-style-type: none">• New connectors<ul style="list-style-type: none">• Jira• Confluence• SharePoint Server• Schoology• CSV• eDiscovery support for Microsoft Graph connectors• Stemming support with Microsoft Graph connectors		GCC availability
Compliance	<ul style="list-style-type: none">• Retention policies for Yammer• Retention for cloud attachments• Retention labels auto-applied based on sensitivity label• Outlook clients support for records management	<ul style="list-style-type: none">• Graph API to manage labels & events		



What to expect in Microsoft Search in near future?

- <https://www.microsoft.com/en-us/microsoft-365/roadmap?filters=Microsoft%20Search>
- <https://aka.ms/KCS/News21>



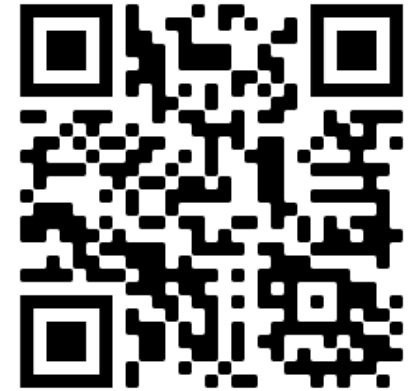
Microsoft Search Resources

- Session content
<https://github.com/tonipohl/MicrosoftSearch>
- Configure Search Connector with the admin portal
<https://www.youtube.com/watch?v=TVSkJpk1RiE>
- Configure the Azure Data Lake Storage Gen2 Graph connector
<https://docs.microsoft.com/en-us/microsoftsearch/azure-data-lake-connector>
- File share Graph connector to search on-premise Windows file shares
<https://docs.microsoft.com/en-us/microsoftsearch/fileshare-connector>
- On-prem connectors: Install the Microsoft Graph connector Agent
<https://docs.microsoft.com/en-us/microsoftsearch/graph-connector-agent>
<https://aka.ms/gcdownload>
- C# sample
<https://github.com/microsoftgraph/msgraph-search-connector-sample>
- PnP Modern Search v4 webparts
<https://microsoft-search.github.io/pnp-modern-search/>
- Microsoft Graph Resources (code)
<https://developer.microsoft.com/en-us/graph/gallery/?filterBy=Samples,SDKs>
- SPFx sample
<https://github.com/microsoft-search/spfx-samples/tree/master/Sample1.0>
Microsoft Search in SharePoint and Office 365
<https://www.youtube.com/watch?v=6upqwbbHojM>
- Bringing external data into Microsoft 365 - custom search result types and verticals Chris O'Brien
<https://www.sharepointnutsandbolts.com/2021/09/Microsoft-365-custom-search-vertical-result-type.html?m=0>
- Licensing and pricing
<https://docs.microsoft.com/en-us/microsoftsearch/licensing>
- Microsoft Graph Postman Collections
<https://www.postman.com/microsoftgraph/workspace/microsoft-graph/collection/455214-085f7047-1bec-4570-9ed0-3a7253be148c?ctx=documentation>

Next time, have your flashlight with you!



- Configure & use Microsoft Search
- Upload your content
- If needed, configure custom connectors





thank you



questions?



ATWORK



BLOG.ATWORK.AT - GITHUB.COM/TONIPOHL



**1. GET
THE APP**



**2. VISIT SESSIONS
AND SPONSORS,
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**3. EARN
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**5. TOP 5 WIN A
RASPBERRY PI 400**



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